Medicaid and Medicare Spending on Acute, Post-Acute and Long-Term Services and Supports in California

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Prepared for
The SCAN Foundation
and
The California Department of Health Care Services

December 2012

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Acknowledgments

This report was supported by funds received from the California Department of Health Care Services and from a grant from The SCAN Foundation. The SCAN Foundation is dedicated to creating a society in which seniors receive medical treatment and human services that are integrated in the setting most appropriate to their needs. For more information, please visit www.TheSCANFoundation.org.

The authors also thank Patrick Henderson for assisting with the formatting and copy editing of this report.

CAMRI

CAMRI is a multi-campus research program of the University of California that promotes the development and dissemination of evidence to improve policy decision-making in California's Medicaid program. For more information, please visit http://camri.universityofcalifornia.edu/.

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Introduction

In an attempt to slow down growth in health care spending,[1] state and federal governments have implemented a number of cost-containment strategies in recent years. Medicaid and Medicare expenditures are major contributors to the long term fiscal challenges facing the public sector. Medicaid, financed by both federal and state governments, pays for acute, post-acute, and long-term services and supports (LTSS) for low-income seniors and certain individuals with disabilities, among others.[2] Medicare, financed by the federal government and premiums, pays for acute and post-acute health care services for those Medicaid beneficiaries who are also enrolled in Medicare (known as dual eligibles[3] and hereafter referred to as Medicare-Medicaid Enrollees, or MMEs).[4]

Federal spending on Medicaid and Medicare constituted 5.5% of gross domestic product (GDP) in fiscal year (FY) 2011. Without changes to current law, federal spending on these programs is expected to reach 7.2% of GDP by 2022.[5]

Spending on Medi-Cal (California's Medicaid program) also represents a significant share of the state's budget. For example, California spent $11.1 billion in state general funds on Medi-Cal services and administration in 2010.[6] This amount accounted for 18.9% of the state's total expenditures, just second behind its expenditures on elementary and secondary education (19.6% of state expenditures).[7]

Over the next decade, enrollment in Medicaid and Medicare across the nation is expected to rise by about 30%.[8] As enrollment grows, so too will program costs, further squeezing federal and

[1] Martin, Anne B., Lassman, David, Washington, Benjamin, et. al., "Growth In US Health Spending Remained Slow In 2010; Health Share Of Gross Domestic Product Was Unchanged From 2009," Health Affairs, vol. 31 no. 1 208-219, January 2012.

[2] Because Medicaid is means-tested, only some of California's elderly and individuals with disabilities qualify. Individuals must meet certain categorical, financial and sometimes functional level-of-care criteria established by the state within federal guidelines.

[3] These individuals have traditionally been referred to as dual eligibles. The Medicare-Medicaid Coordination Office of the Centers for Medicare and Medicaid Services (CMS) has begun referring to dual eligibles as "Medicare-Medicaid enrollees" (MMEs). For this report, we will follow CMS' example.

[4] MMEs tend to either be age 65 and over who qualify for Medicare upon turning age 65, or are under age 65 and qualify for Medicare after having received Social Security Disability Insurance for at least 24 months.

[5] Table 1-2. Projected Spending and Revenues Under CBO's Long-Term Budget Scenarios, "The 2012 Long-Term Budget Outlook," Congressional Budget Office, June 2012.

[6] Reflects state's general revenue and other state spending columns in Table 28 of "State Expenditure Report: Examining Fiscal 2009-2011 State Spending, 2010," National Association of State Budget Officers, Washington, D.C., 2011. Available at: http://www.nasbo.org/sites/default/files/2010%20State%20Expenditure%20Report.pdf

[7] Table 29 of "State Expenditure Report: Examining Fiscal 2009-2011 State Spending, 2010," National Association of State Budget Officers, Washington, D.C., 2011.

[8] The Congressional Budget Office projects that Medicaid enrollment will rise from 67 million in 2011 to 94 million in 2022 and that Medicare enrollment will rise from 48 million in 2011 to 66 million in 2022. Enrollment increases will be largely related to the growing elderly population in the U.S. Other factors will include program changes and continuing problems in our economy. Source: "The Budget and Economic Outlook: Fiscal Years 2012 to 2022," Congressional Budget Office, Washington, DC, 2011. Available at: http://www.cbo.gov/publication/21670

state budgets and imposing financial burdens on low-income families, individuals with disabilities, and older adults.

Medicaid beneficiaries with LTSS needs often have multiple chronic conditions, limitations in activities of daily living (ADLs), such as bathing and dressing; instrumental activities of daily living (IADLs), such as preparing meals and shopping; and cognitive impairments and/or breathing limitations. As such, they are among the most costly participants in the Medicaid program. In Medicaid, spending on LTSS constitutes greater than 30% of all spending on services.[9] In Medicare, MMEs – with and without LTSS needs – cost nearly five times more than individuals enrolled in Medicare only.[10]

Significant strains on federal and state budgets have led policymakers to look for strategies to contain spending, often without cutting eligibility thresholds. Policymakers will have to make tough decisions about where to direct the limited public funds available. As a result, many are looking for opportunities to contain spending by coordinating care and improving quality.

As part of a partnership between the University of California and the California Department of Health Care Services (DHCS), the California Medicaid Research Institute (CAMRI) developed an integrated and longitudinal database containing Medi-Cal and Medicare claims and assessment data of LTSS recipients in California in 2008. CAMRI's integrated database provides opportunities to look at program spending across the entire care continuum of beneficiaries with LTSS needs within Medi-Cal and, for MMEs, across Medicare and Medi-Cal.

To assist policymakers in targeting programmatic interventions and better identifying opportunities for cost containment, this report describes the categories of services with high and low relative costs. Specifically, the report shows Medi-Cal and Medicare spending on LTSS beneficiaries in three categories: acute and other medical care, post-acute care, and LTSS. For additional information about CAMRI's process for acquiring, linking and cleaning these data as well as the challenges faced, see "Studying Recipients of Long-Term Services and Supports: A Case Study in Assembling Medicaid and Medicare Claims and Assessment Data in California."[11]

This report is the second in a series that describes findings from CAMRI's integrated database. The first report in this series, "Recipients of Home-and Community-Based Services in California," describes the demographic characteristic, home and community-based service

[9] Eiken, S., Sredl, K., Burwell, B. and Gold, L. Medicaid Expenditures for Long-Term Services and Supports: 2011 Update. Cambridge, MA: Thomson Reuters, October 31, 2011.

[10] "FY 2011 Report to Congress," Medicare-Medicaid Coordination Office," Centers for Medicare & Medicaid Services, Department of Health and Human Services. Available at: https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/Downloads/MMCO_2011_RTC.pdf

[11] Julie Stone, M.P.A., Robert Newcomer, Ph.D., Arpita Chattopadhyay, Ph.D., et.al., "Studying Recipients of Long-Term Care Services and Supports: A Case Study in Assembling Medicaid and Medicare Claims and Assessment Data in California, California Medicaid Research Institute," University of California, November 16, 2011. Available at: http://thescanfoundation.org/sites/thescanfoundation.org/files/CaMRI_Data_Case_Study_Report_3.pdf

(HCBS) use, functional level-of-care needs, and rates of nursing facility admissions and mortality for recipients of HCBS in California.[12]

This project was performed by CAMRI under contract with DHCS, and with co-funding from The SCAN Foundation.

Study Population

The analyses reported here describe the health care and LTSS expenditures of persons aged 18 or over who received either a Medi-Cal funded HCBS or had a nursing facility stay at some time during calendar year 2008. The LTSS user population is not defined by an eligibility category, but instead by service use. For this study, the services defining LTSS include Medi-Cal reimbursed nursing facility services, home health (HH), In-Home Supportive Services (IHSS), Adult Day Health Care (ADHC), Targeted Case Management (TCM), and any of the Medi-Cal HCBS (section 1915(c) of the Social Security Act) waiver programs described in **Appendix A**.[13]

Medi-Cal's enrollment and claims files were used to identify adults ages 18 or older receiving LTSS services. The study team also used IHSS' assessment data, referred to as Case Management Information Payrolling System (CMIPS), to gather information on IHSS participants in 2008. The Medi-Cal enrollment file also provided month-to-month information on Medicare and Medi-Cal enrollment status. The DHCS used Social Security numbers to link the Medi-Cal recipient population with Medicare's enrollment and FFS claims files.

Claims for individuals with a diagnosis of a developmental disability (n=103,076) are not available from Medi-Cal and these individuals are excluded from our analyses. We also excluded individuals for whom we could not determine the date of birth (n=29,838) from either the Medi-Cal enrollment file or from a linked claim or CMIPS record. Another 49,139 individuals were excluded because of incomplete claims data as they were enrolled for some or all of 2008 in either Medi-Cal managed care or Medicare managed care.

A total of 429,188 Medi-Cal LTSS recipients in Medi-Cal's fee-for-service (FFS) system met the inclusion criteria for our analysis. Those participating in both Medicare and Medi-Cal for at least one month in 2008 (n=326,795) are considered dually enrolled in our analyses. The remaining eligible LTSS recipients were participating in only Medi-Cal (n=102,393) during this period. FFS claims and expenditures were compiled for all participating months in each of these programs for all LTSS recipients.

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[12] Robert Newcomer, PhD, Charlene Harrington RN, Ph.D., Julie Stone, M.P.A., et. al., "Recipients of Home and Community Based Services in California." California Medicaid Research Institute," University of California, June 6, 2012. Available at: http://www.thescanfoundation.org/california-medicaid-research-institute-recipients-home-and-community-based-services-california

[13] For more information about California's waiver programs and other HCBS, see, "California's Medi-Cal Home & Community Based Services Waivers, Benefits & Eligibility Policies, 2005-2008," by Robert Newcomer, Charlene Harrington, Julie Stone and Andrew B. Bindman at the University of California, San Francisco and Mark Helmar at the California Department of Health Care Services, August 2011. Available at: http://www.thescanfoundation.org/california-medicaid-research-institute-californias-medi-cal-home-community-based-services-waivers

Determination of Expenditures

We report on three broad categories of health care expenditures using Medi-Cal and Medicare claims data linked to our study population. These health care expenditures are for acute and other medical care services, post-acute care, and LTSS for Medi-Cal funded state plan and HCBS waiver services. The specific services included in each of these three categories are described in **Appendix A**. Because we did not have comprehensive data for prescription drug expenditures, we did not include them in our analyses.

