

**MINICOURSE TITLE:**  
Health Econometrics of Health Cost, Expenditure and Utilization Data

**TOPICS**

1. Skewed outcomes in the absence of censoring at zero:
  - Box-Cox approaches (including OLS for  $\log(\$)$ )
  - The retransformation problem
  - Generalized Linear Models (GLM)
  - Extensions that allow selection of both the link and the distribution function for GLM
  
2. The zeroes issue and skewed outcomes common to many cost and expenditure analyses:
  - Two part and related models
  - Robustness of untransformed least squares
  - Less parametric approaches, such as the Gilleskie-Mroz alternative
  
3. Counts of health care utilization:
  - Poisson and negative binomial models
  - Latent mixture models
  - Other count models: zero inflated Poisson and Negative Binomial models, hurdle models

We will comment on the strengths and weaknesses, and the robustness of various methods. The mini-course will provide a tool kit of formal methods for checking the quality of the fit of the estimated model to the data. The kit will include a range of specification tests and sample statistical software for Stata, as well as a sample data set. The application for each section will be based on the 2004 MEPS household sample data with standard covariates.

For this mini-course, we already have a full set of prototypical statistical programs written in STATA 10 that will be updated to Stata 11 by the conference. The Stata 10 programs and a pdf copy of the slides from the 2008 Duke ASHE meeting are available on our websites.

This course is targeted toward anyone using cost, expenditure, or count micro data with a basic PhD level of econometrics.

**SESSION FACULTY:**

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