SYMPOSIUM AGENDA

9:00 am  Welcome & Introductions
  Patrick Remington, Director

9:10 am  Food Safety Risk Communication Efforts in Eastern Europe
  Tara Carolfi

9:30 am  Canine Blastomycosis Case Trends Used as a Possible Surveillance Tool for Early Detection and Treatment of Human Blastomycosis Cases
  Barrett Spurgeon

9:50 am  An Assessment of the Human Health Effects of Consuming Game Harvested with Lead Ammunition
  Rossana Perez-Freytes

10:10 am Racial/Ethnic Disparity in Access to and the Use of Health Care Among Wisconsin Children
  Wen-Jan Tuan

10:30 am Break

10:50 am Development and Implementation of a Global AIDS Curriculum
  Cristianne Wendler

11:10 am An Assessment of Mercury Risk Perception and Awareness of Fish Advisories in a Latino Population
  Jason Ricco
Special Thanks to...

Mentors
Henry A. Anderson
Byron Crouse
Lori Diprete-Brown
Sarah Esmond
Christopher W. Olsen
Jim Vergeront

Preceptors
Laura Anderko
Narra Smith Cox
John Eich
Kirk J. Hogan
Jim Kazmierczak
Dr. Hilde Kruse
Julie Langenberg
Maureen Smith

Staff
Barbra Beck
Colin Brock
Heather Cote
Barbara Duerst
Connie Laffin
Patrick Remington
Jennifer Spencer

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Barbara Beck
Marvin Birnbaum
Anne Bradford Harris
Charles Brokopp
Richard Brown
Molly Carnes
Tim Corden
Byron Crouse
Lori DiPrete-Brown
Barbara Duerst
Philip Farrell
Ismor Fischer
Mike Fleming
John Frey
Meg Gaines
Cindy Haq
Mary Hayney
Karen Holden
Marty Kanarek
Kyungmann Kim
George Mejicano
Javier Nieto
Thomas Oliver
Chris Olsen
Jonathan Patz
Linda Reivitz
Patrick Remington
Gordon Ridley
Sue Riesch
Jeanette Roberts
Hal Skinner
Susan Skochelak
Lisa Steinkamp
Geoff Swain
Amy Trentham-Dietz
Louise Trubek
Jim Vergeront
Mark Wegner
Whitney Witt
Bobbi Wolfe
Claire Wendla
Susan Zahner

11:30 pm  Wisconsin Rural Health Status Dashboard
Zachary Baeseman

11:50 am  Anesthetic and Surgical Risk Factors for Alzheimer’s Disease in Adult Children of Persons with Alzheimer’s Disease
Katie Malcore

12:10 pm  Closing Remarks & Lunch
Patrick Remington, Director
Public Health in Practice


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

Anesthetic and Surgical Risk Factors for Alzheimer’s Disease in Adult Children of Persons with Alzheimer’s Disease

Katie Malcore

Preceptor: Kirk J. Hogan, MD, JD; Professor, Department of Anesthesiology, UW-Madison School of Medicine and Public Health

Postoperative cognitive dysfunction (POCD) 3 months after non-cardiac surgery is detected in 6% of young and middle-aged patients, and in 13% of patients over age 60. Risk factors for POCD include advanced age, fewer years of formal education, prior cerebral vascular accident, duration of anesthesia, type of surgery, and peri-operative complications. The relationship of POCD to Alzheimer’s disease (AD) is unknown. The objective of this study was to determine whether anesthetic and surgical POCD risk factors contribute to the onset and progression of AD in healthy adult children of parents with AD. Since 2001, the Wisconsin Registry for Alzheimer’s Prevention (WRAP) has enrolled 875 adult children of parents with AD, and 324 control volunteers for prospective 4 year serial, clinical, neuropsychological, biochemical, and neuro-imaging evaluations. In the current study, preoperative, intraoperative and postoperative records were obtained from WRAP participants for all surgeries occurring within 5 years prior to enrollment to the present. The records were scored for known and proposed POCD variables including physical status, surgical procedure, mode and duration of anesthesia, episodes of hypotension or low oxygen saturation, body temperature, ICU admission, postoperative delirium or infection, and length of hospital stay. Scored variables were entered into the WRAP database for descriptive analysis and correlation with psychometric, molecular, radiologic, and clinical indices. Records have been collated for 256 surgeries from 178 participants. After matching surgical and non-surgical family history positive groups for age, education, gender, and IQ, those having had surgery demonstrate a trend toward lower mean performance on the Stroop Test of directed attention. (p = 0.10) The high proportion of WRAP participants and controls with a history of surgery (23.0%), coupled with the duration and magnitude of the procedures, suggests that surveillance for cognitive dysfunction and biomarkers of AD in the WRAP cohort is adequately powered to determine whether POCD predictors contribute to AD onset and progression.