Medicare costs were aggregated from the following six Medicare claims files:

1. CMS Medicare Provider Analysis and Review (MEDPAR) file: hospital inpatient, skilled nursing facility (SNF), inpatient rehabilitation facility (IRF), and long-term care hospital (LTCH);

2. CMS Carrier: ambulatory services (including physician services), emergency department (ED) visits, therapies (physical therapy, occupational therapy, and speech therapy), diagnostic testing and other services:

3. CMS Outpatient files: ambulatory services (including physician services), emergency department (ED) visits, therapies (physical therapy, occupational therapy, and speech therapy), diagnostic testing and other services;

4. CMS Durable Medical Equipment (DME) file: equipment and services related to DME;

5. CMS Home Health File (HH): services related to home health; and

6. CMS Hospice file: hospice services.

Each of these Medicare files captures costs for Medicare-covered services. We classified claims according to the file type. For example, claims for physician services in MEDPAR provided during a hospitalization were classified as inpatient hospital claims and claims for physician services in the hospice file were classified as hospice. Within the Carrier file and the Outpatient file, we used the Health Care Procedure Coding System (HCPCS) codes, in combination with place of service to categorize claims using the Berenson-Eggers Type of Service (BETOS) categorization (see **Appendix B**) to assign claims to the service categories corresponding to those files shown above. The claims from these two files were combined in presenting the results.

Medi-Cal claims were received in a single file in which the state had aggregated services and procedures into mutually exclusive categories known as Vendor codes. These groupings were used and organized to correspond to the BETOS categories so that Medi-Cal expenditures for specific services and procedures were aligned with comparable Medicare service categories (see **Appendix B, Table 1**). Claims not assigned to a specific service category were evaluated using HCPCS codes, in combination with place of service, to assign them into appropriate inpatient, ambulatory, and other service categories.

Analysis/Approach

Table 1 provides demographic information of our study population. **Tables 2** through **5** show total expenditures and average spending per beneficiary for acute and other medical, post-acute care, and LTSS for selected Medi-Cal beneficiaries with at least one LTSS claim in 2008 (see description of study population within this report). "Beneficiary", as used in the tables and narrative, refers to the population of LTSS participants in the Medicare and/or Medi-Cal in 2008. This is distinct from service recipients who were actual users of services. Results are stratified by three population groups: MMEs, Medi-Cal-only beneficiaries and the combined group of all LTSS beneficiaries. We also report total expenditures by Medi-Cal and Medicare separately.

The expenditures for users or recipients of specific services are shown in **Appendix C**. For these, we have determined the number of users in each service group by counting the number of unique individuals having a claim for that service during the period.

Not all spending that may have been paid on behalf of LTSS recipients for these services are included in these totals. Excluded from these analyses are individual and family out-of-pocket payments made by recipients and payments made by other sources, such as retiree insurance or private long-term care insurance.

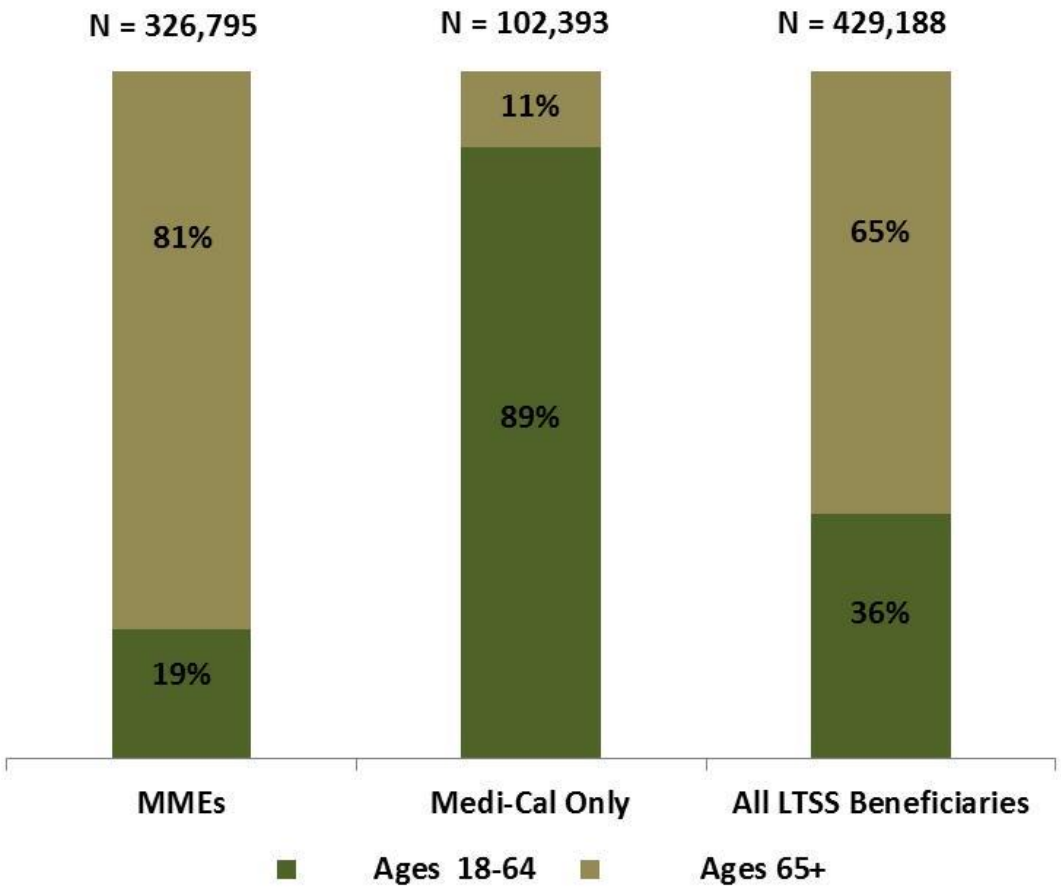
Results

Demographic Characteristics of LTSS Recipients

Of the 429,188 Medi-Cal LTSS recipients in FFS in 2008, 76% (326,795) were dually enrolled in Medicare (i.e., MMEs).

The age, sex and race/ethnicity characteristics of the FFS LTSS population are shown in **Figure 1** and **Table 1**. Among MMEs, the majority (81.2%) were ages 65 or older, while 88.8% of Medi-Cal only beneficiaries were ages 18-65. The mean age of LTSS recipients was 67.7 years. The mean age differs substantially between MMEs and Medi-Cal only beneficiaries (73.8 years vs. 48.5 years, respectively). About two-thirds of recipients in both funding source groups were women.

Figure 1. Mean Age of LTSS Recipients by Category, Age 18+, CY 2008



The race and ethnicity stratification of national LTSS recipients in 2008 was similar to that of the California population. For example, persons characterized as White accounted for almost 40% of all LTSS beneficiaries and 40% of MMEs, reflecting a similar distribution in the total California population in 2008 (43%).[14] For Medi-Cal only beneficiaries, Whites represented approximately 34%.

Persons identified as Hispanic were the second largest beneficiary group, accounting for about one quarter of all beneficiaries and of MMEs. As a share of the California population, Hispanics aged 65 and older represented about 17% of the population in 2008. [15] Hispanics comprised almost 30% of Medi-Cal only LTSS beneficiaries. Asian/Pacific Islanders comprised approximately 20% of the LTSS beneficiaries. African-Americans comprised about 13% of the total of LTSS beneficiaries and over 20% of Medi-Cal only beneficiaries. The higher share of African-Americans in the Medi-Cal only population may be partly attributed to differences in health status and life expectancy relative to other groups.[16]

[14] State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2005, Sacramento, CA July, 2007. Available at: http://www.cdph.ca.gov/data/statistics/Pages/VitalStatisticsandPopulationSummaryTables.aspx

[15] Ibid.

[16] Nazleen Bharmal, Chi Hong Tseng, Robert Kaplan and Mitchell D. Wong, "State-Level Variations in Racial Disparities in Life Expectancy," *Health Services Research*, DOI: 10.1111/j, (2011), pp. 1475-6773.

Table 1. Demographics of California's LTSS Beneficiaries in Fee-for-Service (FFS) Age 18+, CY 2008

