Barriers to Effectively Using CMS Administrative (and Other) Data to Study Health Outcomes

- Lack of unique identifiers within programs across types of data

- Lack of unique identifiers across programs

CMS Administrative Data (cont.)

- Separation of billing and associated diagnostic and therapeutic care into separate bill types

- Use of "rule-out" or "confirm" diagnosis on certain types of bills

- Potential of relying on unconfirmed diagnosis (es)

CMS Administrative Data (cont.)

- Identifying persons by diagnosis (prevalence)

- Identifying onset of diagnosis (incidence)

- Use of different coding systems for procedures

CMS Administrative Data (cont.)

- Lack of clinical information to determine and differentiate person-level critical pathways

- Lack of information on cause of disability for the disabled

- Failure to differentiate aged enrollees as to former disabled status

CMS Administrative Data (cont.)

- Lack of comprehensive (breadth and depth) person-level data on other primary and secondary health insurance coverage

- Lack of information on socio-economic status

- Inability to get cause of death

CMS Administrative Data (cont.)

- Inability to link Part D event data

- Size of sample

- Inability to disaggregate program, other payer, and beneficiary payments for bundled services to get accurate revenue functions for the providers

CMS Administrative Data (cont.)

- Inability to link specific services on claims with providers cost to develop provider cost functions

- Inconsistent use of the unique physician identification number (UPIN)

CMS Administrative Data (cont.)

Data Initiatives

- Transition to use of ICD 10
- Transition to use of National Provider Identification Number
- Integrated Data Repository
- Research Data Distribution Center
- Section 723 Chronic Condition Warehouse

Medicare Modernization Act

- Signed by the President December 2003
- Major changes to the Medicare program including Outpatient Prescription Drug Benefit, Medicare Advantage, Contractor Reform
- Mandated numerous studies and demonstrations to improve the effectiveness of the Medicare program and the quality of life of program recipients

Data Initiatives – Section 723

- Establish a research database for chronically ill Medicare beneficiaries
- Research database will support:
  - Studies for improving the quality of care for chronically ill Medicare beneficiaries
  - Studies for reducing the cost of care
  - Integration of existing datasets
  - Identification of new data needs for research
- Consult with experts in the fields of care for the chronically ill

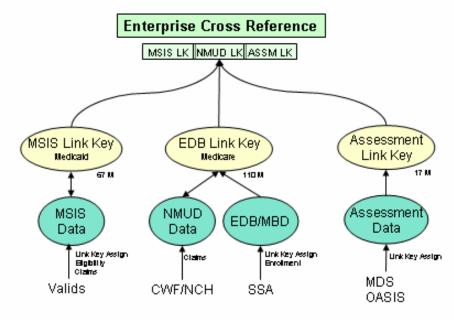# Data Initiatives –Section 723 (cont.)

- Emphasis on Studying Chronic Illness
- 75% of Medicare beneficiaries have at least 1 chronic condition
- Estimated in less then 20 years the care for people with chronic illness will consume 80% of the nation's health budget
- Medicare costs are increasing in part because of the rising costs of treating chronic illness
- Section 723 initiative will help study cost effective and quality improvement options to treat chronically ill beneficiaries

Data Initiatives –Section 723 (cont.)

(from Barriers to Using CMS Administrative Data)

- Medicare beneficiary's identifier can change over time
- Each CMS program (Medicare, Medicaid, and Assessments) contain different person identifiers
    - Medicaid, MDS, and OASIS identifiers are assigned at the state level
    - Need to un-duplicate identifiers within a database
    - Need to link un-duplicated identifiers across databases

Data Initiatives –Section 723 (cont.)

Enterprise Cross Reference (ECR) System

Data Initiatives –Section 723 (cont.)

(from Barriers to Using CMS Administrative Data)

- Difficult to create individual-level patient profiles
- Difficult to identify and retrieve chronic conditions using claims data
- Existing data format supports claims processing needs and not research
- Data is currently stored by claim type not by individual

Data Initiatives –Section 723 (cont.)

Strategy for Building the Research Database

- Create person-level view of data
- Develop new format for Medicare claims data in order to support research
- Access data by chronic conditions
- Construct data extraction tool that supports complex customized research data requests
- Protect the privacy of Medicare beneficiaries

Data Initiatives –Section 723 (cont.)

Building Blocks

- 5% national sample of Medicare beneficiaries (2 million)

- Medicare claims, MDS/OASIS Assessments (1999 – current)

- 100 % of Medicare Current Beneficiary Survey (1991 – current; 16,000 individuals per year)

Data Initiatives –Section 723 (cont.)

Phase I Tasks

- Develop Enterprise Cross Reference/Unique Linkage capability
- Develop Core Research Files
- Develop Chronic Illness Classifications Algorithms
- Create a database infrastructure and populate the database

Data Initiatives –Section 723 (cont.)

Creation of Data Infrastructure

- Using Iowa Foundation for Medical Care (IFMC) facility temporarily until CMS Data Center Modernization is complete

- IFMC is an official CMS data center
  - Established infrastructure/security
  - Supports data needs of the QIO
  - Maintainer of MDS/OASIS

- Data stored at IFMC will have the following features:
  - Unique patient ID to protect privacy
  - Cross reference capability link all CMS programs
  - Core research file format
  - Chronic disease flags
  - Custom data extract capability

Data Initiatives –Section 723 (cont.)

Coordination Activities

- Identify clinical definitions and taxonomies
  - HHS Data Council/HHS Quality Council
  - Health Service Researchers
- Develop core research files to support database design
  - Researchers familiar with CMS data
  - Work through ResDAC

Data Initiatives –Section 723 (cont.)

Future Phases

- Provide data to researchers
- Incorporate lessons learned from Phase I
- Provide ongoing improvements to the research database
  - Expand data sources
  - Expand sample (from 5%+ to 100% for 2005)
  - Enhance data access tools
  - Establish consultation and technical support group
  - Create PivotTables (statistical summaries)