

A decorative vertical panel on the left side of the cover, featuring a warm orange-to-white gradient. It contains stylized illustrations of various autumn leaves falling from a basket at the bottom. The leaves are in shades of orange and brown, and the basket is a simple, rounded shape with a handle.

6TH INTERNATIONAL CONFERENCE ON

# HEALTH POLICY RESEARCH

Methodological Issues in  
Health Services and  
Outcomes Research

October 28–30, 2005

**BOSTON**  
MASSACHUSETTS

American Statistical Association  
Health Policy Statistics Section



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### INFORMATION

ICHPR Registration

1511 Ritchie Highway, Suite 204

Arnold, MD 21012

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<http://www.amstat.org/meetings/ichpr/2005>



# 6th INTERNATIONAL CONFERENCE ON HEALTH POLICY RESEARCH

## GOALS

**This conference is devoted to Health Services and Outcomes Research to:**

- foster a better understanding of the methodological foundations;
- promote the use of sound scientific principles in the design and analysis of these studies; and
- offer education workshops on statistical methodology in practice.

**October 28–30, 2005**

Boston Park Plaza Hotel & Towers ■ Boston, Massachusetts  
<http://www.amstat.org/meetings/ichpr/2005>

## HOTEL

The conference will take place at The Boston Park Plaza Hotel & Towers, 64 Arlington Street, Boston, MA 02116. A limited number of guest rooms are available at a special conference rate of \$179, plus tax, single or double occupancy. For reservations, please call the hotel at (617) 426-2000 and press “0”. Ask the hotel operator for In-House Reservations for the “ICHPR/ASA” meeting. This rate is available until September 27, 2005. The toll-free number (888) 625-5144 (in the United States or Canada) is available for general reservations but may not be able to access the conference rate. Reserve your room early.

## AIRPORT

Traveling to Boston, you will arrive at the Logan International Airport, (BOS) located two miles outside the city center with several public transportation options to the airport from downtown and suburban locations. Travelers can ride the MBTA Blue Line to Airport Station and connect to all terminals via free Logan shuttle buses. Taxis are available within the city and at the airport. More information is available at [www.massport.com/logan](http://www.massport.com/logan).

## PUBLIC TRANSPORTATION

The MBTA (Massachusetts Bay Transportation Authority), referred to as the “T,” runs daily service on buses, trains, and trolleys throughout Boston and surrounding towns. T stations can be identified by a black “T” on a white circular sign. Tokens can be bought at booths at each station. More information is available at [www.mbt.com](http://www.mbt.com).

## CAR RENTALS

AVIS—Call (800) 331-1600 or visit [www.avis.com](http://www.avis.com). Avis Worldwide Discount (AWD) number is J099649. Special negotiated rates are available from October 21, 2005, to November 7, 2005. All rates include unlimited free mileage.

## SHUTTLE SERVICE

The preferred airport shuttle service for the ICHPR is JC Transportation Shuttle. The cost is \$12.50 per person one way. More information is available at [www.jctransportationshuttle.com](http://www.jctransportationshuttle.com).

# OVERALL CONFERENCE AGENDA:

## FRIDAY, OCTOBER 28

8:30 a.m.–10:15 a.m.  
Concurrent Session and Workshops

10:15 a.m.–10:30 a.m.  
Break

10:30 a.m.–12:15 p.m.  
Concurrent Sessions and Workshops

12:30 p.m.–2:00 p.m.  
Conference Luncheon

2:15 p.m.–4:00 p.m.  
Plenary Session

4:00 p.m.–4:15 p.m.  
Break

4:15 p.m.–6:00 p.m.  
Concurrent Sessions and Workshops

6:00 p.m.–8:00 p.m.  
Offsite event

## SATURDAY, OCTOBER 29

8:30 a.m.–10:15 a.m.  
Concurrent Sessions and Workshops

10:15 a.m.–10:30 a.m.  
Break

10:30 a.m.–12:15 p.m.  
Concurrent Sessions and Workshops

12:30 p.m.–2:00 p.m.  
Lunch on own

2:00 p.m.–3:45 p.m.  
Concurrent Sessions and Workshops

3:45 p.m.–4:00 p.m.  
Break

4:00 p.m.–5:45 p.m.  
Concurrent Sessions and Workshops

\* Don't forget to turn your clocks  
back one hour.

