

2009-2010 VIREC Database and Methods Cyber Seminar Series

Measuring Veterans Health Services Use in VA and Medicare (Part 2)

Session 8
December 7, 2009

Presented by:

Denise M. Hynes, Ph.D., R.N.

Linda Kok, MA



Session Objectives

- **Overview of Medicare Claims data**
- **Using data on services provided by home healthcare agencies, skilled nursing facilities, and hospice services, and on durable medical equipment and supplies**
- **Measurement strategies for evaluating Medicare healthcare use - examples of VA studies that have used the selected Medicare Claims datasets to evaluate healthcare use**
- **Where to go for more help**

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Overview of Medicare Claims Data

- **Healthcare providers and health equipment suppliers submit claims to the Centers for Medicare and Medicaid Services (CMS) for reimbursement for services and products**

Medicare Payment Systems

- **A Prospective Payment System (PPS) in which a pre-determined payment amount (rate) is expected to cover all operating and capital costs for healthcare services provided during a stay or episode of care.**
- **PPSs are used to reimburse:**
 - Home Health Agencies
 - Skilled Nursing Facilities
 - Hospice Services
- **Claims for reimbursement can include individual or multiple services, products or supplies**
- **Some health care services generate no claim - such as for care provided under a Health Maintenance Organization (HMO) plan**

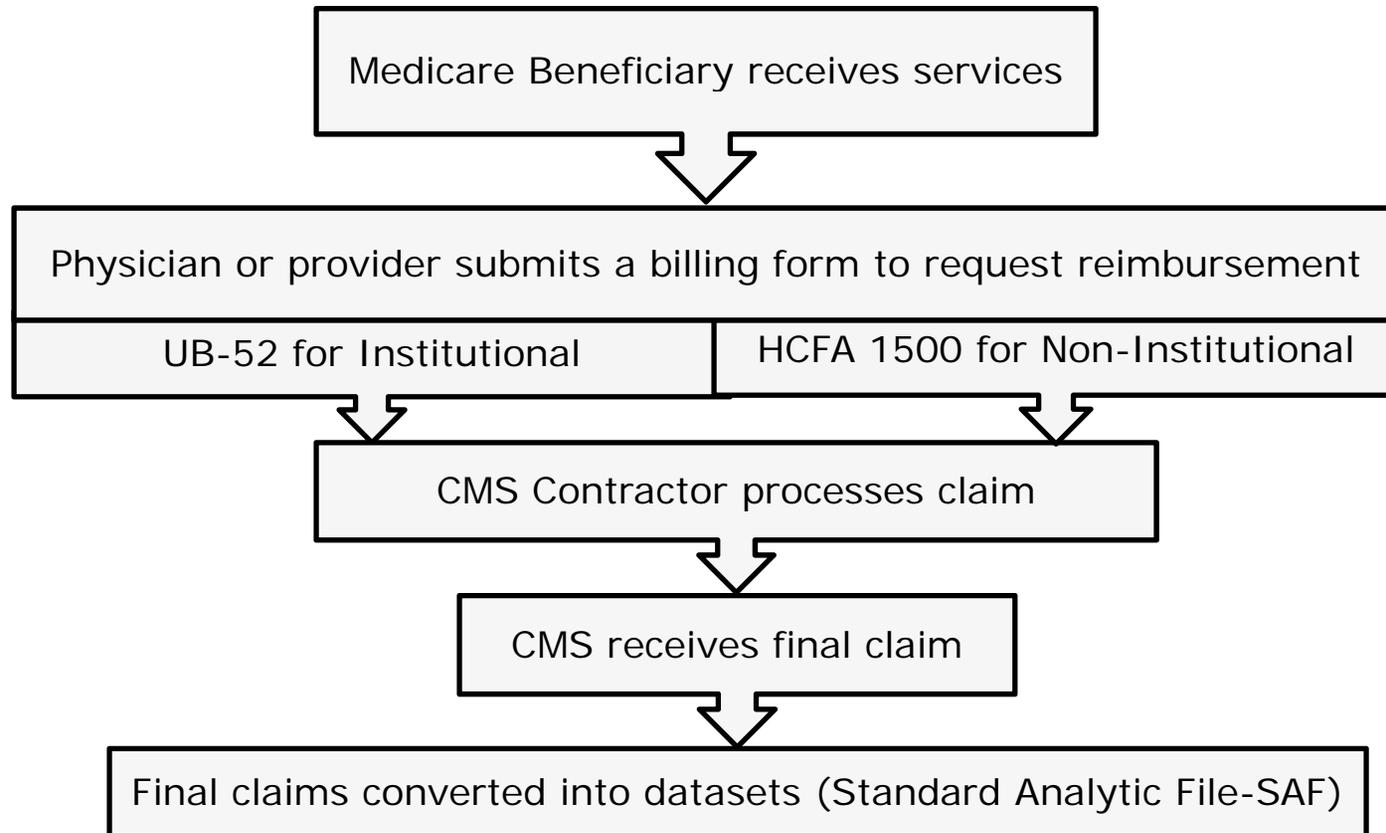
Examples of Relationship of Claims to Care

