

Medicaid Analytic eXtract File MAX

Providing Medicaid Data for Analytic Uses

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What is MAX Data?

Medicaid analytic extract MAX data are person-level data files on Medicaid eligibility, service utilization and payment information for all individuals whether or not they used any Medicaid services in a given calendar year.

MAX Purpose

- **The purpose of MAX is to produce data to support research and policy analysis on Medicaid populations.**
- **The data is needed because of difficulties using MSIS data for various analytic uses such as:**
 - Research and Evaluations
 - Epidemiology
 - Statistics and Forecasting
 - Actuarial Analysis
 - Policy Analysis
 - Disparities in Health Care
 - Developing Quality Indicators
 - Modeling/Simulation for Drug Policy

MAX Background

MAX Derived from MSIS

- MAX files are derived from the Medicaid Statistical Information System (MSIS) -- the reporting system where states provide Medicaid data on utilization and claims to CMS.
- The Centers for Medicaid and State Operations (CMSO) oversees and manages the production of MSIS data.
- The Office of Research, Development, and Information oversees and manages the production of MAX data.

MAX Derived from MSIS

- MAX is produced from 7 (Fiscal Year) quarters of MSIS data from all 50 states plus the District of Columbia.
- All 7 quarters of MSIS data needs to be approved in order to create MAX data.
 - 7 quarters of MSIS data needed due to lags in obtaining updated eligibility information and adjudicating claims.

MAX Production

- MAX transforms data from the 7 fiscal year quarters to a calendar year.
- MAX data is event based.
- For every service rendered for every Medicaid beneficiary, MAX combines initial claims voids and other adjustments to create a “final action event”.

MAX Data Sets

- MAX consists of 1 Person Summary File and 4 Claims Files.
- Person Summary File:
 - The Person Summary File is created to include person level data on eligibility, demographics, managed care enrollment, a summary of utilization and Medicaid payment by type of service.

MAX Data Sets

- The 4 claims files are:
 - **Inpatient (IP)**
 - **Long Term Care (LT)**
 - **Other Services (OT)**
 - **Prescription Drug (RX)**

The files include fee for service (FFS) claims as well as managed care encounter data and premium payments.

MAX Enhancements to MSIS Data

- **More detail on Medicaid Eligibility:**
 - Improved identification of unique enrollees.
 - Retroactive eligibility in proper chronology.
 - Eligibility codes – verified and improved.
 - Eligibility data added to each claim.
 - Dual Medicare and Medicaid Status:
 - Qualified Medicare Beneficiaries. (QMB's)
 - Specified Low –Income Medicare Beneficiaries. (SLMB's)
 - Identifies and links Medicare HIC number and Medicaid Case Number.

MAX Enhancements to MSIS Data

- **MAX continues to identify other program eligibility:**
 - TANF
 - SCHIP

- **MAX provides detail on service claims:**
 - Claims are organized by dates of service and include Final Action Events.
 - Types of service are verified and re-grouped.
 - Detailed data on conditions and treatments such as ICD-9-CM Diagnostic Codes, Procedure Codes and National Drug Codes.

MAX Enhancements to MSIS Data

- **Improved Coding for Services:**
 - Waivers
 - Cost center data for hospitals
 - Durable Medical Equipment (DME) and supplies
 - Adult day care
 - Maternal Delivery Indicator
- **Therapeutic usage data added to each prescription drug record.**

These therapeutic codes are proprietary products and are releasable only to parties who have valid license agreements with First Data Bank and Wolters Kluwer Health (Medi-Span).

