# **New Economic Datasets**

Todd Wagner Jean Yoon Ciaran Phibbs





# Outline

- HERC datasets
  - HERC DSS discharge dataset with subtotals
  - HERC DSS station-level dataset
  - Medicare Wage Index
- DSS Data
  - IPD (Intermediate Product Department)
  - ALB (Account Level Budgeter)
  - Changes to tracking nursing labor
  - Other NDEs
- Fee Basis
- PAID

Great when you need More details

## HERC DSS Discharge Data





## HERC DSS Discharge Dataset with Subtotals

- Existing DSS Inpat dataset
  - Care of patients discharged in fiscal year
  - One record per discharge
  - Includes cost incurred in prior fiscal years
  - Product subtotals: nursing, lab, pharmacy, etc.
- Transfers between bedsections are not identified
  - A patient transferred from inpatient psychiatry to medicine is one record
  - Medicare would treat this as two separate stays

### HERC DSS Discharge Dataset with Subtotals

#### • New HERC DISCH file with 11 subtotals

- Acute medicine, psychiatry, nursing home, etc.
- Cost and length of stay for each subtotal
- Subtotals obtained from treating specialty file
- Functionally identical to the DSS DISCH NDE

## **Documentation on HERC website**

	Home Veteran Services	Business About VA M	edia Room Locations Contact Us			
		HERC Home / Publications /				
	Health Economics Resource Center	Guidebooks				
	HERC Home	For each column within the table, click on the "+" to sort in ascending order; "-" to sort in descending				
	News »	order.				
	Resources »					
	Data »					
	Methods »	Authors +- Smith MW, Barnett PG	Title +- Research Guide to the VA Financial Management System (FMS)	Date 2010		
	Research	Sind Prive, Barnette Po	Download available on our Intranet site	2010		
	Publications »	Wagner TH	Medicare Wage Index for VA Facilities: 2000 - 2009 Download available on our Intranet site	2010		
	Training »	Smith MW, Barnett PG, Phibbs CS,	Microcost Methods for Determining VA Healthcare Costs	2010		
		Wagner TH				
		Smith MW, Chow A	Fee Basis Data: A Guide for Researchers Download available on our Intranet site	2010		
		Phibbs CS, Yang J, Flores NE, Barnett PG	HERC'S Outpatient Average Cost Dataset for VA Care: Fiscal Year 2008 Update Download available on our Intranet site	2009		
		Chen S, Yu W	Guidebook for the HERC Person Level Cost Data Sets FY1998 – FY2008 Download available on our Intranet site	2009		
		Wagner TH	B HERC's Station Level Cost Dataset F/2000 - F/2007	2009		
	$\langle$	Yang J, Wagner TH	HERC's DSS Discharge Dataset with Subtotals for Inpatient Categories of Care, Fiscal Year 2007	2009		
		Wagner TH, Barnett PG	HERC's Average Cost Datasets for VA Inpatient Care FY1998 - FY2008	2009		
		Yoon J, Gage M, Barnett PB	Research Guide to the DSS Intermediate Product Department Files Download available on our Intranet site	2009		
		Phibbs CS, Barnett PG, Harden C, King SS	Research Guide to Decision Support System National Cost Extracts	2008		
		Cinnett DL Jours V/P. Parnett DC	Dreferance Massurement in Economic Analysis	2007		
L		'nublication	s/guidebooks.asp	2006		

## **HERC Station-Level Data**





### **HERC DSS Station-Level Dataset**

- Aggregated, station-level (STA3N) costs
- Annual costs and total utilization (inpatient days or outpatient visits)
- HERC-designated categories
  - 13 inpatient categories
  - 12 outpatient categories
- One record per service per station (STA3N) per fiscal year
- FY2000-2007

