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

January 7, 2013

Presented by:
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Audience Poll

- Did you attend the December session on using Medicare claims data to study inpatient and outpatient care?
  - Yes
  - No

- Have you ever used any Medicare claims data other than the Outpatient and Inpatient Standard Analytic Files?
  - Yes
  - No

- How would you rate your overall knowledge of Medicare claims data?
  - 1 (No knowledge)
  - 2
  - 3
  - 4
  - 5 (Expert-level knowledge)
Session Objectives

- **Overview of Medicare claims data (brief review)**
- **Using data from selected Medicare files**
  - Home Health Agency (HHA)
  - Hospice Services
  - Skilled Nursing Facility (SNF)
  - Durable Medical Equipment (DME)
- **Measurement strategies for evaluating Medicare healthcare use and examples of VA studies using selected Medicare claims data**
- **Where to go for more help**
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Why are Medicare Claims Important?

- Many Veterans who use VA health care also obtain care outside VA

- Researchers need full picture of health care use to draw accurate conclusions

- Almost half of Veterans enrolled in VHA are also enrolled in Medicare
Overview of Medicare Claims

- Healthcare providers and health equipment suppliers submit claims, i.e., bills, to the Centers for Medicare and Medicaid Services (CMS) for reimbursement for services and products.

- Claims are collected by CMS and entered into datasets for analysis based on:
  - Type of billing form used to gather the original information
  - Type of provider
### Sources of Medicare Claims Data

<table>
<thead>
<tr>
<th>Billing Form</th>
<th>CMS 1450/UB-04</th>
<th>CMS 1500</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Provider type</strong></td>
<td><strong>Institutional</strong></td>
<td><strong>Non-institutional</strong></td>
</tr>
<tr>
<td><strong>Examples of Providers</strong></td>
<td>Hospitals, Skilled Nursing Facilities, Home Health Agencies, Hospice</td>
<td>Physicians, Suppliers</td>
</tr>
</tbody>
</table>
Our focus today

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

- **Non-institutional Files**
  - Carrier (Physician/Supplier)
  - Durable Medical Equipment (DME)

- **Institutional Stay Level File**
  - Medicare Provider Analysis and Review (MedPAR)
Examples: Claims to Care Relationship

- **A single claim may include**
  - One service, product or procedure such as
    - A physician office visit
  - More than one service, product or procedure such as
    - An inpatient hospital stay

- **Multiple claims may be submitted for**
  - A long inpatient stay
  - A procedure that involved multiple physicians
Benefits of Medicare Claims Data

- Medicare data can be linked with VA data using Real or Scrambled Social Security Numbers (SSNs)

- Data directly related to billing is likely to be accurate
  - Claim “from” and “thru” dates
  - Charge and payment amounts
  - Diagnosis codes
  - Procedure codes
  - Provider numbers
Limitations of Medicare Claims Data

- No/Limited data on:
  - Data not needed for billing
    - Demographics (Marital Status, Education, Income)
    - Clinical Data (Lab Results, Vital Signs, Symptoms)
  - Services that are not itemized
    - Managed Care (HMOs)
    - Prospective Payment System (PPS)
A Prospective Payment System (PPS) is a system 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.

A PPS is used by CMS to reimburse:
- Hospitals
- Home Health Agencies
- Hospices
- Skilled Nursing Facilities
**Data Access**

- **Eligibility:** Medicare and other CMS data are available to VA researchers with VA Research & Development (R&D) Committee and Institutional Review Board (IRB) approved projects.

- **Data Steward:** VIREC’s VA/CMS Data for Research project
  - All use of CMS data for VA research must be approved by VIREC.

- **Information about data available and the request process:**
  - [http://www.virec.research.va.gov/Index-VACMS.htm](http://www.virec.research.va.gov/Index-VACMS.htm)
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Home Health Agency SAF

- Includes services provided by Medicare-certified home health agencies:
  - Skilled nursing
  - Physical/occupational/speech therapy
  - Home health aide
  - Medical supplies

- How is care billed?
  - Up to 60 days of care on one claim
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
Measuring healthcare use in HHA data:
- Use (any claims)
- Length of treatment
- Number of treatments
- Diagnoses
- Charges
- Payments
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)
  - Length of hospice 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.
How billing is reflected in Skilled Nursing Facility (SNF) data:

- When a SNF stay from admission to discharge requires submission of multiple claims, researchers must combine claims 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 SNF data

- Use (any claims)
- Number of stays
- Length of stay
- Diagnoses
- Charges
- Payments
Durable Medical Equipment

- Includes durable medical equipment, prosthetics and orthotics, and supplies

- Common items
  - Oxygen and supplies
  - Wheelchairs
  - Hospital beds
  - Enteral and parenteral nutrition
  - Drugs administered through DME
Durable Medical Equipment

How is care billed?

