

A Guide to the Supplemental Data for *Exploring the Growth of Medicaid Managed Care*

To conduct the analysis underlying its August 2018 report *Exploring the Growth of Medicaid Managed Care*, the Congressional Budget Office compiled data on states' managed care programs from three different sources: the Medicaid managed care program descriptions published by the Centers for Medicare & Medicaid Services (CMS), states' aggregate Medicaid expenditures as reported on Form CMS-64, and the Medicaid Analytic eXtract (MAX) person summary file.¹ In an effort to promote transparency and to provide a resource for Congressional staff and the research community, CBO is now making those data publicly available.

Before conducting its analysis, CBO made adjustments to the raw data to facilitate comparisons and more meaningful analyses. The tables in this guide explain those adjustments

CBO excluded from its analyses of the MAX data beneficiaries who had any of the following characteristics: they were not eligible for full Medicaid benefits, they had some months of full eligibility and other months of partial eligibility, or their managed care enrollment data conflicted with their eligibility information or managed care spending data. **Table S1** shows the number of observations in the original MAX data, the number of observations excluded for each of those reasons, and the final study population for each year.

¹ See Congressional Budget Office, *Exploring the Growth of Medicaid Managed Care* (August 2018), www.cbo.gov/publication/54235. For program descriptions, see Centers for Medicare & Medicaid, "Medicaid Managed Care Enrollment Report" (accessed June 27, 2017), <https://go.usa.gov/xnGGh>. CBO obtained older versions of those reports through personal communications with CMS and the Internet Archive's Wayback Machine. Data from the program descriptions for the years 1999, 2002, 2005, and 2010 through 2014 were analyzed in the study. For the data on states' aggregate spending, see Centers for Medicare & Medicaid, "Expenditure Reports from MBES/CBES," (accessed July 26, 2018), <https://go.usa.gov/xnQ7y>. Some of the MAX data used in this analysis are not publicly available, and CBO's use of that data is subject to a data use agreement. For more information on the MAX data, see Research Data Assistant Center, "MAX Person Summary File," (accessed July 26, 2018), www.resdac.org/cms-data/files/max-ps; and Centers for Medicare & Medicaid Services, Medicaid Analytic eXtract (MAX) General Information," (updated March 2, 2018), <https://go.usa.gov/xnGwE>. CBO drew from the MAX person summary file for the period 1999 to 2012 (the most recent year for which such data were available for most states as of July 2018).

Table S1. Number of Observations in the Medicaid Analytic eXtract Data, Number Excluded (by Reason for Exclusion), and Size of the Final Study Population

Year	Original MAX File	Excluded: Not Eligible for Full Benefits	Excluded: Months With Partial Benefits	Excluded: Comprehensive Managed Care Months Exceeded Eligible Months	Excluded: Other Managed Care Months Exceed Eligible Months	Excluded: Eligibility Category Unknown	Excluded: No Managed Care Enrollment With Managed Care Spending	Final Study Population
1999	43,587,109	4,400,370	631,019	128,268	77,625	6,498	706,359	37,636,970
2000	46,334,482	6,103,262	750,892	186,108	124,824	821	564,084	38,604,491
2001	50,078,316	7,260,800	730,389	274,424	146,336	906	660,913	41,004,548
2002	55,063,856	8,596,513	951,723	326,886	179,499	31	444,990	44,564,214
2003	57,638,889	9,387,196	928,828	367,890	205,413	145	1,838,528	44,910,889
2004	60,244,567	10,258,566	1,013,342	412,579	247,189	0	1,958,422	46,354,469
2005	61,429,538	10,460,496	1,261,981	400,615	224,667	4	2,622,601	46,459,174
2006	61,661,641	10,762,691	1,322,906	465,999	325,380	5	955,384	47,829,276
2007	61,672,723	11,237,725	1,462,798	540,657	337,179	0	625,345	47,469,019
2008	63,842,647	11,828,878	1,737,967	603,192	381,172	0	556,632	48,734,806
2009	67,689,539	12,496,584	2,002,403	644,652	346,198	0	619,715	51,579,987
2010	71,330,581	13,733,148	1,864,802	633,849	310,442	0	589,032	54,199,308
2011	74,088,579	14,580,032	1,923,838	737,765	356,308	0	577,408	55,913,228
2012	75,216,112	15,216,723	2,130,083	831,116	420,664	0	529,604	56,087,922

In its analyses of all types of data, CBO collapsed detailed information on Medicaid benefits and spending into broader categories to facilitate comparisons among the three different sources of data. **Table S2** lists those service categories and identifies the specific components the three data sources that each of those categories comprise.