## **Documentation on HERC website**

Home V	eteran Services	Business	About VA	Media Room	Locations	Contact Us		
	н	ERC Home / Pu	blications /					
<b>HE</b>	RC G	Guideboo	ks					
HERC Hom								
News »	10	For each column within the table, click on the "+" to sort in ascending order; "-" to sort in descending order.				g		
Resources	»	order.						
Data »	_							
Methods »		uthors +-		Title +-			(7110)	Date
Research		Smith MW, Barnett PG			uide to the VA /ailable on our I	Financial Management Intranet site	System (FMS)	201
Publication	ns »	Vagner TH			age Index for \ ailable on our I	VA Facilities: 2000 - 20(	09	201
Training »		mith MW Barn	ett DG Dhibbs CS				care Costs	201
About Us »		Smith MW, Barnett PG, Phibbs CS, Wagner TH			Microcost Methods for Determining VA Healthcare Costs		201	
	S	mith MW, Cho	wΑ		ata: A Guide fo vailable on our I	or Researchers Intranet site		201
		hibbs CS, Yanç arnett PG	g J, Flores NE,	Update	patient Averag <i>vailable on our 1</i>	ge Cost Dataset for VA ( Intranet site	Care: Fiscal Year 2008	200
	c	Chen S, Yu W			for the HERC P	erson Level Cost Data : Intranet site	Sets FY1998 - FY2008	200
$\subset$		Wagner TH		HERC's	Station Level (	Cost Dataset FY2000 - F	FY2007	200
	Y	ang J, Wagner	TH	Categories	<del>DSS Discharge</del> of Care, Fiscal	- <del>Dataset with Subtotal</del> Year 2007	<u>s for inpatient</u>	200
	v	Vagner TH, Bar	mett PG	HERC's <u>HERC's</u>	Average Cost (	Datasets for VA Inpatie	<u>ent Care FY1998 -</u>	200
	Y	'oon J, Gage M,	, Barnett PB		uide to the DSS vailable on our I	S Intermediate Product Intranet site	: Department Files	200
		hibbs CS, Barn ing SS	nett PG, Harden C	, 🔂 <u>Resear</u>	<u>h Guide to Dec</u>	cision Support System M	National Cost Extracts	200
		innett DL Jove	o VR. Parpott DC	Conform	eee Measurem	ont in Economic Analysi	ic	200
ch.va	.gov/i	oubli	catior	ns/qu	ideb	ooks.as	Sp enters	200
	J 1			3				

www.herc.

## VA Medicare Wage Index





# Wages

- DSS costs are based on local factor inputs
- Wages are a factor input and vary considerably by location
- Statistical analyses across medical centers should control for wage variability
- Options:
  - Dummy variables for each station
  - Medicare Wage index

# VA Medicare Wage Index

- Medicare calculates the wage index based on the "market" and this is included in the Medicare Impact Files
- VA is not included in the Impact File
- We merged the Impact Files with VA facility information from PSSG

# VA Medicare Wage Index

- Dataset is based on public use data and includes no PHI
- Available upon request
- FY2000-2009
- Dataset includes STA3N and STA5A.

## **Documentation on HERC website**

UNITED STATE DEPARTME		S Search All VA	Web Pages_ Search n Advanced Sear
Home Veter	an Services Business About VA M	edia Room Locations Contact Us	
H E R Health Economics Resource	HERC Home / Publications / Guidebooks		
HERC Home	MENT OF VETERANS AFFAIRS    Image: State of the state state of the state state of the state of the state of the state	n a	
News »			19
Resources »			
Data »			
Methods »			Date +- 2010
Research	Sind Milly, Ballett PO		2010
Publications »	Wagner TH		2010
Training » About Us »			2010
	Smith MW, Chow A		2010
			2009
	Chen S, Yu W	Guidebook for the HERC Person Level Cost Data Sets FY1998 – FY2008 Download available on our Intranet site	2009
	Wagner TH	HERC's Station Level Cost Dataset FY2000 - FY2007	2009
	Yang J, Wagner TH		2009
	Wagner TH, Barnett PG	HERC's Average Cost Datasets for VA Inpatient Care FY1998 - FY2008	2009
	Yoon J, Gage M, Barnett PB	Research Guide to the DSS Intermediate Product Department Files Download available on our Intranet site	2009
		Research Guide to Decision Support System National Cost Extracts	2008
	Signatt BL Joyce V/B. Barnett BC	Droforance Massurement in Economic Applysic	2007
www.herc.research.va.g	gov/publication	s/guidebooks.asp	2006
	Wagner TH, Chow A, Yu W, Barnett PG	Researchers' Guide to the DSS Monthly Program Cost Report (MPCR	2006