- Reimbursement based on HCPCS codes
- May be purchase or rental
- Claim may contain one or multiple products
Measuring healthcare use in DME data

- Use (any claims)
- Number of items
- Number of rental months
- Charges
- Payments
MedPAR File vs SNF SAF for Studying SNF Stays

- Claims are “rolled up” to the stay level
- Contains stays in both inpatient hospitals and skilled nursing facilities (SNF)
The MedPAR file is advantageous when studying:
- Number of stays
- Days per stay
- Cost per stay
- Total costs

Disadvantages:
- Sub-category totals for charges not included
- Includes only the diagnosis & procedure codes found on the last claim of the stay
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Measuring Medicare Healthcare Use: Examples from Two Research Studies


Goal
- Describe patterns of healthcare use following utilization of VA home health care (HHC)

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

- VA Fee Basis, Inpatient, Outpatient, and BIRLS files
- Medicare Outpatient, Inpatient, Skilled Nursing Facility, and Hospice files
- Matched propensity score analysis
## Selected Results


**Table 2 (Modified): Utilization Patterns of HHC Users (%)**

<table>
<thead>
<tr>
<th>VA-Medicare</th>
<th>Propensity-Score-Matched Cohort</th>
<th>Non-matched</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nonusers of VA HHC</td>
<td>Users of VA HHC</td>
</tr>
<tr>
<td><strong>Medicare</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td>28.5</td>
<td>28.9</td>
</tr>
<tr>
<td>Inpatient</td>
<td>14.9</td>
<td>17.6</td>
</tr>
<tr>
<td>Nursing home</td>
<td>4.8</td>
<td>7.7</td>
</tr>
<tr>
<td>Hospice</td>
<td>2.7</td>
<td>3.7</td>
</tr>
<tr>
<td><strong>VA or Medicare</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td>92.7</td>
<td>94.9</td>
</tr>
<tr>
<td>Inpatient</td>
<td>30.2</td>
<td>42.7</td>
</tr>
<tr>
<td>Nursing home</td>
<td>10.3</td>
<td>19.0</td>
</tr>
<tr>
<td>Hospice</td>
<td>3.0</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Goal
- Examine provision of assistive technology devices (ATDs) in 2 systems: Medicare and VA
- Analyze differences in ATDs provided and their cost
- Examine potential duplication between systems

Cohort
- 12,046 Veterans post-stroke identified using VA Functional Status and Outcome Database and VA Medical SAS datasets
## Methods

- Retrospective 2-year study (fiscal year [FY] 2001-2002) of post-stroke Veterans
- Comparative analyses between VA and Medicare limited to subset of study cohort age 65 or older at index stroke admission
- Provision of ATDs identified by Health Care Common Procedural Coding System (HCPCS) codes in VA National Prosthetic Patient Database and Medicare DME Files
**Selected Results**  
Winkler et al. (2010) *Medical Care*  
Table 1 (revised). Characteristics According to Device Provided by Medicare, Medicare + VA, or VA. Column Percentages Relative to the Number of Unique Veterans in Each Cohort Are Presented (N = 12,046)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Device provided by Medicare Only</th>
<th>Device provided by Medicare and VA</th>
<th>Device provided by VA Only</th>
<th>No Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. unique veterans</td>
<td>139 (1%)</td>
<td>406 (3%)</td>
<td>6798 (56%)</td>
<td>4703 (39%)</td>
</tr>
<tr>
<td>Age in yr Mean (SD)</td>
<td>74 (9)</td>
<td>73 (9)</td>
<td>69 (11)</td>
<td>68 (12)</td>
</tr>
<tr>
<td>Service Connected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>27 (19%)</td>
<td>106 (26%)</td>
<td>2005 (29%)</td>
<td>1191 (25%)</td>
</tr>
<tr>
<td>No</td>
<td>112 (81%)</td>
<td>300 (74%)</td>
<td>4793 (71%)</td>
<td>3512 (75%)</td>
</tr>
</tbody>
</table>
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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

- Complete list and description of files available
- Links to Medicare Files Data dictionaries
- SAS Proc Contents
- Frequencies for Medicare variables
- [http://www.virec.research.va.gov/Index-VACMS.htm](http://www.virec.research.va.gov/Index-VACMS.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
- Workshops on using Medicare and Medicaid data
- www.resdac.org
CMS and Medicare Websites

- CMS Home Page
  - www.cms.gov

- For Medicare beneficiaries
  - www.medicare.gov
Questions?
Requesting VA/CMS data from VIREC

The following documents are required:

- VA/CMS Data for Research Request Forms
  - Project Information and Authorization
  - Data Security Compliance Checklist
  - Data Description
  - Agreement to Provide Secure Data Storage at Termination of Approved Research
  - Rules of Behavior (ROB) Agreement

- Initial Research and Development (R & D) Committee approval letter
- Initial Institutional Review Board (IRB) approval letter
- Most recent continuing review approval letter
Upcoming Seminars

February 4, 2013

Research Access to VA Data: Linda Kok, MA