## SUNDAY, OCTOBER 30

2:00 a.m.  
Turn clocks back one hour!

8:30 a.m.–10:15 a.m.  
Concurrent Sessions and Workshops

10:15 a.m.–10:30 a.m.  
Break

10:30 a.m.–12:15 p.m.  
Concurrent Sessions and Workshops

# PROGRAM INFORMATION

## CALL FOR CONTRIBUTED PAPERS

The deadline for submission of abstracts for contributed papers is **Tuesday, September 6, 2005**. Abstract submission guidelines are available at the conference web site, [www.amstat.org/meetings/ichpr/2005](http://www.amstat.org/meetings/ichpr/2005), and from the ASA Meetings Department. Topics for contributed papers include, but are not limited to, the following areas:

- Analytic methods for observational data
- Analytic methods for quasi-experimental and designed studies
- Health economics and health policy
- Other

## INVITED SESSIONS

The following invited paper sessions will be scheduled on the program:

- Predicting High-cost Users of Medical Care and the Persistence of High Expenditures Over Time; Organizer: Steve Cohen (Agency for Healthcare Research and Quality)
- Statistical Issues in the Hospital CAHPS (HCAHPS) Survey; Organizer: James O'Malley (Harvard Medical School)
- Imputation in High-dimensional Complex Surveys; Organizers: Tom Belin (UCLA), Recai Yucl (University of Massachusetts-Amherst)
- Assessing Pharmaceutical Safety and Efficacy in the Wake of COX-2 and HRT; Organizers: Frank Harrell (Vanderbilt University), Therese Stukel (University of Toronto)
- Methods in Longitudinal Data Analysis; Organizer: Jim Lubitz (National Center for Health Statistics)
- Methods of Risk Adjustment for Skewed Outcome Data; Organizer: Julianne Soucek (Houston VA Medical Center)
- Population Needs-based Funding Models (International Health Policy Session); Organizers: Lisa Lix (University of Manitoba), Therese Stukel (University of Toronto)
- Advanced Methods for Estimating Health Disparities; Organizers: Anirban Basu (University of Chicago), Douglas Staiger (Dartmouth College)
- Selection Bias in Observational Studies; Organizers: Anirban Basu (University of Chicago), Douglas Staiger (Dartmouth College)
- Causal Inference with Longitudinal Data; Organizers: Mary Beth Landrum (Harvard Medical School), Arlene Ash (Boston University)
- Combining Estimates/Information Using Multiple Data Sources; Organizers: Recai Yucl (University of Massachusetts-Amherst), Tom Belin (UCLA)

## WORKSHOPS

Fee Events, \$60 each; Students—\$30 each

Workshops on statistical methods and introductions to important national research databases will be offered in conjunction with the conference. Workshops are available at additional cost and require advance registration.

Workshops #6 and #9 are free, but require advance registration.

### FRIDAY, OCTOBER 28

**(WK1)** 8:30 a.m.-10:15 a.m.—**Statistical Graphics for Exploring Data, Presenting Information, and Understanding Statistical Models (Part I)**; *Frank E. Harrell, Jr., Vanderbilt University*

Graphical methods are increasingly used for exploratory data analysis. Useful graphical tools in this setting include scatterplot matrices, nonparametric smoothers, and tree diagrams. We will use graphical horror stories from the scientific and lay press to illustrate that most graphics used in papers, presentations, and the popular media today—such as bar charts and pie charts—communicate quantitative information poorly. Then, we will discuss elements of graphical perception and good graph construction, many from the writings of Bill Cleveland, with practical suggestions for choosing the best chart or graph type, making good and clear graphics, formatting, and simultaneously presenting multiple variables.

Nonstatisticians do not grasp easily complex outcome or risk adjustment models. We will discuss and show examples of effect charts and nomograms, graphics that help physicians and other consumers of statistical analyses understand statistical models, and use them to obtain predictions for individual subjects.

