Michigan Department of Community Health
MDCH
Jennifer M. Granholm, Governor
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EPI Insight
Bureau of Epidemiology
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Rollout of the Michigan Disease Surveillance System

Jim Collins, R.S., M.P.H. and Brad Carlson, M.P.H.

Public health surveillance is the cornerstone of public health decision-making and practice. At the federal, state and local levels there are in existence more that 100 systems for public health surveillance. However, these existing systems were developed with little or no coordination or thought toward data sharing. The Michigan Disease Surveillance System (MDSS) is an initiative that avails itself of the use of data and information system standards to advance the development of an efficient, integrated, and interoperable surveillance system that will communicate effectively at federal, state and local levels. A primary goal of the MDSS is the ongoing, automatic capture and analysis of data that are already available electronically.

In the fall of 2001, staff at the Michigan Department of Community Health (MDCH) began gathering requirements for a system to replace the existing electronic system (LHDSURV). While a functional system for many years, it was clear that LHDSURV was inadequate to address several surveillance realities, including the fact that it was one of the multitude of incompatible disease specific systems that currently existed, data in the system was consistently incomplete and delayed, it was not designed to minimize the burden on health care system to report disease and it lacked state-of-the-art information technology resources.

The MDSS has been designed to provide a web-based disease surveillance application that allows for electronic capture of disease data, case assignment and tracking, addition of public health case investigation data, and data export. This system will improve the medical and epidemiological management of the case investigations and enhance public health capacity. Electronic laboratory disease reporting and reporting from a variety of other data sources are also supported within this framework. The system can receive disease reports through manual entry via on-line web submission of case referral/intake reports, or importation of HL7 laboratory reports. The demographic data contained in each potential case is de-duplicated to ensure the system contains a set of unique patient demographic. The individual rather than the condition reported is now the hub of the system's data model. The MDSS geocodes all encountered addresses with Geographical

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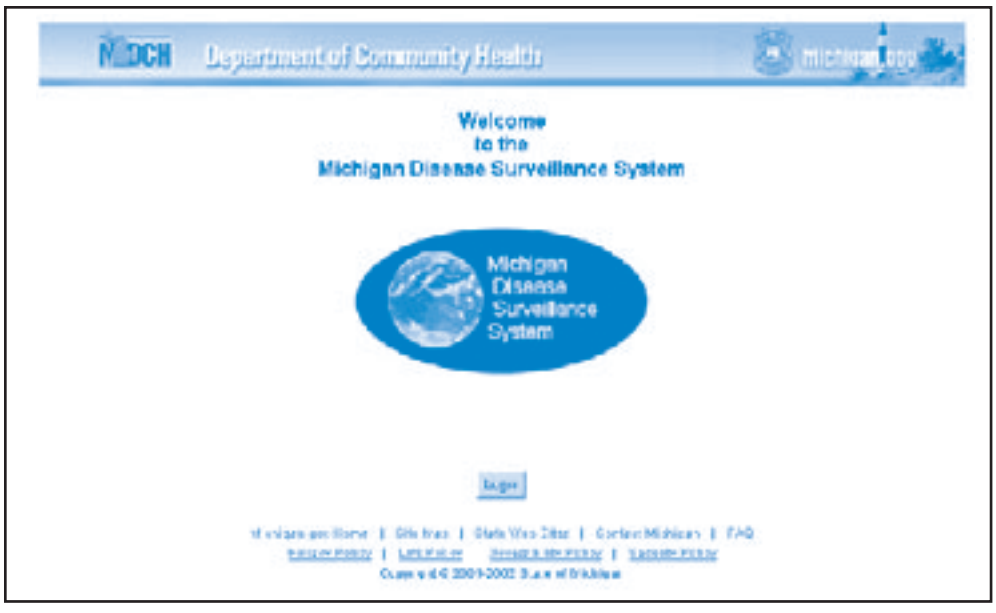

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Tuberculosis in Michigan

By: Gabe Palumbo, M.B.A., M.P.H., and Sue Spieldenner, R.N.

While tuberculosis (TB) remains a major threat to the health and well being of people around the world with more than 2 million deaths each year, case rates in the U.S. have been declining steadily for the past decade. The decrease in TB incidence to historic low levels creates challenges for public health officials who are working to sustain programs and systems, especially when low incidence fails to indicate the full efforts required for comprehensive TB control. As a low incident state, Michigan must strive to retain the skills needed to detect, investigate, and treat TB in spite of falling case rates.

In 2002, the State of Michigan TB Control Program reported 315 TB cases and a case rate of 3.2 per 100,000 population. This represented a 4.5% decrease in the number of cases reported in 2001 and maintains Michigan's status as one of 22 low-incidence states in the country. Overall, TB cases in the State of Michigan have decreased by 18.1%

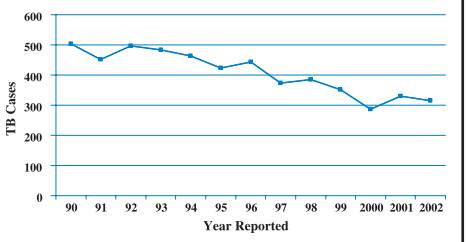


Figure 1

over the five-year period from 1998 - 2002 (Figure 1). The City of Detroit continues to report the highest number of TB cases in the State with 93 cases of TB and an incidence rate of 9.3% cases per 100,000 population reported in 2002. The City of Detroit accounts for approximately 30% of the State's TB morbidity with two-thirds of Michigan's TB cases residing in the greater Detroit metropolitan area encompassing Macomb, Oakland, Washtenaw, and Wayne counties.

Although TB cases continue to decline here in Michigan and across the U.S., this decline is masking some disturbing trends. In 2002, the burden of TB disease continued to be felt disproportionately in Michigan by minority racial and ethnic groups and the foreign born.

With regard to foreign birth, 120 (38.0%) of reported cases in the state in 2002 were foreign born. This represented a 1.5% increase in foreign born cases from year 2001 and a 13% increase for the period 1998 – 2002.

