# Sources of VA Care Costs and Providers

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# Focus for Seminar

- Encounter-level cost data exist (MCA and HERC). We will not be discussing these data today.
- We will be discussing five other topics that may be of use to you in your research

# Topics for today's talk

- HERC person-level costs file
- Non-VA costs
- Geographic Variation in Costs: Wage  index file
- VA data on health care providers
- VA PAID system and HERC guidebook

# HERC Person-Level Costs

Jean Yoon, Ph.D.

# HERC Person-Level Costs

- Reports total annual costs and utilization of VA care for each patient
- Annual person-level file FY98-FY14
- Costs reported for five categories of inpatient care and four categories of outpatient care
- Reports separate costs for total pharmacy costs and total Fee Basis costs (FY00-FY11)
- Utilization measured by inpatient length of stay by category and total outpatient visits.

# HERC Person-Level Costs

- Local and national estimates of costs
- Inpatient stays beginning in one fiscal year and ending in another have costs allocated between the fiscal years based on the proportion of days of stay in each fiscal year
- Inpatient categories of care
  - Medical/surgical, behavioral, long term care, residential/domiciliary, all other
- Outpatient categories of care
  - Medical/surgical, behavioral, diagnostic , all other

# HERC Person-Level Costs

- Inpatient and outpatient costs from HERC Average Cost data
- HERC method of distributing costs to hospital stays and outpatient visits
- Costs identical for all encounters with same characteristics

1)Acute medical surgical stays

  - Estimate of what stay would have cost in a Medicare hospital, based on a regression model

2) Other inpatient care

  - Length of stay

3) Outpatient care

  - Hypothetical Medicare payment based on procedure codes assigned to visit

# HERC Person-Level Costs

- For each inpatient stay and outpatient visit, HERC estimated two costs: national and local.
  - National costs were estimated such that they sum to the total national expenditures for VA care (divided by care category) reported in DSS.
  - Local costs were estimated similarly, but reconcile to the total VA expenditures by care category at the medical center level as reported in DSS.
- Pharmacy costs obtained from DSS national data extracts (NDE)
- Fee Basis costs obtained from four Fee Basis datasets: Inpatient, Ancillary, Outpatient, and Pharmacy
  - Lag in Fee records, so Fee costs not added until 1-2 years after FY

# HERC Person-Level Costs

- The person-level cost datasets are named PLCOSTXX
  - XX refers to the fiscal year of dataset
- SQL tables on CDW static server, vhacdwrb01.vha.med.va.gov, database VINCI_HERC
- SAS datasets on \\vhacdwsasrds01\HERC
- ***Guidebook for the HERC Person-Level Cost Datasets FY1998 – present*** available on HERC intranet site

# Estimating Non-VA Costs

Todd H Wagner, Ph.D.

# Objective

- It is common for Veterans to use non-VA providers.
- We will the pros and cons of different methods for identify non-VA utilization and estimating non-VA costs

