

Introduction to HERC Services

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Poll Question #1

- How often have you used HERC resources (guidebooks, datasets, website, etc.)? (select one)
 - Frequently use
 - Occasionally use
 - Never use
 - Not aware of any HERC resources

Poll Question #2

- Which HERC resources have you used?
(select all that apply)
 - Guidebooks
 - Datasets
 - HERC Website
 - Consulting services
 - Not aware of any HERC resources
-

History

- Health Economics Resource Center (HERC) was created in 1999 as a resource center on health economics to HSR&D
 - Located in Menlo Park, CA as part of the VA Palo Alto Health Care System
 - Staff:
 - 8 PhD Economists
 - 10 Programmers/Analysts
 - 4 Research Associates/Project Managers
 - 1 Administrative Officer
-

HERC Mission

- To support the economic research of HSR&D in order to increase health care efficiency and value for Veterans and the nation.

Core Work

- A. Train and advise researchers
- B. Make VA data sources accessible to researchers
- C. Create new economic datasets
- D. Disseminate economic methods and findings
- E. Help HSR&D identify and answer questions that are important to VHA

Outline

- HERC-Created Datasets
- HERC Documentation of Economics-Related Datasets & Methods
- HERC Cyber Courses & Seminars
- HERC Consulting Service

HERC Datasets

HERC-Created Datasets

- Inpatient average cost
- Outpatient average cost
- Person-level roll-up costs
- MCA discharge with subtotals
- Wage index
- Labor costs
- Nosos risk scores

Inpatient Average Cost

- Cost estimates for inpatient stays in a given FY based on Managerial Cost Accounting (MCA) treating specialty file (TRT) and MedSAS inpatient files
- 3 files per FY (FY1998-FY2015):
 - *Medical-surgical file*: acute medical-surgical discharges
 - *Non medical-surgical file*: discharges from rehabilitation, mental health, and long-term care bed sections
 - *Discharge file*: hospital stays with a discharge in FY
- Guidebook:
<http://www.herc.research.va.gov/include/page.asp?id=guidebook-inpt-ac>

Outpatient Average Cost

- Cost estimate for each outpatient encounter based on MCA outpatient file (OUT) and MedSAS outpatient file
- 3 cost estimates per FY (FY1998-FY2015):
 - *HERC value*: hypothetical reimbursement cost using Medicare methods based on Current Procedural Terminology (CPT) codes
 - *National cost estimate*: national average cost of a visit, given CPT code and clinic type
 - *Local cost estimate*: local cost of visit, based on national cost but adjusted to reflect actual cost of care at the medical center
- Can link to MedSAS outpatient (SE) data to find demographics, location of care, services provided and diagnoses
- Guidebook:
<http://www.herc.research.va.gov/include/page.asp?id=guidebooks#AC>

Person-level Cost

- Total annual costs for VA care received by each individual who used the VA health care system, (FY1998-FY2015), including:
 - Costs for 5 categories of inpatient care
 - Costs for 4 categories of outpatient care
 - Total pharmacy costs
 - Total non-VA/Fee Basis/Purchased Care/Community Care costs
 - Guidebook:
<http://www.herc.research.va.gov/include/page.asp?id=guidebooks#AC>
-

MCA Discharge with Subtotals

- Identical to MCA Discharge (DISCH) but adds fields for cost and length of stay subtotals for each inpatient category of care (FY2007-present):
 - Acute medicine, Rehabilitation, Blind Rehabilitation, Spinal Cord Injury (SCI), Surgery, Psychiatry, Substance Abuse, Intermediate Medicine, Domiciliary, Nursing Home, PR RTP, ICU
- Guidebook:
<http://www.herc.research.va.gov/include/page.asp?id=guidebook-mca-discharge>