- **A single claim may include**
 - One service, product or procedure such as
 - A wheelchair supplied by a durable medical equipment supplier
 - More than one service, product or procedure such as
 - such as all care provided to a patient during a SNF stay
- **Multiple claims may be submitted during a**
 - long SNF stay or
 - extended home health episode of care

Sources of Medicare Claims Data

Billing Form	HCFA 1450/UB-92	HCFA 1500
Provider type	Institutional	Non-institutional
Examples of Providers	Hospitals Skilled Nursing Facilities Home Health Agencies Hospice Services	Physicians Suppliers

Bills → Claims → Data



Overview of Medicare Claims Data

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Medicare Claims Data

- **Institutional Standard Analytic Files (SAF)**
 - Outpatient
 - Home Health Agency (HHA)
 - Hospice
 - Inpatient
 - Skilled Nursing Facility (SNF)
- **Non-institutional Standard Analytic Files (SAF)**
 - Carrier (Physician/Supplier)
 - Durable Medical Equipment (DME)
- **Institutional Stay Level Summary File**
 - Medicare Provider Analysis and Review (MedPAR)

Our focus today

- **Institutional Standard Analytic Files (SAF)**
 - Outpatient
 - Home Health Agency (HHA)
 - Hospice
 - Inpatient
 - Skilled Nursing Facility (SNF)
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Standard Analytic Files (SAF)

■ Elements Common to SAF

- Claim-level data submitted by a specific type of provider
- All include:
 - Diagnosis codes
 - Claim “from” and “thru” dates
 - Charge and payment amounts
 - Provider numbers



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Home Health Agency SAF

- **Includes services provided by Medicare-certified home health agencies:**
 - 50% Skilled nursing
 - 22% Physical therapy
 - 19% Home health aide
 - 5% Medical supplies
 - 4% Occupational therapy
- **How is care billed?**
 - Up to 60 days of care on one claim

Home Health Agency SAF

- **How billing is reflected in HHA data:**
 - Each record is a claim, an episode of care may require many claims
 - “From” and “thru” dates on claim don’t necessarily indicate dates of service
 - Some details of types of care provided are available in revenue center variables

Home Health Agency SAF

- **Measuring healthcare use in HHA data:**
 - Use (any claims)
 - Number of days of use
 - Diagnoses
 - Charges
 - Payments

Skilled Nursing Facility SAF

- **Includes services provided by a skilled nursing facility**
 - Inpatient and rehabilitation care
- **Does not include:**
 - Custodial care
- **How is care billed?**
 - Facilities are paid a pre-determined daily rate for each day of care, up to 100 days.

