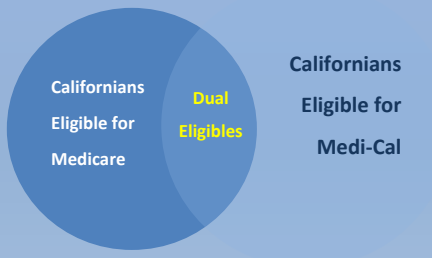
Medi-Cal's Coordinated Care Initiative Population Combined Medicare & Medi-Cal Cost, Utilization, and Disease Burden



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This document provides a summary of complex subjects and should be used only as an overview and general guide to the Medi-Cal program. The views expressed herein do not necessarily reflect the policies or legal positions of the California Health and Human Services Agency (CHHS) or the Department of Health Care Services (DHCS). These summaries do not render any legal, accounting, or other professional advice, nor are they intended to fully explain all of the provisions or exclusions of the relevant laws, regulations, and rulings of the Medicare and Medicaid programs. Original sources of authority should be researched and utilized.

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Introduction

The Department of Health Care Services (DHCS) intends to transition Medi-Cal beneficiaries - who are eligible for Medicare and Medi-Cal - into a Coordinated Care Initiative (CCI) over the next three years.[1,2] Medi-Cal proposes to combine a full continuum of acute, primary, institutional, and home and community based services for dual eligible beneficiaries into a single benefit package that is delivered through an organized service delivery system. The demonstration's goals, which were approved by the State Legislature in CY 2010 and further developed through recent stakeholder engagement,[3] include the following:

- Coordinate State and Federal benefits and access to care across care settings, improve continuity of care, and use a person-centered approach.
- Maximize the ability of dual eligible beneficiaries to remain in their homes and communities with appropriate services and supports in lieu of institutional care.
- Increase the availability and access to home and community-based alternatives.
- Preserve and enhance the ability of consumers to self-direct their care and receive high quality care.
- Optimize the use of Medicare, Medi-Cal, and other State/County resources.

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[1] SB 208 (10/19/2010)
http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0201-0250/sb_208_bill_20101019_chaptered.pdf
Added §14132.275 to the W&I Code to establish pilot projects for dual eligibles to receive a continuum of services and maximize coordination of benefits between the Medi-Cal and Medicare programs. The Pilot projects were to be established in ***up to four counties***, and would include at least one county that provides Medi-Cal services via a two-plan model.

[2] SB 1008 (6/27/2012)
http://www.leginfo.ca.gov/pub/11-12/bill/sen/sb_1001-1050/sb_1008_bill_20120627_chaptered.pdf Amended §14132.275. No sooner than March 1, 2013, demonstration sites are to be established in ***up to eight counties***, and include at least one county that provides Medi-Cal services via a two-plan model and at least one county that provides Medi-Cal service through a COHS service model.

[3] DHCS, *Proposal to the Center for Medicare and Medicaid Innovation, Coordinated Care Initiative: State Demonstration to Integrate Care for Dual Eligible Individuals*, April 4, 2012, Draft for Public Comment.
http://www.dhcs.ca.gov/provgovpart/Documents/Duals/Proposal_Documents/Draft%20Demonstration%20Proposal%20040412.pdf

As part of the planning for this significant effort, DHCS is committed to providing data and information that can inform stakeholders, ensure a smooth transition, and help contracting health plans ready their operations for some of Medi-Cal's most vulnerable populations.

Throughout this paper, several unique subpopulations will be discussed and identified. These subpopulations all represent specific subsets of Medi-Cal's larger dual eligible population. While developing the CCI, policy decisions regarding the inclusion or exclusion of certain dual eligible populations were made.[4] Understanding the final estimated population counts for these subpopulations are an integral part of this paper. Introducing these concepts and definitions early is important to understanding what is to follow. Specifically, we will introduce five unique subpopulations: (1) the *CCI potential population*, (2) the *CCI population before exclusions*, (3) the *CCI population in 58 counties*, (4) the *CCI population in the eight pilot counties*, and (5) the *FFS CCI population in the eight pilot counties*.

While Medi-Cal's dual eligible population totals roughly 1.2 million beneficiaries, specific population definitions and exclusions applicable to the CCI reduce the *CCI population in 58 counties* to 814,659.[5] The *CCI potential population* includes beneficiaries who are eligible for Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits.[6] Beneficiaries participating in Medicare Savings Programs and those eligible for Medicare Parts A or B or D, but not all three, are excluded from the *CCI potential population*. To estimate the *CCI population*, DHCS applied specific

[4] For example, Developmentally disabled clients participating in the Developmentally Disabled Waiver are excluded from CCI enrollment.
[5] See Table 11 for a ledger that shows how DHCS arrived at this estimate.
[6] It should be noted that Medi-Cal beneficiaries entitled full scope benefits and enrolled in a Medicare Advantage Plan (Medicare Part C) and entitled to Medicare Part D are included in this definition.

exclusion criteria and limited the *CCI potential population* to beneficiaries residing in the eight pilot counties of Alameda, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Mateo, and Santa Clara.

The term *CCI population* is used throughout this paper to describe beneficiaries who are eligible for passive enrollment into the initiative. The term is modified and the nomenclature used is changed to reflect specific CCI subpopulations. The initial use of the term refers to the *CCI potential population* (1,044,402). These are beneficiaries who are eligible for Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits. This population includes all beneficiaries, even those with an unmet share of cost (SOC) obligation.[7] Limiting this population to only certified eligibles,[8] those who have no monthly SOC obligation and those who have met their monthly SOC obligation, results in the population referred to as the *CCI population before exclusions* (992,850). After applying the exclusions—removing specific populations who will not be eligible for CCI enrollment—the population is labeled as the *CCI population in 58 counties* (814,659). By limiting the *CCI population in 58 counties* to only the eight pilot counties, the population termed the *CCI population in eight counties* is identified (526,902). Finally, for purposes of analysis, a *CCI population* of beneficiaries participating in Medicare and Medi-Cal's traditional FFS system throughout CY 2010 was identified. This population is termed the *FFS CCI population in the eight pilot counties*. Figure 1 presents a graphical depiction of these populations and how they relate to one another, while Figure 2 shows the proportionate size of each subgroup relative to the total dual

[7] Note for purposes of the CCI population, those meeting the monthly SOC obligation must meet it at the beginning of the month to be considered CCI eligible. Beneficiaries who do not meet their SOC obligation at the beginning of the month are excluded. This topic is discussed later in this paper.

[8] For a complete discussion of how DHCS defined certified eligibles and specific methods for counting Medi-Cal eligibles, please refer to the RASB Statistical Brief entitled "Finding California's Medi-Cal Population: Challenges and Methods in Calculating Medi-Cal Enrollment Numbers."

eligible population. Later in this report, each population will be described and specific demographic profiles, and where applicable, cost and utilization will be presented.

Figure 1 – Flowchart of Medi-Cal's *CCI Populations*

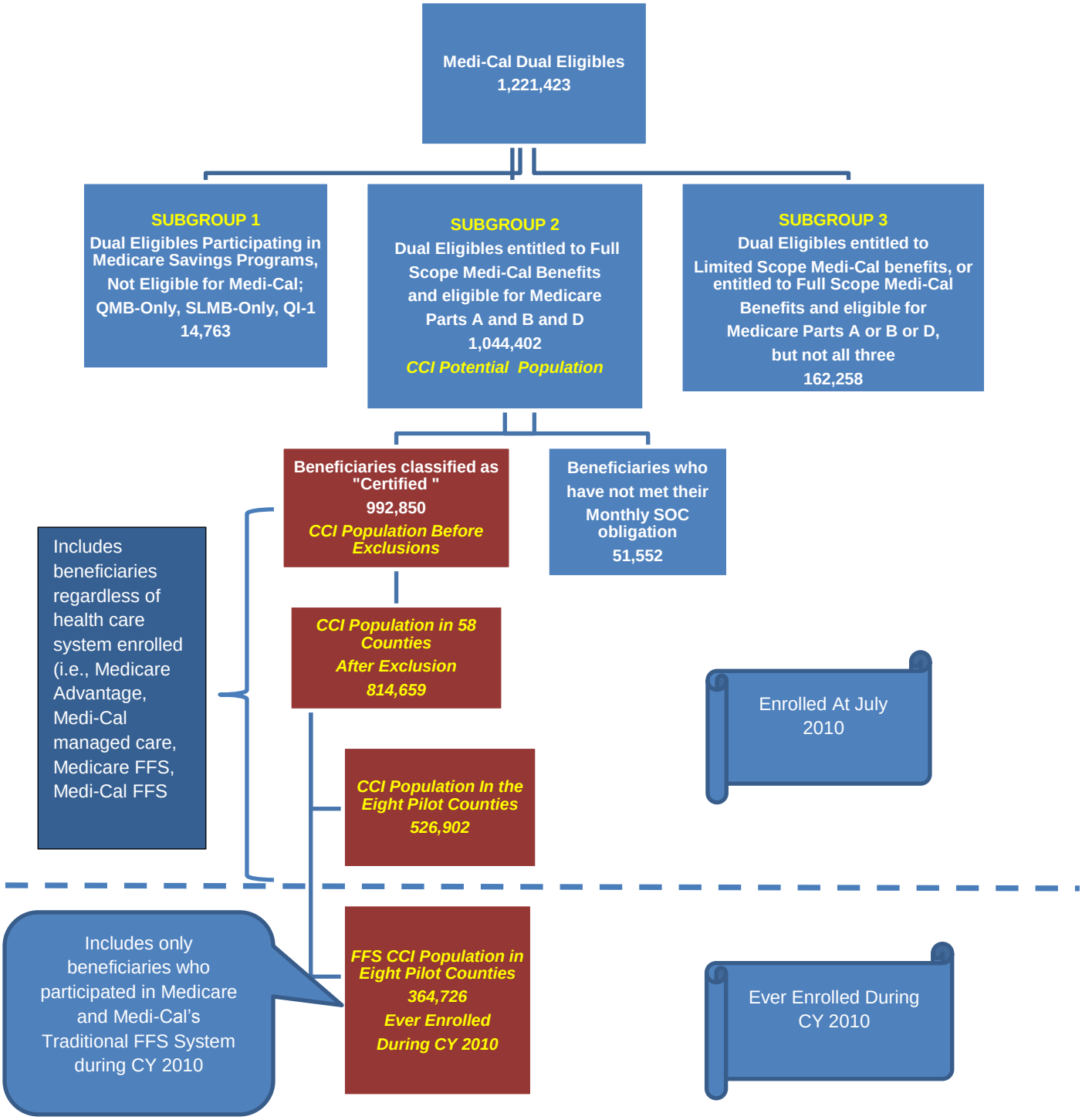
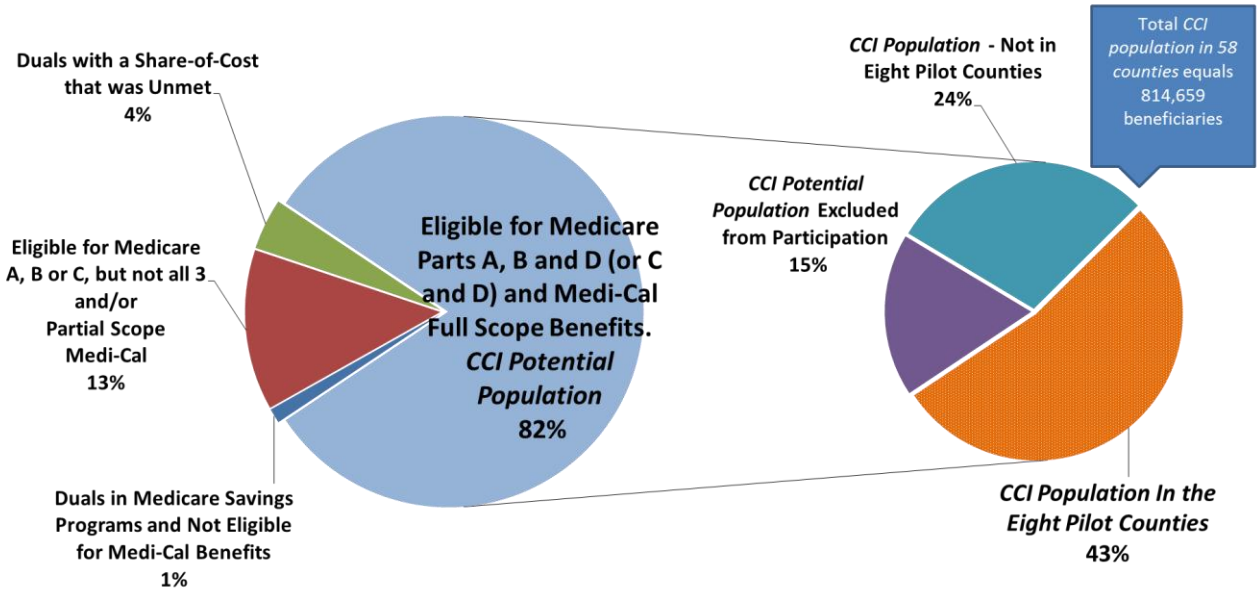


Figure 2 - Medi-Cal's Dual Eligibles, *CCI Population Before Exclusions, CCI Population Not in the Eight Pilot Counties, CCI Population in the Eight Pilot Counties*; At July 2010

TOTAL DUAL ELIGIBLES EQUAL 1,221,423



Source: Created by RASB using Medi-Cal eligibility data

This report is the first in a series that will provide decision makers with descriptive statistics and insights into this unique population's characteristics. DHCS' Research and Analytic Studies Branch (RASB) staff summarized the current body of knowledge regarding the cost, utilization, and socioeconomic status of dual eligibles and used Medi-Cal and Medicare eligibility and fee-for-service (FFS) claims data to examine the *FFS CCI population in the eight pilot counties*.

This report provides a foundation for further exploration of Medi-Cal's *CCI population*. It will help those tasked with formulating policy, coordinating care, and delivering health care services to this medically vulnerable population, to better understand the population's utilization, cost patterns, and chronic disease burden.

Section I offers a brief description of the history and statutory foundation for Medi-Cal's CCI pilot demonstration. Background is provided relative to CMS' *State Demonstrations to Integrate Care for Dual Eligible Individuals* and the State's enactment of legislation to implement this demonstration, hereafter referred to as the Care Coordination Initiative (CCI).

Section II provides an overview of Medi-Cal's annual spending on dual eligibles as well as background on the Medi-Cal and Medicare programs.

Section III presents information related to the data sources and methodology used to create CCI demographic summaries and *CCI population* counts.

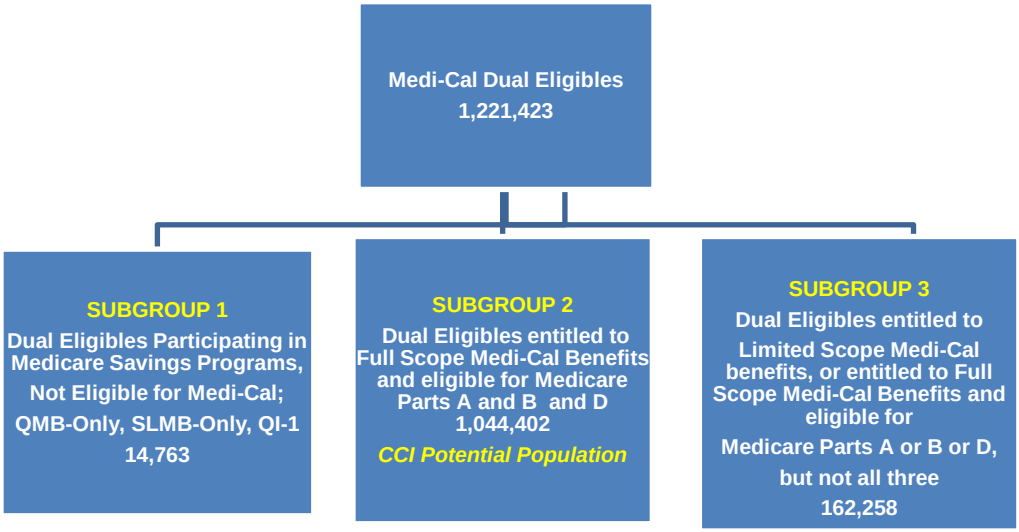
Section IV provides a summary of the literature related to dual eligibles. In this section, RASB summarizes available literature and highlights demographic characteristics, socioeconomic status, comorbidities, and disease burden associated with the dual eligible population. In addition, where applicable, comparisons are made between non-dual and dual eligibles.

Section V offers a description of Medicare coverage groups such as Qualified Medicare Beneficiaries (QMB), Specified Low-Income Medicare Beneficiaries (SLMB), Qualifying Individual (QI), and Qualified Working Disabled Individuals (QWDI). In this section RASB discusses each Medicare coverage group's benefits and its relationship with Medi-Cal.

Section VI presents a taxonomy for studying Medi-Cal's dual eligible population. Medi-Cal's dual eligible population can be separated into unique Medicare eligibility (i.e. Parts A, B, D) and Medicare coverage groups (i.e., QMB, SLMB, QI, QWDI), as well as several unique groups that identify combinations of Medicare eligibility/coverage groups

and Medi-Cal scope of benefits (e.g., limited scope, full scope, etc.) a beneficiary may be entitled to. This section provides the reader with a general view of Medi-Cal's three distinct groups of dual eligibles based on the combination of Medicare coverage and Medi-Cal scope of benefits and sets the context for further analyses (Figure 2). In addition, special emphasis is directed at the certified dual eligibles that are entitled to full scope Medi-Cal benefits and eligible for Medicare Parts A and B and D, which represents the *CCI potential population*.

Figure 3 – Medi-Cal's Dual Eligible Population and Subgroups



Section VII focuses on the *CCI potential population* before applying any exclusions or narrowing the population to the eight pilot counties (i.e., *CCI population*). In this section, RASB provides detailed breakdowns by SOC status and Medicare coverage groups for dual eligibles entitled to Medicare Parts A and B and D, and also eligible for full scope Medi-Cal benefits. This subpopulation is ultimately narrowed by excluding beneficiaries who have not met their monthly SOC obligation, applying

specific exclusion criteria, and limiting the population to those residing in the eight pilot counties.

Section VIII provides an overview of common eligibility pathways for Medi-Cal's dual eligible population, disclosing that 83% commonly enter the Medi-Cal program via a Supplemental Security Income (SSI) linkage or medically needy (MN) pathway. This section focuses on the *CCI potential population* before applying population exclusions.

Section IX delineates the specific exclusions that were applied to the *CCI potential population* to arrive at the *CCI population in 58 counties*. Included are several graphs and tables that account for each exclusion.

Section X presents population counts for the *CCI population in the eight pilot counties*. This section also includes summaries by health system participation (e.g., Medicare Advantage Plan, Medi-Cal health plan, Medicare, and Medi-Cal traditional FFS participation).

Section XI provides a demographic picture of the *CCI population in the eight pilot counties*. Included are summary statistics for each of the eight counties: age distribution, gender distribution, language distribution, ethnicity distribution, Medi-Cal eligibility category distribution, health system enrollment distribution, and Medicare coverage group distribution.

Section XII illustrates the process through which RASB matched Medi-Cal administrative data to Medicare data to examine member demographics, cost, utilization, and disease burden for beneficiaries who participated in Medicare and Medi-Cal's traditional FFS system during CY 2010. This population is referred to as the *FFS CCI population in the eight pilot counties.*

Section XIII profiles the demographic composition of the *FFS CCI population in the eight pilot counties.* Age, aid category, ethnicity, and language statistics are depicted for the total *FFS CCI population in the eight pilot counties* and by individual county.

Section XIV presents the methods used by RASB to identify 21 chronic conditions, 16 significant conditions treated, and 19 other conditions of interest that are studied in this report. This section additionally provides information about how these conditions were classified and the prevalence of these conditions in the *FFS CCI population in the eight pilot counties.* A chart book is incorporated into this section that provides a visual illustration of chronic disease prevalence among the *FFS CCI population in the eight pilot counties*.

Section XV presents an analysis of cost and utilization for the *FFS CCI population in the eight pilot counties*. This section discloses that combined Medicare and Medi-Cal spending for beneficiaries participating in Medicare and Medi-Cal's traditional FFS systems totaled $9.88 billion during CY 2010 and the average per-capita cost was $27,090. Presented are per-capita cost metrics arrayed by several dimensions as well as an analysis of the distribution of costs among the population, provider type, and payer (i.e., Medicare vs. Medi-Cal).

Section XVI presents a glossary of terms for this report. Relevant population classifications and frequently referenced acronyms are also defined.

Section XVII presents the Exhibits referenced in the body of this report.

Section I: Centers for Medicare and Medicaid Services (CMS) Demonstration to Integrate Care for Dual Eligible Individuals and Relationship To Medi-Cal's CCI

The Center for Medicare and Medicaid Innovation (CMMI) is partnering with the Federal Coordinated Health Care Office (FCHCO), established by Section 2602 of the Affordable Care Act (ACA), to evaluate models that: 1) fully integrate care for dual eligible individuals, 2) provide the management of all funds with respect to such individuals, and 3) develop models that allow states to test and evaluate systems of all-payer payment reform for the medical care of residents of the state. [9] Section 3021 of the ACA provides a framework that allows CMMI to design and evaluate such models for dual eligible individuals. Under the above ACA sections, Federal Centers for Medicare and Medicaid Services (CMS), through CMMI in concert with the FCHCO, will develop state partnerships by providing them with the opportunity to enter into innovation contracts with CMS that will result in integrated care models for dually eligible individuals.[10]

In December 2010, CMS announced the *State Demonstrations to Integrate Care for Dual Eligible Individuals.*[11] Open to all states, this competitive solicitation for proposals was issued to design person-centered models that coordinate primary, acute, behavioral and long-term supports and services (LTSS) for Medicare-Medicaid enrollees. In April 2011, after an evaluation by a technical review panel, 15 States were

[9] As described in Section 3021(b)(2)(B)(x) & (xi)
[10] Department of Health and Human Services, Office: Centers for Medicare & Medicaid Services, Office of Acquisition and Grants Management, Solicitation Number: RFP-CMS-2011-0009. Accessed via the worldwide web on Nov. 5th, 2010 at: https://www.fbo.gov/index?s=opportunity&mode=form&id=819095ab34a418a0dc90f754db01faae&tab=core&_cview
[11] Department of Health and Human Services, Centers for Medicare & Medicaid Services, Informational Bulletin, *State Demonstrations to Integrate Care for Dual Eligible Individuals,* December 10, 2010. http://downloads.cms.gov/cmsgov/archived-downloads/CMCSBulletins/downloads/12-10-2010-Federal-Coordinated-Health-Care-Office.pdf

selected to receive up to $1 million to support the design of programs to better coordinate care for dual eligible individuals.[12] The States selected:

- Met the goal of aligning the full range of Medicare and Medicaid primary care, acute care, behavioral health and LTSS; and
- Demonstrated a medium to high level of readiness, to ensure timely implementation.

California was one of the 15 States selected to receive funding through CMS' *State Demonstrations to Integrate Care for Dual Eligible Individuals.* The demonstration proposal submitted by California's Medi-Cal program described how it would structure, implement, and monitor an integrated delivery system and payment model aimed at improving the quality, coordination, and cost-effectiveness of services for dual eligible individuals.[13] Through the demonstration proposal, the State had to exhibit its ability to meet or exceed certain CMS established standards and conditions including beneficiary protections. These standards and conditions include, among others, factors such as beneficiary protections, stakeholder engagement, and network adequacy.

To implement the CMS' *State Demonstration to Integrate Care for Dual Eligibles*, Governor Jerry Brown announced his Coordinated Care Initiative (CCI). In January 2012,[14] California enacted state legislation that requires DHCS to seek a demonstration

[12] CMS website which presents the 15 states selected. Access via the worldwide web on Nov. 5th, 2012 at:http://cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/StateDesignContractSummaries.html

[13] California's Demonstration Proposal Submitted to CMS. Accessed via the worldwide web on Nov. 5th, 2012 at: https://www.cms.gov/Medicare-Medicaid-Coordination/Medicare-and-Medicaid-Coordination/Medicare-Medicaid-Coordination-Office/Downloads/CAProposal.pdf

[14] California had attempted to include dual eligibles in its 2010 Bridge to Reform waiver, but this proposal was dropped at the request of the federal government. The federal government requested this as they were further developing and refining dual eligible coordination policy. While the proposal was dropped, the Brown administration continued to collaborate with stakeholders to develop a demonstration program for dual eligibles after the Bridge to Report waiver was approved.

project or federal waiver of Medicaid law to implement specified objectives.[15] Senate Bill 1008, statutes of 2012 outlines the CCI framework, establishes demonstration sites and requires DHCS to enter into a memorandum of understanding, with specific terms and conditions, with CMS in developing a process for: selecting, financing, monitoring, and evaluating the health models incorporated into the demonstration project. DHCS will enter into financing arrangements with CMS to share in any savings in Medicare expenditures that materializes from the demonstration.[16] Throughout this paper, the terms CCI and CMS' *State Demonstration to Integrate Care for Dual Eligible Individuals* are synonymous and may be used interchangeably. The CCI naming convention is used to discuss the demonstration in the context of Medi-Cal's initiative to integrate care for dual eligibles and will be used from this point forward. The CCI, or demonstration, as discussed throughout this paper, is part of California's larger Coordinated Care Initiative (CCI) that was enacted in July 2012 through SB1008 and SB1036.

The CCI will be designed to enhance health outcomes and beneficiary satisfaction for low-income seniors and persons with disabilities, while rebalancing service delivery away from institutional care and into the home and community. Through this three-year demonstration proposal, California intends to combine a full continuum of acute, primary, institutional, and home-and community-based services for dually eligible beneficiaries into a single benefit package, delivered through an organized service delivery system. The CCI will initially be implemented in the eight pilot counties of: Alameda, Los Angeles, Orange, Riverside, San Bernardino, San

[15] Welfare & Institutions Code Section 14132.275(a). Senate Bill 1008, Chapter 33, Statutes of 2012 accessed via the worldwide web on November 13, 2012 at: http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=sb_1008&sess=CUR&house=B&author=committee_on_budget_and_fiscal_review. SB 1008 amended statute established in SB 208 (10/19/10), which called for the establishment of up to four counties instead of eight and made other changes.

[16] Welfare & Institutions Code Section 14132.275(a).

Diego, San Mateo, and Santa Clara. California's demonstration will use a capitated payment model to provide both Medicare and Medi-Cal benefits through the states existing network of Medi-Cal managed care plans. These health plans will assume responsibility for delivering a full continuum of Medicare and Medi-Cal services, including medical care, behavioral health services, and LTSS.

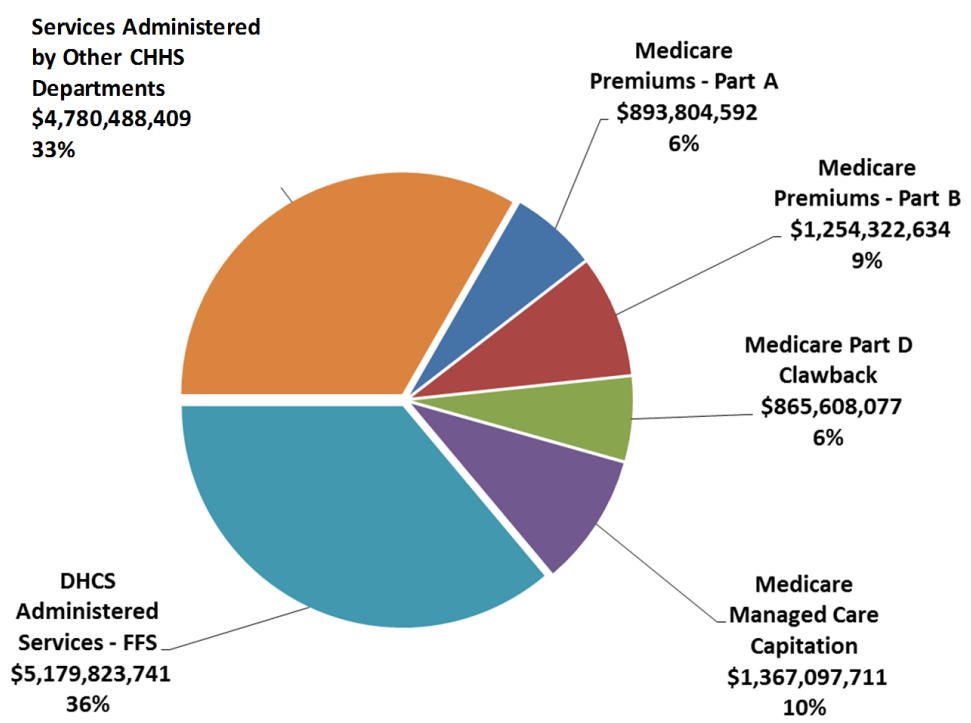
Section II: Background

Dual eligibles are beneficiaries who simultaneously qualify, in some way, for both Medicare and Medi-Cal coverage. This population suffers from costly and debilitating health issues and, in many cases, multiple chronic health conditions. While they represent some of the most costly and medically complex health cases in the Medi-Cal program, the dual eligible population receives their health care through a unique and sometimes fragmented system that often is complicated by the intersection of Medicare and Medi-Cal. In the Medicare Payment Advisory Commission's (MEDPAC) report to Congress, titled *New Approaches in Medicare*, the Commission noted that *the current policy towards dual eligibles creates incentives to shift costs between payers, often hinders efforts to improve quality and coordinate care, and may reduce access to care*.[17]

[17] Medicare Payment Advisory Commission. "Report to the Congress: New Approaches in Medicare." 2004. http://www.medpac.gov/documents/June04_Entire_Report.pdf.

Figure 4 - Total Spending on Medi-Cal's Dual Eligibles, CY 2010

TOTAL EXPENDITURES EQUAL $14.3 BILLION



Source: Created by RASB utilizing Medi-Cal Eligibility Files, Claims Files, and the CMS 64 Report.[18]

Medi-Cal's 1.2 million dual eligibles,[19] which comprised about 14% of the total Medi-Cal population, generated $5.1 billion,[20] or 30%, of total DHCS administered FFS claim expenditures during calendar year (CY) 2010. The combined spending associated with dual eligible beneficiaries enrolled in managed care, the Medicare Part D "clawback,"[21] Medicare Part A and B premiums, coinsurance/deductibles, and

[18] For a detailed definition of DHCS and non-DHCS administered services please see Exhibit A. For the purposes of this paper Medicare Part D "Clawback" is defined as a "monthly payment made by each state to the federal Medicare program beginning in January 2006. The amount of each state's payment roughly reflects the expenditures of its own funds that the state would make if it continued to pay for outpatient prescription drugs through Medicaid on behalf of dual eligibles."

[19] This figure represents dual eligible beneficiaries who were eligible for Medi-Cal for at least one month during CY 2010. For purpose of this number, dual eligibles include beneficiaries who were eligible for Medicare Parts A or B or D and any Medi-Cal benefits (i.e., limited or full scope). Individuals participating in Medicare Savings Programs and not eligible for Medi-Cal benefits are not included.

[20] These figures are based on Medi-Cal administrative data for CY 2010 and was calculated using the MEDS (Medi-Cal Eligibility Data System) and the 35file of paid claims detail.

[21] The clawback is a "monthly payment made by each state to the federal Medicare program beginning in January 2006. The amount of each state's payment roughly reflects the expenditures of its own funds that the state would make if it continued to pay for outpatient prescription drugs through Medicaid on behalf of dual eligibles." http://www.kff.org/medicaid/upload/the-clawback-state-financing-of-medicare-drug-coverage.pdf

services administered by other Departments accounted for $14.3 billion in total Medi-Cal spending.

Within some categories of service, such as long-term care (LTC[22]), the dual eligible population is the single greatest cost driver. During CY 2010, dual eligible beneficiaries accounted for roughly eight out of every ten dollars Medi-Cal spent on LTC services. The dual eligible population amassed $3.5 billion in LTC spending out of Medi-Cal's total LTC spending of $4.5 billion.[23]

Medi-Cal

Medi-Cal, California's Medicaid program, is a public health insurance program that provides comprehensive health care services at no or low cost to low-income individuals, including families with children, seniors, persons with disabilities, foster care children, and pregnant women. The federal government dictates a mandatory set of basic services, which include but are not limited to: physician, family nurse practitioner, nursing facility, hospital inpatient and outpatient, laboratory and radiology, family planning, and early and periodic screening, diagnosis, and treatment for children. In addition to these mandatory services, California provides optional benefits such as outpatient drugs, home- and community-based waiver services, and medical equipment, etc.[24] Some Medi-Cal beneficiaries may also be eligible or become eligible for Medicare

[22] Long-term care as used here refers to those costs associated with the facility or Medi-Cal provider type.
[23] Based on CY 2010 dates-of-services. Includes FFS paid claims only. LTC was defined as all payments made to the following Medi-Cal vendor codes: 06 - Certified Hospice Service; 47 - Intermediate Care Facility-Developmentally Disabled (DD): Includes ICF-DD-Habilitative, ICF-DD-Nursing, and ICF-DD-Continuous Nursing; 56 - State Developmental Centers (formerly State Hospital-Developmentally Disabled; 57 - State Hospital-Mentally Disabled; and 80 - Nursing Facility (prior to July 1992, known as Skilled Nursing Facility).
[24] The following optional services were eliminated from Medi-Cal services as of July 1, 2009, for members over 21 who were not pregnant and seeking pregnancy-related services, living in a licensed nursing home, Intermediate Care Facility (ICF), Sub Acute Facility or an ICF for the developmentally disabled: adult dental services, acupuncture services, audiology and speech therapy services, chiropractic services, optometric and optician services, podiatric services, psychology services and incontinence creams

after enrollment. These beneficiaries, who are commonly referred to as dual eligibles, receive services paid for by both programs. Other low income California residents, who are eligible for Medicare Savings Programs, also receive support from the Medi-Cal program through payment of Medicare Part B premiums and/or cost sharing, but are not entitled to Medi-Cal covered services.

Medicare

Medicare is a Federal program administered by the Centers for Medicare & Medicaid Services (CMS). Medicare provides health insurance for people age 65 or older, those under age 65 with certain disabilities or ALS (amyotrophic lateral sclerosis, or Lou Gehrig's disease), and people of any age with End-Stage Renal Disease (permanent kidney failure requiring dialysis or a kidney transplant).[25]

Individuals can also qualify for Medicare if they are eligible for Social Security or Railroad Retirement benefits or may qualify on a spouse's (including divorced spouse's) record.

Others qualify because they are government employees who are not covered by Social Security, which pays the Medicare part of the Social Security tax. Also, individuals can qualify for Medicare if they have received Social

Medicare Programs

Medicare Part A – Insurance coverage for inpatient hospital, skilled nursing facility and some home health services. Medicare covers the premium for individuals or spouses who have 40 or more quarters of Medicare covered employment.
Medicare Part B – Optional insurance coverage for physician services, outpatient hospital services, durable medical equipment and certain home health services.
Medicare Part C – Insurance coverage that combines Parts A and B and is provided by pre-approved private insurance companies. Insurance plans are known as "Medicare Advantage Plans."
Medicare Part D – Optional insurance coverage for prescription drugs.

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and washes. For more information see the amended Welfare and Institutions Code section 14131.10 at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920103AB5

[25] Centers for Medicare & Medicaid (CMS): Medicare Basics http://www.medicare.gov/Publications/Pubs/pdf/11034.pdf

Security disability insurance (SSDI) for 24 months.[26]

The Medicare program provides insurance through various parts, such as Parts A, B, C, and D. Medicare Part A provides insurance for inpatient hospital, skilled nursing facility, and home health services. Medicare Part B, which is an optional insurance program, provides coverage for physician services, outpatient hospital services, durable medical equipment, and certain home health services. Medicare Part C, which is commonly referred to as Medicare Advantage, offers health plan options that are provided by Medicare-approved private insurance companies (e.g., HMOs, PPOs). Medicare Part D represents optional insurance coverage for prescription drugs. Medicare Advantage Plans provide the benefits and services covered under Parts A and B and often provide Medicare Part D prescription drug coverage.

The Medicare program requires participants to meet specific annual deductible amounts and also coinsurance and premiums. For instance, Medicare Part B requires enrollees to pay a monthly premium ($96.40 in CY 2010). In addition, Medicare participants must also meet annual hospital deductibles and co-insurance amounts (Table 1). An individual who does not meet the eligibility requirements for Medicare Part A may still be able to obtain Medicare Part A – Hospital Insurance (HI) by paying a monthly premium. In 2010, people who bought Part A paid up to $461 each month (Table 1).

[26] SSA: FAQ http://ssa-custhelp.ssa.gov/app/answers/detail/a_id/155/related/1

Table 1 - Medicare Cost-Sharing (2010)

MEDICARE PART A	
Hospital Deductible	$1,100.00 per benefit period[27]
Hospital Coinsurance **Days 01-60** **Days 61-90** **Days 91-150**	 $0 $275.00 per day $550.00 per day
Skilled Nursing Facility **Days 01-20** **Days 21-100**	 $0 $137.50 per day
Premium for Voluntary Enrollees **30-39 Quarters of Coverage** **Less than 30 Quarters of Coverage**	 $254.00 per month $461.00 per month
MEDICARE PART B	
Deductible	$155.00 per year
Premium	$96.40 for most beneficiaries[1]

[1] Please refer to source for additional information.
Source: Medicare and You, 2012, Centers for Medicare & Medicaid Services.
http://www.medicare.gov/Publications/Pubs/pdf/10050.pdf

Medicare is the primary payer for many services received by dual eligibles and covers medically necessary services such as: acute care services, physician services, hospital services, Skilled Nursing Facility services, and home health care services. Medi-Cal is the secondary payer and generally covers:

- Services not covered by Medicare. This may include services such as transportation, dental,[28] vision, adult day health care, and some mental health services.

[27] A benefit period is defined as starting the day that the individual is admitted to the hospital or skilled nursing facility and ends when the individual hasn't received any inpatient hospital care or skilled nursing care in a nursing facility for 60 days in a row. If the benefit period ends, a new benefit period begins when the individual is admitted to an inpatient hospital or skilled nursing facility.

- Services such as cost-sharing for Medicare as well as acute care and skilled nursing facility services that are delivered after the Medicare benefit is exhausted or specific criteria has not been met;
- Long-term care, including custodial nursing facility care, home- and community-based services, and personal care services; and
- Medicare Part A and B premiums.

Table 2, that follows, provides a detailed list of services received by dual eligible beneficiaries organized by primary payer.

[28] Dental services were eliminated for adults effective July 1, 2009. Adults may still receive emergency dental services when medically necessary. For more information see the amended Welfare and Institutions Code section 14131.10 at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920103AB5

Table 2 - Services Paid For By Medicare and Medi-Cal for Dual-Eligible Beneficiaries

MEDICARE*	MEDI-CAL
• Acute Care (hospital) services; • Outpatient, physician, and other supplier services; • Skilled nursing facility services; • Home health care; • Dialysis; • Prescription drugs; • Durable medical equipment; and • Hospice.	• Medicare cost sharing (Part A and Part B deductibles, Part B premiums and coinsurance); • Coverage for hospital and skilled nursing facility services if Part A benefits are exhausted; • A portion of the cost of prescription drugs; • Nursing home care; • Home health care not covered by Medicare when the beneficiary qualified as needing nursing home care; • Transportation to medical appointments; • Optional services: dental (children, Emergency Adults), vision, hearing, home- and community-based services, personal care, and home health care (when the beneficiary does not qualify for Medicare and does not need nursing home care),[29] and • Durable medical equipment not covered by Medicare.

***Skilled Nursing Facility Stays:** Skilled nursing facility care is covered under Medicare Part A up to 100 days in a benefit period with certain restrictions. You must have a three day minimum inpatient stay for a related illness or injury and the doctor must certify that you need skilled care such as intravenous injections or physical therapy. A benefit period is defined as starting the day that the individual is admitted to the hospital or skilled nursing facility and ends when the individual hasn't received any inpatient hospital care or skilled nursing care in a nursing facility for 60 days in a row. If the benefit period ends, a new benefit period begins when the individual is admitted to an inpatient hospital or skilled nursing facility.
Skilled nursing facility services are 100% covered under Medicare for the first twenty days. From days 21-100, a Medicare beneficiary must pay up to $137.50/day.[30] Medicare coverage is exhausted after day 100 in a benefit period. During the Medicare coverage period, Medi-Cal expenditures would only reflect the costs not paid by Medicare. Potentially, there may be no skilled nursing facility expenditures for Medi-Cal eligibles in the first twenty days of a benefit period.
Acute Care Hospital Stays: Acute care inpatient hospital stays are covered under Medicare Part A. For each benefit period, there is an initial $1,132 deductible for days 1-60 of a hospital stay. From days 61-90, the Medicare beneficiary must pay $275/day.[31] After day 60, an individual use lifetime reserve days for additional coverage. Lifetime reserve days are additional days that Medicare will pay for acute hospital days. An individual can use up to 60 lifetime reserve days in his lifetime. If an individual is using lifetime reserve days, they must pay $550/day. Medicare coverage is exhausted if the inpatient stay lasts longer than 90 days and the lifetime reserve days have been used. Inpatient mental health care in a psychiatric hospital is limited to 190 days in a lifetime.

[29] The following optional services were eliminated from Medi-Cal services as of July 1, 2009, for members over 21 who were not pregnant and seeking pregnancy-related services, living in a licensed nursing home, Intermediate Care Facility (ICF), Sub Acute Facility or an ICF for the developmentally disabled: adult dental services, acupuncture services, audiology and speech therapy services, chiropractic services, optometric and optician services, podiatric services, psychology services and incontinence creams and washes. For more information see the amended Welfare and Institutions Code section 14131.10 at http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=200920103AB5
[30] See Table 1.
[31] See Table 1.

Eligibility for Medicare Part A – Hospital Insurance (HI)

An individual age 65 or older who is a US citizen or "an alien who is lawfully present in the US"[32,33] is eligible for free Medicare Part A HI[34] by meeting one of the following requirements:

- Eligible for or receives Social Security benefits;
- Eligible for or receives Railroad Retirement benefits;
- Worked long enough in a government job where Medicare taxes were paid, which also includes living, deceased or divorced spouses; or
- Is the dependent parent of a fully insured deceased child.

An individual younger than age 65 is eligible for Medicare HI by meeting one of the following requirements:

- Is entitled to Social Security Disability Insurance (SSDI)[35] benefits for 24 months;
- Receives a disability pension from the Railroad Retirement board (certain conditions apply);
- Receives Social Security disability benefits due to Lou Gehrig's disease (Amyotrophic Lateral Sclerosis);
- Worked long enough in a government job where Medicare taxes were paid and meets the eligibility requirements for SSDI;

[32] USHHS: Summary of Immigrant Eligibility Restrictions Under Current Law http://aspe.hhs.gov/hsp/immigration/restrictions-sum.shtml
[33] 8 CFR 103.12
[34] *Medicare Part A* means the hospital insurance program authorized under Part A of title XVIII of the Act. Title 42, Code of Federal Regulations, Part 400.202.
[35] SSDI provides benefits to disabled or blind persons who are "insured" by workers' contributions to the Social Security trust fund. These contributions are based on worker's earnings (or those of a spouse or parents) as required by the Federal Insurance Contributions Act (FICA). Title II of the Social Security Act authorizes SSDI benefits. An individual's dependents may also be eligible for benefits based on the individual's earnings record. http://www.socialsecurity.gov/redbook/eng/overview-disability.htm

- Is age 50 or older and either a child or widow(er) (including a divorced widow(er)), of a person who worked in a government job long enough where Medicare taxes were paid and meets the requirements for SSDI; or
- Has permanent kidney failure and receives maintenance dialysis or a kidney transplant and one of the following:
    - Eligible for or receives monthly benefits under Social Security or the Railroad Retirement system;
    - Worked long enough in a Medicare covered government job; or
    - Is a child or spouse (including a divorced spouse) of a living or deceased person who has worked long enough under Social Security or in a Medicare covered government job.

Eligibility for Medicare Part B – Medical Insurance (MI)

An individual who is eligible for free Medicare Part A HI can enroll in Medicare Part B MI[36] by paying a monthly premium. The standard Part B premium in 2010 was $96.40.[37] If an individual's modified adjusted gross income was greater than a certain amount, the Part B premium was increased. For 2010, the maximum premium was $353.60.

[36] *Medicare Part B* means the supplementary medical insurance program authorized under Part B of title XVIII of the Act. Title 42, Code of Federal Regulations, Part 400.202. The Social Security Administration (SSA) announced that there would be no cost of living adjustment (COLA) increase in 2010. This means beneficiaries would see no increase in their Social Security benefits in 2010. Current law, known as the *hold harmless* provision, protects most beneficiaries from a negative net income. In short, the provision states that a beneficiary is protected from seeing a decrease in their Social Security benefits due to an increase in their Part B premium. About 73 percent of current Medicare beneficiaries continued to have the same Part B monthly premium of $96.40 in 2010. However, the remaining 27 percent were not protected by the *hold harmless* provision because they are either higher income or do not have their Part B premium taken from their Social Security benefits. These beneficiaries paid a higher Part B premium in 2010, beginning at $110.50. The remaining 27 percent includes beneficiaries new to Medicare in 2010 (3 percent), those who already pay an adjusted Part B premium because of a higher income (5 percent), and those whose Part B premium paid by Medicaid through one of the Medicare Savings Programs (17 percent).

[37] Medicare and You, 2012, Centers for Medicare & Medicaid Services. http://www.medicare.gov/Publications/Pubs/pdf/10050.pdf

An individual who is not eligible for free Medicare HI can buy MI without having to buy HI if the individual is age 65 or older and is a US citizen, "lawfully present",[38] or a Lawful Permanent Resident[39] who has lived in the US for at least five years.

Eligibility For Medicare Part C – Advantage Plans

If an individual is enrolled in Medicare Parts A and B, they can join a Medicare Advantage plan (Part C).[40] Medicare Advantage plans include:

- Medicare managed care plans;
- Medicare preferred provider organization (PPO) plans;
- Medicare private FFS plans; and
- Medicare specialty plans.

Some individuals who join a Medicare Advantage Plan may have to pay a monthly premium because of the extra benefits the plan offers.

Eligibility for Medicare Part D – Prescription Drug Coverage

Anyone who is eligible for Medicare Part A HI, Part B MI, or a Part C Medicare Advantage plan is eligible for prescription drug coverage under Medicare Part D.[41]

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[38] SSA: Program Operations Manual System, Section RS 00204.010 Lawful Presence Payment Provisions https://secure.ssa.gov/apps10/poms.nsf/lnx/0300204010!opendocument
CMS Manual System: *Medicare payment may not be made for items and services furnished to an alien beneficiary who was not lawfully present in the United States on the date of service. http://www.cms.hhs.gov/Transmittals/Downloads/R296CP.pdf*

[39] USHHS: Medicare.gov/FAQ http://questions.medicare.gov/cgi-bin/medicare.cfg/php/enduser/std_adp.php?p_faqid=17&p_created=993578070
Community Health Advocates/NY: http://www.communityhealthadvocates.org/advocates-guide/immigrant-concerns/medicare
The literature indicates "lawfully present" and "lawful permanent resident" status for Medicare Part B buy in (assumed same intent).

[40] *Medicare Part C* means the choice of Medicare benefits through Medicare Advantage plans authorized under Part C of the title XVIII of the Act. Title 42, Code of Federal Regulations, Part 400.202.

[41] *Medicare Part D* means the voluntary prescription drug benefit program authorized under Part D of title XVIII of the Act. Title 42, Code of Federal Regulations, Part 400.202.

Enrollment in a Medicare prescription drug plan is voluntary and an additional monthly premium may be required for the coverage.[42] Dual eligible beneficiaries are generally entitled to a low income subsidy that covers the Part D monthly premium and deductible.[43]

Certified Eligibles

The term certified eligible, as utilized in this paper, refers to beneficiaries who have been determined eligible for Medi-Cal based on a valid eligibility determination. Certified Eligibles do not include beneficiaries who may be eligible to enroll in the Medi-Cal program, but have not enrolled. In addition, the definition used here only includes beneficiaries who are eligible to receive Medi-Cal covered health care services during the month. This means that beneficiaries with a SOC obligation, but who have not met their monthly SOC obligation, are not included in the certified eligible counts. And finally, specific populations, such as California's Family PACT and Presumptive eligibles, are also not included in the certified eligible counts.

Section III: Data Sources

The demographic characteristics and *CCI potential population* counts presented in this paper were developed utilizing Medi-Cal and Medicare eligibility data. RASB utilized retrospective data analysis to evaluate the demographic characteristics, geographic dispersion, Medicare coverage groups, health system enrollment, and Medi-Cal eligibility pathways for Medi-Cal's dual eligibles.

RASB staff compiled an eligibility data set that included one record for each month of eligibility for dual eligible beneficiaries for months of enrollment between January 2010 and December 2010 who were either Medi-Cal certified eligible or were included in Medi-Cal's eligibility data set, but had not met their monthly SOC obligation.[44] In addition, this data set also incorporated beneficiaries who were deemed

[42] SSA: Who can get Medicare? http://www.socialsecurity.gov/pubs/10043.html#part3
[43] 42 U.S.C. Section 1395w-114(a)(1)(A) provides for a premium subsidy for beneficiaries with income less than 135% of the FPL. 42 U.S.C. Section 1395w-114(a)(1)(B) eliminates that Part D deductible for beneficiaries with income less than 135% of the FPL. Beneficiaries with incomes between 135% and 150% of the FPL are entitled to a subsidy for premiums and deductibles based on a sliding scale (42 U.S.C. Section 1395w-114(a)(2)(A) &(B))
[44] Beneficiaries enrolled in a Share of Cost program are individuals and families whose incomes are too high to qualify for cash assistance but insufficient to cover their medical expenses. Beneficiaries with a SOC obligation must contribute to their medical expenses up to a predetermined monthly threshold. It is only after beneficiaries meet their monthly obligation that they qualify for Medi-Cal benefits.

eligible for Medicare Savings Programs[45] such as QMB-Only, SLMB-Only, QI-1, and QWDI.

Beneficiaries with a SOC obligation that had not been met are separately presented, as well as populations who are eligible for Medicare Savings Programs, such as QMB only and SLMB only.

Claims and utilization data were derived from various sources: Medi-Cal FFS DHCS administered services, Medi-Cal Non-DHCS administered services, Medicare Part A FFS claims, Medicare Part B FFS claims, Medicare Part D claims, and Office of Statewide Health Planning and Development (OSHPD) inpatient discharge data.[46] Table 3 presents the data sources utilized and category of services that were evaluated.

[45] Medicare Savings Programs are Medicare programs administered by a State's Medicaid program to assist eligibles with low incomes and assets. When qualified eligibles meet asset and income requirements Medicaid programs help pay some or all Medicare premiums and deductibles.

[46] An inpatient discharge record is submitted each time a patient is treated in a licensed general acute care hospital in California. Each year, roughly 4 million discharges for California residents, as well as non-resident persons treated in a California acute hospital, are captured in the OSHPD hospital discharge dataset. Data collected by OSHPD includes patient demographic information, such as age, sex, county of residence, and race/ethnicity, diagnostic information, treatment information, disposition, total charges and expected source of payment. http://www.oshpd.ca.gov/HID/DataFlow/ProductListing.html

Table 3 – Data Sources and Category of Services Evaluated

Category of Service	Medi-Cal					Medicare	OSHPD
	DHCS Administered	Administered by Other Departments					
		DDS	DSS	Dept. of Mental Health[47]	Dept. of Drug and Alcohol		
FQHC / RHC	X						
Emergency Med. Transport	X						
Home Health	X						
Hospital Inpatient	X						
Hospital Other	X						
Nursing Home Care	X						
Non-Emergency Medical Transport	X						
Physician and Clinical	X						
Prescription Drugs	X						
All Other Not Categorized Above	X						
CHDP/EPSDT	X						
Dental	X						
Medi-Cal Targeted Case Mngt.	X						
DDS Total Case Management		X					
DDS Waiver		X					
DDS IHSS		X					
DDS MC TCM		X					
DDS Developmental Centers		X					
Mental Health Inpatient	X						
Short-Doyle Comm. Mental Health				X			
Short-Doyle MH Community Hospital				X			
Short-Doyle Mental Health Rehab				X			

[47] California's Department of Mental Health has been absorbed by the Department of Health Care Services. See transition plan: http://www.dhcs.ca.gov/services/medi-cal/Documents/Medi-Cal%20Mental%20Health/Specialty%20Mental%20Health%20Services%20Transition%20Plan%20final%20draft%209-13-11.pdf

Category of Service	Medi-Cal					Medicare	OSHPD
	DHCS Administered	Administered by Other Departments					
		DDS	DSS	Dept. of Mental Health[47]	Dept. of Drug and Alcohol		
Mental Health Drug Program				X	X		
Medicare Part D						X	
Medicare Acute Inpatient						X	
Medicare SNF						X	
Medicare Outpatient Institutional						X	
Medicare Carrier (Includes Physicians)						X	
Medicare DME						X	
Medicare Hospice						X	
Inpatient Discharge Records							X

Section IV: Literature Review

In CY 2008, roughly 9 million beneficiaries were concurrently enrolled in both Medicaid and Medicare nationally, representing 15% of all Medicaid and 20% of all Medicare enrollees.[48] Of these dual eligibles, roughly two-thirds or 5.9 million beneficiaries were age 65 or older and the remaining third (approximately 3.1 million beneficiaries) were classified as disabled individuals under age 65.[49] Approximately 75% of these dual eligibles received full Medicaid benefits, while 25% received only Medicaid assistance with Medicare premiums, cost-sharing, and out-of-pocket costs.[50]

[48] Cassidy, Amanda. "Care for Dual Eligibles. Efforts are afoot to improve care and lower costs for roughly 9 million people enrolled in both Medicare and Medicaid." Health Policy Brief. Health Affairs, June 2012. http://healthaffairs.org/healthpolicybriefs/brief_pdfs/healthpolicybrief_70.pdf
[49] Ibid.
[50] Ibid.

