Administrative Data: Promise vs Privacy

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CMS data are primarily collected to support CMS operational purposes

Demand for CMS data for quality improvement and related initiatives has grown dramatically over the past several years

In one of his first acts in office the President issued a memorandum calling for more open participatory and collaborative government – CMS has been committed to meeting these objectives though:

- Releasing aggregated data in machine-readable formats
- Sharing beneficiary-level data with external data users, while maintaining protections for beneficiary privacy and ensuring appropriate use of the data
CMS Data Navigator

- One-stop shop for CMS data
- Simple point-and-click interface
- Nearly 300 active data sources
- Displays search results by file type

Available at: [http://dnav.cms.gov](http://dnav.cms.gov)
Medicare and Medicaid Statistical Supplement

- Available 2001-2013
- Includes 115 tables and 67 charts describing health expenditures for the entire U.S. population, characteristics of the Medicare and Medicaid covered populations, use of services, and expenditures under these programs.
- Redesign in process
  - Will include new sections, e.g., Part D utilization and cost
  - Will include new methodologies, e.g., member-months

CMS Fast Facts

- CMS statistics accessible by mobile device
- Quick reference statistical summary on annual CMS program and financial data
State, HRR, and County-Level Data

- Datasets with aggregated indicators at the state, HRR and county level

- Based on 100% Medicare claims data for beneficiaries enrolled in FFS for 2007-2012
Since May 2013, CMS has released three datasets that summarize utilization, payments, and charges for procedures and services provided to Medicare fee-for-service beneficiaries:

<table>
<thead>
<tr>
<th>Dataset</th>
<th>Key Variable(s)</th>
<th>Years</th>
<th># of Providers</th>
<th># of Records</th>
<th># of Page Views</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital Inpatient Stays</td>
<td>DRG</td>
<td>FY2011 &amp; FY2012</td>
<td>3,000+ Hospitals</td>
<td>Over 155,000</td>
<td>390,000 (since May 2013)</td>
</tr>
<tr>
<td>Hospital Outpatient Visits</td>
<td>APC</td>
<td>CY2011 &amp; CY2012</td>
<td>3,000+ Hospitals</td>
<td>Over 40,000</td>
<td>99,000 (since June 2013)</td>
</tr>
<tr>
<td>Services Delivered by Physicians and Other Suppliers</td>
<td>HCPCS, Place of Service</td>
<td>CY2012</td>
<td>880,000+ Individual Providers</td>
<td>Over 9M</td>
<td>400,000 (since March 2014)</td>
</tr>
</tbody>
</table>
Change in Average Hospital Inpatient Charges for MS-DRG 470 between 2011 to 2012

National average = $2,116
Physician and Other Supplier Data by Specialty

Specialties with the Highest Medicare Payments

Office Visit Codes by Specialty

- National average for all specialties
Policies to Protect Privacy on PUFs

- CMS is committed to making more program data available in multiple formats to spur innovation and let the private sector leverage the data to its greatest potential.

- Must also ensure that public use files (PUFs) protect beneficiary privacy:
  - Heath Insurance Portability and Accountability Act (HIPAA) – data must be de-identified.
  - CMS privacy policy – “No cell (e.g. admittances, discharges, patients, services) 10 or less may be displayed. Also, no use of percentages or other mathematical formulas may be used if they result in the display of a cell 10 or less.”
Data Dissemination Activity

- CMS is routinely and safely sharing data to support the transformation of the delivery system
  - Accountable Care Organizations (ACOs)
  - Qualified Entities (QEs) – Medicare Data Sharing for Performance Measurement Program
  - Quality Improvement Organizations (QIOs)
  - States
  - CMS demonstrations – Innovation Center grantees (e.g., Health Care Innovation Awardees)

- CMS has also allowed beneficiaries full and open access to their Medicare claims data through the Blue Button Initiative
The Chronic Condition Warehouse (CCW) is CMS’ research data warehouse designed to support external researchers and internal CMS research and analytic functions.

Unique beneficiary ID allows user to link data across all CCW data – including:

- Medicare beneficiary demographics and enrollment (1999-current)
- Medicare fee-for-service (FFS) claims (1999-current)
- Medicare Part D event data (2006-current)
- Medicaid eligibility and claims (1999-2009)
- Medicare-Medicaid linked files (2006-2008)
- Assessment data (instrument inception-current)
Virtual Research Data Center

ACCESS
- Researchers use own laptop to securely access data remotely
- Increases efficiency of data sharing and reduces infrastructure costs for data users

SECURITY
- No shipping of data on external media
- Users only see data files with the data they need to conduct their project
- CMS can track and monitor use of the data

PRIVACY
- Users may only remove aggregated output files; no granular identifiable output may be taken out
- CMS encrypts all beneficiary identifiers
- CMS can encrypt physician identifiers

DATA & ANALYSIS
- Users can perform their own analyses and data manipulation in the virtual environment
- Secure File Transfer System allows users to upload their own data and download output files efficiently and securely
Legal Authorities

● Legal authorities serve 2 functions:

1. Authorize or allow CMS to release data to a specific entity for a specific purpose
2. Place restrictions on the type of data that can be disclosed and to whom
   ▪ Privacy Act of 1974
   ▪ HIPAA

● CMS must balance multiple competing interests and sensitivities regarding data release practices to protect beneficiary privacy

● Protecting CMS data
  o All users of CMS data must sign a Data Use Agreement (DUA)
  o VRDC offers an additional layer of privacy and security