

Multi-Payer Claims Database (MPCD) for Comparative Effectiveness Research

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June 16, 2011

NCVHS Full Committee Meeting



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Catalyst

- \$1.1 billion investment in CER enterprise funded by American Recovery and Reinvestment Act of 2009
- \$400 million allocated to the Office of the Secretary (OS)
- Federal Coordinating Council (FCC) for CER advised Secretary on how to invest allocated funds
- Due to immediate need, FCC recommended OS focus on CER infrastructure development
- HHS identified value of creating a database that would combine claims data from a range of public and private payers



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Objectives

- Goal: Build a MPCD to support CER, on a foundation of public and private payer claims data
 - High priority: Privacy and protection of patients
 - Build a comprehensive database to enable research on priority populations, interventions, and conditions
 - CER broadly defined to include both clinical & delivery system research
 - Increase access and usability of the data
 - Engage private sector in CER infrastructure development and research
 - Offer analytic tools for greater functionality
 - Lay the foundation for future enhancements with clinical data



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Value-Added

- Incorporating public and private data into one source will enhance the value of claims data for CER
 - Easier to find and obtain relevant data
 - Greater geographic coverage and density
 - Ability to study less common conditions
 - Increased demographic and clinical representativeness
 - Potential linking across payers and time



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Project Flow

- Phase 1: Strategic and technical design
 - Strategic plan completed April 29, 2010 by Avalere Health
 - Technical design pilot testing nearing completion
 - Tools to combine data from different sources – Vexcel/Microsoft
 - User interface to create customized data extracts – Thomson Reuters
- Phase 2: Implementation of MPCD – Awarded to Ingenix,
Start date: January 2011



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Phase 2 Overview

- Collaborative effort between ASPE, CMS, Ingenix and other healthcare industry and research leaders
- Database components
 - Hybrid design
 - Centralized warehouse
 - Distributed/federated data network
 - CMS Chronic Condition Warehouse (CCW)
 - Ingenix Normative Health Information Database (NHI)
 - Two additional data sources



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Advisory Structure

- Governance Board
 - Members recruited by AcademyHealth
 - Consists of researchers, private payers, providers, consumers, states, and the Federal Government
 - Guide MPCD's implementation and future sustainability
- HHS Leadership Council
 - Policy leaders and data experts across multiple agencies within HHS
 - Gain insight into potential implementation issues
 - Facilitate collaboration with similar initiatives



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Charles Friedman, PhD	ONC
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Farzad Mostashari, MD ScM	ONC
Todd Park	IOS
Tom Reilly, PhD	CMS
Melissa Robb	FDA
Jean Slutsky, PA MSPH	AHRQ

Advisory Structure

- Data Stewardship Council (DSC)
 - Will include all data contributors
 - Provide recommendations on technical design and data access
 - Monitor processing of data in MPCD
 - Review and approve data requests
- HHS Expert Panel
 - Researchers within HHS familiar with claims data and CER
 - Utilize and test the system beginning in February 2012
 - Provide feedback on how the system can be improved



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Privacy and Security

- Emphasis on privacy and security controls
 - DUAs to address security concerns of data partners
 - Encryption of PII for matching across partners, de-identified data
 - Compliance with FISMA, HIPPA, ARRA, and CMS IT policies
 - Masking of small cells and dates of service
 - Statistician review of de-identification
 - Audit reports for contributors to track data processing
 - Testing data enclave models



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Technical Design

- Leverage insights from CMS' CER project on de-identification
- Distributed vs. centralized datasets
 - Advances in database structure, high-speed computing, and health IT are enabling ways to link across data sources
- Distinction from other federated data network designs such as FDA Sentinel:
 - Analytic queries vs. queries for data extracts
 - Health services researchers have expressed a need to work with data
 - Statistical power



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Data Access Model

- Web-based interface
- Three tiers of data access
 - Tier 1: Public usage files (PUFs)
 - Aggregate data
 - Tier 2: Extracts from standard analytic files (SAFs)
 - Limited data set
 - Requests subject to approval of DSC
 - Tier 3: Extracts from full claims files
 - Obtain richer data than what is available in tier 2
 - Request subject to approval of DSC and relevant data contributors



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Data Sources

- CMS CCW
 - Medicare FFS and Medicaid
- Ingenix NHI
 - Geographically and demographically distributed commercial claims
- Two additional sources in Stage 1
 - States with all-payer claims databases (APCDs)
 - Commercial data contributors
 - Health plans, data aggregators



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Data Sources

- Additional sources beyond Stage 1
 - Pursue additional commercial and public payer data sources
 - Conduct periodic data analysis to determine gaps in coverage



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Data Partner Evaluation Criteria

- Restrictions on use of data
- Quantity and coverage of data
- Quality and format of data
- Cost to MPCD for their participation
- Overlap with other partners



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Incentives

- Subsidize cost of participation
 - Provide hardware for distributed partners
 - Cover cost of work to prep data
 - Royalties/revenue sharing
 - Limited number of free data extracts
 - Subject to standard approval process
 - Market awareness of contributor data
 - Representation on DSC
 - Public recognition



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Key Partners

- AcademyHealth
 - Coordinating Governance Board
 - Supporting outreach to the research community
- National Association of Health Data Organizations (NAHDO)
 - Facilitating state data acquisition
- Buccaneer Computer Systems and Services
 - Hosting MPCD platform
 - CCW data extraction and integration
- University of Washington
 - Participating in database design to ensure value for CER research
 - Will conduct demonstration of CER power and usability of MPCD



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Outreach Activities

- Build awareness and demonstrate MPCD utility through:
 - Presentations at selected annual research conferences (e.g., AcademyHealth ARM, NAHDO)
 - Presentations to other agencies (e.g. NCVHS meeting)
 - Publish articles on demonstration analyses and policy applications in selected peer reviewed journals



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Future Plans

- Include value-added analytics
 - Episode groupers
 - Risk adjustment
 - Quality metrics
- Incorporate non-claims data
 - Lab results
 - Clinical records
 - Electronic medical records



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