Dual eligibles are the most costly population being served by publically funded health care programs.[51] While dual eligibles represent only about one-fifth of each program's enrollment, they account for a large percentage of their respective expenditures.[52] In CY 2008, dual eligibles accounted for 31% of total Medicare expenditures and 39% of national Medicaid expenditures.[53] The drivers behind the high costs associated with dual eligibles are directly associated with the population's demographics and health conditions.

The majority of available literature compares and contrasts the demographic characteristics of dual eligibles to the Medicare population as a whole. A 2006 paper by Moon and Shin provides insight into the demographic trends associated with the dual eligible population. In particular, Moon and Shin found that dual eligibles are more likely to be "either younger (under the age of 65) or older (over age 85)" than other Medicare beneficiaries. Additionally, dual eligibles are more culturally diverse than the entire Medicare population.[54] For instance, 42% of dual eligibles were classified as a racial minority, while only 16% of the non-dual eligible Medicare population was classified as a racial minority.[55] Additionally, available literature stresses the distinct disparity in income levels between dual eligibles and other non-dual Medicare eligibles. A 2009 analysis by Coughlin, Waidmann, and Watts reports that the dual eligible population has a substantially lower income level than other non-dual eligible Medicare beneficiaries.

[51] Moon, Sangho, and Jaeun Shin. Health Care Utilization among Medicare-Medicaid Dual Eligibles: a Count Data Analysis. Bio Medical Central Public Health. 6:88 (2006) (Accessed via Medline on July 30th 2009).
[52] Ibid.
[53] Cassidy, Amanda. "Care for Dual Eligibles. Efforts are afoot to improve care and lower costs for roughly 9 million people enrolled in both Medicare and Medicaid." Health Policy Brief. Health Affairs, June 2012. http://healthaffairs.org/healthpolicybriefs/brief_pdfs/healthpolicybrief_70.pdf
[54] Ibid.
[55] Ibid.

Roughly, 61% of dual eligibles have annual incomes less than $10,000, while only 9% of non-dual eligibles have annual incomes of less than $10,000.[56]

Dual eligibles are also sicker and more likely to be disabled than other non-dual Medicare eligibles.[57] Moon and Shin found that over half of the dual eligibles report fair or poor health, while only one quarter of the non-dual eligible Medicare population reports being in fair or poor health. Dual eligibles are more likely than non-dual eligibles to experience chronic or serious health conditions such as diabetes, pulmonary disease, and stroke.[58] Additionally, dual eligibles are more likely to suffer from mental health issues.[59] Over 40% of the dual eligible population suffers from a cognitive or mental impairment, while only 9% of the non-dual eligible Medicare population suffers from such mental health problems.[60]

The chronic and mental conditions affecting dual-eligible beneficiaries are extremely expensive to treat and can, ultimately, require costly long-term care. In particular, Coughlin, Waidmann, and Watts note that dual eligibles are more likely than other non-dual eligible Medicare beneficiaries to need assistance with multiple activities of daily living (ADL). Dual eligible beneficiaries are also more likely than other non-dual eligible Medicare beneficiaries to reside in an institutional setting.[61] Similarly, a 2007 paper by O'Leary, Sloss, and Melnick indicates that dual eligibles had consistently higher hospitalization rates and longer average length of stays than other non-dual eligible Medicare beneficiaries. According to this analysis, the total inpatient days

[56] Coughlin, Teresa, Timothy Waidmann, and Molly O'Malley Watts. Where Does the Burden lie? – Medicaid and Medicare Spending on Dual Eligible Beneficiaries. Kaiser Commission on Medicaid and the Uninsured. April 2009.
[57] Moon, Sangho, and Jaeun Shin. Health Care Utilization among Medicare-Medicaid Dual Eligibles: a Count Data Analysis. Bio Medical Central Public Health. 6:88 (2006) (Accessed via Medline on July 30th 2009).
[58] Ibid.
[59] Ibid.
[60] Ibid.
[61] Coughlin, Teresa, Timothy Waidmann, and Molly O'Malley Watts. Where Does the Burden lie? – Medicaid and Medicare Spending on Dual Eligible Beneficiaries. Kaiser Commission on Medicaid and the Uninsured. (April 2009).

remained higher among dual eligibles than non-dual Medicare eligibles even when stratified by system of care, age, sex, or race.[62]

A recent study from the Healthcare Cost and Utilization Project (HCUP) found that dual eligibles are also more likely to be hospitalized for a potentially avoidable condition compared to non-dual eligible Medicare beneficiaries. This paper defined potentially avoidable hospitalizations as hospital admissions resulting from nine distinct medical conditions, seven of which were taken from the Prevention Quality Indicators created by the Agency for Healthcare Research and Quality (AHRQ).[63] Results from this study found that, nationally, these potentially avoidable conditions accounted for nine hospital admissions per 100 dual eligibles.[64] Hospitalizations for dual eligibles related to these nine conditions cost about $6.37 billion nationwide.[65] The medical conditions that were most frequently identified as potentially preventable hospitalizations among dual eligibles included bacterial pneumonia, congestive heart failure, and chronic obstructive pulmonary disease (COPD).[66]

Dual eligibles were also far more likely than non-dual eligible Medicare beneficiaries to be hospitalized for one of the selected conditions.[67] For example, dual eligibles were more than twice as likely to be hospitalized for pressure ulcers, asthma, diabetes, and urinary tract infections, and over 30% more likely to be hospitalized for COPD and bacterial pneumonia.[68] Overall, dual eligibles accounted for 22% of total

[62] O'Leary, John F. Ph.D., Elizabeth M. Sloss Ph. D., and Glenn Melnick Ph.D. Disabled Medicare Beneficiaries by Dual Eligible Status: California, 1996-2001. Health Care Financing Review. 28:4 (2007).
[63] Jiang Ph.D., H. Joanna, Lauren M. Wier, M.P.H., D.E.B. Potter, M.S., and Jacqueline Burgess, M.B.A. Statistical Brief 96: Potentially Preventable Hospitalizations Among Medicare-Medicaid Dual Eligibles, 2008. Agency for Healthcare Research and Quality – Healthcare Cost and Utilization Project. (September 2010).
[64] Ibid
[65] Ibid
[66] Ibid
[67] Ibid
[68] Ibid

hospitalizations for Medicare beneficiaries related to potentially avoidable conditions, and accounted for about 23% of potentially avoidable hospital costs.[69]

Chapter Five of MEDPAC's 2010 report to Congress, titled *Aligning Incentives in Medicare,* also presented the demographics and health conditions of Medicare's dual eligible population. MEDPAC's findings paralleled the trends identified in the aforementioned literature. For instance, Table 4, that follows, indicates that dual eligibles are more likely to be disabled, report poor health statuses, and be a racial minority than non-dual Medicare eligibles. Dual eligibles also have lower educational attainment, more limitations to ADL, and are 6 times more likely to live in an institutional setting than non-dual Medicare eligibles.

Table 4 - Demographic Differences Between Dual-Eligible and Non-Dual Medicare Eligibles

	Medicare Eligibles by Medicaid Eligibility (Percent)	
	Dual Eligibles (Medicare/Medicaid)	*Non-Dual Eligible (Medicare Only)*
Characteristic		
Sex		
Male	39%	46%
Female	61%	54%
Health Status		
Disabled	41%	11%
Report Poor Health Status	20%	7%
Race		
White, non-Hispanic	58%	82%
African American	18%	7%
Hispanic	15%	6%
Other	9%	4%
Limitations in ADLs		
No ADLs	49%	71%
1-2 ADLs	23%	19%

[69] Ibid

	Medicare Eligibles by Medicaid Eligibility (Percent)	
	Dual Eligibles (Medicare/Medicaid)	*Non-Dual Eligible (Medicare Only)*
Characteristic		
3-6 ADLs	29%	10%
Living Arrangement		
In an Institution	19%	3%
With a Spouse	17%	55%
Education		
No High School Diploma	54%	22%
High School Diploma Only	24%	31%
Some College or More	18%	45%
Income Status		
Below poverty	58%	10%
100-125% of poverty	20%	7%
125-200% of poverty	16%	19%
200-400% of poverty	5%	35%
Over 400% of poverty	1%	27%

Note: The acronym ADL refers to activities of daily living. Totals may not sum to 100 percent due to rounding and the exclusion of an "other" category. Income status is as of 2008. The poverty level was defined as income of $10,326 for individuals living alone and $13,030 for married couples.
Source: "Report to Congress: Aligning Incentives in Medicare." Medicare Payment Advisory Commission. P.133. June 2010.

Table 5 from MEDPAC's analysis summarizes the percentage of older and disabled dual eligibles suffering from select cognitive and physical impairments. A higher percentage of disabled dual eligibles suffer from cognitive impairments than do older dual eligibles. However, dual eligibles in the older age category are more likely to have dementia, but are less likely than disabled dual eligibles to suffer from mental illness.

Table 5 - Physical and Cognitive Impairments Vary Considerably Among Dual Eligible Beneficiaries

DUAL ELIGIBLE GROUP	AGED	DISABLED
Mentally Ill	26%	44%
Dementia	16%	3%
Developmentally Disabled	2%	18%
One or No Physical Impairments	54%	33%
Two or More Physical Impairments	3%	3%

Note: Beneficiaries were grouped into the "aged" and "disabled" groups based on how they qualified for Medicare coverage. The grouping uses a hierarchy that first divides dual-eligible beneficiaries by their original eligibility into the Medicare program. Beneficiaries are then assigned to a cognitive impairment group and, if none, are assigned to a physical impairment group (a beneficiary with both would be assigned to a cognitive impairment group). Physical impairment refers to a limitation to perform activities of daily living such as bathing, dressing, or eating. Beneficiaries with end-stage renal disease were excluded.
Source: "Report to Congress: Aligning Incentives in Medicare." Totals may not sum to 100 percent due to rounding and the exclusion of the "other" category. Medicare Payment Advisory Commission. P.133. June 2010.

MEDPAC's analysis identified the most frequent chronic conditions impacting the dual eligible population. Table 6 summarizes how these conditions affect older dual eligibles in comparison to disabled dual eligibles under 65 years old. Overall, older dual eligibles are more likely to suffer from a chronic condition than disabled dual eligibles under 65 years old. Older dual eligibles, in particular, are substantially more likely to have Alzheimer's and related conditions, heart failure, ischemic heart disease, rheumatoid arthritis, and osteoarthritis. However, disabled dual eligibles under age 65 have a greater chance of suffering from depression than older dual eligibles.

Table 6 - Most Frequent Chronic Conditions Vary Among the Aged and the Under 65 and Disabled Dual Eligible Beneficiaries in 2005

Chronic Condition	Aged	Under 65 and Disabled
Alzheimer's and Related Conditions	30%	5%
Chronic Obstructive Pulmonary Disease	18%	10%
Depression	18%	28%
Diabetes	36%	23%
Heart Failure	33%	11%
Ischemic Heart Disease	43%	17%
Rheumatoid Arthritis/Osteoarthritis	31%	13%

Note: The analysis includes duals who were eligible for full Medicaid benefits and were enrolled during all 12 months of the year or were enrolled from January through their date of death. Data from Maine were incomplete and were excluded. Analysis excludes beneficiaries with end-stage renal disease and beneficiaries enrolled in Medicare Advantage plans or Medicaid managed care plans.
Source: "Report to Congress: Aligning Incentives in Medicare." Medicare Payment Advisory Commission. P.134. June 2010.

Table 7 from MEDPAC's report presents the total Medicare and Medicaid per-capita costs for dual eligibles suffering from the population's most commonly reported chronic conditions. Those suffering from Alzheimer's and related conditions, COPD, and heart failure produced some of the highest per-capita health care costs. Per-capita costs for dual eligibles with these conditions are nearly twice the average per-capita costs for all dual eligibles. In 2005, dual eligibles afflicted with five or more chronic conditions had the highest annual per-capita health care costs at $50,278.

Table 7 - Total Medicare and Medicaid Per-Capita Spending for Dual Eligible Beneficiaries Varied for Most Frequent Chronic Conditions in 2005

Select Chronic Condition	Share of all Duals with Condition	Per-Capita Medicare and Medicaid Spending	Spending Relative to Average
All Dual Eligible Beneficiaries	100%*	$26,185	1.0
Alzheimer's and Related Conditions	22%	$46,578	1.8
COPD	15%	$40,645	1.6
Depression	21%	$38,829	1.5
Diabetes	32%	$32,188	1.2
Heart Failure	26%	$40,632	1.6
Ischemic Heart Disease	34%	$34,568	1.3
Rheumatoid Arthritis & Osteoarthritis	25%	$31,864	1.2
4 or More Chronic Conditions	30%	$43,986	1.7
5 or More Chronic Conditions	19%	$50,278	1.9

*The presented percentages do not add up to 100% as beneficiaries may suffer from multiple chronic conditions.
Note: COPD (Chronic Obstructive Pulmonary Disease). The analysis includes duals who were eligible for full Medicaid benefits and were enrolled during all 12 months of the year or were enrolled from January through their date of death. Data from Maine were incomplete and were excluded. Analysis excludes beneficiaries with end-stage renal disease and beneficiaries enrolled in Medicare Advantage plans or Medicaid managed care plans.
Source: "Report to Congress: Aligning Incentives in Medicare." Medicare Payment Advisory Commission. P.137. June 2010.

A study by the Urban Institute's Health Policy Center evaluated cost and utilization trends for dual eligibles during CY 2007. Similar to other findings, this study reports that dual eligibles are one of the most costly and medically compromised populations receiving publically-funded medical care. The average per-capita health care cost for a dual eligible (combining expenditures from both Medicaid and Medicare)

during CY 2007 was found to be $29,868.[70] Medicare expenditures for dual eligibles in CY 2007 were four times higher than for non-dual Medicare beneficiaries.[71] Overall, the Medicaid and Medicare programs each financed about half of the total health care spending on the dual eligible population during CY 2007.[72] However, the Medicaid program financed most of the long-term care for dual eligibles, while the Medicare program provided the majority of the population's acute and sub-acute care.[73]

The dual eligible population is heterogeneous and consists of several subpopulations with distinct medical needs. For instance, a small proportion of dual eligibles generated the majority of the population's expenditures in CY 2007. About 20% of dual eligibles accounted for over 60% of the population's total combined Medicaid and Medicare costs.[74] Even within this costly group, the cost-driving subpopulations varied considerably. Some groups were experiencing end-of-life care, others were living with conditions such as hemophilia, some were confined to LTC facilities or receiving LTSS, and some were battling numerous multiple chronic conditions. The heterogeneous nature of the population indicates that a single intervention will not be as effective as several interventions tailored to each unique subpopulation. Future efforts to reduce costs and improve health outcomes among the dual eligible population must be designed in light of these heterogeneous population characteristics.

The body of knowledge obtained from relevant literature provides an overview of the dual eligible population. Despite comprising only a small portion of each program's

[70] Teresa A. Coughlin, Timothy A. Waidmann and Lokendra Phadera. Among Dual Eligibles, Identifying the Highest-Cost Individuals Could Help In Crafting More Targeted and Effective Responses. Health Affairs, 31 no. 5 (2012).
[71] Ibid.
[72] Ibid.
[73] Ibid.
[74] Ibid.

respective enrollments, dual eligibles are among the costliest and sickest populations being served by the Medicaid and Medicare programs.[75] Dual eligibles differ in age distribution, are culturally diverse, and have lower education and income levels than non-dual Medicare beneficiaries.[76,77] Additionally, dual eligibles, as compared to non-dual eligible Medicare beneficiaries, are more likely to be diagnosed with chronic and mental health conditions.[78] The health conditions afflicting the dual eligible population are costly and often necessitate long-term care. The population's heterogeneous demographics and health care needs stress the importance of tailoring interventions to the unique characteristics of the dual eligible population's various subpopulations.

Section V: Medicare Coverage Groups

The term dual eligible as used in this paper encompasses all beneficiaries entitled to some form of Medicare and who receive Medi-Cal assistance, including those who receive the full range of Medi-Cal benefits and those who receive assistance only with Medicare premiums or cost sharing. In addition to Medicare eligibility (i.e., eligible for Medicare Parts A, B, D), dual eligibles may also be grouped into distinct Medicare coverage groups.

Following is a description of the Medicare dual eligible coverage groups and the terms used in this paper to describe Medicare's coverage groups. In this section, RASB discusses these coverage groups and explains who is eligible and the benefits they receive.

[75] Moon, Sangho, and Jaeun Shin. Health Care Utilization among Medicare-Medicaid Dual Eligibles: a Count Data Analysis. Bio Medical Central Public Health. 6:88 (2006) (Accessed via Medline on July 30th 2009).
[76] Ibid.
[77] Teresa A. Coughlin, Timothy A. Waidmann and Lokendra Phadera. Among Dual Eligibles, Identifying the Highest-Cost Individuals Could Help In Crafting More Targeted and Effective Responses. Health Affairs, 31 no. 5 (2012).
[78] Moon, Sangho, and Jaeun Shin. Health Care Utilization among Medicare-Medicaid Dual Eligibles: a Count Data Analysis. Bio Medical Central Public Health. 6:88 (2006) (Accessed via Medline on July 30th 2009).

Qualified Medicare Beneficiaries (QMBs) – These Medi-Cal beneficiaries are entitled to Part A Medicare, have an income not exceeding 100% of the federal poverty level (FPL),[79] and resources not exceeding three times the SSI limit[80] (plus an annual percentage increase equal to the increase in the Consumer Price Index (CPI).[81] QMBs may be eligible for Medi-Cal benefits (full or limited scope) or may be entitled to Medi-Cal for only the payment of Medicare Part A and Part B (supplementary medical insurance) premiums and Medicare cost-sharing (deductibles and coinsurance). For this coverage group, Medi-Cal is entitled to federal financial participation (FFP)[82] at their standard Federal Medi-Cal Assistance Percentage (FMAP).[83]

QMBs Not Entitled to Medi-Cal State Plan Health Care Benefits (QMB Only)[84] – These Medi-Cal beneficiaries are entitled to Part A Medicare, have an income not exceeding 100% of the FPL, and resources not exceeding three times the SSI limit (plus an annual percentage increase equal to the increase in the CPI).

These individuals are considered QMB Only and unlike QMB-Plus beneficiaries are not otherwise eligible for Medi-Cal benefits. Medi-Cal pays their Medicare Part A as well as any Medicare Part B premiums. Also, deductibles and coinsurance for Medicare services provided by Medicare providers are covered by

[79] FPL for a single person is $908, or $1,226 for a couple (100% of FPL Eff. 4/1/11).
[80] Current property limits are $6,680 for a single individual and $10,020 for a couple, DHCS Form MC 14a; http://www.dhcs.ca.gov/formsandpubs/forms/Forms/mc14a.pdf. Prior to 1/1/10, the resource limit was two times the SSI limit.
[81] 42 U.S.C. Sections 1396(d)(p)(1); 1395w–114 (a)(3).
[82] Title 42, Code of Federal Reg-ulations, Part 400.203. *Federal financial participation* (FFP) means the Federal Government's share of a State's expenditures under the Medicaid program.
[83] Title 42, Code of Federal Regulations, Part 400.203. *FMAP* stands for the Federal medical assistance percentage, which is used to calculate the amount of Federal share of State expenditures for services.
[84] 42 U.S.C. §1396d(p)(1). Note, this group is sometimes referred to QMB "mandatory" by some. The federal government uses the term "only."

Medi-Cal to the extent that it is consistent with the State Medicaid Plan. The FFP amount for these services is equal to Medi-Cal's FMAP.[85]

QMBs Entitled to Medi-Cal State Plan Health Care Benefits (QMB Plus) –These beneficiaries must have an income not exceeding 100% of the FPL and resources not exceeding three times the SSI limit (plus an annual percentage increase equal to the increase in the CPI). To qualify as QMB Plus, beneficiaries must also meet the financial criteria for full Medi-Cal coverage. Such beneficiaries are entitled to all benefits available to a QMB, as well as all benefits available under the State's Medicaid Plan to a fully eligible Medi-Cal recipient. These beneficiaries often qualify for full Medi-Cal benefits by meeting the Medically Needy (MN) standards and/or through spending down excess income to the MN level.

Non-QMB, Non-Specified Low-Income Medicare Beneficiaries (SLMB)[86] – This coverage group includes Medi-Cal beneficiaries who are entitled to some form of Medicare and are eligible for Medi-Cal benefits, generally through categorical or optional coverage groups such as MN, but who do not meet the income or resource criteria for QMB or SLMB. These beneficiaries are entitled to Medi-Cal benefits and providers are paid only to the extent that the Medi-Cal rate exceeds any Medicare payment for services covered by both Medicare and Medi-Cal.[87] Payment of Medicare Part B premiums by Medi-Cal for this coverage group is optional. Pursuant to Senate

[85] The current Medi-Cal FMAP is equal to 50%.
[86] This coverage group is sometimes referred to as "Other Full Benefit Dual Eligibles (FBDU).
[87] Prior to 1997, the rate paid by Medicaid for crossover claims was unsettled. A number of court decisions had required Medicaid to pay providers at the Medicare rate (see Cf. Charpentier v. Belshe, No. S-90-758 EJG (E.D. Cal. Dec. 21, 1994, where the Agency was permanently enjoined from limiting Medi-Cal reimbursement for medical equipment to the Medicare rate). In 1997, Congress clarified that states may providers the Medicaid rate for dual eligible and qualified Medicare beneficiaries, even if the amount is less than what Medicare would pay (42. U.S.C Section 1396a(n)(2). Balanced Budget Act of 1997, Pub. L. No. 105-33, Section 4714.111 Stat. 509 (1997). HCFA, Medicaid Director Letter (Nov. 24, 1997) www.cms.hhs.gov/smdl/downloads/SMD112497.pdf). Medicaid and Medicare payments are considered payments in full; providers are prohibited from collecting the cost sharing from the beneficiary (42 U.S.C. Section 1396a(n)(3).

Bill 853, Statutes of 2010, Medi-Cal pays Medicare Part B premiums on behalf of beneficiaries who are not eligible via the QMB coverage category and who have a SOC obligation in the month following each month that the beneficiary's SOC has been met.[88] Medi-Cal may claim FFP for this coverage group at its standard FMAP.

Specified Low-Income Medicare Beneficiaries (SLMB Only) [89] – This coverage group includes Medi-Cal beneficiaries who are entitled to Medicare Part A, have an income that exceeds 100% of the FPL but is less than 120% of FPL,[90] and whose resources do not exceed three times the SSI limit[91] plus an annual percentage increase equal to the increase in the CPI. The only Medi-Cal benefit that members of this coverage group are entitled to is Medicare Part B premium payments. SLMBs who do not qualify for any additional Medi-Cal benefits are referred to as SLMB-Only. Medi-Cal may claim FFP for this group at its standard FMAP.

Specified Low-Income Medicare Beneficiaries (SLMB Plus) – This group includes Medi-Cal beneficiaries who meet the standards for SLMB eligibility, but also meet the eligibility criteria for full Medi-Cal coverage. These individuals are entitled to payment of Medicare Part B premiums, as well as all benefits available under the State's Medicaid Plan to a fully eligible Medi-Cal recipient. These individuals often qualify for Medi-Cal by meeting the MN standards or through spending down excess income to the MN level. Medi-Cal is entitled to FFP at its standard FMAP.

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[88] Welf. & Inst. Code Section 14005.11(e). This Section stipulates that, for a Medi-Cal beneficiary who has a share of cost but who is ineligible for the assistance provided pursuant to subdivision (a), or who is ineligible for any other federally funded assistance for the payment of the beneficiary's Medicare Part B premium, the department shall pay for the beneficiary's Medicare Part B premium in the month following each month that the beneficiary's share of cost has been met. Subdivision (a) refers to qualified Medicare beneficiaries.

[89] 42 U.S.C. §1396a (a)(10)(E)(iii). Note, this group is sometimes referred to as SLMB "mandatory" by some. The federal government uses the terms "only."

[90] 120% FPL for a single person is $1,089, or $1,471 for a couple (120% FPL eff. 4/1/11).

[91] Current property limits are $6,680 for a single individual and $10,020 for a couple (Eff. 4/1/11), DHCS Form MC 14a; http://www.dhcs.ca.gov/formsandpubs/forms/Forms/mc14a.pdf Prior to 1/1/10, the resource limit was two times the SSI limit.

Qualifying Individual (QI – 1) [92,93] – Medi-Cal beneficiaries who are members of this coverage group are entitled to Medicare Part A, have income that is at least 120% of the FPL but less than 135% of the FPL,[94] and have resources that do not exceed three times the SSI limit plus an annual percentage increase equal to the increase in the CPI. [95] Similar to a SLMB, the only Medi-Cal benefit that a QI beneficiary receives is payment of their Medicare Part B premium. Expenditures for this coverage group's premium payments are 100% federally funded, however, annual expenditures are capped. The QI-1 program is not considered an entitlement, therefore, once the State's allocation of Federal funding is exhausted, no additional Federal dollars are available.[96] Federal legislation recently extended this program through December 31, 2012.[97]

Qualified Working Disabled Individuals (QWDI) [98] – This coverage group includes Medi-Cal beneficiaries who lose their Medicare Part A benefit due to returning to work.[99] If their income is no higher than 200% of the FPL and they have resources that are no more than twice the SSI limit, Medi-Cal will purchase Medicare Part A for these beneficiaries. This program does not pay for Medicare Part B premiums.

While Medi-Cal pays the Medicare Part B premium for many of the Medicare coverage groups, it should be noted that California statutory changes in 2008 and 2010 modified the State's responsibility. Specifically, some beneficiaries who are eligible for

[92] 42 U.S.C. §1396a(a)(10)(E)(iv)(II)
[93] DHCS ACWDL No.: 09-11
http://www.dhcs.ca.gov/services/medi-cal/eligibility/Documents/c09-11.pdf
[94] 135% FPL level for a single person equals $1,226, or $1,655* for a couple (135% FPL Eff. 4/1/11).
[95] Current property limits are $6,680 for a single individual and $10,020 for a couple, DHCS Form MC 14a;
http://www.dhcs.ca.gov/formsandpubs/forms/Forms/mc14a.pdf Prior to 1/1/10, the resource limit was two times the SSI limit.
[96] 42 U.S.C. 1396u (3)(e).
[97] Public Law 112–96—Feb. 22, 2012 – Middle Class Tax Relief and Job Creation Act of 2012, Section 3101.
http://www.gpo.gov/fdsys/pkg/PLAW-112publ96/pdf/PLAW-112publ96.pdf.
[98] 42 U.S.C. §1396d(s)
[99] 42 U.S.C. Section 1396a (a)(10)(E)(ii), 1396d(s), Cal. Welf. & Inst. Code Section 14005.11.Cal Code of Regs. Title 22, Section 50256.

Medi-Cal and responsible for a monthly SOC may only receive this benefit once their monthly SOC obligation has been met. Pursuant to Senate Bill 853, Statutes of 2010, Medi-Cal will pay Medicare Part B premiums on behalf of beneficiaries who are not eligible via the QMB coverage category and who have a SOC obligation in the month following each month that the beneficiary's SOC has been met.[100] This provision does not apply to QMBs. This means that meeting the SOC obligation triggers the payment of the beneficiary's Medicare Part B premium. For example, if a beneficiary meets his or her SOC obligation in January 2012, Medi-Cal will pay the beneficiary's Medicare Part B premium for the month of February 2012.

[100] Welf. & Inst. Code Section 14005.11(e). This Section stipulates that, *for a Medi-Cal beneficiary who has a share of cost but who is ineligible for the assistance provided pursuant to subdivision (a), or who is ineligible for any other federally funded assistance for the payment of the beneficiary's Medicare Part B premium, the department shall pay for the beneficiary's Medicare Part B premium in the month following each month that the beneficiary's share of cost has been met. Subdivision a refers to qualified Medicare beneficiaries.*

Section VI: Taxonomy Used in this Paper to Explore Medi-Cal's Dual Eligible Population

Medi-Cal's dual eligible population can be separated into unique Medicare eligibility/coverage groups, as well as unique subgroups that identify which Medi-Cal program(s) a beneficiary may be eligible for and the scope of services they are entitled to. In this section, RASB presents an overview of the taxonomy used to study Medi-Cal's dual eligible population.

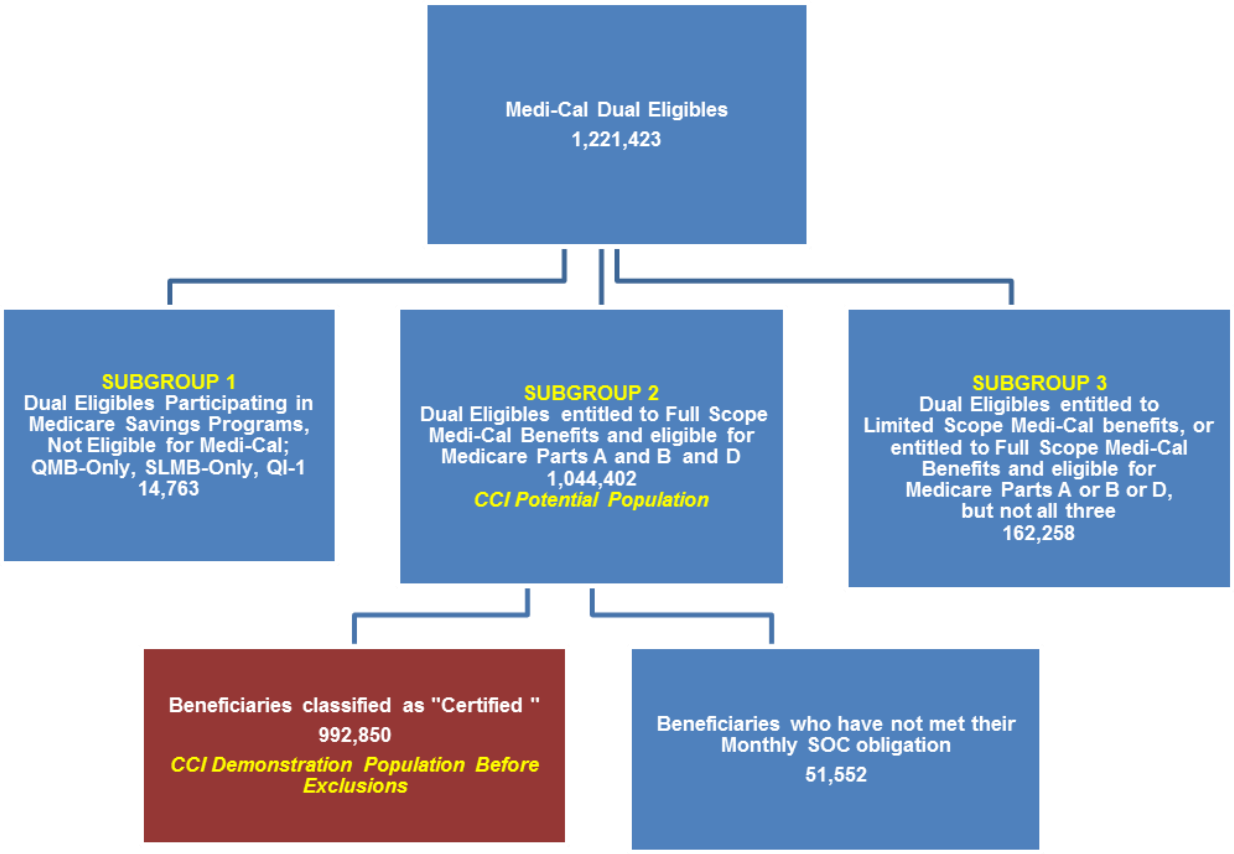
For purposes of explaining the different dual eligible populations, RASB compiled dual eligible enrollment for the month of July 2010. Using one month's enrollment allows for an easy construction of distinct groups and creates a data set that is easier to manipulate and interpret than an entire year of eligibility data. Enrolled beneficiaries may switch from one aid code, county, ethnicity, language, or other descriptive status to another throughout the year. These combinations result in beneficiaries occupying more than one grouping category during the year. For instance, a beneficiary may move from one county to another and also switch from one aid code to another, resulting in multiple records for the same beneficiary and necessitating the application of an assignment routine. Therefore, using a one-month snap shot greatly simplifies the analysis.

In July 2010, 1,221,423 Medi-Cal beneficiaries were classified as dual eligible. As earlier noted, dual eligibles include beneficiaries that are eligible to receive Medi-Cal benefits as well as those that only receive assistance with Medicare cost sharing. Utilizing this broad definition as a starting point, RASB categorized dual eligibles into three distinct subgroups.

Figure 5, that follows, presents the *subgroups,* or combination of Medicare eligibility/coverage groups and Medi-Cal scope of benefit coverage that constitute Medi-

Cal's dual eligible population. These include: Subgroup 1- dual eligibles participating in Medicare Savings Programs that are not eligible for Medi-Cal benefits (QMB-Only, SLMB-Only, QI-1, QWDI); Subgroup 2 - dual eligibles who are entitled to Medicare Parts A and B and D and are also eligible for full scope Medi-Cal benefits; and Subgroup 3 – dual eligibles entitled to limited scope Medi-Cal benefits or entitled to full scope Medi-Cal benefits and eligible for Medicare Parts A or B or D, but not all three.

Figure 5 - Medi-Cal's Dual Eligible and *CCI Population*, At July 2010



Source: Created by RASB utilizing Medi-Cal Eligibility Data

Table 8, below, presents the beneficiary counts for each *subgroup* by SOC status (i.e. no SOC or SOC obligation met vs. SOC obligation with unmet share of cost).

Table 8 - Medi-Cal Dual Eligible Population at July 2010 by Coverage Group and Medi-Cal Subgroup

	Subgroups As of July 1, 2010				
	Subgroup 1 Medicare Savings Programs	Subgroup 2 Dual Eligibles who are entitled to Medicare Part A and Part B and Part D and also eligible for Full scope Medi-Cal benefits		Subgroup 3 Dual Eligibles who are entitled to Medicare Parts A or B or D, but not all three, or eligible for limited Medi-Cal benefits	
		No Share of Cost or Met SOC	With Unmet Share of Cost	No Share of Cost or Met SOC	With Unmet Share of Cost
Not A QMB, SLMB, or QI-1		580,351	42,030	135,139	23,505
QMB Plus		323,340	568	1,887	7
SLMB Plus		81,157	414	1,132	8
Former QI-1		8,002	8,540	459	121
QMB-Only	7,061				
SLMB-Only	4,160				
QI-1	3,542				
Total	**14,763**	**992,850**	**51,552**	**138,617**	**23,641**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

Table 9 presents the eligibility pathways for beneficiaries who were formerly enrolled in the QI-1 Medicare coverage group. While participating in the QI-1 Medicare coverage group, beneficiaries were not entitled to Medi-Cal benefits but received financial assistance for payment of Medicare Part B premiums. Beneficiaries who met their monthly SOC obligations became eligible for Medi-Cal through the MN Program.

Once these beneficiaries attain Medi-Cal eligibility, they are no longer eligible for the QI-1 program.

More than half of these beneficiaries (56%) became eligible for Medi-Cal through a LTC stay. Other common eligibility pathways for beneficiaries in this coverage group included the Aged Federal Poverty Level (Aged-FPL) and Medically Needy (MN) programs.

Table 9 - Former QI-1 Eligibles By Medi-Cal Aid Code, At July 2010

Aid Code	Unduplicated Count	% of Total
13-Aged-LTC	3,508	44%
1H-Aged-FPL Program	1,089	14%
63-Disabled-LTC	976	12%
17-Aged-MN SOC	702	9%
6H-Disabled-FPL Program	557	7%
67-Disabled-MN SOC	412	5%
6G-250% Income Level Working Disabled	332	4%
16-Aged-Pickle Eligible	107	1%
28-Other Aid Codes	319	4%
Total	8,002	100%

Source: Created by RASB utilizing Medi-Cal Eligibility Data

Members of *Subgroup 2* are either categorically linked to Medi-Cal or become eligible through optional coverage groups, such as the MN program. These beneficiaries are:

- Entitled to, or enrolled for, benefits under part A of title XVIII of the Social Security Act [42 U.S.C. 1395c et seq.];
- Enrolled for benefits under part B of title XVIII of such Act [42 U.S.C. 1395j et seq.];
- Voluntarily participating in the prescription drug benefit program authorized under Part D of title XVIII of the Act; *and*
- Determined eligible by the State for medical assistance for full-benefits under title XIX of the Act for the month under any eligibility category covered under the State plan.

In addition, this *subgroup* includes beneficiaries that were determined eligible pursuant to Section 1902(a)(10)(C) of the Act, MN, for any month because they were eligible for medical assistance during at least any part of the month.[101]

Medicare is the primary payer for *Subgroup 2* recipient services and covers medically necessary services such as: acute care services, physician services, hospital services, SNF services, and home health care services. Medi-Cal is the secondary payer and generally covers:

- Services not covered by Medicare. This may include services such as transportation, dental, vision, adult day health care, and some mental health services;
- Services such as cost-sharing for Medicare as well as acute care and skilled nursing facility services that are delivered after the Medicare benefit is exhausted or specific criteria has not been met;

[101] See the SSA website for further definitions and a full-text version of this section: http://www.ssa.gov/OP_Home/ssact/title19/1902.htm.

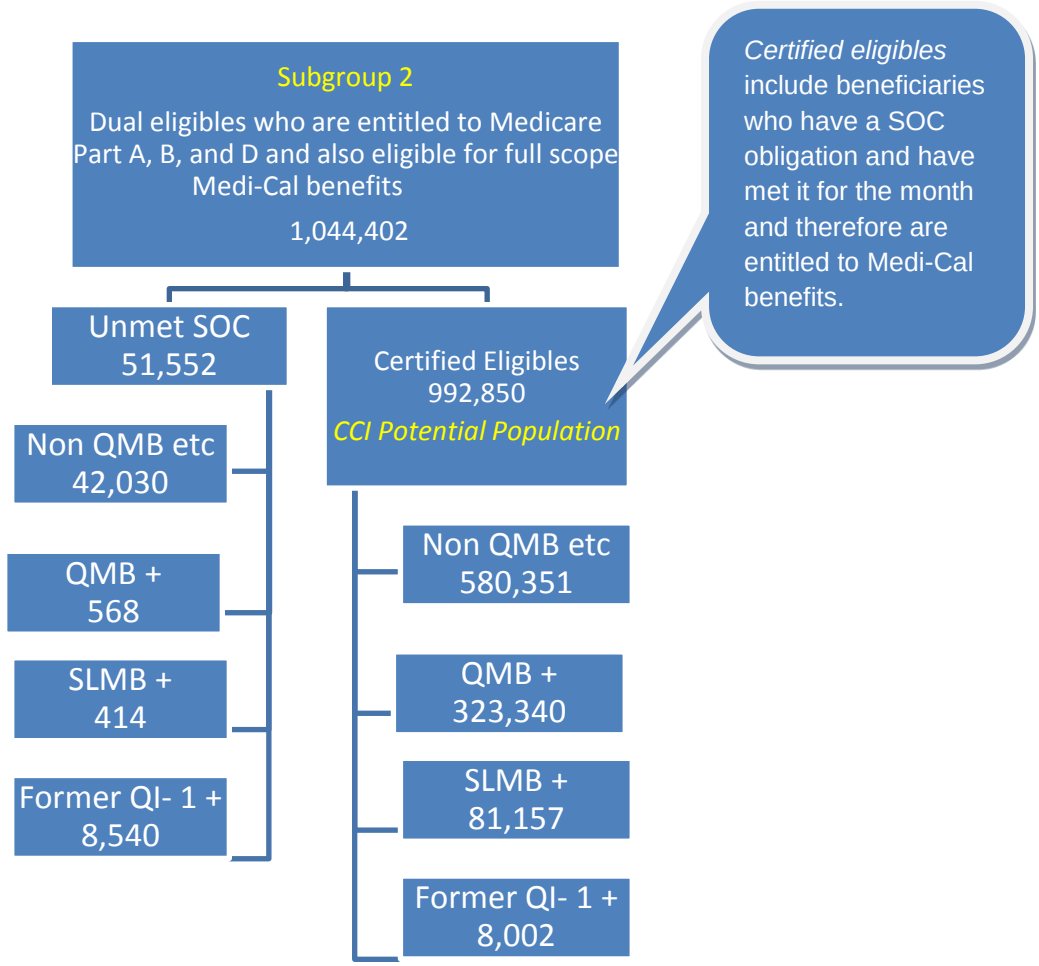
- Long-term care, including custodial nursing facility care, home- and community-based services, and personal care services; and
- Medicare Part A and B premiums.

Section VII: Dual Eligibles who are Entitled to Medicare Part A and Part B and Part D and also Enrolled in a Medi-Cal Full Scope Aid Code – Subgroup 2

Medi-Cal's CCI demonstration concentrates on dual eligibles that are eligible for Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits. This dual eligible *subgroup* represents Medi-Cal's largest population of dual eligibles and can be further separated into two distinct categories:

- Those who must meet a monthly SOC and who have not met their monthly SOC obligation; and
- Those who are not subject to a monthly SOC or those who have met their monthly SOC obligation (i.e., *certified eligibles)* (see Figure 6).

Figure 6 - Dual Eligibles Who Are Entitled to Medicare Parts A & B & D and Also Eligible for Full Scope Medi-Cal Benefits – Subgroup 2, At July 2010



Source: Created by RASB utilizing Medi-Cal Eligibility Data

Table 10 that follows presents unduplicated counts and percent distribution of dual eligibles in *Subgroup 2*. Roughly 38% are eligible for the QMB-Plus and SLMB-Plus Medicare coverage groups, while 60% are not eligible for either. The former QI-1 group represents individuals who were once participating in this *subgroup* but have now become eligible for Medi-Cal coverage. While participating in the QI-1 program, beneficiaries are not entitled to Medi-Cal benefits, but received financial assistance for payment of Medicare Part B premiums. Many of these beneficiaries who met their monthly SOC obligation became eligible for Medi-Cal through the MN eligibility pathway.

Once these beneficiaries attain Medi-Cal eligibility, they are no longer classified as QI-1. Therefore, RASB has denoted them as *former* QI-1s and they are presented for informational purposes only.

Table 10 - Distribution of Certified Beneficiaries Entitled to Medicare Part A, B and D Benefits and Full-Scope Medi-Cal Benefits by Certified Indicator and Medicare Savings Program – Subgroup 2, At July 2010

	Certified CCI Potential Population		Not Certified/ Unmet SOC		Total	
	Number	% of Total	Number	% of Total	Number	% of Total
Medicare Coverage Group						
Not QMB/SLMB	580,351	55.6%	42,030	4.0%	622,381	59.6%
Qualified Medicare Beneficiaries (QMB)	323,340	31.0%	568	0.1%	323,908	31.0%
Specified Low-Income Medicare Beneficiaries (SLMB)	81,157	7.8%	414	0.0%	81,571	7.8%
Former Qualifying Individual (QI-1)	8,002	0.8%	8,540	0.8%	16,542	1.6%
Grand Total	**992,850**	**95.2%**	**51,552**	**4.9%**	**1,044,402**	**100.0%**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

Section VIII: Common Medi-Cal Eligibility Pathways For Medi-Cal's *CCI Potential Population* Before Considering Exclusions

There are various eligibility pathways into the Medi-Cal program. For instance, individuals may become eligible for Medi-Cal by receiving cash assistance from a program such as CalWORKs or SSI linkage, which automatically awards them eligibility for Medi-Cal benefits. In other cases, individuals may become eligible for Medi-Cal by meeting specific eligibility criteria for one of Medi-Cal's special programs. These include groups such as the elderly, persons with disabilities, members of families with dependent children, certain other pregnant women and children, certain women with breast or cervical cancer, and uninsured individuals with tuberculosis.

While there are numerous entry pathways into the Medi-Cal program, Medi-Cal's dual eligibles predominately enter by a few select pathways. The following section describes the most common eligibility pathways for Medi-Cal's dual eligibles. RASB's evaluation focuses on Medi-Cal's dual eligible population that is eligible for Medicare Parts A and B and D, as well as full scope Medi-Cal benefits since these eligibles are targeted for enrollment into California's CCI. This population, as noted in Figure 4, represents the *CCI population before exclusions*.

Medi-Cal's dual eligible population commonly enters the Medi-Cal program through the SSI linkage[102] and State Supplemental Program (SSP). Individuals who receive SSI/SSP automatically receive Medi-Cal benefits and are considered categorically needy.[103] Individuals linked to Medi-Cal through SSI/SSP represented

[102] Supplemental Security Income (SSI) is a Federal income supplement program funded by general tax revenues (not Social Security taxes). The SSI program makes cash assistance payments to aged, blind, and disabled persons (including children) who have limited income and resources. The Federal Government funds SSI from general tax revenues. California pays a supplemental benefit to persons in addition to their Federal benefits. Title XVI of the Social Security Act authorizes SSI benefits. http://www.ssa.gov/ssi/.

[103] 42 U.S.C. Section 1396a(a)(10)(A)(i)(II); 42 C.F.R. Section 435.120

63%, or 626,105, of Medi-Cal's *CCI potential population* before exclusions (Table 11). The second most common Medi-Cal eligibility pathway was the Aged and Disabled Federal Poverty Level Program (A&D FPL), which represented 20% of the *CCI population before exclusions* (198,985 members).

Table 11 - Medi-Cal Dual Eligibles Entitled to Medicare Parts A, B, and D, and Full Scope Medi-Cal – Subgroup 2, At July 2010

MEDI-CAL PROGRAM	UNDUPLICATED BENEFICIARIES	% OF TOTAL
SSI or SSA Linked (Primarily Aid Codes 10-Aged SSI/SSP- Cash, 20-Blind SSI/SSP-Cash, 60-Disabled SSI/SSP - Cash)	626,105	63.1%
MN FPL - Aged Disabled (Primarily Aid Codes 1H, 2H, 6H)	198,985	20.0%
Other MN Groups (Primarily Aged, Disabled)	69,841	7.0%
LTC-Aged, Disabled, Blind (Aid Codes 13-Aged LTC, 23-Blind LTC, 63-Disabled LTC)	55,565	5.6%
PA - Other (Primarily Disabled Pickle, Craig v. Bonta)	36,942	3.7%
Other (Primarily 250% Working Disabled)	5,022	0.5%
BCCTP	359	0.0%
Medically Indigent	31	0.0%
CCI POPULATION BEFORE EXCLUSIONS	**992,850**	**100.0%**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

The A&D FPL program provides Medi-Cal coverage with no SOC obligation to individuals or couples who are age 65 or older or are disabled.[104] Qualification for this program requires that the individual have income at or below the FPL plus a specific dollar amount ($230 for an individual, $310 for a couple[105]) and be elderly or able to show that they meet the Social Security disability definition. For adults, Social Security disability is defined as being unable to engage in any substantial gainful activity because of a medically determinable physical or mental impairment which can be expected to result in death or last at least twelve straight months. Social Security defines a child as disabled if the child has a physical or mental condition(s) that very seriously limits his or her activities; and the condition(s) have lasted, or is expected to last, at least 1 year or result in death.[106]

Medi-Cal's MN program for the Aged, Blind, and Disabled also represented a common eligibility pathway for members of Medi-Cal's *CCI potential population*. Roughly 7%, or 69,841 beneficiaries, received full scope Medi-Cal through this program (Table 11). MN coverage is generally associated with individuals who do not receive cash assistance, which would automatically provide them Medi-Cal coverage. To qualify, an individual must be age 65 or older and meet the Social Security blindness or disability definition. In general, these individuals meet the resource limits for Medi-Cal programs for the Aged, Blind, or Disabled beneficiaries, but have too much income for other eligibility pathways. Beneficiaries who qualify for Medi-Cal under this eligibility

[104] Welfare & Institutions Code Section 14005.40. C.C.R. Title 22 Section 50558b; ACWDL # 04-25 (June 25, 2004); Medi-Cal Eligibility Procedures Manual 5K-21.
[105] Welfare and Institutions code section 14005.40(c)(1). Effective 4/1/11, the FPL level for an individual is $908. Adding $230 to this value results in an individual income limit of $1,133 ($908 + $230 = $1,138).
[106] The definition for disability is found at 42 U.S.C Section 1382c(a)(3)(A), (B). For children, see 42 U.S.C. Section 1382c(a)(3)(C). Medi-Cal beneficiaries in this category are considered categorically needy and represent a mandatory group pursuant to federal statute.

pathway may or may not have a SOC obligation.[107] Beneficiaries qualify for no-SOC or "free" Medi-Cal if their countable family income (income minus allowable deductions) is at or below the Maintenance Need Levels (MNL).[108] Beneficiaries with income above the MNL must meet a monthly SOC obligation. The SOC is the dollar amount of medical expenses that an individual must incur during a calendar month before Medi-Cal will cover medical expenses for the month.[109] This is sometimes referred to as a beneficiary's monthly "spend down" amount.

Dual eligibles residing in long-term care facilities and enrolled in Medi-Cal aid codes 13-Aged Long-Term Care, 23-Blind Long-Term Care, and 63-Disabled Long-Term Care represented another significant group. These beneficiaries constituted roughly 5.6% of this *subgroup* or 55,565 beneficiaries (Table 11). Long-term care does not represent a Medi-Cal eligibility pathway, however, LTC services represent a mandatory Medicaid service and individuals may become eligible for Medi-Cal due to costly LTC services.[110]

Beneficiaries who qualify for Medi-Cal through categorical linkages, such as SSI, are eligible for LTC services at no cost (meaning they do not have to meet a SOC obligation). Others, such as beneficiaries who qualify for Medi-Cal through the MN program, may have to meet a monthly SOC obligation. For these beneficiaries, Medi-Cal serves as a gap filler. The Medi-Cal program pays the difference between the monthly cost of LTC services and the monthly income of the recipient. If individuals do

[107] 42 U.S.C. Section 1396a(a)(10)(C); 42 C.F.R. Sections 435.300 et seq., 435.800 et seq.; 436.80 et seq.; Welf. & Inst. Code Sections 14005.7(c), 14005.9, 14005.12; 22 CCR Sections 50251(a)(1), 50401 et Seq., 50501 et seq., 50251 et seq., 50549 et seq., 50555.1, 50603. Also see ACWDL: 90-50, 96-31, 97-41, 05-36, 06-41, and 07-06.
[108] The current maintenance of need level (MNL) is $600 for an individual. This MNL has been in effect since July 1, 1989.
[109] Cal. Welf. & Inst. Code Section 14054.
[110] Cal Welf. & Inst. Code Section 14132(c); Cal. Code Reg. Title 22, Section 51335; 42 U.S.C. Sections 1396(a)(4)(A), 1396d(f); 42 C.F.R Sections 440.40(a), 440.155. Skilled nursing facility services must be required on a daily inpatient basis under conditions specified in 42 C.F.R Section 409.31-409.35 and must be ordered and provided under the direction of a physician.

not have sufficient cash flow to cover the costs of LTC services and they satisfy the resource, income, and other eligibility requirements associated with this Medi-Cal eligibility pathway, Medi-Cal will cover medical costs once the SOC obligation is met. [111] Table 12, below, presents dual eligibles within the *CCI potential population* who were enrolled in LTC aid codes by SOC status. Roughly 90% of the enrolled beneficiaries had a monthly SOC, while only 10% had no SOC.

