Public Health Symposium

November 11, 2011
8:00 am - 4:30 pm
Pyle Center, 702 Langdon Street
Madison, Wisconsin

School of Medicine and Public Health
UNIVERSITY OF WISCONSIN–MADISON

Department of Population Health Sciences
Master of Public Health Program
Public Health in Practice
An Overview of the Master of Public Health Program

The Master of Public Health Program, established in 2005, provides multi-disciplinary 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 Master of Public Health Program offers a unique educational experience that focuses on applied public health. The MPH Program is supported by a strong core of departmental faculty as well as program faculty spanning a broad array of departments including Family Medicine, Biostatistics and Medical Informatics, Nutritional Sciences, Nursing, Pharmacy, Veterinary Medicine, Social Work, Law, and several other departments across the School of Medicine and Public Health and the University of Wisconsin–Madison campus.

Program Faculty
Henry Anderson
Linda Baumann
Marvin Birnbaum
Elizabeth Bolt
Bridget Booske
Anne Bradford Harris
Charles Brokopp
Karl Broman
Richard Brown
Molly Carnes
Marion Ceraso
Tim Corden
Byron Crouse
Sarah Davis
Thomas DeLeire
Dave Demets
Lori DiPrete-Brown
Barbara Duerst
Maureen Durkin
Mark Edgar
Corinne Engelman
Philip Farrell
Ismor Fischer
Mike Fleming
John Frey
Donna Friedsam
Meg Gaines
Cindy Haq
Marilyn Haynes Brokopp
Mary Hayney
Paul Hunter
Marty Kanarek
Murray Katcher
Paul Kelleher
Kyungmann Kim
Kristen Malecki
Ana Martinez-Donate
George Mejicano
Paul Moberg
Megan A. Moreno
Ken Mount
F. Javier Nieto
Kathleen Noonan
Thomas Oliver
Chris Olsen
Jonathan Patz
Paul Peppard
Patrick Remington
Gordon Ridley
Susan Riesch
Jeanette Roberts
Laura Senier
Ajay Sethi
Lori Severtson
Kirstin Siemerling
Halcyon Skinner
Lisa Steinkamp
Geof Swain
Amy Trentham-Dietz
Louise Trubek
Jim Vergeront
Mark Wegner
Whitney Witt
Bobbi Wolfe
Susan Yakke
Susan Zahner

Program Staff
Thomas Oliver
Barbara Duerst
Heather Cote
Ann Paremski
Jenny Vue
8:00 am  Registration & Continental breakfast
8:30 am  Tom Oliver: Welcome and Overview
8:45 am  A School-Based Outreach Approach to Reducing the Uninsured in Wisconsin
          Marisa MacLaren
9:05 am  Assessing the Built, Social, and Nutrition Environment of Wisconsin Communities: The WASABE and ANEW Study
          Navnit Sekhon, Kelli Blackmore, Madeline Duffy, Sarah Moen, Jessica Warrens
10:00 am Break
10:20 am Modeling Community Health Improvement for CHAMP Program Infrastructure
          Tracy Wilson
10:40 am Chronic Disease Program Integration
          Sara Busarow
11:00 am Initiating a Population-Based Case Control Study in Pancreatic Cancer at the UW
          Lalita Subramanian
11:20 am State Arbovirus Surveillance Procedures for Assessing False Results of Serological Tests Including West Nile Virus Antibody Diagnostic Tests
          Andrew Haertl
12:00 Noon Break for Lunch (On Your Own)
1:00 pm  HIV Surveillance Among High-Risk Populations in Trinidad and Tobago
          Ben Ballweg
1:20 pm  Patient Awareness of the Risks and Consequences of Healthcare-Associated Infection
          Andy Ottum
1:40 pm  Evaluation of Nitrates Testing Program in Wisconsin
          Megan Christenson
2:00 pm  Outreach Campaign for the Use of Greenhouse Gas Digesters on Wisconsin Dairy Farms
          Cara Williams
2:30 pm  Adjourn
CAPSTONE COMMITTEE:

Roberta Riportella, PhD
Project Director Covering Kids & Families,
Professor and Health Policy Specialist Department
of Consumer Science, School of Human Ecology,
UW-Madison/UW Extension

Michael Jacob, MPA
Project Coordinator, Covering Kids & Families,
Science Department, UW-Madison School of
Human Ecology