**(WK2)** 10:30 a.m.-12:15 p.m.—**Statistical Graphics for Exploring Data, Presenting Information, and Understanding Statistical Models (Part II)**; *Frank E. Harrell, Jr., Vanderbilt University*

In Part II, we will interactively demonstrate how to make effective statistical graphics in the freely available R environment for data analysis and graphics ([www.r-project.org](http://www.r-project.org)) and share some graphical marvels (especially from Edward Tufte and Howard Wainer).

**(WK3)** 10:30 a.m.-12:15 p.m.—**Strategies for Using Propensity Scores Well**; *Thomas E. Love, Case Western Reserve University*

This intermediate-level workshop describes and demonstrates effective strategies for using propensity score analysis in causal modeling. Attendees should be familiar with basic risk adjustment, logistic regression, and the use of the propensity score to deal with selection bias in observational studies. We will begin with a brief review of propensity score methods, and then discuss strategies for estimating the propensity score effectively, assessing and displaying covariate balance, choosing analytic techniques,

## CONFERENCE LUNCHEON

\$20 for registrants (part of the luncheon cost is included in the registration fee)

\$45 for guests (actual cost)

Friday, October 28

12:30 p.m.–2:00 p.m.

Boston Park Plaza Hotel & Towers

*The luncheon speaker will be Professor David Cutler, Otto Eckstein Professor of Applied Economics and Dean for the Social Sciences at Harvard University. His recent book, "Your Money or Your Life: Strong Medicine for America's Health Care System" (Oxford Press), was praised as "a clear and concise guide to how one should think about the costs and benefits of health care, the value of medical advances, and options for reforming the health care system."*

## MENU

Spring greens and julienne vegetables, honey mustard dressing, Boston baked scrod with lemon thyme butter sauce, and New York-style cheesecake

*Vegetarian Option—*

Vegetable Napoleon: layered roasted vegetables, including portabella mushroom, eggplant, zucchini, yellow squash, red pepper, and marinara sauce served with steamed rice

## OFFSITE EVENT

Reception at the  
Mary Baker Eddy Library  
**Friday, October 28**  
**6:00 p.m.–8:00 p.m.**

The Mary Baker Eddy Library for the Betterment of Humanity, located a short distance from the Boston Park Plaza Hotel & Towers, features a variety of exhibits on the history and power of ideas. Mary Baker Eddy was an influential, 19th-century American author, teacher, and religious leader noted for her ground-breaking ideas about spirituality and health, which she named Christian Science. She also founded the Church of Christ, Scientist, in Boston, Massachusetts, in 1879. The library has exhibits that review motivating factors such as the medical use of blood-letting and other now-discarded techniques, and the library's Mapparium offers a widely acclaimed visual display of the spread of ideas across the globe. A fee of \$20 for registrants and guests is required for this event. More details can be found at [www.marybakereddylibrary.org](http://www.marybakereddylibrary.org).

and communicating results to a nonstatistical audience. The instructor will use examples from health policy and health services research to motivate and illustrate ideas. Time permitting, additional (advanced) topics will be discussed. Attendees will receive detailed handouts and access to software developed at the Center for Health Care Research and Policy.

**(WK4) 4:15 p.m.–6:00 p.m.—Modern Metaanalysis;** *Christopher H. Schmid, Tufts University School of Medicine*

While the fixed versus random effects debate still crops up, most statisticians have moved beyond this and now are concerned with methods for exploring heterogeneity, whether in efficacy trials or diagnostic test studies. Topics such as metaregression, indirect comparisons, baseline rate regression, and summary ROC curves have been discussed in both the statistical and clinical literature. Most analysts now recognize that random effects models are necessary to describe most sets of studies, as these usually display considerable heterogeneity. Many of the models proposed recently have included a Bayesian component because many of them are most easily formulated as hierarchical structures that can be fit most easily with Markov chain Monte Carlo simulation. We will describe uses of hierarchical models in a variety of practical applications, many with aspects of missing data; contrast Bayesian and nonBayesian approaches and discuss the choice of appropriate prior distributions; and use examples from the literature to demonstrate methods and software choices.

