

## **Data Evaluation and Methods Research Paper #1: New Administrative Data Source for Identifying Medicare-Medicaid Enrollees in the Medicare Current Beneficiary Survey**

### **Introduction**

Medicare-Medicaid enrollees, sometimes referred to as “dual eligibles,” are a uniquely vulnerable population and the subject of much research interest. These beneficiaries are eligible for both Medicare and Medicaid, due to a qualifying disability or age combined with a lack of financial assets. Medicare-Medicaid enrollees are high health care utilizers, with costs to both Medicare and Medicaid combined totaling more than four times the per capita spending on other Medicare beneficiaries.<sup>(1)</sup>

As a nationally-representative survey of Medicare beneficiaries, the Medicare Current Beneficiary Survey (MCBS) has the potential to be a rich source of data on Medicare-Medicaid enrollees, providing information that is not available from administrative records alone. The MCBS team is in the process of reviewing data operations, and as part of this work, we are utilizing a new administrative source for determining Medicaid participation in order to be more consistent with guidelines suggested by the Federal Medicare-Medicaid Coordination Office at the Centers for Medicare and Medicaid Services (CMS).<sup>(2)</sup>

This paper describes the impact this change will have on estimates of Medicare-Medicaid enrollees in the MCBS.

### **Data and Methods**

The MCBS is a continuous, longitudinal survey of approximately 15,000 Medicare beneficiaries, conducted by the CMS Office of Enterprise Data and Analytics.<sup>(3)</sup> Sampled beneficiaries are interviewed three times a year for four years, on a variety of subjects including cost and utilization, health status and functioning, access to and satisfaction with care, insurance coverage, and demographics. Disabled beneficiaries and those 85 years old or older are oversampled to improve precision, and beneficiaries are followed into and out of institutions. Annual file releases provide topical survey data not available in the administrative claims.

We will focus on the MCBS Cost and Use 2011 files in our discussion of survey coverage of Medicare-Medicaid enrollees.

#### *Medicare-Medicaid Enrollee Information*

CMS maintains several sources of information to identify Medicare-Medicaid enrollees. There are enrollment data provided on a monthly basis that indicate whether a state Medicaid program paid Medicare premiums

for a given Medicaid beneficiary. This indicator of Medicare-Medicaid enrollee status is commonly referred to as the “State Buy-In.” It has been the historical source for determining dual eligibles in the MCBS and is used to populate the variable H\_MCSW as well as the series of monthly variables H\_MCDE01-H\_MCDE12 located on the RIC A file. Since not all Medicare-Medicaid enrollees receive a state buy-in, this indicator may undercount the number of dually eligible beneficiaries. We will refer to this administrative source as the “State Buy-In” indicator.

The State MMA File of Dual Eligibles (aka “State MMA File”) is submitted to CMS on a monthly basis and offers more granularity on the beneficiary’s type of dual eligible status (see Table 1). This indicator is considered to be the most current, accurate, and consistent source of information on dually eligible Medicare-Medicaid enrollees. Starting with CAU 2011, the MCBS will be using the information based upon the state MMA indicator to determine dual eligibles in the MCBS. This information will populate the variable called OP\_MDCCD and the DUAL\_MMM monthly variable series on the RIC A file (see note). In this paper, we will refer to this administrative source as the “State MMA” indicator.

*Methods*

First, we examined unweighted frequencies of Medicare-Medicaid enrollees in the MCBS identified by the current state Medicaid source, State Buy In, and the new Medicaid source, State MMA. Then, we compared weighted frequencies in the Cost and Use file to the 100% MMA administrative count by age groups.

Next, the MCBS State MMA administrative data was compared to the 100% MMA administrative population to assess whether Medicare-Medicaid enrollee characteristics are representative in the context of the MCBS sampling process and survey weights. The MCBS has several oversamples that could affect estimates Medicare-Medicaid enrollee representation, notably the under age 65 and over age 85 populations. Age, sex, and race/ethnicity information from administrative data were examined in the survey weighted population and the 100% population, with a chi square test of proportions to test for significance.