Barbara Duerst, RN, MS
Associate Director, MPH Program, UW-Madison

A School-Based Outreach Approach to Reducing the Uninsured in Wisconsin

ABSTRACT

Health insurance coverage plays a critically important role in a child’s health. When compared to children whose insurance coverage remains constant, chronically uninsured children and those experiencing coverage lapses have a lower rate of check ups and vaccinations, encounter more illness-related restrictions or activities, and are more likely to go without needed care when sick. BadgerCare was started in 1999 and expanded to BadgerCare+ in 2008. The expansion to BadgerCare+ offers all children in Wisconsin access to health care. It is imperative that the state turns its attention to guaranteeing that the remaining uninsured, eligible children, and families are enrolled. Wisconsin’s Covering Kids & Families (CKF) is a statewide coalition dedicated to reducing disparities and improving overall health by enhancing capacity to maximize participation in public health insurance programs. Recognizing that schools can become a local, centralized source of information and outreach for families, CKF has developed a model to strengthen the ability of schools and communities to assist uninsured children and families. By improving knowledge and enhancing a local, trusted source of information and support, CKF’s school-based outreach model has proven to be an innovative and indispensable resource to build Wisconsin’s public health capacity and improve access to health care coverage.

BIOGRAPHICAL SKETCH

Marisa holds Bachelors Degrees in Biology and Women’s Studies from the University of Wisconsin-Madison and is working towards her Master of Public Health at the University of Wisconsin-Madison. Marisa is currently working as a Disability Claims Reviewer at the Wisconsin Department of Health Services. Her interests lie in the areas of health behavior and health education, health policy, and maternal and child health. Marisa is passionate about improving the health care of Wisconsin and United States citizens and would like to make a career as a public health professional working to ensure affordable, quality health care is accessible to everyone.
Assessing the Built, Social, and Nutrition Environment of Wisconsin Communities: The WASABE and ANEWC Studies

ABSTRACT
Two-thirds of adults in Wisconsin are overweight or obese and this number is on the rise. A closer examination of Wisconsin’s communities is necessary to better determine the extent to which built, social, and nutritional environmental factors affect the health of community members. In conjunction with the Survey of the Health of Wisconsin (SHOW), the Assessment of the Nutrition Environment in Wisconsin Communities (ANEWC) and the Wisconsin Assessment of the Social and Built Environment (WASABE) determine whether a community’s environment provides or limits opportunities for healthy eating and participating in physical activities. Street-network buffers were created around each household participating in SHOW, as evidence suggests residents are willing to travel certain distances to procure a service. Within each buffer area, physical and social attributes such as land use and signs of social capital are assessed by WASABE. Additionally, the number, type of, and proximity to food outlets is determined by ANEWC. This includes an assessment of the availability, quality, and cost of healthful choices. These assessments provide unique objective data of the built, social, and nutrition environments in Wisconsin communities that compliment survey and other extant data often used to assess the environment. The results of these studies are expected to elucidate the influence of environmental factors on health behaviors and health outcomes. Community members and policy makers alike will benefit from the data provided to enhance and shape interventions and policies to reduce the number of overweight and obese individuals, thus improving the health of Wisconsin communities. Specifically, a group of five Master of Public Health students will use these data as a foundation to reach out to local health officials in five Wisconsin communities and begin to understand policy makers’ needs for better understanding and addressing health impacts associated with the built, social, and nutrition environment.
CAPSTONE COMMITTEE:

Kristen Malecki, PhD, MPH
Epidemiologist/Assistant Professor, Population Health Sciences, UW-Madison

Barbara Duerst, RN, MS
Associate Director, MPH Program, UW-Madison

Janice Liebhart
Assistant Researcher, UW Comprehensive Cancer Center

BIогRAPHICAL SKETCH

Navnit Sekhon is a second-year MPH student graduating in December 2011. She received her masters degree in Human Biology from Panjabi University, Punjab, India. Navnit has always been interested in obesity prevention. Her research interest lies in assessment of social and economic determinants of health. After graduation, Navnit hopes to work in the area of chronic disease prevention or community health.