Table 12 - Dual Eligibles Residing in LTC Facilities by SOC Obligation, At July 2010

SOC OBLIGATION	UNDUPLICATED BENEFICIARIES	% OF TOTAL UNDUPLICATED BENEFICIARIES
SOC Obligation	50,008	90%
No SOC Obligation	5,557	10%
TOTAL	**55,565**	**100%**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

Other Medi-Cal eligibility pathways included the 250% Working Disabled, Disabled Pickle, Craig v. Bonta, and 1931(b) Non-CalWORKs programs. These Medi-Cal eligibility pathways accounted for roughly 4% of the total dual eligibles included in this subgroup. The 250% Working Disabled Program provides Medi-Cal coverage to individuals whose countable income, based on SSI rules, is less than 250% of the

[111] The MN programs follows the aid program to which they are most closely linked (42 U.S.C. Section 1396a(a)(17)(B); 402 C.F.R. Section 435.601(b). The ABD MN program for beneficiaries who are aged, blind, or disabled follows SSI rules with respect to deductibles from countable income (42 C.F.R. Section 435.831(b)(2). The MN program allows a MN Maintenance Need Income Level (MNIL) deduction from countable income (Welf. & Inst. Code Section 14005.12, Cal Code Reg. Title 22 Section 50603.). The MNIL has not changed since 1989 and is equal to $600 for a single individual, $750 for two people, $934 for three people, $1,100 for four people. This MNIL increases with the family size. The amount by which the countable income exceeds the MNIL represents the beneficiary's SOC: Countable Income – MNIL = SOC.

FPL.[112,113] There were 4,961 beneficiaries within this subpopulation whose eligibility for Medi-Cal was gained through the 250% Working Disabled Program.

Named after its congressional sponsor and enacted in 1977, the Pickle Amendment[114] established a separate category of medical eligibility (42 U.S.C. § 1396a) within the Medi-Cal program. The Pickle Amendment affects individuals who received both Social Security benefits (SSA) and SSI benefits but became ineligible for SSI due to cost-of-living adjustments (COLA) in the SSA. Under the Pickle Amendment, that individual will remain eligible for Medicaid, provided that the individual would continue to be eligible for SSI benefits assuming the COLA increases in the SSA benefits were disregarded. The amendment requires that individuals be deemed a SSI recipient (which in California means automatic Medi-Cal eligibility) if they meet the following requirements:

- Simultaneously entitled to receive both social security (Old Age, Survivors, or Disability Insurance (OASDI)) and SSI in some month after April 1977;
- Currently eligible for and receiving OASDI;
- Currently ineligible for SSI; and
- Receiving income that would qualify the individual for SSI after deducting all OASDI cost-of-living adjustments received since the last month in which the individual was eligible for both OASDI and SSI.

Craig v. Bonta and disabled adult children (DAC) represented two additional eligibility pathways or programs associated with Medi-Cal's dual eligibles. Craig v.

[112] The SSI regulations related to determining countable income are found at 20 CFR Section 416.1110, 416-1112, and at 416.976 for IRWEs.
[113] Welf. & Inst. Code Section 14007.9, 42 U.S.C. 1396a(a)(10)(A)(ii)(XIII). DHCS ACWDLs 00-16, 00-51, 01-14, 01-26, and 01-46.
[114] Section 503 of P.L. 94-566

Bonta, a court case, stipulated that aged, blind, and disabled individuals terminated from SSI/SSP for any reason other than death or incarceration must remain eligible for full-scope Medi-Cal without a SOC until the county determines that they are eligible for another Medi-Cal program.[115] Beneficiaries losing SSI/SSP must have their eligibility determination performed in accordance with SB 87 guidelines.[116] In July 2010, Medi-Cal *CCI population before exclusion* beneficiaries that are associated with Craig v. Bonta totaled 13,153, while there were 3,954 DACs. DACs are eligible for no SOC Medi-Cal under a special program for Medi-Cal DACs.[117] This program covers disabled children who are over age 18, were born with or became blind or disabled before age 22, and whose SSI/SSP benefits were discontinued because of their receipt of or entitlement to Retirement Survivor Disability Insurance (RSDI) benefits or an increase in RSDI benefits that they currently receive.[118, 119] Coverage under this program is applied to DACs who can claim Social Security Title II (RSDI) benefits based on their parent's work history.

Medi-Cal's 1931(b)–Non-CalWORKs also represented a common eligibility pathway, accounting for 15,816 eligibles in July 2010.[120] Medi-Cal's 1931(b) program provides children through age 18 (if they are expected to graduate, until 19), parents, and caretaker relatives with free Medi-Cal (no SOC). To qualify for this program, parents and caretaker relatives must have children who are deprived of full parental support. This means that at least one parent in the family must be absent, deceased, or disabled, or the principal wage earner (PWE) must be unemployed or underemployed.

[115] Craig v. Bonta, S.F. Superior Ct., No. CFF 02 500688.
[116] ACWDL # 07-24 (Nov. 9, 2007).
[117] 42 U.S.C. Sections 402(d), 1383c(c); 20 C.F.R. Section 404.350; ACWDL # 87-49 (Aug. 26, 1987).
[118] 42 U.S.C. Sections 402(d), 1383c(c); 20 C.F.R. Section 404.350.
[119] 42 U.S.C. Section 402(d)(1)(B); 42 C.F.R. Section 404.350(a)(5).
[120] Medi-Cal utilizes two aid codes for this program: (1) aid code 3N-1931(b) Non-CalWORKs, (2) aid code 3V-Restricted Scope.

There are special rules based on type of applicant and the number of hours the PWE can work. In addition, a family's countable income must fall below specific limits and property limits apply.[121]

Families may receive 1931(b) without any time limit, so long as they meet applicable eligibility requirements. Therefore, some families receive 1931(b) until their youngest child reaches age 18 or 19. Parents and children losing 1931(b) or CalWORKs due to increased income should be eligible for Transitional Medi-Cal (TMC) for up to one year. A review of the 1931(b)–Non CalWORKs dual eligible population discloses that almost all of the eligibles are parent caretakers (Table 13).

Table 13 - 1931(b) Non-CalWORKs Beneficiaries Eligible for Medicare Parts A, B, and D by Age Group, At July 2010

AGE GROUP	UNDUPLICATED BENEFICIARIES
0 - 17	10
18 - 20	5
21 - 64	13,653
65 and Up	2,148
Total	**15,816**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

[121] There are income and property exemptions that apply when determining whether a family meets these specific thresholds.

Section IX: Reduction of the *CCI Potential Population* after Considering Applicable Exclusions to Arrive At the *CCI Population in 58 counties*

Table 14, that follows, presents a summary of how specific exemptions were applied to Medi-Cal's dual eligible population to arrive at the *CCI population in 58 counties*. The total number of dual eligibles at July 2010 was 1.2 million.

The first filters applied to narrow the dual eligible population relate to benefit coverage. The broadest definition of the *CCI population* is called the *CCI potential population* and is defined as: Beneficiaries eligible for Medicare Parts A and B and D, and entitled to full scope Medi-Cal benefits.

Referring to Figure 7, the above criteria exclude beneficiaries who are participating in Medicare Savings Programs (i.e., QMB-Only, SLMB-Only, QI-1, QWDI). As previously stated, these beneficiaries receive aid in paying for cost sharing, co-payments, and Medicare premiums, but are not entitled to Medi-Cal health benefits.[122]

CCI Populations

CCI Potential Population: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits, including beneficiaries who have met or not met their SOC obligation.

CCI Population Before Exclusions: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, before considering CCI exclusions.

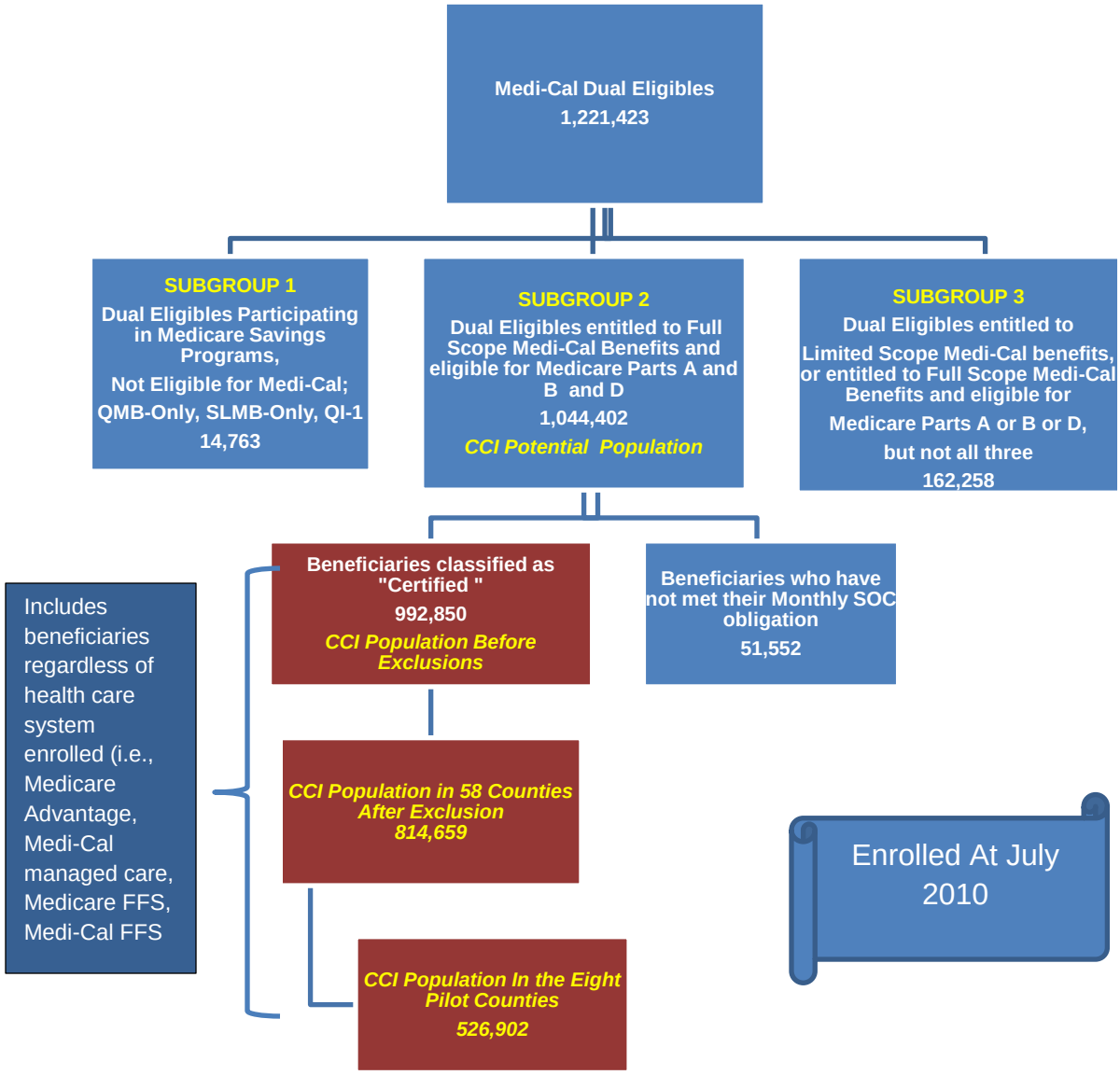
CCI Population in 58 Counties: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation at the beginning of the month, after considering applicable CCI exclusions.

CCI Population in the Eight Pilot Counties: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation at the beginning of the month, after considering applicable CCI exclusions, limited to the eight pilot counties.

FFS CCI Population in the Eight Pilot Counties: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, after considering applicable CCI exclusions, limited to the eight pilot counties. This population is further limited by selecting only those beneficiaries who were enrolled in both Medi-Cal and Medicare's traditional FFS programs.

[122] "Benefits" as used in this case refers to health services defined as medical assistance pursuant to Title XIX Section 1902 of the Social Security Act (SSA) [42 USC 1396a]. This section sets forth the requirements for making payments to States for medical assistance through an approved Medicaid State plan that describes the nature and scope of the State's Medicaid program and contains the necessary information in order for a State to receive federal financial participation. "Benefits" for purposes of the

Figure 7 – Flowchart of the *CCI Population,* At July 2010



current discussion does not include Medicare premiums, co-payments, and cost sharing paid on behalf of beneficiaries participating in Medicare Savings Programs such as QMB-Only, SLMB-Only, QI-1, and QWDI. When these services and Medi-Cal assistance is discussed throughout this brief are discussed, they will be separately noted.

This subpopulation, as displayed in Figure 7, totals 14,763. In addition, dual eligibles entitled to limited scope Medi-Cal benefits, or entitled to full scope Medi-Cal benefits and eligible for Medicare Parts A or B or D, but not all three, are excluded as well (162,258 beneficiaries).

Since the *CCI potential population* is limited to beneficiaries eligible for Medicare Parts A and B and D, and entitled to full scope Medi-Cal benefits, the number of Medi-Cal dual eligible beneficiaries is reduced from 1,221,423 to 1,044,402 based on the initial filtering discussed above. The *CCI potential population* total of 1,044,402 includes beneficiaries who have a monthly SOC, some who met their obligation and some who have not. Beneficiaries who have met their monthly SOC obligation are considered "certified," while those beneficiaries who did not meet their monthly SOC obligation are ineligible for participation in the CCI. After selecting "certified" eligibles only, the remaining 992,850 beneficiaries constitute the *CCI population before exclusions* (Figure 7). To arrive at the *CCI population in 58 counties*, as currently considered, additional populations are excluded.

Table 14 – *CCI Population* after Considering Excluded Populations, July 2010

CCI Population Before Exclusions			**992,850**
Exclusions (unduplicated count of beneficiaries)	(see list)	(178,191)	
CCI Population in 58 Counties			**814,659**

As noted in Table 14, there are 178,191 unduplicated beneficiaries who will be ineligible based on specific exclusions, reducing the *CCI population before exclusions* of 992,850 to the *CCI population in 58 counties* of 814,659. The beneficiaries are deemed ineligible under one or more of the following exclusions:

- Certified beneficiaries with a monthly SOC obligation not deemed met at the first of the month. Only those beneficiaries who meet their SOC obligation at the beginning of the month are eligible for the CCI. Beneficiaries most likely to meet their SOC obligation at the beginning of the month include those residing in LTC facilities or those receiving in-home-supportive services. Beneficiaries who do not meet their SOC obligation at the beginning of the month are excluded from CCI participation.
- Beneficiaries with other health coverage.
- Beneficiaries during Retroactive Months of Eligibility.
- Beneficiaries participating in the Developmentally Disabled (DD) Waiver.
- Beneficiaries participating in the Nursing Facility – Acute (NF-A), In-Home Operations (IHO), Acquired Immune Deficiency Syndrome (AIDS), and Assisted Living Waiver Pilot Project (ALWPP) waivers.

- Beneficiaries with one or more claims indicating a diagnosis for ESRD in the prior year.
- Beneficiaries residing in a rural zip code.
- Beneficiaries under age 21.
- Beneficiaries residing in a State Veteran's Home.
- Beneficiaries enrolled in certain large, non-profit health plans operating their own pharmacies.[123]

The numbers of beneficiaries subject to exclusions are separately identified for each unique exclusion category in Table 15. Table 15 presents the *CCI population before exclusions* and then removes the unduplicated count of beneficiaries subject to exclusions to arrive at the *CCI population in 58 counties*.

When reviewing Table 15 the reader should be aware that a single beneficiary may be subject to more than one distinct exclusion. Therefore, the total beneficiary count for each distinct exclusion category cannot be summed to arrive at the total number of unduplicated beneficiaries subject to all exclusions. For example, there are 17,108 beneficiaries subject to exclusion due to a diagnosis of ESRD. Over 8%, or 1,411, of these beneficiaries are also subject to one or more additional exclusions. If each exclusion was summed independently, the total number of persons affected would be overstated by 1,523. The additional exclusions applicable to the ESRD subpopulation include:

- Enrollment was certified on a retroactive basis (648 beneficiaries);

[123] A prepaid health plan that is a non-profit health care service plan with at least 3.5 million enrollees statewide, that owns or operates its own pharmacies and that provides medical services to enrollees in specific geographic regions through an exclusive contract with a single medical group in each specific geographic region in which it operates to provide services to beneficiaries.

- Other Health Coverage (533 beneficiaries);
- Under age 21 (147 beneficiaries);
- Developmentally Disabled Waiver (160 beneficiaries);
- HCBS Waiver (NF-A, IHO, AIDS Waiver, or ALWPP) (83 beneficiaries);
- Beneficiary resides in a rural zip code (32 beneficiaries)[124]; and
- Beneficiary resides in a Veteran's Home (I beneficiary).

After applying the exclusions and appropriately employing criteria to arrive at the total number of unduplicated beneficiaries subject to exclusions, there are 814,659 dual eligible beneficiaries who are members of the *CCI population in 58 counties* (Table 15).

[124] The following rural zip codes were excluded from CCI participation: 92242, 92267, 92280, 92319, 92323, 92332, 92351, 92363, 92364, 92366, 93528, 93554, 93562, 93592, 90704, 92225, 92226, 92239, 92272, 92280.

Table 15 - Beneficiaries Excluded from the *CCI Population before Exclusions*, July 2010

GROUPS EXCLUDED FROM DUAL ELIGIBLE DEMONSTRATION UNIVERSE *(Not mutually exclusive - beneficiaries may be counted in more than one row)*	
Certified Beneficiaries enrolled under an aid code with a monthly share-of-cost obligation not deemed met at the first of the month	15,048
Beneficiaries with Other Health Coverage	37,760
Beneficiaries during Retroactive Months of Eligibility	34,530
Beneficiaries participating in the Developmentally Disabled (DD) Waiver	45,064
Beneficiaries participating in the NF-A, IHO, AIDS, and, ALWPP waivers	2,947
Beneficiaries with one or more claims indicating a diagnosis for ESRD	17,108
Beneficiaries residing in a rural zip code	1,413
Beneficiaries who are under 21 years of age.	1,168
Beneficiaries residing in a Veteran's Home	72
Beneficiaries enrolled in certain large, non-profit health plans operating their own pharmacies[125]	39,778
CCI POPULATION BEFORE EXCLUSIONS	**992,850**
LESS: UNDUPLICATED TOTAL OF EXCLUSIONS	**178,191**
CCI POPULATION IN 58 COUNTIES	**814,659**

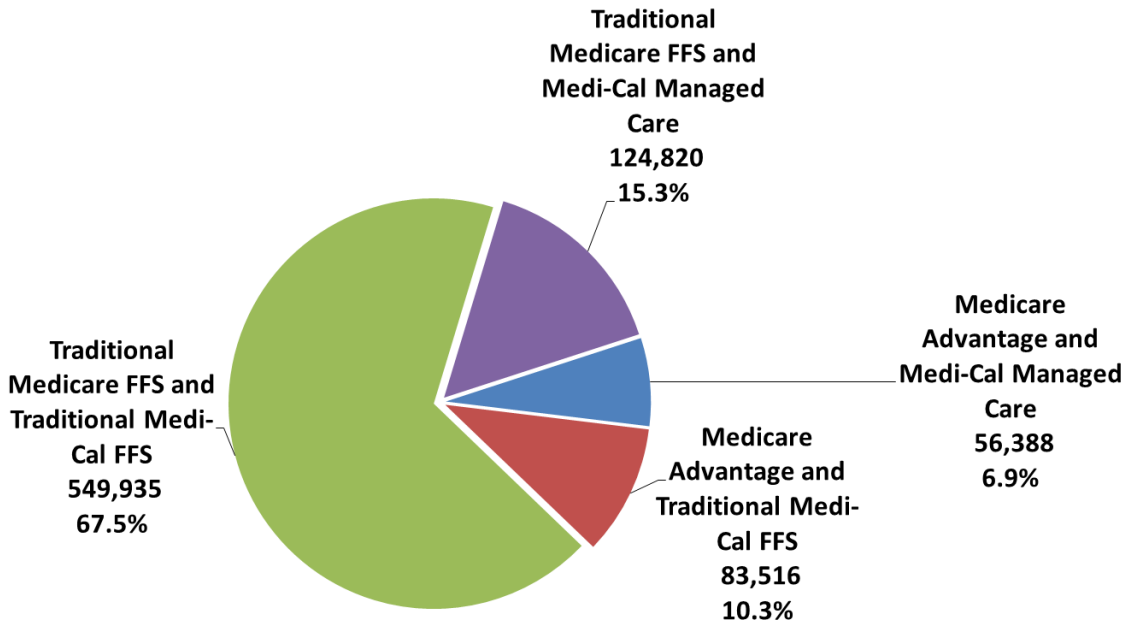
Note: The reader should be aware that a single beneficiary may be subject to more than one distinct exclusion. Therefore, the total beneficiary count cannot be summed to arrive at the total number of unduplicated beneficiaries subject to all exclusions. Enrollment numbers reflect certified totals for the month of July 2010.

Figure 8 presents the *CCI population in 58 counties* and displays the different segments of the population by health system enrollment. Within this count are beneficiaries enrolled in Medi-Cal managed care plans, Medicare Advantage Plans,

[125] A prepaid health plan that is a non-profit health care service plan with at least 3.5 million enrollees statewide, that owns or operates its own pharmacies and that provides medical services to enrollees in specific geographic regions through an exclusive contract with a single medical group in each specific geographic region in which it operates to provide services to beneficiaries.

Medi-Cal plans where passive enrollment will not be required, and beneficiaries participating in Medicare and Medi-Cal's traditional FFS system.

Figure 8 - *CCI Population in 58 Counties* by Plan Enrollment, At July 2010
TOTAL ELIGIBLES EQUAL 814,659



Source: Created by RASB utilizing Medi-Cal Eligibility Data

Section X: *CCI Population in the Eight Pilot Counties*

The *CCI population in the eight pilot counties* is defined with the same parameters as the *CCI population in 58 counties,* but includes only those beneficiaries residing in the eight pilot counties. Table 16 presents *CCI population* counts for the initial eight pilot counties based on the July 2010 eligibility month. The eight pilot counties constitute 65%, or 526,902, of the total *CCI population in 58 counties*. Over two-thirds of the *CCI population in the eight pilot counties* participated in both Medicare and Medi-Cal's traditional FFS programs, while 12.3% participated in Medicare's traditional FFS program and Medi-Cal's managed care program (Figure 9). Twelve percent

participated in Medicare Advantage plans and Medi-Cal's traditional FFS system. Roughly 8.5% participated in both Medicare Advantage and Medi-Cal managed care plans.

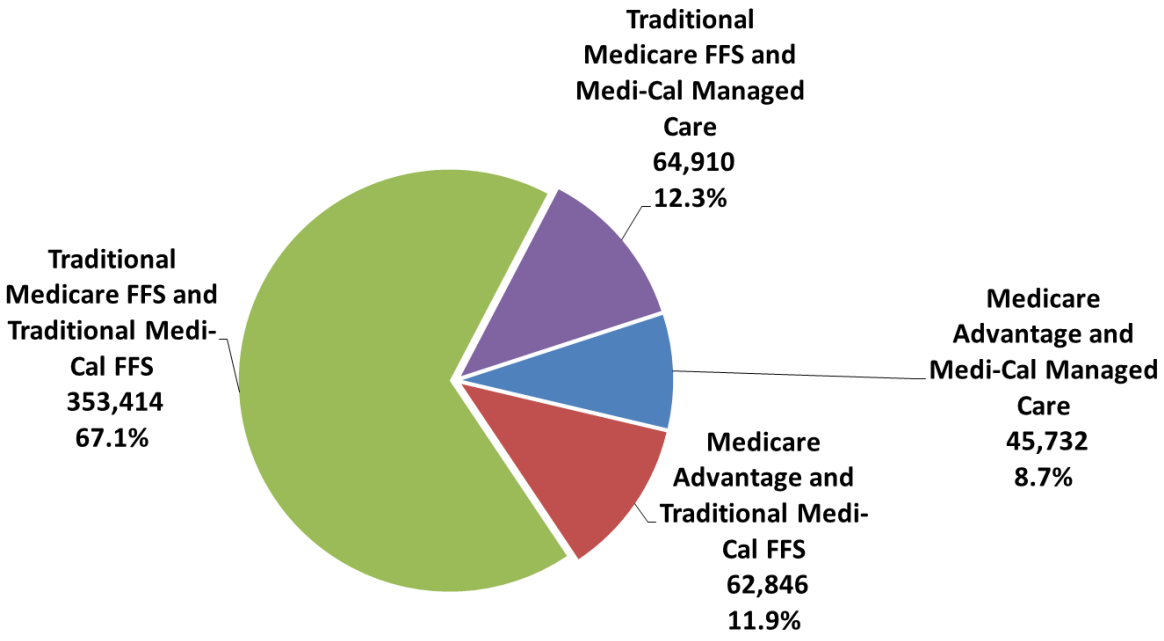
Table 16 - *CCI Population in the Eight Pilot Counties*, At July 2010

County	Plan Model Type	*CCI Population in 58 Counties*	In a Medicare Advantage Plan Only	In Both a Medicare Advantage Plan and a Medi-Cal Health Plan	In a Medi-Cal Health Plan Only	Not in a Medicare or a Medi-Cal Health Plan
Alameda	Two-Plan	31,076	2,951	2,623	2,096	23,406
Los Angeles	Two-Plan	271,072	36,983	11,005	11,638	211,446
Orange	COHS	57,060	92	16,999	39,367	602
Riverside	Two-Plan	34,477	6,769	3,313	925	23,470
San Bernardino	Two-Plan	36,368	6,450	2,941	1,000	25,977
San Diego	GMC	50,952	7,767	1,475	1,827	39,883
San Mateo	COHS	10,652	23	6,928	3,565	136
Santa Clara	Two-Plan	35,245	1,811	448	4,492	28,494
Grand Total		**526,902**	**62,846**	**45,732**	**64,910**	**353,414**

Source: Created by RASB utilizing Medi-Cal Eligibility Data

Figure 9 - *CCI Population in the Eight Pilot Counties* By Plan Enrollment, At July 2010,

TOTAL ELIGIBLES EQUAL 526,902



Source: Created by RASB utilizing Medi-Cal Eligibility Data

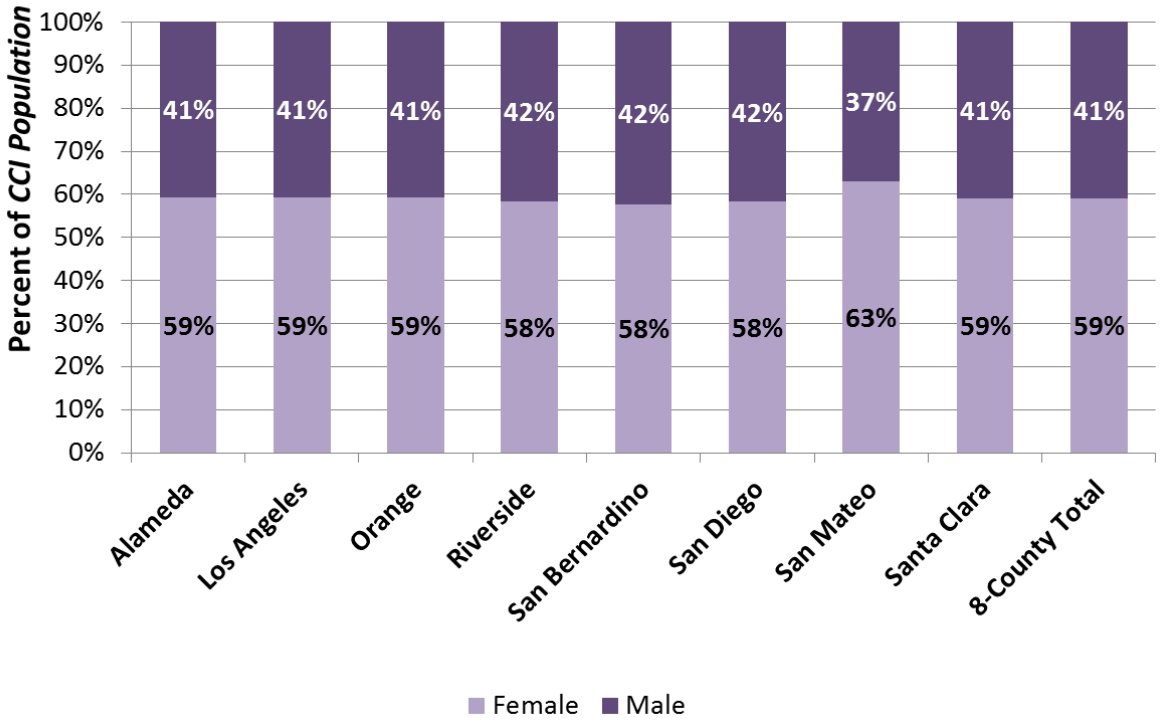
Section XI: Distribution by Gender, Age, Ethnicity, Language, Medi-Cal Eligibility Category, and Healthy System Enrollment; *CCI Population in the Eight Pilot Counties*

This section provides a demographic picture of the *CCI population in the eight pilot counties*. Included are summary statistics for each of the eight pilot counties, which include: age distribution, gender distribution, language distribution, ethnicity distribution, Medi-Cal eligibility category distribution, health system enrollment distribution, and Medicare coverage group distribution. The chart book that follows presents this information; data highlights have been added to identify significant information.

Table 17 – Chart Book 1, Demographic Graphics of Section XI

Figure 10 - Distribution by Gender, *CCI Population in the Eight Pilot Counties*, At July 2010

TOTAL ELIGIBLES EQUAL 526,902



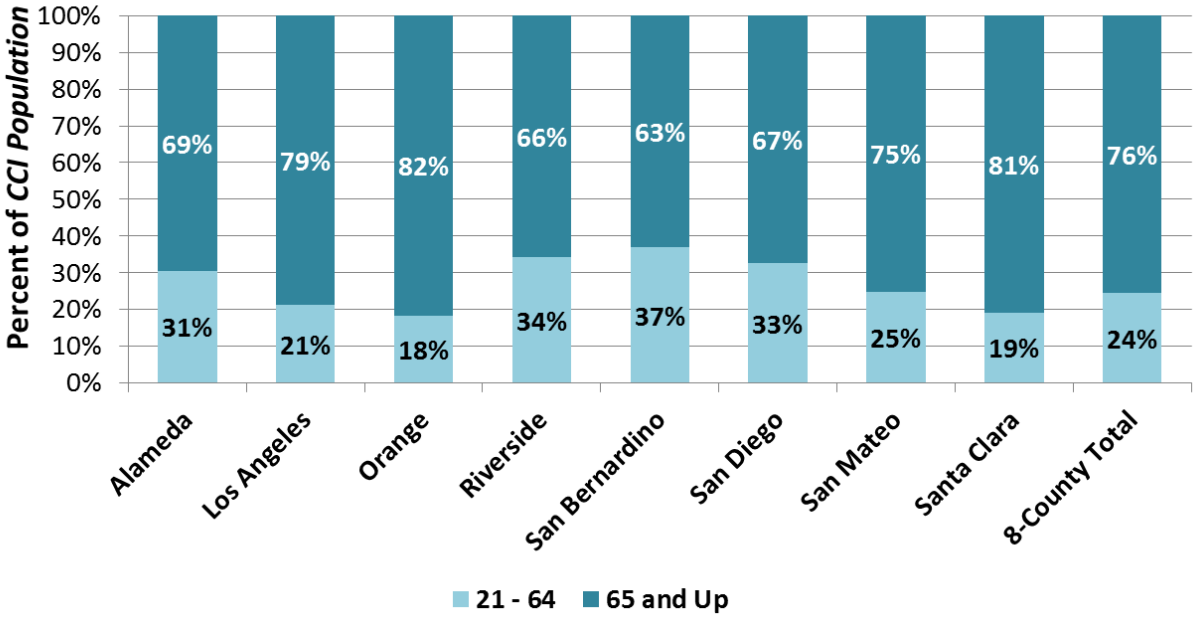
Data Highlights

Females comprise 59% of the CCI population in the eight pilot counties and males comprise 41%. The greater number of females in the older age cohorts is reflective of the longer lifespans of females overall.

CCI population in the eight pilot county counts as seen in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Figure 11 - Distribution by Age, *CCI Population in the Eight Pilot Counties*, At July 2010

TOTAL ELIGIBLES EQUAL 526,902



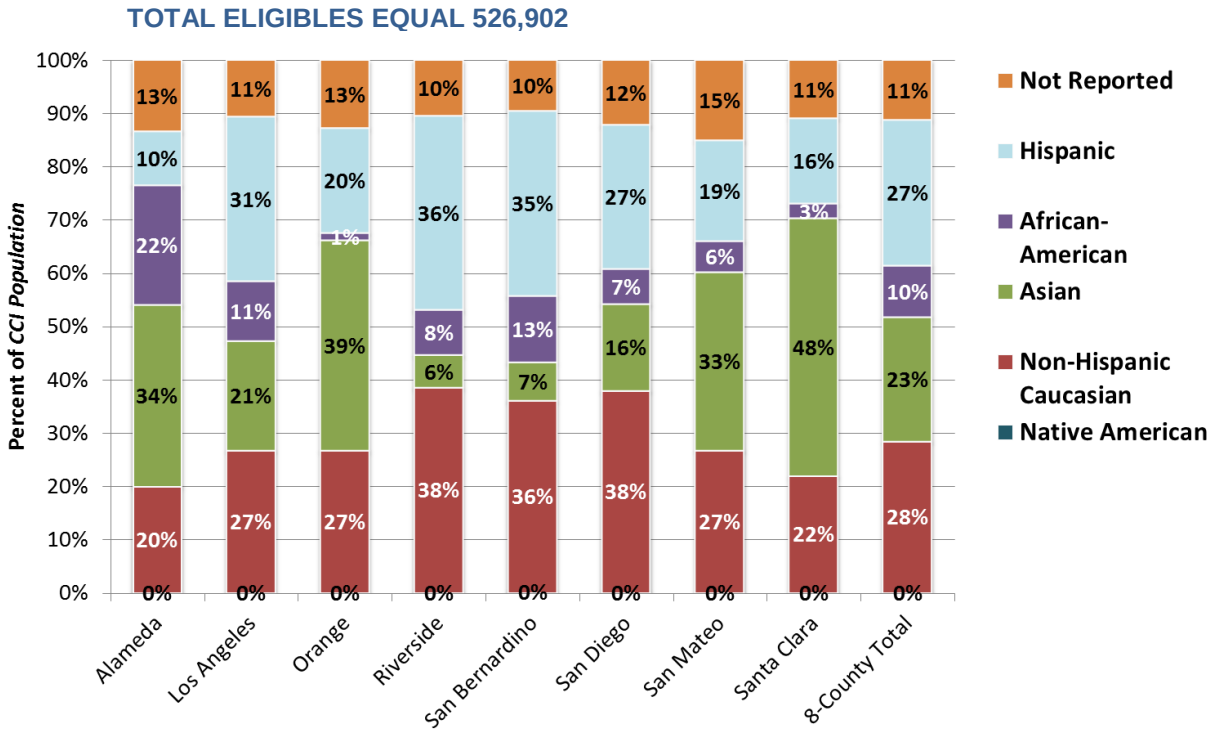
Data Highlights

Roughly 24% of the CCI population in the eight pilot counties was between the ages of 21 and 64, while 76% of the population was 65 years of age or older.

This distribution, however, differed among the 8 pilot counties. Four counties (Alameda, Riverside, San Bernardino and San Diego) reported more than 30% of their respective CCI populations were between 21 and 64 years old.

CCI population in the eight pilot county counts as reflected in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Figure 12 - Distribution by Ethnicity, *CCI Population in the Eight Pilot Counties*, At July 2010



Data Highlights

Dual eligibles of Asian, Hispanic, and Non-Hispanic Caucasian ancestry comprised 78% of the CCI population in the eight pilot counties. Compared to the CCI population in the eight pilot counties, dual eligibles of Asian ancestry were represented in greater proportions in the counties of Alameda, Orange, San Mateo, and Santa Clara. African-American dual eligibles comprised 22% of the CCI population in Alameda County and 10% of the overall CCI population.

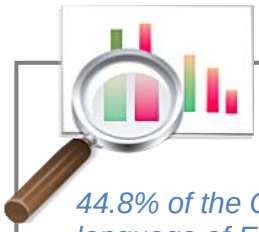
The counties of Los Angeles, Riverside, and San Bernardino all denoted greater proportions of Hispanics than the CCI population in the eight pilot counties. In these counties, Hispanics represented between 31% and 35% of the CCI population.

CCI population in the eight pilot county counts as seen in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Table 18 - Distribution by Language, *CCI Population in the Eight Pilot Counties*, At July 2010

TOTAL ELIGIBLES EQUAL 526,902

Language	Alameda	Los Angeles	Orange	Riverside	San Bernardino	San Diego	San Mateo	Santa Clara	All 8 Counties
English	54.0%	39.9%	40.8%	58.2%	62.7%	52.3%	59.0%	34.3%	44.8%
Spanish	5.9%	23.1%	13.9%	23.4%	20.1%	19.0%	13.2%	9.1%	19.4%
Unknown	12.3%	10.6%	10.2%	15.3%	13.5%	16.0%	10.9%	7.7%	11.5%
Vietnamese	3.1%	1.9%	23.6%	0.6%	0.8%	3.5%	0.4%	22.9%	5.7%
Cantonese	12.9%	3.6%	0.5%	0.1%	0.3%	0.5%	3.6%	3.6%	3.1%
Mandarin	3.1%	2.8%	0.9%	0.1%	0.2%	0.2%	1.4%	8.0%	2.3%
Armenian	0.0%	6.1%	0.2%	0.0%	0.1%	0.0%	0.2%	0.0%	3.2%
Tagalog	1.9%	1.7%	0.6%	0.6%	0.4%	3.8%	5.2%	3.8%	1.9%
Russian	0.8%	2.3%	0.4%	0.0%	0.0%	1.0%	2.0%	2.5%	1.6%
Farsi	1.5%	1.8%	2.9%	0.2%	0.1%	0.7%	0.5%	1.7%	1.5%
Cambodian	0.3%	0.5%	0.3%	0.1%	0.1%	0.2%	0.0%	0.6%	0.4%
Other	4.2%	5.6%	5.8%	1.5%	1.7%	2.7%	3.5%	5.7%	4.7%



Data Highlights

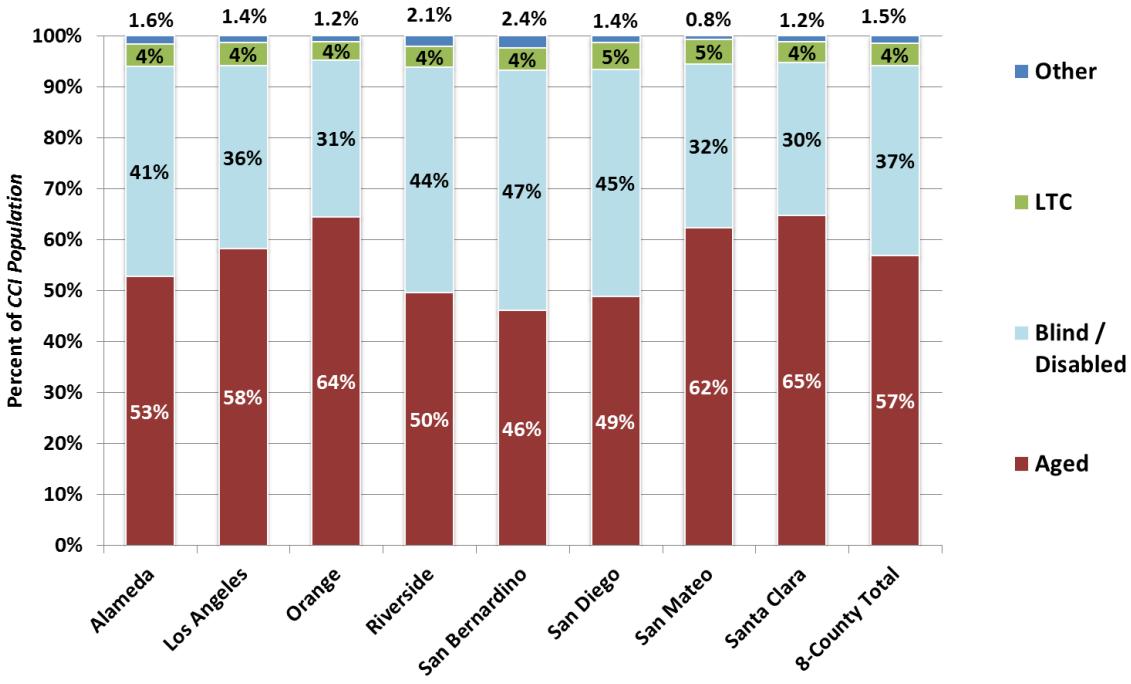
44.8% of the CCI population in the eight pilot counties reported a primary language of English. Spanish was the most frequent non-English primary language spoken (19.4%), followed by Vietnamese (5.7%), Armenian (3.2%) Cantonese (3.1%), Mandarin (2.3%) and Tagalog (1.9%). Spanish was the most frequent non-English primary language in 5 counties (Los Angeles, San Mateo, San Diego, Riverside, and San Bernardino).

Vietnamese was the most frequent non-English primary language in Orange and Santa Clara Counties, while Cantonese was the most frequent non-English primary language in Alameda County, and Vietnamese was the second most frequent non-English primary language in Santa Clara County. Los Angeles County reported large numbers of Armenian and Russian speakers.

CCI population in the eight pilot county counts as seen in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Figure 13 - Distribution by Medi-Cal Eligibility Category, *CCI Population in the Eight Pilot Counties,* At July 2010

TOTAL ELIGIBLES EQUAL 526,902



Data Highlights

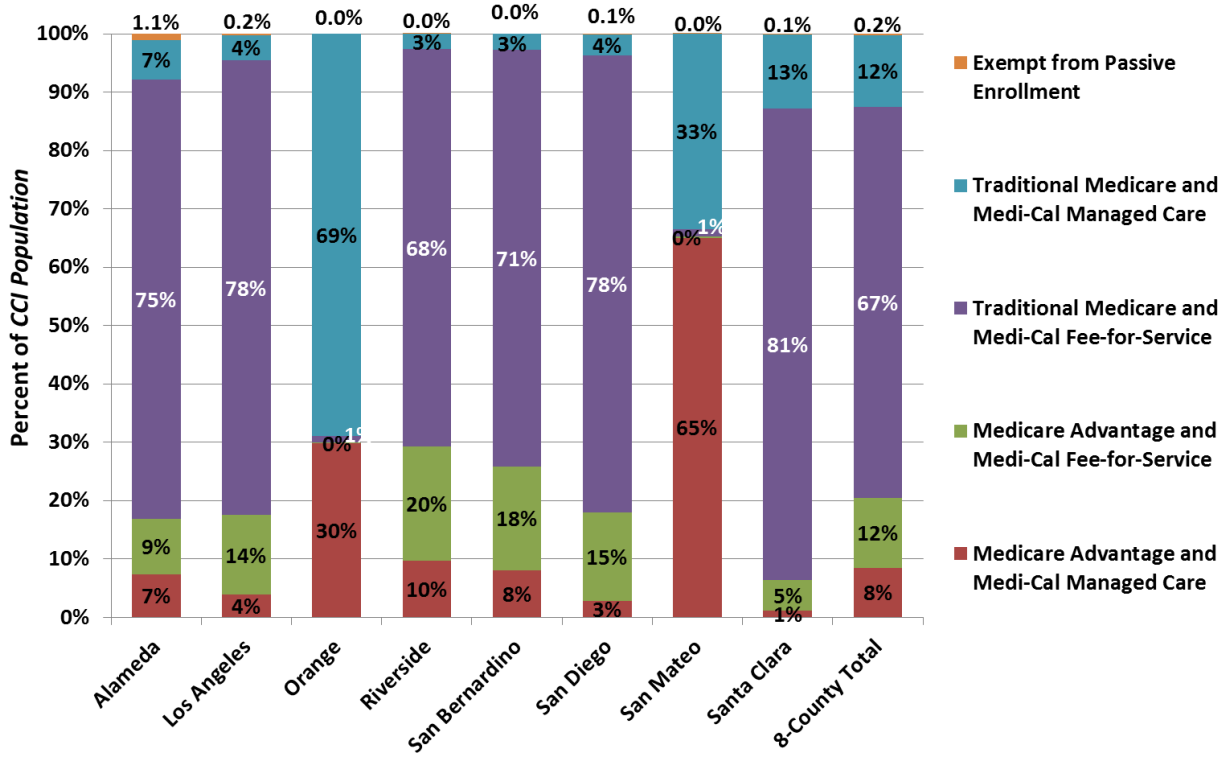
Overall, eligibles enrolled in aid codes for the Aged represented 57% of the CCI population in the eight pilot counties, while those enrolled in Blind/Disabled aid codes comprised 37% and those enrolled in Long-Term Care aid codes comprised 4%.

Alameda, Riverside, San Bernardino, and San Diego counties contained greater percentages of Blind/Disabled eligibles than the other pilot counties.

CCI population in the eight pilot county counts as displayed in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Figure 14 - Distribution by Health System Enrollment, *CCI Population in the Eight Pilot Counties*, At July 2010

TOTAL ELIGIBLES EQUAL 526,902



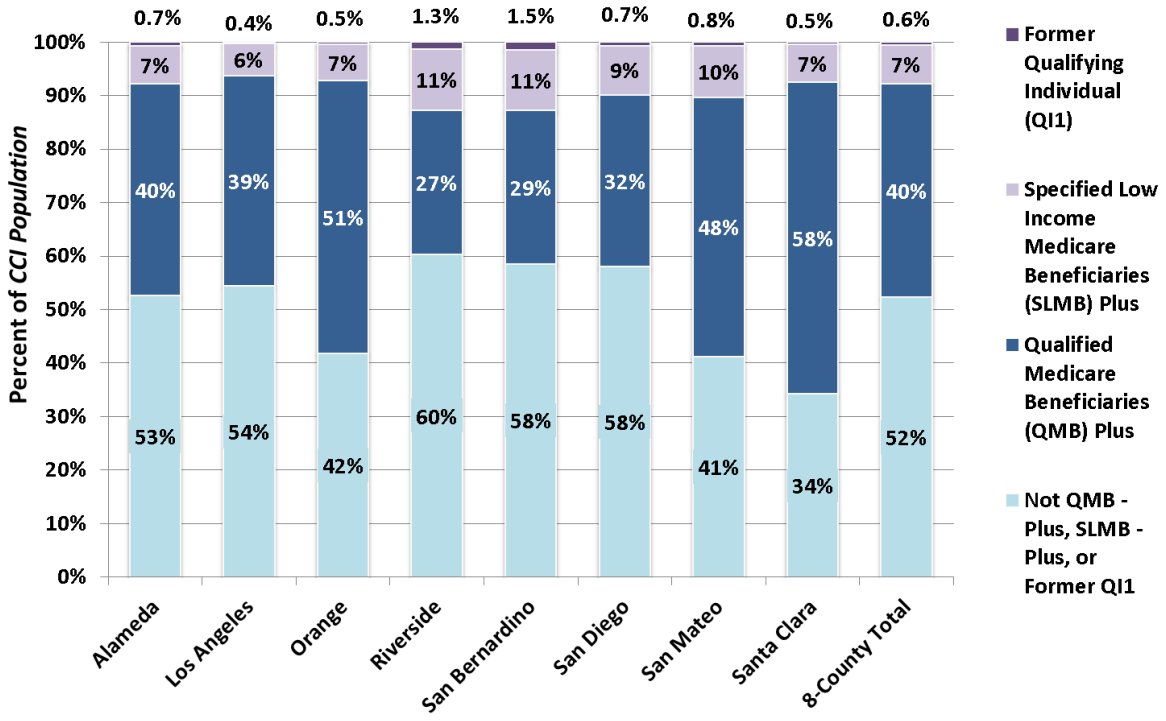
Data Highlights

The distribution of the CCI population in the eight pilot counties by Medi-Cal and Medicare health system shows the strong influence of the plan model type selected by each county. In the Medi-Cal Two-Plan and GMC counties, where enrollment in Medi-Cal managed care health plans has been voluntary for dual eligible Aged, Blind, and Disabled beneficiaries, there was a greater percentage of the CCI population who participated in traditional FFS in both programs.

CCI population in the eight pilot county counts as displayed in the above figure reflect all eligibles regardless of health system enrollment (i.e., FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Figure 15 - Distribution by Medicare Coverage Group, *CCI Population in the Eight Pilot Counties*, At July 2010

TOTAL ELIGIBLES EQUAL 526,902



Data Highlights

Overall, 48% of the dual eligibles in the CCI population in the eight pilot counties were participants in a Medicare Savings Program. Roughly 40% of the CCI population in the eight pilot counties participated in QMB Plus, 7% in SLMB Plus, and .06 % were former QI-1 participants.

The percentage of dual eligibles in the CCI population in the eight pilot counties who were participants in a Medicare Savings Program was greatest in Orange, San Mateo, and Santa Clara counties.

CCI population in the eight pilot county counts as displayed in the above figure reflect all eligibles regardless of health system enrollment (i.e., Medicare FFS, Medi-Cal FFS, Medicare managed care, Medi-Cal managed care). See Figure 9 for the distribution of the CCI population in the eight pilot counties by health system.

Section XII: Identifying the *FFS CCI Population in the Eight Pilot Counties* For Analysis of Health Care Cost, Utilization, and Disease Prevalence

The sections above have described the demographic characteristics of the *CCI population* as well as the number of beneficiaries likely to participate in the CCI based solely on Medi-Cal eligibility data. In this section, RASB describes how the Medi-Cal eligibility data was matched to the Medicare and the OSHPD administrative data sets so that cost, utilization, and disease burden could be examined. All previous population totals were based on *point-in-time* counts (i.e., July 2010) and made use of Med-Cal eligibility data as the source for all counts and demographic profiles. In this section, RASB incorporates Medicare eligibility data and also makes use of a technique that counts beneficiaries who have *ever* been enrolled in Medicare and Medi-Cal during CY 2010.

RASB utilized various administrative data sets to evaluate health care cost, utilization, and disease prevalence. To ensure that this analysis made use of the most complete data set possible and provided the best picture of the utilization, cost, and disease burden of the population of interest, RASB selected only *CCI population* beneficiaries who participated in Medicare and Medi-Cal's traditional FFS programs throughout CY 2010. Specifically, this is the group of persons who were ever enrolled in Medicare and Medi-Cal during CY 2010, but only participated in Medicare and Medi-Cal's traditional FFS systems. Beneficiaries enrolled in traditional FFS Medi-Cal and Medicare were chosen because complete encounter records are not uniformly available for those beneficiaries enrolled in managed care plans. This is consistent with the methods used by other researchers to examine cost and utilization among Medicare's

dual eligible population. For example, the CMS publication *Chronic Conditions Among Medicare Beneficiaries* (issued by the Center for Strategic Planning) examined only Medicare beneficiaries who were enrolled in Medicare FFS, Parts A and B, and excluded beneficiaries who were enrolled at any point in an Advantage plan.[126]

Combining Medicare and Medi-Cal Data Sets

The first step in combining the Medicare and Medi-Cal data sets involved identifying a Medi-Cal dual population finder's file using Medi-Cal eligibility data. This entailed querying Medi-Cal eligibility data for all beneficiaries who were eligible for any form of Medicare during CY 2010 months of eligibility.[127] The total number of Medi-Cal beneficiaries who met this criterion at any time during CY 2010 equaled 1,333,016. This total included *CCI beneficiaries* who participated in Medicare and Medi-Cal's traditional FFS programs, as well as those who participated in Medicare Advantage and Medi-Cal managed care plans. This total also included Medi-Cal duals that were not eligible for the *CCI population.*

The next step involved matching the Medi-Cal dual eligible finder's file to Medicare's eligibility file. Matching to the Medicare eligibility data and searching for beneficiaries who were eligible for Medicare at any time during the year disclosed that 1,332,387 beneficiaries were included in both the Medi-Cal and Medicare eligibility data sets, representing a 99.95% match rate. Further analysis disclosed that not all of these matches included agreement among fields such as gender and birth date. Therefore,

[126] Centers for Medicare & Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart Book. Baltimore, MD. 2011. Page 30.
[127] See Figure 4 of this report for an illustration of Medi-Cal eligibility data for CY 2010 as concerns the CCI population.

RASB further limited matching records to only those where agreement was found between the Social Security Number (SSN), gender, and birth date.