## **DSS IPD Data**





## DSS Intermediate Product Department (IPD) Files

- IPD inpatient and outpatient files beginning FY 2003
- Product department indicates both <u>type</u> and <u>location</u> of care
  - E.g. inpatient units, primary care clinic team
- Often multiple product departments per encounter
- Cost incurred in each product department
  - Fixed direct, fixed indirect, variable direct

## **DSS Intermediate Product Department (IPD) Files**

- Inpatient: monthly record per patient per inpatient product department
- Outpatient: one record per patient per outpatient product department
- No clinical information (ICD-9 or CPT) but can be linked to utilization files

#### **Example of IPD-TRT Records**

Patient	TRTIN	TRTOUT	IPD_NUM	IPD_TOT
А	06-07-22	06-07-27	psychiatry MD bedday	471.11
A	06-07-22	06-07-27	psychology & neuropsychology lab	1.08
А	06-07-22	06-07-27	occupational therapy	1985.01

## **Documentation on HERC website**

Home Veteran Servic	es Business About VA M	edia Room Locations Contact Us				
	HERC Home / Publications / Guidebooks					
 HERC Home	For each column within the	table, click on the "+" to sort in ascending order; "-" to sort in descending	a			
News »	order.					
Resources »						
Data »						
Methods »	Authors +- Smith MW, Barnett PG	Title +- Research Guide to the VA Financial Management System (FMS)	Date + 2010			
 Research	Siliur MW, Barrieu PG	Download available on our Intranet site	2010			
Publications »	Wagner TH	Medicare Wage Index for VA Facilities: 2000 - 2009 Download available on our Intranet site	2010			
 Training »	Smith MW, Barnett PG, Phibbs CS,	Microcost Methods for Determining VA Healthcare Costs	2010			
 About Us »	Wagner TH					
	Smith MW, Chow A	Fee Basis Data: A Guide for Researchers Download available on our Intranet site	2010			
	Phibbs CS, Yang J, Flores NE, Barnett PG	HERC'S Outpatient Average Cost Dataset for VA Care: Fiscal Year 2008 Update Download available on our Intranet site	2009			
	Chen S, Yu W	Guidebook for the HERC Person Level Cost Data Sets FY1998 – FY2008 Download available on our Intranet site	2009			
	Wagner TH	HERC's Station Level Cost Dataset FY2000 - FY2007	2009			
	Yang J, Wagner TH	HERC's DSS Discharge Dataset with Subtotals for Inpatient Categories of Care, Fiscal Year 2007	2009			
	Wagner TH, Barnett PG	HERC's Average Cost Datasets for VA Inpatient Care FY1998 - FY2008	2009			
 <	Yoon J, Gage M, Barnett PB	Research Guide to the DSS Intermediate Product Department Files Download available on our Intranet site	2009			
	Phibbs CS, Barnett PG, Harden C, King SS	<u>Research Guide to Decision Support System National Cost Extracts</u>	2008			
	Cinnett DL Jours V/P. Parnett DC	Droforance Massurement in Economic Analysis	2007			
		s/guidebooks.asp				

## **DSS ALB Data**





### **ALB Uses**

- ALB has several uses
  - Find labor costs and hours by department
  - Find overhead (indirect) costs by type
- ALB extract does not contain
  - Patient-level data
  - Product-level data (e.g., costs of individual supplies)

#### **ALB Data Elements**

- ALBCC code has 3 components
  - Leading 8, column, 1 (omit)
  - VA cost center, columns 2-4
  - Production unit code
  - Division suffix
- Example: DSS ALBCC Code 201MM1 is broken down as follows:
  - VACC 201: Medicine
  - Production Unit Code MM: Primary Care Clinic
  - Division: 1 Usually Main Division of a VA medical facility

#### **ALB Cost Data**

- Cost are divided into elements
  - Fixed direct (does not vary with volume)
    - Types: FDO (other), FDL (labor), FDE (equipment), FDF (facility)
  - Variable direct (varies with volume)
    - Types: labor (VL), supplies (VS)
  - Indirect
    - Non-clinical departments: police, building engineers, administration, clinical research, etc.