CAPSTONE COMMITTEE:

Gary Radloff, MPA
Interim Director of the Wisconsin Bioenergy Initiative and the Midwest Energy Policy Director, College of Agricultural and Life Sciences, UW-Madison

Jonathan Patz, MD, MPH
Professor & Director of Global Health Institute, UW-Madison

Keith Poulsen, DVM, PhD
Veterinary Clinical Instructor, School of Veterinary Medicine, UW-Madison

Charlanne FitzGerald, MPH
UW Population Health Institute Researcher, UW-Madison

Outreach Campaign for the Use of Greenhouse Gas Digesters on Wisconsin Dairy Farms

ABSTRACT

Anaerobic digesters process animal manure and other organic matter to capture biogas. These digesters prevent major components of biogas, the potent greenhouse gases carbon dioxide and methane, from entering the environment. Biogas from digesters can be used to off-set fossil fuels for energy generation. Currently digesters are in use on approximately 26 Wisconsin dairy farms. Widespread use of digesters on dairy farms in Wisconsin would significantly lower greenhouse gas emissions, which could reduce the impact of rapid climate change on the health of future generations. Digesters also improve the health of local farming communities in a number of ways, including reducing manure run-off into water sources, decreasing the levels of pathogens in land-applied manure, reducing odors, and providing job opportunities. The Wisconsin Bioenergy Initiative (WBI) at the UW-Madison Nelson Institute for Environmental Studies developed an outreach campaign to increase the use of biogas systems. A targeted campaign strategy was developed to increase digester use specifically on dairy farms. Several tools were used to develop and evaluate the campaign, and a variety of techniques were used to broadcast information on the benefits of digesters. The presentation will focus on the development, completion and evaluation of the outreach campaign.

BIогRAPHICAL SKETCH

Kelli Blackmore graduated in 2010 from Butler University with a BS in Chemistry. While at UW-Madison, Kelli has developed a strong interest in the role the environment plays in people’s health. Following completion of her MPH, Kelli hopes to pursue a career in which she is able to work with communities on issues concerning how people interact with their surrounding environment and how that impacts health.

BIогRAPHICAL SKETCH

Cara Williams is a candidate for the DVM/MPH. She obtained a B.S. in Animal Sciences at the University of Illinois at Urbana-Champaign, and a certificate in Global Health at UW-Madison. Her career goals are to work with communities to reduce disease transmission between animals and humans, to enable families to improve their health and economic status by better caring for their production animals, and to increase access to veterinary services in underserved communities. Ms. Williams is a native of Chicago, and plans to work both internationally and in rural America as a veterinarian.
Evaluation of Nitrate Testing Program in Wisconsin

ABSTRACT
Nitrate-contaminated water in private wells is an important public health issue since it is associated with negative health impacts such as blue baby syndrome. Other than naturally-occurring iron, nitrate is the most common chemical found in Wisconsin’s groundwater. Drinking water regulations of the Safe Drinking Water Act do not apply to private wells, so rural water supply wells are not routinely tested for contaminants. The Wisconsin Department of Health Services provides funding to local health departments to support nitrate tests for low-income pregnant women and new mothers who use private wells in order to promote water testing. The aim of this study was to evaluate the nitrate testing program in the local health departments of Wisconsin. Electronic surveys were distributed to all health officers in the local health departments of Wisconsin to assess how well the nitrate testing program is working. Of the 72 county health departments, 51 (70.8%) responded to the survey. When asked at what nitrate level they advised older children and non-pregnant adults not to use the water, varied responses were received. These results suggest confusion about the acceptable nitrate levels for older children and non-pregnant adults. The insight gained from the project will help local and state public health officials improve testing services related to nitrate-contaminated water.

BIOPHGRAPHICAL SKETCH
Megan Christenson plans to complete the MPH program as well as the Certificate in Global Health in December 2011. She received her Bachelors degree in Biology and Spanish from St. Olaf College and an MS degree in Conservation Biology and Sustainable Development from the UW-Madison. Prior to the MPH program, she worked in Peru as a coordinator for a Chagas disease research project. She is interested in the interface between the environment and human health, both locally and abroad.

BIOPHGRAPHICAL SKETCH
Madeline Duffy received her baccalaureate degree from the University of Wisconsin Eau Claire in the spring of 2009 in Psychology & Public Communications. During her time at UW-Madison she has worked on a variety of projects addressing health disparities, grass root development, standard setting and systems change. She is currently pursuing the Global Health Certificate and hopes to incorporate global health into her career. Upon completion of her MPH she hopes to pursue her passions in international health, health behaviors, and systems change surrounding environment and how that impacts health.

BIOPHGRAPHICAL SKETCH
Sarah Moen graduated in the spring of 2010 from the University of Wisconsin-Madison with BAs in English and Sociology. Her research interests include the multiple health determinants of obesity and the potential for positively impacting the ever increasing body mass indices of the world. Upon graduation from the MPH program in December, Sarah hopes to work with weight management in a clinical setting or with a public health journal focused on obesity and overweight.

