Friday, August 10, 2007
11:00 am — 2:00 pm
G5/152 Clinical Science Center
600 Highland Avenue
Madison, Wisconsin
SYMPOSIUM AGENDA

11:00 am  Welcome & Introductions
Luncheon
Pat Remington, Director

11:20 am  Investigation of False Positive Rates in Wisconsin Newborn Screening Using Tandem Mass Spectrometry Technology
Traci Dusso

11:40 am  Improving Access to and Engagement in Addiction Treatment: The ACTION Campaign
Bonnie Roth

12:00 noon  A Case Study of a Community Health Needs Assessment
Melissa Umland Olson

12:20 pm  Break

12:40 pm  Hepatitis B Vaccine Provision to Milwaukee-area Infants
Morgen Alexander-Young

1:00 pm  Community Voices Project: Addressing Disparities in STDs and Unintended Pregnancies among African American Adolescents
Sabrina Smiley

1:20 pm  Poultry Vaccination Programs and Public Health Implications: An Integrated Approach to H5N1 Prevention
Dwayne Myal

1:40 pm  Closing Remarks
Pat Remington, Director
Public Health in Practice

An Overview of the Master of Public Health and Wisconsin Population Health Fellowship Programs

The Master of Public Health Program, established in 2005, provides multidisciplinary graduate education and training in public health concepts and methods to health professionals and students through a focus in service learning. Close connections with the community, through the Wisconsin Division of Public Health, the City of Milwaukee Health Department, and other health care and not-for-profit agencies, enable students to apply their skills in a real world setting. The MPH program’s vision is to develop a workforce that is competent to advance the well-being of the citizens of Wisconsin and beyond.

The Wisconsin Population Health Fellowship Program is an extension of the student’s public health service and training. The two-year fellowship program, targeted to those who have completed masters programs, preferably in public health and allied sciences, provides applicants with practical field assignments in community based, non-profit, governmental and health service organizations. The primary goal of the Wisconsin Population Health Fellowship Program is to develop the next generation of public health officials and administrators skilled in planning, implementation, and evaluation of public health programs. Fellows are currently located in public health departments in Milwaukee and La Crosse, the American Cancer Society, the state health department and small non-profit health organizations.

Special Thanks to...

**Mentors**
- Dennis Baumgardner
- Murray Katcher
- Tom Mosgaller
- Christopher Olsen

**Preceptors**
- Barbra Beck
- Dave Gustafson
- Alexandria Meyer
- Michael Perdue
- Mary Young

**Program Faculty**
- Henry Anderson
- Linda Baumann
- Byron Crouse
- Lori DiPrete-Brown
- Philip Farrell
- John Frey
- Cindy Haq
- Karen Holden
- Marty Kanarek
- Kyungmann Kim
- Javier Nieto
- Chris Olsen
- Jonathan Patz
- Linda Reivitz
- Patrick Remington
- Gordon Ridley
- Sue Riesch
- Jeanette Roberts
- Susan Skochelak
- Geoff Swain
- Amy Trentham-Dietz
- Jim Vergeront
- Mark Wegner
- Claire Wendland
- Susan Zahnier

**Staff**
- Barbra Beck
- Colin Brock
- Heather Cote
- Barbara Duerst
- Patrick Remington
- Norma-Jean Simon
- Jennifer Spencer

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Investigation of False Positive Rates in Wisconsin Newborn Screening Using Tandem Mass Spectrometry Technology