With regard to race and ethnicity, 136 (43.1%) were Black, Non-Hispanic, 99 (31.4%) of TB cases in 2002 were White, Non-Hispanic, 55 (17.4%) were Asian or Pacific Islander, 23 (7.3%) were Hispanic and 2 (0.6%) were unknown. There were no cases of tuberculosis in the American Indian/Alaskan Native populations in Michigan in 2002. With

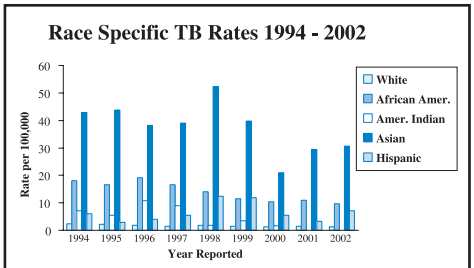


Figure 2

regard to race-specific case rates, Asian /Pacific Islanders case rates were the highest in Michigan in 2002 with 30.7 cases per 100,000 population, followed by Black, Non-Hispanic with 9.6 cases per 100,000 population, Hispanic all races with 7.1 cases per 100,000 population and White, Non-Hispanic with 1.2 cases per 100,000 population (Figure 2).

As case rates continue to decline, the state program has become more focused on TB prevention activities through education and training. Over the past two years, three TB trainings approved by the Michigan Nurses Association (MNA) have been developed for health care professionals, both public and private. They include; Contact Investigation, Case Management, and Tuberculin Skin Testing. To date, the state TB Program has provided trainings to nearly all of Michigan's 84 local health departments. The trainings have allowed local public health nurses to strengthen their knowledge, skills and abilities in conducting identification and prevention activities.

Farewell to Bao-Ping Zhu

Bao-Ping Zhu, M.D., M.S., was a familiar face in the Bureau of Epidemiology until recently when he accepted a job as the State Epidemiologist and Chief of the Office of Epidemiology in Missouri. Zhu was assigned to MDCH by the CDC as the Chief Maternal and Child Health Epidemiologist five years ago. While here, he oversaw the growth of this area and supervised several epidemiologists.

Before coming to MDCH, Zhu completed his EIS fellowship in Utah. His primary work, while at MDCH, focused on describing the health status of maternal and child health population, especially in terms of the racial disparities of maternal and infant mortality rates between African-American and Caucasian women. In addition, he was an adjunct faculty at Michigan State University, College of Human Medicine, where he taught epidemiology and conducted research.

Zhu, his wife Jinwei Yan, and their three sons recently relocated to Columbia, Missouri where they are adjusting to their new surroundings. The Bureau of Epidemiology wishes them luck in this new endeavor!

Rabies In Michigan

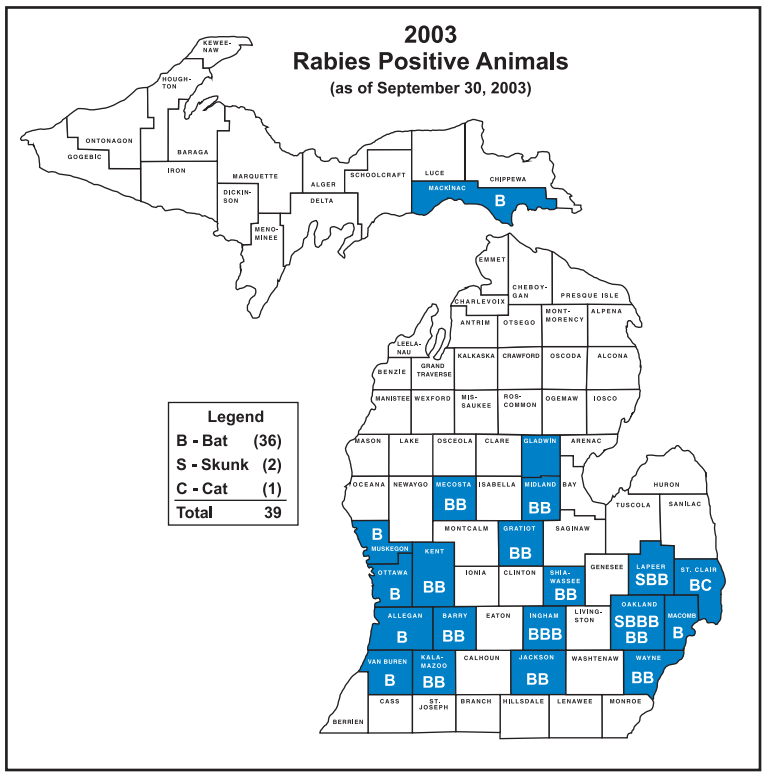
By: Kimberly Signs, D.V.M.

Rabies, a disease of mammals that occurs in a variety of animals worldwide, but occurs primarily in wildlife in the United States, continues to present a risk to animal and human health in Michigan. The Michigan Department of Community Health's Bureau of Laboratories (MDCH BOL) tests over 2700 specimens annually, with the peak testing occurring in late summer. As of September of 2003, over 2000 specimens have been tested, with 39 positives identified, including 36 bats, 2 skunks, and 1 cat.

Bats

Bats are the species most at risk for rabies infection in Michigan, and of all the species tested, they are the most likely to be positive. Due largely to widespread vaccination of domestic dogs, human cases of rabies in the United States are now rare. Typically one to two cases occur each year. Of all the human rabies cases that have occurred in the United States since 1991, 75% have been due to exposure to rabid bats. The other 25% have resulted from exposure to rabid dogs in developing countries, where dog rabies remains a concern. Although it is estimated that fewer than 1% of the bats in Michigan carry rabies, a higher proportion (average of 6%) of those tested at the BOL are rabid. This reflects the fact that sick bats are more likely to exhibit abnormal behavior, have an encounter with a human or another animal, and be submitted for rabies testing. Abnormal behaviors include being active during the day, being found in a place where bats are not usually seen (such as inside a home), or inability to fly. Recommendations with regard to bats are as follows:

- Never handle a bat with bare hands.
- Any dead, sick, or injured bat should be collected and tested for rabies if exposure to people, pets, or livestock has occurred.
- Prevent bats from entering occupied spaces in any building where contact with people, pets, or livestock might occur.