Katie Malcore will graduate from medical school in May, 2009, at which time she plans to begin a medical residency training program in Anesthesiology. Her goal is to train and practice at an academic institution that will allow her to pursue research interests pertaining to public health and anesthesiology.
Wisconsin Rural Health Status Dashboard
Zachary Baeseman

Preceptor: John Eich, Director, Wisconsin Office of Rural Health
Mentor: Byron Crouse, MD, FAAFP, Associate Dean for Rural and Community Health, University of Wisconsin– School of Medicine and Public Health

Variation and disparities between urban and rural environments have been well documented both nationally as well as in the State of Wisconsin. Additionally, an older and aging population in rural Wisconsin presents the need for unique and additional health services. Due to these differences and vulnerabilities, it is essential to examine and monitor Wisconsin’s rural health and communicate this underpinning information to public health practitioners, legislators, and researchers in the field so they may be better informed on future policy and research endeavors. The Wisconsin Rural Health Status Dashboard is an effort to accomplish precisely this feat. The dashboard consists of compiled health data from a variety of sources to specifically assess and annually track the health status of rural Wisconsin.

After enjoying and completing this past year of public health work, Zachary Baeseman is excited to currently be starting his third year of medical school. He is a firm believer that physicians hold an obligation not only to their patients, but to their community. As a result of this, Zachary has plans of being a Family Medicine physician deeply committed and active in the pursuit of both community and the State of Wisconsin’s health. Specifically, he can see himself someday working in a rural Wisconsin community. His background in public health and specific field experience work will serve him extremely well in these future career aspirations.

The Certificate in Global Health is a collaborative offering from the schools of Medicine and Public Health, Nursing, Pharmacy, Veterinary Medicine, and the Division of International Studies. The certificate curriculum focuses on global health topics and health issues that transcend national boundaries, emphasizing health and disease in developing countries. Through a nine-credit program of course work and a global health field experience, students will be prepared to address health disparities in a context of cultural diversity. Certificate recipients may serve populations internationally or work among the increasingly diverse population of Wisconsin and the United States.

Through core courses and electives, students may focus their studies on health promotion, detection and treatment of disease, prevention and management outbreaks, health policy, environmental health or other interdisciplinary topics. Available as a Graduate Certificate to professional students in the health sciences, to graduate students in health-related fields, and as a Capstone Certificate to individuals with a minimum of a BA or BS in a health-related field, the Certificate in Global Health program is designed to assist traditional and non-traditional students with interests in global health. The program is based in the Department of Population Sciences of the UW School of Medicine and Public Health and is administered by the Center for Global Health at the University of Wisconsin-Madison.
Food Safety Risk Communication Efforts in Eastern Europe

Tara Carolfi

Preceptor: Dr. Hilde Kruse, Regional Adviser in Food Safety, World Health Organization
Mentor: Lori Diprete-Brown, Assistant Director, Center for Global Health, University of Wisconsin-Madison School of Medicine and Public Health

Foodborne diseases encompass a wide spectrum of illnesses and are a growing public health problem worldwide. They are the result of ingesting contaminated foodstuffs, and range from diseases caused by a multitude of microorganisms to those caused by chemical hazards. Recent global developments are increasingly challenging international health security. These developments include the growing industrialization and trade of food production, the rapid urbanization associated with a more frequent food preparation/consumption outside the home and the emergence of new or antibiotic-resistant pathogens. Food safety authorities all over the world have acknowledged that ensuring food safety must not only be tackled at the national level but also through closer linkages among food safety authorities at the international level. This is important for exchanging routine information on food safety issues and to have rapid access to information in case of food safety emergencies. In light of this growing concern, this project at WHO/Euro involved collaboration with Kazakhstan, Tajikistan, Uzbekistan, and Croatia to improve food safety education and broaden awareness. Risk communication strategies were used in planning food safety programs to expand knowledge effectively in these countries for vulnerable populations such as children and tourists.