Table S2. CBO’s Categorization of the Services in Form CMS-64, the Medicaid Analytic eXtract, and the Medicaid Managed Care Enrollment Report

CBO’s Service Category	Services in Form CMS-64 Data	Services in the Medicaid Analytic eXtract	Services in the Medicaid Managed Care Enrollment Report (Program descriptions)
Hospital Services	Critical Access Hospitals; Emergency Hospital Services; Emergency Services for Undocumented Aliens; Inpatient Reg. Payments	01 Inpatient Hospital	Inpatient Hospital
Clinic/Outpatient	Federally Qualified Health Center; Rural Health; Clinic Services; Outpatient Hospital Services – Reg. Payments	11 Outpatient Hospital; 12 Clinic	Federally-Qualified Rural Health Centers; Outpatient Hospital
Physicians’ Services	Sterilizations; Abortions, Targeted Case Management Services – com. Case-Man.; Physician & Surgical – Reg. Pay; Nurse Practitioner Services; Diagnostic Screening & Preventive Services; EPSDT; Case Management Statewide; Nurse Mid-Wife; Preventive Services Grade A or B, ACIP Vaccines and Their Admin; Other Practitioners Services – Reg. Payments; Physician & Surgical Services – Vaccine Codes; Physician & Surgical Services – Evaluation and Management	24 Sterilizations; 25 Abortions; 31 Targeted Case Management; 08 Physicians; 10 Other Practitioners; 36 Nurse Midwife Services; 37 Nurse Practitioner Services	Case Management; Early and Periodic Screening, Diagnostic, and Treatment; Family Planning; Physician

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Behavioral Health Services	Mental Health Facility – Reg. Pay; Health Home Chronic Conditions	02 Mental Hospital Services for the Aged; 04 Inpatient Psychiatric Facility Services for Individuals Age 21 Years and Under; 53 Psychiatric Services (Excluding Adult Day Care)	Inpatient Behavioral Health; Outpatient Behavioral Health
Prescription Drugs	Prescribed Drugs	16 Prescribed Drugs	Pharmacy
Nonemergency Dental Care	Dental Services	09 Dental	Dental
Postacute Care	Private Duty Nursing; Home Health Services; Hospice; Rehabilitative Services	38 Private Duty Nursing; 13 Home Health; 35 Hospice Benefits; 33 Rehabilitation Services	Home Health; Hospice; Private Duty Nursing; Skilled Nursing Facility
Other Acute Care	Laboratory/Radiological; Other Care; Occupational Therapy; Physical Therapy; School-Based Services; Speech, Hearing, Language; Medicaid – Coinsurance; Medicaid – Group Health; Medicaid – Other; Freestanding Birth Center; Prosthetic Devices, Dentures, Eyeglasses; Tobacco cessation; QI	15 Lab and X-Ray; 19 Other Services; 23 Capitated Premium Payments to Private Health Insurance; ² 34 PT, OT, Speech, Hearing Language; 99 Unknown - Included in Error Tolerance	Durable Medical Equipment; Lab and X-ray

² This variable was only available in the 2011 and 2012 MAX data.

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CBO’s Service Category	Services in Form CMS-64 Data	Services in the Medicaid Analytic eXtract	Services in the Medicaid Managed Care Enrollment Report (Program descriptions)
Institutional Long-Term Care	Intermediate Care – Private; Intermediate Care Facility – Public; Nursing Facility – Reg. Pay	05 ICF Services for the Mentally Retarded; 07 NF’S - All Other; 39 Religious Non-Medical Health Care Institutions	Intermediate Care for Developmentally Disabled (or Mentally Retarded); Institutes for Mental Disease; Institutional Care; Institutional; ³ Nursing facility

³ Several states reported covering “institutional” but did not include a noun after the adjective. We treated this as institutional care if three conditions were met: the program covered another type of long-term services and supports, the program enrolled elderly or disabled beneficiaries, and the program did not specifically exclude beneficiaries who were using long-term services and supports.