**(WK5) 4:15 p.m.–6:00 p.m.— Privacy, Confidentiality, and Data Security Training for Health Services Research;** *Alan M. Zaslavsky, Harvard University*

Privacy, confidentiality, and data security (PCDS) are of broad concern, especially in health care. Strong PCDS regulations are part of the Health Insurance Portability and Accountability Act of 1996 (HIPAA). The complexity of these regulations cannot be overstated: The final rule on HIPAA's privacy provisions alone comprises more than 1,500 pages of text. Professionals who work with identifiable data are seeking guidance in understanding PCDS issues, recommendations for best practices for PCDS compliance, and tools and methods to increase compliance in their work.

This workshop will present overviews of general principles of privacy and confidentiality; requirements of relevant regulations as they affect health services research; technical methods for assessing and limiting unauthorized disclosure, especially for microdata files; and administrative procedures and training that can help to reduce errors affecting PCDS.

## **SATURDAY, OCTOBER 29**

**(WK6) 8:30 a.m.–10:15 a.m.— No Fee Research Opportunities Using AHRQ Databases;**

*Karen Beauregard, Agency for Healthcare Research and Quality*

The Medical Expenditure Panel Survey (MEPS) is a vital national data source designed to continually provide health services researchers, policymakers, health care administrators, businesses, and others with timely comprehensive information about health care use and costs in the United States. The objective of this workshop is to provide data users with an understanding of the unique analytic capabilities of the MEPS. To meet this objective, participants will be provided with an orientation to the MEPS and MEPS data files. To develop a working knowledge of linking techniques, participants will be walked through exercises and provided with worksheets that illustrate SAS programming techniques using MEPS public use files. The complex survey design aspects of MEPS also will be covered.

**(WK7) 8:30 a.m.–10:15 a.m.—Advances in Latent Variable Modeling (Part I);** *Bengt Muthen,*

*University of California, Los Angeles*

This sequence of two workshops gives an overview of recent developments in statistical analysis with latent variables that are of particular relevance to health policy researchers. We will show how the idea of latent variables captures a variety of statistical concepts, including random effects, sources of variation in hierarchical data, frailties, missing data, finite mixtures, latent classes, and clusters. The workshop discusses the integration of such statistical latent variable modeling with the traditional latent variable modeling of psychometrics with its focus on measurement error and hypothetical constructs measured by multiple, fallible indicators as seen in item response theory, factor analysis, and structural equation modeling. The integration leads to a general latent variable framework introduced in the Mplus computer program, facilitating applications such as factor models, growth curve models, multilevel models, latent class models, latent transition models, loglinear modeling, complier-average causal effect estimation in randomized trials, growth mixture modeling with latent trajectory classes, nonignorable missing data models, finite mixture models, discrete-time survival models, and combinations of such models. Various outcome types (such as continuous, censored, count, zero-inflated, semicontinuous, and categorical) of relevance to health research are handled. We will provide numerous examples of health analyses, with Part I emphasizing cross-sectional analyses and Part II emphasizing longitudinal analyses.



**(WK8)** 10:30 a.m.–12:15 p.m. —(see description above) **Advances in Latent Variable Modeling (Part II)**; *Bengt Muthen, University of California, Los Angeles*

**(WK9)** 10:30 a.m.–12:15 p.m. —No Fee  
**Research Opportunities Using Data from the CDC National Center for Health Statistics;**

*Jim Lubitz and Robert Weinzimer, CDC National Center for Health Statistics*

CDC NCHS is the nation's principal health statistics agency, providing data to identify and address health issues. We will focus on three of the major CDC NCHS data-collection programs: the National Health Interview Survey, the National Health and Nutrition Examination Survey, and the CDC National Health Care Survey. We will describe data collection methods, analytic considerations, data findings, methods of data access, and present examples of research using data from each of these surveys to analyze trends in health and factors affecting health and health outcomes. Target Audience: Health researchers and policymakers who use data for research and health policy decisionmaking.