	MME Beneficiaries			Medi-Cal Only Beneficiaries			All LTSS Beneficiaries	
	Number	% of MME	% of Row	Number	% of Medi-Cal Only Beneficiaries	% of Row	Number	% of Population
Total	**326,795**	**100.0%**	**76.1%**	**102,393**	**100.0%**	**23.9%**	**429,188**	**100.0%**
Mean Age (yrs)	73.8	na	na	48.5	na	na	67.7	na
Female	213,673	65.4	76.4	65,837	64.3	23.6	279,510	65.1
Race/Ethnicity								
White	131,099	40.1	79.0	34,879	34.1	21.0	165,978	38.7
Hispanic	75,126	23.0	71.3	30,229	29.5	28.7	105,355	24.5
African American	36,220	11.1	62.9	21,356	20.9	37.1	57,576	13.4
Asian/Pacific Islanders	69,789	21.4	86.7	10,741	10.5	13.3	80,530	18.8
Alaskan/Native American	1,071	0.3	63.1	625	0.6	36.9	1,696	0.4
Other/Combos	13,397	4.1	81.4	3,058	3.0	18.6	16,455	3.8
Unknown	93	0.0	5.8	1,505	1.5	94.2	1,598	0.4

na = not applicable

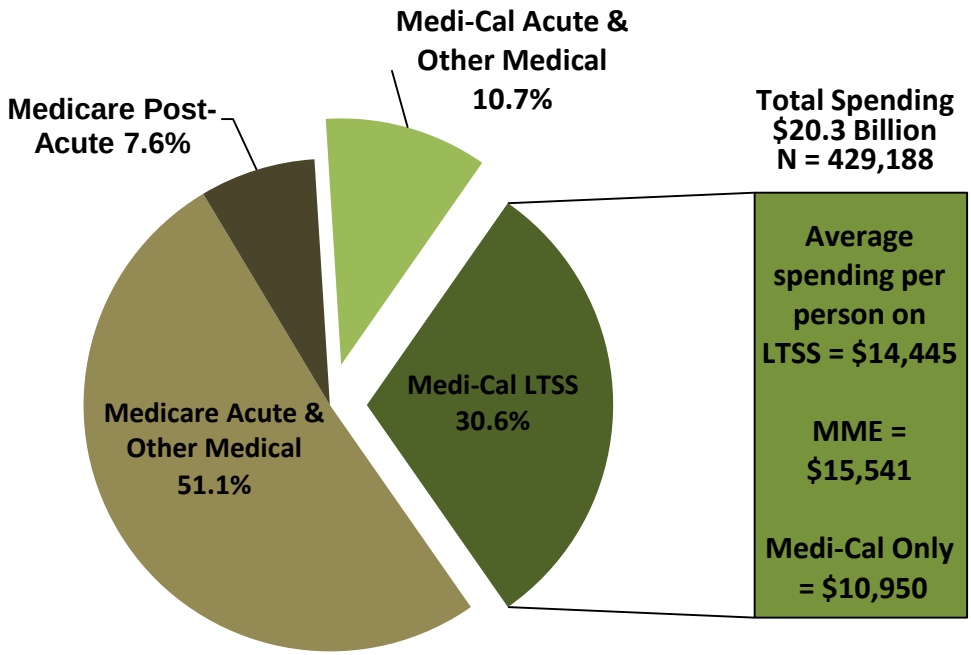
Medi-Cal and Medicare Spending on All Services

Medi-Cal and Medicare spending on all acute and other medical care, post-acute care, and LTSS for FFS LTSS beneficiaries in California in 2008 was $20.3 billion. Medicare paid for more than half (about 59%) of all spending. Medi-Cal paid the remaining 41%.

Figure 2 shows that the largest category of spending for LTSS beneficiaries was Medicare acute and other medical care, representing just over half of all spending. The second largest category of spending was for Medi-Cal LTSS, representing just under one-third of all expenditures.

Total spending per beneficiary for LTSS was $14,445 in CY 2008. Spending on LTSS per beneficiary for LTSS was 42% higher for MMEs ($15,541) than for Medi-Cal only beneficiaries ($10,950).

Figure 2. Total Medi-Cal and Medicare Spending on LTSS Beneficiaries in FFS Age 18+, CY 2008



Note: For average spending per user by service, see Appendix B. Medi-Cal post-acute care constituted less than 1% of all spending.

Spending on MMEs accounted for about 88% of all spending on LTSS beneficiaries ($17.8 billion of the $20.3 billion), which is a higher proportion than their presence in the population (76.1%). Spending on Medi-Cal only beneficiaries accounted for just over 12% ($2.5 billion of $20.3 billion) while they made up 23.9% of the population. Average per beneficiary spending on MMEs was more than double that of Medi-Cal only beneficiaries ($54,424 versus $24,408).

Over 60% of all spending on MMEs was for acute and other medical care, the vast majority of which was paid by Medicare ($10.4 billion of the $11.2 billion). Almost 30 percent of spending on MMEs was for LTSS, which was entirely funded by Medi-Cal (Medicare does not pay for LTSS). The remaining 9% ($1.5 billion) was spent on post-acute care, the vast majority of which was paid by Medicare. See **Figure 3**.

Spending on Medi-Cal-only beneficiaries is more evenly split between acute and other medical care (55%, or $1.4 billion) and LTSS (45%, or $1.1 billion). Less than 1% ($952,000) of Medi-Cal expenditures for this population went to pay for post-acute care. However, there may be some under-reporting of what was truly Medi-Cal post-acute care because the vendor codes in the Medi-Cal data do not allow us to easily distinguish this spending (**Figure 3**). As a result, we placed payment for certain benefits, such as Medi-Cal home health, entirely under LTSS, although some portion of those payments were likely to have paid for post-acute care.

Figure 3. Total Medi-Cal and Medicare Spending on LTSS Beneficiaries in FFS by MME and Medi-Cal Only, Age 18+, CY 2008

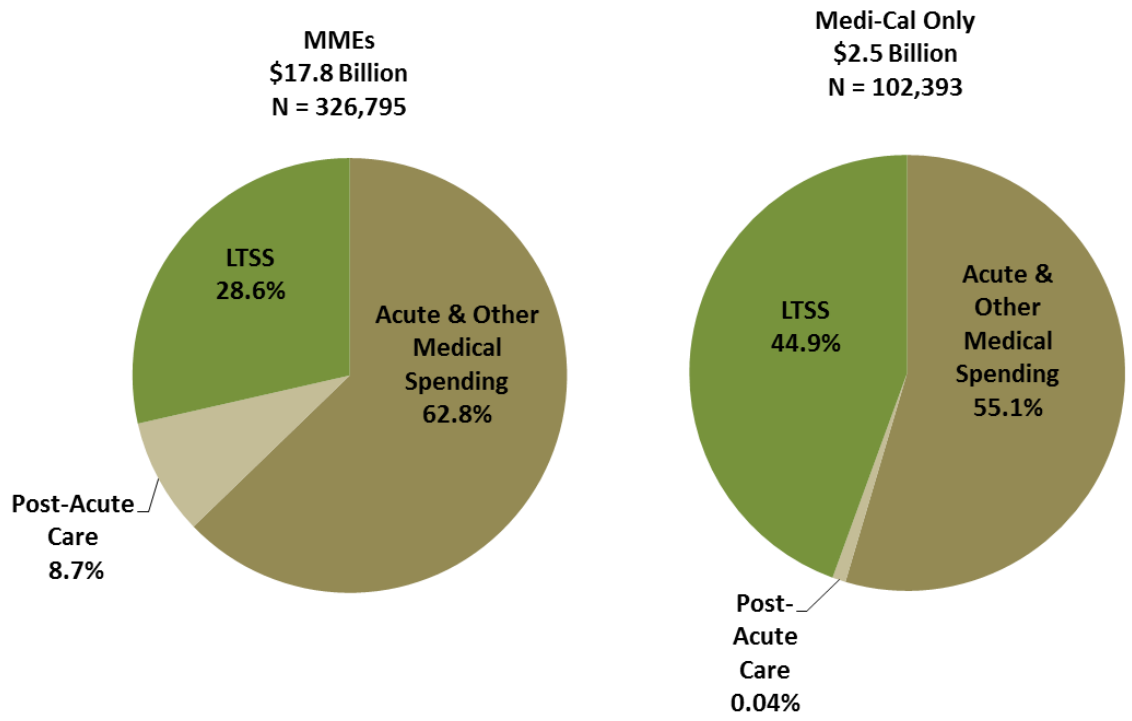


Table 2. Medi-Cal and Medicare Spending on Services for California's LTSS Beneficiaries in FFS, Age 18+, CY 2008

	Acute and Other Medical Spending $	Post-Acute Care Spending $	LTSS Spending $	Total Spending $	LTSS as % of Total Spending on All Services
MME Beneficiaries (N = 326,795)					
Total Medicare and Medi-Cal Spending	**11,163,678,000**	**1,543,224,000**	**5,078,611,000**	**17,785,513,000**	**28.6%**
Average Spending Per MME Beneficiary	34,161	4,722	15,541	54,424	na
Total Medicare Spending	10,372,291,000	1,543,148,000	na	11,915,439,000	na
Average Medicare Spending Per MME	31,739	4,722	na	36,462	na
Total Medi-Cal Spending	791,387,000	76,000	5,078,611,000	5,870,074,000	86.5%
Average Medi-Cal Spending Per MME Beneficiary	2,422	<1	15,541	17,963	na
Medi-Cal Only Beneficiaries (N = 102,393)					
Total Medi-Cal Spending	**1,377,042,000**	**952,000**	**1,121,217,000**	**2,499,211,000**	**44.9%**
Average Spending Per Medi-Cal Only Beneficiary	13,449	9	10,950	24,408	na
All Beneficiaries (N = 429,188)					
Total Medicare and Medi-Cal Spending	**12,540,720,000**	**1,544,176,000**	**6,199,828,000**	**20,284,724,000**	**30.6%**
Average Per Beneficiary	29,220	3,598	14,445	47,263	na

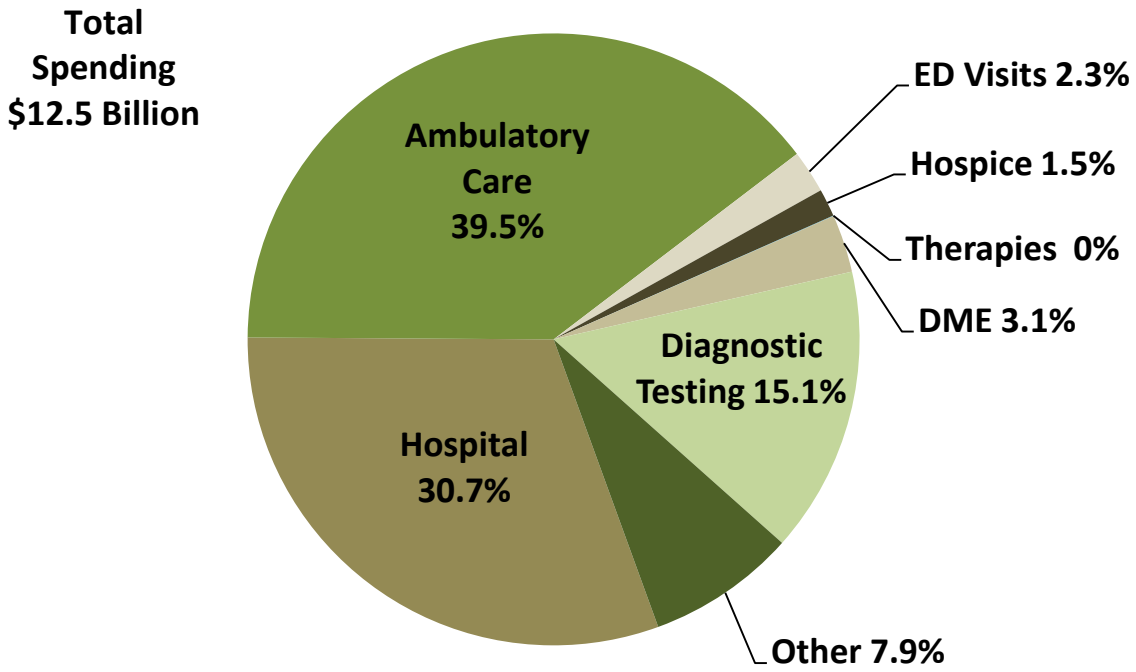
Notes: Amounts are rounded to the nearest thousand.