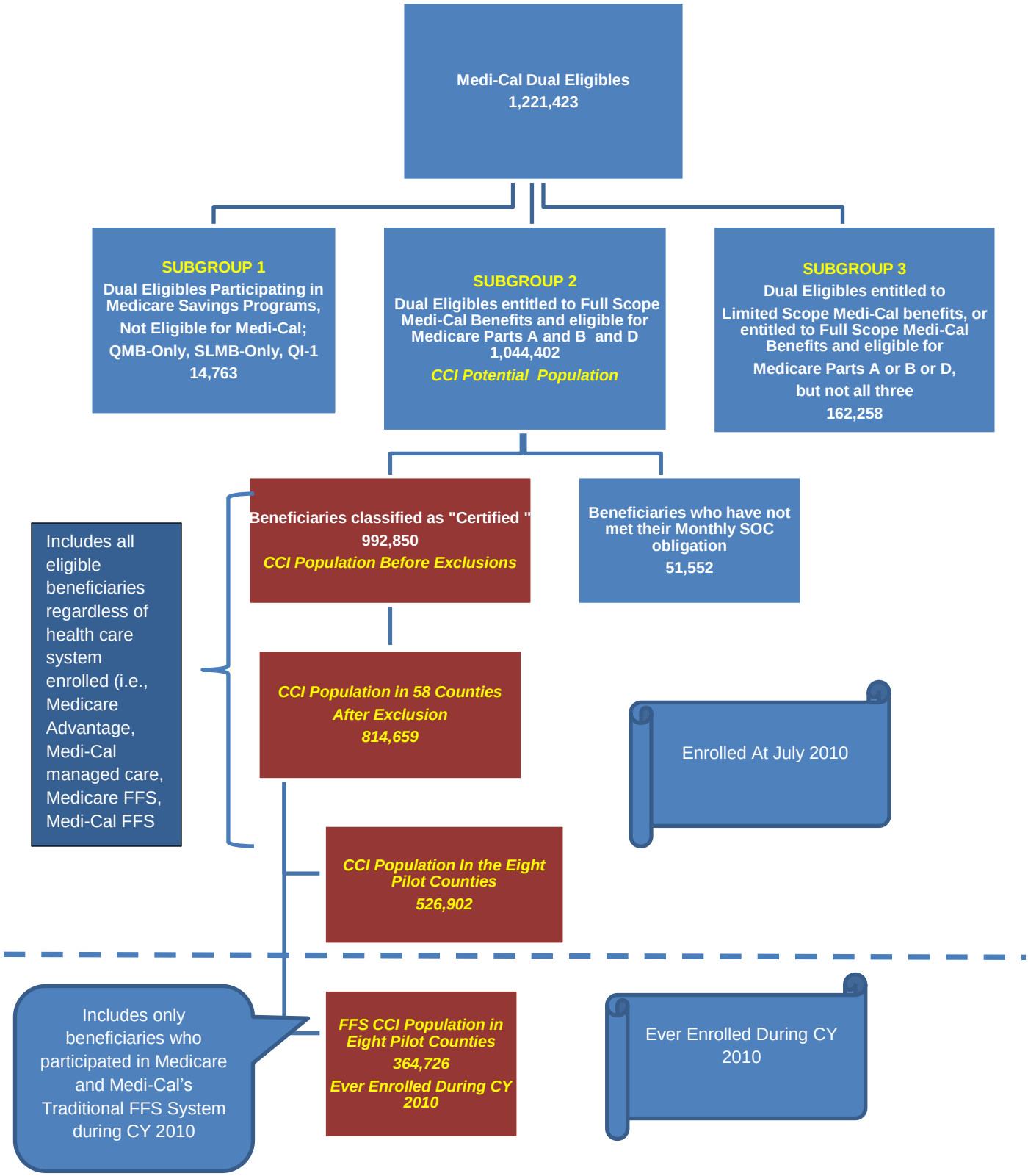
After limiting the matched file to only those records where the SSN, gender, and birth date agreed, 1,294,171 beneficiaries were included in the matched data set. This represented a 97.09% match rate. This final matched data set was then evaluated in terms of the *CCI population* criteria, which resulted in the elimination of specific non-eligible *CCI populations* (see Tables 14 and 15). After eliminating the non-eligible *CCI population*, the total number of *CCI population in 58 counties* beneficiaries ever eligible during CY 2010 totaled 942,873. Further limiting this matched *CCI population in 58 counties* to the eight pilot counties resulted in a *CCI population* of 589,026. Analysis of this matched data set disclosed that a small proportion of these matched records did not agree relative to months of eligibility. For example, in some cases Medi-Cal data indicated that a beneficiary was eligible for the month of January, but the Medicare data set indicated that the same beneficiary was not eligible for Medicare during January, but rather March. To further clean this matched file, RASB selected only those matches that indicated agreement with respect to months of enrollment, which reduced the matched file to 570,231 beneficiaries.

The final step in this process involved selecting only those beneficiaries that participated in Medicare and Medi-Cal's traditional FFS programs in the eight pilot counties. This population totaled 364,726. Again, this count of 364,726 beneficiaries represents beneficiaries who participated at any time during CY 2010. Stated another way, this count reflects beneficiaries who were eligible for at least one month during CY 2010. As stated previously, earlier counts of the *CCI population in the eight pilot*

counties represent point-in-time counts (i.e., July 2010). This population will hereafter be referred to as the *FFS CCI population in the eight pilot counties*.

Figure 16 – Medicare and Medi-Cal Match Process

Figure 17 – Flowchart of the *CCI Populations* Studied



Section XIII: Demographic Profile of Medi-Cal's *FFS CCI Population in the Eight Pilot Counties*, CY 2010

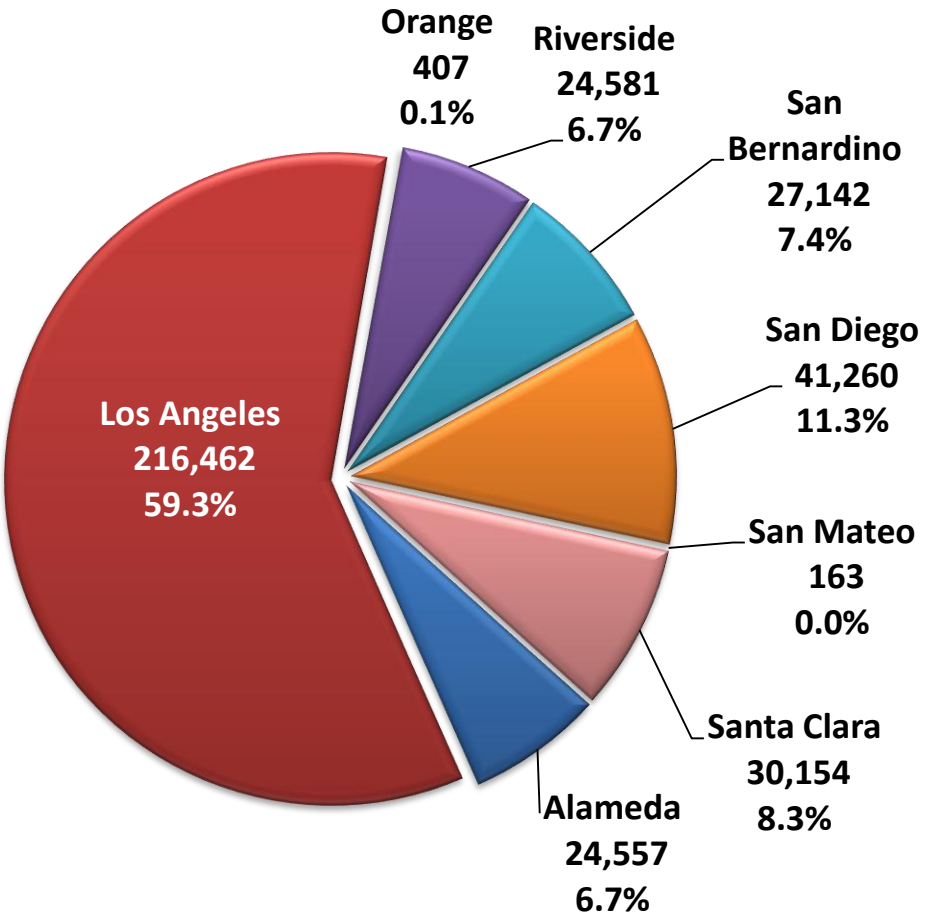
As noted above, after matching the Medi-Cal *CCI population in the eight pilot counties* to the Medicare eligibility file, 364,726 beneficiaries were identified as participating in both Medicare and Medi-Cal's traditional FFS system programs for at least one month during CY 2010 (ever enrolled). This population will hereafter be referred to as the *FFS CCI population in the eight pilot counties*.

In this section, RASB profiles the demographic composition of the *FFS CCI population in the eight pilot counties*. Demographic information regarding age, gender, aid code, ethnicity, and language spoken are depicted in terms of individual counties, eight pilot county totals, and are organized in a fashion that mirrors the earlier demographic study of the *CCI population in the eight counties* for easy comparisons. The chart book that follows presents this information; data highlights have been added to identify significant information.

Table 19 – Chart Book 2, Demographic Figures of Section XIII

Figure 18 – Number of *FFS CCI Population* Eligibles in the Eight Pilot Counties

TOTAL ELIGIBLES EQUAL 364,726

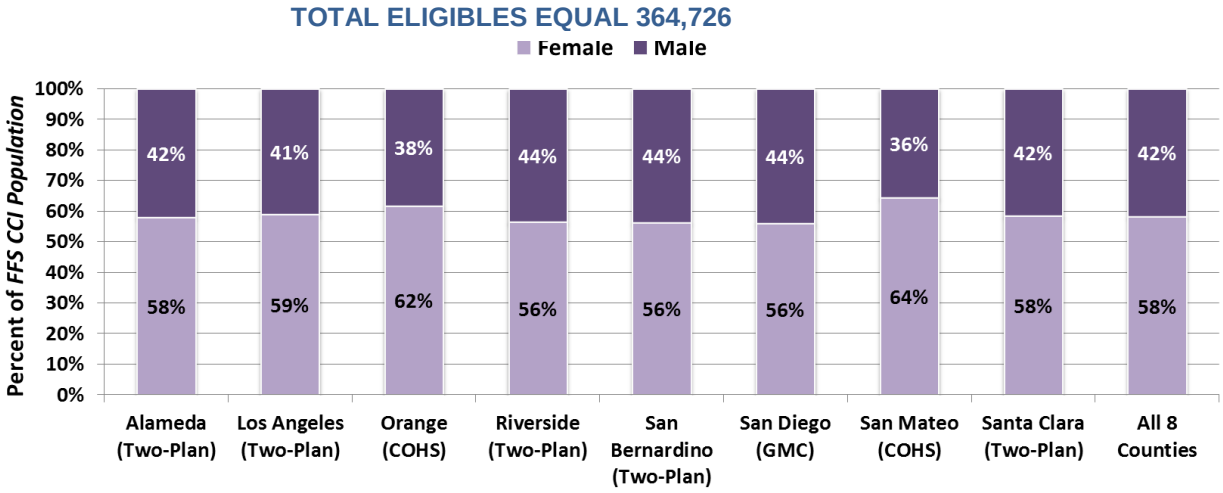


Data Highlights

Roughly 59% of the total FFS CCI population in the eight pilot counties resided in Los Angeles County, while 11% resided in San Diego County. Santa Clara, San Bernardino, and Riverside each represented roughly 7% of the total FFS CCI population in the eight pilot counties.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Figure 19 – Distribution By Gender, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



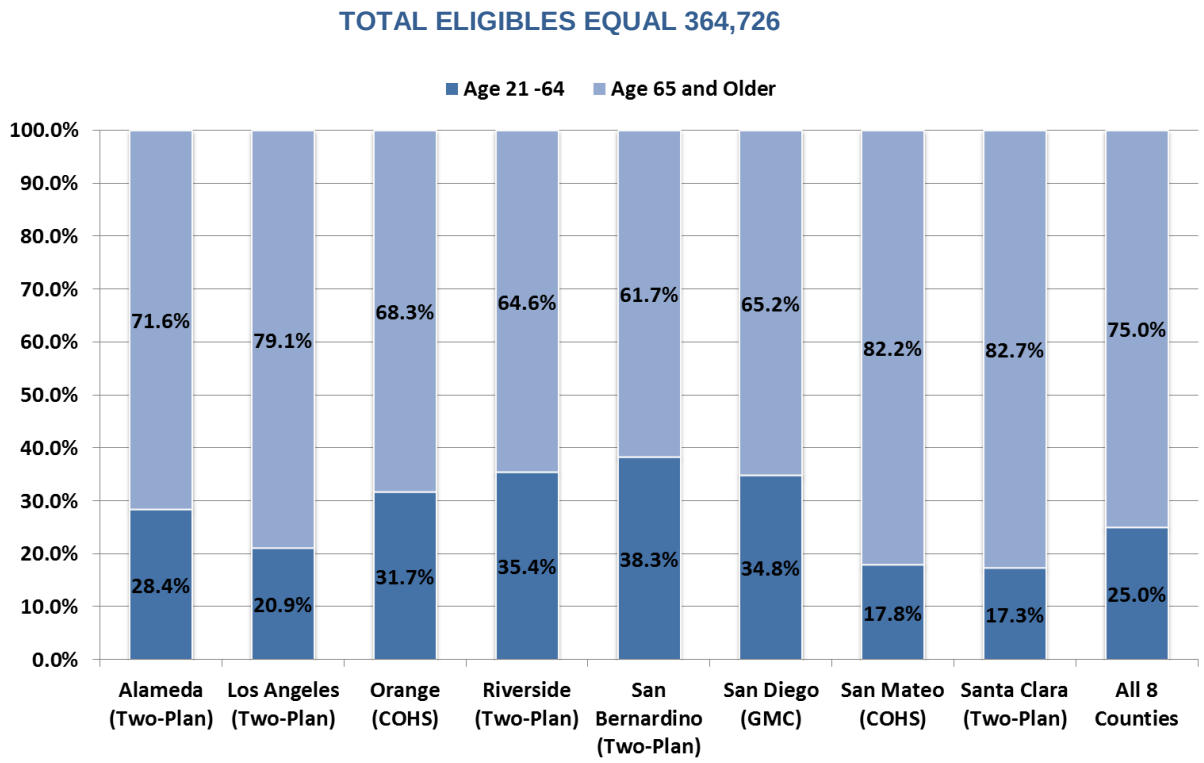
Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

Data Highlights

The combined eight county distribution disclosed that roughly 58% were female and 42% were male. This distribution was consistent across all eight pilot counties.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Figure 20 – Distribution by Age, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



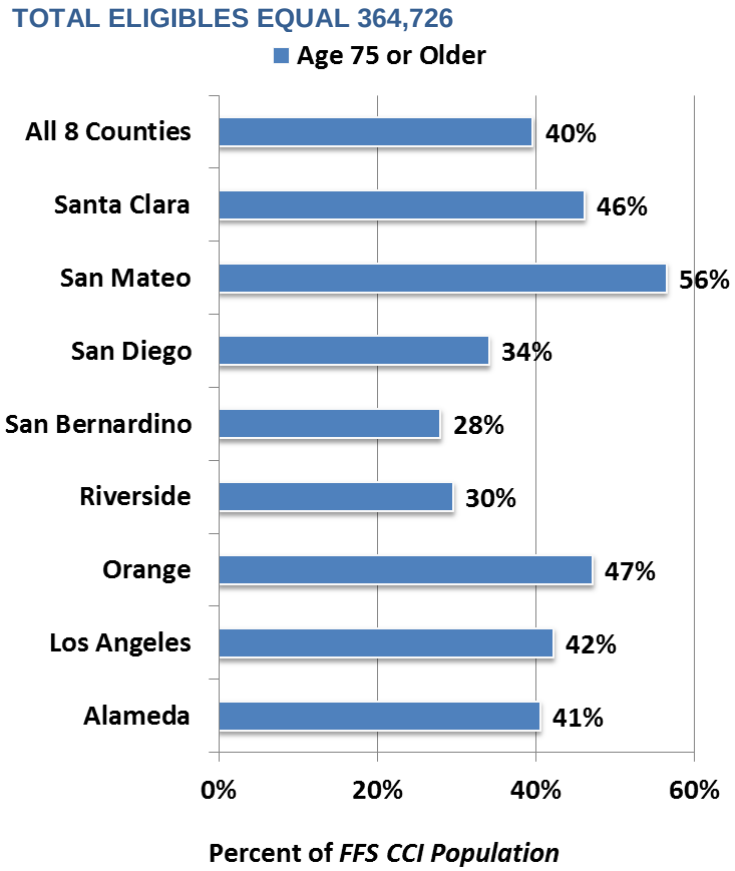
Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

Data Highlights

Seventy-five percent of the FFS CCI population in the eight pilot counties was age 65 or older. This finding was consistent with the CCI population in the eight pilot counties before matching to the Medicare eligibility data and limiting to only those participating in Medicare and Medi-Cal's traditional FFS system (Figure 7).Santa Clara County disclosed the highest proportion of beneficiaries age 65 or older (82.7%) and San Bernardino County disclosed the lowest proportion of beneficiaries age 65 or older (61.7%).

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Figure 21 – Proportion of *FFS CCI Population in the Eight Pilot Counties* Age 75 or Older, Beneficiaries Ever Enrolled in CY 2010



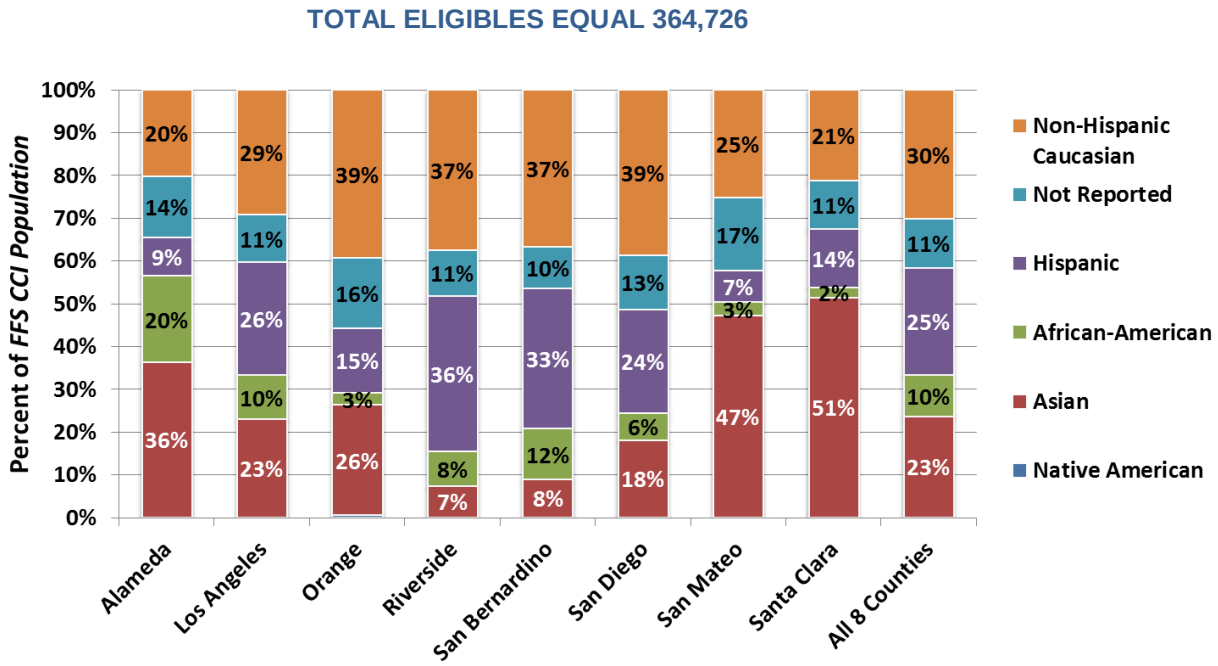
Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

Data Highlights

Roughly 40% of the FFS CCI population in the eight pilot counties was age 75 or older.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Figure 22 – Distribution by Ethnicity, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

Data Highlights

Thirty percent of the FFS CCI population in the eight pilot counties was classified as non-Hispanic Caucasian, 25% as Hispanic, 23% as Asian, and 10% as African-American. The distribution by ethnicity mirrors that of the CCI population in the eight pilot counties (which includes beneficiaries regardless of health system enrollment). The counties of Riverside, San Bernardino, and Los Angeles had greater proportions of Hispanics than the combined eight county proportions. Alameda, San Mateo, and Santa Clara all displayed high proportions of beneficiaries of Asian ethnicity.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Table 20 – Distribution by Language, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

Language	Alameda	Los Angeles	Orange	Riverside	San Bernardino	San Diego	San Mateo	Santa Clara	All 8 Counties
English	52.4%	39.5%	61.2%	57.2%	63.1%	53.4%	40.5%	32.3%	44.3%
Spanish	5.3%	19.5%	8.1%	23.2%	18.6%	16.8%	4.9%	7.7%	17.4%
Unknown	12.1%	10.2%	10.6%	15.6%	13.7%	15.9%	6.7%	7.2%	11.3%
Armenian	0.0%	7.4%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	4.4%
Vietnamese	3.0%	2.0%	4.9%	0.8%	0.9%	4.0%	0.0%	25.5%	4.1%
Cantonese	14.3%	4.1%	0.2%	0.2%	0.3%	0.6%	27.0%	3.9%	3.9%
Korean	1.2%	4.7%	5.7%	0.5%	0.6%	0.3%	0.6%	1.9%	3.1%
Mandarin	3.6%	3.4%	1.7%	0.1%	0.3%	0.2%	3.7%	9.0%	3.1%
Russian	0.9%	2.9%	0.7%	0.0%	0.0%	1.3%	8.0%	2.8%	2.2%
Tagalog	2.1%	1.9%	1.2%	0.8%	0.6%	3.9%	6.1%	3.6%	2.1%
Other	5.0%	4.4%	5.4%	1.6%	1.8%	3.7%	2.5%	6.0%	4.1%

Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

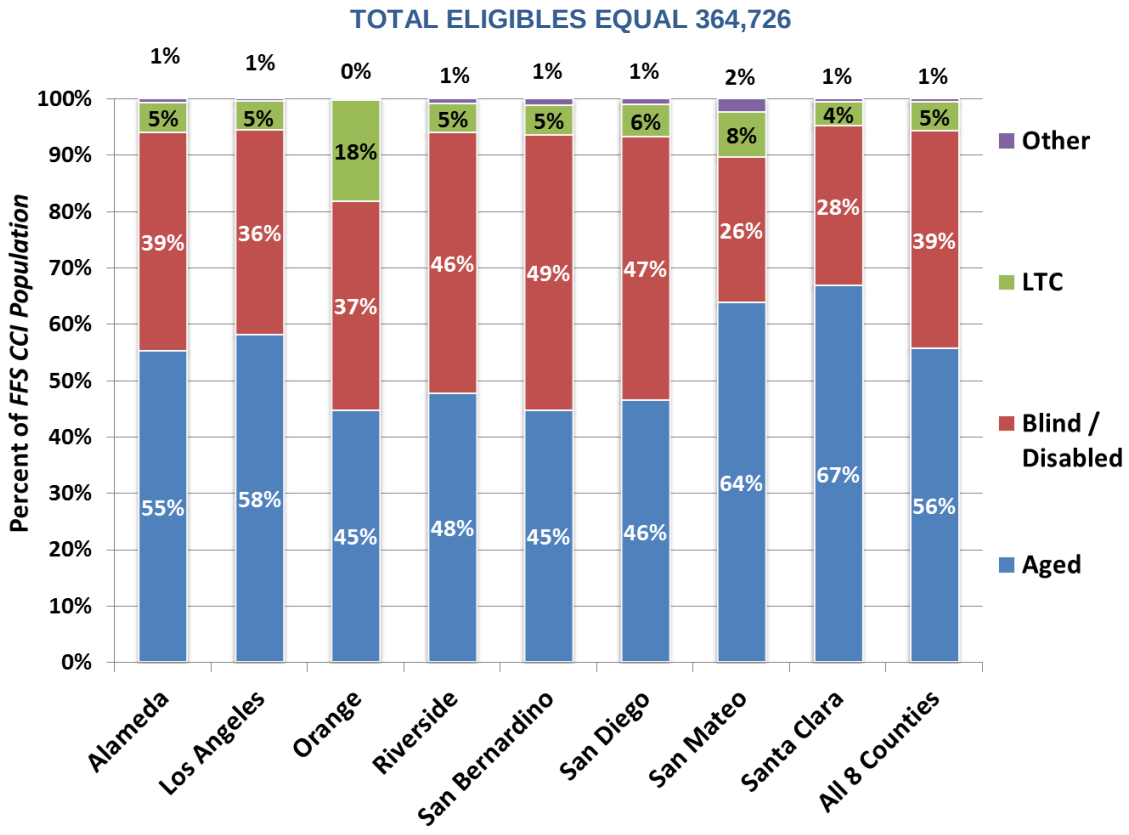
Data Highlights

Forty-four percent of the FFS CCI population in the eight pilot counties reported a primary language of English. Non-English speakers ranged from a high of 68% in Santa Clara to a low of 37% in San Bernardino. San Mateo disclosed that 27% of the FFS CCI population spoke Cantonese. This was a much higher proportion than reported for all eight pilot counties, 3.9% of whom spoke Cantonese. Cantonese speakers represented 14% of Alameda's FFS CCI population.

Santa Clara displayed a high proportion of Vietnamese speakers (26%) relative to the eight pilot county proportion of 4%. Spanish was a top language in Los Angeles, Riverside, San Bernardino, and San Diego counties, with each county disclosing that between 17% and 23% of their respective FFS CCI population spoke Spanish. Los Angeles County also included Armenian and Russian speakers, which represented 7% and 3%, respectively, of their FFS CCI populations.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Figure 23 – Distribution by Medi-Cal Aid Code Category, *FFS CCI Population in the Eight Pilot Counties,* Beneficiaries Ever Enrolled in CY 2010



Source: Created by RASB using matched Medi-Cal and Medicare eligibility data.

Data Highlights

More than half of the FFS CCI population in the eight pilot counties was enrolled in the Aged aid code category (56%), while 39% were enrolled in the Disabled aid code category. The remaining FFS CCI population in the eight pilot counties was divided between the LTC aid code (5%) and the Other aid code category (1%). San Bernardino, Riverside, and San Diego counties disclosed that roughly 47% of their respective FFS CCI populations were enrolled in a Disabled aid code category. Conversely, Santa Clara disclosed that only 28% of their FFS CCI population was enrolled in a Disabled aid code category, while 67% were enrolled in an Aged aid code category.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI beneficiaries participated in traditional Medicare and Medi-Cal FFS.

Section XIV: Evaluating and Identifying Chronic Disease Within the *FFS CCI Population in the Eight Pilot Counties*

Chronic diseases are the leading cause of death and disability in the United States, accounting for seven out of ten deaths each year.[128] AHRQ defines a chronic condition as one which lasts 12 months or longer and meets one or both of the following tests: (a) it places limitations on self-care, independent living, and social interactions; or (b) it results in the need for ongoing intervention with medical products, services, and special equipment.[129] Chronic conditions are not only a major cause of mortality and morbidity, but account for a significant portion of healthcare spending. It is estimated that 78% percent of all healthcare expenditures in the United States are spent caring for individuals with chronic conditions.[130]

The growing number of adults with Multiple Chronic Conditions (MCCs) is another concern in the United States. It has been found that roughly 21% or 63 million Americans suffer from MCCs.[131] These diseases also contribute to significant limitations in daily living for almost one out of ten Americans, or 25 million people. In 2008, nearly one in every two adults age 18 or older had at least one of the following six leading chronic illnesses: cardiovascular disease, arthritis, diabetes, asthma, cancer, and COPD.[132] The prevalence of chronic conditions has increased significantly over the last several decades, with diabetes and obesity, for example, growing at double-digit rates.

[128] Centers for Disease Control and Prevention, Chronic Disease Prevention and Health Promotion. http://www.cdc.gov/chronicdisease/overview/index.htm#1

[129] Chronic Condition Indicator (CCI). *H-CUP – US Tools and Software.* Health Care Cost and Utilization Project.http://www.hcup-us.ahrq.gov/toolssoftware/chronic/chronic.jsp

[130] Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB and Blumenthal D. Multiple Chronic Conditions: Prevalence, Health Consequences, and Implications for Quality, Care Management, and Costs. 2007. Journal of General Internal Medicine; 22(Supp 3):391-395.

[131] Vogeli C, Shields AE, Lee TA, Gibson TB, Marder WD, Weiss KB and Blumenthal D. Multiple Chronic Conditions: Prevalence, Health Consequences, and Implications for Quality, Care Management, and Costs. 2007. Journal of General Internal Medicine; 22(Supp 3):391-395.

[132] National Center for Health Statistics. Health, United States, 2009. With special feature on medical technology. Hyattsville, MD: National Center for Health Statistics; 2009. Available from: http://www.cdc.gov/nchs/data/hus/hus09.pdf

Many of the trends in chronic disease identified in the general population are also present in both the Medicare and Medicaid populations.

Among the Medicare population, the chronic disease prevalence for conditions such as hypertension, high cholesterol, heart disease, and diabetes is significant. Most Medicare beneficiaries suffer from two or more chronic conditions.[133] Ten conditions have accounted for half of the inflation-adjusted growth in spending over the past two decades.[134] The most notable increases in spending have been associated with diabetes, COPD, kidney disease, hyperlipidemia, hypertension, mental disorders, and arthritis. Hypertension, which is a dominant condition among both the Medicare population and the wider US population, accounts for $108.8 billion in healthcare expenditures when the treatment of its complications and its comorbidities are calculated.[135]

As discussed in the literature review section of this paper, dual eligibles are generally sicker than non-dual eligible Medicare beneficiaries and suffer from complex health conditions that are difficult to manage and treat. In many cases, these complex health conditions are exacerbated by a fragmented health care system that requires interaction with multiple programs across Federal, State, and local governments as well as numerous providers and caregivers.

Many within the Medicare population are burdened with multiple co-occurring chronic diseases. The Institute of Medicine reports that 23% of Medicare beneficiaries have five or more chronic conditions, accounting for 66% of all Medicare health care

[133] Centers for Medicare and Medicaid Services, *Chronic Conditions Among Medicare Beneficiaries. Chart Book.* Baltimore, MD. 2011.
[134] Thorpe KE, Howard DH. The rise in spending among Medicare beneficiaries: the role of chronic disease prevalence and changes in treatment intensity. Health Affairs. 2006
[135] Hodgson TA, Cai L. Medical care expenditures for hypertension, its complications, and its comorbidities. Med Care 2001.

spending. Seventy percent of dual-eligible beneficiaries have two or more chronic conditions compared to 66% of non-duals.[136] Medicare beneficiaries suffering from MCCs are more likely to incur hospital inpatient admissions and visit hospital emergency rooms. Only 4% of Medicare beneficiaries with zero to one chronic conditions were hospitalized during the year and less than 1% were hospitalized three or more times during the year. Among Medicare beneficiaries with two or three chronic conditions, 14% were hospitalized. Almost two-thirds of Medicare beneficiaries with six or more chronic conditions were hospitalized at least once during the year and 18% were hospitalized three or more times during the year.[137] Twenty-five percent of Medicare beneficiaries with two or three chronic conditions had at least one emergency department visit throughout the year and 3% had multiple visits. Beneficiaries with six or more chronic conditions were frequent visitors to the emergency room (ED). Seventy percent of the beneficiaries with six or more chronic conditions had at least one ED visit and over 25% visited the ED multiple times.[138]

The existence of co-morbidities results in increased care complexity and complicates care coordination. There is evidence that individuals who suffer from MCCs are less likely to receive recommended care. McBean et al. found that individuals suffering from diabetes, COPD, and depression were 17% less likely to receive annual HbA1c testing (a blood test for monitoring diabetes) than individuals

[136] Centers for Medicare & Medicaid Services. *Chronic Conditions among Medicare Beneficiaries*, Chart Book. Baltimore, MD. 2011.
[137] Centers for Medicare and Medicaid Services, *Chronic Conditions Among Medicare Beneficiaries. Chart Book.* Baltimore, MD. 2011.
[138] Centers for Medicare and Medicaid Services, *Chronic Conditions Among Medicare Beneficiaries. Chart Book.* Baltimore, MD. 2011.

suffering from only diabetes.[139] Age-adjusted individuals suffering from only diabetes were more likely to receive three diabetes care measures (HbA1c, lipid testing, and eye examinations) than those who suffered from diabetes and COPD. The presence of MCCs also influences the types of health care services used. For example, individuals suffering from MCCs displayed higher use of nursing home and community-based services (categories of service generally administered by State programs) than those who are not suffering from MCCs.[140] Individuals suffering from MCCs are also at increased risk of hospitalizations and emergency room visits and MCCs increase the risks for poor outcomes such as mortality and functional limitations.[141]

MCCs are highly correlated with age. Individuals of advanced age are likely to be suffering from multiple co-occurring chronic conditions. This is important, given the fact that roughly 40% of the *CCI population* is age 75 or older. In addition, roughly 39% of the *CCI population* is disabled, and like the aged population, many disabled beneficiaries suffer from multiple complex conditions. In many cases, the disabled experience co-occurring physical and mental health conditions. The combination of physical and mental health chronic conditions results in some of the most costly and complex health care cases.

Because the focus of this paper is dual eligibles, conditions applicable to the high-cost Medicaid populations are also of interest. Among high-cost Medicaid beneficiaries, nearly 83% have three or more chronic conditions and over 60% have five

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[139] McBean, Marshall, M.D., M.Sc.,Caldwell, M.S., Kim, Jee-Ae, M.P.P.. *Monitoring Chronic Disease Care and Outcomes among Elderly Medicare Beneficiaries with Multiple Chronic Diseases*, University of Minnesota School of Public Health, September 14, 2008.

[140] Kasper, J, O'Mally M., Lyons B, *Chronic Disease and Co-Morbidity Among Dual Eligibles: Implications for Patterns of Medicaid and Medicare Service Use and Spending.* The Kaiser Commission on Medicaid and the Uninsured. Washington D.C., July 2010. Available at http://www.KFF.ORG

[141] Centers for Medicare and Medicaid Services, *Chronic Conditions Among Medicare Beneficiaries. Chart Book.* Baltimore, MD. 2011.

or more chronic conditions. Studies indicate that Medicaid beneficiaries with diabetes are more likely to also have cardiovascular disease, and those with a mental illness are more likely to have diabetes.[142,143] In recent years, the high prevalence of chronic conditions among the mentally ill have been well documented in the literature. For example, persons with mental illness are 3.2 times more likely to have heart disease, 2.6 times more likely to have diabetes, and twice as likely to have hypertension or asthma.[144] Persons with serious mental illness (SMI) die, on average, 25 years earlier than the general population.[145] Nearly 60% of deaths among the mentally ill can be attributed to cardiovascular, pulmonary and infectious diseases. Many persons suffering from a serious mental illness also suffer from high rates of obesity and tobacco use, which are modifiable risk factors for chronic conditions.

Modifiable chronic disease risk factors, such as hypertension, overweight and obesity, smoking, and alcohol use have a high prevalence among the Medicaid population. Additionally, the rate of obesity among the Medicaid adult population is 10 percentage points higher than for adults covered by any other health plan or among the uninsured.[146] The health expenditures among obese Medicaid beneficiaries are estimated to be 39% greater than for non-obese beneficiaries.[147]

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[142] Ibid

[143] Kaiser Commission on Medicaid and the Uninsured. An Overview of Medicaid Enrollees with Diabetes in 2003. 2003. Available at www.kff.org.

[144] Dickey B, Normand SL, Weiss RD, Drake RE, and Azeni H. Medical Morbidity, Mental Illness, and Substance Use Disorders. July 2002. Psychiatric Services 53(7); 861-867.

[145] National Association of State Mental Health Program Directors, Medical Directors Council. Morbidity and Mortality in People with Serious Mental Illness. October 2006. Available at www.nasmhpd.org.

[146] Finkelstein EA, Feibelkorn IC, and Wang G. National Medical Spending Attributed to Overweight and Obesity: How much, and who's paying? 2003. Health Affairs http://content.healthaffairs.org/content/early/2003/05/14/hlthaff.w3.219.full.pdf+html

[147] Ibid.

Given the prevalence of chronic disease within the *CCI population* and the clinical heterogeneity of the CCI subpopulations, designing successful care coordination programs will require careful planning and the collaboration of multiple programs and caregivers throughout the healthcare system. Therefore, RASB has compiled data and information to help stakeholders understand the disease prevalence and conditions treated among the *FFS CCI population in the eight pilot counties*. The analysis that follows will allow readers to identify specific chronic health conditions within the *CCI population*, identify the costs associated with individuals suffering from specific chronic conditions, and evaluate these chronic conditions across several dimensions such as age, eligibility category, care setting, etc. Because of the high incidence of comorbidities, RASB has also evaluated co-morbidity and its impact on cost and various subpopulations. In addition to examining chronic conditions, RASB also provides the reader with information regarding the conditions treated throughout CY 2010. The *conditions treated* topic is a separate and distinct analysis within this section.

Key Chronic Diseases: The Facts

- ***Heart disease*** *and* ***stroke*** *are the first and third leading causes of death, accounting for more than 30% of all U.S. deaths each year.*
- ***Cancer****, the second leading cause of death, claims more than half a million lives each year.*
- ***Diabetes*** *is the leading cause of kidney failure, nontraumatic lower extremity amputations, and new cases of blindness each year among U.S. adults aged 20–74 years.*
- ***Arthritis****, the most common cause of disability, limits activity for 19 million U.S. adults.*
- ***Obesity*** *has become a major health concern for people of all ages. 1 in 3 adults and nearly 1 in 5 young people aged 6–19 are obese.*

Source: Centers For Disease Control

To identify a set of chronic conditions and other conditions treated, RASB utilized information from the US Department of Health and Human Services Strategic Framework for Multiple Chronic Conditions, and the AHRQ.[148,149] RASB identified the chronic conditions and conditions treated using administrative data. The data sources used to identify chronic conditions included Medicare FFS institutional and non-institutional claims, as well as enrollment/eligibility data. The data sources used for identifying the conditions treated included: Medi-Cal eligibility data, Medicare eligibility data, Medi-Cal FFS paid claims data (DHCS administered services and services administered by non-DHCS departments), Medicare FFS Parts A & B

Conditions Studied in the FFS CCI Population in the Eight Pilot Counties

21 CMS CCW Conditions: These 21 conditions were identified using CMS' CCW algorithm, found to be prevalent throughout the Medi-Cal CCI population and were frequently noted in the literature. They include: acute myocardial infraction, Alzheimer's disease, Alzheimer's disease and related disorders or senile dementia, atrial fibrillation, cataract, chronic kidney disease, COPD, depression, diabetes, glaucoma, heart failure, hip/pelvic fracture, ischemic heart disease, osteoporosis, rheumatoid arthritis and osteoarthritis, stroke/transient ischemic attack, female breast cancer, colorectal cancer, prostate cancer, lung cancer, and endometrial cancer.

16 Significant AHRQ CCS Conditions: The 16 significant conditions treated represent conditions that were either most commonly found in the FFS CCI population in the eight pilot counties administrative data examined or were frequently referenced in the literature related to the study of disease burden among Medicare eligibles. Many of the conditions treated identified and examined were associated with chronic conditions. The conditions include: arthritis, asthma, atrial fibrillation, cancer, congestive heart failure, COPD, coronary atherosclerosis, dementia and other cognitive disorders, diabetes, hyperlipidemia, hypertension, mood disorder, osteoporosis, renal failure, schizophrenia, and stroke.

19 Other AHRQ CCS Conditions: The 19 other conditions of interest represent conditions or events necessitating treatment that were found in the literature to be common with the demographic profile of beneficiaries studied or the health care services received, such as residing in a nursing home. These conditions include: acute myocardial Infarction, adverse effects of medical drugs, back and spine disorders, cataract, complications of medical care, developmental disorders, drug and alcohol dependency, glaucoma, hepatitis, HIV infection, injuries, nutritional deficiencies, paralysis, pneumonia, respiratory failure, septicemia, mycosis and ulcers of the skin, suicides and self-harm, and urinary tract infections.

[148] For more information related to AHRQ and their clinical classification system, see their website at http://www.hcup-us.ahrq.gov/toolssoftware/ccs/ccs.jsp

[149] U.S. Department of Health and Human Services. *Multiple Chronic Conditions—A Strategic Framework: Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions.* Washington, DC. December 2010.

paid claims data, and OSHPD patient discharge data (Table 22).[150]

Two different techniques and algorithms were utilized to identify chronic conditions and the conditions treated throughout the year for this analysis. RASB utilized algorithms incorporated into CMS' Chronic Conditions Data Warehouse (CCW) to identify 21 chronic conditions and the AHRQ's Clinical Classification System (CCS) to identify the 16 significant and 19 other conditions treated.[151]

The reader should be aware that the algorithms from CMS' CCW and AHRQ's CCS make use of different criteria and were designed for different purposes. Therefore, the prevalence rates determined using each algorithm may differ as well. The 21 chronic conditions identified using CMS' CCW algorithms are designed to indicate the clinical *presence* of the condition based on an inference from the pattern of diagnosis and, in some cases, procedure codes present on FFS claims data. AHRQ's CCS was used to group and classify ICD-9-DM codes into a manageable number of categories that could be evaluated. The focus was on the condition treated over a specific period of time.

Differences in the chronic disease prevalence rates can arise based on a number of factors. In some cases this may be due to the specific criteria used, such as the specific ICD-9-CM codes used to group the data. In other cases the difference in treatment prevalence rates may be due to the look-back period. The methodology utilized by CMS to identify the 21 chronic diseases requires an evaluation of a look-back period during which other criteria must be met.

[150] For further information regarding OSHPD's Patient Discharge Data see their website at http://www.oshpd.ca.gov/HID/Products/PatDischargeData/PublicDataSet/index.html

[151] Buccaneer. Chronic Condition Data Warehouse, User Guide. Version 1.8, September 2011. Accessed last on September 17, 2012, at http://www.ccwdata.org/cs/groups/public/documents/document/ccw_userguide.pdf

AHRQ's CCS can be used to group diagnosis codes into a smaller group of meaningful clinical classifications. Clinical classifications are assigned based on the diagnosis code reported on the administrative claim record during the period studied. If an individual has a chronic disease, claims for that individual might be reflective of related comorbidities, rather than the causative disease. In those cases, the clinical condition for the causative disease would not be assigned to that individual. Below is an example of how diabetes, or individuals identified as treated for this condition category using AHRQ's CCS categorization, differs from CMS' CCW algorithm used to assign individuals to the chronic condition category of diabetes.

The AHRQ CCS algorithms identify two categories indicative of diabetes, diabetes mellitus without complications, and diabetes mellitus with complications. The criteria for these clinical classifications are made up of several diagnosis codes, twelve for diabetes mellitus without complications, and fifty-seven for diabetes mellitus with complications. Most of the diagnosis codes in these categories imply an active disease process; however, there are a few diagnosis codes which describe specific laboratory findings. These laboratory findings can be indicative of glucose intolerance, but they are not a specific diabetes diagnosis. For example, one of the diagnosis codes that groups to diabetes is glycosuria (glucose in the urine). Although glycosuria is grouped to diabetes within the CCS it is not always indicative of diabetes, as specific types of drugs including corticosteroids and certain atypical psychotics may cause abnormal glucose tolerance.

The CCW uses a different methodology to identify individuals with chronic conditions. The CCW uses several years of data to determine if an individual has one

of the chronic disease conditions. These “look-back” periods range from one to three years prior to the study period and may also require other criteria including number of claims and/or type of services. By using a “look-back” period, it is more likely to capture individuals with a chronic disease, even if they didn’t have a claim with a qualifying diagnosis code in the study period.

In the CCW, diabetes is categorized as one clinical classification group versus two groups in the AHRQ’s CCS criteria. For diabetes, there is a two year period (the current and previous year) where the individual must have one inpatient, skilled nursing facility or home health agency claim or two hospital outpatient or carrier claims with these diagnosis codes. For the purposes of this study, this time period would be 2009 and 2010. The diagnosis criterion also differs slightly from the HCUP/CCS criteria. In the CCW, there are sixty-four diagnosis codes that meet the diabetes criteria; however the diagnosis codes indicative of laboratory findings are dropped. Also dropped are claims related to the fitting or maintenance of insulin pumps. There are four additional diagnosis codes describing some of the comorbidities related to diabetes, including specific eye conditions and diabetic neuropathy.

Furthermore, because RASB made use of administrative claims from multiple sources (i.e., Medi-Cal, Medicare, and OSHPD), specific treatment prevalence variation may be the result of additional data concerning a particular treatment for a condition. Therefore, readers should review the criteria used for each metric presented and ensure that they understand how each was derived.

Identifying Chronic Conditions

In 2006, the CMS implemented the CCW.[152] The CCW contains all Medicare FFS institutional and non-institutional claims, nursing home and home health assessment data, as well as enrollment/eligibility data from January 1, 1999 forward based on a random 5% sample of Medicare beneficiaries. Starting in 2000, 100% of the Medicare population was incorporated. Twenty-one predefined chronic condition indicator variables were coded into the initial phase of the CCW, which were designed to facilitate research on chronic disease.[153] These predefined conditions include common chronic health conditions among older adults, and were designed to streamline data extraction for research efforts. The 21 condition variables indicate whether a Medicare beneficiary received treatment for the condition. The variables indicate the clinical *presence* of the condition based on an inference from the pattern of diagnosis and in some cases procedure codes present on FFS claims data.[154]

To identify a set of chronic diseases for this study, RASB made use of 21 chronic conditions that are summarized in the CMS CCW (Table 21).[155] These 21 conditions were found to be prevalent throughout the Medi-Cal *CCI population* and many were noted in the literature. For example, the dual eligible populations displayed high rates of treatment for Ischemic Heart Disease, COPD, diabetes, and congestive heart failure.[156]

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[152] Section 723 of the Medicare Modernization Act of 2003 (MMA) mandated that a plan to improve the quality of care and reduce cost of care for the chronically ill Medicare beneficiaries be developed and implemented. As part of this effort, an essential component included the development of a research database that contained Medicare data, linked by beneficiary across the continuum of care.

[153] For more information regarding CMS' Chronic Condition Warehouse, visit their website at http://www.ccwdata.org/chronic-conditions/index.htm

[154] Schneider, Kathleen M, O'Donnell Brian E., Dean Debbie. *Prevalence of Multiple Chronic Conditions in the United States Medicare Population*, Health Quality Outcomes. September 2009.

[155] Buccaneer. Chronic Condition Data Warehouse, User Guide. Version 1.8, September 2011. Accessed last on September 17, 2012, at http://www.ccwdata.org/cs/groups/public/documents/document/ccw_userguide.pdf

[156] Centers for Medicare & Medicaid Services. Chronic Conditions among Medicare Beneficiaries, Chart Book. Baltimore MD. 2011.

Table 21 – CMS Chronic Conditions

Condition Number	CMS Chronic Condition Included in Warehouse	Source
1	Acute Myocardial Infarction	CMS Chronic Condition Warehouse
2	Alzheimer's Disease	CMS Chronic Condition Warehouse
3	Alzheimer's Disease and Related Disorders or Senile Dementia	CMS Chronic Condition Warehouse
4	Atrial Fibrillation	CMS Chronic Condition Warehouse
5	Cataract	CMS Chronic Condition Warehouse
6	Chronic Kidney Disease	CMS Chronic Condition Warehouse
7	Chronic Obstructive Pulmonary Disease	CMS Chronic Condition Warehouse
8	Depression	CMS Chronic Condition Warehouse
9	Diabetes	CMS Chronic Condition Warehouse
10	Glaucoma	CMS Chronic Condition Warehouse
11	Heart Failure	CMS Chronic Condition Warehouse
12	Hip/Pelvic Fracture	CMS Chronic Condition Warehouse
13	Ischemic Heart Disease	CMS Chronic Condition Warehouse
14	Osteoporosis	CMS Chronic Condition Warehouse
15	RA/OA Rheumatoid Arthritis Osteoarthritis	CMS Chronic Condition Warehouse
16	Stroke/Transient Ischemic Attack	CMS Chronic Condition Warehouse
17	Female Breast Cancer	CMS Chronic Condition Warehouse
18	Colorectal Cancer	CMS Chronic Condition Warehouse
19	Prostate Cancer	CMS Chronic Condition Warehouse
20	Lung Cancer	CMS Chronic Condition Warehouse
21	Endometrial Cancer	CMS Chronic Condition Warehouse

Identifying Conditions "Treated"

To identify the conditions "treated," RASB summarized each *CCI population* beneficiary's paid claims and OSHPD hospital discharge data and assigned each treatment diagnosis to a unique clinical classification category[157] using AHRQ's CCS. The CCS for ICD-9-CM is a diagnosis and procedure categorization scheme developed as part of the HCUP, a Federal-State-Industry partnership sponsored by the AHRQ. CCS is based on the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM), a uniform standardized coding system. The CCS allows users to collapse the ICD-9-DM's multitude of codes (over 14,000 diagnosis codes) into a smaller number of clinically meaningful categories. This allows for a more useful presentation of descriptive statistics than using individual ICD-9-DM codes. This classification scheme made use of both the primary and secondary diagnoses for Medi-Cal FFS paid claims and up to 25 diagnoses for Medicare and OSHPD data sources.

It should be noted that the AHRQ CCS conditions treated analysis is not meant to infer prevalence for a specific disease or condition, but rather to help those tasked with developing an adequate network of providers to assess the types of conditions and diseases treated among the population. The analysis can also help readers understand how costs are distributed among various diseases and conditions and may be used to identify potential areas of intervention. For example, the *FFS CCI population in the eight pilot counties* conditions treated analysis disclosed that 30,000 beneficiaries were treated for falls and injuries.

[157] Clinical classification refers to the AHRQ system for categorizing ICD-9 diagnosis codes into a smaller set of groupings for analysis.

RASB evaluated FFS administrative claims for services or programs administered by DHCS as well as those administered by other departments, such as Department of Social Services, Department of Mental Health, Department of Developmental Services, Department of Drug and Alcohol Programs, etc. Table 22 presents the data sets used to identify specific ICD-9-DM codes.

Table 22 – Data Sources Used to Classify Diagnoses In AHRQ CCS Groups and Identify Health Conditions Treated Among the *FFS CCI Population in the Eight Pilot Counties* During CY 2010

DATA SOURCE	DATA FILE	DIAGNOSIS USED TO CONSTRUCT CLINICAL CLASSIFICATION
Medi-Cal FFS DHCS Administered Services	Medi-Cal FFS paid claims-35-File, Dates-of-Service Occurring between 1/1/2010 and 12/31/2010	Primary and Secondary Diagnosis
Medi-Cal FFS Non-DHCS administered Services	Medi-Cal FFS paid claims-35-File, Dates-of-Service Occurring between 1/1/2010 and 12/31/2010	Primary and Secondary Diagnosis
OSHPD – All Payers Source Hospital Inpatient Discharges	OSHPD – Patient Discharge Data – CY 2010 Discharges	Up to 25 diagnoses
Medicare Parts A & B Paid Claims	Medicare FFS Parts A & B paid claims, Dates-of-Service Occurring between 1/1/2010 and 12/31/2010	Up to 25 diagnoses

The final summarized file contained one unique record for each clinical classification associated with each beneficiary. This means that a unique beneficiary may constitute more than one record in this data set as each beneficiary may have more than one unique clinical classification. This data set was then summarized by aid code category, age group, and care setting. Once separated into specific groups,

frequencies were derived for each clinical classification. This allowed RASB to identify the most frequent conditions among the subpopulations. This information was then used to identify disease or condition flags that were used to compare and contrast one population from another and classify groups for further analysis.

Table 23 displays selected conditions treated using the AHRQ's CCS coding scheme and the treatment prevalence for each condition. RASB identified the most expensive disease categories and medical conditions, those of greatest interest relative to the population studied, and the most prevalently treated conditions throughout the *CCI population*. RASB identified all significant categories and used this information to compare and contrast subpopulations. RASB separated the conditions treated into two groups: (1) significant conditions treated; and (2) other conditions treated.

The 16 significant conditions treated represent conditions that were either most commonly found in the *FFS CCI population in the eight pilot counties* administrative data examined or were frequently referenced in the literature related to the study of disease burden among Medicare eligibles. Many of the conditions treated identified and examined were associated with chronic conditions. The 19 other conditions of interest represent conditions or events necessitating treatment that were found in the literature to be common with the demographic profile of beneficiaries studied or the health care services received, such as residing in a nursing home. Examples of other conditions of interest include conditions such as adverse effects of medical drugs, complications of medical care, drug and alcohol dependency, mycosis and ulcers of the skin, falls, and nutritional deficiencies. The condition treated identified for an individual does not mean that the beneficiary was treated for only that condition. Beneficiaries treated for the

specific condition examined may have been treated for any of the other conditions examined or conditions not presented. In addition to the AHRQ clinical classifications conditions identified in Table 23, RASB also captured all 278 AHRQ clinical classifications or conditions treated for the *FFS CCI population in the eight pilot counties* and denoted the treatment prevalence for each, comparing the Aged to the Disabled in the *FFS CCI population in the eight pilot counties* (see Exhibit B).