**(WK10)** 2:00 p.m.–3:45 p.m.—**Issues When Using Hierarchical Models To Estimate Provider Performance;** *Michael Shwartz and Arlene Ash,*

*Boston University*

When, and in what sense, is a hierarchical modeling (HM) framework, in which “shrinkage” estimates of individual provider performance are used, “better for comparing providers” than raw (or traditionally risk-adjusted) mean performance measures? We describe reasons for preferring shrinkage estimators and discuss the difficulty of evaluating the actual results of HM versus other methods in real situations where we do not know the “true” (underlying) means. We also discuss these issues in the context of real data used for profiling, demonstrating that the assumptions that justify HM, especially exchangeability, should not be taken for granted. No previous knowledge of HM is required.

**(WK11)** 4:00 p.m.–5:45 p.m.—**Risk Adjustment and Predictive Modeling;** *Randall P. Ellis, Boston University*

We will provide an overview of the development and use of models that predict person-level spending and health care resource use. Risk adjustment models are used in the United States and internationally for “health-based payment” to health plans, geographic areas, and provider groups where economic incentives may matter greatly. Predictive models that worry less about incentives are increasingly being used to predict person-

level resource use for many purposes, including case-mix severity controls, identifying patients for case management, provider profiling, and forecasting. We will focus on diagnosis-based models, with some comparisons to other predictive frameworks. Attendees will be introduced to a range of uses of such models, the incentive problem, statistical issues, and implementation challenges. Specifically, we will cover how risk adjustment and predictive models differ, comparing alternative risk adjustment model approaches; how the Diagnostic Cost Group (DCG) system works; and issues in implementing risk adjustment and predictive modeling internationally.

## **SUNDAY, OCTOBER 30**

**(WK12)** 8:30 a.m.–10:15 a.m.—**Bayesian Hierarchical Modeling with Applications to**

**Provider Profiling (Part I);** *David Draper, University of California, Santa Cruz*

Datasets with a nested or hierarchical character (e.g., patients within hospitals) abound in health policy research. Often, the units at most or all levels of the hierarchy have either been drawn randomly or we find it useful to think of them as “like” having been drawn randomly, giving rise to a desire to fit random-effects and mixed models. Bayesian fitting of such models can have distinct technical advantages over likelihood-based methods, particularly when the outcome variable is noncontinuous (e.g., binary or count data). In this short course, I will begin with a quick overview of Bayesian inference in general; this will be followed by two detailed case studies in the use of Bayesian hierarchical modeling in provider profiling (one will involve random effects logistic regression in assessing the appropriateness of hospital mortality rates; the other will be based on random effects Poisson regression to examine evidence on whether RN versus non-RN nurse staffing has an effect on patient falls.

No previous exposure to Bayesian inference or random effects modeling will be assumed; all of the ideas will be developed in a self-contained fashion. Extensive details on the fitting of the models in WinBUGS and MLwiN will be provided.

**(WK13)** 10:30 a.m.–12:15 p.m. —(see description above) **Bayesian Hierarchical Modeling with Applications to Provider Profiling (Part II);** *David Draper, University of California, Santa Cruz*

**Registration must be received by October 17, 2005. Forms received without payment will be returned.**

## INSTRUCTIONS

1. Print or type all information and retain a copy for your records.
2. Use a separate form for each registrant.
3. Purchase orders will not be accepted. No exceptions.
4. Please see the web site for abstract submission guidelines and deadlines. Do not send abstract submissions with this form.

5. ASA Federal ID #53-0204661
6. Register online at [www.amstat.org/meetings/ichpr/2005](http://www.amstat.org/meetings/ichpr/2005) or mail form with payment to:  
**ICHPR Registration**



1511 Ritchie Highway, Suite 204  
 Arnold, MD 21012

Fax to (410) 626-7509 (credit cards only).  
 Do not mail if you fax your form.