MCA cost data

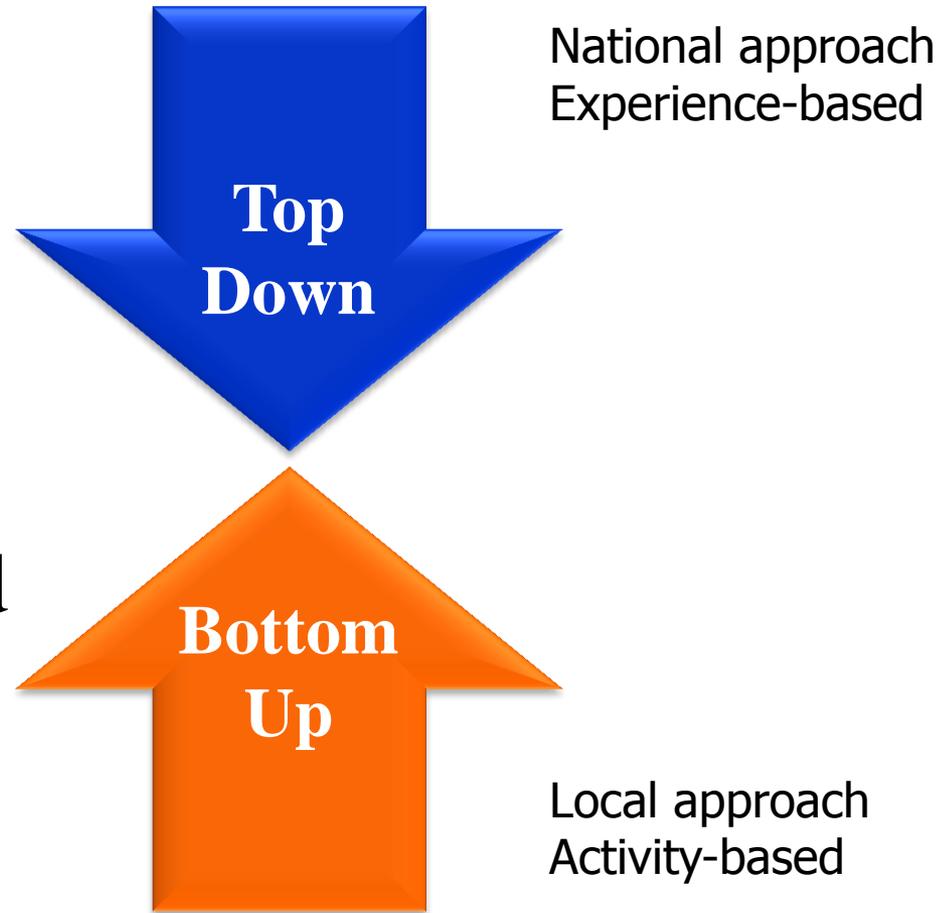
- Reflect local variations in production efficiency and labor cost
- Should be reviewed for abnormalities – rare cases in which costs are not consistent with characteristics of care
- Best data source for studies of VHA efficiency

HERC Cost Data

- Assume outpatient costs are proportional to Medicare reimbursement rates
 - Assume acute inpatient costs are proportional to Medicare DRG weight and adjusted for length of stay
 - Does not capture cost differences due to local efficiencies
 - Standardized to minimize data abnormalities
 - May be useful for study findings to be generalizable outside VHA
-

Top Down versus Bottom Up

- HERC data use relative value weights to estimate cost per encounter (top down)
- MCA costs are based on activity-based costing methods (bottom up)



MCA versus HERC Costs

- See HERC seminar on MCA and HERC costs:

http://www.hsrd.research.va.gov/for_researchers/cyber_seminars/archives/video_archive.cfm?SessionID=1093

Wage Index

- Combines Medicare wage index and VHA Support Service Center (VSSC) data to provide wage adjustments for VA facilities in each geographic wage area (FY2000-FY2017)
 - Use for determining cost of providing a new intervention based on time/type of staff
 - Guidebook & Dataset:
<http://www.herc.research.va.gov/include/page.asp?id=guidebook-wage-index>
-