Tara Carolfi’s interest in global issues led her to a B. A. in International Studies and Political Sciences as well as several years of working abroad in Senegal, France, and Italy. These experiences led her to earn her MPH and Global Health Certificate in one year as an accelerated student. Her public health interests include environmental health especially food security, food safety, and nutrition, in addition to advocacy work for pancreatic cancer research. After Tara completes her MPH degree this August, she hopes to continue working in the areas of Global Health or nutrition education for a non profit organization.

An Assessment of Mercury Risk Perception and Awareness of Fish Advisories in a Latino Population

Jason Ricco

Preceptor: Laura Anderko, RN, PhD, Associate Professor and Director, Nursing Centers Research Network, Robert Wood Johnson Executive Nurse Fellow, University of Wisconsin-Milwaukee School of Nursing
Mentor: Henry A. Anderson, MD, Chief Medical Officer, Wisconsin Division of Public Health

Eating fish contaminated with mercury can cause serious health problems, especially for children and pregnant women. There is little information on mercury and fish advisory awareness and fish consumption in Latino populations in Wisconsin. This study assesses the awareness of fish advisory recommendations and health risks associated with mercury resulting from fish consumption as well as consumption patterns in a Latino population in Milwaukee, Wisconsin. Only 8% and 7% of participants reported mercury effect and fish advisory awareness, respectively. 84% of participants consumed fish in the last 12 months, with store-bought commercial fish the most popular category of consumption (78%). Only 16% of households reported a fishing license, and just 20% of consumers reported eating sport-caught fish. Focus group participants validated the low levels of awareness and sport-fish consumption in the community, identified language and cultural barriers as primary impediments, and suggested utilization of mass media to disseminate advisory and health information. The findings emphasize the need for a reassessment of mercury and fish advisory awareness campaigns to maximize dissemination of information to all sectors of society with a particular emphasis on commercial fish. Informational materials must be culturally competent and available in multiple languages.

Jason Ricco has been interested in environmental health since earning a Certificate in Environmental Studies. He realized the importance of preventive medicine and decided to earn an MPH degree to expand the horizons of his medical career. Jason has become involved in the area of environmental justice, which combines his passion for environmental health and reducing health disparities. Upon graduation from medical school in May 2009, he plans to complete a residency in family medicine, receive certification in preventive medicine, and end up in either academic population health sciences or public health.
Canine Blastomycosis Case Trends Used as a Possible Surveillance Tool for Early Detection and Treatment of Human Blastomycosis Cases

Barrett Spurgeon

Preceptor: Jim Kazmierczak, DVM, MS, State Public Health Veterinarian, Wisconsin Division of Public Health
Mentor: Christopher W. Olsen, DVM, PhD, Associate Dean for Academic Affairs, School of Veterinary Medicine, University of Wisconsin–Madison

During the first nine weeks of 2006 an outbreak of human blastomycosis occurred in Merrill, Wisconsin. Blastomycosis is a serious disease caused by the fungus Blastomyces dermatitidis and can be fatal if left untreated. The purpose of this project was to determine if a better surveillance tool can be implemented by using canine blastomycosis cases as a sentinel population. To complete the project, canine blastomycosis case data from 2002 to 2007 was gathered from Lincoln county veterinary clinics and owners of canine blastomycosis cases, focusing primarily on behaviors and locations where the animals were likely exposed to the fungus. This information was analyzed to determine if there was a significant increase in the number of canine blastomycosis cases in 2006 compared to 2002-2005 and 2007. An epidemic curve was constructed to determine if the time interval between peaks in onset of canine and human blastomycosis cases is statistically significant. Geographic Information System (GIS) and SaTSCAN programs were used to analyze the geographical and temporal distribution of canine and human blastomycosis cases to determine if they resulted from exposure to a common source. If the majority of canine cases preceded human blastomycosis cases and were clustered around the same source, then this study would provide the evidence to support implementing a new method for blastomycosis surveillance. Surveillance for canine blastomycosis cases at sentinel veterinary clinics within endemic areas could be used to notify the public and health care providers of an increased likelihood of B. dermatitidis infection. This should raise the index of suspicion for blastomycosis in persons developing early clinical signs of the disease, leading to earlier diagnosis and treatment of blastomycosis and improving the health of Wisconsin residents.