- If dead bats are found and there has been no known pet or human exposure, they should be collected by scooping them up with a shovel, placing them in a plastic bag, and disposing of them in the trash to go to a landfill.

Rabies in Domestic Animals/ Recent Cases of Interest

Most rabies in Michigan occurs in bats. However, domestic animals such as a horses, sheep, or cats are occasionally discovered to be rabid. In most situations, these events are entirely preventable with proper rabies vaccination. The following examples of situations that have occurred recently in Michigan will illustrate this point.

Case #1:

A 20-yr-old pony, part of a petting zoo animal display at a farm run by a local school district, became ill with neurologic signs and was euthanized. The brain was submitted for rabies testing and found to be positive for skunk-strain rabies. Health records for the pony were incomplete, and a history of rabies vaccination could not be confirmed. There were approximately 5000 children and adults who visited the farm in the 30 days prior to the diagnosis of rabies, and approximately 200 of them underwent rabies post-exposure prophylaxis. The cost of rabies post-exposure prophylaxis, which includes a dose of rabies immune globulin, and a series of five vaccines, is approximately $3,000 dollars per person. Proper vaccination of the pony against rabies would have prevented this situation from occurring.

Case #2:

A barn cat that had been living on a farm for 5 years suddenly became aggressive and attacked the property owner and a neighbor who was trying to help confine the cat. The cat was killed and its brain was submitted for rabies testing. The results were positive. The owner and neighbor underwent post-exposure rabies prophylaxis, and other animals on the farm were quarantined or destroyed due to possible contact with this rabid cat. This cat was infected with skunk-strain rabies, and lived in an area of Michigan where skunk rabies was known to occur. This cat had never received a rabies vaccination, although it had lived on the same farm for 5 years.

A new website is being developed in Michigan for zoonotic and emerging diseases, including rabies. This website is a multi-agency effort to provide a single site that contains comprehensive information about all aspects of these types of diseases, as well as links to other useful sites. Because of its wildlife

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Newborn Screening in Michigan

By: William Young, Ph.D.

For almost 40 years, the Michigan Newborn Screening Program has been helping to improve the lives of children around the state. The program is designed to provide rapid identification of newborns with rare and serious, but treatable, disorders. These disorders could cause mental retardation, physical disability, severe illness or death. However, early diagnosis and treatment of infants affected with these disorders can result in normal growth and development.

The Newborn Screening Program benefits affected children through improved health by offering them the opportunity to achieve the best possible outcome. In addition, the program significantly reduces financial costs both for families and for society through early identification. This allows for treatment to be initiated before the development of symptoms that require costly interventions.

The current program has expanded to include eight disorders: PKU, Galactosemia, Maple Syrup Urine Disease (MSUD), Medium Chain Acyl-CoA Dehydrogenase Deficiency (MCAD), Congenital Hypothyroidism, Congenital Adrenal Hyperplasia (CAH), and Sickle Cell Anemia. With the exception of Hypothyroidism, the disorders are inherited. Although each of the disorders is rare the combined incidence is approximately 1/500 for all Michigan newborns.

There are currently one hundred birthing hospitals and over one hundred midwives that participate in this state mandated program. The program is funded by a fee for the initial newborn screening cards (all or a portion of this fee may be covered by insurance or Medicaid and thus reimbursable to the hospital). The revenue obtained from the fees allows the state to offer laboratory, follow-up, and medical management services to all Michigan families of affected newborns. The current cost of the initial newborn screening card is $54.84.

The initial newborn screening test should be completed when the infant is 24-36 hours of age. Just a few drops of blood from a heel stick are needed. All specimens are forwarded to the MDCH Newborn Screening Laboratory for analysis. Positive test results are either repeated or the newborn is referred to one of three medical management centers (metabolic, endocrine, sickle cell) funded by the program. The medical management centers provide confirmatory testing and long-term treatment to affected children identified by the program. Epidemiological evaluation of current screening methodologies and medical outcomes is a recent addition to the program.

A significant advance in newborn screening technology has occurred with the application of tandem mass spectrometry (MS/MS) for the detection of a wide range of inherited disorders using a single spot of blood. The state laboratory is currently using MS/MS to detect PKU, MSUD, and MCAD deficiency. The latter disorder is one of a group of fatty acid oxidation disorders characterized by severe, metabolic symptoms following periods of prolonged fasting. The department's Newborn Screening Advisory Committee is now evaluating the expansion of MS/MS screening to include an additional 15-20 amino, organic and fatty acid disorders. Cystic fibrosis is also being considered. It is anticipated that DNA technology will increasingly be applied to newborn screening, which will greatly expand the potential for early detection of a large number of inherited disorders. It is already a part of second tier CAH and cystic fibrosis dry blood spot testing to improve specificity without reducing sensitivity of the screening tests.

If you have any questions about the MDCH Newborn Screening Program, contact William Young at youngw@michigan.gov.

"Rabies in Michigan" continued from page 3

reservoirs, rabies will continue to be a concern for Michigan citizens. The key to prevention of disease in humans and domestic animals is the appropriate use of available vaccines, as well as education of the public about the risks that wild animals can pose.

In general, the following precautions should be taken to reduce your risk of exposure to animals that may be carrying rabies:

- All pets and domestic livestock for which a licensed vaccine exists should be vaccinated. This includes dogs, cats, ferrets, horses, cattle, and sheep. Vaccines should be administered by a licensed veterinarian, and boosters given according to the manufacturers directions.
- Do not approach or handle unfamiliar or wild animals.
- Thoroughly wash any wound caused by an animal with soap and water and seek medical attention immediately.
- Rabies Post-exposure Prophylaxis (PEP) is highly effective in preventing rabies in people possibly exposed to a rabid animal, if administered before symptoms develop.
- There is no post-exposure prevention treatment available for animals. As a result, unvaccinated domestic animals that are exposed to a potential rabies carrier may be required to be euthanized.
- It is illegal to have wild animals as pets.
- Many exotic species make poor pets, and no rabies vaccine is licensed for use in these species.

