


Leveraging CMS Data to Accelerate Health System Change

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Introduction

- CMS is the largest single payer for health care services in the US
 - Expected to serve over **125 million individuals** in 2016 between the:
 - Medicare program (health insurance for individuals age 65 and older, as well as those with disabilities)
 - Medicaid/CHIP program (health insurance managed by the states for individuals with lower incomes)
 - Over **11 million plan selections** during the 2015 open enrollment period for the federal and state health insurance marketplaces
 - **2.5 billion claims** submitted annually for the Medicare FFS program alone
- Significant new data sources
 - Meaningful use of health information technology
 - Provider quality information
 - Health Insurance Marketplace data
- Trusted to protect beneficiary privacy




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Delivery System Reform Focus Areas


Improving the way providers are incentivized, the way care is delivered, and the way information is distributed will help provide better care at lower cost across the health care system.

FOCUS AREAS




Source: Burwell SM. Setting Value-Based Payment Goals — HHS Efforts to Improve U.S. Health Care. NEJM 2015 Jan 26; published online first.



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CMS Data and Delivery System Reform


- Information is a key driver of delivery system transformation
 - CMS data can provide critical insights that can inform and drive health system change and make the system more transparent, affordable, and accountable
 - All health system actors can benefit from better data and information and a vibrant health data ecosystem
- To promote delivery system transformation, CMS is:
 - Employing advanced analytics to create actionable information products, accelerate transparency, inform policy decisions and evaluate programs
 - Routinely and safely sharing data with numerous stakeholders to drive health care quality and efficiency improvements and lower health care costs
 - Driving unprecedented efforts around health data transparency




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CMS Data Transparency

- CMS, HHS, and the White House have made a commitment to greater data transparency
 - Since 2010, CMS has released an unprecedented amount of aggregated, de-identified data in machine-readable form
 - Geographic Variation and Chronic Condition PUFs
 - Hospital Inpatient, Hospital Outpatient, and Physician PUFs
- CMS Data Navigator (<https://dnav.cms.gov/>) makes it easy to find CMS data and information products on our website






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Medicare Provider Utilization and Payment Data

- Public data sets with payment and utilization information for services and procedures provided to Medicare beneficiaries
- Data released to date covers 60% of Medicare program payments

May 2013	April 2014	April 2015
Hospital Inpatient & Outpatient	Physician & Other Supplier	Part D Prescriber
<ul style="list-style-type: none"> ▪ 3,000+ Hospitals ▪ 150,000+ records ▪ 100,000 page views 	<ul style="list-style-type: none"> ▪ 880,000+ NPIs ▪ 9+ million records ▪ 166,000 page views 	<ul style="list-style-type: none"> ▪ 1+ million NPIs ▪ 23+ million records ▪ 16,000 page views in first month



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User Friendly Interfaces

- Search for a provider by name, address, or National Provider Identifier (NPI)
- Tool returns information about the services the provider furnished to Medicare beneficiaries
- Available for services/procedures (Part B data) and prescription drugs (Part D data)

Leith A Abdulla, M.D.
Specialty: Cardiology, Internal Medicine
 NPI: 1013170001
 Provider Type: General Internist
 Billing Type: Individual

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Electrocardiogram complete		Place of Service: Office		
NPI/ICD Code: 93.00	Number of Services	Number of Beneficiaries	Average Allowed Amount	Average Medicare Payment
	90	69	\$80	\$20.75
				\$16.6

Electrocardiogram report		Place of Service: Facility		
NPI/ICD Code: 93.09	Number of Services	Number of Beneficiaries	Average Allowed Amount	Average Medicare Payment
	72	57	\$32.28	\$8.85
				\$6.98

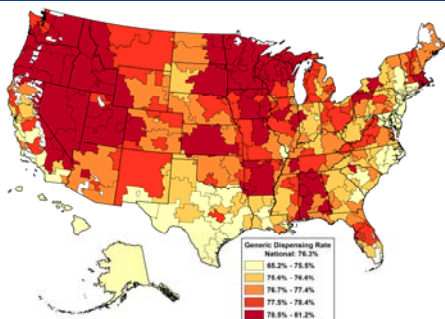
Cardiovascular stress test		Place of Service: Facility		
NPI/ICD Code: 93.39	Number of Services	Number of Beneficiaries	Average Allowed Amount	Average Medicare Payment
	38	38	\$82	\$23.28
				\$18.62

Cardiovascular stress test		Place of Service: Facility		
NPI/ICD Code: 93.39	Number of Services	Number of Beneficiaries	Average Allowed Amount	Average Medicare Payment
	38	38	\$57	\$15.79
				\$12.63