**Table 1. Medicare-Medicaid enrollees**

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<i>Partial Benefit</i>
Qualified Medicare Beneficiaries without other Medicaid (QMB-only)
Specified Low-Income Medicare Beneficiaries without other Medicaid (SLMB-only)
Qualified Disabled and Working Individuals (QDWI)
Qualifying Individuals (QI)
<i>Full Benefit</i>
Qualified Medicare Beneficiaries plus full Medicaid (QMB-plus)
Specified Low-Income Medicare Beneficiaries plus full Medicaid (SLMB-plus)
Other full benefit dual eligible / Medicaid only dual eligibles

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NOTE: The RIC 4 file includes the variable D\_CAID and variable series D\_CAID1-DCAID12, which blend survey and administrative sources to reflect Medicaid eligibility, with flags specifying whether the information is from administrative records, reported in the survey, or both. Historically, H\_MCSW and the variable series H\_MCDE01-H\_MCDE12 populated the administrative source for the D\_CAID variables, but starting with CAU 2011, OP\_MDCCD and the DUAL\_MMM series will populate the administrative information for these variables.

This analysis utilized SAS Enterprise Guide 5.1 and applied SAS survey procedures using cross-sectional (CS1YRWGT) and replicate weights (CS1YR001-CS1YR100) when appropriate.

## Results

### *Unweighted Frequencies*

Table 2. MCBS Unweighted Frequencies of Medicare-Medicaid Enrollees, 2011

State Buy-In	State MMA		<i>Total</i>
	Medicare-Medicaid	Medicare Only	
Medicare-Medicaid	2,383	19	2,402
Medicare Only	248	8,251	8,499
<i>Total</i>	2,631	8,270	

There is considerable overlap in the Medicare-Medicaid enrollee population identified by the State Buy-In and State MMA indicators. The two sources of administrative identification are examined in Table 2. In the 2011 unweighted MCBS population, the overall agreement between the two sources was 97.6%. However, the State MMA indicator identifies a higher total number of Medicare-Medicaid enrollees (n=2,631; weighted n=9,684,932) within the MCBS population compared to the State Buy-In indicator (n=2,402; weighted n=8,765,503).

### *Weighted frequencies compared to administrative sources*

Table 3. 100% MMA Administrative Medicare-Medicaid Enrollees Compared to MCBS Estimates, 2011<sup>1</sup>

	100% MMA Admin <i>n=51,717,260</i>		MCBS State Buy-In <i>weighted n=50,009,065</i>		MCBS State MMA <i>weighted n=50,009,065</i>	
	Freq	Percent	Freq	Percent	Freq	Percent
Under 65 years	4,156,590	41.0%	3,586,966	40.9 (38.4, 43.5)	3,851,134	39.7 (37.3, 42.1)
65 to 84 years	4,688,243	46.3%	4,144,892	47.3 (44.9, 49.6)	4,586,222	47.4 (45.2, 49.6)
85 years+	1,286,336	12.7%	1,033,645	11.8 (10.7, 12.9)	1,247,576	12.9 (11.7, 14.1)
<i>Total</i>	10,131,169	19.6%	8,765,503	17.5 (16.7, 18.4)	9,684,932	19.3 (18.5, 20.2)

<sup>1</sup> Data are from the 2011 Beneficiary Summary File and the 2011 MCBS Cost and Use File

The weighted State Buy-In variable underestimates the count of Medicare-Medicaid enrollees by roughly 13% compared to the 100% administrative population, while the weighted State MMA variable approximates the 100% count (Table 3). The age distribution of Medicare-Medicaid enrollees is accurate compared to the distribution in the 100% administrative population for both the State MMA and State Buy-In sources, within the margin of error.