Locally-Acquired Quinolone-Resistant *Neisseria Gonorrhoeae* in Michigan

By: Dara Ganoczy, M.P.H.

As of the end of September, 12 cases of quinolone-resistant gonorrhea (QRNG) had been identified in Michigan this year. Seven were Ingham County residents, three were from Kent County, and the other two were from Washtenaw and Wayne counties. Ten of the cases were male, three were men who had sex with men (MSM), and their ages ranged from 16 to 42 years. Six of the cases were Black, four were White, one was Asian, and one Hispanic. Only two cases (Washtenaw and Kent counties) reported travel to areas with endemic QRNG; the others appear to have acquired their infections locally. In recent years, Michigan has had one or two QRNG cases each year, all of whom reported recent travel to Asia.

Following identification of the first QRNG cases in Ingham County, the STD program notified all local health departments of changes in treatment recommendations for patients in Ingham and adjoining counties (Clinton, Eaton, Jackson, Livingston, and Shiawassee). Patients in these counties are to receive a non-quinolone regimen for the treatment of gonorrhea. Providers in other counties are advised to obtain a travel history for patients being treated for gonorrhea, and if they had sex partners from Asia, Hawaii, California, or Ingham or adjoining counties, they, too, should be treated with a non-quinolone regimen. In Kent County, the Health Department sent out an advisory recommending that providers culture all MSM who are being evaluated for gonorrhea and submit cultures to the state lab in Lansing for susceptibility testing. No changes in treatment of MSM in Kent County are recommended at this time. Providers in all counties are encouraged to culture patients whose symptoms do not resolve and send cultures to the state lab in Lansing for susceptibility testing.

Several areas of the country are seeing increases in reported cases of QRNG, and the CDC recommended in their 2002 STD Treatment Guidelines that states track gonococcal resistance to assist providers in prescribing the most effective antibiotics for their patients. The Michigan Department of Community Health has been conducting a gonococcal resistance surveillance project in conjunction with sentinel labs around the state since July 2002. In addition, the Detroit STD Clinic joined the national Gonococcal Isolate Surveillance Project in January 2003. We will continue to monitor reports of QRNG and as additional cases are detected, treatment guidelines may be revised as necessary. For more information contact Dara Ganoczy, M.P.H., STD Epidemiologist, at 517-335-9007 or ganoczyd@michigan.gov.

Recent Presentations

Erik Janus, M.S., recently presented "Michigan's Drinking Water: Toxicology Health Risks and Potential for Chemical Terrorism" in November at the Michigan State Medical Society Annual Meeting. Janus is a toxicologist for the chemical terrorism group in the Division of Environmental and Occupational Epidemiology

Lori Cameron M.P.H., Ph.D., Martha Stanbury, M.S.P.H., and Shevon Desai, along with others recently presented "Outreach and Coalition Building for Agricultural Safety and Health in Michigan-A One-Year Pilot Project" at the Challenges in Agricultural Health and Safety Conference in San Francisco, September 7-9. All are from the Division of Environmental and Occupational Epidemiology

Upcoming Conferences

What DO They Really DO in Lansing?

An introduction to MDCH/ Division of Communicable Disease and Immunization for NEW Local Health Department Staff

December 4th
9:30-3:00

MDCH/ Division of Communicable Disease and Immunization is hosting an orientation titled ***"What DO They Really DO in Lansing?"*** for new local health department communicable disease staff. You may recall that we hosted a similar day in September 2002. The orientation will provide an introduction to:

- The organization of MDCH/ Communicable Disease and Immunization and its various sections
- Who to contact in each section for specific questions
- Completing investigation forms
- How to submit lab specimens
- What MDCH can do for you!
- …And Much Much More!!

To register, contact Jennifer Beggs at 517-335-8165 by November 21st.

On November 6th, the **Michigan Cancer Surveillance Program** will be hosting a one-day conference on benign brain/CNS tumors and collaborative staging. The conference will be held in the Auditorium at the Michigan Historical Library/Museum in Lansing from 8:00-5:15 p.m. The conference is targeting hospital and laboratory personnel that report cancer cases and will cover new requirements and procedures that will take effect on January 1, 2004. If you have any questions contact Whitakers@michigan.gov.

Severe Morbidity and Mortality Associated with Influenza in Children and Young Adults

By: Shelley Stonecipher, D.V. M., M.P.H.

In January of 2003, the Michigan Department of Community Health (MDCH) received reports of unexplained deaths and severe illnesses and mortality associated with influenza among Southeast Michigan residents. By February 6th, seven unexplained deaths were reported ranging in age from 7-48 years and one death due to neurological complications of influenza in a 5-year-old child. Increased surveillance for unexplained deaths and for severe illnesses associated with influenza began in the State of Michigan. MDCH performed case finding with assistance from local health departments and other health care personnel throughout Michigan.

MDCH investigated cases with assistance from the Centers for Disease Control and Prevention. Epidemiological and clinical information was obtained and submission of clinical specimens for diagnostic testing was facilitated. Explanations for the unexplained deaths among the adults were ultimately identified, all of which were determined to be due to other infectious or noninfectious disease processes. Further investigation focused on unexplained deaths and severe illnesses associated with influenza in children, considered low risk for influenza complications, and young adults less than 21 years of age.

The results of the investigation identified 14 lab-confirmed cases of influenza: 4 deaths and 10 severe illnesses, with onset during January 17–February 21 among children and young adults aged <21 years in Michigan. Ten children with severe illnesses were likely complications of influenza. The four fatalities associated with influenza occurred in previously healthy children for whom influenza vaccination was not encouraged or recommended.* The cases were similar with the onset of fever, and rapid progression of severe illness to death. All tested positive for influenza and none were vaccinated for influenza. In addition, four other unexplained deaths among children remain under investigation to date.

It is unknown whether these cases represent an increase in the number of cases or are the result of increased surveillance. The results of this ongoing investigation indicate the need for further studies to better define the frequency of serious complications from influenza in children.