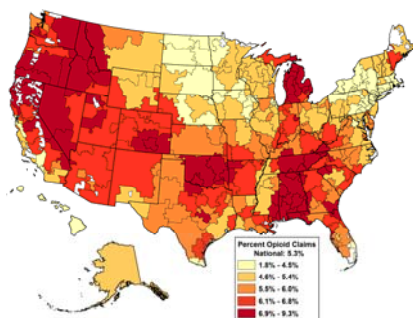
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Generic Dispensing Rates by HRR in Part D



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Percent of Opioid Claims by HRR in Part D



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Use and Disclosure of CMS Data


- CMS is committed to Open Data – making CMS data freely available in open, machine-readable formats, while appropriately safeguarding privacy, confidentiality, and security
- However, open data cannot meet the data needs of all CMS stakeholders
- While CMS data are primarily collected to support CMS operational purposes, demand for granular CMS data has grown dramatically over the past several years
 - Quality improvement, care coordination, and related initiatives
 - New areas of research such as comparative effectiveness and patient centered outcomes research
 - New statutory programs requiring disclosure of CMS data



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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
 - Health Insurance Portability and Accountability Act
- CMS must balance multiple competing interests and sensitivities regarding data release practices to protect beneficiary privacy
 - Too much flexibility could result in security breaches that may compromise individual privacy
 - Too little flexibility could inhibit health system insights that may improve the care beneficiaries receive



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Data Sharing for Care Coordination

- CMS is sending near real-time monthly data to facilitate care coordination to:
 - Accountable Care Organizations (ACOs) for patients assigned to the ACO
 - State Medicaid programs for Medicare-Medicaid enrollees
- Data is essential for analyzing the full continuum of care for beneficiaries
- Feeds include beneficiaries' entire claims history, including all service types, procedures and supplies.
- Opportunity for private sector to help transform the data to clinical information



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Data Sharing for Performance Measurement

- Qualified Entity (QE) Program authorizes the release of Medicare claims data to QEs for performance evaluation of providers
- QE Program changes the performance measurement landscape by facilitating the creation of actionable performance reports that cover all/most of a providers' practice

PAST

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Certified QEs

CERTIFIED QUALIFIED ENTITIES

KEY

- Oregon Health Care Quality Corporation (OHCQ)
- The Health Collaborative
- Home Health Management Coalition (HHMC)
- HealthEdge
- California Healthcare Performance Information System (CHPIS)
- Pittsburgh Regional Health Institute (PRHI)
- Minnesota Community Measurement (MCMC)
- Minnesota Department of Health, Division of Health Policy and Data (MDH)
- Center for Improving Value in Health Care (CIVHC)
- Wisconsin Health Information Organization (WHIO)
- Midwest Health Institute (MHI)
- Health Care Cost Institute (HCCI)

- Data held by the 11 regional QEs includes approximately 40M covered lives (Medicare FFS data represents 25% of the covered lives)
- One national QEs - HCCI has 90 M covered lives across all 50 states and DC (Medicare FFS data represents just over 50% of HCCI's data)

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MACRA Changes to Qualified Entity (QE) Program

- Currently, QEs may only use Medicare data to create public reports that evaluate the performance of providers of services and suppliers
- The Medicare Access and CHIP Reauthorization Act (MACRA) expands permissible uses of CMS data to allow QEs to:
 - Provide or sell analyses to authorized users for non-public use
 - Authorized users include providers/suppliers, issuers, employers, medical societies/hospital associations, and any other entity approved by the Secretary
 - Provide/sell combined data OR provide Medicare claims data at no cost to providers/suppliers and medical societies/hospital associations for non-public use
- MACRA also includes additional privacy and security requirements for QEs, such as requirements for a data use agreement (DUA) between the QE and the authorized user and fines for a breach

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Research Data Assistance Center (ResDAC)

- Provides assistance to academic, government, and non profit researchers interested in using Medicare and/or Medicaid data
- Staffed by epidemiologists, public health specialists, health services researchers, biostatisticians, and health informatics specialists
- Located within the University of Minnesota
- Performs the following tasks:
 - Assists researchers with the CMS DUA process
 - Provides training on CMS data
 - Provides documentation on available CMS data
 - Assists researchers in understanding and working with a variety of CMS data


www.resdac.org




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Research Data Dissemination

- The Chronic Condition Warehouse (CCW) is CMS' **research** data warehouse designed to support external researchers and internal CMS research and analytic functions
- Contains over 315B records with 1B records added monthly
- Unique beneficiary ID allows data linkages across all CCW data:
 - Medicare enrollment and claims (1999-current)
 - Medicare Part D event data (2006-current)
 - Medicaid eligibility and claims (1999-2012)
 - Medicare-Medicaid linked files (2006-2010)
 - Assessment data (instrument inception-current):
 - Long Term Care Minimum Data Set (MDS)
 - Home Health Outcome and Assessment Information Set (OASIS)
 - Inpatient Rehab Facility – Patient Assessment Instrument (IRF-PAI)