Acute and Other Medical Care Expenditures

Spending on acute and other medical care was the largest category of spending for LTSS beneficiaries in 2008, totaling $12.5 billion. Average spending per beneficiary was $29,220. Medicare paid the vast majority (83%) of this total. See **Table 3**.

Within acute and other medical spending, ambulatory care and hospitalizations far outpaced spending on the other categories, accounting for about 70% of total expenditures. The remaining categories of spending individually constituted small shares of total spending: diagnostic testing (15.1%) being the largest of these, followed in order by DME (3.1%), ED visits (2.3%), hospice (1.5%), therapies (PT/ST/OT) (0.02%), and all other services (7.9%). See **Figure 4**.

Figure 4. Acute and Other Medical Care Spending for California's LTSS Beneficiaries in FFS by Category, Age 18+, CY 2008



For MMEs, a similar pattern prevailed. Ambulatory care had the highest expenditures, followed by hospital services, and diagnostic testing. The bulk of these and the other acute and other medical service expenditures were paid for by Medicare (**Table 3**).

For Medi-Cal only beneficiaries, hospital stays accounted for 60% of total Medi-Cal acute care expenditures, followed by ambulatory care services (21.4%). Emergency department visits, hospice, and DME--each at about 2%, all surpassed diagnostic testing. Other medical services comprised 11.5% of total acute care expenditures (**Table 3**).

Medicare is the predominant payer for each of the acute medical services. For MMEs, Medicare covered 93% of all costs on acute and other medical spending, while Medi-Cal covered just 7%.

Table 3. Acute and Other Medical Care Spending on Services for California's LTSS Beneficiaries in FFS, Age 18+, CY 2008

	Hospital $	Ambulatory Care $	ED Visits $	Hospice $	Therapies (PT, OT, ST) $	DME $	Diagnostic Testing $	Other $	Total Spending $
MME Beneficiaries N = 326,795									
Total Medicare and Medi-Cal Spending	3,016,783,000	4,663,058,000	252,867,000	157,914,000	2,742,000	356,888,000	1,885,159,000	828,267,000	11,163,678,000
Average Spending Per MME	9,231	14,269	774	483	8	1,092	5,769	2,535	34,161
Total Medicare Spending	2,681,610,000	4,544,360,000	251,045,000	102,244,000	2,715,000	344,149,000	1,883,423,000	562,745,000	10,372,291,000
Average Medicare Spending Per MME	8,206	13,906	768	313	8	1,053	5,763	1,722	31,739
Total Medi-Cal Spending	335,173,000	118,698,000	1,822,000	55,670,000	27,000	12,739,000	1,736,000	265,522,000	791,387,000
Average Medi-Cal Spending Per MME	1,026	363	6	170	0	39	5	813	2,422
Medi-Cal Only Beneficiaries N = 102,393									
Total Medi-Cal Spending	827,813,000	294,682,000	31,063,000	26,400,000	207,000	25,896,000	13,190,000	157,791,000	1,377,042,000
Average Spending Per Medi-Cal Only Beneficiary	8,085	2,878	303	258	2	253	129	1,541	13,449
All Beneficiaries N = 429,188									
Total Medicare and Medi-Cal Spending	**3,844,596,000**	**4,957,740,000**	**283,930,000**	**184,314,000**	**2,949,000**	**382,784,000**	**1,898,349,000**	**986,058,000**	**12,540,720,000**
Average Spending Per Beneficiary	8,958	11,551	662	429	7	892	4,423	1,930	29,220

Note: Amounts are rounded to the nearest thousand

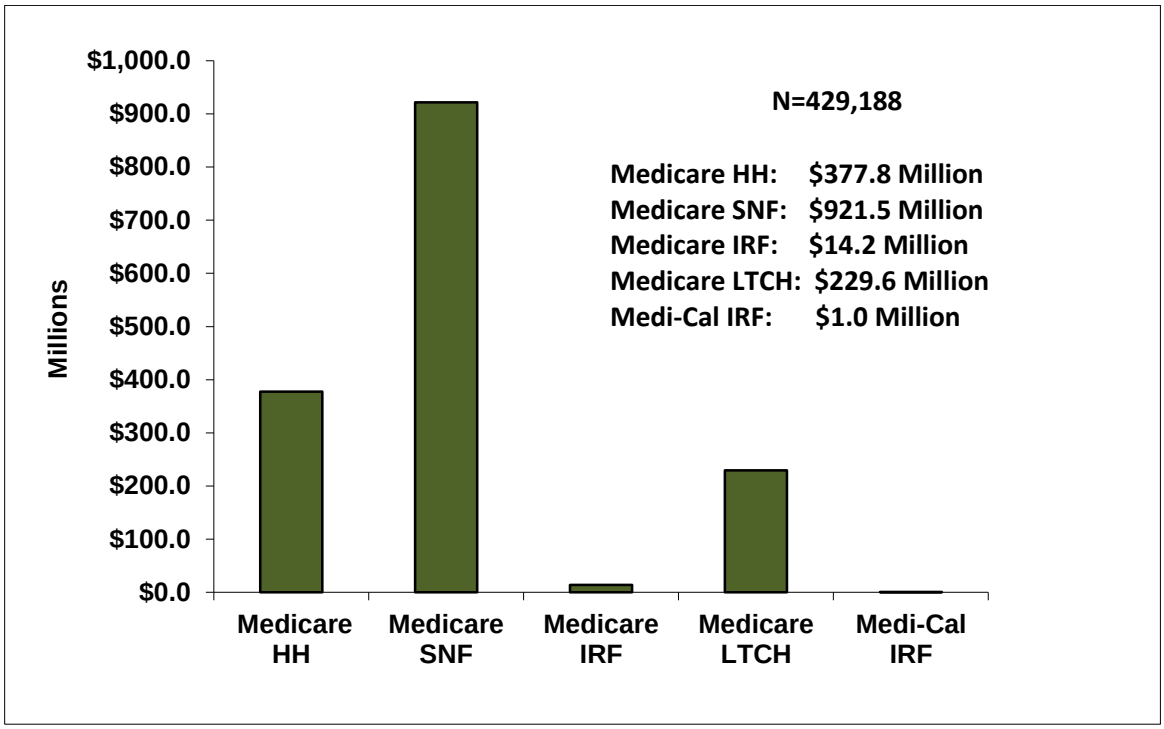
[a] While Medicare is the primary payer for the hospice benefit for MME's, Medi-Cal covers expenses for medication co-payments, respite care, and most significantly for assisted living residential care for those who become eligible for the hospice benefit.

Post-Acute Care

Total spending for post-acute care for all LTSS beneficiaries was $1.5 billion in 2008. As shown in **Table 4**, the vast majority of this was paid by Medicare. There may be some under-reporting of Medi-Cal covered post-acute care services. Even if we had fully captured these costs, the majority of post-acute care would still have been paid by Medicare due to the large portion of the study population who are MMEs (76.1%). For MMEs, Medicare pays first for Medicare-covered benefits that are also covered by Medi-Cal (e.g., post-acute care in HH and nursing facilities) and Medi-Cal pays last.

The largest share of post-acute care spending for all LTSS beneficiaries, $921.5 million, paid for Medicare SNFs, with average spending per beneficiary of about $2,100. The second largest share of spending for all beneficiaries, $377.8 million, was for Medicare HH, with average spending per beneficiary of $880. Average spending per beneficiary on SNF care was almost 2.5 times greater than average spending per beneficiary on HH. Spending on Medicare LTCHs constituted the third largest share of post-acute care spending for LTSS beneficiaries, totaling $229.6 million. Medicare and Medi-Cal spending on IRFs, constituted $14.2 million and $1 million respectively.

Figure 5. Post-Acute Care Spending for California's LTSS Beneficiaries in FFS, Age 18+, CY 2008



HH and SNF services account for the largest proportions of Medicare's spending on post-acute care for MMEs. Together, these expenditures account for more than 84.2% of all dollars spent on post-acute care for MMEs (**Table 4**).

Table 4. Post-Acute Care Spending for California's LTSS Beneficiaries in FFS, Age 18+, CY 2008

	MME Beneficiaries N = 326,795		Medi-Cal Only Beneficiaries N = 102,393		All Beneficiaries N = 429,188	
	Total Spending $	Average Spending Per MME $	Total Spending $	Average Spending Per Medi-Cal Only Beneficiary $	Total Spending $	Average Spending Per Beneficiary $
Medicare HH	377,757,000	1,156	na	na	377,757,000	880
Medicare SNF	921,542,000	2,820	na	na	921,542,000	2,147
Medicare IRF	14,244,000	44	na	na	14,244,000	33
Medicare LTCH	229,605,000	703	na	na	229,605,000	535
Medicare SubTotal	1,543,148,000	4,722	na	na	1,543,148,000	3,596
Medi-Cal IRF	76,000	0	952,000	9	1,028,000	2
Total Medicare and Medi-Cal Spending	**1,543,224,000**	**4,722**	**952,000**	**9**	**1,544,176,000**	**3,598**

Notes: Amounts are rounded to the nearest thousand.
Average $ in tables uses total beneficiary counts as the denominator. See appendices for counts of users and their average spending per user.