For the complete Morbidity and Mortality Weekly Report

CDC. MMWR Severe Morbidity and Mortality Associated with Influenza in Children and Young Adults–Michigan, 2003. MMWR 2003; 52(35); 837-840.

*Current vaccination recommendations for influenza is for groups of people who are at increased risk for complications from influenza. Young, otherwise healthy children aged 6–23 months are at increased risk for influenza-related hospitalization. For this reason, influenza vaccination of healthy children aged 6–23 months is encouraged when feasible (1).

1. CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2003;52 (No. RR-8).

Employee Focus: Gabe Palumbo

Gabe Palumbo, M.B.A., M.P.H., currently serves as a Center for Disease Control and Prevention (CDC) Senior Public Health Advisor in the Infectious Disease Epidemiology section. He was relocated to MDCH in August 2001 after serving in a similar position in Honolulu, Hawaii.

Palumbo joined the CDC in 1993 after being recruited into the Public Health Associates Program. He received two years of training as a TB disease investigation specialist with the New York City Health Department. After this training, he became a Senior Public Health Advisor in tuberculosis and has remained in this position, acting as a consultant to various state health departments.

Although in the Infectious Disease Epidemiology section, Palumbo has much broader duties in addition to TB surveillance and epidemiology. Much of his job involves program management, including assisting with the federal grant and progress report writing, and maintaining contracts with local health departments and the American Lung Association. Along with the TB coordinator, he also supervises two regional TB nurses. In addition to these programmatic duties, Palumbo, along with other TB staff, manage the surveillance database and interact with the laboratory to report TB cases.

One of Palumbo's major accomplishments since joining MDCH is working with the Michigan Advisory Committee for Elimination of Tuberculosis (MI-ACET). He worked with them to draft the 2003 MI-ACET Recommendations in addition to helping to create the new MI-ACET website. The website, www.michigantb.org, has comprehensive information on TB testing, treatment, and epidemiology. The website is a great resource for health care professionals, local health departments, and the general public.

Palumbo received a B.S. in Communications for Medaille College in Buffalo, NY. He received an M.B.A. from California Lutheran University and an M.P.H. from Emory. He lives with his wife, Jackie, and their children Jessica and Matthew in Grand Ledge. In their spare time, the Palumbo family enjoys many outdoors activities, especially kayaking and hiking.

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Information Systems (GIS) mapping which is integrated into case, as well as reporting screens. Tabular summary and detail reports are also available. Security of data is of utmost importance in this system. To that end, the MDSS is accessible only to users having signed-in through the Michigan Single-Sign-On process. Once entry to the system has been gained, further access is limited to users based upon assigned programmatic and geographic roles that are maintained and enforced within the application.

At implementation, the system will facilitate investigations for the majority of communicable diseases reportable in the State of Michigan (sexually transmitted diseases, tuberculosis and HIV/AIDS laboratory data will be accepted by the system, but case management will be separate during the initial implementation). Parallel developments include an automated syndromic surveillance system (The MDSS Syndromic Surveillance Project) that will leverage MDSS technologies to incorporate the inclusion of "chief complaint" data from Michigan's emergent care facilities as well as a system to monitor sales patterns of over-the-counter pharmaceuticals. Both of these projects promise the introduction of data streams that sacrifice specificity for much more timely data access to emergent conditions than has been available via traditional passive diagnoses-based reporting.

By working with a user group representing a variety of Michigan's Local Public Health Jurisdictions (Central-Michigan District, Kent County, Macomb County, Marquette County, and Washtenaw County Health Departments), project developers have been able to gather valuable insights and the needs of public health participants from across the State. Further, the contributions of this group have been critical in the development of the training programs scheduled for release in late fall, 2003.

Ultimately, the development of the MDSS and associated projects will provide a clearer picture of public health in Michigan, and will be a resource for the early identification of emergent public health conditions and a data foundation upon which we will be building for many years to come. Questions about the system should be referred to the appropriate MDCH Regional Epidemiologist, Brad Carlson (carlsonbr@michigan.gov) or Jim Collins (collinsjim@Michigan.gov).

New CDC Fellow Joins MDCH Staff

Violanda I. Grigorescu M.D., M.S.P.H. is the CDC/HRSA Maternal and Child Health (MCH) Epidemiologist Fellow who joined MDCH as the MCH epidemiology team leader. She is a senior MCH epidemiologist who worked with Georgia Division of Public Health prior to her move to Michigan. While being in Atlanta, she worked on different projects such as: perinatal indicators by perinatal regions and hospitals' level of care, peripartum cardiomiopathy case reviews, and maternal morbidity among Medicaid women. She also offered assistance in improving the maternal mortality surveillance system.

Grigorescu has a long career in women's health and MCH as a physician and then as an epidemiologist. She earned her M.D. degree at the University of Medicine and Pharmacy Iasi, Romania and her M.S.P.H. at the University of Louisville, School of Public Health. She has more than 15 years of clinical experience as an Ob/Gyn physician in her native country, including also

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Staff Changes

Jennifer Beggs, M.P.H., recently took a new position in the Communicable Disease Section as a Communicable Disease Epidemiologist. Prior to this she worked for the Surveillance Section as a Regional Epidemiologist assigned to Region 7. She attended the University of Michigan were she received an M.P.H. She received a B.S. from Michigan State University. Her new tasks will include planning MDCH's Communicable Disease Conferences; monitoring and providing guidance for prion diseases, legionella, and hepatitis A outbreaks; developing a scabies manual; and assisting with general communicable disease follow-up.

Susan Bohm, M.S., recently took a position as the new Regional Epidemiologist for Region 1 (based in Ingham County). She comes to the Surveillance System section from Chronic Diseases, Epidemiology Services Division, where she worked on the Behavioral Risk Factor Survey. Prior to coming to MDCH, she held several research assistant positions at the Department of Epidemiology, Michigan State University and had a long career in scientific journal publishing at the National Research Council of Canada. She received her M.S. in epidemiology from MSU and her B.S. in Life Sciences from the University of Toronto.