*Characteristic validation of Medicare-Medicaid enrollees in the MCBS versus administrative records*

Table 4. Characteristics of Medicare-Medicaid Enrollees, 100% MMA Admin vs. MCBS, 2011

	100% MMA Admin <sup>1</sup> <i>n=10,131,169</i>	MCBS State MMA <sup>2</sup> <i>weighted n=9,684,932</i>
Total Enrollment (%)	19.6	19.4 (18.5-20.2)
Years of age (%)		
Under 65	41.0	39.8 (37.4-42.2)
65-84	46.3	47.4 (45.1-49.6)
85 or greater	12.7	12.8 (11.7-14.1)
Sex (%)		
Female	61.2	62.0 (59.7-64.4)
Race/Ethnicity (%)		
White, non-Hispanic	63.7	65.3 (63.0-67.7)
Black, non-Hispanic	20.4	19.2 (17.6-20.9)
Hispanic	7.2	7.1 (5.8-8.3)
Other	8.6	8.4 (6.6-10.1)

<sup>1</sup> Data are from the 2011 Beneficiary Summary File, based on the 100% administrative population

<sup>2</sup> Data are from RIC A of the 2011 MCBS Cost and Use File and reflect MMA administrative data only

Medicare-Medicaid total enrollee counts and proportions across age, sex and race/ethnicity categories in the weighted State MMA variable approximate the 100% administrative count (Table 4).

**Discussion**

Medicare-Medicaid enrollees are a vulnerable population with significant policy relevance due to their high costs to both federal and state governments. The ability to link administrative identification with survey-reported characteristics makes the MCBS a robust source of information on these beneficiaries. Previously, the survey used the State Buy-In administrative source for Medicare-Medicaid enrollee identification, but we are now transitioning to the State MMA indicator instead. Select data releases, including CAU 2011 and ATC 2013 will combine both sets of variables for cross walking purposes. Future files will base Medicare-Medicaid enrollee indicators only on the State MMA source information.

Overall, the MCBS approximates the 100% MMA administrative population in total enrollment and the distribution of select characteristics of Medicare-Medicaid enrollees. Both the State MMA and the State Buy In sources approximate the correct age distribution of Medicare-Medicaid enrollees, but the State MMA data provides a better estimate of the total number of enrollees and is considered to be the more complete and accurate source.

Users should note that Puerto Rico is not represented in the either the State MMA or State Buy In indicators. As a result, beneficiaries residing in Puerto Rico are coded in the administrative data as Medicare only beneficiaries, regardless of their Medicaid status. Since the MCBS Hispanic population is disproportionately Puerto

Rican, users may want to refer to the D\_CAID variables available in RIC 4, which include both administrative and self-reported information on Medicaid enrollment.

In summary, the MCBS is a unique resource on Medicare-Medicaid enrollees, and the change to the State MMA administrative source further positions the MCBS to provide accurate national estimates on this population.

## References

- (1) Coughlin TA, Waidmann TA, Phadera, L. Among Dual Eligibles, Identifying the Highest-Cost Individuals Could Help in Crafting More Targeted and Effective Responses. *Health Affairs*, no. 5 (2012): 1083-1091.
- (2) Centers for Medicare and Medicaid Services. Medicare-Medicaid Dual Enrollment from 2006 through 2011. [http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/Downloads/Dual\\_Enrollment\\_2006-2011\\_Final\\_Document.pdf](http://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/Downloads/Dual_Enrollment_2006-2011_Final_Document.pdf). Accessed on December 5, 2014.
- (3) Adler, GS. A Profile of the Medicare Current Beneficiary Survey. *Health Care Financing Review*. 1994; 15(4), 153-163.
- (4) Chronic Conditions Data Warehouse. <https://www.ccwdata.org/> Accessed on March 12, 2015.

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*This data brief was written by Jessie Parker in the CMS Office of Enterprise Data and Analytics (OEDA), with support and editorial feedback provided by Kai Anderson, Paul Guerino, Kim Lochner, Jason Petroski, Michael Slater, and Debbie Reed-Gillette. For more information about the MCBS, visit [www.cms.hhs.gov/mcbs](http://www.cms.hhs.gov/mcbs). To purchase MCBS data files, contact the Research Data Assistance Center (ResDAC) at [www.resdac.org](http://www.resdac.org) or (888) 973-7322.*