Table 23 - 16 Significant Health Conditions Treated and 19 Other Conditions Treated—Identified Using AHRQ's Clinical Classification System, *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Condition Number	Condition Treated	AHRQ Clinical Condition Included	% of *FFS CCI Population* w/Condition
Significant Conditions Treated			
1	Arthritis	201 - Infective arthritis and osteomyelitis	1.4%
		202 - Rheumatoid arthritis and related disease	6.9%
		203 - Osteoarthritis	37.0%
		Subtotal (unduplicated)	**39.8%**
2	Asthma	128 - Asthma	12.8%
3	Atrial Fibrillation	106 - Cardiac dysrhythmias	27.6%
		107 - Cardiac arrest and ventricular fibrillation	1.1%
		Subtotal (unduplicated)	**27.9%**
4	Cancer	11 - Cancer of head and neck	0.5%
		12 - Cancer of esophagus	0.1%
		14 - Cancer of colon	2.1%
		15 - Cancer of rectum and anus	0.8%
		16 - Cancer of liver and intrahepatic bile duct	0.5%
		17 - Cancer of pancreas	0.3%
		18 - Cancer of other GI organs; peritoneum	0.5%
		19 - Cancer of bronchus; lung	1.0%
		20 - Cancer; other respiratory and intra-thoracic	0.2%
		21 - Cancer of bone and connective tissue	0.3%
		24 - Cancer of breast	2.4%
		25 - Cancer of uterus	0.3%
		26 - Cancer of cervix	0.3%

CONDITION NUMBER	CONDITION TREATED	AHRQ CLINICAL CONDITION INCLUDED	% OF *FFS CCI POPULATION* W/CONDITION
		27 - Cancer of ovary	0.4%
		28 - Cancer of other female genital organs	0.2%
		29 - Cancer of prostate	2.6%
		30 - Cancer of testis	0.0%
		31 - Cancer of other male genital organs	0.0%
		32 - Cancer of bladder	0.6%
		33 - Cancer of kidney and renal pelvis	0.4%
		34 - Cancer of other urinary organs	0.1%
		35 - Cancer of brain and nervous system	0.3%
		36 - Cancer of thyroid	0.3%
		39 - Leukemia	0.5%
		41 - Cancer; other and unspecified primary	0.9%
		SUBTOTAL (UNDUPLICATED)	**11.7%**
5	Congestive Heart Failure	108 - Congestive heart failure; non-hypertensive	16.0%
6	COPD	127 - Chronic obstructive pulmonary disease	23.6%
7	Coronary Atherosclerosis	101 - Coronary atherosclerosis and other heart disease	28.8%
8	Dementia and Other Cognitive Disorders	653 - Delirium dementia and amnestic and other cognitive disorders	13.0%
9	Diabetes	49 - Diabetes mellitus without complication	44.0%
		50 - Diabetes mellitus with complications	26.7%
		SUBTOTAL (UNDUPLICATED)	**47.0%**
10	Hyperlipidemia	53 - Disorders of lipid metabolism	62.1%
11	Hypertension	98 - Essential hypertension	71.1%
		99 - Hypertension with complications and secondary hype	25.8%
		SUBTOTAL (UNDUPLICATED)	**73.9%**
12	Mood Disorder	657 - Mood disorders	20.6%
13	Osteoporosis	206 - Osteoporosis	19.6%
14	Renal Failure	157 - Acute and unspecified renal failure	7.5%
		158 - Chronic renal failure	10.9%
		SUBTOTAL (UNDUPLICATED)	**13.9%**
15	Schizophrenia	659 - Schizophrenia and other psychotic disorders	10.0%
16	Stroke	109 - Acute cerebrovascular disease	8.6%
		112 - Transient cerebral ischemia	3.7%
		113 - Late effects of	6.1%

Condition Number	Condition Treated	AHRQ Clinical Condition Included	% of *FFS CCI Population* w/Condition
		cerebrovascular disease	
		Subtotal (unduplicated)	**13.1%**
Other Conditions Treated			
1	Acute Myocardial Infarction	100 - Acute Myocardial infarction	2.9%
2	Adverse Effects of Medical Drugs	241 - Poisoning by psychotropic agents	0.2%
		242 - Poisoning by other medications and drugs	2.9%
		243 - Poisoning by non-medicinal substances	0.3%
		2613 - E Codes: Poisoning	0.5%
		2617 - E Codes: Adverse effects of medical drugs	3.2%
		Subtotal (unduplicated)	**5.9%**
3	Back and Spine Disorders	205 - Spondylosis; intervertebral disc disorders; other	38.3%
4	Cataract	86 - Cataract	28.0%
5	Complications of Medical Care	237 - Complication of device; implant or graft	4.3%
		238 - Complications of surgical procedures or medical care	5.0%
		Subtotal (unduplicated)	**8.1%**
6	Developmental Disorders	654 - Developmental disorders	1.2%
7	Drug and Alcohol Dependency	660 - Alcohol-related disorders	2.5%
		661 - Substance-related disorders	3.0%
		Subtotal (unduplicated)	**4.6%**
8	Glaucoma	88 - Glaucoma	15.6%
9	Hepatitis	6 - Hepatitis	7.0%
10	HIV infection	5 - HIV infection	1.3%
11	Injuries	226 - Fracture of neck of femur (hip)	1.4%
		227 - Spinal cord injury	0.6%
		228 - Skull and face fractures	0.4%
		229 - Fracture of upper limb	1.9%
		230 - Fracture of lower limb	2.3%
		231 - Other fractures	3.7%
		232 - Sprains and strains	9.7%
		233 - Intracranial injury	1.5%
		234 - Crushing injury or internal injury	1.2%
		235 - Open wounds of head; neck; and trunk	2.9%
		236 - Open wounds of extremities	3.8%
		239 - Superficial injury; contusion	8.5%
		240 - Burns	0.5%
		244 - Other injuries and conditions due to external causes	16.2%

Condition Number	Condition Treated	AHRQ Clinical Condition Included	% of *FFS CCI Population* w/Condition
		2601 - E Codes: Cut/pierce	0.4%
		2603- E Codes: Fall	6.5%
		2605 - E Codes: Firearm	0.0%
		2607 - E Codes: Motor vehicle traffic (MVT)	0.8%
		2614 - E Codes: Struck by; against	0.9%
		Subtotal (unduplicated)	**32.0%**
12	Nutritional deficiencies	52 - Nutritional deficiencies	11.2%
13	Paralysis	82 - Paralysis	3.3%
14	Pneumonia	122 - Pneumonia (except that caused by tuberculosis or s	10.2%
15	Respiratory Failure	131 - Respiratory failure; insufficiency; arrest (adult)	5.8%
16	Septicemia	2 - Septicemia (except in labor)	5.3%
17	Mycosis and Ulcers of the Skin	4 - Mycosis	20.0%
		199 - Chronic ulcer of skin	7.1%
		Subtotal (unduplicated)	**23.2%**
18	Suicides and Self-Harm	662 - Suicide and intentional self-inflicted injury	1.1%
19	Urinary tract infections	159 - Urinary tract infections	26.5%

Source: Created by RASB

Aggregating Expenditures For Chronic Conditions and Conditions Treated

To further illustrate the impact of individual chronic conditions or conditions treated on the health and spending of dual eligibles, RASB utilized the following process for identifying the aggregate expenditures for each chronic condition or condition treated. First, RASB identified all Medi-Cal beneficiaries who received treatment for a specific disease/condition or one of the 21 chronic conditions examined. Once RASB identified a subpopulation of beneficiaries who were treated for the specific condition or one of the 21 chronic conditions examined, RASB then identified all services associated with the cohort of interest. The expenditures presented include all healthcare expenditures incurred for the cohort, which may include costs associated with other non-related health conditions.

Assigning *CCI Population* Beneficiaries To LTC Service Settings

To evaluate differences between beneficiaries who received LTC services, those who experienced limitations in ADLs, and those who did not receive LTC facility services or did not receive Long-Term Services and Supports (LTSS), RASB separated beneficiaries into various groups based on the services received. For example, *FFS CCI population in the eight pilot counties* beneficiaries who were residing in LTC facilities were grouped into a separate cohort. These beneficiaries represented some of the most costly beneficiaries within the *FFS CCI population in the eight pilot counties*. RASB also separately identified beneficiaries who received LTC services for short-term stays throughout the study period. These beneficiaries did not reside in a LTC facility, but rather made use of these services for a short duration. In some cases, individuals may require a short stay in a skilled nursing facility after discharge from an acute inpatient hospital. These individuals may require more intensive services than available in an outpatient or home setting, or simply cannot easily access needed outpatient services. For example, individuals with certain types of orthopedic surgeries, including total knee and total hip replacements, frequently require short stays in the skilled nursing facility after discharge. These individuals may require a short period of intensive rehabilitation therapy to ensure that they are safe in the home.

FFS CCI population in the eight pilot counties beneficiaries receiving LTSS were also separately grouped and evaluated. These beneficiaries were identified based on their use of specific services such as adult day health care, in-home supportive services, home- and community-based services, etc. (Table 24). *FFS CCI population in*

the eight pilot counties beneficiaries not falling into one of the groups noted above were categorized as “No LTC or LTSS.”

Table 24 – LTC Services Groups

GROUP	CATEGORIZATION SCHEME*
Long-Term Care (LTC) Facility Residents	Beneficiaries were enrolled in one of the following Medi-Cal aid codes**: 13 – Aged LTC, 23 – Blind LTC, 63 – Disabled LTC:
Had a short-term stay in a LTC facility	Received services from one of the following provider types: • Intermediate Care Facilities for the Developmentally Disabled; • State Developmental Centers; and • Skilled Nursing Facilities, but Were not enrolled in Medi-Cal aid codes 13, 23, 63.
Received Long-Term Services and Supports (LTSS)	Received services from one of the following provider types: • Adult Day Health Services/Community-Based Adult Services; • In-Home Operations/Nursing Facility-Acute Hospital Waivers; • Acquired Immune Deficiency Syndrome (AIDS) Waiver; • Department of Developmental Services (DDS) Waiver; • Multipurpose Senior Services Program (MSSP) Waiver; • Assisted Living Waiver; and • In-Home Supportive Services, and Were not enrolled in Medi-Cal aid codes 13, 23, or 63.

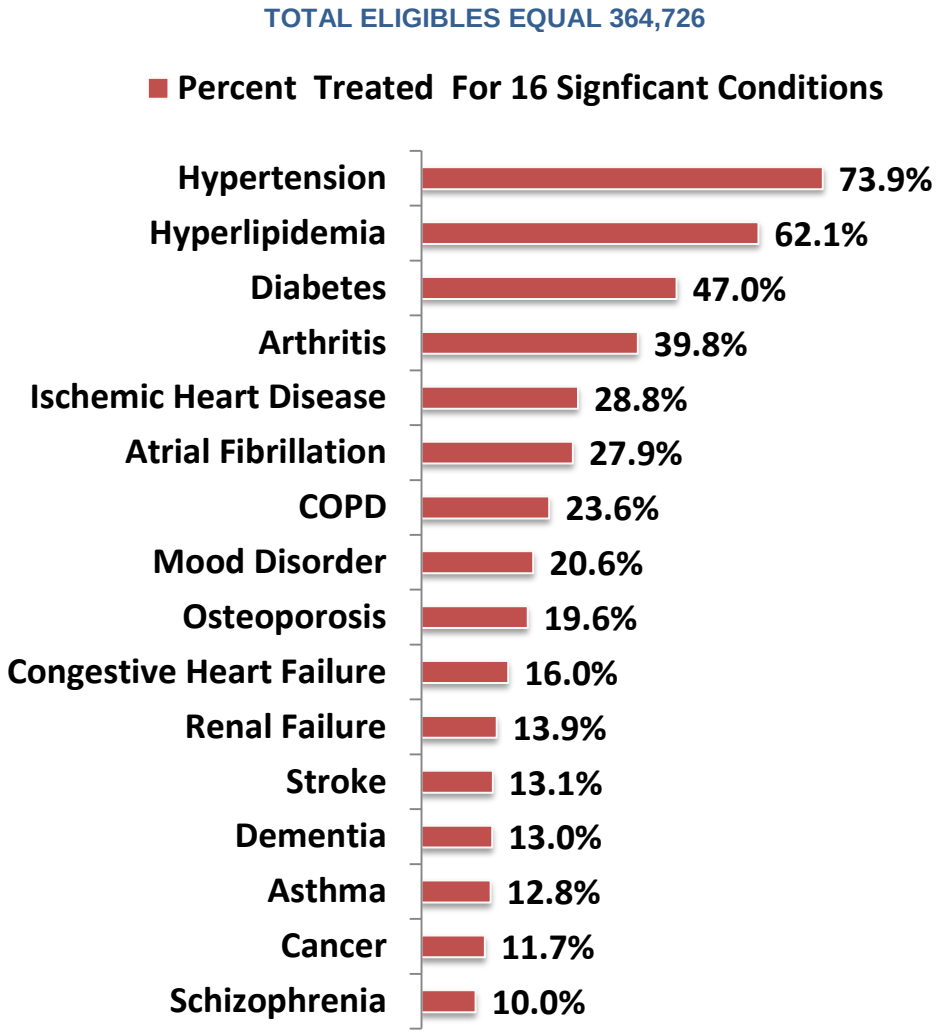
GROUP	CATEGORIZATION SCHEME*
Had a short-term stay in a LTC facility and received LTSS	Received services from one of the following provider types: • Intermediate Care Facilities for the Developmentally Disabled; • State Developmental Centers; and • Skilled Nursing Facilities, and also Received services from one of the following provider types: • Adult Day Health Services/Community-Based Adult Services; • In-Home Operations/Nursing Facility-Acute Hospital Waivers; • Acquired Immune Deficiency Syndrome (AIDS) Waiver; • Department of Developmental Services (DDS) Waiver; • Multipurpose Senior Services Program (MSSP) Waiver; • Assisted Living Waiver; and • In-Home Supportive Services.
No LTC or LTSS	Individuals not meeting the criteria for inclusion in the above four groups.

Notes: * The list provided above is not specific to the CCI population and may include service categories excluded from participation in the CCI. See Table 15 for a complete list of exclusions applied to the CCI population.
** A full list of Medi-Cal aid codes can be found at:
*files.**medi-cal**.ca.gov/pubsdoco/publications/.../**aidcodes**_z01c00*

To provide the reader with an easy to digest summary of the conditions treated within the *FFS CCI population in the eight pilot counties* and chronic conditions examined, RASB has provided an informative series of figures and tables that will highlight specific areas of importance. The chart book that follows will address the 21 chronic conditions examined, the 16 significant conditions treated and the 19 other conditions treated; data highlights have been added to identify significant information.

Table 25 – Chart Book 3, Graphics of Section XIV

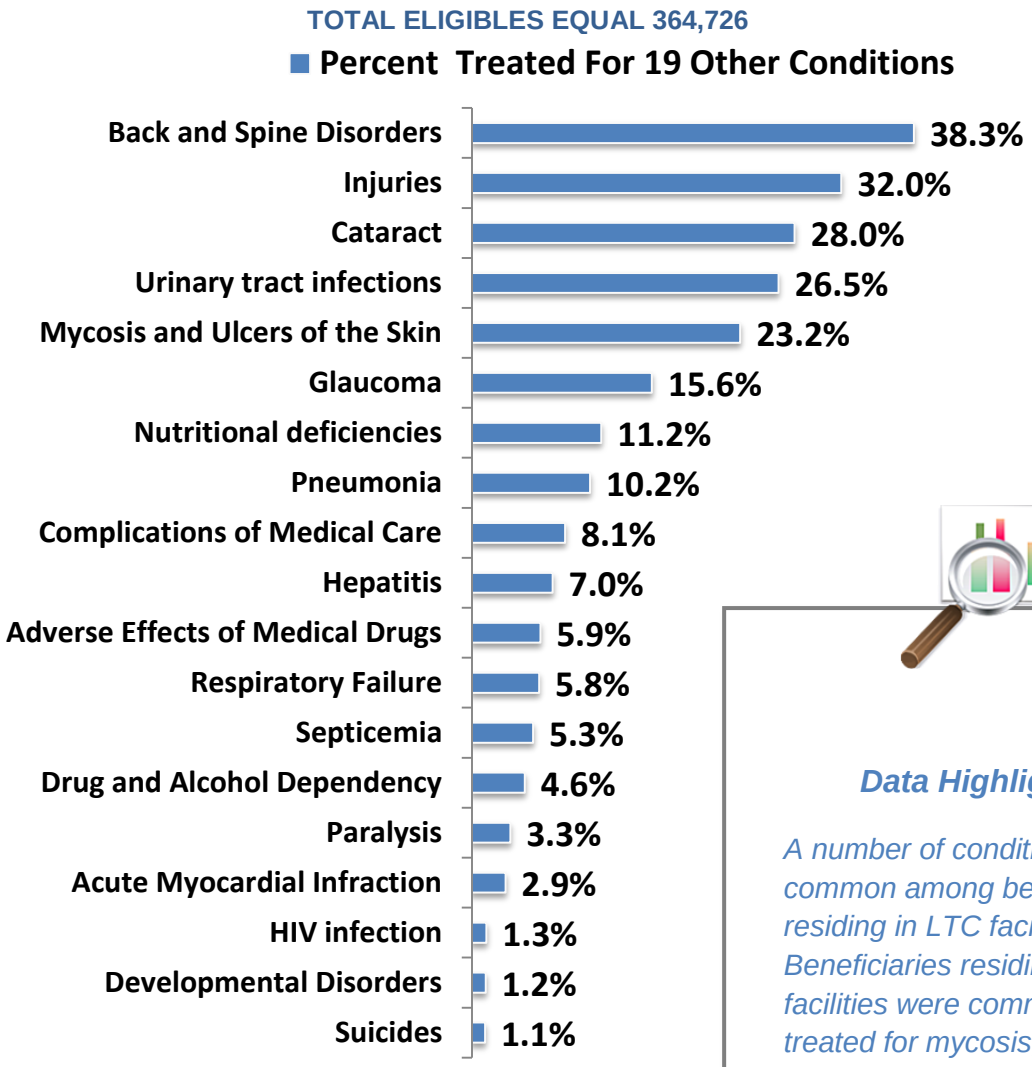
Figure 24 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for 16 Significant Conditions by Aid Code Category Using AHRQ's CCS, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

Hypertension, hyperlipidemia, diabetes, and arthritis were the most commonly treated conditions among the 16 examined. Certain conditions, such as dementia, stroke, congestive heart failure, and mood disorders were more likely to be associated with beneficiaries who resided in LTC facilities. Ten percent of the FFS CCI population in the eight pilot counties was treated for schizophrenia.

Figure 25 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for 19 Other Conditions Identified Using AHRQ's CCS, Beneficiaries Ever Enrolled During CY 2010

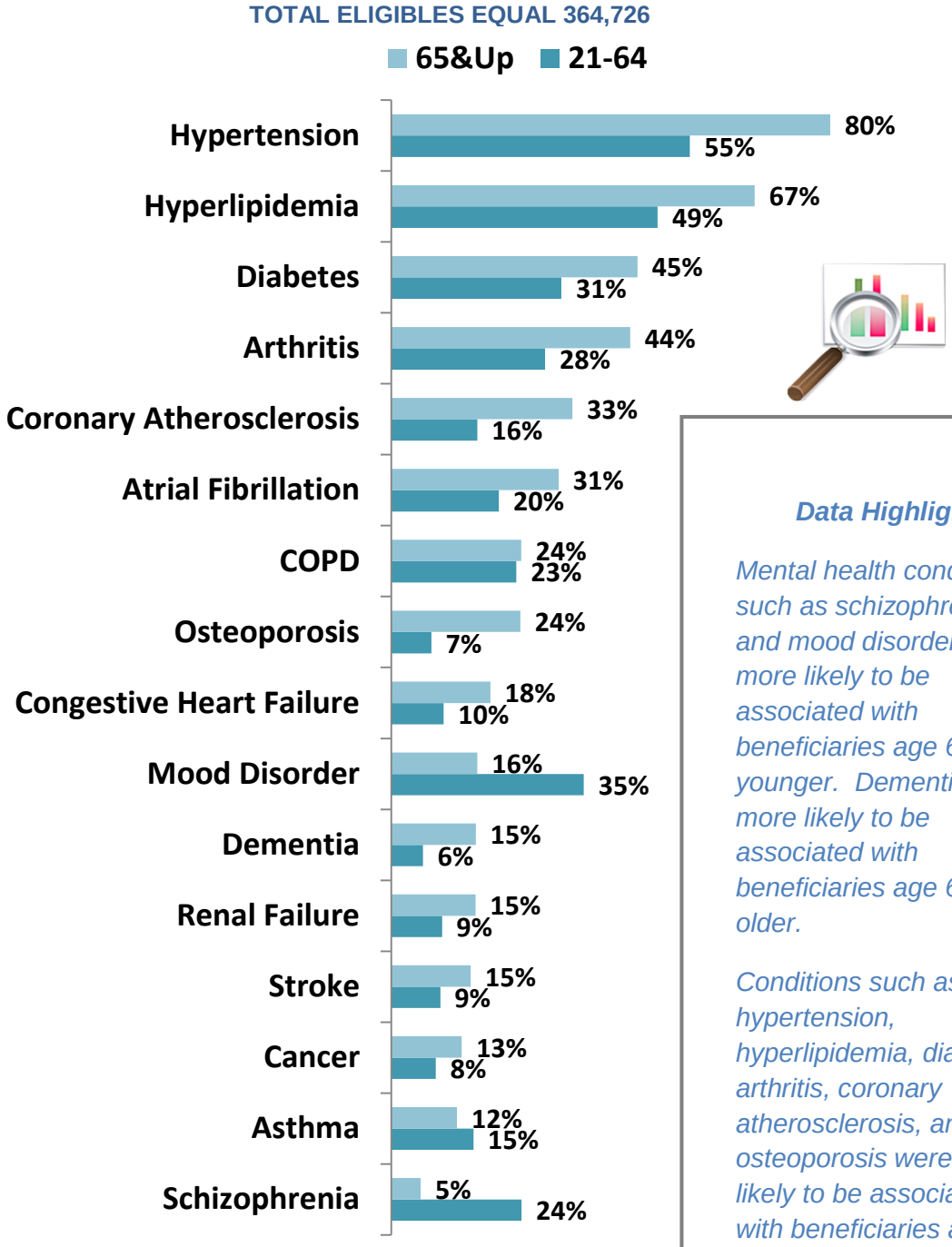


Data Highlights

A number of conditions were common among beneficiaries residing in LTC facilities. Beneficiaries residing in LTC facilities were commonly treated for mycosis, skin ulcers, and urinary tract infections.

Adverse effects of medical drugs, falls, and drug and alcohol dependency were also treated within the FFS CCI population in the eight pilot counties.

Figure 26 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for 16 Significant Conditions by Age Group, Identified using AHRQ's CCS, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

Mental health conditions such as schizophrenia and mood disorders were more likely to be associated with beneficiaries age 65 and younger. Dementia was more likely to be associated with beneficiaries age 65 or older.

Conditions such as hypertension, hyperlipidemia, diabetes, arthritis, coronary atherosclerosis, and osteoporosis were more likely to be associated with beneficiaries age 65 or older.

Figure 27 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for Select Conditions By LTC Status using AHRQ's CCS, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

Aid category	*FFS CCI Population in the Eight Pilot Counties*				
	Had a Short-Term Stay In a LTC Facility	Had a Short-Term Stay in a LTC Facility and Recd	LTC Facility Resident	No LTC and No LTSS	Received LTSS
16 Significant Conditions					
Arthritis	49.8%	68.1%	35.7%	29.3%	55.7%
Asthma	17.4%	24.6%	8.8%	9.8%	17.2%
Atrial Fibrillation	52.8%	63.9%	42.4%	19.1%	36.3%
Cancer	17.1%	21.0%	11.1%	9.3%	14.8%
Congestive Heart Failure	40.1%	52.0%	35.0%	8.4%	21.8%
COPD	47.4%	52.1%	38.5%	16.6%	29.3%
Coronary Atherosclerosis	46.5%	60.9%	35.8%	19.2%	40.5%
Dementia	55.6%	54.0%	65.8%	3.9%	14.5%
Diabetes	54.4%	61.9%	48.1%	34.4%	50.4%
Hyperlipidemia	53.4%	69.8%	37.9%	57.7%	73.3%
Hypertension	90.6%	95.9%	82.2%	64.3%	86.2%
Mood Disorder	49.6%	47.6%	49.8%	15.2%	21.2%
Osteoporosis	21.6%	32.3%	17.5%	15.0%	26.7%
Renal Failure	37.6%	46.6%	30.6%	8.1%	17.1%
Schizophrenia	37.2%	25.2%	38.9%	8.3%	5.2%
Stroke	38.4%	44.6%	39.0%	6.4%	16.6%
19 Other Conditions					
Acute Myocardial Infarction	10.3%	14.2%	6.7%	1.5%	3.4%
Adverse Effects of Medical Drugs	16.2%	20.7%	11.7%	4.1%	6.4%
Back and Spine Disorder	38.0%	54.6%	20.4%	31.2%	52.0%
Cataract	52.1%	44.3%	64.6%	21.9%	29.7%
Complications of Medical Care	26.0%	31.0%	20.7%	4.6%	9.1%
Developmental Disorders	6.3%	4.6%	5.8%	0.7%	0.7%
Drug and Alcohol Dependency	13.3%	9.6%	4.9%	4.8%	3.1%
Glaucoma	19.9%	19.9%	25.5%	12.6%	18.6%
Hepatitis	8.8%	9.6%	3.1%	6.7%	7.8%
HIV Infection	1.1%	0.9%	0.5%	1.6%	0.8%
Injuries	68.8%	80.9%	55.5%	23.1%	37.4%
Nutritional Deficiencies	28.0%	35.5%	21.9%	7.1%	13.6%
Paralysis	11.6%	15.8%	11.8%	1.0%	4.4%
Pneumonia	39.7%	43.8%	36.5%	4.8%	10.9%
Respiratory Failure	26.4%	31.2%	22.1%	2.2%	6.2%
Septicemia	29.9%	32.8%	27.1%	1.6%	4.4%
Mycosis and Ulcers of the Skin	68.2%	69.2%	74.0%	12.2%	27.5%
Suicide and Self Harm	4.9%	2.5%	1.3%	1.2%	0.5%
Urinary Tract Infection	54.3%	64.3%	53.1%	18.1%	32.2%

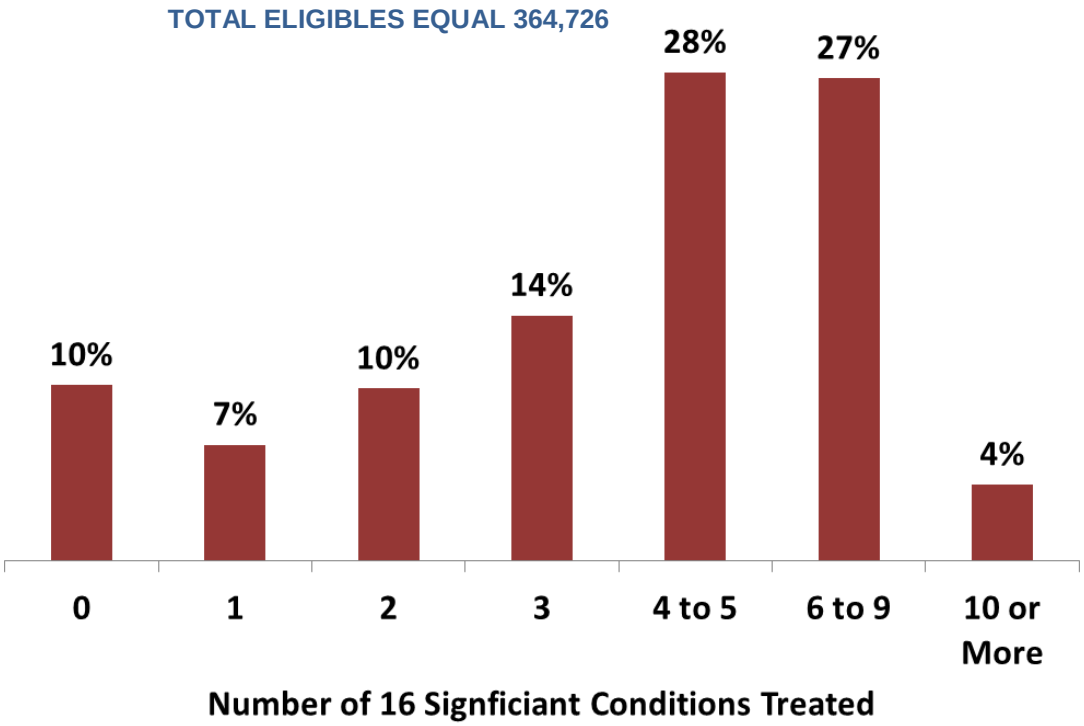
Data Highlights

Beneficiaries who did not receive LTC facility or LTSS during the year displayed a significantly different treatment pattern than those who received LTC facility or LTSS.

Beneficiaries who did not receive LTC facility or LTSS were less likely to be treated for injuries, mycosis and ulcers of the skin, urinary tract infections, and cataracts. These beneficiaries also exhibited lower incidences of treatment for diabetes, COPD, coronary atherosclerosis, and mood disorders.

Beneficiaries who received LTC facility or LTSS were more likely to be suffering from dementia, be treated for mycosis and ulcers of the skin, septicemia, pneumonia, injuries, urinary tract infections, stroke, Schizophrenia, and renal failure than those who received no LTC facility or LTSS.

Figure 28 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for 16 Significant Conditions Examined by Number of Conditions Treated, Beneficiaries Ever Enrolled During CY 2010

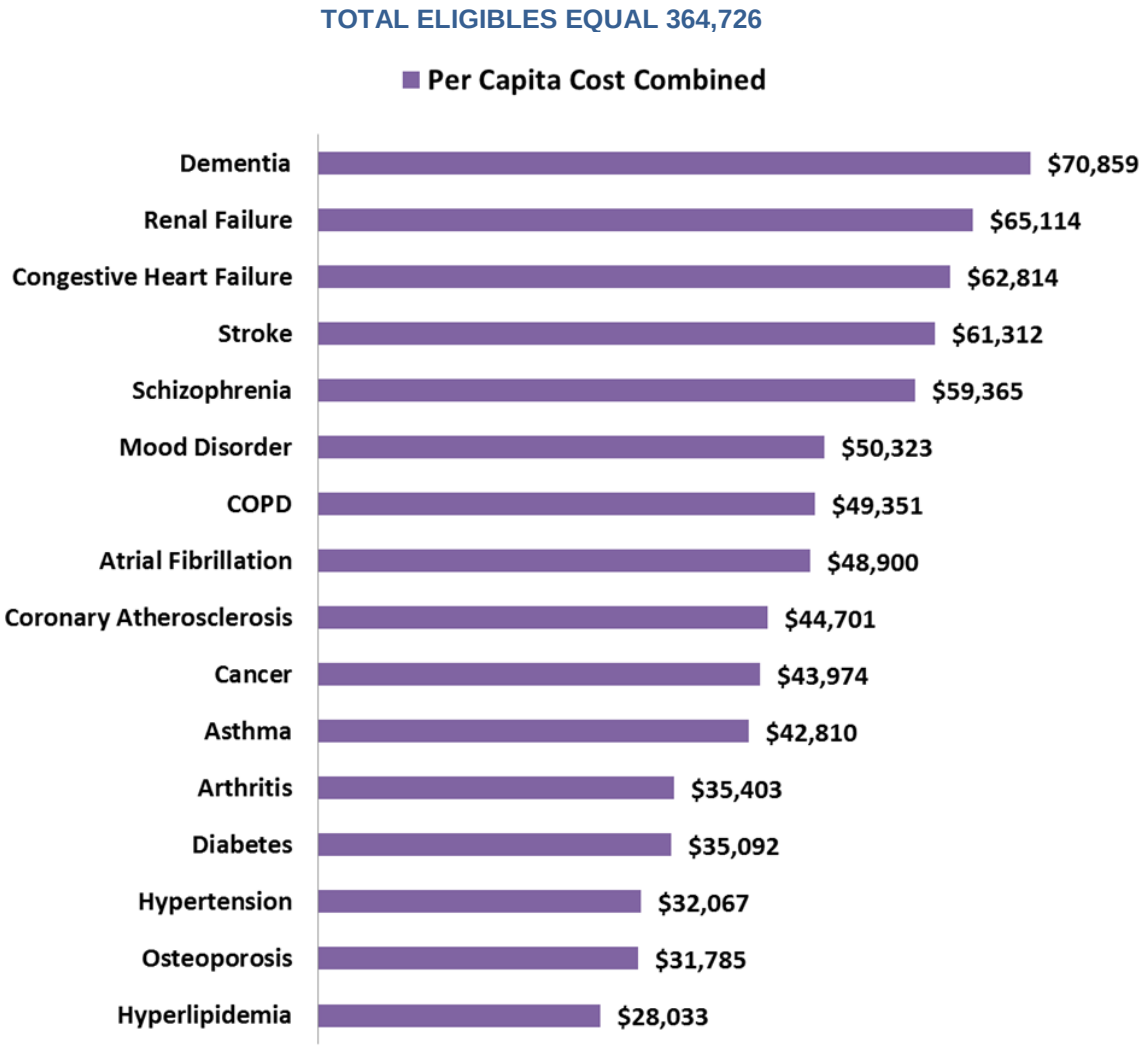


The 16 significant conditions include: arthritis, asthma, atrial fibrillation, cancer, congestive heart failure, COPD, coronary atherosclerosis, dementia and other cognitive disorders, diabetes, hyperlipidemia, hypertension, mood disorder, osteoporosis, renal failure, schizophrenia, and stroke.

Data Highlights

Thirty-one percent of the FFS CCI population in the eight pilot counties was treated for 6 or more of the 16 significant conditions examined, while 59% were treated for 4 or more conditions examined.

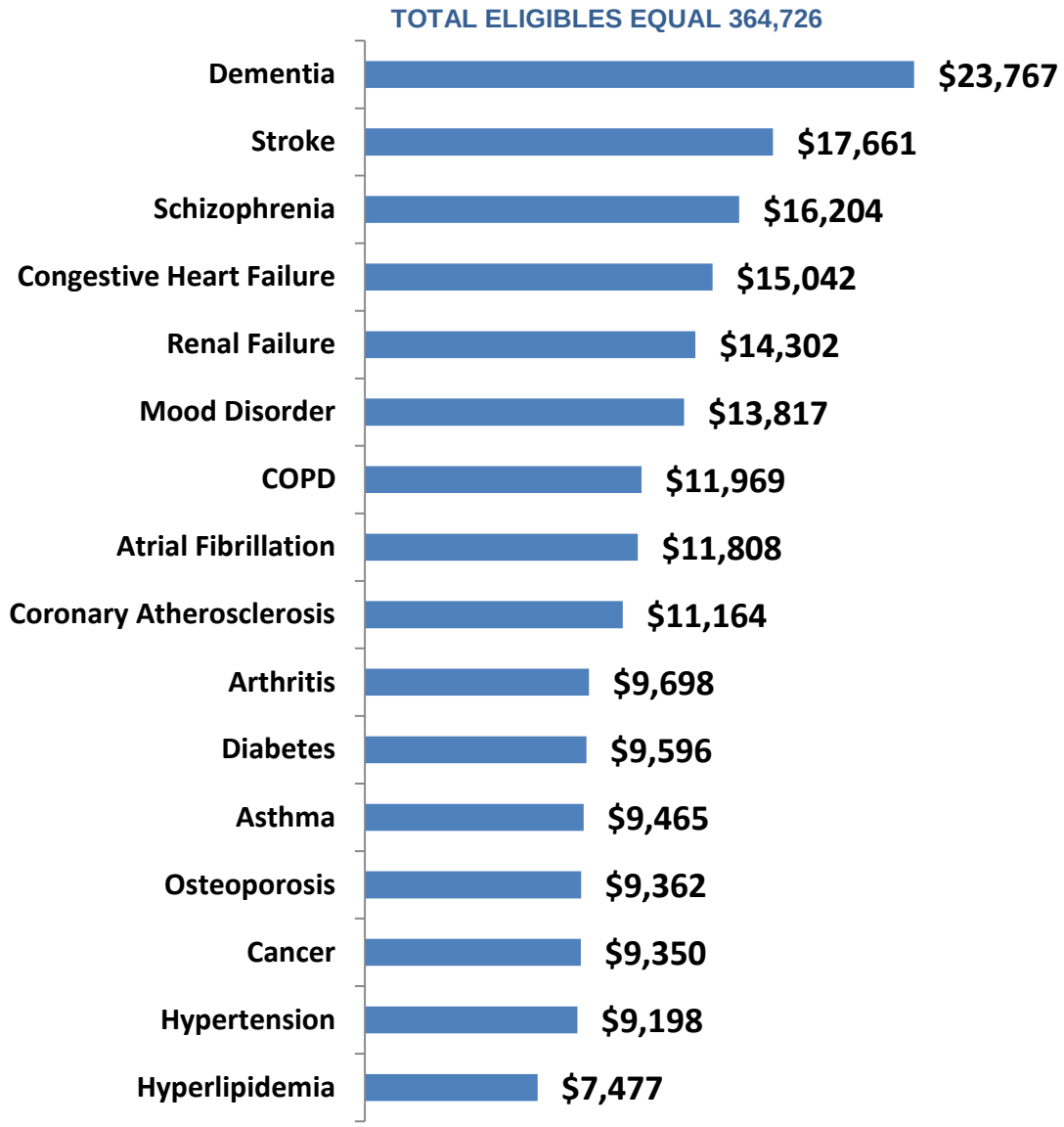
Figure 29 – Combined Medicare and Medi-Cal Per-Capita Cost for Beneficiaries Within Each of the 16 Significant Conditions Treated Cohorts, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

Of the 16 significant conditions examined, dementia generated the highest per-capita cost, followed by renal failure, congestive heart failure, stroke, and schizophrenia. All of these conditions generated a combined annual per-capita Medicare and Medi-Cal FFS cost exceeding $59,000.

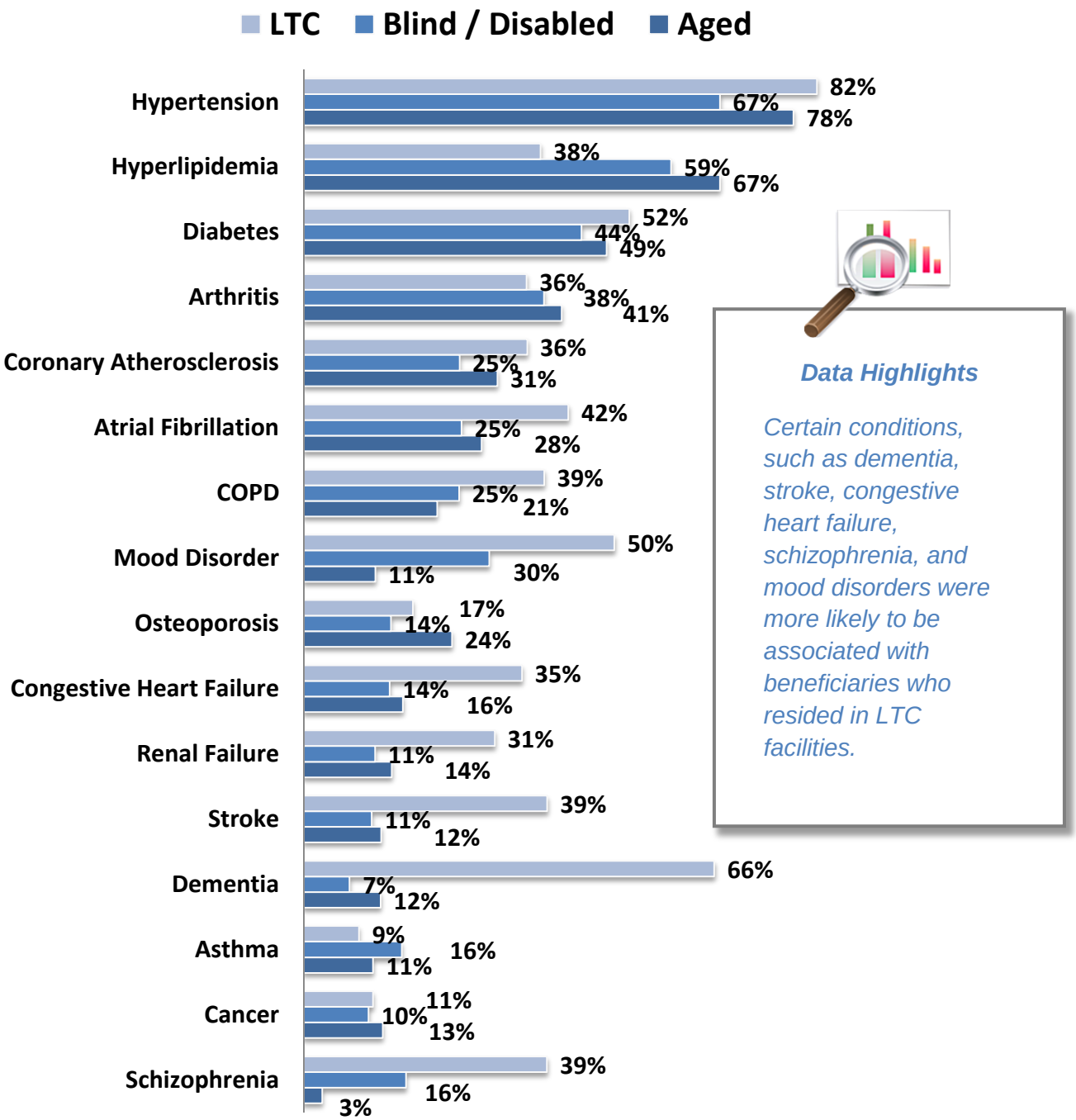
Figure 30 – Total Medi-Cal DHCS-Administered and Non-DHCS Administered Per-Capita Cost for Beneficiaries Within Each of the 16 Significant Conditions Treated Cohorts, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

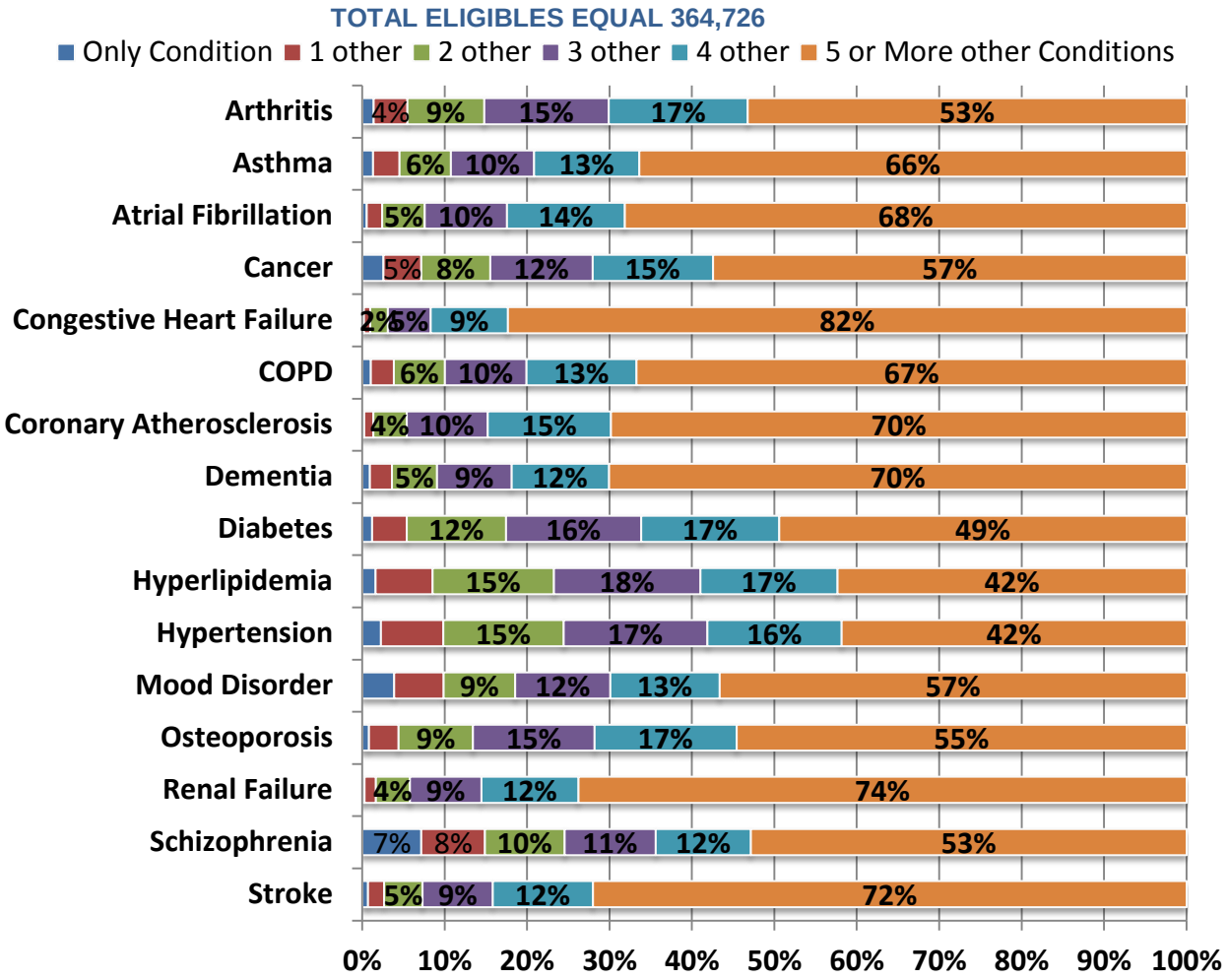
Those conditions that required LTC and LTSS generated the greatest per-capita cost within the FFS CCI population in the eight pilot counties. Dementia was a common condition among LTC facility residents and Medi-Cal was the primary payer for this service. Other conditions such as stroke and schizophrenia also included significant LTC services.

Figure 31 – Percent of *FFS CCI Population in the Eight Pilot Counties* Treated for 16 Significant Conditions by Aid Code Category, Beneficiaries Ever Enrolled During CY 2010



Note: The LTC aid code category includes beneficiaries enrolled in Medi-Cal aid codes 13-Aged-LTC, 23-Blind-LTC, and 63-Disabled-LTC.

Figure 32 – Number of Conditions Treated By Condition Cohort for 16 Significant Conditions Treated, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

The number of concurrent conditions treated varied among the beneficiaries who were treated for the 16 significant conditions examined. Seventy-two percent of the beneficiaries treated for stroke were treated for five or more of the 16 conditions examined. Similarly, conditions such as renal failure, dementia, diabetes, and congestive heart failure all disclosed that between 70% and 82% of the members of these cohorts were treated for five or more of the 16 conditions examined.

Figure 33 – Prevalence of CMS' 21 CCW Conditions among *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

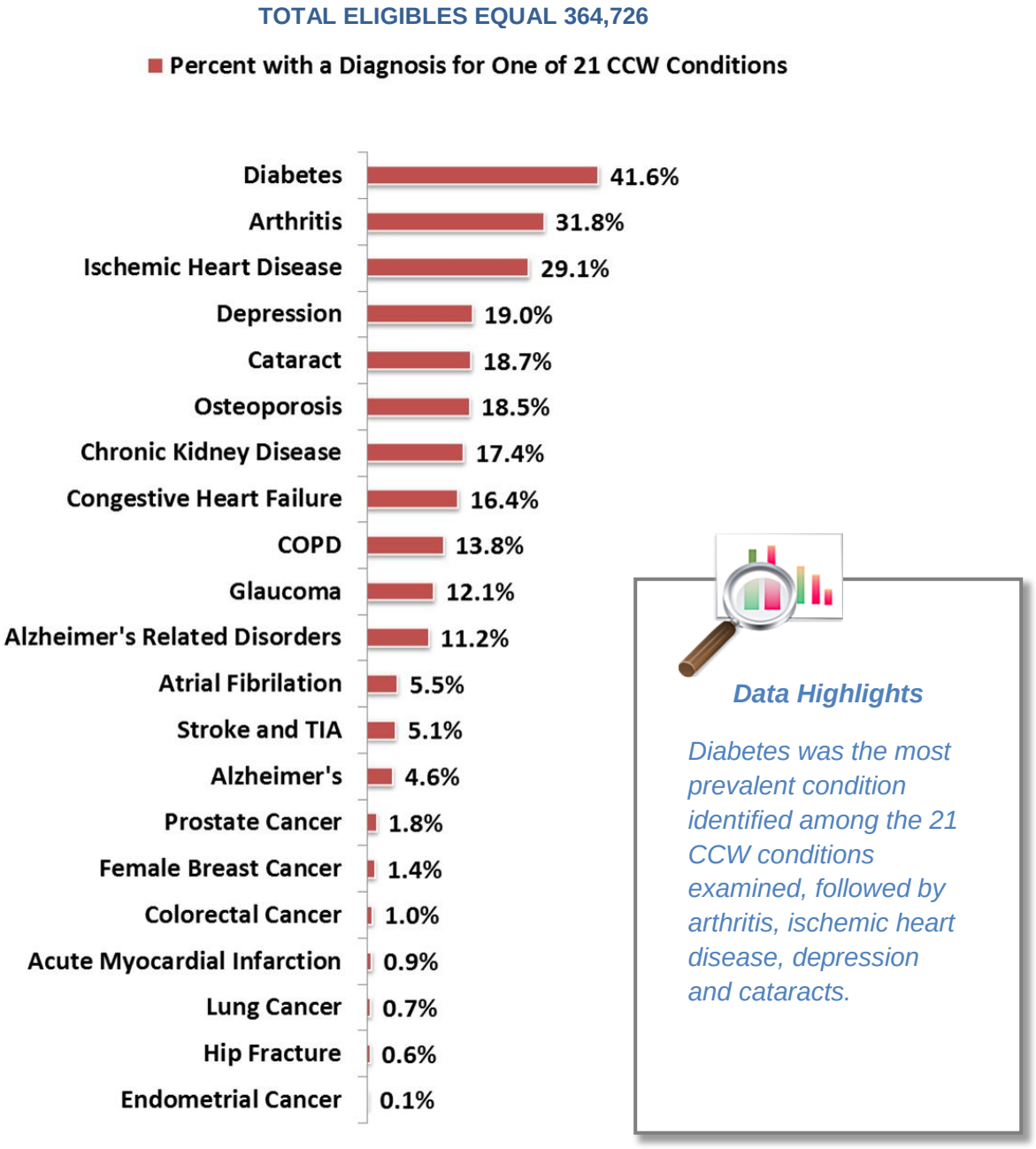
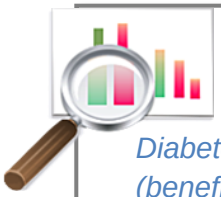


Figure 34 – Prevalence By CMS' 21 CCW Conditions By Age Group, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

	FFS CCI Population in Eight Pilot Counties	
Age Group	**Age 21-64**	**Age 65 and older**
Clinical Conditions		
Acute Myocardial Infarction	0.5%	1.0%
Alzheimer's	0.6%	6.0%
Alzheimer's Related Disorders	2.8%	14.0%
Atrial Fibrillation	1.7%	6.8%
Cataract	8.6%	22.1%
Chronic Kidney Disease	12.0%	19.2%
COPD	13.7%	13.9%
Congestive Heart Failure	9.6%	18.7%
Diabetes	31.1%	45.1%
Glaucoma	5.5%	14.2%
Hip Fracture	0.2%	0.7%
Ischemic Heart Disease	16.0%	33.4%
Depression	31.1%	15.0%
Osteoporosis	7.0%	22.3%
Arthritis	21.2%	35.3%
Stroke and TIA	3.5%	5.7%
Female Breast Cancer	1.1%	1.6%
Colorectal Cancer	0.4%	1.2%
Prostate Cancer	0.4%	2.2%
Lung Cancer	0.4%	0.8%
Endometrial Cancer	0.1%	0.1%



Data Highlights

Diabetes was the most prevalent condition identified among both age groups (beneficiaries aged 21 to 64 and beneficiaries age 65 and older). Beneficiaries between the ages of 21 and 64 were more likely to suffer from depression that those age 65 or older.