Rebecca Malouin, Ph.D., M.P.H., has recently accepted a new position as Senior Genetic Epidemiologist in the Epidemiology Services Division. Previously, Malouin was an Epidemiologist with the Maternal and Child Health group working on a HRSA-funded project concerning racial disparities in maternal morbidity in Michigan. She is now responsible for special studies and ongoing program evaluation in the genetics and newborn screening programs.

Elizabeth Hamilton, M.P.H., has accepted an expanded role within the Bloodborne Infections and STD Epidemiology section as an HIV Epidemiology Specialist. She will remain as the primary contact for the HIV Surveillance Evaluation Project. In addition, she will give support to staff in using SAS and in writing SAS programs, completing and assisting staff with the more complex HIV data analyzes, and in taking the lead role for Epi Profiles and community planning.

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her training and work in infertility management and treatment and reproductive-assisted techniques in Sheffield, U.K. She was also involved in many voluntary activities as the vice-president and then president of the Society for Education on Contraception and Sexuality funded in 1991 in Romania with USAID and IPPF support. From 1995 until 1997, she was involved in WHO projects related to women and children's health in Eastern and Central Europe.

In 1999, Grigorescu became the MCH epidemiologist/Healthy Start (HRSA funded) evaluator at the Louisville/ Jefferson County Health Department, KY. She was the team leader of the Data Use Institute (DUI) and Perinatal Periods of Risk Practice Collaborative (PPOR-PC) teams. As a consequence, she was able to develop a strong collaboration with different community partners and thus to implement both PPOR and Fetal and Infant Mortality (FIMR) project as a two-step process of analyzing the fetal and infant mortality in Louisville/Jefferson County, KY. She was the local CityMatCH representative and she worked in collaboration with the Kentucky Chapter of March of Dimes (MOD) as well as the MCH public heath professionals at the State level, being involved in different activities (i.e. State Child Fatality Review Committee, State MCH Conference). Grigorescu also continued to work with the University of Louisville and as a result she developed the MCH epidemiology internship in collaboration with the School of Public Health faculty.

Preparations for the 2003-2004 Influenza Season

By: Kyle Enger, M.P.H.

The 2003-2004 influenza surveillance season began on September 28, 2003. There are currently 39 health care providers who are enrolled as sentinel surveillance sites throughout the state. Their data contribute to the CDC's influenza surveillance system, which allows tracking of influenza activity regionally and nationally. In the past, surveillance was only active from October to mid-May, since influenza usually peaks during December to March (1). However, in Michigan during 2003, the sentinel surveillance system was active from mid-May through September for the first time, with about 10 sentinel sites providing data. As expected, only low levels of influenza-like illness were detected. Summer surveillance should increase our ability to detect unusual influenza activity and may provide early warning of a pandemic. Recruitment of additional sentinel sites is ongoing; interested clinicians may contact Kyle Enger at 517-335-8159 for more information.

Influenza vaccine is the key means available to limit influenza morbidity and mortality. About 85.5 million doses of inactivated influenza vaccine will be available nationwide for the 2003-04 influenza season (2). According to the CDC, this quantity is sufficient for everyone who wants vaccine to receive it as early as October (2). Influenza vaccination is particularly important for persons aged 6-23 months or 50+ years, persons with certain medical conditions, women in the 2nd or 3rd trimester of pregnancy, and persons (such as health care workers) who care for individuals at increased risk for influenza-related complications (3). Although vaccination is most useful in October or November, it may continue throughout the influenza season until supplies are exhausted (3).

This year, a newly approved live attenuated influenza vaccine is also available. Its trademark is FluMist and it is administered as a nasal spray. However, it is only approved for use in healthy persons aged 5 to 49 years, who are at lowest risk for influenza-related complications (4). It is more expensive than the inactivated vaccine, and its storage and handling procedures differ as well.

The composition of the 2003-04 vaccine is the same as the 2002-03 vaccine; it contains A/New Caledonia/20/99-like [H1N1), A/Moscow/10/99-like [H3N2), and B/Hong Kong/330/01-like strains (5). Both inactivated and live attenuated vaccine will protect against the same strains of virus.

Worldwide virologic surveillance results covering May to September of 2003 (1) showed H3N2 subtypes of influenza A predominating, with about 70% of the 254 H3N2 isolates tested matching the vaccine strain well. All of the 91 H1 isolates tested matched the vaccine strain well. Half of the 4 influenza B strains tested matched the vaccine strain well. Although this indicates that H3N2 subtypes might also predominate this winter in the U.S., neither the predominant subtype nor the severity of the 2003-04 influenza season can be predicted with certainty. The best way to be prepared is to get vaccinated in October or November.

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3. CDC. Prevention and Control of Influenza: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2002; 51(RR-3): 1-32.

4. Harper, SA, et al. Using Live, Attenuated Influenza Vaccine for Prevention and Control of Influenza. MMWR 2003; 52[RR-13): 1-8.

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New Grants

The Infectious Disease Epidemiology section, along with Detroit Health Department, has been awarded a grant to determine if the new Quantiferon blood test is equivalent to the tuberculin skin test for detection of TB infection or disease. Michigan will enter into a consortium with five other states to conduct this research and CDC will provide equipment, training, and dollars for enrollment incentives.

The Bloodborne Pathogens and STD Epidemiology Section has received $114,945 in funding from CDC for continuation of the OASIS project. The OASIS project conducts enhanced surveillance for gonorrhea, which will aid in characterization of the population in terms of demographics, risk factors, and co-morbidities.

The Michigan Cancer Surveillance Program, in the Epi Services Division, has received funding through the National Cancer Institute to bring a closer collaboration between the state cancer registry and the Detroit Metropolitan SEER registry. This will include work related to data collection and data quality as well as collaborative research projects. This funding is for just under one million dollars for a seven year funding cycle.

The Bloodborne Pathogens and STD Epidemiology section in the Division of Communicable Disease and Immunization has received two grants. The section was awarded $303,972 to continue the STARHS project, which will develop incidence reporting of HIV through new laboratory methods. This funding will also provide ongoing financial support for antiretroviral drug resistance surveillance. Also, the section was awarded $130,699 for behavioral surveillance for HIV.