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Types of Research Data Files

- CMS makes two types of files available to researchers
 - Limited Data Set (LDS) files which excludes specific direct identifiers, including name, address, HIC, SSN, DOB, ZIP Code and medical record number
 - Research Identifiable Files (RIFs) which are custom CMS data extracts that may contain direct beneficiary identifiers
- LDS files are easier to request (less documentation and CMS review) but users face additional limitations on use of the data

	Research Identifiable	Limited Data Sets
Requires CMS Privacy Board Review?	Yes	No
Data file can be customized to only include a specific cohort (e.g., diabetics residing in MN)	Yes	No
Data can be linked to non-CMS data using a beneficiary identifier (SSN or Medicare id)	Yes	No




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Research Data Dissemination Options

- Virtual Research Data Center (VRDC)
 - Researchers to access and perform their own analysis and manipulation of CMS data virtually from their independent workstation
 - Researchers can only download aggregate results from the analyses

- Physical data provision
 - Files created, encrypted, and copied to portable media by CMS
 - CMS ships files to researchers who must ensure the security of the data at the researcher's site



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Virtual Research Data Center (VRDC)

- Researchers have been requesting access to CMS data for decades
 - Requests have grown exponentially over the past couple years
 - Researchers are requesting more timely and less expensive data
- CMS developed the VRDC to meet researchers evolving needs
- VRDC is a secure and efficient means for researchers to virtually access and analyze the vast store of CMS data in the CCW
- VRDC benefits
 - Lower cost, more timely data
 - Researchers use own laptop to securely access and analyze data remotely
 - Increased security for sensitive data
 - Additional privacy protections – no beneficiary identifiable data may leave the secure environment





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Analytics in Action: Cincinnati

- Over 265,000 Medicare beneficiaries (FFS + MA)
- Medicare Advantage penetration = 39.7% (versus 31.6% nationally)
- Medicare FFS population
 - Over 160,000 beneficiaries (0.5% of the national FFS population)
 - Over \$1.5B in spending (0.5% of the national FFS population)


Unless otherwise noted figures are for 2013 and per capita spending figures represent standardized dollars



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Demographic Profile


<i>Selected Demographic Indicators</i>	<i>Cincinnati</i>	<i>National</i>
Average Age	70	71
% Dual Eligible	21.0%	21.3%
Race		
% White, Non-Hispanic	85.9%	79.9%
% African American	11.4%	9.8%
% Hispanic	0.5%	6.0%
Average HCC (Risk) Score	1.03	1.00

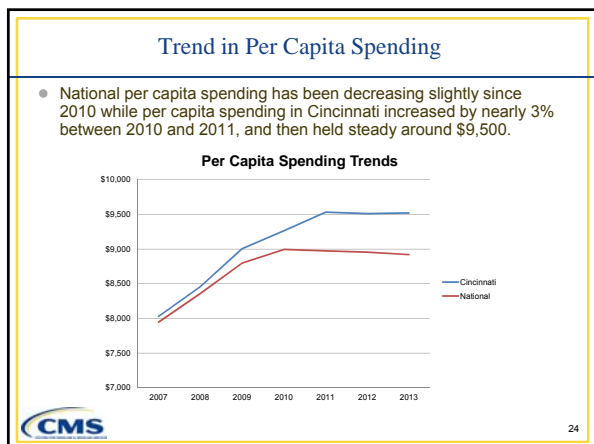
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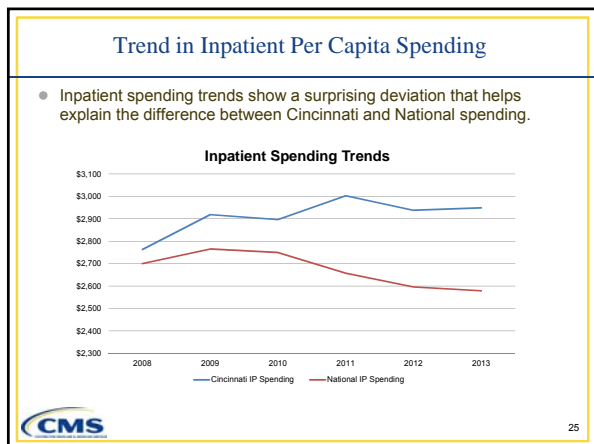
Chronic Condition Prevalence