Those age 65 or older were more likely to suffer from ischemic heart disease, cataracts, congestive heart failure, and glaucoma than those between the ages of 21 and 64.

Figure 35 – Prevalence of CMS' 21 CCW Conditions By Aid Code Group, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

Aid category	Aged	Blind / Disabled	LTC
Clinical Conditions			
Acute Myocardial Infarction	0.9%	0.7%	2.0%
Alzheimer's	4.8%	1.8%	24.3%
Alzheimer's Related Disorders	11.1%	5.1%	59.0%
Atrial Fibrillation	6.2%	3.5%	13.1%
Cataract	20.2%	13.1%	47.2%
Chronic Kidney Disease	17.6%	14.7%	35.8%
COPD	11.9%	14.7%	29.2%
Congestive Heart Failure	16.5%	14.1%	34.3%
Diabetes	42.8%	39.2%	48.1%
Glaucoma	13.7%	9.2%	15.8%
Hip Fracture	0.7%	0.4%	1.5%
Ischemic Heart Disease	31.2%	25.1%	36.9%
Depression	11.1%	26.9%	44.8%
Osteoporosis	22.5%	13.2%	15.4%
Arthritis	32.8%	30.7%	30.4%
Stroke and TIA	4.7%	4.0%	18.7%
Female Breast Cancer	1.4%	1.5%	1.2%
Colorectal Cancer	1.2%	0.7%	1.0%
Prostate Cancer	2.4%	0.9%	1.4%
Lung Cancer	0.8%	0.6%	0.8%
Endometrial Cancer	0.1%	0.1%	0.1%

Data Highlights

Beneficiaries who resided in LTC facilities were more likely to be suffering from specific chronic conditions. Alzheimer's and related disorders were concentrated among the beneficiaries residing in LTC facilities. Age related conditions such as congestive heart failure, COPD, and glaucoma were also concentrated among the LTC residents, which is a reflection of the advanced age among this subgroup.

Figure 36 – Prevalence of CMS' 21 CCW Conditions by Type of LTC Services Received, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

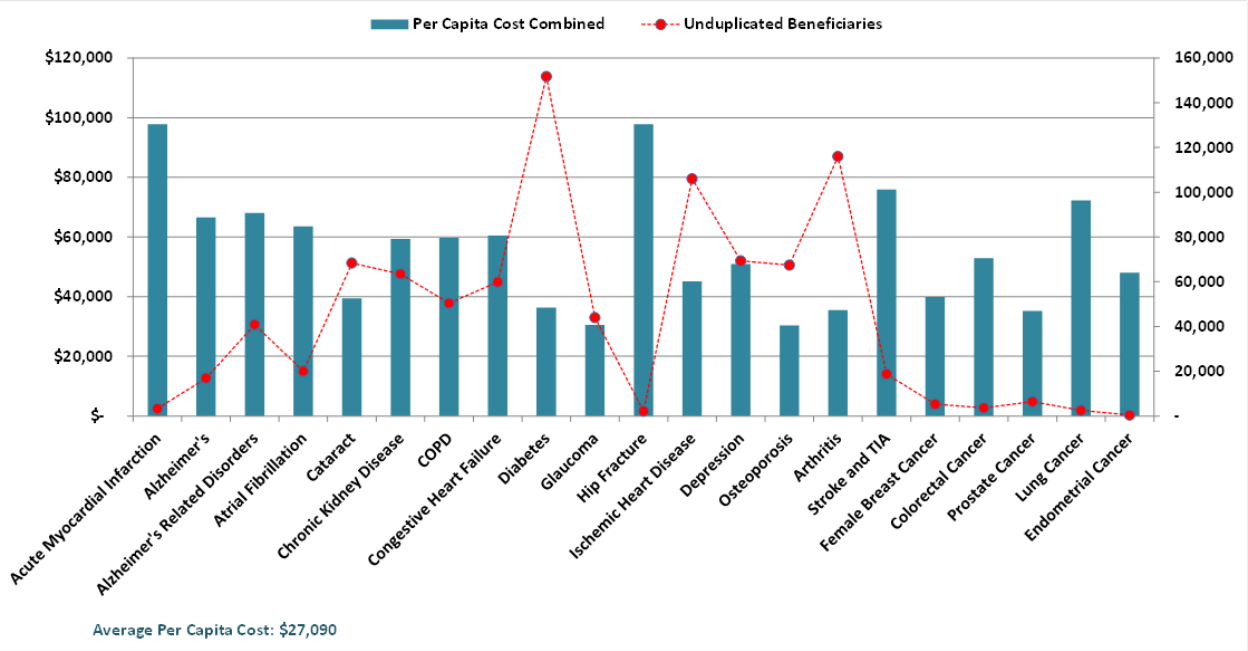
	FFS CCI Population in the Eight Pilot Counties				
Aid category	**Had a Short-Term Stay In a LTC Facility**	**Term Stay in a LTC Facility and Received LTSS**	**LTC Facility Resident**	**No LTC and No LTSS**	**Received LTSS**
Clinical Conditions					
Acute Myocardial Infarction	3.1%	5.1%	2.0%	0.4%	1.1%
Alzheimer's	17.0%	20.2%	24.3%	1.0%	5.7%
Alzheimer's Related Disorders	45.8%	45.5%	59.0%	2.9%	12.9%
Atrial Fibrillation	13.8%	19.2%	13.1%	3.0%	7.1%
Cataract	40.1%	32.4%	47.2%	14.6%	18.8%
Chronic Kidney Disease	43.9%	51.7%	35.8%	10.7%	21.7%
COPD	36.9%	38.0%	29.2%	8.7%	16.7%
Congestive Heart Failure	38.8%	50.7%	34.3%	8.9%	22.4%
Diabetes	54.4%	61.9%	48.1%	34.4%	50.4%
Glaucoma	12.6%	13.4%	15.8%	10.1%	14.7%
Hip Fracture	3.9%	8.2%	1.5%	0.1%	0.5%
Ischemic Heart Disease	47.7%	61.8%	37.0%	19.4%	40.7%
Depression	46.0%	45.5%	44.8%	13.6%	20.3%
Osteoporosis	18.8%	27.6%	15.4%	14.6%	24.9%
Arthritis	41.6%	55.2%	30.4%	22.2%	46.0%
Stroke and TIA	18.2%	24.2%	18.7%	2.1%	5.9%
Female Breast Cancer	1.5%	2.2%	1.2%	1.2%	1.9%
Colorectal Cancer	1.7%	2.1%	1.0%	0.7%	1.4%
Prostate Cancer	2.0%	2.5%	1.4%	1.5%	2.1%
Lung Cancer	1.8%	2.1%	0.8%	0.4%	0.9%
Endometrial Cancer	0.2%	0.3%	0.1%	0.1%	0.2%

Data Highlights

Beneficiaries who received LTC facility or LTSS throughout the year had considerably more disease burden than those who did not receive these services. Beneficiaries who resided in a LTC facility or incurred a short-stay in such a facility displayed greater chronic disease burden than beneficiaries who received only LTSS.

Figure 37 – Per-Capita Cost and Number of Beneficiaries by CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

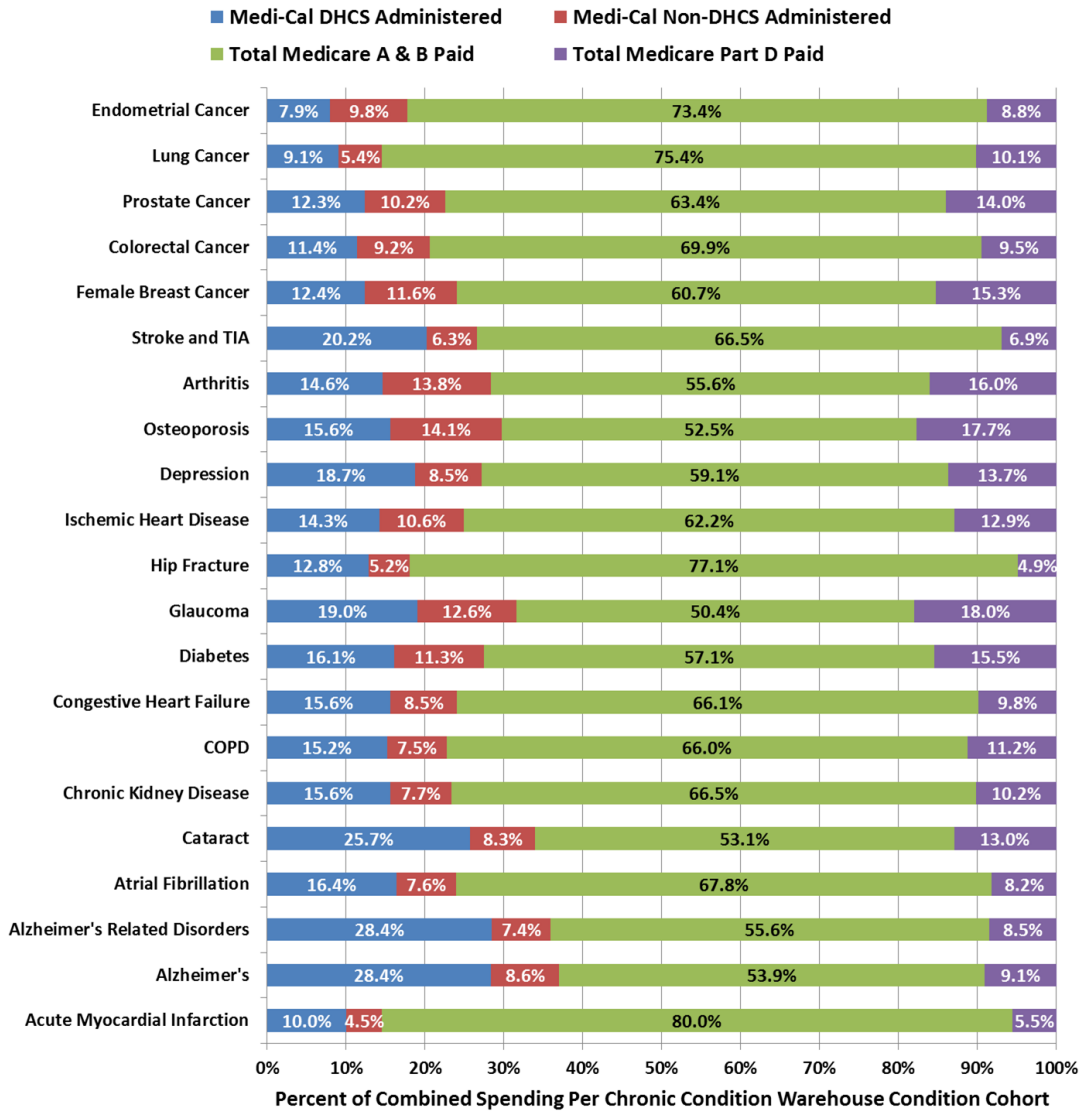


Data Highlights

Some chronic conditions impacted a small number of beneficiaries, but generated a high per-capita cost, while others impacted a significant number of beneficiaries, but generated a per-capita cost closer to the overall population average per-capita cost. Conditions such as stroke, cancer, hip fractures, acute myocardial infractions, Alzheimer's disease, and arterial fibrillation all impacted a small portion of the population and generated a high per-capita cost. Conditions such as diabetes, arthritis, and ischemic heart disease all impacted a significant proportion of the population and generated a per-capita cost that was closer to the overall population average.

Figure 38 – Proportion of Total FFS Expenditures by Payer Source for each of CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

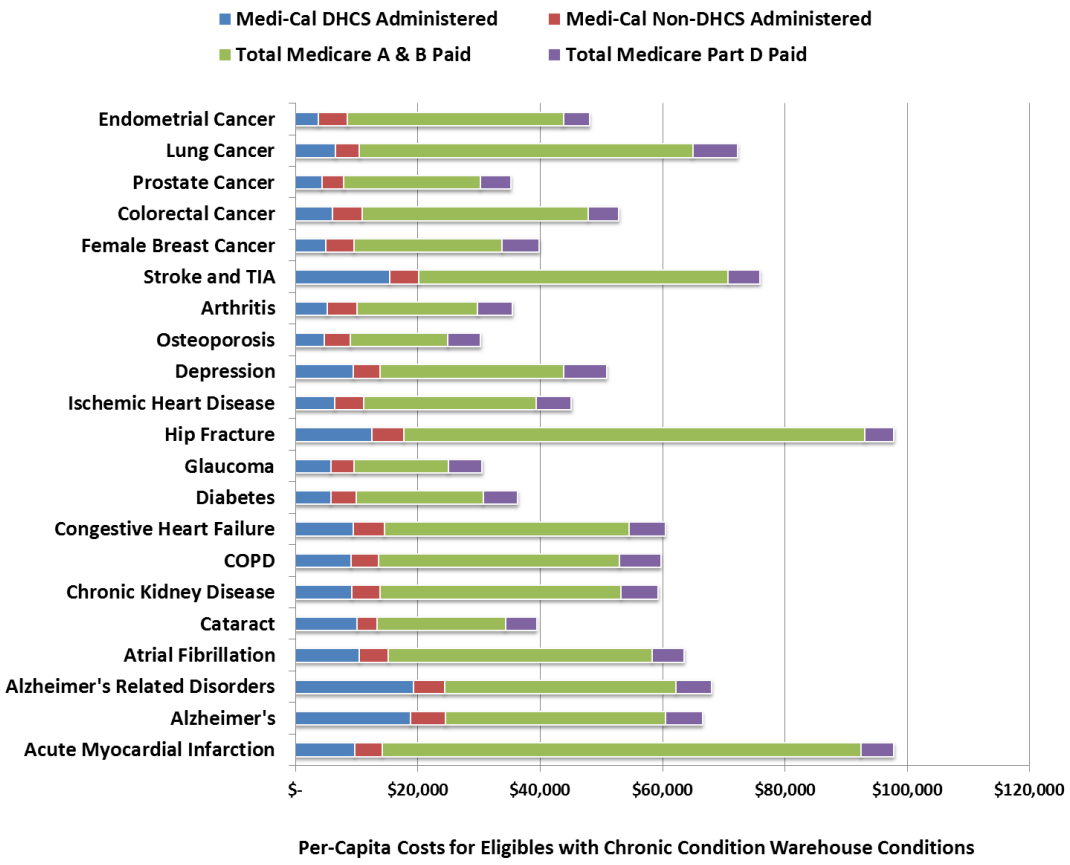
TOTAL ELIGIBLES EQUAL 364,726



Data Highlights

The cost burden for each program was correlated with the type of condition treated and the associated type of care delivered. For example, conditions such as acute myocardial infarction were a greater cost burden for Medicare, as the costs were concentrated in the acute care setting. Conditions such as Alzheimer's resulted in a significant cost burden to Medi-Cal, as the associated LTC services were primarily covered by Medi-Cal.

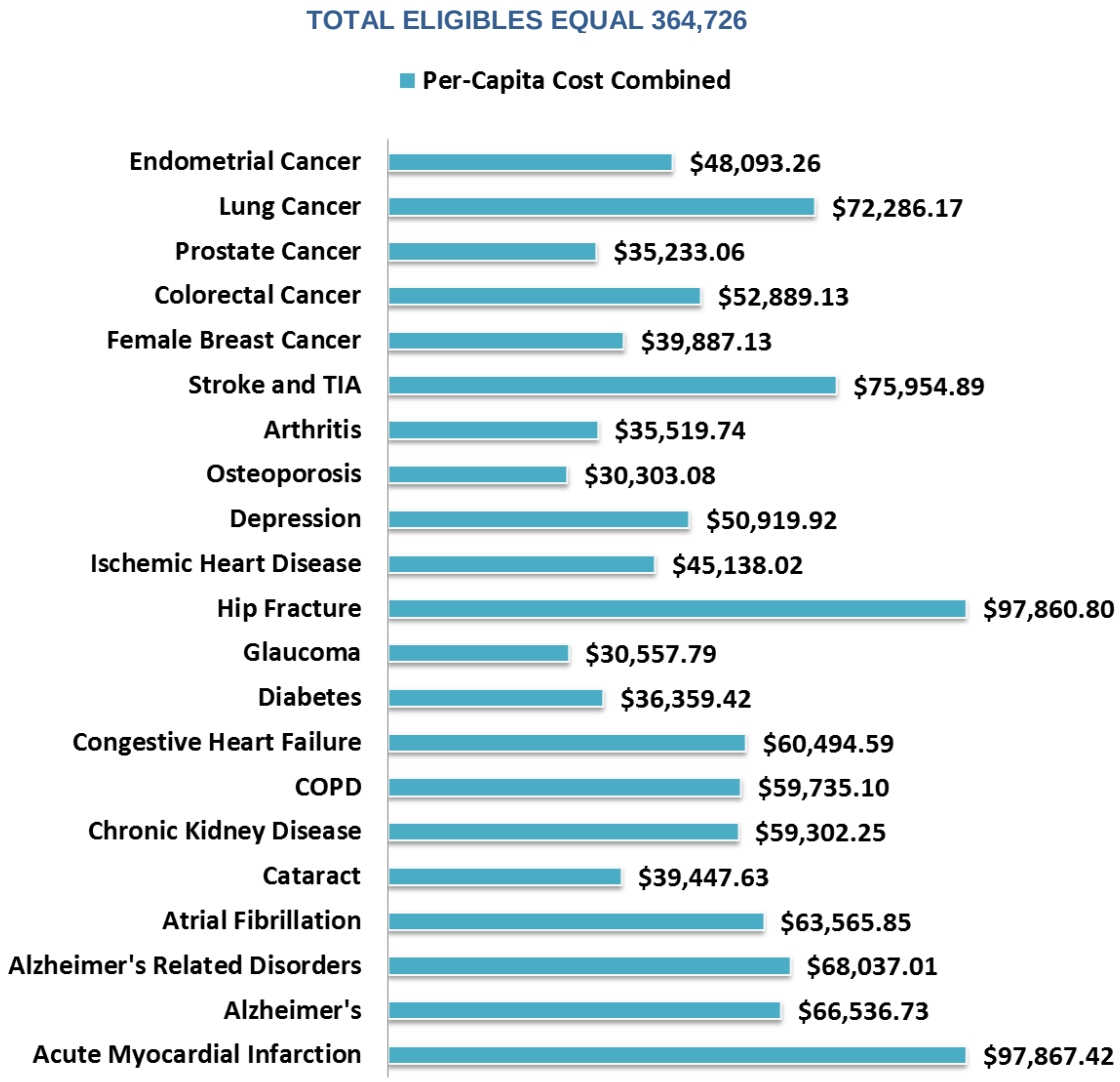
Figure 39 – Per-Capita Cost of CMS' 21 CCW Conditions by Payer, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

Alzheimer's disease was the most costly condition in terms of per-capita cost for the Medi-Cal program. This was due to the extensive LTC services utilized. Acute myocardial infarction was the most costly per-capita condition overall, primarily due to the extensive hospital acute care and physician services covered by Medicare.

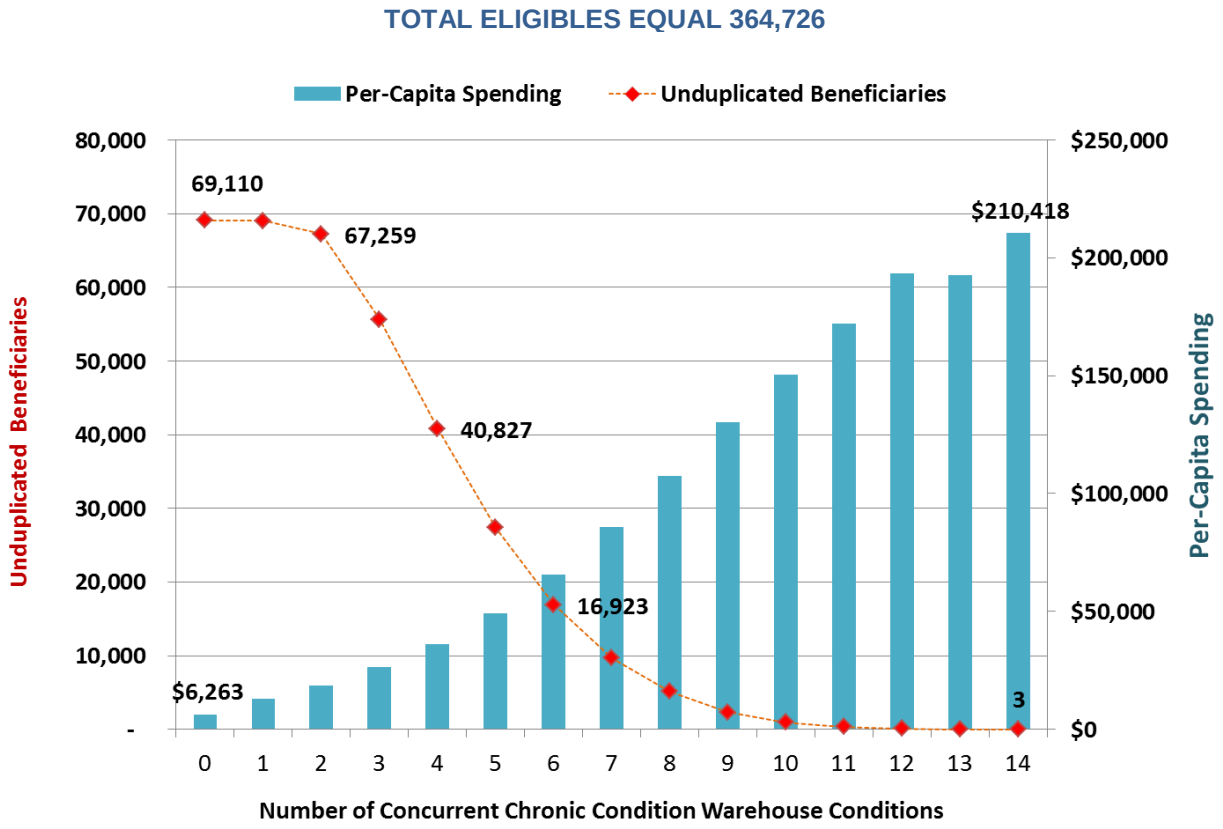
Figure 40 – Combined Medicare and Medi-Cal Per-Capita Costs by CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010



Data Highlights

The most costly condition among the 21 examined was acute myocardial infarction, followed by hip fractures, stroke, and lung cancer.

Figure 41 – Per-Capita Cost of Multiple Chronic Conditions by CMS' CCW Algorithms, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

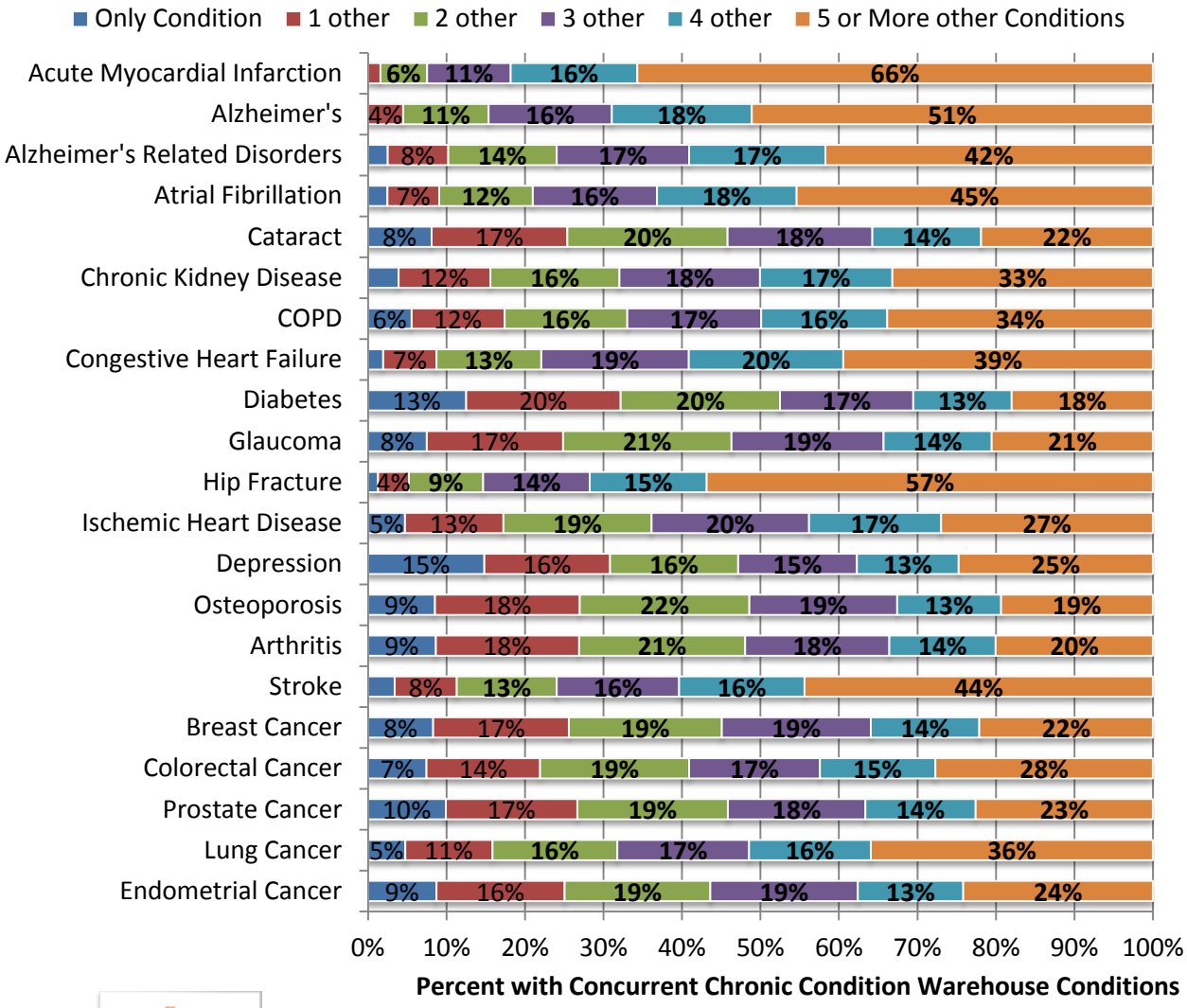


Data Highlights

The per-capita cost increases exponentially as the number of concurrent conditions increases. Beneficiaries with none of the 21 conditions examined disclosed the lowest per-capita cost ($6,263). The number of beneficiaries within each concurrent condition cohort declines as the number of concurrent conditions increases.

Figure 42 – Number of Concurrent Conditions By CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

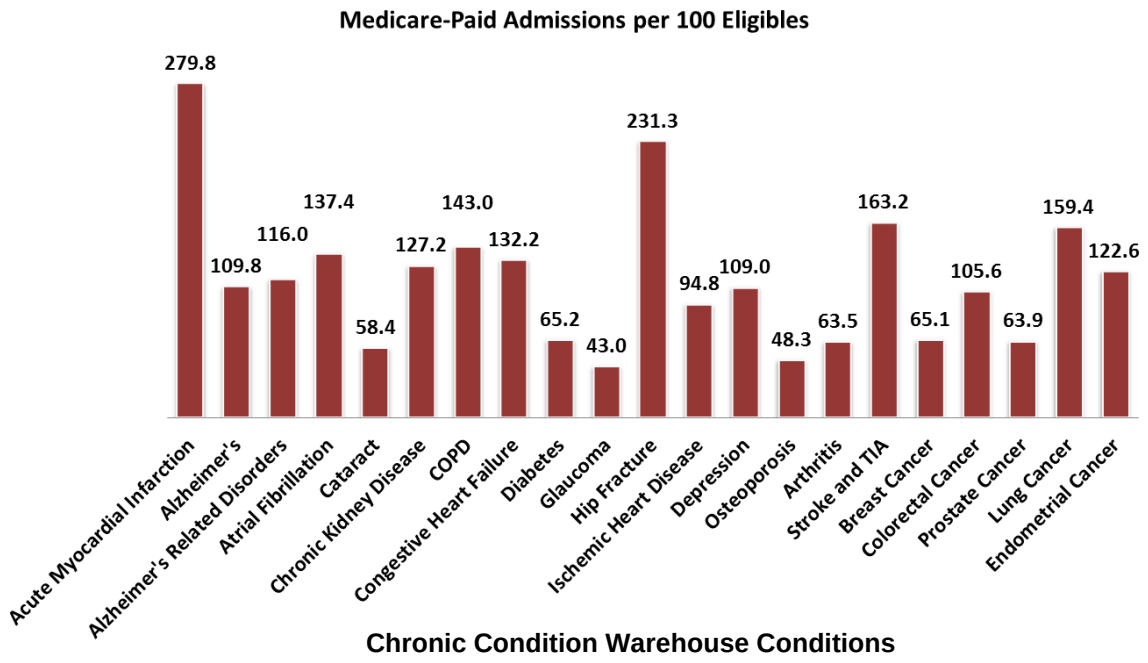


Data Highlights

Multiple chronic conditions were common in every condition cohort examined. Over 50% of some condition cohorts, such as acute myocardial infraction and Alzheimer's disease, suffered from five or more concurrent conditions.

Figure 43 – Medicare Paid Acute Care Admissions Per 100 Eligibles By CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

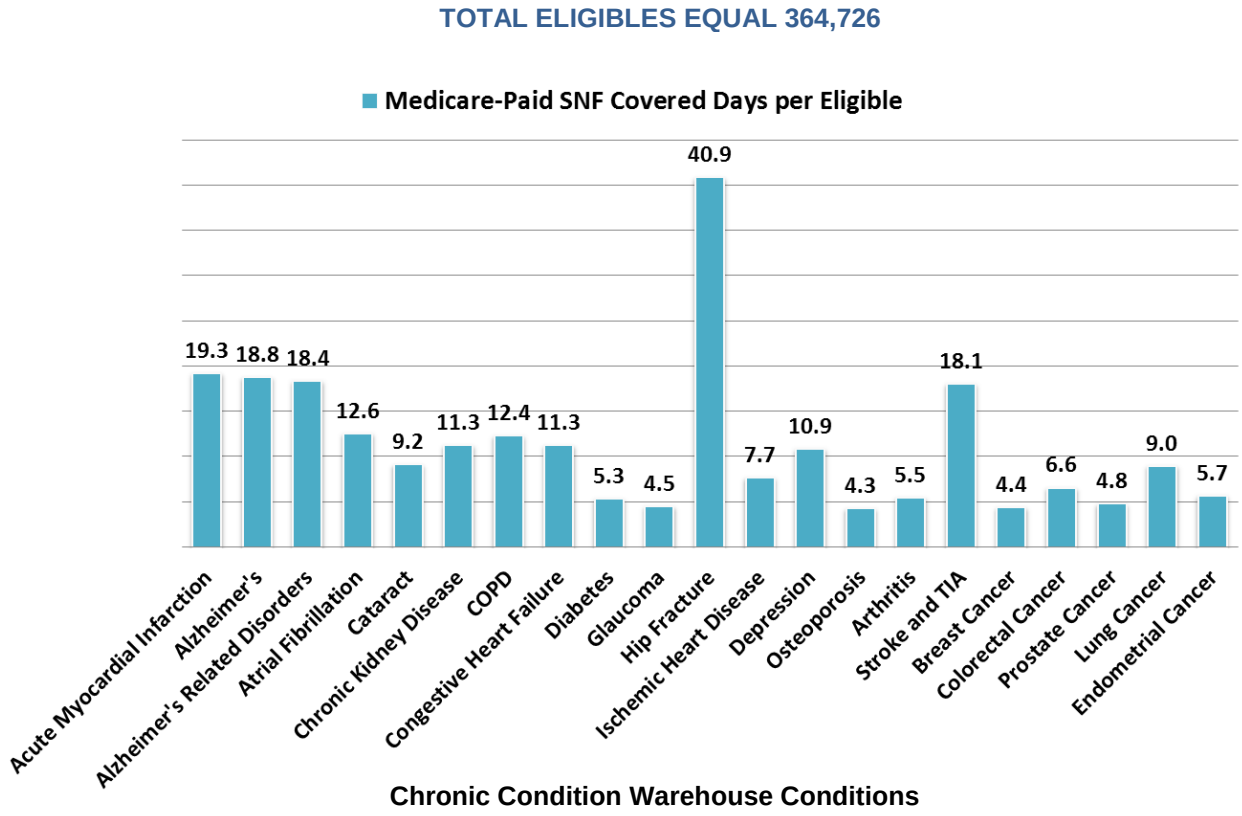
TOTAL ELIGIBLES EQUAL 364,726



Data Highlights

The highest rates of hospital inpatient admissions were associated with acute myocardial infarction, hip fractures, lung cancer, and stroke.

Figure 44 – Medicare Paid Skilled Nursing Facility Days Per Eligible by CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

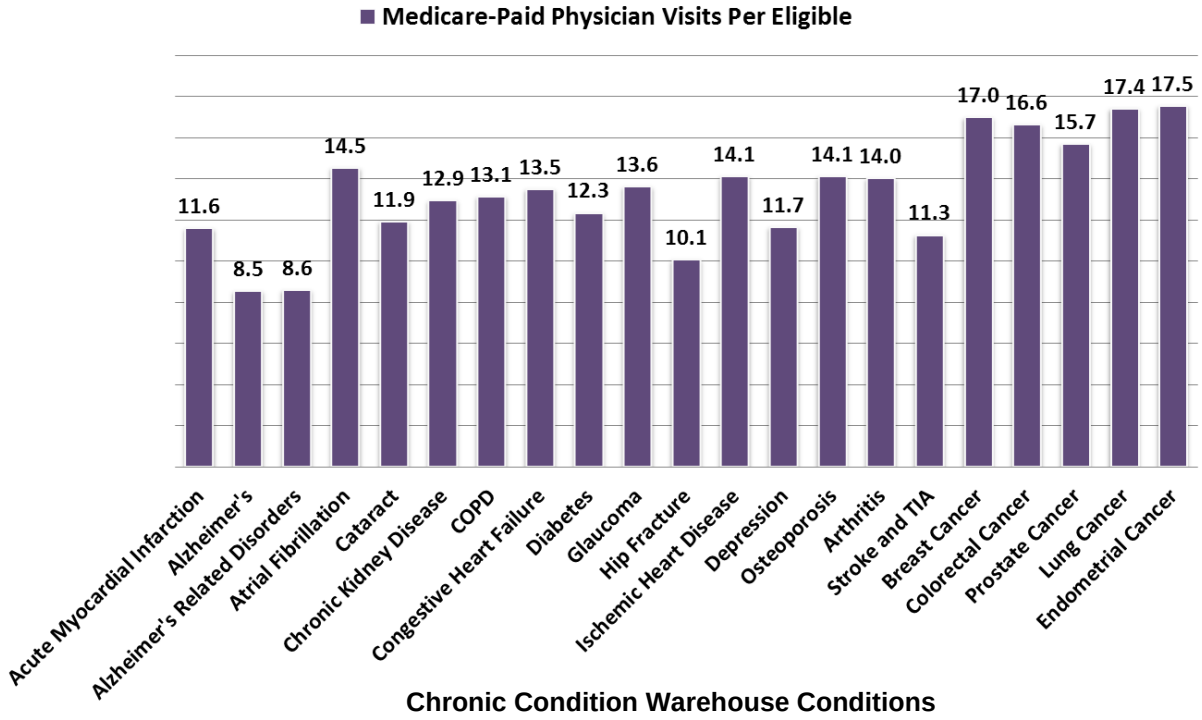


Data Highlights

Beneficiaries suffering from hip fractures displayed the greatest average Medicare-covered SNF days per beneficiary. Other conditions with high average Medicare-covered SNF days included acute myocardial infarction, Alzheimer's disease, and stroke.

Figure 45 – Medicare Paid Physician Visits Per Eligible by CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

TOTAL ELIGIBLES EQUAL 364,726

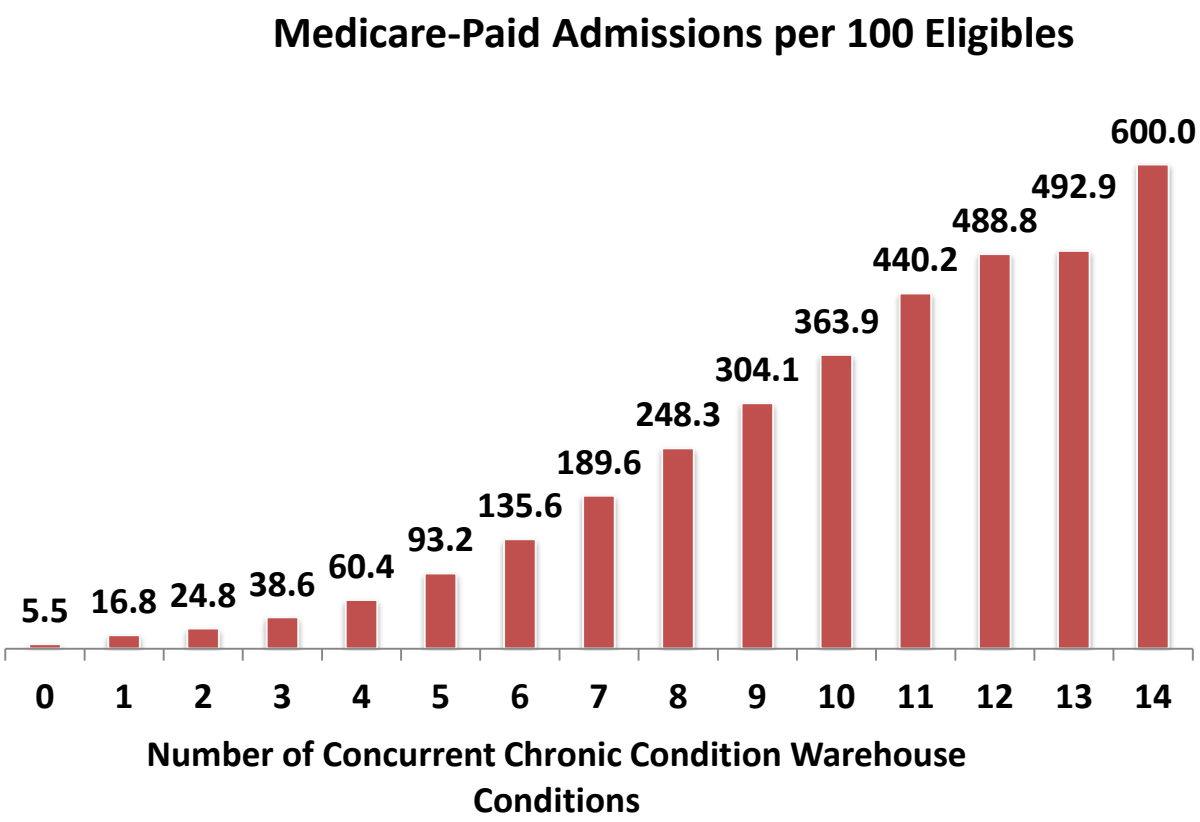


Data Highlights

The highest average numbers of physician visits per eligible were associated with the five cancer cohorts examined. Beneficiaries in these cohorts average roughly 17 physician visits during the year.

Figure 46 – Medicare Paid Inpatient Admissions Per 100 Eligibles by CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010

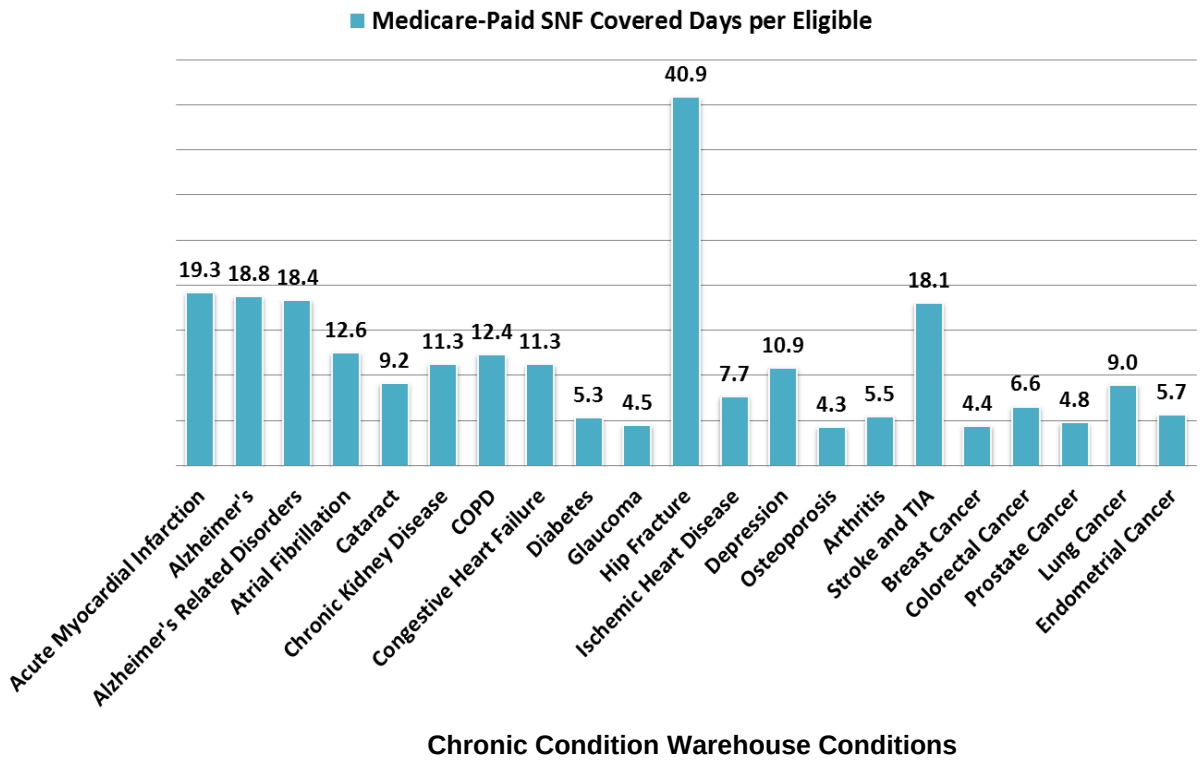
TOTAL ELIGIBLES EQUAL 364,726



Data Highlights

The number of hospital admissions rose in tandem with the number of concurrent chronic conditions present in a beneficiary. Beneficiaries with an average of 14 concurrent chronic conditions had the highest average number of hospital admissions at 600 admissions per 100 eligibles in CY 2010.

Figure 47 – Medicare Paid Skilled Nursing Facility Days Per Eligible By CMS' 21 CCW Conditions, *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010.



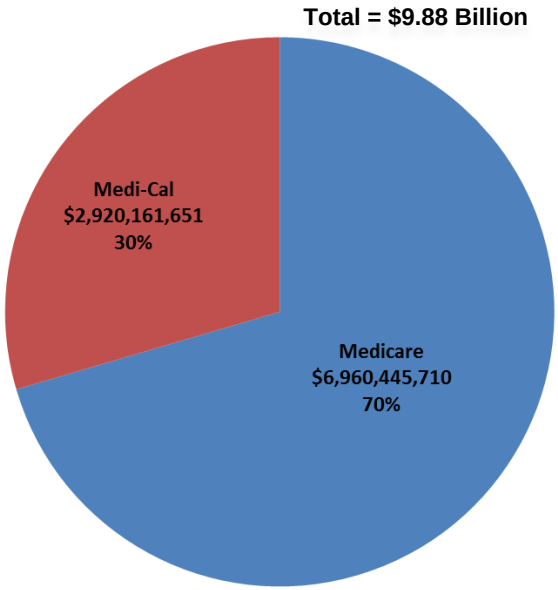
Data Highlights

The number of paid skilled nursing facility days rose in tandem with the number of concurrent chronic conditions present in a beneficiary. Beneficiaries with an average of 13 concurrent chronic conditions had the highest average number of paid skilled nursing facility days at 99.9 per eligible in 2010.

Section XV: Health Care Cost and Utilization - *FFS CCI Population in the Eight Pilot Counties*

During CY 2010, the Medicare and Medi-Cal programs spent $9.88 billion on the *FFS CCI population in the eight pilot counties*. Medicare covered 70% of these expenditures, while Medi-Cal picked up the remaining 30%. Expenditures were concentrated within each program's scope of coverage and role as primary payer. Each program's expenditure burden was correlated with the type of patient considered and associated care setting.

Total Combined Medicare and Medi-Cal Expenditures Associated with *FFS CCI population in the eight pilot counties*, CY 2010 Dates-of-Service

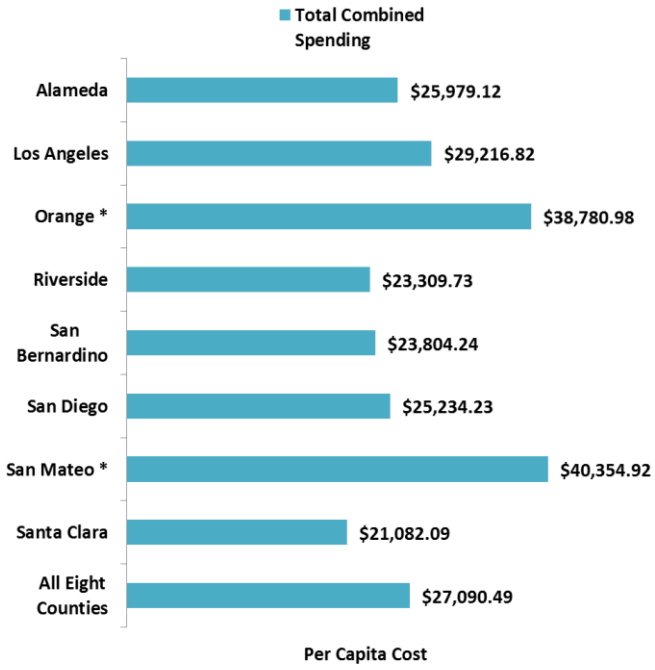


For example, Medi-Cal assumed a significant expenditure burden when beneficiaries resided in LTC facilities or received LTSS; these beneficiaries displayed significant costs for DHCS-administered and non-DHCS administered Med-Cal services. The non-DHCS administered services were primarily associated with:

- Personal Care Services Program (PCSP) under the Medi-Cal State Plan;
- IHSS Plus State Plan Option; and
- In-Home Operations/Nursing Facility Waiver Personal Care Services.

Beneficiaries with specific conditions such as Alzheimer's disease, stroke, hip fractures, or dementia were highly likely to be residents of LTC facilities beyond Medicare coverage limits; therefore, the LTC and LTSS services and associated expenditures for these beneficiaries were primarily Medi-Cal covered services. Conditions such as acute myocardial infarction generally involved significant acute inpatient services, and in this case, Medicare assumed a significant cost burden. The average combined Medicare and Medi-Cal FFS per-capita cost for the *FFS CCI population in the eight pilot counties* during CY 2010 was $27,090. The per-capita cost varied from a high of $40,355[158] in San Mateo County to a low of $21,082 in Santa Clara County.

Combined Per-Capita Costs For *FFS CCI Population in the Eight Pilot Counties* by Pilot County, CY 2010



* Orange and San Mateo Counties have only 407 and 163 FFS eligibles represented above, respectively

In terms of the combined eight county per-capita average cost among payers, Medicare recorded a per-capita cost $19,084, Medi-Cal DHCS-administered services recorded a per-capita cost of $4,594, and Medi-Cal non-DHCS administered costs recorded a per-capita cost of $3,412. The counties of Orange and San Mateo, both COHS counties, recorded per-capita costs that were much higher than all other

[158] Note, San Mateo is a COHS county. The number of *FFS CCI* eligibles in this county totaled 163.

counties, but the number of *FFS CCI population beneficiaries in these two pilot counties* totaled only 407 and 163 respectively.

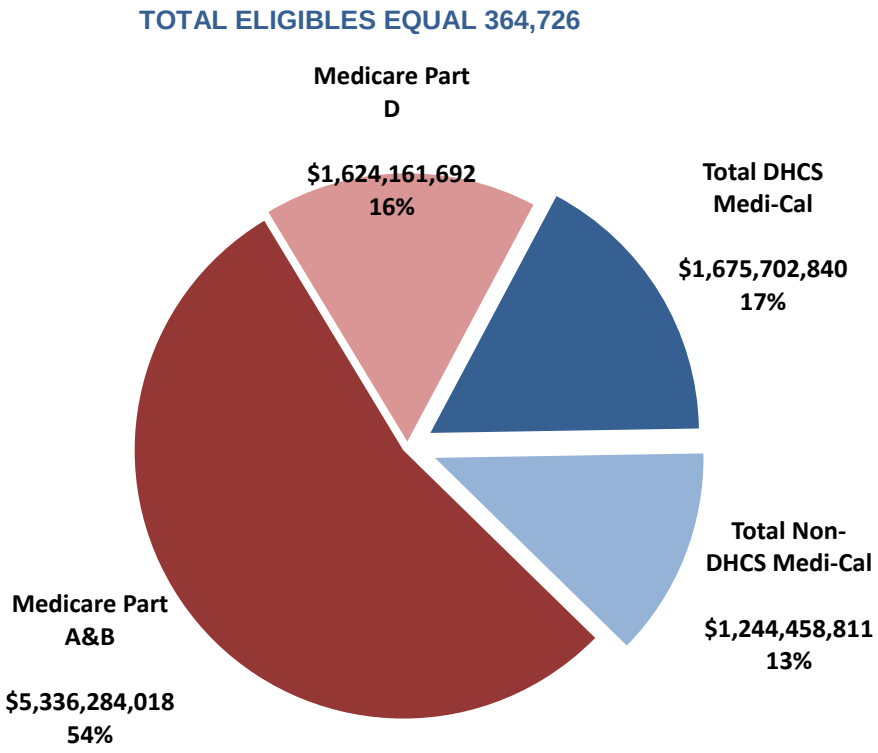
Table 26 – *FFS CCI Population in the Eight Pilot Counties* - Per-Capita Cost By Payer Source, CY 2010

County	Unduplicated *FFS CCI Eligibles*	Per-Capita Cost			
		Combined Total	Medicare	DHCS Administered	Non-DHCS Administered
All Eight Counties	364,726	$27,090	$19,084	$4,594	$3,412
Alameda	24,557	$25,979	$16,752	$5,221	$4,006
Los Angeles	216,462	$29,217	$20,617	$4,747	$3,853
Orange*	407	$38,781	$23,697	$12,636	$2,448
Riverside	24,581	$23,310	$17,055	$3,719	$2,536
San Bernardino	27,142	$23,804	$17,444	$3,861	$2,499
San Diego	41,260	$25,234	$18,428	$4,754	$2,052
San Mateo*	163	$40,355	$20,477	$17,326	$2,553
Santa Clara	30,154	$21,082	$13,940	$3,964	$3,178

Source: Compiled by RASB using Medicare and Medi-Cal administrative data
** It should be noted that the counties of San Mateo and Orange represent COHS counties and the total FFS CCI population in these counties are 163 and 407, respectively.*

Figure 48 below provides another look at the distribution of expenditures, further splitting out Medicare expenditures between Parts A & B compared to Part D, and separating Medi-Cal expenditures between those administered by DHCS, and those administered by other departments within the California Health and Human Service Agency (CHHS).