The SARS Response in Michigan, 2003

By: Kyle Enger, M.P.H.

No confirmed cases of SARS were found in Michigan during the SARS epidemic in the spring of 2003. However, the Communicable Diseases and Immunization Division responded vigorously, communicating with local health departments (LHDs), devising and disseminating a screening tool, collecting data regarding cases under investigation, and fielding calls from health care professionals, the media, and the public. Shelley Stonecipher headed our SARS response, with assistance from Kyle Enger, Sally Bidol, Joyce Lai, Gillian Stoltman, Melinda Wilkins, and Matthew Boulton. The Virology Section of the Bureau of Laboratories also assisted in the response.

From March through July, the Division coordinated with the LHDs to investigate 68 Michigan residents who were potential SARS cases. Three of these residents were classified as suspect cases; however, they were later excluded based on laboratory evidence. A fourth suspect case was identified in Michigan but resided in another state; however, that case was later excluded as well. No probable or confirmed cases were identified in Michigan.

The World Health Organization (WHO) issued a global health alert and travel advisory on March 15, including reports of cases in Toronto, Canada. On June 12, the last probable SARS case in Toronto was identified. There have been 251 probable cases in Canada, 43 (17%) of whom died (1). One hundred and nine (43%) of the Toronto cases were health care workers (1). On June 15, the last probable case in the world was identified in Taiwan, and on July 5, the WHO announced that transmission of SARS had ceased worldwide. Surveillance is continuing in order to rapidly identify potential cases of SARS. In Michigan, the Division is identifying ways to improve our SARS response should it return in the future.

Valuable resources regarding SARS are available from the CDC (http://www.cdc.gov/ncidod/sars/) and the WHO (http://www.who.int/csr/sars/en/).

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Recent Publications

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Dr. Henry Falk Visits MDCH

MDCH was honored by the visit of a very prominent public health leader in August. Dr. Henry Falk, the Assistant Administrator of the federal Agency for Toxic Substances and Disease Registry (ATSDR) in Atlanta and newly (in August) appointed head of the federal National Center for Environmental Health (NCEH) came to Michigan to discuss two prominent sites of dioxin contamination in our state.

Dr. Falk has taken a particular interest in the Petitioned Health Assessment request ATSDR received from several Michigan residents. ATSDR was created under the federal Superfund legislation and is charged with conducting public health assessments at sites of environmental contamination. Under this legislation, private citizens can petition the ATSDR to consider whether a health assessment should be conducted at a site of public concern. The presence of dioxin and other dioxin-like chemicals in the soils of the city of Midland and in the floodplain of the Tittabawassee River between Midland and Saginaw was the focus of a 2001 petition to ATSDR. After considering the available information, ATSDR decided that the Midland and floodplain dioxin contamination met the criteria the agency uses to determine if a public health assessment should be conducted. MDCH has had a cooperative agreement to conduct public health assessments with ATSDR since 1988 and agreed to take the lead on this assessment.

Dr. Falk and several ATSDR and NCEH staff members flew into Lansing on August 20th and met briefly over with Epidemiology Bureau Director Dr. Matt Boulton, Division of Environmental and Occupational Epidemiology Director Dr. David Wade, Toxicology and Response Section Manager Linda Dykema and staff from the Toxicology and Response section. Dr. Falk and his colleagues from ATSDR met with MDCH Director Olszewski, upper level Michigan Department of Environmental Quality (MDEQ) management, and representatives of the Governor office before departing to Midland.

In Midland Dr. Falk met with citizens and environmental activists who composed and submitted the petition to ATSDR. The group also attended a public meeting in Freeland sponsored by MDCH and featuring presentations by Dr. Falk and Dr. Suzanne White, Executive Director of the Poison Control Center at Children's Hospital in Detroit. Dr. White was representing the newly formed American College of Medical Toxicologists. Her presentation centered on the toxicity and health effects of dioxin. Dr. Falk's explained ATSDR's relationship with MDCH in the health assessment process and welcomed dialogue with the community and the stakeholders.

Dr. Flak and his colleagues were given a tour of the floodplain on both sides of the Tittabawassee River with stops in public parks where MDEQ has detected levels of dioxin in surface soil above its 90 parts per trillion direct contact criteria. Following the tour, the group participated in a working lunch with Dow at its corporate headquarters in Midland. Dr. Falk was asked about health assessment project components such the exposure study under development and the likely epidemiological health study that would follow. The group also had a tour of the Dow plant facility before departing for Atlanta.

Dr. Falk's visit to Michigan coveys a message to citizens and colleague alike that the Midland and floodplain dioxin contamination are important public health issues in which he has taken a priority interest. His openness and accessibility impressed all who met with him. MDCH staff involved with the public health assessment for these areas is grateful for the interest and support that Dr. Falk continues to provide.

New EIS Officer Arrives at MDCH

Darline K. El Reda, Dr.P.H., M.P.H., began her Epidemic Intelligence Service (EIS) Fellowship through The Centers for Disease Control and Prevention (CDC) this summer and will be spending two years at the Bureau of Epidemiology. She comes to Michigan after years of working in the field of sexually transmitted diseases. First, as a Disease Intervention Specialist for the City of Long Beach Health Department conducting contact tracing and outbreak investigations, then as an HIV program evaluator and Epidemiology Teaching Assistant at the University of Texas-Houston. More recently, Dr. El Reda was a Senior Epidemiologist at the City of Houston Health Department working on the management of STD and HIV grants for the Bureau of Epidemiology. During her EIS fellowship, Dr. El Reda will focus her research on maternal and child health issues in Michigan and assist in investigations of disease outbreaks/ epidemics in Michigan and elsewhere in the United States. Her first project will be to evaluate Michigan's Early Hearing Detection and Intervention Surveillance System. Dr. El Reda received her B.S. from Syracuse University, her M.P.H. from California State University-Long Beach ('98), and her Dr.P.H. from the University of Texas Houston Health Science Center School of Public Health ('02).