Labor Costs

- Combines VHA labor costs (salary+benefits) from MCA Account Level Budgeter Cost Center and the Financial Management System for different types of VA staff, as denoted by Budget Object Code (FY2000-FY2014)
- Guidebook & Dataset:
<http://www.herc.research.va.gov/include/page.asp?id=guidebooks#DIRECT>

Nosos Risk Scores

- Based on CMS version 21 (V21) Hierarchical Condition Categories (HCCs) which uses only age, gender, diagnosis codes (ICD-9/ICD-10)
- Adapted to VA with inclusion of mental health/substance use disorder diagnoses, VA pharmacy use, VA priority, VA registry, insurance and total MCA/Fee Basis costs
- Risk scores can adjust for individual patient risk when comparing treatments or health outcomes
- Technical Report:
<http://www.herc.research.va.gov/include/page.asp?id=technical-report-risk-adjustment>

Want to use HERC data?

Request process described on the VHA Data Portal (VA intranet only):

<http://vaww.vhadataportal.med.va.gov/DataSources/HERCCostData.aspx>

Research & Operations data requests only.
No Preparatory to Research requests.

HERC Documentation

Navigating the HERC Website

Internet: <http://www.herc.research.va.gov/>

Intranet: <http://vaww.herc.research.va.gov/>

Data Types

The image shows a screenshot of the Health Economics Resource Center (HERC) website. At the top, there is a navigation bar with links for Health, Benefits, Burials & Memorials, About VA, Resources, Media Room, Locations, and Contact Us. Below this, the page title reads "HERC » Home" and "Health Economics Resource Center (HERC)". A left-hand navigation menu is visible, with "Data" expanded to show "Types". The "Types" menu includes options for Inpatient, Outpatient, Pharmacy, Labor, and Other. A red box highlights the "Data" and "Types" sections of the menu. To the right of the menu, there is a large blue banner featuring a scale of justice and the text "Updated CEA Guidelines". Below the banner, there are three columns of text: "New Technical Report #33", "Updated CEA Guidelines", and "Updated Recommendations for CEA".

Health Benefits Burials & Memorials About VA Resources Media Room Locations Contact Us

HERC » Home

Health Economics Resource Center (HERC)

HERC Home

- ▼ Data
 - Overview
 - ▼ Types
 - Inpatient
 - Outpatient
 - Pharmacy
 - Labor
 - Other
 - Sources
 - Methods

Updated CEA Guidelines

Major changes were made to guidelines on how U.S. cost-effectiveness studies should be conducted and reported

Learn more »

New Technical Report #33 Updated CEA Guidelines Updated Recommendations for CEA

Data Sources

The screenshot shows the top navigation bar of the HERC website with links for Health, Benefits, Burials & Memorials, About VA, Resources, Media Room, Locations, and Contact Us. Below the navigation bar is a breadcrumb trail 'HERC » Home' and the main heading 'Health Economics Resource Center (HERC)'. A left-hand navigation menu is visible, with 'Data' expanded to show 'Sources' highlighted in red. The 'Sources' menu includes 'HERC Average Cost', 'Managerial Cost Accounting (MCA)', 'Non-VA', and 'Financial Management System (FMS)'. The main content area features a video player with a golden scale of justice image and a blue sidebar with the heading 'Updated CEA Guidelines' and a 'Learn more >' link. A dark blue footer contains three news items: 'New Technical Report #33', 'Updated CEA Guidelines', and 'Updated Recommendations for CEA'. A 'CONNECT WITH HERC' button is located in the bottom right corner.

Health Benefits Burials & Memorials About VA Resources Media Room Locations Contact Us

HERC » Home

Health Economics Resource Center (HERC)

HERC Home

▼ Data

Overview

Types

▼ Sources

- HERC Average Cost
- Managerial Cost Accounting (MCA)
- Non-VA
- Financial Management System (FMS)

Updated CEA Guidelines

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Learn more >

New Technical Report #33 Updated CEA Guidelines Updated Recommendations for CEA

CONNECT WITH HERC

Methods

Health	Benefits	Burials & Memorials	About VA	Resources	Media Room	Locations	Contact Us
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HERC » Home