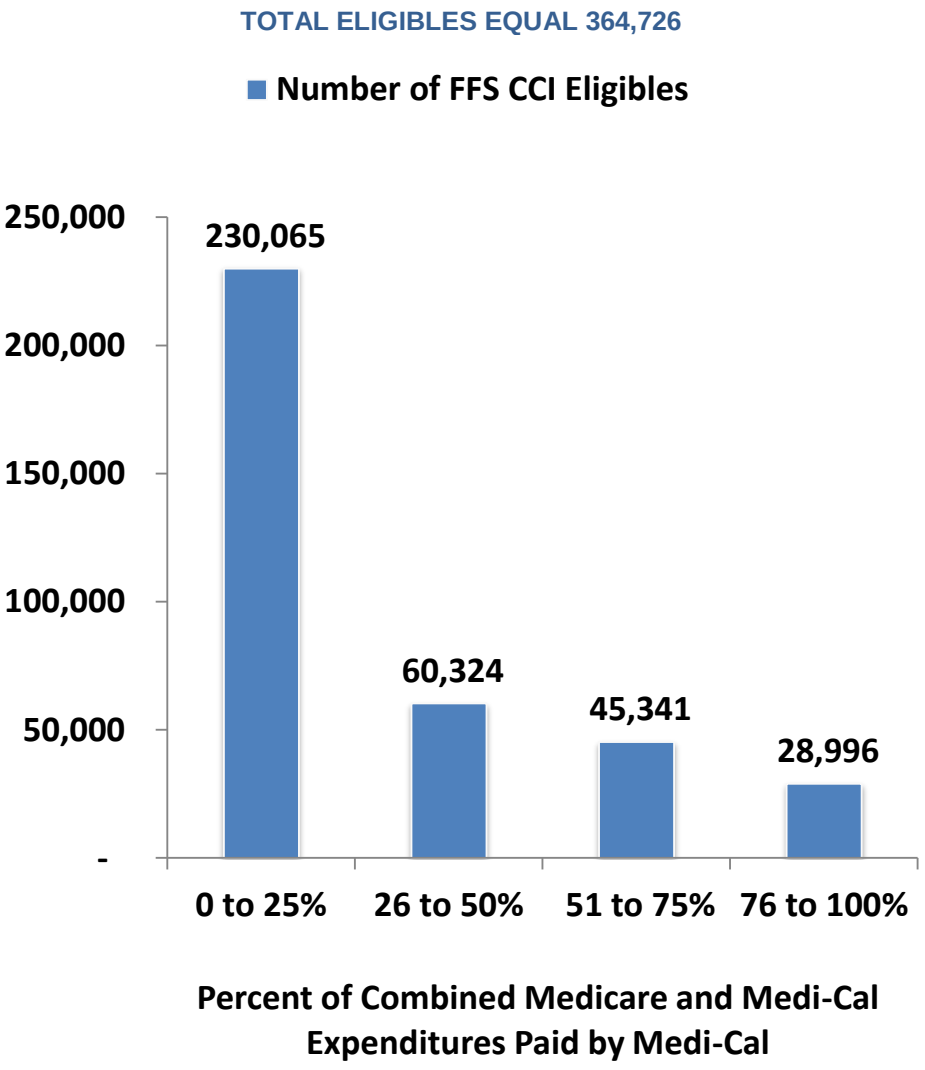
Figure 48 - Distribution of Expenditures by Program and Payer for *FFS CCI Population in the 8 Pilot Counties*; Beneficiaries Ever Enrolled During CY 2010



Source: Compiled by RASB using Medicare and Medi-Cal administrative data

The distribution of expenditures was not uniform for all *FFS CCI population in the eight pilot counties* beneficiaries. There were 230,065 beneficiaries (63.1%) for whom Medi-Cal paid 25% or less of the combined total expenditures. There were another 60,324 beneficiaries (16.5%) for whom Medi-Cal paid between 26% and 50% or less of the combined total expenditures. This means that the Medicare program covered the majority of expenditures for 79.6%, or nearly four-fifths of the *FFS CCI population in the eight pilot counties* (see Figures 49 and 50, below). The discussion that follows will focus on the remaining one-fifth (20.4%) of the *FFS CCI population in the eight pilot counties* for whom Medi-Cal paid the majority of combined expenditures.

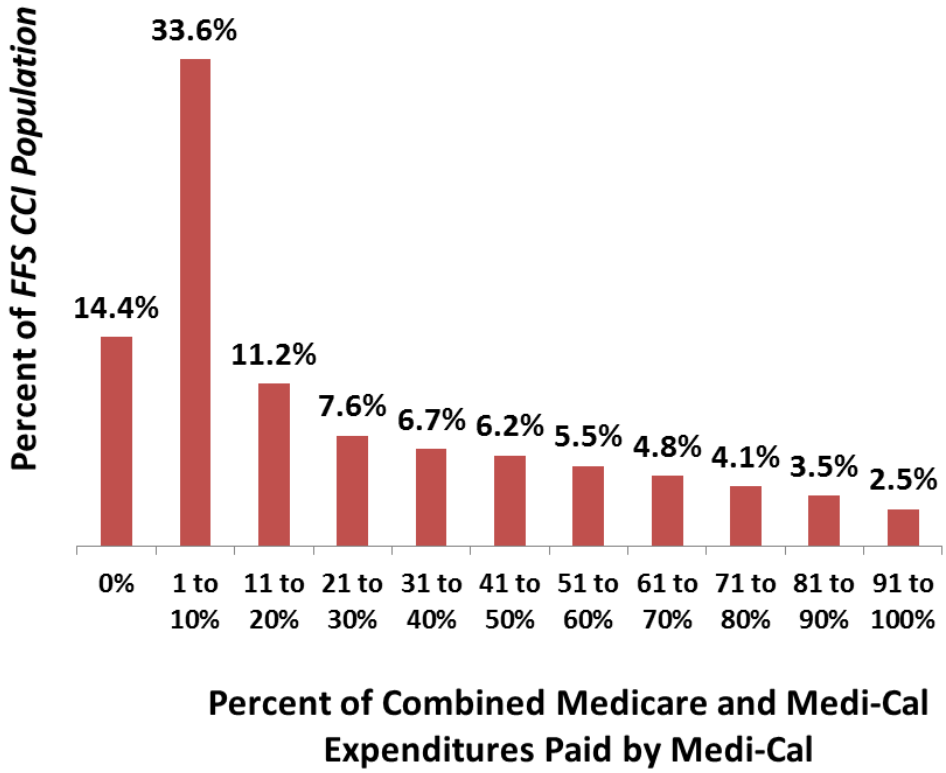
Figure 49 - Number of *FFS CCI Population in the 8 Pilot Counties* by Percent of Combined Medicare and Med-Cal Expenditures Were Paid by Medi-Cal; Beneficiaries Ever Enrolled During CY 2010



Source: Compiled by RASB using Medicare and Medi-Cal administrative data

Figure 50 - Percent of *FFS CCI Population in the 8 Pilot Counties* by Percent of Combined Medicare and Med-Cal Expenditures Paid by Medi-Cal; CY 2010

TOTAL ELIGIBLES EQUAL 364,726

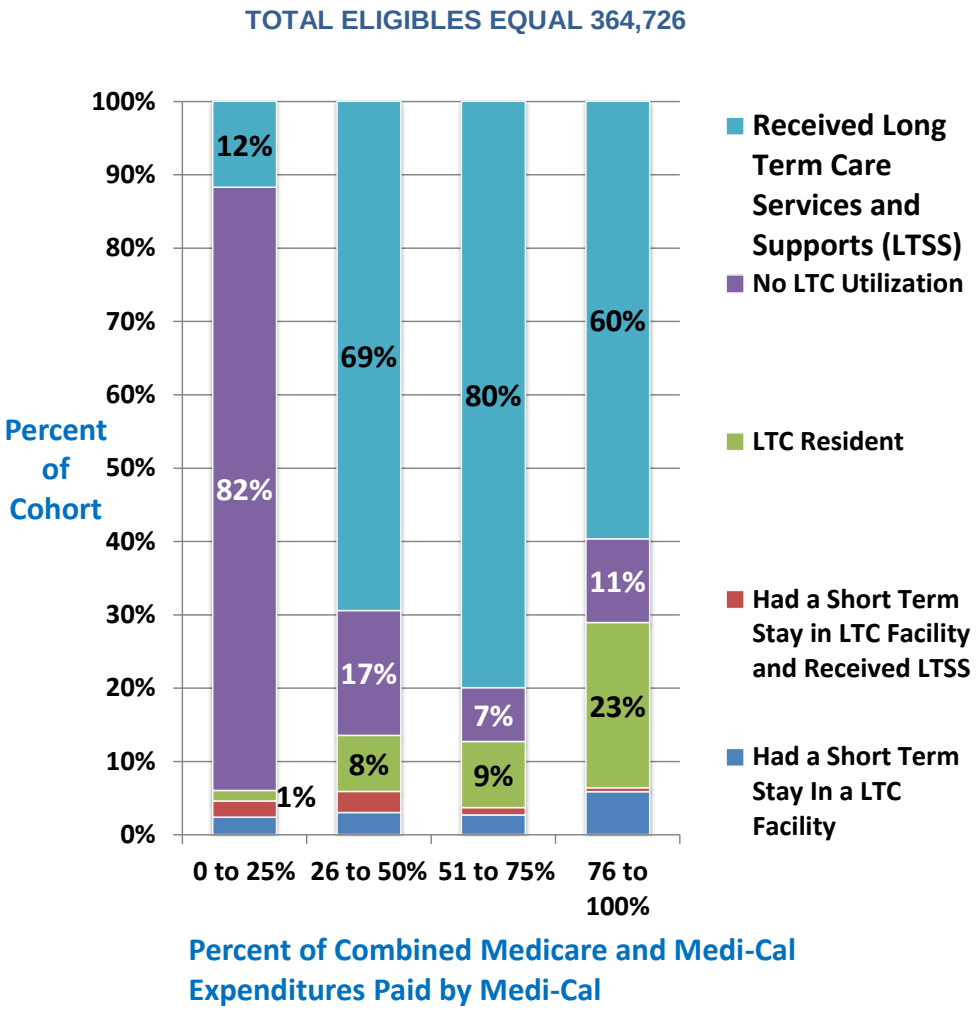


Source: Compiled by RASB using Medicare and Medi-Cal administrative data

Utilization of LTC Facility and LTSS

The largest differences between those eligibles in the *FFS CCI population in the eight pilot counties* for whom Medi-Cal paid only a small percentage of the combined Medicare and Medi-Cal expenditures, and those for whom Medi-Cal paid the majority of expenditures was their utilization of LTC facility services and LTSS.

Figure 51 - Distribution by LTC Utilization Type and Percent of Combined Expenditures Paid by Medi-Cal; CY 2010



Source: Compiled by RASB using Medicare and Medi-Cal administrative data

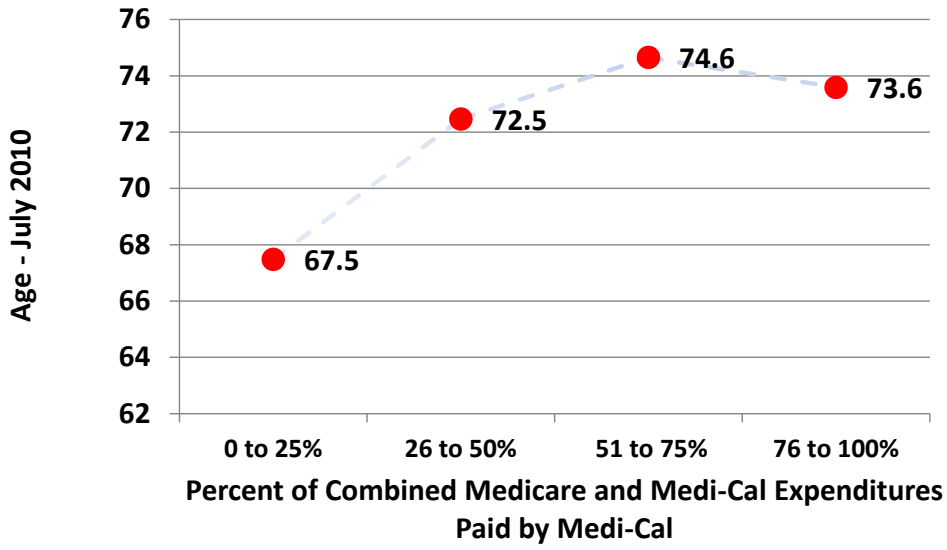
As displayed in Figure 51, above, the cohort for whom Medi-Cal paid 25% of combined expenditures or less was comprised largely of individuals with no utilization of LTSS or LTC facility services. However, among those for whom Medi-Cal paid for more than 25% of the combined expenditures, utilization of LTC services increases dramatically. Among beneficiaries for whom Medi-Cal paid for more than 75% of the combined expenditures, almost all members received some type of LTC services; only 11% of this cohort had no LTC utilization.

Age Distribution by Payer Contribution

The average age of the *FFS CCI population in the eight pilot counties* grew somewhat older as the amount of the Medi-Cal contribution to their overall cost of care increased. The age of beneficiaries in the *FFS CCI population in the eight pilot counties* appeared to be modestly correlated with the percentage of combined expenditures paid by Medi-Cal.

Figure 52 - Average Age of *FFS CCI Population in the Eight Pilot Counties* and Percent of Combined Expenditures Covered by Medi-Cal; CY 2010

TOTAL ELIGIBLES EQUAL 364,726

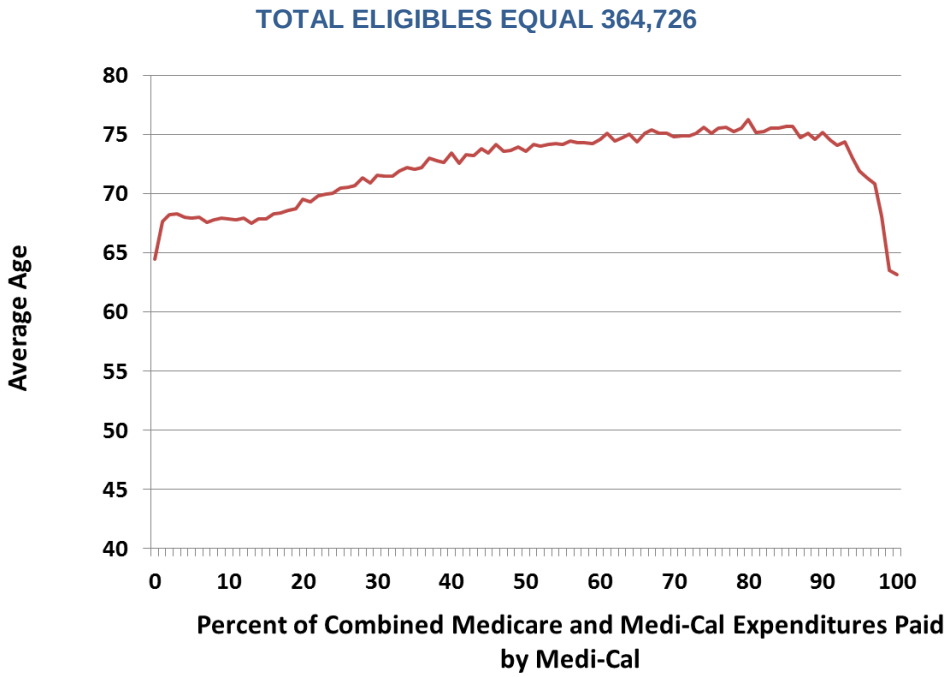


Source: Compiled by RASB using Medicare and Medi-Cal administrative data

The exception to this trend appeared to be those beneficiaries for whom Medi-Cal paid more than 98% of costs. Within this group the average age is under 65 years old. Among those members of the *FFS CCI population in the eight pilot counties* for whom Medi-Cal paid more than 85% of costs the average age begins declining. One

possible explanation may be that this cohort contains larger numbers of younger individuals enrolled in Medi-Cal under a Disabled aid code and receiving LTSS.

Figure 53 - Average Age of *FFS CCI Population in the Eight Pilot Counties* and Percent of Combined Expenditures Covered by Medi-Cal; CY 2010



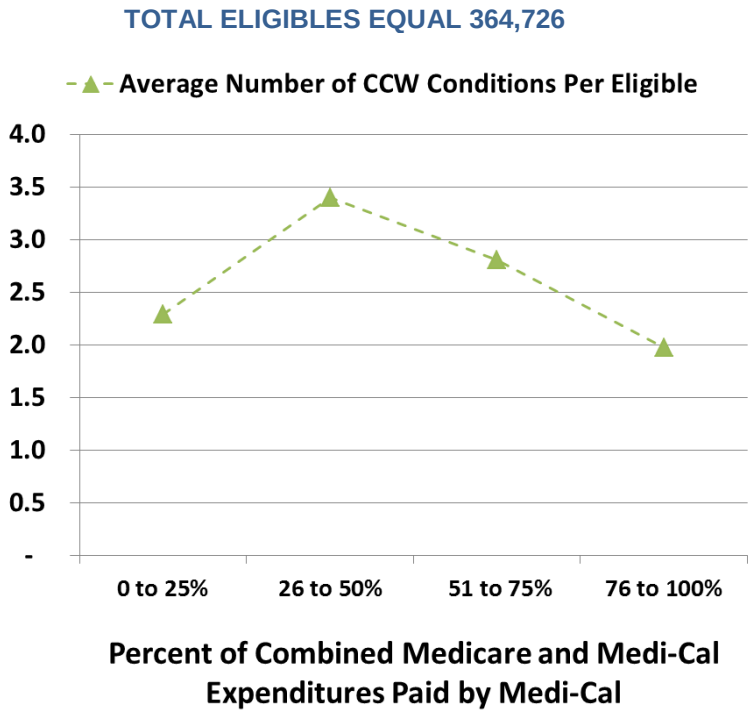
Comorbidity Distribution by Payer Contribution

Figure 54, below, displays the relationship between the percentage of combined expenditures paid by Medi-Cal for beneficiaries in the *FFS CCI population in the eight pilot counties* and the average number of diagnoses for the 21 CCW conditions[159] for beneficiaries in the population. There did not appear to be a strong association between the two variables.

[159] The number of CCW clinical conditions for each eligible was determined by applying the CCW grouping algorithm, to the diagnosis codes found in the Medicare claims data.

Findings elsewhere in this paper indicate that beneficiaries with a greater number of concurrent clinical conditions are likely to have a more compromised health status and be more costly. Based on the findings presented here, it appears that as the number of concurrent clinical conditions increases, beneficiaries are likely to receive services that represent a predominantly Medicare covered service. These services include inpatient acute care services and skilled nursing services.

Figure 54 - Number of Concurrent Clinical Conditions and the Percentage of Combined Expenditures Paid by Medi-Cal; CY 2010



Diseases Associated with High Medi-Cal Expenditures

Table 27, below, displays the percentage of beneficiaries in the *FFS CCI population in the eight pilot counties* with each of the 21 CCW conditions. The population is further separated into those eligibles for whom Medi-Cal paid less than 50% of total combined expenditures, and those for whom Medi-Cal paid more than 50%

of total combined expenditures. The group with a prevalence of disease greater than the average for all eligibles is shaded.

Overall the prevalence of disease for all conditions was similar, and no conditions were either dramatically more absent, or more prevalent, in either group. Eligibles for which Medi-Cal paid more than 50% of the total combined expenditures displayed an above average prevalence for Alzheimer's disease and Alzheimer's related conditions. These conditions are associated with dual eligible populations more likely to require LTC facility services or LTSS.

Table 27 - Prevalence of CMS CCW Conditions by Medi-Cal Contribution

CMS CCW Condition	Eligibles for Whom Medi-Cal pays Less than Fifty Percent of Combined Total	Eligibles for Whom Medi-Cal pays More than Fifty Percent of Combined Total	All FFS CCI Population in the Eight Pilot Counties
Percent with Condition			
Acute Myocardial Infarction	1.1%	0.1%	0.9%
Alzheimer's	3.8%	8.0%	4.6%
Alzheimer's Related Disorders	9.3%	18.8%	11.2%
Atrial Fibrillation	5.6%	4.9%	5.5%
Cataract	18.1%	21.2%	18.7%
Chronic Kidney Disease	18.3%	14.1%	17.4%
COPD	14.9%	9.7%	13.8%
Congestive Heart Failure	17.0%	14.1%	16.4%
Diabetes	42.3%	38.8%	41.6%
Glaucoma	12.055%	12.052%	12.054%
Hip Fracture	0.7%	0.1%	0.6%
Ischemic Heart Disease	29.9%	25.8%	29.1%
Depression	19.2%	18.2%	19.0%
Osteoporosis	18.2%	19.4%	18.5%
Arthritis	31.2%	34.2%	31.8%
Stroke and TIA	5.1%	5.3%	5.1%
Female Breast Cancer	1.5%	1.1%	1.4%

CMS CCW Condition	Eligibles for Whom Medi-Cal pays Less than Fifty Percent of Combined Total	Eligibles for Whom Medi-Cal pays More than Fifty Percent of Combined Total	All FFS CCI Population in the Eight pilot Counties
Percent with Condition			
Colorectal Cancer	**1.0%**	**0.8%**	**1.0%**
Prostate Cancer	**1.9%**	**1.2%**	**1.8%**
Lung Cancer	**0.8%**	**0.2%**	**0.7%**
Endometrial Cancer	**0.14%**	**0.07%**	**0.1%**

In this section, RASB presents cost and utilization data for the *FFS CCI population in the eight pilot counties*. Unless otherwise noted, cost metrics presented in this section are related in cost-per-capita and the conditions profiled are the 21 chronic conditions identified in CMS' CCW. The expenditures presented included those covered by Medicare and Medi-Cal, including services administered by other departments such as Department of Social Services, Department of Alcohol and Drug Programs, Department of Mental Health, and Department of Developmental Services. A list of the administrative claims and category of services used to compile cost and utilization are presented in Table 3.

RASB has presented the cost and utilization data in chart book fashion. The chart book that follows presents this information; data highlights have been added to identify significant information.

Table 28 - Chart Book 4, Graphics of Section XV

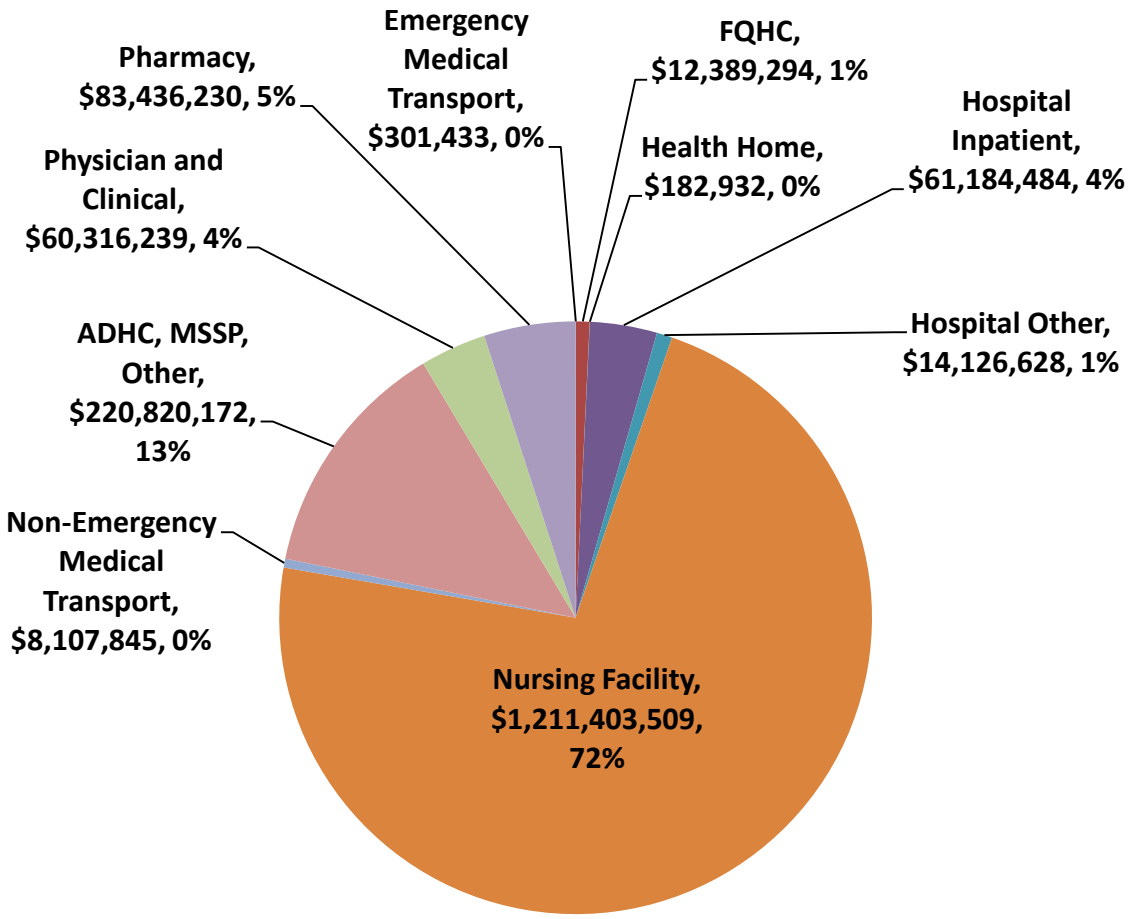
Table 29 – Combined Medicare and Medi-Cal Expenditures, Unduplicated Eligibles, and Member Months by County and Payer Source for *FFS CCI Population in the Eight Pilot Counties*, Beneficiaries Ever Enrolled During CY 2010, Expenditures Compiled by Date-of-Service

County	Unduplicated Eligibles	Total Combined Expenditures	% of Total	Total Medi-Cal Expenditures (DHCS and Non-DHCS)	% of Total	Total Medicare Expenditures	% of Total
All Eight Counties	**364,726**	**$9,880,607,361**	**100%**	**$2,920,161,649**	**100%**	**$6,960,445,710**	**100%**
Alameda	24,557	$ 637,969,171	6%	$ 226,587,507	8%	$ 411,381,663	6%
Los Angeles	216,462	$6,324,331,943	64%	$1,861,631,433	64%	$4,462,700,510	64%
Orange	407	$ 15,783,857	0%	$ 6,139,247	0%	$ 9,644,610	0%
Riverside	24,581	$ 572,976,474	6%	$ 153,746,456	5%	$ 419,230,017	6%
San Bernardino	27,142	$ 646,094,576	7%	$ 172,627,395	6%	$ 473,467,181	7%
San Diego	41,260	$1,041,164,282	11%	$ 280,829,116	10%	$ 760,335,166	11%
San Mateo	163	$ 6,577,851	0%	$ 3,240,162	0%	$ 3,337,690	0%
Santa Clara	30,154	$ 635,709,207	6%	$ 215,360,333	7%	$ 420,348,873	6%

Note: As previously discussed, the *FFS CCI population in eight pilot counties* includes beneficiaries who were ever eligible for Medi-Cal and Medicare during CY 2010. All previous populations presented and discussed represented point-in-time counts for the month of July 2010.

Figure 55 – Medi-Cal DHCS-Administered Expenditures by Category of Service for *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service

TOTAL EXPENDITURES = $1,672,268,766 **TOTAL ELIGIBLES EQUAL 364,726**

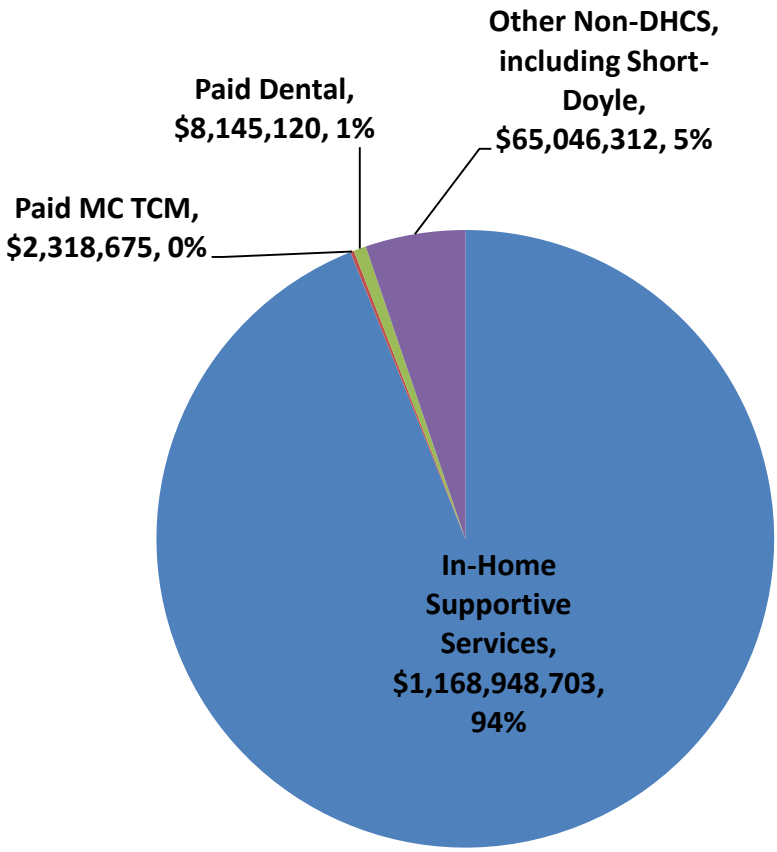


Data Highlights

DHCS-administered expenditures are concentrated among LTC facility and other LTSS, such as adult day health care (ADHC), Multipurpose Senior Services Programs (MSSP), etc. Seventy-two percent of the total DHCS-administered expenditures were associated with nursing facilities, while roughly 13% was associated with ADHC and MSSP.

Figure 56 – Medi-Cal Non-DHCS Administered Expenditures by Category of Service for *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service

TOTAL EXPENDITURES = $1,244,458,810 **TOTAL ELIGIBLES EQUAL 364,726**

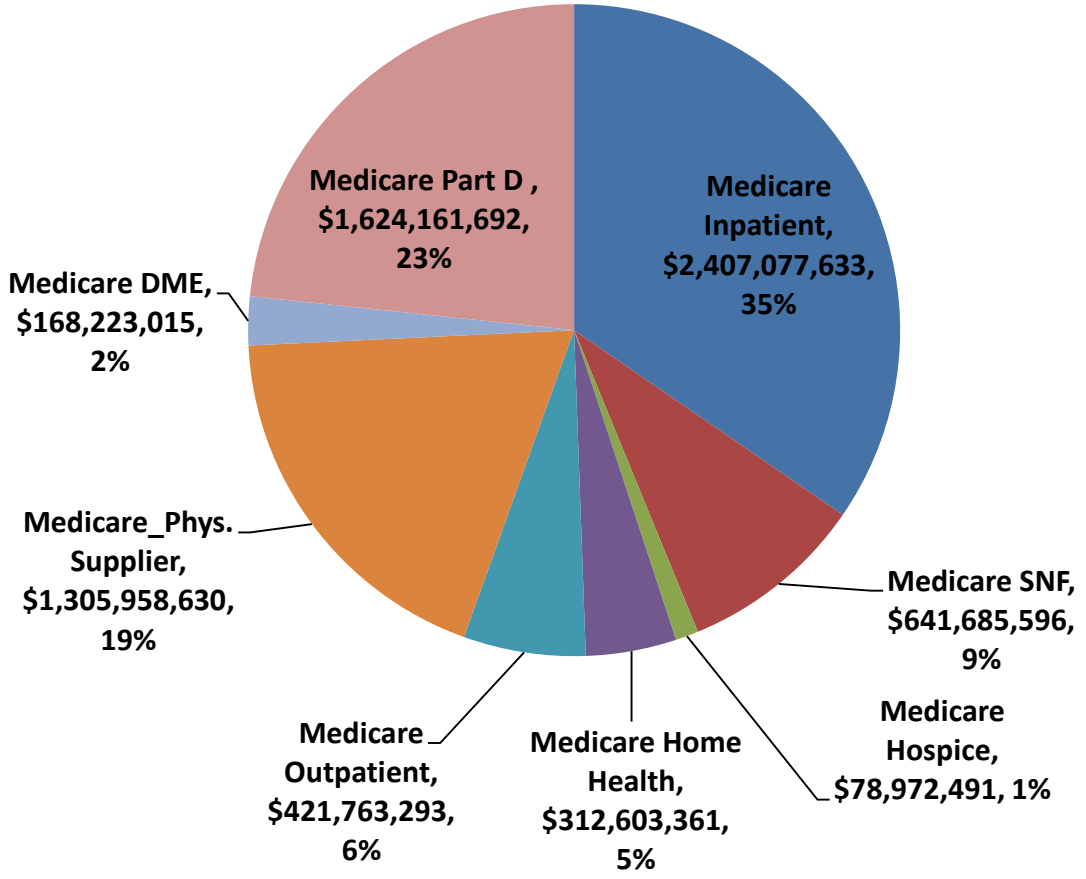


Data Highlights

The predominant expenditure category among Non-DHCS services was in-home supportive services. In-home supportive services represented 94% of the total non-DHCS expenditures during CY 2010.

Figure 57 – Medicare Expenditures by Service Category for *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service

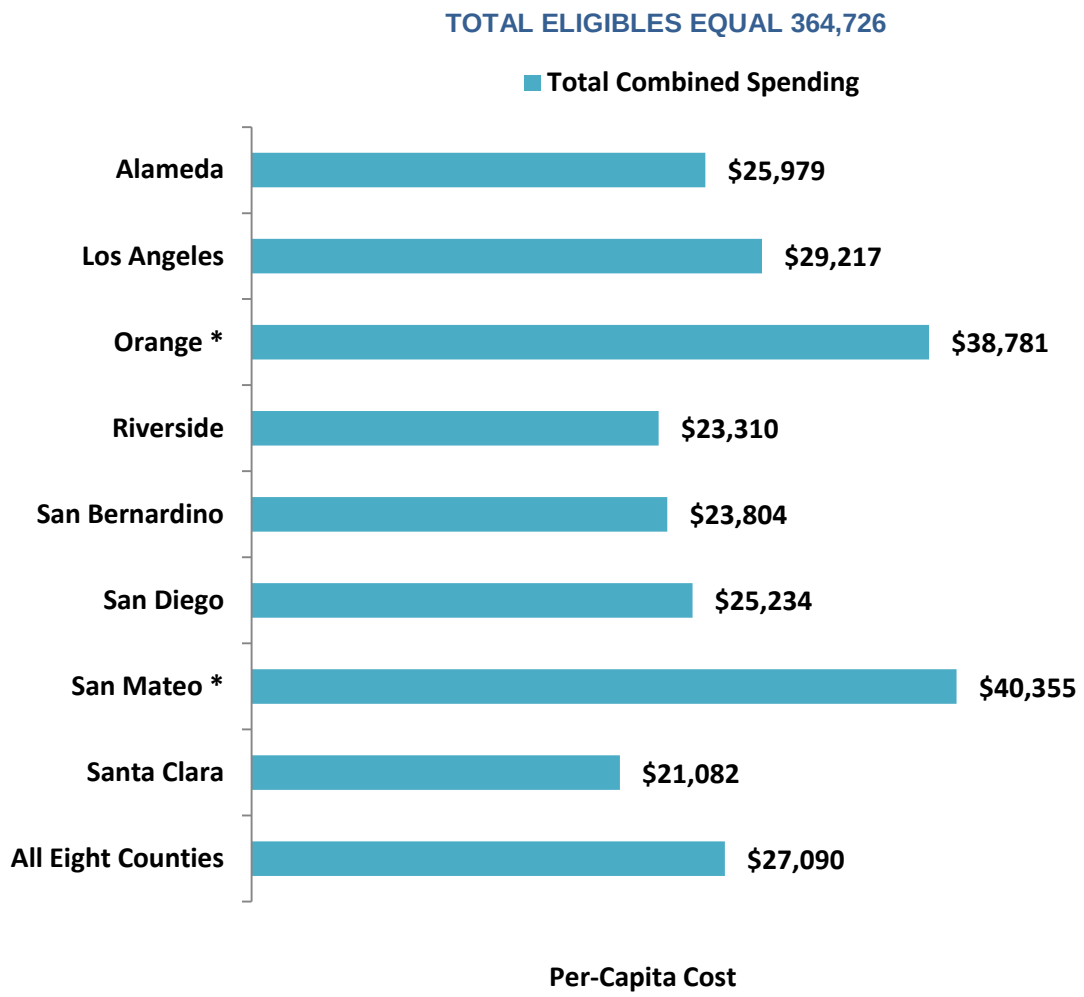
TOTAL EXPENDITURES = $6,960,445,710 **TOTAL ELIGIBLES EQUAL 364,726**



Data Highlights

Thirty-five percent of total FFS Medicare expenditures were associated with hospital inpatient services, while 23% were associated with Medicare Part D drugs. Physician supplier expenditures accounted for 19% of total expenditures.

Figure 58 – Combined Medicare and Medi-Cal Per-Capita Cost for *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service

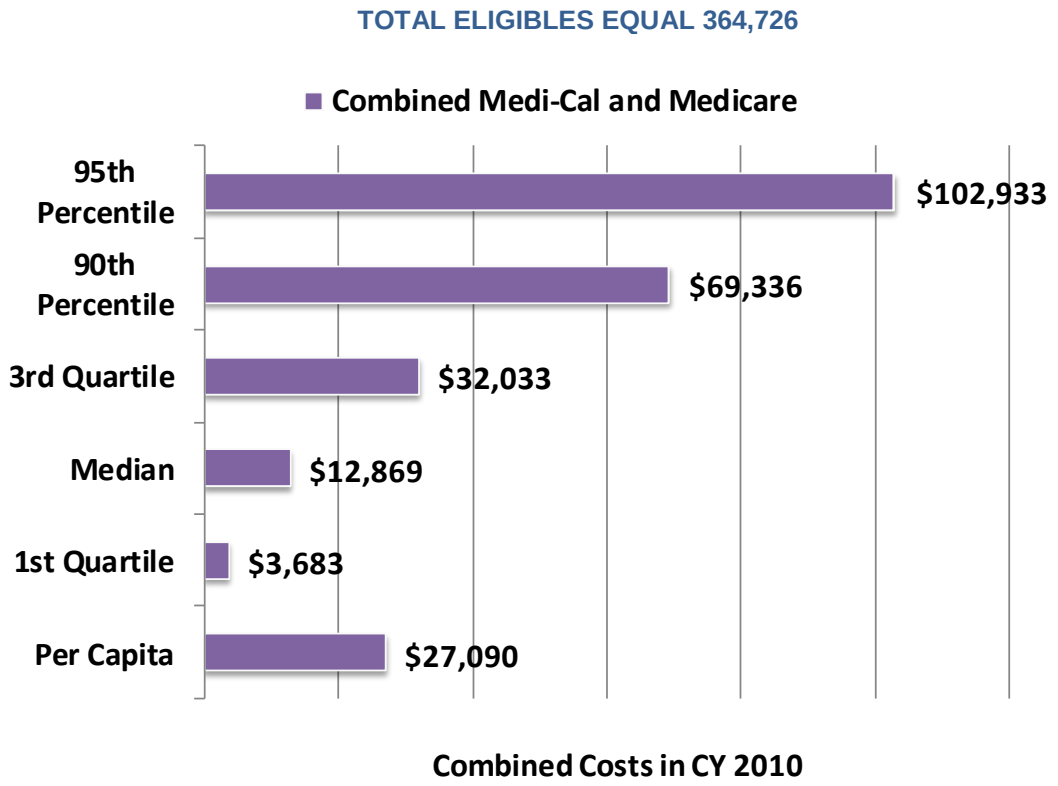


Data Highlights

The combined Medicare and Medi-Cal per-capita cost was $27,090.

Orange and San Mateo counties use the County Organized Health System (COHS) model, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory for most beneficiaries; in these counties only 407 and 163 CCI population beneficiaries participated in traditional Medicare and Medi-Cal FFS.

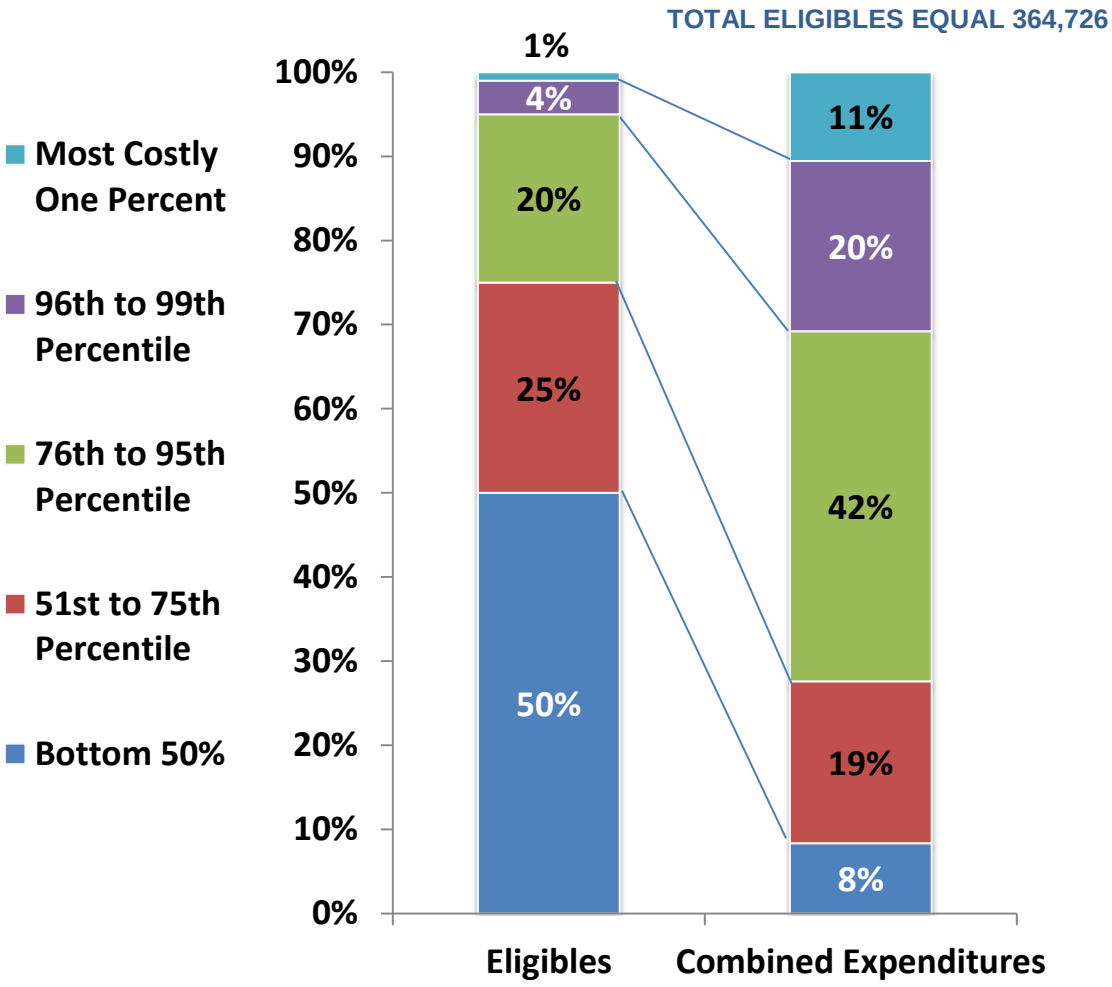
Figure 59 – Per-Capita Cost Distribution Statistics for the *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service



Data Highlights

The median combined Medicare and Medi-Cal cost for FFS CCI population in the eight pilot counties for CY 2010 was $12,869. This was far below the mean (or per-capita) cost of $27,090, reflecting the skewed distribution of costs among the members of the population. Eligibles at the least expensive 1st quartile and below had an annual cost of $3,683. Eligibles at the 3rd quartile and below had an annual cost of $32,033. Eligibles in the 90th percentile of expenditures had an annual cost of $69,336, while those at the 95th percentile had an annual cost of $102.933.

Figure 60 – Distribution of Eligibles and Combined Medicare and Medi-Cal Expenditures, *FFS CCI Population in the Eight Pilot Counties,* CY 2010 Dates-of-Service

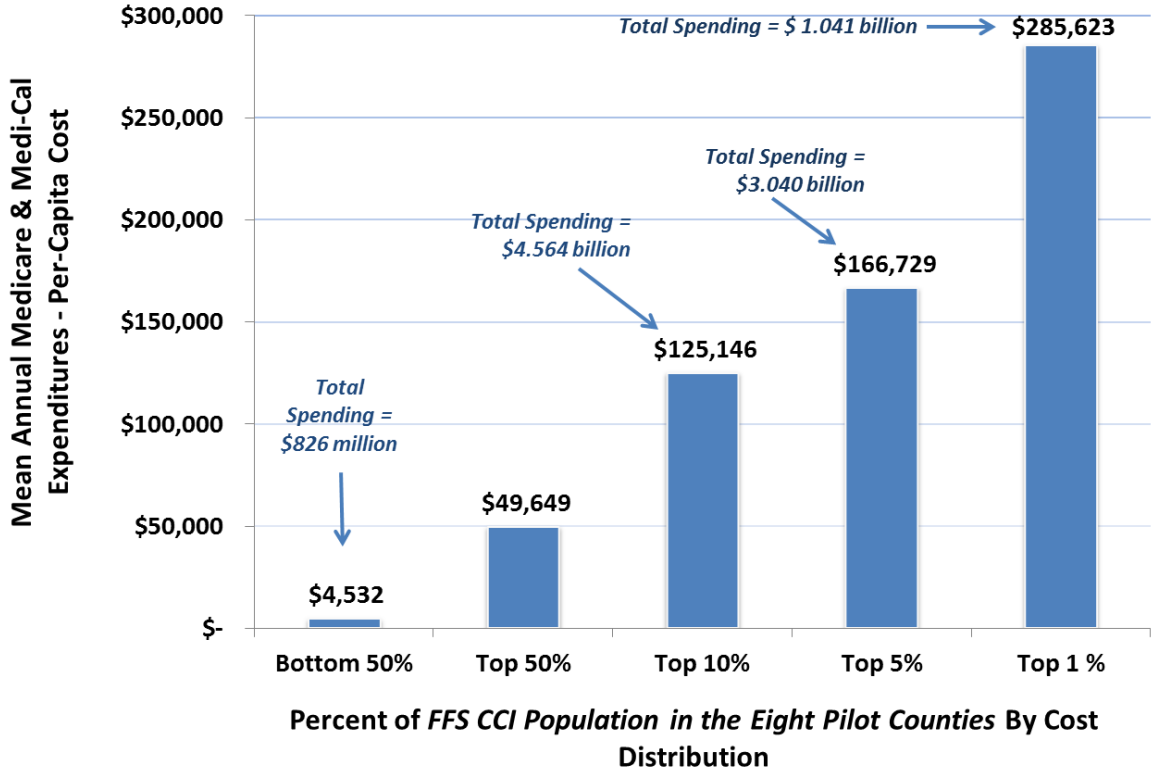


Data Highlights

The least costly 50% of the FFS CCI population in the eight pilot counties generated only 8% of the total combined Medicare and Medi-Cal expenditures. The most expensive 5% of the population generated 31% of the total combined expenditures.

Figure 61 – Per-Capita Mean FFS Medicare and Medi-Cal Cost Distribution, *FFS CCI Population in the Eight Pilot* Counties, CY 2010 Dates-of-Service

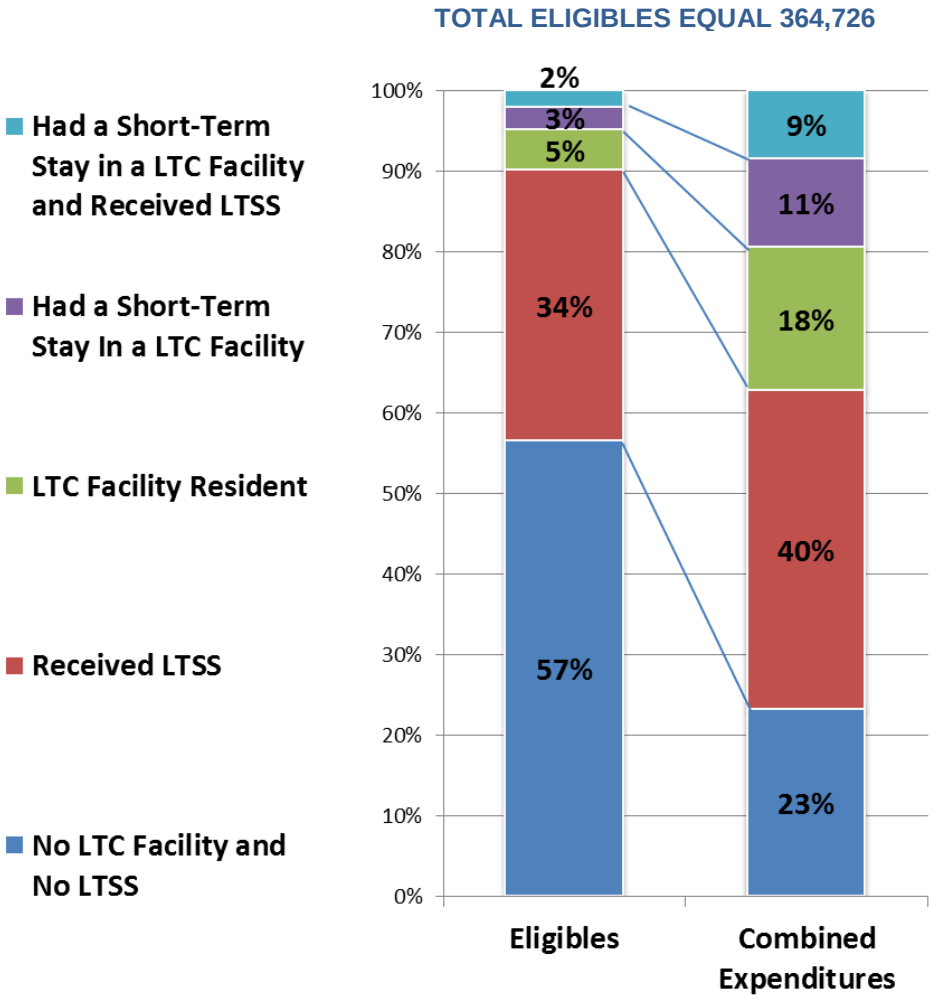
TOTAL SPENDING EQUALS $9.881 BILLION **TOTAL ELIGIBLES EQUAL 364,726**



Data Highlights

The least costly 50% of the FFS CCI population in the eight pilot counties generated an average per-capita cost of $4,532 and accounted for $826 million in total spending. Those eligibles in the most expensive 5% of the FFS CCI population in the eight pilot counties generated an average per-capita cost of $166,729 while those in the most expensive 1% generated an average cost of $285,623 and accounted for combined spending of $4.1 billion or 41% of total spending.

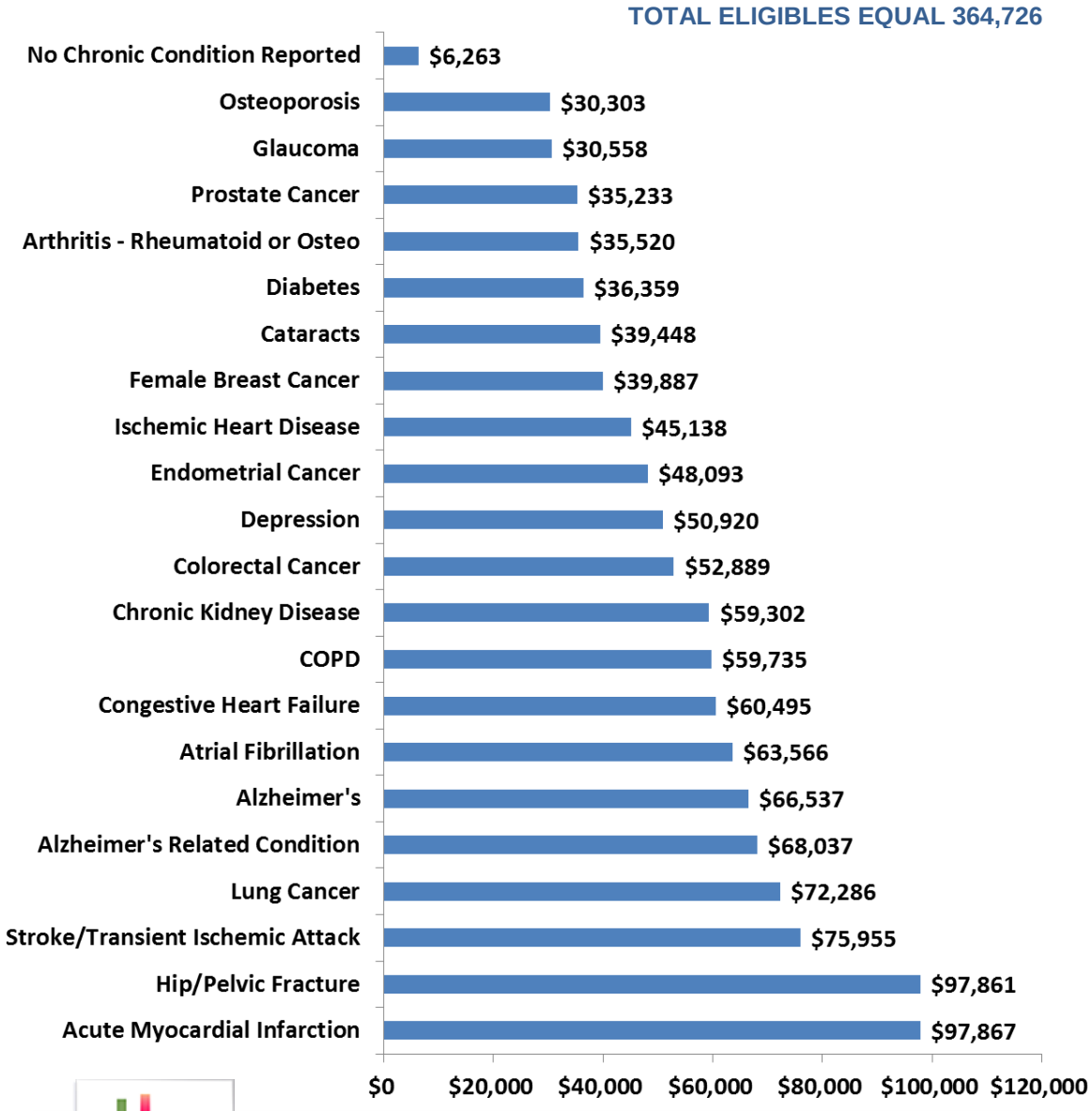
Figure 62 – Distribution of Combined Medicare and Medi-Cal FFS Expenditures By LTC Status, CY 2010 Dates-of-Service, *FFS CCI Population in the Eight Pilot Counties*



Data Highlights

Beneficiaries who received no LTC services throughout the year represented 57% of the FFS CCI population in the eight pilot counties and generated 23% of the total combined Medicare and Medi-Cal expenditures. Conversely, beneficiaries who resided in LTC facilities represented 5% of the population, but generated 18% of total combined expenditures.