Barrett Spurgeon is primarily interested in infectious diseases, especially those that are transmissible from animals to humans. She is uncertain if she will focus on clinical veterinary medicine or public health, working as an epidemiologist or public health veterinarian. This fall she will be returning to the School of Veterinary Medicine and will graduate in May of 2010.
An Assessment of the Human Health Effects of Consuming Game Harvested with Lead Ammunition

Rossana Perez-Freytes

Preceptor: Julie Langenberg, VMD (Wildlife Veterinarian), Bureau of Wildlife Management, Department of Natural Resources
Mentor: Chris Olsen, DVM PhD, Associate Dean for Academic Affairs, School of Veterinary Medicine

Deer that are harvested with lead ammunition often have small lead fragments remaining in their tissue from the fragmentation of the lead bullet. These fragments frequently are microscopic and scatter far from the bullet wound channel. Though lead in venison likely poses less risk to human health than lead paint in older homes, the risk is not small enough to ignore. An assessment of this risk is necessary to inform public health policy in Wisconsin, as contamination of venison with leaded fragments is currently an unregulated source of lead for the state’s citizens. Lead is one of the most toxic metals for humans with adverse effects ranging from slight alterations of biochemical and physiological systems to severe damage to internal organs that may even lead to death. Despite the regulatory and educational efforts to reduce human and wildlife health risks in Wisconsin associated with lead, there continues to be a problem with the use of lead in hunting. Samples of venison from food pantries, hunters, and food processors from Wisconsin were radiographed. Samples with metal densities compatible with lead fragments were submitted for lead analysis, using Inductively Coupled Plasma Spectrophotometry (ICP). In preliminary data, lead was detected in 4% of one pound meat samples but, often at concentrations that exceeded 50 parts per million. Data analysis for this risk assessment includes interpreting these results compared to published food safety standard and use of the probability theory to estimate population parameters. A risk assessment will then be shared with the concerned state public health, natural resource, and agriculture agencies for consideration of the health implications of eating venison containing lead.

Rossana Perez-Freyte’s public health interest lies in delving into the nexus of human and animal welfare. This includes understanding the importance of veterinarians as the first line of defense in emerging infectious diseases and bio-warfare. The MPH program has allowed her to understand how global warming, population dynamics and anthropogenic effects have directly contributed to the endangering of species. This has allowed her to become passionate and intrigued with infectious disease epidemiology and the relationship between biological conservation and medicine. This fall she will be returning to her third year of veterinary school.

Racial/Ethnic Disparity in Access to and the Use of Health Care Among Wisconsin Children

Wen-Jan Tuan

Preceptor: Maureen Smith, MD, MPH, PhD, Associate Professor of Population Health Sciences, UW-Madison School of Medicine and Public Health
Mentor: Sarah Esmond, MS, Project Manager, Center for the Study of Cultural Diversity

Persistent inequalities in children’s access to health care services have been observed among minority populations. Unequal access can be attributed to socioeconomic variations existing across ethnic minorities. Race/ethnicity itself reflects cultural, language, and historical differences, and contributes in a unique way to overall health disparities. This study sought to measure racial/ethnic disparities in health care access and utilization among Wisconsin children. The study included 12,276 children (aged 0-18) from the 2000-2005 Wisconsin Family Health Survey, a statewide random sample telephone survey. Multivariate log-linear analyses were used to estimate risks of access barriers after adjusting for poverty and socio-demographic factors. Results revealed that large disparities in children’s access to health insurance existed between Hispanics and whites, and American Indians and whites. No statistical differences in children’s health insurance coverage were found between blacks and whites, and Asians and whites. Although conventional research has theorized a causal relationship between health insurance and health care utilization, the analysis indicated that minority children experiencing racial disparities in insurance coverage do not reflect similar disparities in the use of health care services. Children of certain minority groups reported with a smaller proportion of insurance coverage are more likely to take advantage of health care services than non-minority children. As the merits of providing universal health insurance for children have been up for debate, SCHIP and Medicaid programs have shown their potentials in improving children’s access to health care. However, coverage expansion does not necessarily assure elimination of gaps in the enrollment and usage of the health care systems for all minority children.

Wen-Jan Tuan’s interests in public health include minority health research, health care management and policy, and public health informatics theory and practice. After graduation, he will continue to work as a researcher in the Health Innovation Program to develop advanced information systems and data security/sharing guidelines. His long-term career objective is to serve as a public health officer in local or state health departments. He also hopes to spend more time volunteering in public health projects with rural communities in northern Wisconsin.