#### Resources

 DSS National Data Extract Technical Guide and Product Department Guide

http://vaww.dss.med.va.gov/nationalrptg/nr\_extracts.asp http://vaww.dss.med.va.gov/programdocs/pd\_depts.asp *Note: These are internal VA Web sites and are not available to the public.* 

- HERC Technical Reports 5 and 6:
  - Barnett PG, Berger MS Cost of positron emission tomography: method for determining indirect cost. 2003.
  - Barnett PG, Berger MS. Indirect costs of specialized VA mental health treatment. 2003.

## **Nursing Changes Coming to DSS**

#### DSS TLU to ALB mapping

- How DSS gets labor costs into system
- For each employee, labor allocated to ALBs by % effort
- Nurses float to other units as patient census changes
  This is not directly tracked in DSS

### **DSS Changes, Cont.**

- Good private sector systems, floating is tracked.
- Office of Nursing Services working with DSS to have system track floating, when nurses are not providing patient care (e.g., in training session), and provide more data on contract nurses.

## **Other DSS NDEs**

To date, HERC has not used the data. vaww.dss.med.va.gov/nationalrptg/nr\_extracts.asp *Note: This is an internal VA Web site and is not available to the public.* 





### **DSS Ward NDE**

- Divides all inpatient encounters into segments based on the ward on which the patient was located for each hospitalization during the current fiscal year.
  - Includes date and time of admission and discharge from the unit.
- Similar to the TRT file, but wards refer to a specific location
- Ward data are only available since FY07

# **Surgery NDE**

- Contains the cost and workload of all surgery cases.
- This NDE is based on the VistA Surgery package
- DSS does not cost cancelled or aborted cases, but does record them.

## Fee Basis: Non-VA Purchase Data





#### **Fee Basis Program**

- Pays for care at <u>non-VA facilities</u> when
  - it is the only source available, or
  - VA could save money
- Full range of services covered
- Nearly all outpatient care is pre-authorized; limited emergent care

#### **Growth in Fee Basis**

- Large growth in contract care in last 10 years:
  - \$556 million in FY2003, \$3.1 billion in FY2009
  - 10-20% growth per year
- Examples of growth areas
  - long-term care (community NHs)
  - kidney dialysis
  - radiology

## 8 Fee Basis Files per Fiscal Year

#### Inpatient care

- Hospital stays (facility or facility+physician)
- Ancillary, physician (if billed separately)
- Outpatient care
  - Outpatient non-pharmacy
  - Payments to pharmacies
- Travel expenses
  - Two vendor files (pharmacy, all other)
- Veterans with Fee Basis ID cards

#### Resources

- Fee Basis intranet web site
  - Record of national Fee monthly calls
- HERC intranet web site
  - Guidebook on Fee Basis data
  - Technical report analyzing FY2003 data
- Mark Smith will be presenting on Fee Basis Data at a July 28<sup>th</sup> Cyberseminar

## **PAID Data**





## PAID

- VA's payroll data system
- PAID has many different types of data
- 2 parts to PAID
  - History file, data from each pay period
  - Master file, annual file with human resources data

#### PAID, cont.

- PAID History file
  - Data on hours worked, including hours with shift differentials
  - Data on pay, including all deductions and adjustments
  - Essentially all of the detail for generating paychecks

### PAID, cont.

PAID Master file

- Education/qualifications, including degree dates

- Demographics
- Hire date
- Job description/title

## Linking to PAID

Individual identifiers

- SSN, name, birthdate, etc.

- Workplace identifiers
  - TLU, facility, BOC (type of employee)

## Linking to PAID, cont.

#### Providers

- DSS, PTF, NPCD all have a provider ID
- There is a crosswalk between provider ID and SSN
- Use SSN to pull PAID data and link to providers
- Nurses
  - Nurse manager of each unit has own TLU
  - All nurses working for that unit assigned to that TLU
  - From DSS, can get mapping of TLUs to ALBCCs
  - This only works for nurses