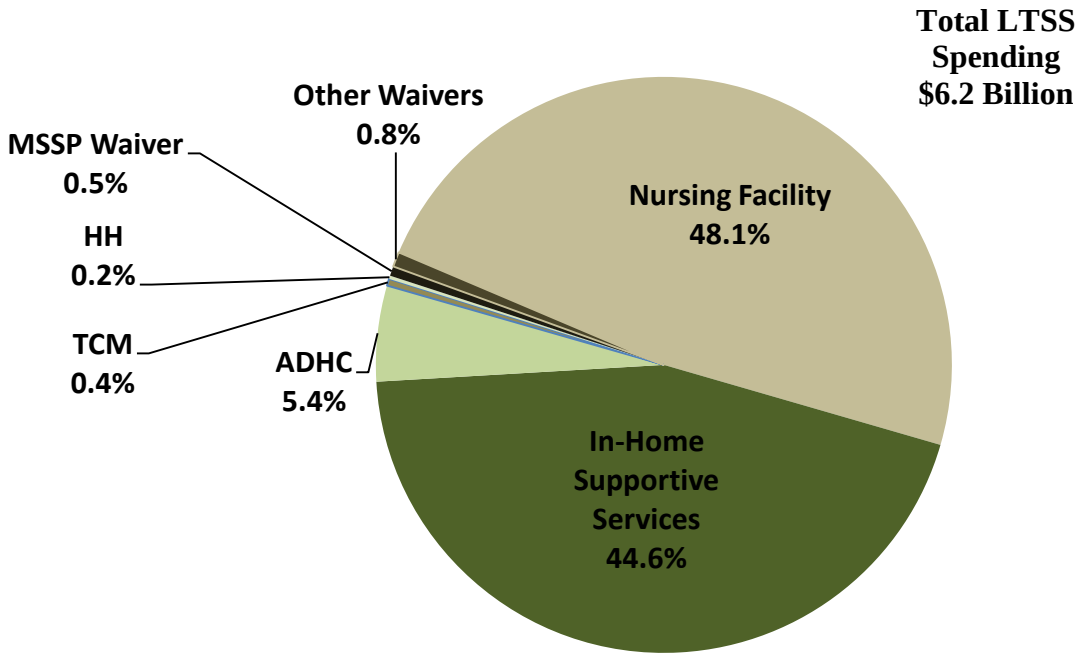
Long Term Services and Supports (LTSS)

The expenditures associated with the use of Medi-Cal's LTSS are shown in **Table 5**. Medi-Cal spent $6.2 billion on LTSS for beneficiaries ages 18 and older in 2008. Average per beneficiary spending was about $14,000. Just over half of all LTSS spending (51.9%) was for HCBS while the remainder (48.1%) paid for services in Medi-Cal-covered nursing facilities (**Figure 6**).

Average per person spending of all FFS LTSS recipients on nursing facility care, however, was lower than average spending per beneficiary on HCBS. Specifically, average per beneficiary spending on Medi-Cal nursing facilities among all LTSS beneficiaries was $6,947 compared to $7,498 for HCBS. Higher average per beneficiary spending on HCBS is because there were more total dollars spent on HCBS than on nursing facility care. However, when the expenditures per user are examined, average per recipient spending on nursing facility care at $32,406 are more than three times Medi-Cal's average spending per user of HCBS at $9,129 (**Appendix C**).

Of all LTSS, Medi-Cal's largest HCBS expenditures was on IHSS (44.6%). Medi-Cal spent its second largest HCBS expenditures on ADHCs (5.4%). Waiver spending represented just 1.3% of all Medi-Cal LTSS spending, including 0.5% for the MSSP waiver and another 0.8% for all other waivers combined (**Figure 6)**.

Figure 6. Medi-Cal Spending on LTSS for California's FFS Beneficiaries Age 18+, CY 2008



MMEs consumed 82% of LTSS spending. Average spending per beneficiary for MMEs was about 30% higher than average spending per Medi-Cal only beneficiaries ($15,541 vs. $10,950).

Table 5. Medi-Cal Spending for LTSS for California's FFS Beneficiaries Age 18+, CY 2008

	MME Beneficiaries N = 326,795		Medi-Cal Only Beneficiaries N = 102,393		All Beneficiaries N = 429,188	
	Total Spending $	Average Spending Per MME $	Total Spending $	Average Spending Per Medi-Cal Only Beneficiary $	Total Spending $	Average Spending Per Beneficiary $
Institutional Care: Nursing Facility	2,453,827,000	7,509	527,878,000	5,155	2,981,705,000	6,947
HCBS State Plan Services						
IHSS	2,255,007,000	6,900	509,360,000	4,975	2,764,367,000	6,441
ADHC	293,228,000	897	39,727,000	388	332,954,000	776
TCM	7,404,000	23	16,640,000	163	24,044,000	56
HH	783,000	2	10,697,000	104	11,480,000	27
SubTotal	2,556,422,000	7,823	576,424,000	5,630	3,132,845,000	7,299
HCBS Waivers						
AIDS Waiver	5,488,000	17	3,002,000	29	8,489,000	20
Assisted Living Waiver	10,341,000	32	578,000	6	10,919,000	25
MSSP Waiver	33,073,000	101	415,000	4	33,488,000	78
Other Waivers[a]	19,461,000	60	12,921,000	126	32,382,000	75
SubTotal	68,363,000	209	16,916,000	165	85,279,000	199
Total HCBS (State Plan + Waivers)	2,624,785,000	8,032	593,340,000	5,795	3,218,124,000	7,498
Total LTSS (NF + HCBS)	**5,078,612,000**	**15,541**	**1,121,218,000**	**10,950**	**6,199,829,000**	**14,445**
Percent HCBS of Total LTSS	51.7%	na	52.9%	na	51.9%	na

Notes. na = not applicable. Amounts are rounded to the nearest thousand.
Medi-Cal spending for LTSS also includes (1) post-acute care for Medi-Cal only and (2) co-pays for Medicare's post-acute inpatient rehabilitation facilities (IRFs) listed in Table 4.

[a] The IHO and NF/AH waivers are combined into the category, 'Other Waivers.' The Medi-Cal claims system records these waiver payments under the same Vendor Code. Additionally, these two waivers have small enrollments. **Note:** Most waiver recipients also receive IHSS and/or other services. Spending for these services is counted within these state plan benefits.

Discussion

Medicare and Medicaid spending are imposing increasing burdens on federal and state budgets. Total Medicare and Medi-Cal spending on all populations, not just those accessing LTSS, was $82.5 billion in 2008.[17] Individuals with LTSS needs are high cost drivers for both programs.

Our report shows that, in California, total spending on adult LTSS beneficiaries in FFS was $20.3 billion in 2008, representing 24.6% of all combined Medicare and Medi-Cal spending for only 4% of Medi-Cal beneficiaries.[18] This amount does not include Medi-Cal's spending on children, individuals with developmental disabilities, or those in managed care who also utilize LTSS.

Medicare alone spent $11.9 billion in California for beneficiaries with LTSS needs in 2008. This represented almost one-quarter of total Medicare program spending in the state ($47.1 billion). Medi-Cal spent $8.4 billion of its program dollars on LTSS beneficiaries in that year. This also represented about one-quarter of total Medi-Cal spending ($35.4 billion).[19]

In the face of high expenditures and concerns about quality, Congress recently debated methods to contain Medicare and Medicaid spending while improving the quality of care delivered. This debate resulted in the enactment of the *Patient Protection and Affordable Care Act of 2010* (ACA). During this debate, Medicare spending on hospitals, nursing homes and home health agencies and Medicaid spending on LTSS were identified by House and Senate members as targets for spending reductions. In part, this is because these services represent a relatively large share of outlays for Medicare and Medicaid and, because estimates of future spending on these services indicate continued growth. Our report confirms that the largest cost drivers for LTSS beneficiaries in California are ambulatory care, hospital services and LTSS.

Overall, more than half of total expenditures for LTSS beneficiaries were for acute and other medical care services. Ambulatory and hospital inpatient care each contributed about a third of these costs. Post-acute care services represented only 8% of total expenditures for LTSS beneficiaries. Of this, the largest component was for Medicare SNFs.

LTSS services comprised just under a third of total expenditures for LTSS beneficiaries and a slight majority of the spending was for HCBS rather than institutional care in a nursing facility. In 2008, California was one of just 10 states that spent more than 50% of its Medi-Cal LTSS dollars on HCBS. Other states were Alaska, Colorado, New Mexico, Kansas, Minnesota, Maine, Oregon, Washington, and West Virginia. The average spending for HCBS recipients/users in California was $9,129 compared to $14,665 for all states in 2008 (Appendix C, Table 1).[20] California Medi-

[17] National Health Expenditures, "Health expenditures by state of residence, 1991-2009", Centers for Medicare and Medicaid Services, accessed Thursday, June 14, 2012. Available at: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsResidence.html

[18] Medi-Cal enrolled 10,514,516 individuals in CY 2008. Source: Medicaid Statistical Information System (MSIS), 2008 Medicaid Quarterly State Summary.

[19] These amounts all state and federal funds. National Health Expenditures, "Health expenditures by state of residence, 1991-2009", Centers for Medicare and Medicaid Services, accessed Thursday, June 14, 2012. Available at: http://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/NationalHealthAccountsStateHealthAccountsResidence.html

[20] Howard, J., Ng, T., Harrington, C. 2011. Medicaid Home and Community-Based Service Programs: Data Update. Washington, DC: Kaiser Commission on Medicaid and the Uninsured. December. Available at: http://www.kff.org/medicaid/upload/7720-05.pdf

Cal program was relatively generous in providing access to LTSS, but its spending per recipient was lower than the national average.