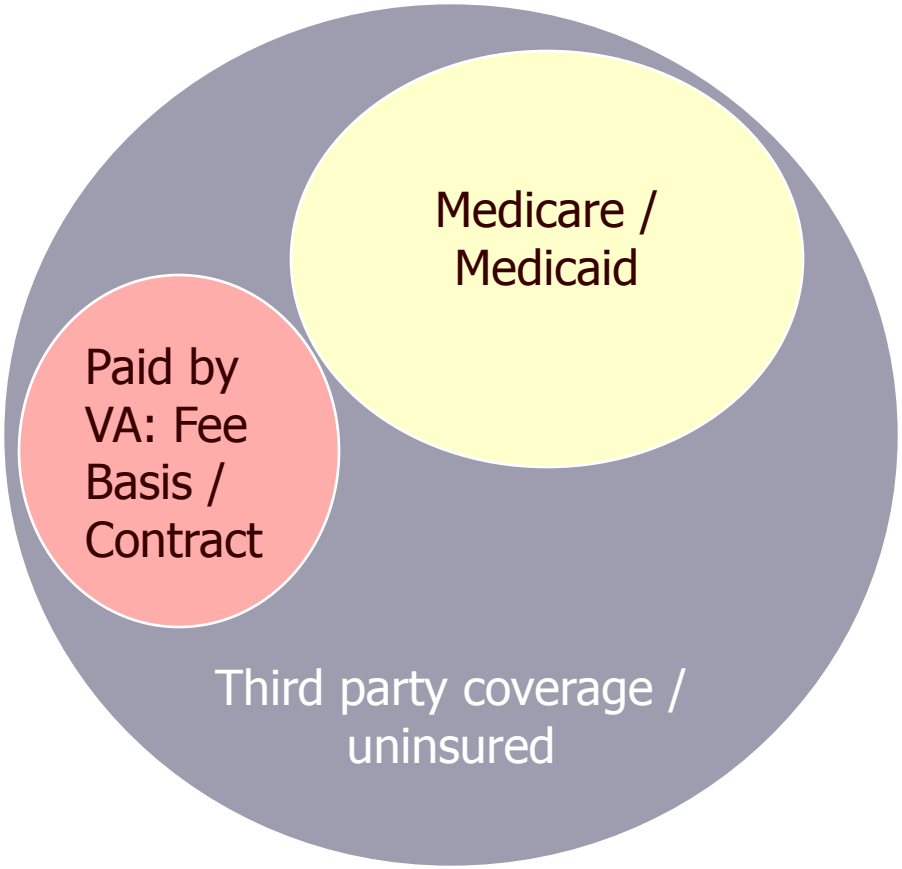
# Non-VA Use is Common

- Among Medicare enrollees, 80% of Veterans underage 65 relied on VA, while 53% of those over age 65 relied on VA*
- Distance to the VA matters.
- Reliance varies by medical need: higher reliance on VA for SUD and MH treatment
- Federal policies affect use
  - Affordable Care Act
  - Veterans Choice Act

*Petersen L, et al (2010) Relationship between clinical conditions and use of Veterans Affairs health care among Medicare enrolled Veterans. HSR.

# Non-VA Utilization

- How do you identify the universe?
- If you use different methods, how do you prevent double counting?



# Medicare

- Near universal coverage for adults over age 65
- Eligibility:
  - US citizen or legal resident
  - Resided in US >= 5 years
  - Worked 10+ years for Medicare eligible employer

# Medicare

- Medicare also covers individuals with disabilities.
- Four parts of Medicare
  - Part A: Payments to facilities
  - Part B: payments to providers
  - Part C: Medicare Advantage
  - Part D: Prescription coverage
- Generosity:

  www.medicare.gov/what-medicare-covers/

# Medicare Access for Research

- Through VIReC

  vaww.virec.research.va.gov/Index-VACMS.htm

- 2 year lag in access

- Data are well documented and relatively easy to use

# Medicaid: MAX Data

- States submit data to the Centers for Medicare and Medicaid Services (CMS)
- Data extracted to create the Medicaid Analytic eXtract files (MAX) to support research and policy analysis for all states and the District of Columbia.
- MAX data are available in many states for patients enrolled in traditional fee-for-service and managed care plans with and without full capitation.
- Analysis of encounter data for patients in capitated plans found that 66% of states had usable outpatient encounter data in 2007.