BIOPHGRAPHICAL SKETCH
In 2006 Jessica received a BA in History and Political Science from the College of Charleston in Charleston, SC. While working for an organization that dealt with standards and best practices within the international medical donation community, she developed an interest in global public health. Jessica is currently enrolled in the Global Health Certificate program at UW-Madison and hopes upon graduation to work in the global health field to improve access to essential medicine and health programs.
CAPSTONE COMMITTEE:

Rebecca Thompson, CPA
Executive Director, Wisconsin Medical
Society Foundation

Susan Riesch, PhD, RN, FAAN
Professor, UW Madison School of Nursing

Tim Bartholow, MD
Chief Medical Officer, Wisconsin Medical Society

Modeling Community Health Improvement for CHAMP Program Infrastructure

ABSTRACT
Community health improvement efforts are becoming increasingly important as the prevalence of preventable diseases and poor health outcomes increase. The Wisconsin Medical Society Foundation’s CHAMP, Community Health Action via Medical Partnerships, Program aims to help address this need. The CHAMP Program encourages collaboration of physicians and public health agencies and professionals to link local businesses, government, academia, and media to work together on local community health improvement efforts. CHAMP Teams may take on a leadership role by guiding a grassroots effort or provide guidance to existing community health initiatives. As a new program, CHAMP is working to develop program infrastructure to further support existing teams and develop new CHAMP Teams throughout Wisconsin. The Northern Wisconsin CHAMP Team of Ashland and Bayfield Counties formed in 2010 and has been focusing on raising awareness of the issues and consequences associated with underage alcohol use. Due to their efforts, the Northern Wisconsin CHAMP Team is serving as a model for other developing CHAMP Teams and is aiding in CHAMP Program infrastructure development. A CHAMP Toolkit, compiling the tools and resources used and created by the Northern Wisconsin CHAMP Team, will aid other communities in developing CHAMP Teams and sustaining community health improvement efforts.

BIOGRAPHICAL SKETCH
Tracy graduated from UW-Madison in 2010 with a BS in biology. With an interest in the health care profession, she turned to public health inspired by the focus on prevention of disease and poor health outcomes at the population level. Building upon her experiences in the MPH program, Tracy hopes to continue working to advance community health improvement efforts through program development and evaluation, and policy measures to improve efforts at the community level.

CAPSTONE COMMITTEE:

Dr. Nasia Safdar, MD
Epidemiologist, UW Hospitals and Clinics,
Infectious Diseases

Dr. Ajay Sethi, PhD, MHS
Assistant Professor, Department of Population Health Sciences, UW School of Medicine and Public Health

Elizabeth A. Jacobs, MD, MPP
Associate Vice Chair for Health Services Research, Department of Medicine & Health Innovation Program, UW School of Medicine and Public Health

Patient Awareness of the Risks and Consequences of Healthcare-Associated Infection

ABSTRACT
Hospital-associated infections (HAIs) cause significant morbidity and mortality in the United States. In 2002, the Centers for Disease Control and Prevention estimated that approximately 1.7 million HAIs occurred in the US. Each year, 1 in every 20 hospitalized patients will develop an HAI, and up to 99,000 people die as a result. Consequently, the prevention of HAIs has become a priority of organizations such as the Joint Commission and the CDC. Four unique surveys were designed to examine how various methods of patient education influence patients’ awareness and knowledge of four common HAIs (Clostridium difficile, Methicillin-resistant Staphylococcus aureus, central line associated bloodstream infections, and surgical site infections), and whether or not there are differences in the levels of awareness and knowledge between patients who are already infected, have previously been infected, or are only at risk for an HAI. These surveys were administered orally to patients at the University of Wisconsin Hospital prior to discharge. The results will be used to determine if patients are reaching the appropriate level of awareness and knowledge as recommended by The Society for Healthcare Epidemiology of America in their Patient Education Guidelines on HAIs. Understanding how variations in patient education affect awareness and knowledge of HAIs will be of value when improving patient education and risk communication at the University of Wisconsin Hospital.