Enhancements to MAX Data

- **New Enhancements for 2005 MAX data and beyond**
 - New Eligibility Data Elements**
 - Improved verification of Social Security Numbers (SSNs)
 - Expanded detail on enrollee race and ethnicity
 - **Monthly** dual Medicare and Medicaid enrollment (earlier years were reported quarterly)
 - Waiver plan identifier and waiver type up enrollment in up to three waivers per month
 - Enrollment in 1915(c) waivers on an annual basis

Enhancements to MAX Data

- **New Enhancements for 2005 MAX data and beyond**

- New Service Data Elements**

- Expenditures for 21 categories of community-based long-term care
 - National Provider Identifier (available in 2009)
 - Provider Taxonomy (available in 2009)

Special MAX Enhancements

Data Linkages

- **Link to Medicare Enrollment Data Base (EDB)**
 - Best way to identify dual eligibles
 - Begin and end dates of Medicare eligibility
 - Other Medicare data (e.g. primary language, date of death)
- **Link to First Data Bank (FDB) Data**
 - Prescription drugs
 - Link on National Drug Code (NDC)
 - Therapeutic classes (clinical use)
 - Other FDB data (e.g. generic, OTC or prescribed drug)
- **Capability for other linkages (e.g. SSA)**

MAX Users

- **CMS Employees across different components**
- **Other Federal agencies**
 - ASPE, HRSA, AHRQ, NCI, CBO, CRS, Census and Others
- **State agencies**
- **Academics**
- **Consultants/Contractors**

MAX Availability

- **What data are available?**
 - Available now
 - 1999-2004 - All states and D.C.
 - SMRF 1992-1998 – 25-29 states full data
 - SMRF 1987-1991 – 5 states, data quality?
 - Future availability
 - 2005 – All states and D.C. – Fall 2008
 - 2006 – All states and D.C. – Mid 2009

MAX Access

- **Can I access MAX data for research?**
 - MAX data are protected by the Privacy Act
 - Review of research protocol by Privacy Board
 - Minimum data necessary criteria apply
 - For approvals, Data Use Agreement required
 - A fee will be charged
 - Contact Research Data Assistance Center (ResDAC)
 - Web address: <http://www.resdac.umn.edu>
 - Telephone: 1-888-973-7322

Operating Platform

- **MAX users can access MAX data using the following operating platforms:**
 - + **CMS mainframe (Cobol, SAS) –
Person Summary and Claims Data**
 - + **PC SAS Person Summary and Claims
Data – provided by Research Data
Distribution Center**
 - + **MAX Website**

MAX Data Products Documentation

- **The MAX web address is:**
http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/07_MAXGeneralInformation.asp
- **The web address for detailed MAX prescription drug data is:**
http://www.cms.hhs.gov/MedicaidDataSourcesGenInfo/08_MedicaidPharmacy.asp

MAX Data Products Documentation

- **Documentation on the Web**
- **Data Dictionaries**
 - General information
 - Better descriptions of data elements
 - Improved source information
 - Addition of user notes
- **Data Validation Reports**
- **Data Anomaly Reports**
 - Valid data, but unexpected results (e.g. broken time series, new covered service)
 - Data inconsistencies (can't be fix)

Challenges in Developing Consistent Medicaid Data

- **Medicaid differences...**
 - Across states (program)
 - Over time (program)
 - When Fiscal Agents change (data)
- **Eligibility** - Review and edit state mapping
- **Type of service**
 - Review and edit state mapping
 - Add new types of service
- **Create “final action events”**
(e.g. stays, visits, etc.)

Medicaid Data Limitations

- **Eligibility**
 - Minimal information on other insurance coverage
 - No beneficiary name or address
 - Other data unavailable (e.g. income, other programs)
 - Eligibility “Churning”
- **Services**
 - Only during spells of eligibility
 - Only Medicaid covered services (coverage varies by state)
 - Incomplete for duals (residual after Medicare payment)
 - Incomplete for persons in prepaid plans

Medicaid Data Limitations

- **Payments**
 - Missing some payments
 - Aggregate adjustments
 - End-of-year settlements
 - Disproportionate Share Hospital (DSH)
 - Incomplete for third-party payments
 - Drug payment amounts are prior to rebates
- **Completeness**
- **Timeliness**
- **No provider characteristics**

Thanks

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