# MAX Data

- MAX data linked to veterans enrolled in VA
- VA/CMS MAX data are available from VIReC for research
- Data lag –most recent file is 2010
- VA/CMS MAX Person Summary, Inpatient, Other Services, and Prescription Drug files
- Person Summary - one record per enrollee per state per year
- Inpatient file is one record per inpatient stay.
- Other Services/Pharmacy file is one record per claim

# Fee Basis / Purchase Care

- File structure and data are changing rapidly due to the Choice Act

- New HERC Guidebook

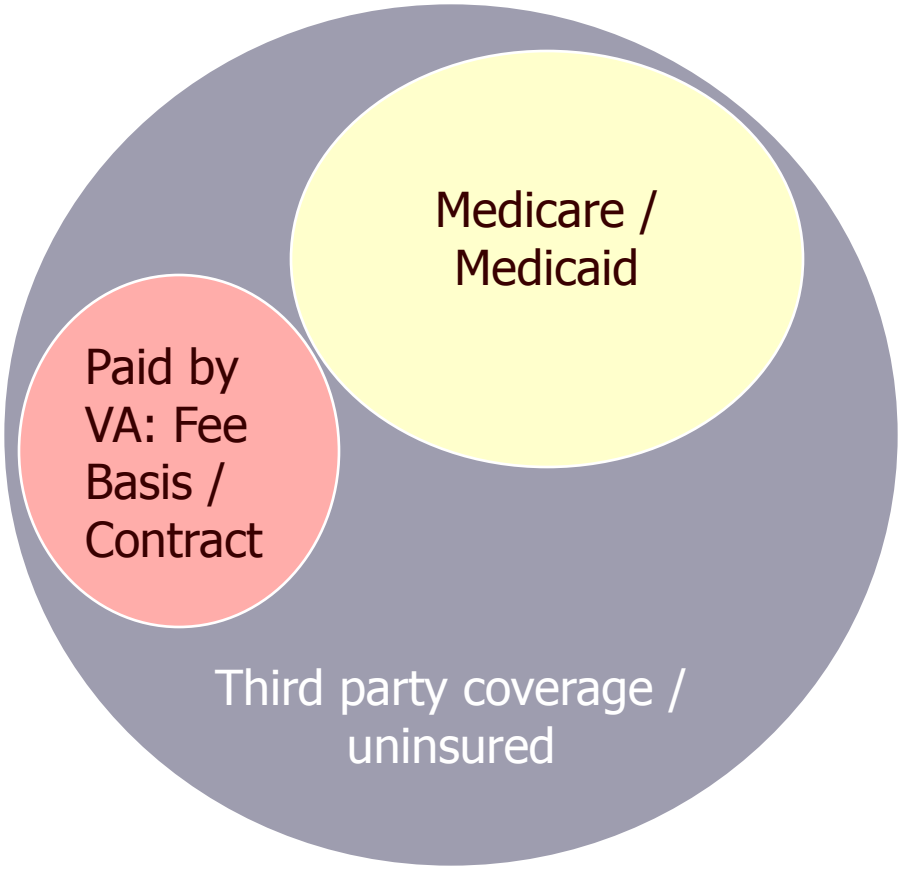
www.herc.research.va.gov/include/page.asp?id=guidebook-fee-basis

- Tables are awesome!

www.herc.research.va.gov/files/MXLS_guidebook-fee-basis-tables.xlsx

# Self-Report

- Perhaps the best way to measure all non-VA care on the extensive margin
- Self-report is not great on the intensive margin