The vast majority (86%) of California's spending on HCBS was for personal care delivered through the IHSS benefit. California spent $8,942 per IHSS user (Appendix C, Table 1), which was less than the national average of $11,142 per user of personal care.[21] Although California administers several waiver programs to keep Med-Cal beneficiaries who would otherwise require nursing facility care in their communities, these programs were small and constituted about 2.5% of LTSS expenditures for community based services.

It should be noted that the analyses presented here reported $6.2 billion in total Medi-Cal LTSS expenditures in 2008 for the study population. This is substantially less than the $12.3 billion that was reported for the 2008 federal fiscal year on the CMS 64 Form.[22] The difference is attributable to our not including individuals in managed care, persons aged 0-17, and individuals with developmental disabilities. For example, not counted in our study was about $1.7 billion on section 1915(c) HCBS waiver services for persons with developmental disabilities. Our analysis also excluded about $118.2 million spent on the Program for All-Inclusive Care for the Elderly (PACE), an integrated managed care program for certain individuals age 55 and over who would otherwise require nursing facility care.[23]

For 2008, California reported total Medi-Cal spending on nursing facilities as $4.3 billion on its CMS Form 64. Our analysis reports just under $3 billion. This difference could be partly attributed to the exclusion of spending for individuals with developmental disabilities, children residing in nursing facilities, and individuals in managed care. For example, $880.1 million was spent on intermediate care facilities (ICF/MRs) for individuals with developmental disabilities.

California's relatively high use of HCBS to provide LTSS services is a promising foundation upon which to pursue additional opportunities to improve the quality and efficiency of medical, post-acute, and LTSS services for Medi-Cal beneficiaries who require LTSS.

Avoidable hospitalizations are another area where Medi-Cal may be able to reduce spending.[24] Previous research has documented substantially higher rates of avoidable hospitalizations among California's Medi-Cal beneficiaries[25] than those with other types of coverage.[26] Opportunities to extend HCBS as a means of avoiding unnecessary hospitalizations might be considered. Future research by CAMRI will evaluate avoidable hospitalizations among the LTSS beneficiaries.

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[21] Howard, J., Ng, T., Harrington, C. 2011. Medicaid Home and Community-Based Service Programs: Data Update. Washington, DC: Kaiser Commission on Medicaid and the Uninsured. December. Available at: http://www.kff.org/medicaid/upload/7720-05.pdf

[22] CMS Form 64 contains state claims to the federal government for expenditures that states believe are eligible for federal matching funds.

[23] Steve Eiken, Kate Spredl, Brian Burwell, and Lisa Gold, "Medicaid Expenditures for Long-Term Services and Supports: 2011 Update," Thomson Reuters, Cambridge Massachusetts, October 31,2011.

[24] Konetzka, R.T., Karon, S.L., and Potter, D.E.B./ (2012). Users of Medicaid Home and Community-based Services Are Especially Vulnerable to Costly Avoidable Hospital Admissions. Health Affairs. 31 (6):1167-1175.

[25] For MMEs, cost-shifting from Medicaid to Medicare is also an area where cost-containment strategies can be targeted.

[26] Andrew B. Bindman, M.D., Arpita Chattapodhyay, Ph.D., Dennis Osmond, Ph.D., et.al., "Preventing Unnecessary Hospitalizations in Medi-Cal: Comparing Fee-for-Service with Managed Care," Primary Care Research Center, University of California, San Francisco, San Francisco, California, February 2004. Prepared for the California Health Care Foundation, Available at: www.chcf.org/~/media/MEDIA%20LIBRARY%20Files/PDF/P/PDF%20PreventableHospitalizationsInMediCal.pdf

In an attempt to address these cost-drivers, the ACA included initiatives intended to reduce avoidable hospital readmissions, increase the use of primary care, contain spending on Medicare post-acute care providers, implement care coordination strategies to help beneficiaries avoid costly nursing facility stays, and provide incentives to states to expand HCBS as an alternative to nursing home care, among many others.

California is aggressively pursuing the use of managed care as a delivery model for Medi-Cal's seniors and persons with disabilities. The transition from FFS is nearly complete for Medi-Cal-only beneficiaries and is expected to be implemented in the next year among MMEs in eight counties (Alameda, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Mateo, and Santa Clara), where the majority of MMEs in the state reside. DHCS is hopeful that these changes in payment and program design will create incentives for enhanced care coordination to ultimately reduce costs and improve quality.[27] Research on the impact of managed care among TANF beneficiaries (low-income children and their parents) suggests that managed care is associated with an increase in beneficiaries having a regular source of care[28] and a reduction in preventable hospitalizations.[29] There is little information at this point to indicate whether these lessons will apply to Medi-Cal beneficiaries who require LTSS.

The financial incentives in Medi-Cal managed care contracts may encourage health plans to enhance coordinated care in the community and to use HCBS in an attempt to reduce high cost hospitalizations. Careful monitoring of the impact of California's Medi-Cal managed care policies are needed to evaluate their success and potential effects among Medi-Cal beneficiaries who require LTSS.

[27] See http://www.calduals.org/

[28] Seligman HK, Chattopadhyay A, Vittinghoff E, Bindman AB. (2007). Racial and ethnic differences in receipt of primary care services between Medicaid fee-for-service and managed care plans. The Journal of Ambulatory Care Management. Jul-Sep; 30(3):264-73.

[29] Bindman AB, Chattopadhyay A, Auerback GM.(2008).Interruptions in Medicaid coverage and risk for hospitalization for ambulatory care-sensitive conditions. Annals of Internal Medicine. Dec 16;149(12):854-60; and Bindman AB, Chattopadhyay A, Auerback GM. (2008). Medicaid re-enrollment policies and children's risk of hospitalizations for ambulatory care sensitive conditions. Medical Care. Oct;46(10):1049-54.

APPENDICES

Appendix A. Description of Medi-Cal and Medicare Services

The following provides brief summaries of the Medi-Cal and Medicare services presented in this report.

Acute and Other Medical Care Expenditures

Acute and other medical care refers to a broad array of health care services described below:

- **Hospital.** Includes the facility and provider charges associated with inpatient stays for acute care hospitals, psychiatric hospitals, rural hospitals, critical access hospitals, among others.

- **Ambulatory Care.** Includes charges for physician services, physician assistants, nurse practitioners, nurse midwives, certified registered nurse anesthetists, clinical psychologists, among others. Charges are for office, clinic, and outpatient department visits; visits to specialists and consultations; as well as visits to hospitals, beneficiaries' homes, and nursing facilities. Charges also include outpatient procedures.

- **Emergency Department Visits.** Includes charges for emergency room visits that do not result in hospital admissions.

- **Therapies – Physical Therapy (PT), Occupational Therapy (OT), and Speech Therapy (ST).** Includes charges for unbundled therapy services that are not billed as part of an inpatient, home health, nursing facility stay, or other institutional stay.

- **Durable Medical Equipment (DME).** Includes charges for equipment used by beneficiaries for health care purposes, such as wheelchairs, hospital beds, blood glucose monitors, oxygen and oxygen equipment. It also includes related supplies, such as drugs and biologics that are necessary for the effective use of the product.

- **Diagnostic Testing** Includes charges for clinical diagnostic laboratory services, screenings (e.g. mammograms, colorectal, prostate cancer, and glaucoma), diabetes outpatient self-management training, medical nutrition therapy, bone mass measurements, ultrasounds, among others.

- **Hospice**. Includes charges for hospice services delivered at home, in nursing facilities, in hospitals, and other settings.

- **Other.** Includes all charges for acute and other medical services that do not fall into the service categories above. Examples are services for end-stage renal disease; ambulance services; chiropractic, enteral and parenteral procedures; chemotherapy; and vision/hearing/speech services; among others.

Post-Acute Care

Post-acute care refers to recuperative or rehabilitative services provided after an acute-care episode. Both Medicare and Medi-Cal pay for post-acute care. In Medicare, post-acute care benefits are easily distinguished in claims data and include Medicare's coverage of skilled nursing facilities (SNFs), home health (HH) agencies, long-term care hospitals (LTCHs), and inpatient rehabilitation facilities (IRFs).

Medi-Cal also pays these providers to deliver post-acute care, but limitations in Medi-Cal's claims data makes it hard to separate post-acute care delivered by these providers. As such, we were able to report only on Medi-Cal's post-acute care spending for IRFs. Medi-Cal's post-acute care delivered by LTCHs is included under Acute and Other Medical Care: Hospital (**Table 3**). Medi-Cal's post-acute care delivered by home health agencies is included in Medi-Cal LTSS spending (**Table 5**).

The following describes Medicare's post-acute care benefits in greater detail:

- **Medicare HH Benefit.** Medicare's home health (HH) benefit covers certain services generally delivered to individuals in their homes or other residential care settings. Beneficiaries are confined to his or her home (i.e., "homebound"),[30] under the care of a physician, and need skilled nursing care on an intermittent basis or physical or speech therapy.[31] HH is provided by Medicare as long as the care is medically reasonable and necessary for the treatment of illness or injury.

- **Medicare SNF Benefit.** Medicare covers skilled nursing facility (SNF) services for beneficiaries who require skilled nursing care and/or rehabilitation services following a Medicare-covered hospitalization of at least three consecutive days, as long as the individual is transferred to a SNF within 30 days of discharge from a hospital. Medicare does not cover nursing care if only custodial care is needed (e.g., when a person needs assistance with bathing, walking, or transferring from a bed to a chair). To be eligible for Medicare-covered SNF care, a physician must certify that the beneficiary needs daily skilled nursing care or other skilled rehabilitation services that are related to the hospitalization, and that these services can be provided only on an inpatient basis. Medicare covers up to 100 days of SNF care in each "spell of illness."

