

VA HEALTH ECONOMICS BULLETIN

A VA Health Services Research & Development Resource Center

Volume 15, Issue 1
February, 2015



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The VA Health Economics Bulletin is a quarterly publication of the Health Economics Resource Center (HERC) to bring VA researchers updates on datasets and data sources.

For more information on VA datasets, visit the HERC web pages for [Guidebooks](#) and [Technical Reports](#).

For economics-related questions, please view our [Methods](#) web pages.

For economics advice, please call the HERC consulting service at (650) 617-2630 or email us at here@va.gov.

New Risk Scores for VA Cost Analyses

HERC and the VA Office of Productivity, Efficiency, and Staffing have developed a new risk adjustment system for cost data. The new system will be discussed in a cyber seminar on Wednesday, February 18th at 2:00pm ET.

The new risk system is called Nosos, which means chronic disease in Greek. Nosos is based on the Centers for Medicare and Medicaid Services Hierarchical Condition Categories risk model and includes additional factors, including mental health conditions, VA priority, presence in a VA registry, and pharmacy costs. It was developed by a team led by Todd Wagner, Ph.D. with programming work by Anjali Upadhyay and John Cashy at HERC and Mei-Ling Shen from the Office of Productivity, Efficiency, and Staffing.

A description of the programs used to calculate Nosos scores is documented in a [technical report](#) on the HERC website. Nosos scores were calculated for fiscal years 2006-2014 and are available at [\\vhacdwap15\RiskScores](#).

The project lead, Todd Wagner, Ph.D. will be giving a cyber seminar on Wednesday, February 18th at 2:00pm ET/11:00am PT to discuss the new risk system. Dr. Wagner will discuss the development and implementation of Nosos, as well as the future of risk adjustment of cost data at VA. To register for the cyber seminar, visit the Health Services Research & Development [Cyber Seminar Program page](#).



Dedicated to improving
the quality of health
economics research

Spring Econometrics Course

HERC is adding two new lectures to its spring Econometrics course: Natural Experiments and Difference-in-Differences (April 8) and Mixed Effects Models (April 29).

In the April 8th lecture, participants will be introduced to natural experiments and will gain a basic understanding of the different types of these experiments. Christine Chee, Ph.D. will provide an overview of the difference-in-differences estimator and discuss how it can be used to evaluate treatment effects. Dr. Chee will then discuss potential threats to validity when evaluating natural experiments. In the lecture on mixed effects models, Haley Hedlin, Ph.D. will present an overview of these models, and participants will learn how they are related to other statistical models. Dr. Hedlin will use real-world

applications as examples to demonstrate model fitting and estimation and interpretation of estimates.

This course is primarily designed for researchers who would like an introduction to econometric methods for observational studies in health services research. Course material will assume basic knowledge of probability and statistics and familiarity with the linear regression model. Each hourly session begins at 2:00pm ET/11:00am PT.

To learn more about each individual session, please visit the [HERC Econometrics cyber course webpage](#). To register for a session, please visit the VA Health Services Research and Development [cyber seminar website](#).

March 11	Econometrics Course: Introduction & Identification <i>Todd Wagner, Ph.D.</i>
March 25	Research Design <i>Christine Pal Chee, Ph.D.</i>
April 1	Propensity Scores <i>Todd Wagner, Ph.D.</i>
April 8	Natural Experiments and Difference-in-Differences *NEW* <i>Christine Pal Chee, Ph.D.</i>
April 22	Instrumental Variables <i>Christine Pal Chee, Ph.D.</i>
April 29	Mixed Effects Models *NEW* <i>Haley Hedlin, Ph.D.</i> Senior Biostatistician, Qualitative Sciences Unit at Stanford Department of Medicine
May 6	Specifying the Regression Model <i>Ciaran Phibbs, Ph.D.</i>
May 13	Limited Dependent Variables <i>Ciaran Phibbs, Ph.D.</i>
May 27	Cost as the Dependent Variable (Part I) <i>Paul Barnett, Ph.D.</i>
June 3	Cost as the Dependent Variable (Part II) <i>Paul Barnett, Ph.D.</i>

Budget Impact Analysis Methods for QUERI Projects

In his January seminar, Budget Impact Analysis Methods Development for QUERI Projects, Neil Jordan, Ph.D., reviewed methods researchers can use to help determine the affordability of implementing a new intervention. In this seminar, which was part of the HERC Health Economics seminar series, Dr. Jordan introduced the audience to Budget Impact Analysis and explained when this type of analysis should be used. He described examples of studies conducted within the VA and outlined the strengths and weaknesses of the current methodology.

Budget Impact Analysis is a type of economic evaluation that measures the financial consequences of implementing a new intervention or technology. It provides decision makers with the total expenditures for an intervention, including costs associated with implementation and maintenance, changes in staffing, and changes in patients. The results of this analysis can be used for budget planning and can

help determine the affordability of a new intervention.