**Traci Dusso**

**Preceptor:** Alexandria Meyer, MS, Statewide Genetics Consultant, Wisconsin Department of Health and Family Services

**Mentor:** Murray Katcher, MD, PhD, Chief Medical Officer, Wisconsin Department of Health and Family Services

The Wisconsin Newborn Screening (NBS) Program screens for 47 disorders using dried blood spot samples. The 37 disorders screened using tandem mass spectrometry (MS/MS) include fatty acid oxidation disorders, aminoacidopathies, and organic acidurias. Since the introduction of MS/MS technology, NBS false positive rates have risen, perhaps leading to increased parental stress. This study aims to discern which, if any, factors reported at time of collection are associated with increased false positive rates in NBS. Preliminary analysis was completed using data from the Wisconsin NBS Program, looking at the impact of gender, birth weight, gestational age, race/ethnicity, time from birth to sample collection, and total parenteral nutrition (TPN) status on false positive rates for each of the three groups of disorders. Where applicable, factors were directly standardized to state norms. Further statistical analysis was completed using a logistic regression model in SAS. Initial results indicate gender, birth weight, gestational age, race/ethnicity, time from birth to sample collection, and TPN use are all associated with higher rates of false positives in NBS, dependent on the type of disorder. Results of the secondary analysis support the conclusions of the primary analysis with all factors showing a significant result for at least one type of disorder. Multivariate analysis confirmed a given factor’s effect in the presence of all other factors: for organic acidurias, race was significant at the p<0.0001 level, and for fatty acid oxidation disorders, gender was significant at the p<0.02 level. Additional multivariate analysis showed significant effects of all other factors. The study findings indicate all factors analyzed have a discernable effect on false positive rates, dependent on the type of disorder. The clinical versus statistical significance of each factor must now be established. Understanding which factors influence the reporting of screening tests and the ability to modify the important factors may improve the screening process and reduce the need for retesting.

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Poultry Vaccination Programs and Public Health Implications: An Integrated Approach to H5N1 Prevention

**Dwayne Myal**

**Preceptor:** Michael Perdue, PhD, Scientist, World Health Organization Global Influenza Programme

**Mentor:** Christopher Olsen, DVM, PhD, Associate Dean, UW-Madison, School of Veterinary Medicine

One of the most complex public health issues to date is H5N1 highly pathogenic avian influenza; a disease primarily affecting birds but also posing significant health concerns and pandemic implications to humans worldwide. For a number of higher risk nations the implementation of poultry vaccination programs have been considered into their pandemic prevention planning; the rationale being that protecting animals should also help protect humans. In most cases, little is known about poultry vaccination programs or the actual impact they have had on protecting human health. Working in collaboration, the World Health Organization and the United Nations Food and Agriculture Organization, myself included, have begun to evaluate national poultry vaccination programs as a means of understanding their utility, role, and importance in the protection of human health. In doing so, we analyzed the poultry vaccination programs and protocols, post-vaccination surveillance data, and the epidemiology of outbreaks in both humans and poultry in various nations throughout Europe, Africa, and Asia. We discovered that when correctly implemented, poultry vaccination programs can be associated with a reduction in the number of human cases, as well as poultry outbreaks. We also learned that a combination of factors including government infrastructure, availability of resources, and public awareness were also found to be equally, if not more important to outbreak prevention; in combination with or irrespective of an existing poultry vaccination program. Understanding the details, successes, and failures of poultry vaccination programs will be important to all nations when assessing individual needs and establishing best practices in their ongoing efforts to prevent an avian influenza pandemic in humans.

Dwayne Myal (MPH Student) graduated from UW-Madison with a BS in 2005 concentrating his studies in Nutritional Sciences and International Development. Mr. Myal’s interests are primarily international public health with an emphasis on infectious diseases. He has had HIV/AIDS related work/field experiences in Uganda and Honduras. In addition, he has worked with the CDC and the WHO in Vietnam and Geneva, Switzerland respectively, on the ongoing avian influenza pandemic prevention campaigns. In the future Mr. Myal would like to continue working on international public health and developmental issues; possibly working for a government, intergovernment, or non-government organization dedicated to resolving some of those issues.

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Traci Dusso (MPH Student) received her BS in Genetics from the University of Wisconsin – Madison in Spring 2006. Ms. Dusso’s public health interests lie mainly in the area of epidemiology, specifically the epidemiology of inherited genetic diseases. Ms. Dusso is also interested in the spread of communicable diseases and maternal and child health. Her future plan is to work in a health department where she will be able to apply all of the skills which she has learned in the MPH program.
Community Voices Project: Addressing Disparities in STDs and Unintended Pregnancies among African American Adolescents  
**Sabrina Smiley**

**Preceptor:** Barbra Beck, PhD, Training and Education Coordinator, UW Population Health Institute, City of Milwaukee Health Department