Skilled Nursing Facility SAF

- **How billing is reflected in the SNF:**
 - When a SNF stay from admission to discharge requires submission of multiple claims, claims must be combined to measure health care utilization or cost for a single stay
 - Frequency of claim submission may be based on facility accounting or duration of stay

Skilled Nursing Facility SAF

- **Measuring healthcare use in the SNF**
 - Stays
 - Use (any claims)
 - Number of days of use
 - Diagnoses
 - Charges
 - Payments

MedPAR File

- **Summary of healthcare during a single stay**
- **Contains inpatient and SNF data**

MedPAR File vs SNF SAF for Studying SNF Stays

- **MedPAR file may be more efficient than SNF for some analyses**
 - Uses
 - Number of stays
 - Days per stay
 - Cost per stay
 - Total costs (rolled up in a single record)
- **Disadvantages:**
 - Sub-category totals for charges not included
 - Includes only the diagnosis codes found on the last claim of the stay

Hospice SAF

- **Includes services provided when doctor has certified life expectancy of 6 months or less**
 - Care at home (80-90%) or as inpatient
- **How is care billed?**
 - Single daily rate for each day a beneficiary is enrolled in hospice care - regardless of the amount or type of services furnished

Hospice SAF

- **How billing is reflected in Hospice data:**
 - Claim-level data, an episode of care may require combining many claims
 - Most claims are for less than 30 days of care

Hospice SAF

- **Measuring healthcare use in Hospice data**
 - Use (any claims)
 - Number of days of use
 - Diagnoses
 - Charges
 - Payments

Durable Medical Equipment

- **Includes purchase or rental of supplies and equipment**
 - Type of Service (variable: BETOS) in 2006 data
 - 23% of claims are for oxygen and supplies
 - 11% Orthotic devices
 - 6% Wheelchairs
 - 2% Enteral & parenteral
 - 2% Hospital beds
- **How is care billed?**
 - Bills may be submitted for single or multiple products or supplies on one claim

Data Access

- The VA/CMS Data for Research project at VIReC provides CMS data to VA researchers with IRB approved projects under an Information Exchange Agreement (IEA) and a Data Use Agreement (DUA) between VHA & CMS, 2009
- Medicare and other CMS data are available for VA research only through VIReC – USH memorandum, October, 2009



Status of VA/CMS Data for Research

- Policies and procedures for release of CMS data to VA researchers are currently under review by leadership, but are not yet approved.
- To initiate research requests for use of CMS data, please contact VIREC at (708) 202-2413 or virec@va.gov to request a pre-application form.
- Researchers who have already submitted a pre-application do not need to submit additional documents at this time
- Submission of this form will permit VIREC to forward the approved VA/CMS data request packet and instructions to you as soon as available.



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Measuring Medicare Healthcare Use: Examples from Two Research Studies

- **Weaver F, et al. (2008) Providing All-Inclusive Care for Frail Elderly Veterans: Evaluation of Three Models of Care. *J Am Geriatr Soc.* 56: 345-353.**
- **Van Houtven CH, Jeffreys AS, Coffman CJ. (2008) Home Health Care and Patterns of Subsequent VA and Medicare Health Care Utilization for Veterans. *Gerontologist.* 48(5), 668-678.**

Measuring Medicare Healthcare use

Weaver, et al. (2008) J Am Ger

■ Goal

- Determine whether any of three models of all-inclusive long-term care (AIC) (VA as sole provider, VA-community partnership, and VA as care manager) reduce hospital and nursing home use by frail elderly veterans

■ Cohort

- 368 veterans aged 55 and older who met the state criteria for nursing home admission enrolled in one of three AIC models

Measuring Medicare Healthcare use

Weaver, et al. (2008) J Am Ger

■ Methods

- VA data:
 - Fee Basis File
 - MedSAS
 - VA Decision Support System (DSS)
- Medicare Claims files to identify Medicare reimbursed health care by study participants:
 - Inpatient, skilled nursing facility, hospice, outpatient, DME, and provider files
- DataPACE