There is significant opportunity to use Budget Impact Analyses within the VA. Although there has been limited use of Budget Impact Analysis in VA implementation projects, this analysis is designed to help decision makers successfully implement and maintain an evidence-based intervention.

To watch the entire cyber seminar and learn more about Dr. Jordan's white paper, please visit the [HSR&D website](#).

To find an economist to assist with a Budget Impact Analysis, please visit the [HERC experts list](#).

HERC Website Redesign

HERC redesigned its website late January 2015. HERC staff, with the help of outside usability experts, reorganized HERC's site architecture to make content easier to find. For example, content formerly nested under "Frequently Asked Questions" was moved to new webpages defined by data type, data source, and method.

If you are having trouble locating content, please consider using the search bar at the top right-hand corner of each page, or contact our webmaster (viliija.joyce@va.gov). Please note that some former links may no longer be active.

New HERC Discharge Data

HERC released its fiscal year 2013 summary of the Managerial Cost Accounting (formerly called DSS) discharge data, which includes cost subtotals. The summary is available at the VA Informatics and Computing Infrastructure (VINCI). Visit the [HERC website](#) for more information.

How much does that medication really cost?

Studies of the cost-effectiveness studies of medications often require information on pharmaceutical costs that are typical in the U.S. health care system and not the much lower cost negotiated by VA. HERC has developed guidance on how to estimate these costs.

Reimbursements are often used as a proxy for health care costs, but the actual cost of prescription drugs is not known. The Average Wholesale Price (AWP) does not reflect the substantial rebates pharmaceutical manufacturers provide to health sponsors. These rebates are not disclosed. A Congressional Budget Office audit of pharmaceutical rebates to Medicaid found that the true cost of brand name drugs is just 64% of the AWP and that the true cost of generic drugs is 27% of AWP.

The AWP is increasingly difficult to obtain. The RedBook of pharmacy prices is no longer published; proprietary pharmaceutical price lists are accessed by subscription to a database service. Several price databases have dropped AWP from their database. This makes the Federal Supply Schedule (FSS) a useful option. FSS gives medication costs paid by Federal Agencies. Combining data from different CBO studies suggests that the other payers pay 121% of the cost listed in FSS for brand name drugs.

The complete HERC guidance on finding drug costs for cost-effectiveness analysis may be found on the [HERC website](#).

HERC Staff Update

Howard Jiang joined HERC as a Programmer in January 2015. He earned a M.S. in Statistics and a M.S. in Mathematics from Oregon State University. He has also completed all Ph.D. course work and oral/written exams (not defended). He has more than 20 years of experience in data mining, statistical modeling and data analysis. Howard enjoys gardening in his spare time.

HERC

The Health Economics Resource Center produces pioneering, rigorous health economics and related research that improves health care within and beyond VA.

Our research activities include innovation and excellence in:

- Performing cost and cost-effectiveness analyses
- Studying the efficiency of health care
- Evaluating health programs and interventions
- Planning, managing, and analyzing randomized clinical trials
- Health care decision modeling
- Assessing health-related quality of life
- Health economics and health services research

We are committed to:

- Integrity
- High quality of work
- Productivity
- Transparency
- Mutual trust and respect
- Teamwork
- Investment in people through learning and mentoring
- A flexible, supportive, and enjoyable work environment



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HERC Cyber Seminars

Each hourly session begins at 11:00am Pacific (2:00pm Eastern), unless otherwise noted.

Register: <http://www.hsrc.research.va.gov/Cyberseminars>
Schedule & archives: <http://www.herc.research.va.gov/include/page.asp?id=courses-seminars>

Cyber Seminars

The Health Economics Cyber Seminars feature presentations on a variety of health economics and health services topics.

February 18, 2015 Risk Adjustment

Todd Wagner, Ph.D.

Health Economics Resource Center (HERC)/
Center for Innovation to Implementation (Ci2i)
VA Palo Alto Health Care System

March 18, 2015

Choosing Wisely and Overuse: Prevalence, Variation, and Reform

Carrie Colla, Ph.D.

Assistant Professor, The Dartmouth Institute for Health
Policy and Clinical Practice
Geisel School of Medicine at Dartmouth

April 15, 2015

Randomized controlled evaluation of an Intensive Management Patient Aligned Care Team (IMPACT) for high-need, high-cost Veterans Affairs patients

Donna Zulman, M.D.

Center for Innovation to Implementation (Ci2i)
Christine Chee, Ph.D.
Health Economics Resource Center (HERC)
VA Palo Alto Health Care System

May 20, 2015

The Cost-Effectiveness of Smoking Cessation for Patients with Psychiatric Illness

Paul Barnett, Ph.D.,

Health Economics Resource Center (HERC)
VA Palo Alto Health Care System

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