Sexually transmitted diseases (Chlamydia, Gonorrhea, and Syphilis) and unintended pregnancies disproportionately affect African Americans in Milwaukee; particularly African American youth ages 15-19. Milwaukee County has the highest reported STD case rate in the state, with 49.7% of all STDs reported in Milwaukee County. Among 63 selected large cities, Milwaukee ranks 10th highest in STD case rates. In addition, Milwaukee has one of the highest percentages (18.7%) of adolescent births out of total births in the country, ranking it 49th highest out of 50 major metropolitan areas in 2002. Milwaukee was also ranked 44th highest for percentages of births among adolescents who are already parents (25.8% of all teen births). These health conditions are exasperated by challenges youth face in accessing health care. This presentation summarizes Community Voices, a qualitative project on the norms and beliefs of STDs and unintended pregnancy among Milwaukee African American adolescents. This project is the segment of the Milwaukee Alliance for Sexual Health (MASH) activities conducted between October 2006 and March 2007. It included a series of community focus groups, one-on-one and key stakeholder interviews. Participants in the focus groups and one-on-one interviews included African-American teens (15-19), young adults (20-24), pregnant teens, and teens with a history of a STD who resided in the inner city of Milwaukee, an area disproportionately affected by STDs and unintended teenage pregnancy. Ultimately, Community Voices was directed gathering information that will assist in strategic planning to improve the sexual health of African American youth and young adults in inner city Milwaukee.

**Sabrina Smiley** (Second Year Fellow) is a recent graduate of the University of Alabama at Birmingham School of Public Health, Ms. Smiley is leading a qualitative project on the norms and beliefs of unintended pregnancy and sexually transmitted infections (STIs) among Milwaukee African-American adolescents with the assistance of local cultural experts. She is writing two issue papers addressing the causes of the high STD rate among African-Americans in Milwaukee. Ms. Smiley is also collaborating with the Center for Urban and Population Health addressing the experiences and opinions of African Americans about the Milwaukee health care system. Moreover, Ms. Smiley is leading a Young Women of Color Sexual and Reproductive Health Advisory Council of Planned Parenthood of Wisconsin. This is an initiative to promote responsible sexual behavior to prevent transmission of HIV among young women of color in Milwaukee.

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Improving Access to and Engagement in Addiction Treatment: The ACTION Campaign  
**Bonnie Roth**

**Preceptor:** Dave Gustafson, PhD, Director, NIATx  
**Mentor:** Tom Mosgaller, Director of Change Management, NIATx

Every year, more than 23 million Americans are in need of treatment for a substance abuse disorder, but less than 10 percent of those individuals actually receive treatment. Founded in 2003, the Network for the Improvement of Addiction Treatment (NIATx) works with addiction treatment and behavioral health care organizations across the country to increase consumer access and engagement in treatment, improve consumer outcomes, and advance addiction treatment as an essential component of the health care system. NIATx members create a culture of process improvement in which treatment center staff uses existing resources to improve services, learn innovative strategies through peer networking, and model organizational improvements in addiction treatment. The Adopting Changes to Improve Outcomes Now (ACTION) Campaign hopes to spread the successes learned by NIATx over the past four years to treatment providers all across the country. Launching in September 2007, the ACTION Campaign will provide treatment providers with the tools and expertise they need to implement one of three Campaign ACTIONs which have been shown to improve access to and increase engagement in addiction treatment: 1) Provide rapid access, 2) Improve client engagement, and 3) Create a seamless transition between levels of care. The Campaign hopes to enroll 500 treatment providers during this 18-month period to implement one of the three Campaign ACTIONs. In doing this, the ACTION Campaign ultimately aims to impact the lives of 55,000 individuals currently affected by addiction.