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CBO’s Service Category	Services in Form CMS-64 Data	Services in the Medicaid Analytic eXtract	Services in the Medicaid Managed Care Enrollment Report (Program descriptions)
Home- and Community- Based Services ⁴	Personal Care – Reg. Pay; Personal Care – 1915(j); HCBS – Reg.Pay (Waiv); HCBS – St. Plan (1915(j)); HCBS – St. Plan (1915(i)); HCBS – St. Plan (1915(k))	30 Personal Care Services; 51 Durable Medical Equipment; 52 Residential Care; 54 Adult Day Care	Adult Day Services; Day habilitation; Home and Community-Based Services; Home Modifications; Personal Attendant Services; Personal Care
Nonemergency Transportation	Non-Emergency Medical Transportation	26 Transportation Services	Nonemergency Transportation

⁴ Home and community-based services (HCBS) encompass a wide range of services, many of which overlap with other categories of Medicaid spending. For example, personal care and durable medical equipment may be provided as part of an HCBS benefit or they may be provided as part of acute or postacute care. Historically, it was not possible to identify HCBS in the beneficiary-level data but when CMS created the MAX files, they created an HCBS taxonomy to identify HCBS services. The MAX person summary file contains four type-of-service codes that were previously not included in beneficiary-level data (codes 51 to 54). Those codes include some HCBS and some other services. We grouped three of the four codes with HCBS spending because although they include some non-HCBS spending, we suspect we are omitting HCBS spending from some other categories. Moreover, most of the services included in codes 51 to 54 were previously treated as “other services.” For more information on the new type-of-service codes, see Centers for Medicare & Medicaid Services, “What Are the Types of Records That Are Contained in Each of the Medicaid Analytic eXtract (MAX) Files? How Do the Records in These Files Differ From the Records in the Medicaid Statistical Information System (MSIS) and the Transformed-Medicaid Statistical Information System (T-MSIS) files?” *Frequently Asked Questions Regarding Medicaid Analytic eXtract Data* (February 21, 2018), <https://go.usa.gov/xU7Ux>. For more information on the HCBS taxonomy, see Victoria Peebles and Alex Bohl, “The HCBS Taxonomy: A New Language for Classifying Home- and Community-Based Services,” *Medicare & Medicaid Research and Review*, vol. 4, no. 3 (2014), <https://go.usa.gov/xU7UT>.

Table S2. CBO's Categorization of the Services in Form CMS-64, the Medicaid Analytic eXtract, and the Medicaid Managed Care Enrollment Report

CBO's Service Category	Services in Form CMS-64 Data	Services in the Medicaid Analytic eXtract	Services in the Medicaid Managed Care Enrollment Report (Program descriptions)
Payments for Medicaid Managed Care	Medicaid – MCO; Medicaid MCO - Evaluation and Management; Medicaid MCO – Vaccine codes; Medicaid MCO – Community First Choice; Medicaid MCO – Preventive Services Grade A or B, ACIP Vaccines and Their Admin; Prepaid Ambulatory Health Plan; MCO PAHP – Evaluation and Management**; MCO PAHP – Vaccine codes; MCO PAHP – Community First Choice; MCO PAHP – Preventive Services Grade A or B, ACIP Vaccines and Their Admin; Prepaid Inpatient Health Plan; MCO PIHP - Evaluation and Management**; MCO PIHP – Vaccine Codes; MCO PIHP – Community First Choice; MCO PIHP – Preventive Services Grade A OR B, ACIP Vaccines and Their Admin; All-Inclusive Care Elderly; Primary Care Case Management	20 Capitated Payments to HMO, HIO or PACE Plan; 21 Capitated Payments to Prepaid Health Plans (PHPs); 22 Capitated Payments for Primary Care Case Management (PCCM)	n.a.
Payments Not Attributable to Individual Beneficiaries	Inpatient Hospital – DSH; Inpatient Hospital - Sup. Payments; Inpatient Hospital - GME Payments; Nursing Facility Services - Sup. Payments; Physician & Surgical Services – Sup. Payments; Outpatient Hospital Services – Sup. Payments; Other Practitioners Services – Sup. Payments; Coinsurance; Medicare – Part A; Medicare Part B; 120%-134% of poverty; Mental health facility – DSH; Drug Rebate Offset – National; Drug Rebate Offset – State Sidebar; MCO – National Agreement; MCO – State Sidebar Agreement; Increased ACA OFFSET – Fee for Service; Increased ACA OFFSET – MCO; Intermediate Care Facility – Mentally Retarded: Supplemental Payments; All administrative costs	n.a.	n.a.