

Biomedical and Health Informatics Lecture Series

**Tuesday, February 22, 2011
12:00 - 12:50 p.m., Room E-216**

Richard E. Hoskins, PhD, MPH

Clinical Associate Professor, Epidemiology
Clinical Associate Professor, Medical Education and Biomedical Informatics
Retired Senior Epidemiologist, Washington State Dept. of Health

“Trauma Care Mortality Assessment: Some new (but old) Statistical Methods, Visualizations, Maps and Newly Integrated Data Sources Applied to Trauma System Assessment”

The trauma system in Washington State has been collecting data from 70 to 80 designated trauma hospitals since 1995. They include Harborview Medical Center, which is the state's only Level 1 trauma center and 3 Level 2 trauma centers located in Spokane, Vancouver, and Tacoma. Most of the other hospitals in the state are level 3, 4 or 5 trauma centers which provide various levels of trauma care. The trauma registry with hundreds of covariates is maintained by the Washington State Dept. of Health. It is used for epidemiological and clinical research and quality assurance. One of the many measures of trauma care effectiveness is of course the risk of mortality for trauma patients either in the trauma hospital or after discharge. One could wish that calculating a death rate would be just dividing the number of deaths by the number of patients. But like all things epidemiological, the devil is in the details. This talk is about those details: how do you model death rates so that you can know the trauma system is working and getting better? What is the geography of trauma and trauma death? How do you (correctly) detect death rates that might be too high in particular hospitals, and what is the risk of death after discharge? How do you integrate various data sources with the trauma registry such as death certificates, traffic crash data, hospital discharge data and even birth certificates? Perhaps the main objective of this talk is to encourage UW researchers to explore the potential of the trauma registry as a rich source of data that would support the investigation of important public health questions concerning trauma. <http://www.doh.wa.gov/hsqa/emstrauma/traumareg.htm>

Richard Hoskins, PhD, MPH, retired as an epidemiologist working with the trauma registry from the Washington State Department of Health. Currently he is an Associate Clinical Professor in the Departments of Epidemiology and Medical Education & Biomedical Informatics at UW. Also he is a member of the Center for Public Health Informatics at UW. He has taught short courses in geographic information systems in many countries and been a collaborator in a variety of Internet based health data mapping projects. He is the founding co-editor of International Journal of Health Geographics (www.ij-healthgeographics.com). Currently he works out of his apartment near the Kenai River in Alaska, which is one of the most productive salmon rivers in the world. His neighbors include brown bears, lots of moose, eagles, and, of course, salmon at certain times of the year.