**Bonnie Roth** (MPH Student) is a graduate of the University of Wisconsin—Eau Claire with a Bachelor’s degree in Health Care Administration. After obtaining her degree, Ms. Roth was the Director of an Assisted Living facility in Eau Claire, WI until returning to graduate school. Ms. Roth will graduate from the University of Wisconsin in May 2008 with her Master in Public Health degree, and from there is interested in a wide variety of careers, including interest in quality improvement initiatives as well as in program management opportunities.
A Case Study of a Community Health Needs Assessment  
Melissa Umland Olson

Preceptor: Mary Young, MSEd, Regional Director, Division of Public Health, Southern Region

Community health needs assessments are essential activities in public health. They are used to first identify the specific needs of a population and then develop and implement the appropriate programs and policies in order to address those needs. Local health departments in Wisconsin are mandated to complete Community Health Improvement Processes and Plans on a regular basis. While there is a great amount of flexibility under the mandate, the needs assessments must fulfill the following requirements: be data driven, local health departments must take leadership roles in the process and plan, community involvement must be demonstrated, and it must be based on the State Health Plan priorities or local needs assessments. Because of the flexibility under the mandate, local health departments utilize a wide variety of methods and data sources to conduct their needs assessments. The number of indicators that can be examined for needs assessments are greatly increasing due to public health data being more readily available for analysis, which allows local health departments to examine indicators for all eleven health priorities from the State Health Plan and most of the specific objectives within each priority. However, including too many indicators may be overwhelming when it is time for the assessment team to set priorities. This presentation is a case study of one community health needs assessment in Wisconsin and lessons learned from that experience.

Melissa Umland Olson (Second Year Fellow) began training at the Southern Regional Office of the Division of Public Health following her graduation from the U.W. Department of Population Health Sciences in 2006. Some of her current work projects include: providing comprehensive data for community health needs assessments, analysis of public health workforce data, and administration of the local public health survey. Ms. Olson also provides data and technical assistance to local health departments within the Southern Region as needed.

Hepatitis B Vaccine Provision to Milwaukee-area Infants  
Morgen Alexander-Young

Preceptor: Barbra Beck, PhD, Training and Education Coordinator, UW Population Health Institute, City of Milwaukee Health Department
Mentor: Dennis J. Baumgardner, MD, Professor of Family Medicine, University of Wisconsin School of Medicine and Public Health; Director of Campus Research, Training and Development, Aurora UW Medical Group and Center for Urban Population Health

The Centers for Disease Control and Prevention (CDC) recommends that all medically stable infants weighing over 2000 grams receive a first dose of the hepatitis B vaccine within 12 hours of birth, regardless of the mother’s hepatitis B status. Receiving a first dose in the hospital provides an opportunity to start the hepatitis B vaccination series, and has shown to be a positive predictor of hepatitis B vaccine series completion. The birth dose also serves as a safety net for infants born to mothers whose hepatitis B surface antigen positive condition has gone undetected throughout pregnancy and birth, and for whom other precautions against the perinatal transmission of hepatitis B were not taken. In June 2006, this study randomly sampled 619 birth records from six Milwaukee-area hospitals. Using the Wisconsin Immunization Registry (WIR) online database, the immunization history was examined for each birth record. Of the sample, WIR records indicated 29% received a first dose of the hepatitis B vaccine within 24 hours of birth, and 33% had completed the vaccine series by 9 months of age. These results raised the question as to whether the sample was under-immunized, or whether it is an issue of under reporting to the WIR data system. Multivariate analysis showed the main factors associated with receiving the first hepatitis B vaccine dose in the hospital to be maternal race, mode of delivery, zip code residency, and mother’s Medicaid eligibility at time of child’s birth. The factors associated with completing the hepatitis B vaccine series by 9 months of age were maternal race and having received a first dose of the vaccine within 2 days of birth. Further analysis is needed to assess for series completion at 18 months, in following the vaccine dosage recommendation that infants complete their hepatitis B vaccine series between 6 and 18 months of age. This study provides further evidence for the importance of hospital birth units providing the first dose of the hepatitis B vaccine, as it has shown to be a predictor for timely completion of the hepatitis B vaccine series in infants.

Morgen Alexander-Young (Second Year Fellow) is a recent graduate of the University of Michigan School of Public Health. Ms. Alexander-Young is the Milwaukee Health Department’s lead staff person on a state-city effort to create a long-range HIV/AIDS service plan. She is working with a broad team of service providers and patients on this effort. She has also worked with the health department’s division of Maternal and Child Health to develop and implement programs to address infant mortality and child neglect.