- **LTCH Benefit.** Long-Term Care Hospitals (LTCHs) provide extended medical and rehabilitative care for patients who are clinically complex and have multiple acute or chronic conditions. LTCHs consist of a relatively heterogeneous group of providers that

[30] A homebound individual is defined under Medicare law as one who cannot leave home without a considerable and taxing effort, or who requires the aid of a supportive device (such as crutches, a cane, a wheelchair, or a walker), or if the individual has a condition such that leaving the home is medically contraindicated. Absences from home may occur infrequently for short periods of time for purposes such as to receive medical treatment, attend certain adult day care programs, or attend church.

[31] Eligibility for home health may also be extended to an individual who has been furnished home health services based on such a need and who no longer has such a need for such care or therapy, but continues to need occupational therapy.

typically offer a range of services, including comprehensive rehabilitation, head trauma treatment, and pain management. Although some LTCHs treat a wide range of conditions, others specialize in one or two types of conditions. An average length of stay is greater than 25 days for Medicare patients.[32]

- **IRF Benefit.** Inpatient Rehabilitation Facilities (IRFs) provide intensive inpatient rehabilitation services (such as physical, occupational, or speech therapy) and for at least three hours daily. Many beneficiaries of IRFs require intensive rehabilitation services for one of 10 conditions including treatment of stroke, spinal cord injury, major multiple trauma, brain injury, polyarthritis, and other specific conditions. Beneficiaries can be admitted to an IRF through a transfer from a hospital or directly from the community.

Long Term Services and Supports (LTSS)

LTSS refer to a broad range of health and social services needed by people with limited capacity for self-care. These services are intended to help recipients with functional and/or cognitive or behavioral limitations to maintain or restore their highest level of functioning and independence as possible. LTSS are not covered by the Medicare Program, but are entirely funded by state Medicaid programs.

Institutional LTSS refers to services offered in nursing facilities that provide 24-hour nursing, custodial care and room and board. Medi-Cal also covers skilled nursing and therapies in nursing facilities, among other services.

HCBS refer to a diverse package of supportive services offered to individuals in their homes and other community-based settings. In general, HCBS are intended to avoid entry into high-cost nursing facilities and other institutional facilities while allowing individuals to maintain residence in their preferred settings. Medi-Cal's major HCBS include the following:

- **In-Home Supportive Services (IHSS)**. IHSS is the name used by Medi-Cal to describe the Personal Care Service Program (PCSP) benefit. IHSS provides assistance with activities of daily living (ADLs, e.g., bathing and dressing) and instrumental activities of daily living (IADLs, e.g., preparing meals and shopping).

- **Adult Day Health Care (ADHC).** ADHCs[33] served individuals age 18 years or older with one or more chronic or post-acute medical, cognitive or mental health conditions; and with functional impairments in two or more ADLs or IADLs. ADHCs served a mix of short-term, post-acute and longer-term clients. Core services included the provision of one or more professional nursing services, personal care services or social services, and therapeutic activities provided by ADHC personnel. Physical therapy, occupational

[32] "Report to Congress: Medicare Payment Policy," Medicare Payment Advisory Commission, Washington, D.C., March 2012.

[33] On March 24, 2011, the Governor of California signed Assembly Bill 97 to eliminate ADHC as a Medi-Cal benefit. The settlement agreement of the subsequent class action law suit, Darling v. Toby Douglas, resulted in the establishment of the Community-Based Adult Services (CBAS) benefit in its place.

therapy, mental health services, registered dietician services, speech therapy, and transportation services were also provided.

- **Targeted Case Management (TCM).** TCM provides specialized case management services to assist beneficiaries gain access to needed medical, social, educational, and other services. TCM services include: needs assessment, development of an individualized service plan, linkage and consultation, assistance with accessing services, crisis assistance planning, and periodic review of service effectiveness. The program benefits persons defined as high-risk, those who have language or other comprehension barriers, persons on probation, those who exhibit an inability to handle personal, medical, or other affairs, those abusing alcohol or drugs, and adults at risk of institutionalization, or abuse or neglect. Recipients of HCBS waiver reimbursed case management are not eligible for TCM services.

- **Home Health (HH).** HH covers services for persons age 21 and older. HH must be medically necessary and ordered by a physician as part of a written plan of care that a physician reviews every 60 days. Covered services include skilled nursing; physical, speech and occupational therapy; HH aide; medical supplies, equipment, and appliances for use in the home. Services are often most often provided in a participant's residence.

- **HCBS Waiver Services.** Section 1915(c) of the Social Security Act gives California, like other states, the option to extend a broad range of HCBS to selected populations of individuals with the level-of-care need that would otherwise be offered in Medicaid-covered institutions, such as a nursing facility or hospital. Under a HCBS waiver, the Secretary of the Department of Health and Human Services (HHS) is permitted to waive Medicaid's "statewideness" requirement to allow states to cover HCBS services in a limited geographic area. The Secretary may also waive the requirement that services be comparable in amount, duration, or scope for individuals in particular eligibility categories. States may use this waiver to limit the number of individuals served and to target certain populations, such as persons under age 65 with physical disabilities, individuals with HIV/AIDS, persons who are medically fragile or technologically dependent, individuals with mental illness, and individuals with mental retardation and developmental disabilities. Medi-Cal's major HCBS waivers in 2008 were the AIDS Waiver, Assisted Living Waiver, and the Multi-Purpose Senior Services Program (MSSP). Other waivers included the In-Home Operations (IHO) Waiver and the Nursing Facility/Acute Hospital (NF/AH) Waiver). [34]

[34] For additional information about California's section 1915(c) waivers, see "California's Medi-Cal Home & Community Based Services Waivers, Benefits & Eligibility Policies, 2005—2008," by Robert Newcomer, Charlene Harrington, Julie Stone and Andrew B. Bindman at the University of California, San Francisco and Mark Helmar at the California Department of Health Care Services, August 2011. Available at: http://www.thescanfoundation.org/california-medicaid-research-institute-californias-medi-cal-home-community-based-services-waivers and http://camri.universityofcalifornia.edu/publications.html

Appendix B. Berenson-Eggers Type of Service (BETOS) Public Use File

Background Information

Standardized coding systems are used by Medicare and other health insurance programs to ensure that health care claims are processed in an orderly and consistent manner. The Health Care Common Procedure Coding System (HCPCS) is one of these standard code sets. The HCPCS is divided into two principal subsystems, referred to as level I and level II of the HCPCS. CMS establishes uniform national definitions of services, codes to represent services, and payment modifiers to the HCPCS codes. These are used by Medicare, Medicaid, and private health insurers for claims processing.

Level I of the HCPCS comprises Current Procedural Terminology (CPT) codes. It is a numeric coding system maintained by the American Medical Association (AMA). This uniform coding system consists of descriptive terms and identifying codes. CPT codes are identified using 5 numeric digits. CPT codes are used primarily to identify medical services and procedures furnished by physicians and other health care professionals. These health care professionals use the CPT codes to identify services and procedures billed to public or private health insurance programs. CPT codes are updated and republished annually by the AMA.

Level II of the HCPCS is a standardized coding system used primarily to identify products, supplies, and services not included in the CPT codes. These cover such things as ambulance services and durable medical equipment, prosthetics, orthotics, and medical supplies when used outside a physician's office. Level II codes are also referred to as alpha-numeric codes because they consist of a single alphabetical letter followed by 4 numeric digits.

There is also a Level III HCPCS coding system. It was developed and used by Medicaid State agencies, Medicare contractors, and private insurers in their specific programs or local areas of jurisdiction. For purposes of Medicare, level III codes are also referred to as local codes. Local codes were established when an insurer preferred that suppliers use a local code to identify a service, for which there is no level I or level II code, rather than use a "miscellaneous or not otherwise classified code." Elimination of level III codes has long been planned but this action has not been implemented.

BETOS Codes

A classification system known as the Berenson-Eggers Type of Service (BETOS) code was developed within CMS primarily for analyzing the growth in Medicare expenditures. BETOS has a number of features that make it attractive for use in the current study. Among these, it covers all Level I and II HCPCS codes. It assigns a HCPCS code to only one BETOS code. The BETOS code categories consist of understandable clinical categories. Further, these categories and the HCPCS assignment is stable over time, and relatively immune to minor changes in technology or practice patterns. The BETOS categories are listed here. For this study, they were applied to the Carrier and Outpatient Medicare claims files. All claims in the MEDPAR file were assigned into hospital services, all claims in the Home Health Agency, Hospice, Durable Medical Equipment files were assigned to home health, hospice, or durable medical equipment categories respectively.

EVALUATION AND MANAGEMENT

M1A = Office visits - new
M1B = Office visits - established
M2A = Hospital visit - initial
M2B = Hospital visit - subsequent
M2C = Hospital visit - critical care
M3 = Emergency room visit
M4A = Home visit
M4B = Nursing facility visit
M5A = Specialist - pathology
M5B = Specialist - psychiatry
M5C = Specialist - opthamology
M5D = Specialist – other
M6 = Consultations

PROCEDURES

P0 = Anesthesia
P1A = Major procedure - breast
P1B = Major procedure - colectomy
P1C = Major procedure - cholecystectomy
P1D = Major procedure - turp
P1E = Major procedure - hysterctomy
P1F = Major procedure - explor/decompr/excis disc
P1G = Major procedure - Other
P2A = Major procedure, cardiovascular-CABG
P2B = Major procedure, cardiovascular-Aneurysm repair
P2C = Major Procedure, cardiovascular-Thromboendarterectomy
P2D = Major procedure, cardiovascular-Coronary angioplasty (PTCA)
P2E = Major procedure, cardiovascular-Pacemaker insertion
P2F = Major procedure, cardiovascular-Other
P3A = Major procedure, orthopedic - Hip fracture repair
P3B = Major procedure, orthopedic - Hip replacement
P3C = Major procedure, orthopedic - Knee replacement
P3D = Major procedure, orthopedic - other
P4A = Eye procedure - corneal transplant
P4B = Eye procedure - cataract removal/lens insertion
P4C = Eye procedure - retinal detachment
P4D = Eye procedure - treatment of retinal lesions
P4E = Eye procedure - other
P5A = Ambulatory procedures - skin
P5B = Ambulatory procedures - musculoskeletal
P5C = Ambulatory procedures - groin hernia repair
P5D = Ambulatory procedures - lithotripsy
P5E = Ambulatory procedures - other
P6A = Minor procedures - skin
P6B = Minor procedures - musculoskeletal