Health Economics Resource Center (HERC)

- HERC Home
- ▶ Data
- ▼ Methods**
 - ▶ Decision Analysis
 - ▶ Determining Costs
 - Econometrics
- ▶ Courses and Seminars
- ▶ Publications
- ▶ Resources
- ▶ About Us



Updated CEA Guidelines

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[Learn more »](#)

▶ ▶

[New Technical Report #33](#) [Updated CEA Guidelines](#) [Updated Recommendations for CEA](#)

CONNECT WITH HERC

Document Economics-Related Datasets & Methods

- Guidebooks on economics-related data/methods
 - Microcosting methods
 - MCA cost NDEs
 - Fee Basis data
- Technical Reports
 - Updating mental health/SUD groupers for ICD-10
 - Instrumental variables with VA data
 - Using VA health factors data for research

HERC Guidebooks

HERC » Publications » Guidebooks

Guidebooks

- HERC Home
- ▶ Data
- ▶ Methods
- ▶ Courses and Seminars
- ▼ Publications
 - Bibliography of VA Cost Studies
 - Bulletins
 - Guidebooks
 - Journal Articles
 - Technical Reports
- ▶ Resources
- ▶ About Us

CDW Disclaimer

VA data, including HERC data, are currently in transition to the VA Corporate Data Warehouse (CDW), a national VA data repository. The National Data Systems (NDS) oversees the request and approval process through the Data Access Request Tracker (DART) system. For more information on data available at CDW and the current request procedures, please see the VHA Data Portal (VA intranet site - [contact HERC](#) for the url).

HERC guidebooks are grouped by the following categories:

- ▶ [HERC Average Cost Datasets](#)
- ▶ [Managerial Cost Accounting System](#)
- ▶ [Station-Level Cost Data](#)
- ▶ [Resources for Direct Measurement of Intervention Cost](#)
- ▶ [Provider Data](#)
- ▶ [Other Data Sources](#)

HERC Average Cost Datasets

HERC's Average Cost Datasets for VA Inpatient Care for FY1998-FY2015

Wagner TH, Chow A, Su P, Barnett PG
Health Economics Resource Center, June 2016 | [View »](#)

The U.S. Department of Veterans Affairs (VA) provides health care to Veterans at more than 120 inpatient facilities. In 1999, the VA funded the Health Economics Resource Center (HERC) to adapt existing cost methodologies and to expand methods to estimate costs of health care encounters. This guidebook describes HERC's method for estimating the cost of VA inpatient stays back to fiscal year 1998. It discusses methods in building the dataset, assumptions underlying the dataset, and how to use the dataset.

HERC Technical Reports

HERC » Publications » Technical Reports

Technical Reports

- HERC Home
- ▶ Data
- ▶ Methods
- ▶ Courses and Seminars
- ▼ Publications
 - Bibliography of VA Cost Studies
 - Bulletins
 - Guidebooks
 - Journal Articles
 - Technical Reports
- ▶ Resources
- ▶ About Us

CDW Disclaimer

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Technical Report 33: Comparing the Measurement of Chronic Conditions in ICD-9-CM and ICD-10-CM in VA Patients, FY2014-FY2016

Health Economics Resource Center, #33, December 2016 | [View »](#)

We developed ICD-9-CM and ICD-10-CM definitions for 34 different chronic conditions, and we compared the prevalence rates of these chronic conditions from federal fiscal year (FY) 2014 to FY2016 in a large sample of VA patients in order to measure the changes before and after transition to ICD-10-CM.

Technical Report 32: Costing Methods Used in VA Research, 1980-2012

Health Economics Resource Center, #32, October 2016 | [View »](#)

The Health Economics Resource Center (HERC) of the U.S. Department of Veterans Affairs (VA) reviewed peer-reviewed publications to determine the methods and data sources used in studies of VA health care costs between 1980 and 2012. The review identified the number of published papers that used four principal methods of costing available to VA researchers and examined how practices differed in the last five years of the research that was reviewed. The review generated a bibliography of publications that used each of the four methods. The goal of this review was to identify priorities for HERC strategic planning.

