Supporting Comparative Effectiveness Research with Claims Data: Federal Efforts to Develop a Multi-Payer Claims Database

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November 7, 2011
Brookings Roundtable on Active Medical Product Surveillance

Some Initial Housekeeping

• To minimize feedback, please confirm that the microphone on your telephone is muted.

• To mute your phone, press the mute button or ‘*6’. (To unmute, press ‘*7’ as well.)

• There will be several opportunities for questions and discussion throughout today’s session. Please use the Q&A tab at the top of your screen to submit your questions into the queue at any point and we will call upon you to state your question.

• We will open up the lines for questions from those participating only by phone at the end of each Q&A session.

• Call the Brookings IT Help Desk at 202-797-6193 with technical problems.
Multi-Payer Claims Database (MPCD) for Comparative Effectiveness Research (CER)

Dave Knutson
Andre Chappel
Brookings Webinar
Nov 7, 2011
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
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
  – Lay the foundation for future enhancements with clinical data
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
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 Optum, Start date: January 2011
Implementation Phase Overview

• Collaborative effort between ASPE, CMS, Optum and other healthcare industry and research leaders

• Database components
  – Hybrid design
    • Data hosting
    • Distributed/federated data network
  – CMS Chronic Condition Warehouse (CCW)
  – Optum Normative Health Information Database (NHI)
  – Two additional data sources
Data Partner Evaluation Criteria

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

## Voting Members

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<thead>
<tr>
<th>Name</th>
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<tr>
<td>W. David Helms, PhD (Chair)</td>
<td>Peter Bach, MD</td>
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<td>Jeff Allen, PhD</td>
<td>Mark Gaskill, MFT</td>
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<td>Patrick Baier, DPhil</td>
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<td>Melinda Beeuwkes Buntin, PhD</td>
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<td>Irene Fraser, PhD</td>
<td>Tony Trenkle</td>
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## Non-Voting Members

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<td>Denise Hynes, PhD, MPH, RN</td>
<td>Amol Navathe, MD, PhD</td>
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<td>Larry Kessler, ScD</td>
<td>Steve Rokes, MIS</td>
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<td>Denise Love, MBA, RN</td>
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<tr>
<td>Mark McClellan, MD, PhD, MPA</td>
<td>Lu Zawistowich, ScD</td>
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# HHS Leadership Council

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<td>Sherry Glied, PhD (Chair)</td>
<td>ASPE</td>
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<td>Patrick Conway, MD MSc</td>
<td>OCSQ</td>
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<td>Terry Cullen, MD MS</td>
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<td>Anne Elixhauser, PhD</td>
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<td>Rick Gilfillan, MD MBA</td>
<td>CMS</td>
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<td>Rick Kronick, PhD</td>
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<td>Farzad Mostashari, MD ScM</td>
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<td>Todd Park</td>
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<td>Tom Reilly, PhD</td>
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<td>Melissa Robb</td>
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<td>Jean Slutsky, PA MSPH</td>
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Advisory Structure Cont.

• 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
  – Provide feedback on how the system can be improved
Privacy and Security

• Emphasis on privacy and security controls
  – Data use agreements
  – De-identified data at every step of the process
  – PII hashed at source before matching across partners
  – Compliance with FISMA, HIPPA, ARRA, and CMS IT policies
  – Statistician review of inferential de-identification
  – Masking of small cells of data and dates of service
  – Audit reports for contributors to track data processing
  – Data enclave under consideration
Data Access Model

- Web-based interface

- Three tiers of data access
  - Tier 1: May include a perturbed dataset
  - Tier 2: Standard analytic file (SAF)
    - Limited data set
    - Requests subject to approval of Data Stewardship Council (DSC)
  - Tier 3: Extracts from full set of claims files
    - Obtain richer data than what is available in tier 2
    - Still minimum data necessary
    - Request subject to DSC approval and additional review by data contributors
Modifications Under Consideration

• Later release of final database

• Internal beta version to test fully distributed alternatives
  – Mini-Sentinel model
  – Automated fully distributed regression approach

• Perturbed dataset to assist researchers in understanding the data before they submit queries

• Beta test to demonstrate unique value of MPCD and to evaluate the relevance of various analytic strategies for CER
Potential High-Level Timeline Mod

- **Jan 11**: Project kick-off
- **Mar 11**: Establish Governance Board
- **Jun 11**: Final Data Storage Model
- **Jul 11**: Final implementation Work plan
- **Oct 11**: NHI DUA Finalized
- **Nov 11**: Access to Medicare & Medicaid Data
- **Jul 12**: Beta version Release to HHS & Contractor Testers
- **Jan 13**: Beta feedback And Studies Complete
- **Mar 13**: Beta test Report Complete
- **Apr 11**: Final Data Storage Model
- **Jul 11**: Final implementation Work plan
- **Oct 11**: NHI DUA Finalized
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- **Jan 13**: Beta feedback And Studies Complete
- **Mar 13**: Beta test Report Complete

**Timeline Dates:**
- **1.6.2011 - 9.30.2013**
- **Sep 12**: Sustainability Plan
- **Jan 13**: Establish two additional data partnerships
- **Feb 13**: Identify UW CER Questions
- **Jul 13**: MPCA 2nd Release With 2 additional Data sources
- **Sep 13**: UW CER Studies Complete
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
Outreach Activities

• Build awareness and demonstrate MPCD utility through:
  – Presentations at selected annual research conferences (e.g., AcademyHealth ARM, APHA, NAHDO)
  – Presentations to other agencies and outside groups (e.g. Brookings)
  – Professional communication from AcademyHealth

Down the road...

  – Diffusion of information from Governance Board members
  – Publish articles on demonstration analyses and policy applications in selected peer reviewed journals
Future Possibilities

- Include value-added analytics
  - Episode groupers
  - Risk adjustment
  - Quality metrics

- Incorporate non-claims data
  - Lab results
  - Clinical records
  - Electronic medical records
ASPE Project Team

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Roundtable Discussion and Questions

View this and past Active Medical Product Surveillance webinars at: http://www.brookings.edu/health/Projects/evidence/roundtables.aspx