New Employees

Brenda Brennan, M.S.P.H., recently joined the Infectious Disease Epidemiology Section as one of the new Communicable Disease Epidemiologists. She received her undergraduate degree in microbiology from Michigan State University. After graduation, she worked as a researcher at the Karmanos Cancer Institute and later at Pfizer Global Research and Development. Brennan received a M.S.P.H. in Tropical Public Health and Communicable Diseases from the University of South Florida. While obtaining her degree, she worked at the Florida Department of Health as a virologist conducting arboserology testing.

Kim Kutzko, M.P.H., is the new Regional Epidemiologist for Region 5 (based in Kalamazoo). She attended the University of Iowa and received a B.A. in psychology and attended the University of Michigan School of Public Health and received a M.P.H. in epidemiology. Previously, she worked as a Research Associate in the Department of Epidemiology at the University of Michigan and as the Assessment and Evaluation Specialist at the Kalamazoo County Human Services Department.

Paul Moffat, M.P.H., M.P.A., is a new CDC Public Health Advisor for the Immunization Program. For eight years, Moffat has worked for the Maine, New York and Ohio Immunization Programs. He started his career performing STD/HIV surveillance and disease intervention techniques in Chicago and southern California, and has also managed the New Orleans, Louisiana TB control program. Recently, he has worked in short term assignments both as the Deputy Director of Guyana's Global AIDS Program and as a Technical Officer for the World Health Organization in Kishoreganz, Bangladesh.

Scott Schreiber, M.P.H., is the new Region 8 Epidemiologist for the Upper Peninsula based in Marquette. He received his B.S. in zoology at Michigan State University and his M.P.H. in hospital and molecular epidemiology at the University of Michigan. Previously, he worked as a Research Assistant in the Department of Microbiology and Immunology at the University of Michigan.

Michael Hass, M.S., is the new Geographic Information System (GIS) Specialist in the Surveillance Section. Hass attended the University of Massachusetts and Humboldt State University (CA) where he received an M.S. in GIS and natural resources planning. He comes to MDCH from the Michigan State University Extension and Branch County GIS where he completed numerous spatial database and analysis projects for multiple governmental partners, including Branch, Hillsdale, and St. Joseph county local health departments.

Elizabeth Grant, M.H.S, is the new Regional Epidemiologist for Region 6 and is based in Grand Rapids. She received a B.S. with honors in medical microbiology and immunology from the University of Wisconsin - Madison in 2000. She received a M.H.S. from Johns Hopkins Bloomberg School of Public Health in infectious disease epidemiology in 2003. Prior to attending graduate school, Grant worked as a laboratory scientist at the University of Wisconsin Biotechnology Center. During graduate school, Grant worked for a year with the Center for Immunization at the Maryland Department of Health and Mental Hygiene.

Shelly Shinevar is the new Secretary for the Surveillance Systems Section. She has worked for MDCH since January 2001 in multiple areas, including Legislative Support, Analysis & Policy Development/Certificate of Need/Cardiovascular Health, and Nutrition & Physical Activity. She has also worked as a dance director, teacher, and choreographer at Lansing Community College (LCC), Michigan State University and at various dance studios and recreation programs. She has a B.S. degree from Western Michigan University in english and dance education and a Post-Baccalaureate Legal Assistant Certificate and an Associate of Arts degree from LCC.

Cassandre Celeste Larrieux, M.P.H., is a new Maternal and Child Health Epidemiologist in the Epidemiology Services Division responsible for the Pregnancy Risk Assessment Monitoring System (PRAMS) and the Supplemental Food Program for Women, Infants, and Children (WIC) programs data analysis.

She received her bachelor's degree in chemistry/molecular biology and a M.P.H. at Florida A&M University. She also worked as a chemist technician for the Florida Dept. of Environmental Protection. She has participated in a variety of public health projects such as: developing a surveillance report on the prevalence of diabetes and its complications in Florida's Hispanic population for 1990-99 as well as analyzing data for Florida's Behavioral Risk Factor Surveillance System (BRFSS).

Michael Paustian, M.S., is a new Maternal and Child Health Epidemiologist in the Epidemiology Services Division responsible for the CSHCN and oral health surveillance data analysis. He received his B.S. in genetics from Iowa State University in 1999 and his M.S. degree in epidemiology from the University of Iowa in 2003. As a graduate research assistant his work included a study on the contribution of environmental exposures, particularly arsenic exposure, to melanoma. He also worked on a study of the preventive aspects of selenium intake with regard to prostate cancer. He has designed and presented an evaluation study on the implementation of motivational interviewing into substance-abuse counseling.

Kory Groetsch, M.S., is the new Health Assessor/Education Coordinator with the site assessment team in the Toxicology and Response Section (Division of Environmental and Occupational Epidemiology). He has more than seven years experience in

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"New Employees" continued from page 11

the field of environmental toxicology and chemistry and currently is the immediate past president of the Midwest Chapter of the Society of Environmental Toxicology and Chemistry. Groetsch has worked as an environmental scientist for the Lake Superior Chippewa Indians studying contaminant concentrations in traditional native foods and issues of chemical exposure to tribal members. Groetsch has a M.S. from Miami University (Ohio).

Oana Vasiliu, M.D., M.S., is a new Epidemiologist with the Division of Environmental and Occupational Epidemiology. Dr. Vasiliu is a native of Romania, where she received her medical degree; she recently received her M.S. in epidemiology from MSU. She is the Project Manager for the Michigan PBB Cohort Endocrine Disruption study that is a collaboration of MDCH with MPHI and Dr. Michele Marcus of the Rollins School of Public Health at Emory University. The study seeks to examine the impact of PBB exposure, as measured by serum levels, upon a number of hormonally influenced conditions and life events in cohort members and their offspring.

Paul Kramer, is a new employee in the Vital Records and Health Data Section. Kramer has a degree in economics from Trinity College and a degree in computer science from Wayne State. He previously worked at Voices of Detroit as a data coordinator. He was also awarded the Spirit of Detroit Award by the Detroit City Council last May for his work there. Kramer will be working on the expansion of a new hearing screening reporting module in hospitals to ease the burden of reporting and processing of newborn hearing screen results.

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