HERC Cyber Courses & Seminars

Poll Question #3

- Have you ever attended one of the HERC cyber courses or seminars? Select all that apply.
 - Cost-effectiveness analysis course
 - Econometrics course
 - Monthly HERC cyber seminar
 - Never attended a HERC course or seminar

Cyber Courses

- Cyber courses
 - Econometrics with Observational Data
 - Cost-Effectiveness Analysis with VA Data

Econometrics with Observational Data

#	Date	Presenter	Title
1	02/01/17	Todd Wagner	Econometrics Course: Introduction & Identification
2	02/08/17	Christine Pal Chee	Research Design
3	02/22/17	Todd Wagner	Propensity Scores
4	03/01/17	Christine Pal Chee	Natural Experiments and Difference-in-Differences
5	03/08/17	Christine Pal Chee	Instrumental Variables
6	03/22/17	Josephine Jacobs	Fixed Effects and Random Effects
7	03/29/17	Ciaran Phibbs	Specifying the Regression Model
8	04/05/17	Ciaran Phibbs	Limited Dependent Variables
9	04/12/17	Paul Barnett	Cost as the Dependent Variable (Part I)
10	04/26/17	Paul Barnett	Cost as the Dependent Variable (Part II)

HERC Econometrics Course

Health	Benefits	Burials & Memorials	About VA	Resources	Media Room	Locations	Contact Us
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HERC » Courses and Seminars » Econometrics Course

Econometrics Course

- HERC Home
- ▶ Data
- ▶ Methods
- ▼ **Courses and Seminars**
 - Overview
 - Cost-Effectiveness Analysis Course
 - Econometrics Course**
- HERC Seminars
- QUERI Seminars
- ▶ Publications
- ▶ Resources
- ▶ About Us

Winter 2017: Econometrics with Observational Data Course

This course is intended to provide an introduction to econometric methods used to analyze data in health services research. Topics will include: linear regression; research design; propensity scores; instrumental variables; quasi-experiments and difference-in-differences; mixed effects modeling; specifying the regression model; limited dependent variables; and cost as the dependent variable. Course material will assume knowledge of basic probability and statistics and familiarity with linear regression. Lectures are held on Wednesdays, with each hourly session beginning at 11:00AM Pacific/2:00PM Eastern time, unless otherwise noted.

[Register »](#)

Target audience: Researchers who would like an introduction to econometric methods for observational studies in health services research. Course material will assume knowledge of basic probability and statistics and familiarity with linear regression.

If you are unable to enroll in a HERC course, it may be possible to view a recorded archive of each lecture. Some archived course content is limited to VA employees, other content is available to a broader audience. Please see the [HSR&D training page](#) for details.

[Looking for the Cost-Effectiveness Analysis Course? »](#)

Econometrics Course Sessions

February 1, 2017
Econometrics Course: Introduction and Identification
Todd Wagner, Ph.D.

The objective of this class is to introduce participants to the course. We start by briefly describing a randomized trial and the leverage of experimental design to understand causation. We then transition into understanding causal pathways

Cost-Effectiveness Analysis with VA Data

#	Title
1	An Overview of Decision Analysis
2	Recommendations for Conducting Cost-Effectiveness Analysis: Elements of the Reference Case
3	Estimating the Cost of an Intervention
4	VA Costs: HERC versus MCA
5	Introduction to Effectiveness, Patient Preferences, and Utilities
6	Modeling in Medical Decision Analysis
7	Estimating Transition Probabilities for a Model
8	Evidence Synthesis to Derive Model Transition Probabilities (Part I – Systematic Literature Review)
9	Evidence Synthesis to Derive Model Transition Probabilities (Part II – Quantitative Pooling)
10	Sensitivity Analyses
11	Budget Impact Analysis
12	How can Cost-Effectiveness Analysis be Made More Relevant to US Healthcare?