BIOGRAPHICAL SKETCH
Andy graduated from the UW-Madison in 2009 with a BS in Economics. After graduation he worked for a year as a medical assistant at the University of Wisconsin Hospital before starting the MPH program. His motivation for pursuing his MPH is a result of a strong passion for helping underserved and indigent populations, and seeing the benefits of public health firsthand while traveling to Honduras and working at a free surgery center. Andy’s current areas of interest include epidemiology, infectious diseases, and global health.
**CAPSTONE COMMITTEE:**

Linda Clouf Baumann, PhD, APRN, BC, FAAN  
Professor Emeritus, UW-Madison School of Nursing  

Genevieve Meredith, MPH, OTR  
Associate Director, Global Program, National  
Alliance of State & Territorial AIDS Directors  

Marge Sutinen, CIT  
Director, Midwest AIDS Training and  
Education Center

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**CULMINATING PROJECT COMMITTEE:**

Paul Moberg, PhD  
Research Professor, UW Department of Population  
Health Sciences, Program Director, Evaluation  
Research Group, UW Population Health Institute  

Mark Wegner, MD, MPH  
Adjunct Assistant Professor, UW Department of  
Population Health Sciences, Chronic Disease Medical  
Director, Wisconsin Division of Public Health

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**HIV Surveillance Among High-Risk Populations in Trinidad and Tobago**

**ABSTRACT**

The Caribbean has the second highest adult HIV prevalence worldwide behind sub-Saharan Africa (estimated at 1 percent and 5 percent, respectively). Trinidad and Tobago—the Caribbean’s southernmost country—has an estimated adult HIV prevalence of 1.5 percent, and this prevalence is expected to grow due to a robust HIV treatment program paired with an incidence that hasn’t slowed sufficiently over the 30 years of the epidemic. Sub-populations with higher HIV prevalence rates—normally those engaged in higher-risk behaviors—can keep an epidemic from diminishing, especially when the sub-population engages in other risk behaviors with the general population. A convenience sample of 307 men who have sex with men (MSM) in 2004 found that one in five men had HIV, 25 percent of the sample also noted having sex with women. The National Alliance of State & Territorial AIDS Directors (NASTAD) assists US state health departments and foreign ministries of health in some PEPFAR-supported countries through connecting experienced state staff with other states and countries. NASTAD has provided assistance to Haiti for many years, and recently was given the opportunity to provide similar assistance to other Caribbean nations. Trinidad and Tobago is its first such venture. The project included training potential interviewers, coordinating project logistics, developing a background report on HIV epidemic in Trinidad and Tobago, preparing an operations manual for the formative assessment, and formulating a tool kit for assisting in the planning and conduct of bio-behavioral surveys among high-risk populations using respondent-driven sampling.

**BIографICAL SKETCH**

After completing a bachelor’s degree in Percussion Performance in Haiti. After his time there, he joined the Navy as a broadcast journalist, spending time on an Air Force base in Tokyo and an aircraft carrier in Virginia. Upon graduation, Ben traveled to South America and Antarctica before settling into science and emergency medical technician classes to prepare for a career in healthcare. He hopes to use his public health degree to provide assistance to some of the people most removed from modern healthcare services. Ben is hoping to start his public health career with his capstone organization, providing technical assistance for surveillance of populations most at risk for HIV infection in The Bahamas, currently the Caribbean country with the highest estimated adult prevalence of HIV.

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**Chronic Disease Program Integration**

**ABSTRACT**

Chronic diseases are a leading cause of morbidity and mortality in the United States. These diseases include cardiovascular disease, cancer, diabetes, arthritis, overweight/obesity, and others. Chronic diseases are also among the most preventable, with a set of shared risk factors. The major risk factors include unhealthy diet, insufficient physical activity, and tobacco exposure. Because of the large impact of chronic diseases and their shared, modifiable risk factors, there have been efforts to integrate chronic disease programming. Chronic disease program integration efforts aim to align categorical programs’ resources to increase effectiveness and efficiency. Wisconsin is one of four states currently participating in a national pilot project aimed at encouraging chronic disease program integration at state health departments. At the Wisconsin Department of Health Services (DHS), program integration has been promoted. The program integration pilot focuses on integrating chronic disease programs, such as Arthritis, Comprehensive Cancer Control, Diabetes Prevention and Control, Heart Disease and Stroke Prevention, and risk factor programs, such as Tobacco Prevention and Control, and Nutrition, Physical Activity, and Obesity Prevention. Wisconsin’s program integration efforts have included other programs in the Bureau of Community Health Promotion as well. The University of Wisconsin Population Health Institute is working with DHS to evaluate the experience. Pilot states are also participating in a national evaluation process. State’s experiences with chronic disease program integration are being documented and evaluated, and each state’s experience will be examined as a case study.