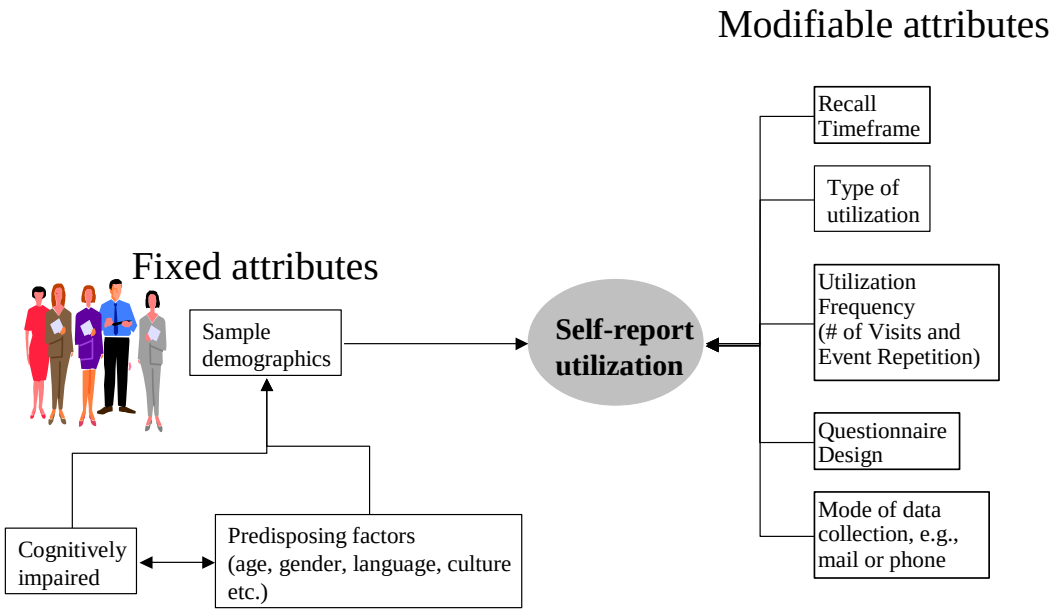


# Specificity / comprehension tradeoff

- During the past 12 months, how many times have you seen a doctor or other health care professional about your own health at a doctor's office, a clinic, or some other place?  Do not include times you were hospitalized overnight, visits to hospital emergency rooms, home visits, or telephone calls.