HERC Cost-Effectiveness Course

Health	Benefits	Burials & Memorials	About VA	Resources	Media Room	Locations	Contact Us
------------------------	--------------------------	---	--------------------------	---------------------------	----------------------------	---------------------------	----------------------------

HERC » Courses and Seminars » Cost-Effectiveness Analysis Course

Cost-Effectiveness Analysis Course

HERC Home

► Data

► Methods

▼ **Courses and Seminars**

Overview

Cost-Effectiveness Analysis Course

Econometrics Course

HERC Seminars

QUERI Seminars

► Publications

► Resources

► About Us

Winter 2018 schedule to be announced. Archived 2016 course materials listed below.

[Looking for the Econometrics Course? »](#)

Winter 2016 Cost-Effectiveness Analysis Course

January 6, 2016
An Overview of Decision Analysis
Risha Gidwani, Dr.P.H. | [Slides](#) | [Video](#)

This lecture kicks off the HERC Cost-Effectiveness Analysis cyber course by providing an introduction to the field of decision analysis. Topics include: why to engage in decision analysis; the difference between cost-effectiveness analysis, cost utility analysis, cost-benefit analysis and budget impact analysis; and the different ways to operationalize a decision analysis (modeling versus measurement alongside a clinical trial). This lecture is aimed at providing a general high-level overview of the field.

January 13, 2016
Recommendations for Conducting Cost-Effectiveness Analysis: Elements of the Reference Case
Ciaran Phibbs, Ph.D. | [Slides](#) | [Video](#)

Cyber Seminars

- Monthly economics cyber seminars
 - Register at
<http://www.hsrd.research.va.gov/cyberseminars/catalog-upcoming-series.cfm?seriesort=hmcs>

HERC Cyber Seminars

Health	Benefits	Burials & Memorials	About VA	Resources	Media Room	Locations	Contact Us
------------------------	--------------------------	---	--------------------------	---------------------------	----------------------------	---------------------------	----------------------------

HERC » Courses and Seminars » HERC Seminars

HERC Seminars

- HERC Home
- ▶ Data
- ▶ Methods
- ▼ **Courses and Seminars**
 - Overview
 - Cost-Effectiveness Analysis Course
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- ▶ Resources
- ▶ About Us

Upcoming Seminars



Wednesday, January 18, 2017, 11 AM (Pacific)
Panel presentation: De-implementing low value health services
Paul Barnett, Ph.D. | Slides available on the Intranet

This panel will focus on current and future de-implementation efforts at the Veterans Health Administration (VHA). Panel members will include VHA Health Services Research & Development (HSR&D) researchers David Au, MD, Eve Kerr, MD, MPH, and Paul Barnett, PhD, who are working on studies to promote greater safety and efficiency by reduction of inappropriate care. They will describe current studies, discuss criteria for selecting services for de-implementation, and field questions from participants.

Archived Seminars

September 21, 2016
Using Harm-based Weights for the AHRQ Patient Safety for Selected Indicators Composite (PSI-90): Does it Affect Assessment of Hospital Performance and Financial Penalties in Veterans Health Administration Hospitals?
Qi Chen, Ph.D. | [Video](#)

HERC

Consulting Service

Consulting Service Requests

- **Yes! We can help.**
 - Discussing types of analysis for a future project
 - Answering economic dataset-related questions
 - Providing resources to use economics-related data
 - Discussing potential collaboration on a project with an economist

- **Unfortunately, we cannot help.**
 - Running large data analysis for an existing project

So you need a health economist...

- Discuss project specifics with HERC economist before submitting a proposal:
 - Scientific question(s) to be answered and expected outcomes
 - Economic data (collected or requested)
 - Economist time (funding, % effort)

Consulting Service

- E-mail HERC: herc@va.gov
- Expert List:
<http://www.herc.research.va.gov/include/page.asp?id=extended-economist-help>

Questions?

Email: herc@va.gov

Phone: (650) 617-2630

HERC Internet: www.herc.research.va.gov/

HERC intranet: vaww.herc.research.va.gov/