**BIографICAL SKETCH**

Sara Busarow obtained her MD from Northwestern University and a BS in Bacteriology from the University of Wisconsin. As a medical student, she received an Albert Schweitzer Urban Fellowship and worked with families in Chicago’s housing projects through Chicago Youth Programs. She now works at the University of Wisconsin Population Health Institute. Her projects there have included evaluation of the Wisconsin Collaborative Diabetes Quality Improvement Project and of chronic disease program integration activities at the Wisconsin Department of Health Services.
CAPSTONE COMMITTEE:
Halcyon Skinner, PhD, MPH
Assistant Professor, Population Health Sciences, UW School of Medicine and Public Health
Amy Trentham-Dietz, PhD
Associate Professor, Population Health Sciences, UW School of Medicine and Public Health
Nathan Jones,
Assistant Scientist, UW Comprehensive Cancer Center, UW School of Medicine and Public Health

Lalita Subramanian

Initiating a Population-Based Case Control Study in Pancreatic Cancer at the UW

ABSTRACT
Fewer than 6% of patients diagnosed with pancreatic cancer survive beyond 5 years. A better understanding of the risk factors and etiology of the disease will allow for early interventions or preventive strategies to improve survival rates. Chronic pancreatitis has been consistently associated with pancreatic cancer risk. Both chronic and acute pancreatitis can develop from select viral infections. The hypothesis is that the inflammation in the pancreas as a result of the viral infection promotes development of pancreatic tumors. To determine the strength of the association of viral pathogens that can cause pancreatitis to the incidence of pancreatic cancer, a population-based case-control study has been initiated at UW-Madison. The project includes enrollment of patients diagnosed with pancreatic cancer at the UW Hospitals and Clinics. Recruitment and data collection efforts include the design of consent forms and questionnaires for phone interviews and blood draws. Similar processes for a corresponding control group from the Wisconsin population are also required. The initial stages involve a feasibility analysis of participant recruitment for both control and case groups. Concurrently, the detailed study design, program planning, design of the questionnaire, and IRB preparation are being carried out. The primary objective of this study is to develop and optimize the research infrastructure and protocols necessary to determine molecular markers for pancreatic cancer at the University of Wisconsin as a platform for future epidemiological studies in pancreatic cancer

BIOGRAPHICAL SKETCH
Lalita Subramanian is a cancer researcher currently working on molecular methodologies to develop low-cost alternatives for the prevention and treatment of the disease. She hopes to expand her career with the help of the training obtained in the MPH program with a focus on global health and epidemiology. Her long-term goals are to be involved in population-based efforts in monitoring, evaluating and implementing strategies to reduce the morbidity and mortality associated with cancer, particularly in low-income and underserved communities.

CAPSTONE COMMITTEE:
Christopher Olsen, DVM, PhD
Associate Dean for Academic Affairs
and Professor of Public Health, UW School of Medicine and Public Health
Erik Hofmeister, DVM, PhD
Veterinary Medical Officer, Pathobiological Sciences, School of Veterinary Medicine
Susan Paskewitz, PhD
Professor of Entomology, College of Agricultural and Life Sciences, UW Madison

Andrew Haertl

State Arbovirus Surveillance Procedures for Assessing False Results of Serological Tests Including West Nile Virus Antibody Diagnostic Tests

ABSTRACT
Diagnostic cut-off levels classify serum samples as either positive or negative if they are above or below the level chosen for any diagnostic test with a continuous spectrum of possible values. The cut-offs used in assays such as West Nile virus ELISAs were based on exhaustive investigations of the CDC while they were developing a related flavivirus ELISA. Positive results from these serological assays are reported to state arbovirus surveillance departments, but false results may be submitted unbeknownst to disease surveillance personnel. In this study, a survey is distributed to every state arbovirus unit in the United States to examine each state’s procedures to minimize the effects of false results and the abilities of each surveillance unit to investigate reported arbovirus results. Results of surveys found four commercial laboratories account for most results submitted to state arbovirus surveillance departments. Follow-up procedures for reported results varied between different states; however, results may have indicated serum samples are not readily available for additional tests to determine false results.

BIOGRAPHICAL SKETCH
Andrew Haertl is a 3rd year veterinary student completing a dual DVM/MPH degree by 2013. He has a strong interest in zoonotic disease surveillance and laboratory animal health.