# What is Self-Report

- Cognitive process of recalling information



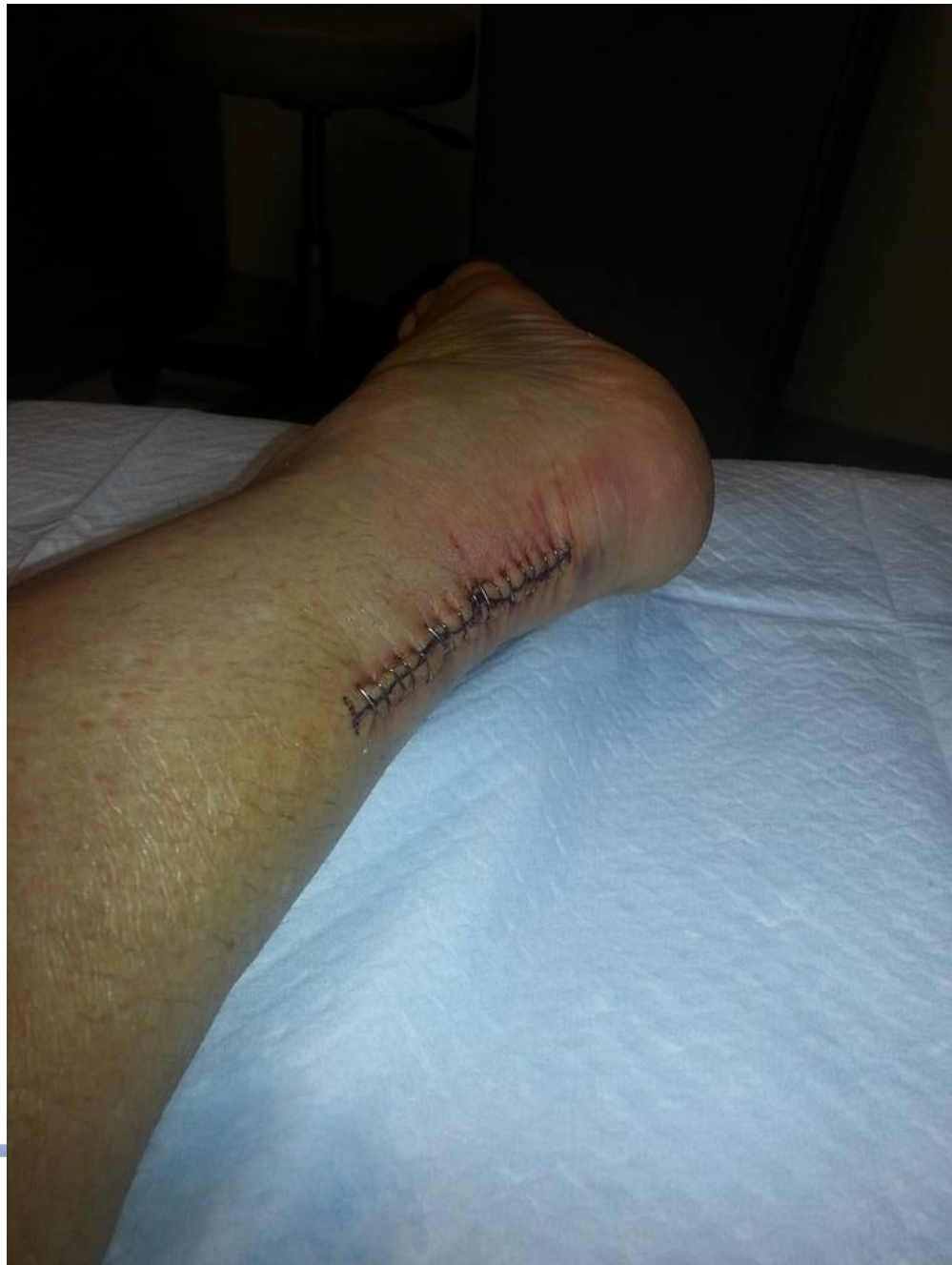

Bhandari and Wagner (2006): http://mcr.sagepub.com/content/63/2/217.full.pdf

# If you asked me…

- My best guess is:

