The ASPE/CMS Multi-Payer Claims Database (MPCD) for Comparative Effectiveness Research Initiative

Amol Navathe, MD, PhD

Brookings Active Surveillance Implementation Council Meeting #2

November 18, 2010

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

ASPE/CMS CER Multi-payer Claims Database

- Objective: to build and operate a MPCD to support CER using public and private payer claims data
  - Continue to uphold privacy and protection of patients while
    - Building a comprehensive and diverse database to enable research on multiple priority populations, interventions, and conditions
    - Meaningfully engaging private sector in CER infrastructure development and research
    - Increasing access and usability of such data
    - Utilizing analytic tools to incorporate greater functionality
    - Laying the foundation for future enhancements with clinical data
  - CER broadly defined to include clinical and non-clinical research

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

ASPE/CMS CER Multi-payer Claims Database

- Value: incorporating public and private data into one source will create value over existing disparate sources
  - Greater geographic coverage
  - Increased demographic and clinical representativeness
  - Ability to study less common conditions
  - Focus on effectiveness research (e.g. real life settings)

ASPE/CMS CER Multi-payer Claims Database

Flow of projects:

- Phase I – Strategic and Technical Design

  - Strategic Design completed April 29, 2010 by Avalere Health

  - Technical Design and Pilot Test in progress – 2 awards

    - Vexcel/Microsoft

    - Thomson Reuters

- Phase II – Implementation of MPCD

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Strategic Design

- Purpose
  - Evaluate design options that optimize sustainability and impact of data

- Findings
  - MPCD will have advantages and additional potential uses versus existing claims data sources
  - Two key challenges, data partnership and patient privacy protections, motivate technical and strategic needs
  - Potential approaches include state-based, plan-based, employer-based, and "hybrid"
  - Recommend federated "hybrid" approach with private aggregator leveraging existing multi-payer claims data resources and incorporating state-based and other data when possible
  - Many open questions to be addressed in design phase of Implementation project

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Technical Design and Pilot Test

- Purpose
  - Evaluate technical feasibility and application performance with eye toward
    - Rapid data integration to support distributed database design
    - Value of next generation analytic applications and tools for health data
    - Advantage of resource combining public and private payer data

- Deliverables
  - Test database linking data, including private payor data, across sources and settings in a rapid prototyping environment
  - Sample research analyses to demonstrate utility of
    - Combined public/private payer data
    - Analytic tools/user Interface

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Takeaways for MPCD to date

- Investment in a flexible platform will greatly enhance utility in the short-term and capability to scale long-term
  - Administrative data will be able to
    - Analyze trends
    - Conduct health services research
    - Allow major comparisons (e.g. surgery vs medical mgmt for mortality outcome)
    - Generate hypotheses
  - Challenges still include
    - Privacy, privacy, privacy (especially when linking data)
    - Data ownership
    - Many questions requiring clinical data

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Takeaways for MPCD to date

- Need to actively engage potential data partners on open questions from inception
  - Technical design and data contribution, e.g.
    - Protecting privacy
    - Release of data
  - Coordinate/synergize with existing projects such as Mini-Sentinel
    - Common Data Model development
    - Outreach to potential data contributors
    - Lessons and best practices in infrastructure building

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Takeaways for MPCD to date

- Analytic tools likely need further development to be useful "off-the-shelf" for research

- Distributed data network approach has a range of meanings and approaches from a technological perspective

CER Multi-payer Claims Database Implementation

- Initial Design Plans
  - "Hybrid" approach with a central repository of less sensitive data + distributed queriable network for "non-core" data
    - Central repository to include CMS data, data from contractor, and any other contributions from partners
    - Distributed network partners will establish guidelines for contribution including ability to screen requests on a query-by-query basis
  - Will engage several potential partners in addition to data agreements in place with contractor
  - Plan to engage states through NAHDO and RAPHIC

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

CER Multi-payer Claims Database Implementation

Timeline

- First 25 weeks: Design phase
  - Re-visit key technical and strategic design options
  - Convene Governance board
  - Identify and establish data partnerships
  - Establish common data model
- Within 52 weeks: Initial infrastructure setup
  - Execute technical design and implementation plans
  - Create test version of MPCD with at least central repository and framework for distributed network

- Within 78 weeks: Testing and enhancements
  - Database validation
  - Develop user documentation
  - Open MPCD for greater use
  - Perform proof-of-concept analyses
- Within 108 weeks: Plan for maintenance, sustainability, and further scalability

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Office of the Assistant Secretary for Planning and Evaluation

Amol Navathe, MD, PhD

Medical Officer and Senior Program Manager, Comparative Effectiveness Portfolio

amol.navathe@hhs.gov

202-690-6461

www.aspe.hhs.gov