Name \_\_\_\_\_ ASA ID# (if known) \_\_\_\_\_  
First/Given Last/Family

Preferred Name for Badge \_\_\_\_\_  
(if other than first name)

Organization/Affiliation \_\_\_\_\_

Mailing Address \_\_\_\_\_  
Street Address

\_\_\_\_\_ City State/Province ZIP/Postal Code Country

Daytime Phone \_\_\_\_\_ Fax \_\_\_\_\_ Email \_\_\_\_\_

## WORKSHOP ADD-ONS

(add-ons to registration fee) Please select the workshops you wish to attend. Be sure to verify that times do not overlap.

				<i>student</i>
WK1	(10/28 8:30 a.m.-10:15 a.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK2	(10/28 10:30 a.m.-12:15 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK3	(10/28 10:30 a.m.-12:15 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK4	(10/28 4:15 p.m.-6:00 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK5	(10/28 4:15 p.m.-6:00 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK6	(10/29 8:30 a.m.-10:15 a.m.)	<input type="checkbox"/> FREE	<input type="checkbox"/> FREE	
WK7	(10/29 8:30 a.m.-10:15 a.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK8	(10/29 10:30 a.m.-12:15 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK9	(10/29 10:30 a.m.-12:15 p.m.)	<input type="checkbox"/> FREE	<input type="checkbox"/> FREE	
WK10	(10/29 2:00 p.m.-3:45 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK11	(10/29 4:00 p.m.-5:45 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK12	(10/30 8:30 a.m.-10:15 a.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	
WK13	(10/30 10:30 a.m.-12:15 p.m.)	<input type="checkbox"/> \$60	<input type="checkbox"/> \$30	

TOTAL WORKSHOP FEES \$ \_\_\_\_\_

## OFFSITE EVENT

(\$20 PER PERSON, add-on to registration fee)

Reception at the Mary Baker Eddy Library,  
**Friday, October 28, 6:00 p.m.-8:00 p.m.**

Guest Name (s) \_\_\_\_\_

## REGISTRATION

- \$260 On or before September 27
- \$310 September 28—October 17
- \$80 Student (attach photocopy of student ID or letter from faculty member)

**Registration Fee:** \$ \_\_\_\_\_

**Total Workshop Fees** (from left column): \$ \_\_\_\_\_

**Conference Luncheon:**  I will attend at \$20 \$ \_\_\_\_\_

**Conference Luncheon, Guests:** # \_\_\_\_\_ x \$45 = \$ \_\_\_\_\_

**Offsite Event Ticket:** # \_\_\_\_\_ x \$20 = \$ \_\_\_\_\_

**TOTAL AMOUNT DUE** \$ \_\_\_\_\_

## CONFERENCE LUNCHEON

**Friday, October 28, 12:30 p.m.-2:00 p.m.**  
 (\$20 registrant, \$45 for guest; add-on to registration fee)

Dietary restrictions:

- Registrant  Kosher  Vegetarian  
 Guest  Kosher  Vegetarian

Food Allergy (please specify & indicate registrant or guest)  
 \_\_\_\_\_



This meeting is ADA accessible. Please check here  if you need special services due to a disability, and attach a statement regarding your needs.

**CANCELLATION POLICY:** All cancellations must be submitted in writing. Email: [ichpr@amstat.org](mailto:ichpr@amstat.org); Fax: (410) 626-7509; Mail: ICHPR Registration, 1511 Ritchie Highway, Suite 204, Arnold, MD 21012. For cancellations received prior to September 27, 2005, fees will be refunded less a 20% cancellation charge per item cancelled. For cancellations received September 28–October 17, 2005, fees will be refunded less a 40% cancellation charge per item cancelled. Cancellations received after October 17, 2005, will not be refunded.

## PAYMENT

Check or Money Order made payable to "American Statistical Association" (U.S. Dollars on U.S. Bank; include "ICHPR 2005" on memo line).

- Visa  MasterCard  American Express (No other cards accepted)

Card Number \_\_\_\_\_

Expiration Date \_\_\_\_\_

CVS # (3-digit security code on back)

Name as it appears on card \_\_\_\_\_

Cardholder's Signature \_\_\_\_\_