Selected Results

Weaver, et al. (2008) J Am Ger

Table 4 (Modified): Healthcare Services use 6 Months Before and 6 Months After All-Inclusive Care Enrollment

Types of Use	VA as Sole Provider (n=86)		VA –Community Partnership (n=51)		VA as Care Manager (n=54)	
	Pre-test	Post-test	Pre-test	Post-test	Pre-test	Post-test
Hospital Admissions/patient	0.64	0.90	0.63	0.58	0.26	0.55
Total inpatient days/patient	7.63	9.20	5.27	2.33	2.06	2.24
Nursing home use, %	5	10	22	31	15	33
Nursing home admissions/patient	0.05	0.10	0.25	0.58	0.22	0.55
Nursing home days/patient	0.91	2.31	7.51	18.02	8.2	5.15
Home care use, %	47	47	25	82	37	87
Adult day healthcare use, %	3	53	0	100	0	100

Measuring Medicare Healthcare use

Van Houtven, Jeffreys & Coffman (2008) Gerontologist

- **Goal**

- Describe VA Home Health Care (HHC) utilization

- **Cohort**

- 24,169 VA HHC users and 53,356 non HHC users



Measuring Medicare Healthcare use

Van Houtven, Jeffreys & Coffman (2008) Gerontologist

■ Methods

- VA Fee Basis, Inpatient, Outpatient, and BIRLS files
- Medicare Home Health Agency, Inpatient, Hospice, Outpatient, Skilled Nursing Facility, and Hospice files
- Matched propensity score analysis

Selected Results

Van Houtven, Jeffreys & Coffman (2008) Gerontologist
Table 2 (Modified): Utilization Patterns of HHC Users (%)

VA-Medicare	Overall Cohort		Propensity-Score-Matched Cohort		Non-matched
	Nonusers	Users	Nonusers	Users	Users
Medicare					
Outpatient	29.4	27.8	28.5	28.9	26.8
Inpatient	13.0	17.4	14.9	17.6	17.2
Nursing home	2.9	7.8	4.8	7.7	8.0
Hospice	1.5	4.0	2.7	3.7	4.4
VA or Medicare					
Outpatient	92.5	94.5	92.7	94.9	94.1
Inpatient	21.9	47.3	30.2	42.7	51.7
Nursing home	5.4	22.0	10.3	19.0	24.9
Hospice	1.6	4.9	3.0	4.2	5.5

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VIReC Help

- **VIReC Webpage**

<http://www.virec.research.va.gov>

- Information on VA data sources and how to access data

- **VIReC Help Desk**

- VIReC staff will answer your question and/or direct you to available resources on topics
- VIReC@va.gov or (708) 202-2413

- **HSRData Listserv**

- Join at the VIReC Web site
- Discussion among >400 data stewards, managers, and users
- Past messages in archive (on intranet)



VIReC's VA-CMS Web Page

- Links to Medicare Files Data dictionaries
- SAS Proc Contents
- Frequencies for selected Medicare variables
- List of source files for VHA cohort
- <http://www.virec.research.va.gov/DataSourcesName/VA-MedicareData/Background.htm>

Research Data Assistance Center (ResDAC)

- **CMS contractor based at the University of Minnesota**
- **Provides free assistance to**
 - Researchers
 - Government agencies
 - Not-for-profit organizations
- **CMS 101: Introduction to the use of Medicare data for research**
- **www.resdac.umn.edu**

CMS and Medicare Websites

- **CMS Home Page**
 - www.cms.hhs.gov
- **CMS Research, Statistics, and Data Systems**
 - www.cms.hhs.gov/home/rsds.asp
- **For Medicare beneficiaries**
 - www.medicare.gov



Questions?



Upcoming Seminars

- **January 4, 2010**

Dr. Elizabeth Tarlov

“Applying Comorbidity Measures Using VA and Medicare data”