  9

- The event is salient, but I don't recall any use of health care before it

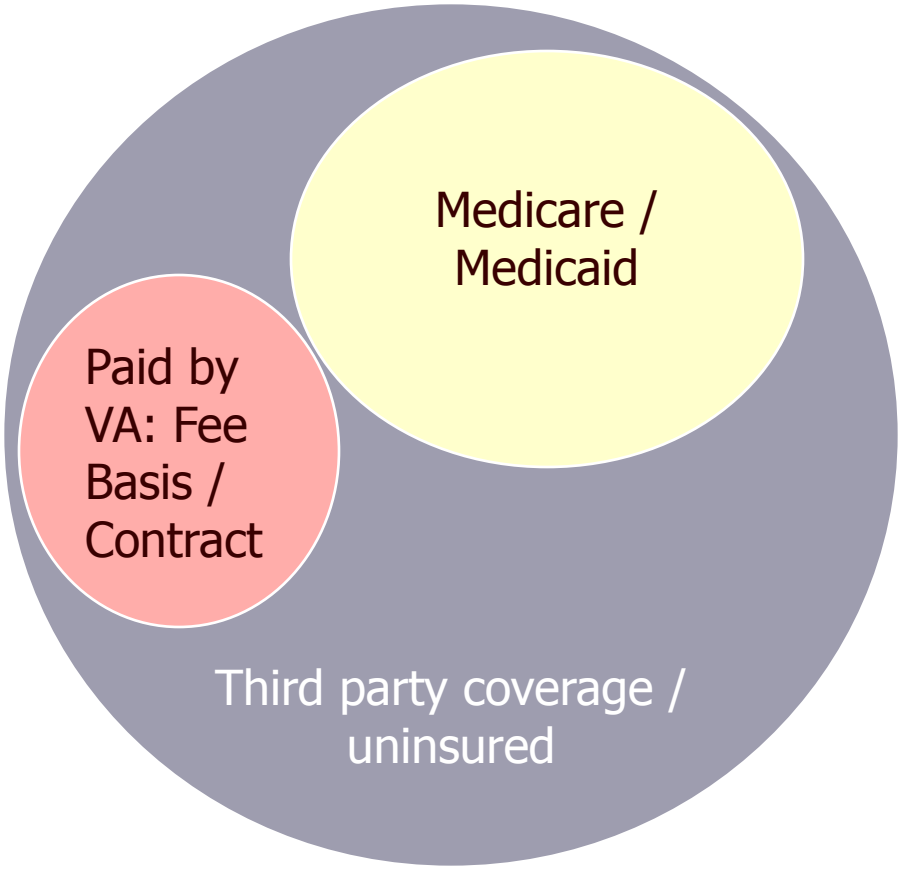


# Costs

- Self-reported costs are unreliable
- Must impute costs from self-reports
- Limitations
  - can introduce biases
  - Not as precise as accounting data
- Consider seeking billing data (discussed next)

# Collecting Data from Non-VA Providers

- Self-report may not be sufficiently precise
- With permission, you can collect the grey area by collecting billing data from providers
- Really hard and missing data are common!



# Time and Location

# Inflation

- Costs vary over time
- Should adjust using the general consumer price index or the producer price index
- The medical care consumer price index overstates inflation (does not sufficiently control for changes in quality).*

Frank, R. G., Berndt, E. R., & Busch, S. H. (Eds.). (1999). *Price Indexes for the Treatment of Depression. Washington, D.C: Brookings Institution Press.*

# Geographic Variation in Costs

- Labor represents a large component of medical care costs.
- Wages vary considerably by geographic market
- Must normalize the costs
- HERC has developed a Wage Index file

# Wage Index

- Medicare creates a Wage Index file
- We have linked VA hospitals (at the sta6a level) to the Medicare Wage Index file
- Data are available from 2000-2010
- Adjust for wages in the multivariate analysis
- More info:

  www.herc.research.va.gov/publications/guidebooks.asp

# VA Data on Health Care Providers

# Use of provider data

- Evaluate interventions directed at providers
- Study how provider characteristics relate to efficiency or quality
- Control for correlation of patients seen by the same provider

# Provider is identified in many VA datasets

- Outpatient visits
- Inpatient encounters
- Primary care assignments
- Hospital discharges
- Prescription fills
- Laboratory and radiology orders

# National Health Care Practitioner Database (NHCPD)

- Contains provider name
- Medical center
- Provider ID
- Real and scrambled Social Security Number

# Provider ID

- Used in all datasets
- Identifies a specific provider
- Unique number at each site where provider practices
- Formatted differently in MCA/DSS
- Different variable name in different datasets

# Provider type

- Provider Classification System
- Developed by CMS and ANSI
- 6-character code
- Type of provider and area of specialization
- Different variable name in different datasets
- Not in the NHCPD but in PCMM and MedSAS files.

# Provider Data on CDW

- NHCPD files in CDW, library: MedSAS Provider Data, PROVIDER.ALLSRCXX (up to FY13)
- PCMM schema on
  - CDW production server (vhacdwa01.vha.med.va.gov), database CDWWork
  - Static server (vhacdwarb01.vha.med.va.gov).

# More information

**Guide to VA Data on Health Care Providers.** Roumiantseva D, Sinnott PL, Barnett PG. June 2011

See www.herc.research.va.gov → publications → guidebooks

# PAID Data

# PAID

- VA's payroll data system: Personnel and Accounting Integrated 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
  - MCA/DSS, PTF, NPCD all have a provider ID
  - Separate crosswalk file for provider ID and SSN
  - Use SSN to pull PAID data and link to providers

# Linking to PAID, cont.

- Nurses
  - Nurse manager of each unit has own TLU
  - All nurses working for that unit assigned to that TLU
  - From MCA/DSS, can get mapping of TLUs to ALBCCs
    - E.g. Getting total nursing hours for a nursing unit
    - This only works for nurses

# More information

PAID data located in CDW-Raw (vhacdwa06).

**Guidebook for Research Use of PAID Data.** Shane A, Phibbs CS. 2013

See www.herc.research.va.gov
→ publications → guidebooks