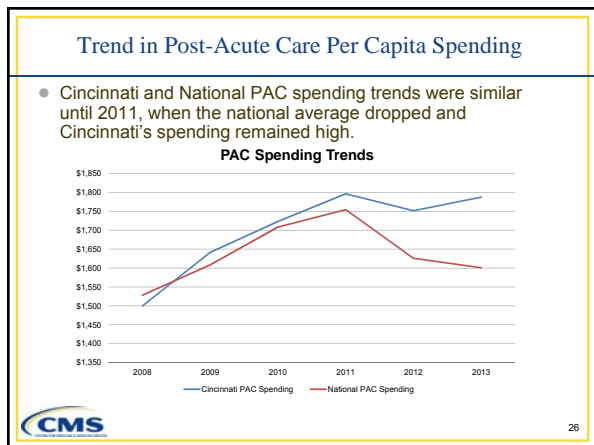
<i>Selected Chronic Conditions</i>	<i>Cincinnati</i>	<i>National</i>
% with arthritis	29.3%	29.2%
% with diabetes	26.5%	26.9%
% with ischemic heart disease	26.5%	27.7%
% with heart failure	14.8%	14.1%
% with asthma	6.0%	5.0%
% with stroke	4.0%	3.7%

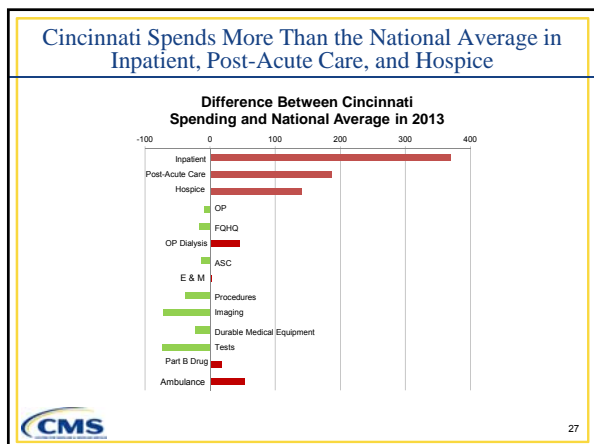
- Prevalence of many chronic conditions is decreasing both in Cincinnati and nationally for the Medicare FFS population

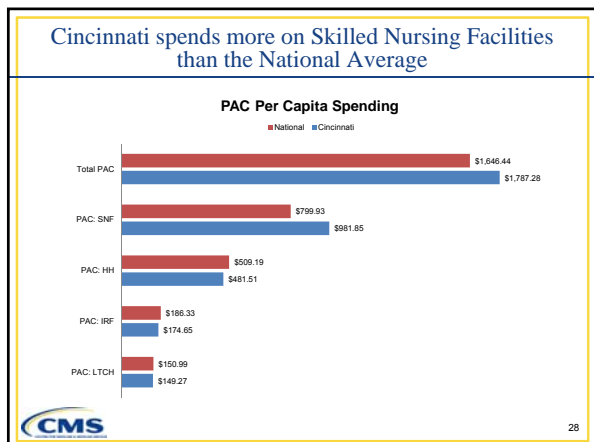
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Comparison to Similar HRRs

Of all HRRs with a risk score of 1.03, Cincinnati is in the middle for Total Spending, but has one of the highest inpatient per cap spending.

Rankings among HRRs with 1.03 Risk Score: Per Cap Spending		Rankings among HRRs with 1.03 Risks Score: IP Per Cap Spending	
1	LA - Alexandria \$10,894	1	LA - Alexandria \$3,084
2	TX - Longview \$10,511	2	OH - Cincinnati \$2,948
3	LA - Lafayette \$10,426	3	MI - Ann Arbor \$2,912
4	LA - Slidell \$10,251	4	TX - Longview \$2,900
5	LA - Lake Charles \$10,048	5	LA - Slidell \$2,891
6	TX - Victoria \$9,966	6	OH - Dayton \$2,867
7	OH - Dayton \$9,623	7	PA - Allentown \$2,810
8	OH - Cincinnati \$9,519	8	LA - Lake Charles \$2,804
9	MI - Ann Arbor \$9,493	9	LA - Lafayette \$2,791
10	TN - Jackson \$9,387	10	CT - Hartford \$2,757
11	PA - Allentown \$9,335	11	TN - Jackson \$2,729
12	PA - Reading \$9,244	12	PA - Reading \$2,728
13	FL - Tallahassee \$9,204	13	OH - Canton \$2,584
14	OH - Canton \$9,040	14	FL - Tallahassee \$2,575
15	CT - Hartford \$8,999	15	TX - Victoria \$2,574

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