



## 7th International Conference on Diet and Activity Methods (ICDAM 7)

Theme: Diet and Physical Activity Assessment: From the Individual to the Environment

Washington, DC

### Preconference Workshops — Thursday, June 4, 2009

- 8:00–12:00 **Measuring Diet and Physical Activity in Children and Adolescents**
- Description:** Measuring behaviors in youth is a major challenge for both the diet and physical activity fields, and those challenges can be magnified in disadvantaged populations. This workshop will provide an overview of the strengths and weaknesses of multiple strategies for assessing diet and physical activity and provide recommendations for specific situations and youth of different ages. Physical activity measures covered will include self-reports, proxy reports, direct observation, and electronic monitors. Diet measures covered will include food histories and recalls, direct observations, and use of sales receipts and other archival records. Special attention will be paid to assessing children from disadvantaged communities.
- Presenters:**
- Karen Peterson, Sc.D.  
Professor  
Director of Human Nutrition Program  
Department of Environmental Health Sciences  
University of Michigan School of Public Health
- Gregory J. Welk, Ph.D.  
Associate Professor  
Department of Kinesiology  
Iowa State University
- 8:00–12:00 **Objective Measurement of Physical Activity and Location Using Accelerometers and Geographic Positioning Systems (GPS):**
- Learning Objectives:**
- Understand how accelerometers and GPS technology work and what type of data they provide
  - List three examples of recent applications of these tools to research challenges in physical activity and diet measurement
  - Understand current strengths and weaknesses of objective physical activity and locale measurement
- Description:** This workshop is designed for researchers interested in incorporation of objective measurement of physical activity using accelerometers or measurement of geographic locations in their studies. The workshop will include three sections:
- Objective measurement of physical activity
  - Use of GPS measurement of static or active locations
  - Forum to address questions, problems, and ideas
- The workshop will provide an opportunity for participants to increase their understanding of the technology and issues in the objective measurement of physical activity, location and movement characteristics. The workshop and discussion will focus on practical considerations involved in the use of these devices, strengths and limitations of technological approaches to measurement, and challenges in data extraction and analysis. Ample time will be reserved for questions, and the audience is urged to come armed with questions from their existing studies and ideas for new ones.

**Presenters:**

Stewart Trost, Ph.D.  
Associate Professor, Nutrition and Exercise Sciences  
College of Health and Human Sciences  
Oregon State University

Jean Wolf, Ph.D.  
President  
GeoStats Inc.

8:00–12:00 **Understanding Measurement Error in Diet and Physical Activity Assessment****Learning Objectives:**

- Understand that random and systematic measurement errors may occur in dietary and physical activity assessment and that these errors may impact the results of surveillance and epidemiologic studies
- Understand how to design dietary and physical activity studies to be able to adjust for measurement error
- Be aware of statistical tools and methods that can adjust for measurement error in surveillance and epidemiologic studies

**Description:** This workshop is designed for public health professionals and epidemiologists who focus on diet and/or physical activity. The workshop will address sources of measurement error, discuss aspects of study design that permit the use of statistical methods to correct for measurement error, and provide an overview of these methods for both surveillance and epidemiologic studies. In the discussion of statistical methods, the use of formulae will be kept to a minimum, and the emphasis will be on the need for and the concepts behind these methods, rather than on the specific details of implementation.

**Presenters:**

Kevin W. Dodd, Ph.D.  
Mathematical Statistician  
U.S. National Cancer Institute

Janet A. Tooze, Ph.D., M.P.H.  
Assistant Professor  
Department of Biostatistical Sciences  
Wake Forest University School of Medicine

1:00–4:00 **Simulation and Statistical Modeling of Energy Balance and Obesity: Results from Four Countries****Learning Objectives:**

- Present statistical models and results related to energy balance and obesity undertaken in four countries
- Discuss implications of models with respect to energy balance
- Discuss policy, environmental, and behavioral change strategies that might serve to affect change in the area of obesity

**Description:** COMnet is a network of mathematical modelers working to improve and validate models that project population outcomes and evaluate effects of interventions and policies that impact prevalence of childhood as well as adult obesity. Their work examines overall rates of obesity and outcomes as well as disparities by gender, race/ethnicity, and socioeconomic position. Members currently come from Australia, Canada, England, and the United States. The group meets regularly to develop a comparative modeling approach, share ideas about underlying modeling assumptions, suggest new data that needs to be collected, further refine environmental, social and behavioral theories of change, and accelerate these results, link the models to policy and concerns of policy makers, and work with additional experts to guide discussions.

**Presenters:**

*Australia: ACE Obesity: Methods and Results for Obesity Interventions in Children and Adolescents*

Boyd Swinburn, M.B., Ch.B., M.D., FRACP, Rob Carter, Ph.D., and Marj Moodie, Ph.D.  
Deakin University

*Canada: Population Health Microsimulation Model (POEHM) and Other Models*

William Flanagan Ph.D.  
Statistics Canada / Statistique Canada  
Diane T. Finegood, Ph.D.  
Canadian Institutes of Health Research / Instituts de Recherche en Santé du Canada  
Nate Osgood, Ph.D.  
University of Saskatchewan

*England: The Foresight Group Report. Modeling, Results, Responses and Policy Impact*

Klim McPherson, Ph.D., and Martin Brown, Ph.D.  
Oxford University

*United States: Modeling the Obesity Epidemic and the Energy Gap: Implications for Altering the Course of Childhood Obesity in the U.S.*

Steve Gortmaker, Ph.D.  
Harvard School of Public Health  
Y. Claire Wang, M.D., Sc.D.  
Columbia Mailman School of Public Health

**Reaction Panel:**

William H. Dietz, M.D., Ph.D.  
U.S. Centers for Disease Control and Prevention  
Terry Huang, Ph.D.  
NICHD  
Patricia L. Mabry, Ph.D.  
Office of Behavioral and Social Sciences Research (OBSSR)  
NIH Office of the Director  
Tracy Orleans, Ph.D.  
Robert Wood Johnson Foundation

1:00–4:00

**Tools to Measure the Physical Activity and Food Environments: An Introduction to Geographic Information Systems (GIS)****Learning Objectives:**

- Identify how GIS can be used to enhance hypothesis-driven environment-behavior research through the use of integrated geographically referenced data sets
- Identify challenges associated with the analysis of data from different levels of geographic aggregation, including administratively, socially, and functionally defined areas
- Understand techniques for measuring physical activity and food environments in combination with GIS mapping and sampling

**Description:** This workshop is designed for public health researchers interested in using GIS to measure physical activity and food environments. This workshop will introduce the fundamentals of GIS and the usefulness of GIS when linked with field assessments and monitoring activities. There will be a focus on data complexity and the problems of data reduction associated with geographically referenced data. Presenters will discuss bridging the gap between health and geography in terminology, approach, and methodology for scientists engaging in interdisciplinary research.

**Presenters:**

Billie Giles-Corti, Ph.D.

Professor

Centre for the Built Environment and Health

University of Western Australia

Kimberly Morland, Ph.D., M.P.H.

Assistant Professor

Department of Community and Preventive Medicine

Mount Sinai School of Medicine