P6C = Minor procedures - other (Medicare fee schedule)
P6D = Minor procedures - other (non-Medicare fee schedule)
P7A = Oncology - radiation therapy
P7B = Oncology - other
P8A = Endoscopy - arthroscopy
P8B = Endoscopy - upper gastrointestinal
P8C = Endoscopy - sigmoidoscopy
P8D = Endoscopy - colonoscopy
P8E = Endoscopy - cystoscopy
P8F = Endoscopy - bronchoscopy
P8G = Endoscopy - laparoscopic cholecystectomy
P8H = Endoscopy - laryngoscopy
P8I = Endoscopy - other
P9A = Dialysis services (Medicare Fee Schedule)
P9B = Dialysis services (Non-Medicare Fee Schedule)

IMAGING

I1A = Standard imaging - chest
I1B = Standard imaging - musculoskeletal
I1C = Standard imaging - breast
I1D = Standard imaging - contrast gastrointestinal
I1E = Standard imaging - nuclear medicine
I1F = Standard imaging - other
I2A = Advanced imaging - CAT/CT/CTA: brain/head/neck
I2B = Advanced imaging - CAT/CT/CTA: other
I2C = Advanced imaging - MRI/MRA: brain/head/neck
I2D = Advanced imaging - MRI/MRA: other
I3A = Echography/ultrasonography - eye
I3B = Echography/ultrasonography - abdomen/pelvis
I3C = Echography/ultrasonography - heart
I3D = Echography/ultrasonography - carotid arteries
I3E = Echography/ultrasonography - prostate, transrectal
I3F = Echography/ultrasonography - other
I4A = Imaging/procedure - heart including cardiac catheter
I4B = Imaging/procedure - other

TESTS

T1A = Lab tests - routine venipuncture (Non-Medicare Fee Schedule)
T1B = Lab tests - automated general profiles
T1C = Lab tests - urinalysis
T1D = Lab tests - blood counts
T1E = Lab tests - glucose
T1F = Lab tests - bacterial cultures
T1G = Lab tests - other (Medicare fee schedule)
T1H = Lab tests - other (Non-Medicare Fee Schedule)
T2A = Other tests - electrocardiograms
T2B = Other tests - cardiovascular stress tests

T2C = Other tests - EKG monitoring
T2D = Other tests - other

DURABLE MEDICAL EQUIPMENT

D1A = Medical/surgical supplies
D1B = Hospital beds
D1C = Oxygen and supplies
D1D = Wheelchairs
D1E = Other DME
D1F = Prosthestic/Orthotic devices
D1G = Drugs Administered through DME

OTHER

O1A = Ambulance
O1B = Chiropractic
O1C = Enteral and parenteral
O1D = Chemotherapy
O1E = Other drugs
O1F = Hearing and speech services
O1G = Immunizations/Vaccinations

EXCEPTIONS/UNCLASSIFIED

Y1 = Other - Medicare fee schedule
Y2 = Other - Non-Medicare fee schedule
Z1 = Local codes
Z2 = Undefined codes

Source: Centers for Medicare & Medicaid Services Health Care Common Procedure Coding System (HCPCS), 2009

Appendix B. Table 1. Medi-Cal Services and Related Vendor Codes

Service Groupings	Vendor Codes (VC) or Other Codes
(A) Acute and Other Medical Spending	
Hospital	Claim Type = 2 & VC ≠ 62, 80
Physician Services	VC 07, 08, 14, 20, 22, 52, 62, 72, 75, or VC 77 w/ (procedure code ≠ 00006~00009), or VC 50, 60 w/ (Claim Type = 1 or 4)
Emergency Department (ED)	Place of Service = 0 or CPT-4 codes (99281~99285)
Hospice	VC 06
PT/OT/ST	VC 34, 35, 36
Other Professional Services	All other Vendor codes
(B) Post-Acute Care Spending	
Inpatient Rehabilitation Facility (IRF) Spending	VC 59, 69, 79
(C) LTSS Spending	
Nursing Facility (NF)	VC 80
In-Home Supportive Services (IHSS)	VC 89
Adult Day Health Care (ADHC)	VC 01 or (VC 77 w/ procedure code = 00006~00009)
Targeted Case Management (TCM)	VC 92
Home Health (HH)	VC 44
AIDS Waiver (AIDS)	VC 73
Assisted Living Waiver (ALW)	VC 84
Multi-Senior Service Program (MSSP)	VC 81
Other HCBS Waivers: In-Home Operations (IHO)/ Nursing Facility/Acute Hospital (NF AH)	VC 71 w/(procedure code ≠ Z5804~Z5807, Z5832~Z5836, Z5838, Z5840)

Appendix C. Spending by Service User

Appendix C Table 1. Medi-Cal Spending on MMEs, Medi-Cal-Only Users, and All Users in FFS, Age 18+, CY 2008

	MME Users			Medi-Cal Only Users			All Medi-Cal Users		
	Total Spending $	Users by Service[a]	Average Spending per MME $	Total Spending $	Users by Service[a]	Average Spending Per Medi-Cal Only Beneficiary $	Total Spending $	Users by Service[a]	Average Spending Per Beneficiary $
Acute and Other Medical Spending									
Hospital	335,173,000	102,963	3,255	827,813,000	42,161	19,635	1,162,986,000	145,124	8,014
Ambulatory Care	118,698,000	289,193	410	294,682,000	94,639	3,114	413,378,000	383,832	1, 077
ED Visits	1,822,000	95,319	19	31,063,000	47,273	657	32,885,000	142,592	231
Hospice	55,670,000	5,967	9,330	26,400,000	2,087	12,650	82,070,000	8,054	10,190
Therapies (PT/OT/ST)	27,000	1,550	17	207,000	633	327	234,000	2,183	107
DME	12,739,000	155,209	82	25,896,000	32,446	798	38,635,000	187,655	206
Diagnostic Testing	1,736,000	59,554	29	13,190,000	66,276	199	14,926,000	125,830	119
Other	265,522,000	247,928	1,071	157,791,000	70,979	2,223	423,313,000	318,907	1,327
Total Acute and Other Medical Care Spending	791,387,000	313,007	2,528	1,377,042,000	98,064	14,042	2,168,429,000	411,071	5,275
Post-Acute Care Spending									
Medi-Cal IRF	76,000	758	100	952,000	2,574	370	1,028,000	3,332	309
Total Post-Acute Care Spending	76,000	758	100	952,000	2,574	370	1,028,000	3,332	309

Continued

	MME Users			Medi-Cal Only Users			All Medi-Cal Users		
	Total Spending $	Users by Service	Average Spending per MME $	Total Spending $	Users by Service	Average Spending Per Medi-Cal Only User $	Total Spending $	Users by Service	Average Spending Per User $
Medi-Cal LTSS Spending									
NF	2,453,827,000	78,968	31,074	527,879,000	13,044	40,469	2,981,705,000	92,012	32,406
IHSS	2,255,007,000	247,217	9,122	509,360,000	61,919	8,226	2,764,367,000	309,136	8,942
ADHC	293,228,000	37,555	7,808	39,727,000	6,459	6,151	332,954,000	44,014	7,565
TCM	7,404,000	4,444	1,666	16,640,000	13,914	1,196	24,044,000	18,358	1,310
HH	783,000	768	1,020	10,697,000	15,807	677	11,480,000	16,575	693
AIDS	5,488,000	1,081	5,077	3,002,000	647	4,640	8,489,000	1,728	4,913
Assisted Living	10,341,000	637	16,234	578,000	43	13,442	10,919,000	680	16,057
MSSP	33,073,000	9,278	3,565	415,000	135	3,074	33,488,000	9,413	3,558
Other HCBS	19,461,000	304	64,016	12,921,000	213	60,662	32,382,000	517	62,634
Total LTSS Spending	5,078,611,000	324,322	15,659	1,121,218,000	100,883	11,114	6,199,828,000	425,205	14,581
All Medi-Cal Spending	5,870,074,000	326,479	17,980	2,499,212,000	102,128	24,471	8,369,285,000	428,607	19,527
Total HCBS State Plan Services Spending	2,556,422,000	260,622	9,809	576,424,000	90,101	6,398	3,132,845,000	350,723	8,933
Total HCBS Waiver Spending	68,363,000	11,280	6,061	16,916,000	1,038	16,297	85,279,000	12,318	6,923
Total HCBS Spending	2,624,785,000	262,105	10,014	593,340,000	90,424	6,562	3,218,124,000	352,529	9,129

Notes: Amounts are rounded to the nearest thousand. [a] Users are unduplicated

Appendix C Table 2. Medicare Spending on MMEs in FFS by Service, Age 18+, CY 2008

	Total Spending $	Unduplicated Users by Service	Average Spending per MME User $
Acute and Other Medical Spending			
Hospital	2,681,610,000	101,809	26,340
Ambulatory	4,544,360,000	317,451	14,315
ED Visits	251,045,000	143,735	1,747
Hospice	102,244,000	9,655	10,590
Therapies (PT/OT/ST)	2,715,000	21,220	128
Diagnostic Testing	1,883,423,000	308,912	6,097
DME	344,149,000	169,943	2,025
Other	562,745,000	250,434	2,247
Total	10,372,291,000	321,721	32,240
Post-Acute Care Spending			
Medicare HH	377,757,000	64,872	5,823
Medicare SNF	921,542,000	41,495	22,209
Medicare IRF	14,244,000	675	21,102
Medicare LTCH	229,605,000	4,463	51,446
Total	1,543,148,000	92,134	16,749

Notes: Amounts are rounded to the nearest thousand.