Figure 63 – Combined Medicare and Medi-Cal FFS Per-Capita Cost of 21 CCW Conditions Examined Among the *FFS CCI Population in the Eight Pilot Counties*, CY 2010 Dates-of-Service



Data Highlights

The most costly condition among the FFS CCI population in the eight pilot counties was acute myocardial infarction, which generated a per-capita cost of $97,867. Other costly conditions included hip/pelvic fractures, lung cancer, stroke, and Alzheimer's disease. Beneficiaries who did not suffer from one of the 21 CCW conditions examined recorded the lowest per-capita cost ($6,263).

Table 30 – Eligibles, Total Expenditures, Per-Capita Spending on 21 CCW Conditions Relative to Overall *FFS CCI Population in the Eight Pilot Counties* Average

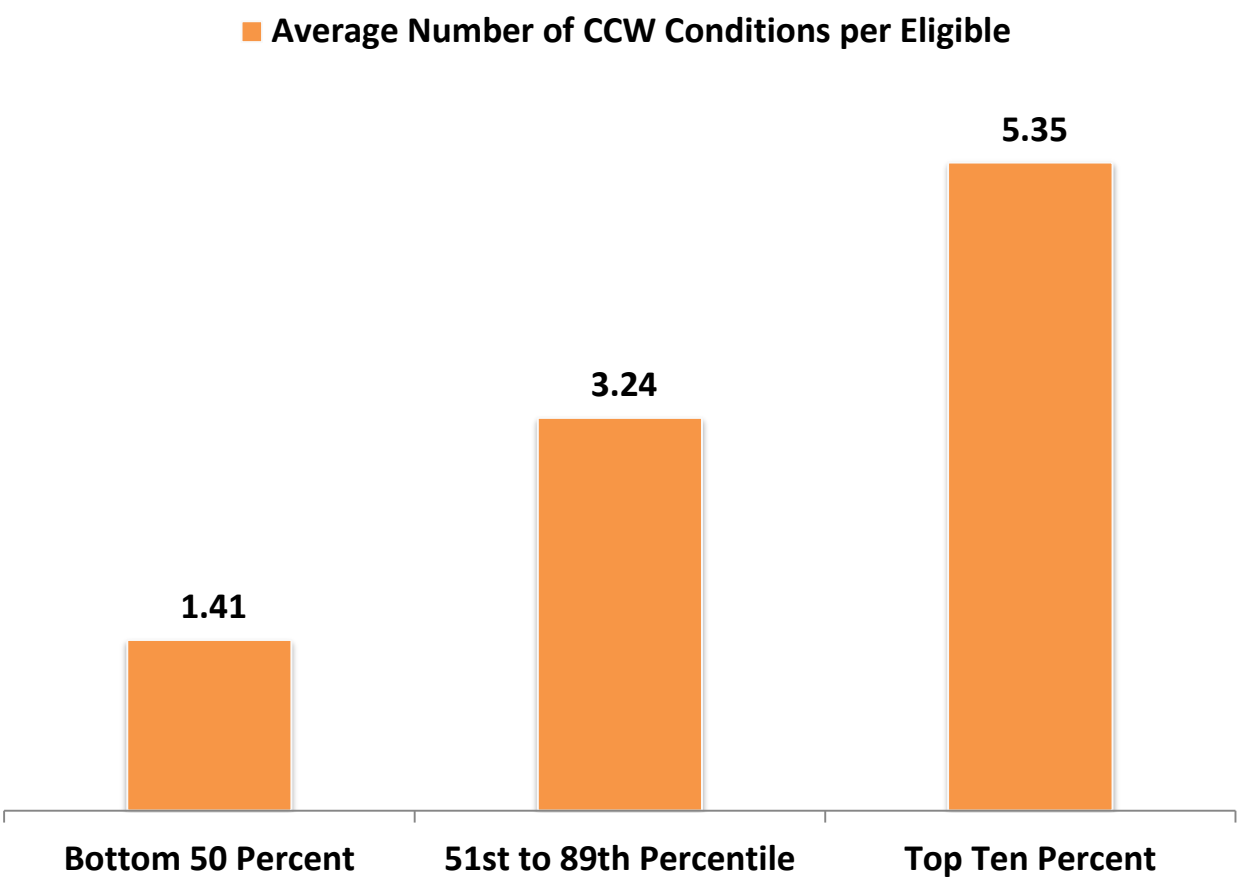
All Eight Counties	Eligibles	Expenditures (in millions)	Per-Capita Cost (Combined Medicare and Medi-Cal)	Per-Capita Spending Relative to Overall CCI FFS Population in Eight Pilot Counties
No Chronic Condition Reported	69,110	$432.80	$6,263	0.23
Overall Average For *FFS CCI Population in the Eight Pilot Counties*	364,726	$9,880.61	$27,090	1.00
Acute Myocardial Infarction	3,296	$322.60	$97,867	3.61
Alzheimer's	16,896	$1,124.20	$66,537	2.46
Alzheimer's Related Condition	40,814	$2,776.90	$68,037	2.51
Arthritis - Rheumatoid or Osteo	115,954	$4,118.70	$35,520	1.31
Atrial Fibrillation	20,061	$1,275.20	$63,566	2.35
COPD	50,439	$3,013.00	$59,735	2.21
Cataracts	68,328	$2,695.40	$39,448	1.46
Chronic Kidney Disease	63,472	$3,764.00	$59,302	2.19
Colorectal Cancer	3,613	$191.10	$52,889	1.95
Congestive Heart Failure	59,862	$3,621.30	$60,495	2.23
Depression	69,335	$3,530.50	$50,920	1.88
Diabetes	151,684	$5,515.10	$36,359	1.34
Endometrial Cancer	447	$21.50	$48,093	1.78
Female Breast Cancer	5,275	$210.40	$39,887	1.47
Glaucoma	43,964	$1,343.40	$30,558	1.13
Hip/Pelvic Fracture	2,159	$211.30	$97,861	3.61
Ischemic Heart Disease	106,023	$4,785.70	$45,138	1.67
Lung Cancer	2,500	$180.70	$72,286	2.67
Osteoporosis	67,427	$2,043.20	$30,303	1.12
Prostate Cancer	6,413	$225.90	$35,233	1.30
Stroke/Transient Ischemic Attack	18,742	$1,423.50	$75,955	2.80

Data Highlights

The average per-capita cost for the FFS CCI population was $27,090. Beneficiaries suffering from acute myocardial infarction or hip/pelvic fractures displayed per-capita costs that were 3.6 times greater than the average. Eight other conditions, among the 21, displayed per-capita costs that were greater than 2 times the average cost. These included: stroke, lung cancer, congestive heart failure, chronic kidney disease, COPD, atrial fibrillation, Alzheimer's related condition, and Alzheimer's disease.

Figure 64 – Average Number of 21 CCW Conditions Per Eligible By Cost Distribution, CY 2010 Dates-of-Service, *FFS CCI Population in the Eight Pilot Counties*

TOTAL ELIGIBLES EQUAL 364,726

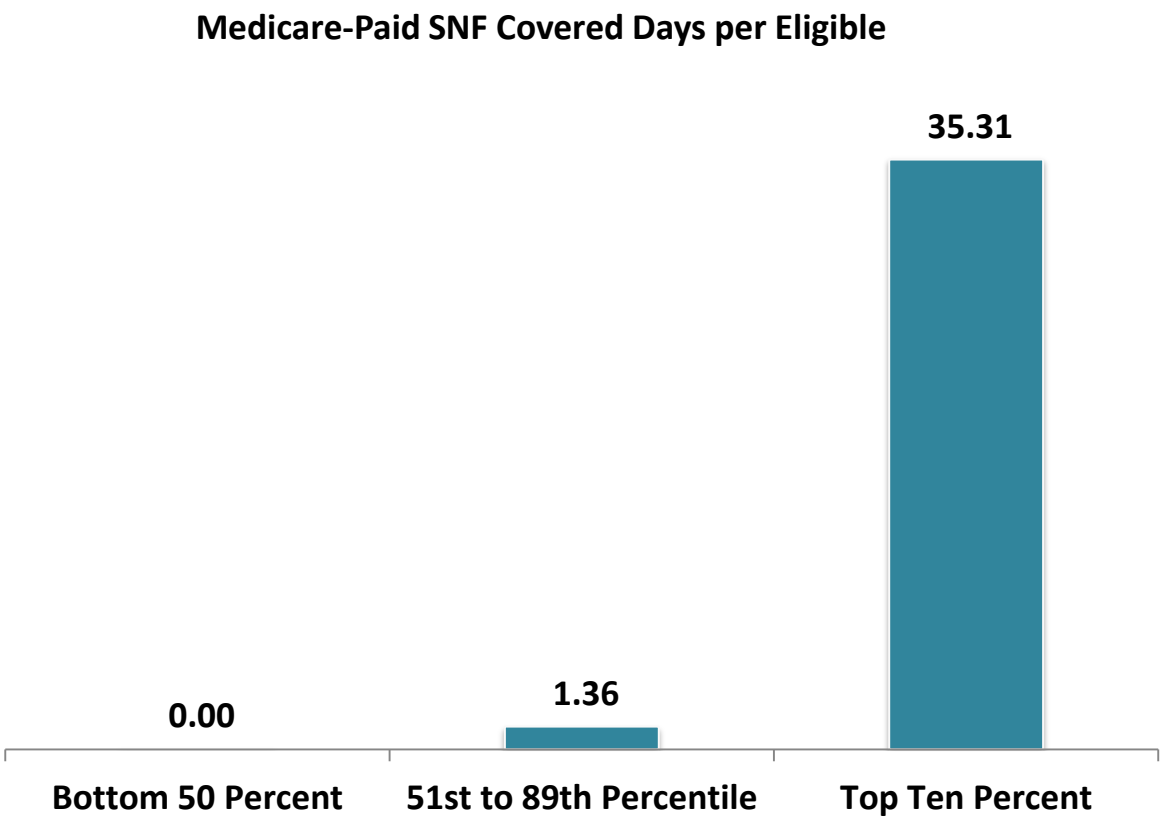


Data Highlights

The average number of concurrent CCW conditions per eligible was highest among the most costly cohorts of the population. Those eligibles in the bottom 50% of the FFS CCI population in the eight pilot counties suffered from an average of 1.41 concurrent CCW conditions, while those eligibles in the top 10% of the FFS CCI population in the eight pilot counties averaged 5.35 concurrent CCW conditions.

Figure 65 – Medicare Paid Skilled Nursing Facility (SNF) Days per Eligible By Population Percentiles, CY 2010 Dates-of-Service, *FFS CCI Population in the Eight Pilot Counties*

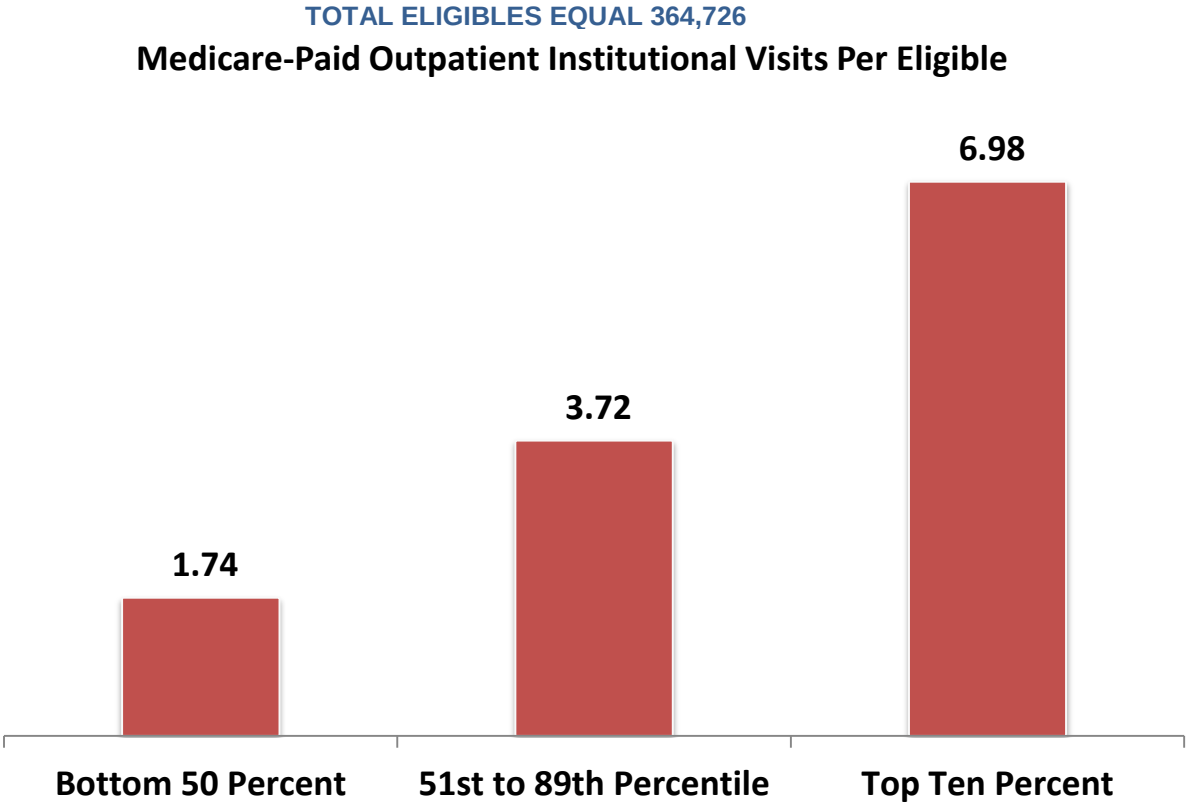
TOTAL ELIGIBLES EQUAL 364,726



Data Highlights

Paid Medicare SNF days were concentrated among the most costly segment of the FFS CCI population in the eight pilot counties. Members of the least costly 50% of the population disclose no paid Medicare SNF days, while members of the most costly 10% of the population generated an average of 35 days per eligible.

Figure 66 – Medicare Paid Outpatient Visits per Eligible By Population Percentiles, CY 2010 Dates-of-Service, *FFS CCI Population in the Eight Pilot Counties*



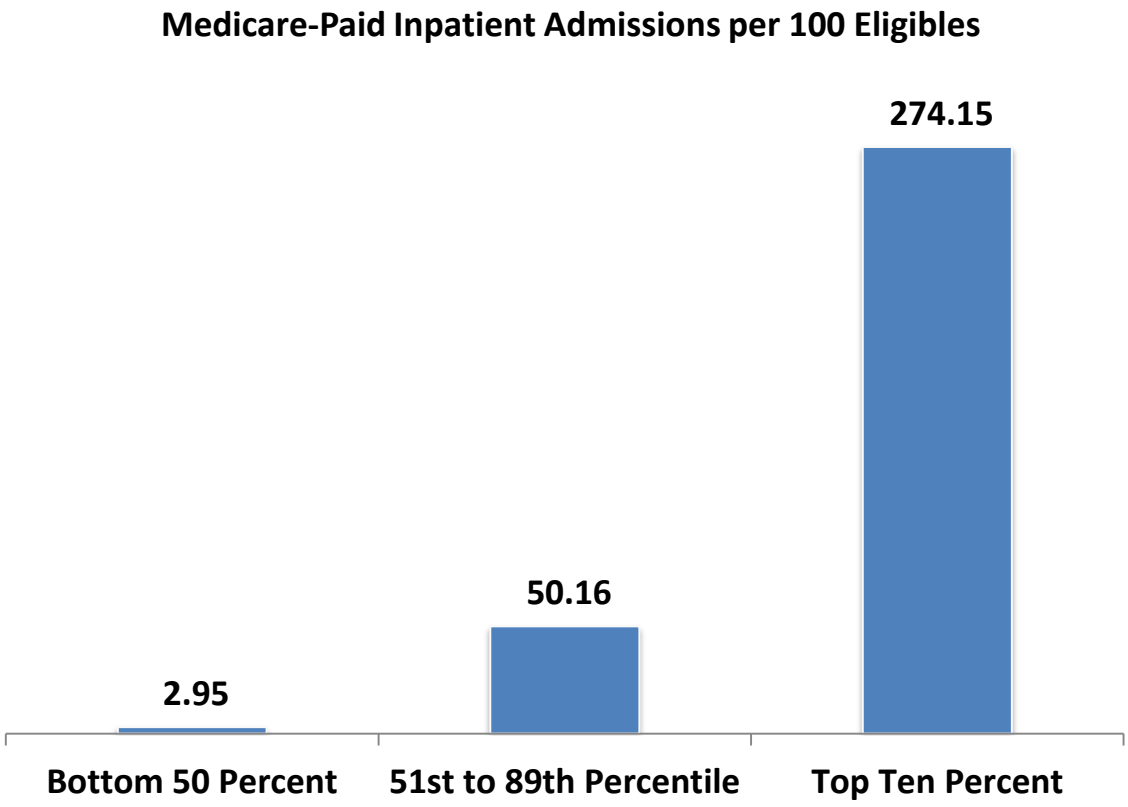
Examples of institutional outpatient providers include hospital outpatient departments, rural health clinics, renal dialysis facilities, outpatient rehabilitation facilities, comprehensive outpatient rehabilitation facilities, and community mental health centers.

Data Highlights

The most costly segments of the FFS CCI population in the eight pilot counties were more likely to incur outpatient institutional provider visits than the less costly segments of the population. The most costly 10% of the population generated 6.98 visits per eligible, while the least costly 50% of the population generated roughly 1.74 visits per eligible.

Figure 67 – Medicare Paid Inpatient Admissions Per 100 Eligibles By Population Percentiles, CY 2010 Dates-of-Service, *FFS CCI Population in the Eight Pilot Counties*

TOTAL ELIGIBLES EQUAL 364,726



Data Highlights

The most costly segments of the FFS CCI population in the eight pilot counties were more likely to incur inpatient admissions than the less costly segments of the population. The most costly 10% of the population generated 274 inpatient admissions per 100 eligibles, while the least costly 50% of the population generated roughly 3 inpatient admissions per 100 eligibles.

Table 31 – Eight Pilot County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

All Eight Counties	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$9,880.60	$27,090
Total Medi-Cal	$2,920.20	$8,006
Medi-Cal DHCS Administered	$1,675.70	$4,594
-Nursing Facility	$1,211.40	$3,321
-Hospital Inpatient	$61.20	$168
-Hospital, Other	$14.10	$39
-Physician/Clinic	$60.30	$165
-Federally Qualified Health Clinic (FQHC)	$12.40	$34
-Pharmacy	$83.40	$229
-Home Health	$0.20	$1
-Transportation-Emergency	$0.30	$1
-Transportation-Non-Emergency	$8.10	$22
-Other DHCS Administered	$220.80	$605
Medi-Cal Non-DHCS Administered	$1,244.50	$3,412
-DSS In-Home Supportive Services	$1,168.90	$3,205
Total Medicare	$6,960.40	$19,084
-Medicare Inpatient	$2,407.10	$6,600
-Medicare SNF	$641.70	$1,759
-Medicare Hospice	$79.00	$217
-Medicare Home Health	$312.60	$857
-Medicare Outpatient	$421.80	$1,156
-Medicare Physician/Supplier	$1,306.00	$3,581
-Medicare DME	$168.20	$461
-Medicare Parts A&B	$5,336.30	$14,631
-Medicare Part D	$1,624.20	$4,453

In the eight pilot counties, total unduplicated FFS CCI population beneficiaries participating Medi-Cal and Medicare equaled 364,726 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

The FFS CCI population in the eight pilot counties generated $9.88 billion in combined Medicare and Medi-Cal expenditures during CY 2010. Medicare accounted for $6.9 billion of these expenditures, or 70% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $2.9 billion or 30% of total expenditures. The per-capita cost for the FFS CCI population in the eight pilot counties equaled $27,090. Medi-Cal's greatest cost burden was associated with LTC and In-Home Supportive Services (IHSS), which generated average per-capita costs of $3,321 and $3,205, respectively. Medicare's greatest cost burden was associated with inpatient hospital and physician/supplier.

Table 32 – Alameda County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Alameda	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$638.00	$25,979
Total Medi-Cal	$226.60	$9,227
Medi-Cal DHCS Administered	$128.20	$5,221
-Nursing Facility	$105.90	$4,312
-Hospital Inpatient	$3.70	$149
-Hospital, Other	$0.80	$32
-Physician/Clinic	$3.10	$127
-Federally Qualified Health Clinic (FQHC)	$2.70	$108
-Pharmacy	$4.10	$166
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.10	$6
-Other DHCS Administered	$7.90	$320
Medi-Cal Non-DHCS Administered	$98.40	$4,006
-DSS In-Home Supportive Services	$90.70	$3,693
Total Medicare	$411.40	$16,752
-Medicare Inpatient	$155.60	$6,335
-Medicare SNF	$47.40	$1,930
-Medicare Hospice	$4.50	$183
-Medicare Home Health	$12.30	$500
-Medicare Outpatient	$37.10	$1,510
-Medicare Physician/Supplier	$64.20	$2,616
-Medicare DME	$8.70	$354
-Medicare Parts A&B	$329.70	$13,428
-Medicare Part D	$81.60	$3,324

Alameda County is a Two-Plan model system of care. Total unduplicated FFS CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS system equaled 24,557 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

Alameda County's FFS CCI population generated $638 million in combined Medicare and Medi-Cal expenditures during CY 2010. Medicare accounted for $411 million of these expenditures, or 64% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $227 million, or 36% of total expenditures. Alameda's FFS CCI population generated a FFS per-capita cost of $25,979. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $4,312 and $3,693, respectively. Medicare's greatest cost burden was associated with inpatient hospital, Part D drugs, and physician/supplier.

Table 33 – Los Angeles County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Los Angeles	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$6,324.30	$29,217
Total Medi-Cal	$1,861.60	$8,600
Medi-Cal DHCS Administered	$1,027.60	$4,747
-Nursing Facility	$691.90	$3,206
-Hospital Inpatient	$39.70	$185
-Hospital, Other	$8.00	$37
-Physician/Clinic	$40.60	$188
-Federally Qualified Health Clinic (FQHC)	$5.70	$27
-Pharmacy	$55.30	$256
-Home Health	$0.20	$1
-Transportation-Emergency	$0.20	$1
-Transportation-Non-Emergency	$6.40	$29
-Other DHCS Administered	$176.30	$814
Medi-Cal Non-DHCS Administered	$834.00	$3,856
-DSS In-Home Supportive Services	$787.50	$3,638
Total Medicare	$4,462.70	$20,617
-Medicare Inpatient	$1,530.80	$7,073
-Medicare SNF	$406.30	$1,877
-Medicare Hospice	$36.40	$168
-Medicare Home Health	$230.80	$1,066
-Medicare Outpatient	$217.70	$1,006
-Medicare Physician/Supplier	$884.50	$4,086
-Medicare DME	$102.00	$471
-Medicare Parts A&B	$3,408.50	$15,746
-Medicare Part D	$1,054.20	$4,870

Los Angeles County is a Two-Plan model system of care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 216,462 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

Los Angeles County's FFS CCI population generated $6.324 billion in combined Medicare and Medi-Cal expenditures during CY 2010. Medicare accounted for $4.463 billion of these expenditures, or 71% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $ 1.821 billion or 29% of total expenditures. Los Angeles County's FFS CCI population generated a FFS per-capita cost of $25,217. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $3,196 and $3,638, respectively. Medicare's greatest cost burden was associated with inpatient hospital, Part D drugs, and physician/supplier.

Table 34 – Orange County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Orange	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$15.80	$38,781
Total Medi-Cal	$6.10	$15,084
Medi-Cal DHCS Administered	$5.10	$12,636
-Nursing Facility	$4.70	$11,445
-Hospital Inpatient	$0.10	$348
-Hospital, Other	$0.00	$18
-Physician/Clinic	$0.00	$88
-Federally Qualified Health Clinic (FQHC)	$0.00	$12
-Pharmacy	$0.10	$201
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$0
-Transportation-Non-Emergency	$0.00	$8
-Other DHCS Administered	$0.20	$516
Medi-Cal Non-DHCS Administered	$1.00	$2,448
-DSS In-Home Supportive Services	$0.90	$2,261
Total Medicare	$9.60	$23,697
-Medicare Inpatient	$3.40	$8,439
-Medicare SNF	$1.00	$2,476
-Medicare Hospice	$0.20	$469
-Medicare Home Health	$0.30	$761
-Medicare Outpatient	$0.40	$967
-Medicare Physician/Supplier	$1.70	$4,240
-Medicare DME	$0.20	$516
-Medicare Parts A&B	$7.30	$17,868
-Medicare Part D	$2.40	$5,829

Orange County operates a County Organized System of Care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 407 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

Orange County's FFS CCI population generated $16 million in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $9.6 million of these expenditures, or 61% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $6.1 million or 39% of total expenditures. Orange County's FFS CCI population generated a FFS per-capita cost of $38,781. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $11,443 and $2,261, respectively. Medicare's greatest cost burden was associated with inpatient hospital, Part D drugs, and physician/supplier.

Table 35 – Riverside County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Riverside	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$573.00	$23,310
Total Medi-Cal	$153.70	$6,255
Medi-Cal DHCS Administered	$91.40	$3,719
-Nursing Facility	$70.70	$2,874
-Hospital Inpatient	$4.80	$196
-Hospital, Other	$1.10	$44
-Physician/Clinic	$3.60	$148
-Federally Qualified Health Clinic (FQHC)	$0.30	$14
-Pharmacy	$4.60	$188
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.30	$13
-Other DHCS Administered	$5.90	$241
Medi-Cal Non-DHCS Administered	$62.30	$2,536
-DSS In-Home Supportive Services	$56.50	$2,300
Total Medicare	$419.20	$17,055
-Medicare Inpatient	$140.80	$5,727
-Medicare SNF	$36.50	$1,486
-Medicare Hospice	$7.50	$307
-Medicare Home Health	$16.40	$669
-Medicare Outpatient	$28.70	$1,169
-Medicare Physician/Supplier	$76.00	$3,093
-Medicare DME	$13.90	$565
-Medicare Parts A&B	$320.00	$13,016
-Medicare Part D	$99.30	$4,039

Riverside County is a Two-Plan model system of care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 24,581 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

Riverside County's FFS CCI population generated $573 million in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $419 million of these expenditures, or 73% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $154 million, or 27% of total expenditures. Riverside County's FFS CCI population generated a FFS per-capita cost of $23,310. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $2,875 and $2,300, respectively. Medicare's greatest cost burden was associated with inpatient hospital, Part D drugs, and physician/supplier.

Table 36 – San Bernardino County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

San Bernardino	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$646.10	$23,804
Total Medi-Cal	$172.60	$6,360
Medi-Cal DHCS Administered	$104.80	$3,861
-Nursing Facility	$82.50	$3,039
-Hospital Inpatient	$5.10	$189
-Hospital, Other	$1.30	$49
-Physician/Clinic	$3.60	$133
-Federally Qualified Health Clinic (FQHC)	$0.10	$4
-Pharmacy	$5.30	$196
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.30	$13
-Other DHCS Administered	$6.40	$236
Medi-Cal Non-DHCS Administered	$67.80	$2,499
-DSS In-Home Supportive Services	$64.70	$2,383
Total Medicare	$473.50	$17,444
-Medicare Inpatient	$186.80	$6,883
-Medicare SNF	$33.30	$1,226
-Medicare Hospice	$9.10	$335
-Medicare Home Health	$19.40	$716
-Medicare Outpatient	$33.60	$1,236
-Medicare Physician/Supplier	$77.90	$2,869
-Medicare DME	$16.50	$609
-Medicare Parts A&B	$376.60	$13,874
-Medicare Part D	$96.90	$3,571

San Bernardino County is a Two-Plan model system of care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 27,142 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

San Bernardino County's FFS CCI population generated $646 million in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $474 million of these expenditures, or 73% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $173 million or 27% of total expenditures. San Bernardino County's FFS CCI population generated a FFS per-capita cost of $23,804. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $3,039 and $2,383, respectively. Medicare's greatest cost burden was associated with inpatient hospital, Part D drugs, and physician/supplier.

Table 37 – San Diego County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

San Diego	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$1,041.20	$25,234
Total Medi-Cal	$280.80	$6,806
Medi-Cal DHCS Administered	$196.10	$4,754
-Nursing Facility	$155.30	$3,764
-Hospital Inpatient	$5.50	$134
-Hospital, Other	$1.90	$45
-Physician/Clinic	$6.90	$168
-Federally Qualified Health Clinic (FQHC)	$1.90	$47
-Pharmacy	$9.10	$220
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.50	$12
-Other DHCS Administered	$15.00	$363
Medi-Cal Non-DHCS Administered	$84.70	$2,052
-DSS In-Home Supportive Services	$79.30	$1,921
Total Medicare	$760.30	$18,428
-Medicare Inpatient	$250.50	$6,071
-Medicare SNF	$76.50	$1,854
-Medicare Hospice	$14.50	$352
-Medicare Home Health	$20.90	$507
-Medicare Outpatient	$65.60	$1,589
-Medicare Physician/Supplier	$128.90	$3,124
-Medicare DME	$18.70	$453
-Medicare Parts A&B	$575.60	$13,950
-Medicare Part D	$184.80	$4,478

San Diego County is a GMC model system of care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 41,260 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

San Diego County's FFS CCI population generated $1.041 billion in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $760 million of these expenditures, or 73% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $281 million, or 27% of total expenditures. San Diego County's FFS CCI population generated a FFS per-capita cost of $25,234. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $3,765 and $1,921, respectively. Medicare's greatest cost burden was associated with inpatient hospital and physician/supplier.

Table 38 – San Mateo County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

San Mateo	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$6.60	$40,355
Total Medi-Cal	$3.20	$19,878
Medi-Cal DHCS Administered	$2.80	$17,326
-Nursing Facility	$2.70	$16,661
-Hospital Inpatient	$0.00	$112
-Hospital, Other	$0.00	$11
-Physician/Clinic	$0.00	$70
-Federally Qualified Health Clinic (FQHC)	$0.00	$77
-Pharmacy	$0.00	$95
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.00	$7
-Other DHCS Administered	$0.00	$292
Medi-Cal Non-DHCS Administered	$0.40	$2,553
-DSS In-Home Supportive Services	$0.40	$2,433
Total Medicare	$3.30	$20,477
-Medicare Inpatient	$1.00	$6,143
-Medicare SNF	$1.00	$6,163
-Medicare Hospice	$0.00	$295
-Medicare Home Health	$0.10	$744
-Medicare Outpatient	$0.30	$1,918
-Medicare Physician/Supplier	$0.40	$2,305
-Medicare DME	$0.00	$222
-Medicare Parts A&B	$2.90	$17,791
-Medicare Part D	$0.40	$2,686

San Mateo operates a County Organized System of Care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 163 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

San Mateo County's FFS CCI population generated $6.6 million in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $3.3 million of these expenditures, or 52% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $3.2 million, or 48% of total expenditures. San Mateo County's FFS CCI population generated a FFS per-capita cost of $40,355.Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $16,661 and $2,433, respectively. Medicare's greatest cost burden was associated with inpatient hospital and physician/supplier.

Table 39 – Santa Clara County Total Combined Medicare and Medi-Cal FFS Expenditures, Per-Capita Cost For *FFS CCI Population in the Eight Pilot Counties*, CY 2010

Santa Clara	Expenditures (in Millions)	Per-Capita Cost
Grand Total	$635.70	$21,082
Total Medi-Cal	$215.40	$7,142
Medi-Cal DHCS Administered	$119.50	$3,964
-Nursing Facility	$97.80	$3,243
-Hospital Inpatient	$2.20	$74
-Hospital, Other	$1.00	$34
-Physician/Clinic	$2.40	$79
-Federally Qualified Health Clinic (FQHC)	$1.60	$54
-Pharmacy	$4.90	$163
-Home Health	$0.00	$0
-Transportation-Emergency	$0.00	$1
-Transportation-Non-Emergency	$0.50	$15
-Other DHCS Administered	$9.10	$301
Medi-Cal Non-DHCS Administered	$95.80	$3,178
-DSS In-Home Supportive Services	$89.00	$2,951
Total Medicare	$420.30	$13,940
-Medicare Inpatient	$138.20	$4,582
-Medicare SNF	$39.70	$1,316
-Medicare Hospice	$6.70	$222
-Medicare Home Health	$12.30	$409
-Medicare Outpatient	$38.40	$1,273
-Medicare Physician/Supplier	$72.30	$2,397
-Medicare DME	$8.20	$273
-Medicare Parts A&B	$315.80	$10,473
-Medicare Part D	$104.60	$3,468

Santa Clara County is a Two-Plan model system of care. Total unduplicated CCI population beneficiaries participating in Medi-Cal and Medicare's traditional FFS systems equaled 30,154 in CY 2010.

Note: The per-capita cost metric presented for each service category/provider type was determined by dividing total FFS expenditures incurred for the service category/provider type during CY 2010 by the total unduplicated FFS CCI beneficiaries in the eight pilot counties enrolled for at least one month during CY 2010 (eligibles). This metric should not be confused with the cost-per-user, which represents the total FFS expenditures incurred for the service category/provider type during CY 2010 divided by the total number of beneficiaries who received the service (users) during CY 2010 dates-of-service.

Data Highlights

Santa Clara County's FFS CCI population generated $636 million in combined Medicare and Medi-Cal FFS expenditures during CY 2010. Medicare accounted for $420 million of these expenditures, or 66% of total expenditures, while Medi-Cal (DHCS administered and non-DHCS administered) accounted for $215 million, or 34% of total expenditures. Santa Clara County's FFS CCI population generated a FFS per-capita cost of $21,082. Medi-Cal's greatest cost burden was associated with LTC and IHSS, which generated average per-capita costs of $3,244 and $2,951, respectively. Medicare's greatest cost burden was associated with inpatient hospital and physician/supplier.

Section XVI: Glossary of Terms

Acquired Immune Deficiency Syndrome (AIDS) Waiver: Provides home and community-based services (HCBS) to Medi-Cal beneficiaries with mid- to late-stage HIV/AIDS disease as an alternative to nursing facility or hospital care.

Adult Day Health Care (currently called Community-Based Adult Services): An organized day program of therapeutic, social and skilled nursing health activities and services provided to elderly persons or adults with functional impairments, either physical or mental, for the purpose of restoring or maintaining optimal capacity for self-care. Individuals must be 18 years or older and meet specific medical necessity criteria which includes a combination of mental and/or physical impairments.

Agency for Healthcare Research and Quality (AHRQ): AHRQ is the lead Federal agency charged with improving the quality, safety, efficiency, and effectiveness of health care for all Americans. As one of 12 agencies within the Department of Health and Human Services, AHRQ supports health services research that will improve the quality of health care and promote evidence-based decision making.

AHRQ's Clinical Classification System (CCS): AHRQ's CCS can be used to group diagnosis codes into a smaller group of meaningful clinical classifications. Clinical classifications are assigned based on the diagnosis code reported on the administrative claim record during the period studied. The CCS measures conditions treated within a population.

Aid Code Category: Aid codes identify the criteria by which each person qualifies for Medi-Cal and the types of services he or she receives, and make clear whether the services are funded by the State or Federal government or both. An aid code is a combination of two numbers or a letter and a number and is attached to a Medi-Cal beneficiary's identification numbers. Aid code category refers to a unique grouping of distinct aid codes into broad categories such as disabled, family, blind, aged, etc. In this case, more than one aid code constitutes a category.

Assisted Living Waiver (ALW): Provides home and community-based services as an alternative to long-term nursing facility placement to Medi-Cal beneficiaries over the age of 21 in either of two settings: a Residential Care Facility for the Elderly; or in Publicly Subsidized Housing with a Home Health Agency providing the assisted care services.

***CCI Potential Population*:** A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits, including beneficiaries who have met or not met their SOC obligation.

***CCI Population Before Exclusions*:** A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, before considering CCI exclusions.

***CCI Population in the Eight Pilot Counties*:** A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, after considering applicable CCI exclusions, limited to the eight pilot counties.

***CCI Population in 58 Counties*:** A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, after considering applicable CCI exclusions.

CCS's 16 Conditions: The 16 significant conditions treated represent conditions that were either most commonly found in the *FFS CCI population in the eight pilot counties* administrative data examined or were frequently referenced in the literature related to the study of disease burden among Medicare eligibles. Many of the conditions treated identified and examined were associated with chronic conditions. The conditions include: arthritis, asthma, atrial fibrillation, cancer, congestive heart failure, COPD, coronary atherosclerosis, dementia and other cognitive disorders, diabetes, hyperlipidemia, hypertension, mood disorder, osteoporosis, renal failure, schizophrenia, and stroke.

CCS's 19 Other Conditions: The 19 other conditions of interest represent conditions or events necessitating treatment that were found in the literature to be common among the demographic profile of beneficiaries studied or the health care services setting, such as residing in a nursing home. These conditions include: acute myocardial Infarction, adverse effects of medical drugs, back and spine disorders, cataract, complications of medical care, developmental disorders, drug and alcohol dependency, glaucoma, hepatitis, HIV infection, injuries, nutritional deficiencies, paralysis, pneumonia,

respiratory failure, septicemia, mycosis and ulcers of the skin, suicides and self-harm, and urinary tract infections.

CCW's 21 Chronic Conditions: These 21 conditions were identified using CMS' CCW, found to be prevalent throughout the Medi-Cal *CCI population* and were frequently noted in the literature. They include: acute myocardial infraction, Alzheimer's disease, Alzheimer's disease and related disorders or senile dementia, atrial fibrillation, cataract, chronic kidney disease, COPD, depression, diabetes, glaucoma, heart failure, hip/pelvic fracture, ischemic heart disease, osteoporosis, rheumatoid arthritis and osteoarthritis, stroke/transient ischemic attack, female breast cancer, colorectal cancer, prostate cancer, lung cancer, and endometrial cancer.

Certain, large, non-profit health plans operating their own pharmacies: For the purposes of this paper the above term is defined as a prepaid health plan that is a non-profit health care service plan with at least 3.5 million enrollees statewide, that owns or operates its own pharmacies and that provides medical services to enrollees in specific geographic regions through an exclusive contract with a single medical group in each specific geographic region in which it operates to provide services to beneficiaries.

Certified Eligible: Beneficiaries who have been determined eligible for Medi-Cal based on a valid eligibility determination. Certified Eligibles do not include beneficiaries who may be eligible to enroll in the Medi-Cal program, but have not enrolled. In addition, this definition only includes beneficiaries who are eligible to receive Medi-Cal covered health care services during the month. This means that beneficiaries with a SOC obligation, but who have not met their monthly SOC obligation are not included in the certified eligible counts. And finally, specific populations, such as California's Family PACT and Presumptive eligibles, are also not included in the certified eligible counts.

Chronic Conditions: AHRQ defines a chronic condition as a condition lasting for more than 12 months and meets one of the following two criteria: 1) limits self-care, independent living, and social interactions; and 2) results in the continued use of medical products, services, and special equipment.

Centers for Medicare & Medicaid Services (CMS): The federal regulatory agency which oversees the national Medicare and Medicaid programs.

CMS' Chronic Conditions Data Warehouse (CCW): The Chronic Condition Data Warehouse (CCW) is a research database designed to make Medicare, Medicaid,

Assessments, and Part D Prescription Drug Event data more readily available to support research designed to improve the quality of care and reduce costs and utilization.

County Organized Health System (COHS): A care delivery system organized at the county level, through which enrollment in each county's specific Medi-Cal managed care health plan is mandatory. Orange and San Mateo counties are COHS counties.

Coordinated Care Initiative (CCI): In January 2012, Governor Jerry Brown announced his Coordinated Care initiative (CCI). To implement CMS' *state demonstration for integrating care for dual eligibles*, California enacted state legislation that requires DHCS to seek a demonstration project or federal waiver of Medicaid law to implement specified objectives.[160] Senate Bill 1008, statutes of 2012 outlines the CCI framework, establishing demonstration sites and requires DHCS to enter into a memorandum of understanding, with specific terms and conditions, with the federal Centers for Medicare and Medicaid Services (CMS) in developing a process for: selecting, financing, monitoring, and evaluating the health models incorporated into the demonstration project. The CCI will be designed to enhance health outcomes and beneficiary satisfaction for low-income seniors and persons with disabilities, while rebalancing service delivery away from institutional care and into the home and community. Through this three-year demonstration proposal, California intends to combine a full continuum of acute, primary, institutional, and home-and community-based services for dually eligible beneficiaries into a single benefit package, delivered through an organized service delivery system. The CCI will initially be implemented in the eight pilot counties of: Alameda, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Mateo, and Santa Clara. The CCI, or demonstration, as discussed throughout this paper, is part of California's larger Coordinated Care Initiative (CCI) that was enacted in July 2012 through SB1008 and SB1036.

Department of Developmental Services (DDS) Waiver: Provides Home and Community-Based Services to individuals with developmental disabilities, enabling them

[160] Welfare & Institutions Code Section 14132.275(a). Senate Bill 1008, Chapter 33, Statutes of 2012 accessed via the worldwide web on November 13, 2012 at: http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=sb_1008&sess=CUR&house=B&author=committee_on_budget_and_fiscal_review. SB 1008 amended statute established in SB 208 (10/19/10), which called for the establishment of up to four counties instead of eight and made other changes.

to living in the community rather than in an intermediate care facility for the developmentally disabled (ICF-DD).

Developmental Disability: A condition that originated before the age of 18, expected to continue indefinitely and constitute a substantial disability for the individual. It includes mental retardation, cerebral palsy, autism and any other disabling conditions similar to mental retardation, but not handicapping conditions solely physical in nature.[161]

Durable Medical Equipment (DME): Equipment used to preserve bodily functions essential to daily living or prevent significant physical disability. Examples of DME include wheelchairs, walkers and hospital beds.

Dual Eligibles: Members who are simultaneously enrolled in both Medi-Cal and Medicare.

Federally Qualified Health Center (FQHC): Publically-funded, community-based centers that provide primary and preventative care regardless of a person's ability to pay for those services.

Fee-for-Service: The traditional service model for Medi-Cal coverage. Under this system medical providers bill Medi-Cal for individual medical services provided to beneficiaries.

FFS CCI Population in the Eight Pilot Counties: A subset of Medi-Cal's dual eligible beneficiaries that are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits who have met their SOC obligation, after considering applicable CCI exclusions, limited to the eight pilot counties. This population is further limited by selecting only those beneficiaries who were enrolled in both Medi-Cal and Medicare's traditional FFS programs.

Eight Pilot Counties: This term refers to the eight counties chosen to initially participate in the CCI pilot. These counties are: Alameda, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Mateo, and Santa Clara.

End-Stage Renal Disease (ESRD): Kidney failure requiring either ongoing dialysis or kidney transplantation.

[161] Welfare and Institutions Code, Section 4512.

Exclusions from the CCI Population: Exclusions are those populations which are not eligible for the CCI population for reasons that may pertain to age, a health condition, disability status, or other health coverage.

Exclusions Applicable to the CCI Population: The chart that follows displays the relevant exclusions applied to narrow the *CCI population* before exclusions and reach the *CCI population in 58 counties*. At the point that these exclusions are applied, the population contains those who are enrolled in Medicare Parts A and B and D and entitled to full scope Medi-Cal benefits and have met their SOC obligation.

GROUPS EXCLUDED FROM DUAL ELIGIBLE UNIVERSE ***(Not mutually exclusive - beneficiaries may be counted in more than one row)***
Certified Beneficiaries enrolled under an aid code with a monthly share-of-cost obligation not deemed met at the first of the month
Beneficiaries with Other Health Coverage
Beneficiaries Associated with Retroactive Months of Eligibility
Beneficiaries participating in the Developmentally Disabled (DD) Waiver, Department of Developmental Services Targeted Case Management, State Developmental Center residents and Intermediate Care Facilities for the Developmentally Disabled residents.
Beneficiaries participating in the NF-AH, IHO, AIDS, and, ALW waivers
Beneficiaries with one or more claims indicating a diagnosis for End-Stage Renal Disease (ESRD) in the previous year.
Beneficiaries residing in a rural zip code
Beneficiaries who are under age 21
Beneficiaries residing in a State-Run Veteran's Home
Beneficiaries Enrolled in certain, large, non-profit health plans operating their own pharmacies

Geographic Managed Care (GMC): In geographic managed care (GMC) counties, DHCS contracts with several commercial plans. This provides more choices for the beneficiaries, so the health plans may want to try new ways to enhance how they deliver care to members. The GMC model is currently operational in the counties of San Diego and Sacramento.

In-Home Operations (IHO) Waiver: The In-Home Operations Waiver serves either 1) participants previously enrolled in the NF A/B Level of Care waiver who have continuously been enrolled in a DHCS In-Home Operations-administered HCBS waiver since prior to January 1, 2002, and require direct care services provided primarily by a licensed nurse; or 2) those who have been receiving continuous care in a hospital for 36 months or greater and have physician-ordered direct care services that are greater than those available in the Nursing Facility/Acute Hospital waiver for the participant's assessed level of care. Services include private duty nursing, case management, waiver personal care services, and other home and community-based services.

In-Home Supportive Services (IHSS): A program that provides a variety of personal care, paramedical and domestic services to individuals who have a chronic disabling condition and require these services to remain at home.

Intermediate Care Facilities for the Developmentally Disabled (ICF-DD): A facility whose primary purpose is to furnish 24-hour developmental, training and habilitative, and supportive health services for those persons with a developmental disability.

Long-Term Care Facility Resident: A beneficiary residing in a long-term care facility. These beneficiaries are distinguished from those beneficiaries who resided in a long-term care facility for a short time during the study period or those beneficiaries who used long-term care services in the home or community. These are beneficiaries who are identified based on their assigned Medi-Cal aid code. For purposes this paper these aid codes include: 13 – Aged –LTC, 23 – Blind – LTC, and 63 – Disabled –LTC. Beneficiaries classified as only incurring a "short-stay" in a LTC facility were identified based on the service received and were not enrolled in one of the LTC aid codes noted above. Individuals classified as incurring a "short-term" stay in a LTC facility received services from one of the following provider types: Intermediate care facilities for the developmentally disabled, state developmental centers, and skilled nursing facilities.

Note, since some populations have been excluded from the CCI eligible population, there may be no populations associated with the provider types.

Long-Term Services and Support (LTSS): LTSS refers to home- and community-based supportive services which allow individuals to avoid institutionalization and remain in the community. For purposes of this paper, beneficiaries identified as receiving LTSS include those who received services from the following provider types: Adult Day Health Care Service/Community Based Adult Services, In-Home Operations/Nursing Facility-Acute Hospital Waivers, Acquired Immune Deficiency Syndrome (AIDS) Waiver, Department of Developmental Services (DDS) Waiver, Multipurpose Senior Services Program (MSSP) Waiver, Assisted Living Waiver.

Managed Care Plan: Under this model, beneficiaries are enrolled into prepaid health plans. These health plans receive a specific monthly amount for managing the care of each beneficiary and assume the risk for the cost of delegated services.

Medi-Cal: California's Medicaid program. See "Medicaid."

Medi-Cal DHCS Administered Services: These services includes most medical services reimbursed by the Medi-Cal program such as: physician and clinic, laboratory, acute hospital inpatient, hospital outpatient, skilled nursing facility, radiology, durable medical equipment, pharmaceuticals, dental, medical transportation, and home health. In most cases, the state's portion of the funding is budgeted by DHCS and such services are either administered by DHCS or through DHCS contractors. For a more detailed discussion of DHCS and non-DHCS administered services see Exhibit A.

Medi-Cal Non-DHCS Administered Services: These services include are a broad range of social support services provided to Medi-Cal eligibles that also qualify for federal matching funds under Title XIX which are administered by other Departments within the California Health and Human Services (CHHS) agency or by the individual counties. For example, the Department of Social Services (DSS) administers the In-Home Supportive Services program which serves incapacitated individuals requiring the attention of a home care giver. For purposes of this paper, non-DHCS expenditures presented include both federal and state expenditures, unless otherwise noted. For a more detailed discussion of DHCS and non-DHCS administered services see Exhibit A.

Medicaid: A joint federal and state program that provides comprehensive health care services at no or low cost to low-income individuals, including families with children, seniors, persons with disabilities, foster care children, and pregnant women.

Medicare: A federal government program providing hospitalization insurance and voluntary medical insurance for persons aged 65 and over and for certain disabled persons under 65.

Medicare Part A – Insurance coverage for inpatient hospital, skilled nursing facility and some home health services. Medicare covers the premium for individuals or spouses who have 40 or more quarters of Medicare covered employment.

Medicare Part B – Optional insurance coverage for physician services, outpatient hospital services, durable medical equipment and certain home health services.

Medicare Part C – Insurance coverage that combines Parts A and B and is provided by pre-approved private insurance companies. Insurance plans are known as "Medicare Advantage Plans."

Medicare Part D – Optional insurance coverage for prescription drugs.

Medicare D-Special Needs Plans (SNP): Medicare SNPs are a type of Medicare Advantage Plan. Medicare SNPs limit membership to people with specific diseases or characteristics, and tailor their benefits, provider choices, and drug formularies (list of covered drugs) to best meet the specific needs of the groups they serve. For example, a Medicare SNP may be designed to serve only people diagnosed with congestive heart failure. The plan might include access to a network of providers who specialize in treating congestive heart failure, and it would feature clinical case management programs designed to serve the special needs of people with this condition. People who join this plan would get benefits specially tailored to their condition, and have all their care coordinated through the Medicare SNP.

Medicare Advantage Plan: If an individual is enrolled in Medicare Parts A and B, they can join a Medicare Advantage plan (Part C).[162] Medicare Advantage plans include:

- Medicare managed care plans;

[162] *Medicare Part C* means the choice of Medicare benefits through Medicare Advantage plans authorized under Part C of the title XVIII of the Act. Title 42, Code of Federal Regulations, Part 400.202.

- Medicare preferred provider organization (PPO) plans;
- Medicare private FFS plans; and
- Medicare specialty plans.

Some individuals who join a Medicare Advantage Plan may have to pay a monthly premium because of the extra benefits the plan offers

Medicare Savings Programs (MSPs): Medicare Savings Programs are Medicare programs administered by a State's Medicaid program to assist eligibles with low incomes and assets. When qualified eligibles meet asset and income requirements Medicaid programs help pay some or all Medicare premiums and deductibles.

Multipurpose Senior Services Program (MSSP): A home and community-based waiver that serves individuals aged 65 and older, who are "certifiable" for placement in a nursing facility and require additional services to avoid institutional placement. MSSP services include case management, chore services, personal emergency response systems and environmental accessibility adaptions.

Nursing Facility-Acute Hospital Waiver (NF-AH): Provides services in the home to Medi-Cal beneficiaries who would otherwise receive care in an intermediate care facility, a skilled nursing facility, a subacute nursing facility, or an acute care hospital. Services include private duty nursing, case management, waiver personal care services, and other home and community-based services.

Per-Capita Cost: For the purposes of this paper, per-capita cost amounts were determined by dividing total expenditures incurred during CY 2010 dates-of-service by the number of unduplicated beneficiaries ever enrolled in 2010. [Total FFS expenditures in dollars/number of unduplicated beneficiaries in study period.]

Share of Cost (SOC): Beneficiaries enrolled in Medi-Cal's SOC program are individuals and families whose incomes are too high to qualify for cash assistance but insufficient to cover their medical expenses. Beneficiaries with a SOC obligation must contribute to their medical expenses up to a predetermined monthly threshold; it is only after beneficiaries meet their monthly obligation that they qualify for Medi-Cal benefits.

Skilled Nursing Facilities: A nursing facility provides health care and related services to individuals who because of their mental or physical condition require care and services (above the level of room and board) which can be made available to them only

through institutional facilities and is not primarily for the care and treatment of mental diseases. Individuals in skilled nursing facilities do not require the full range of services provided in a hospital acute or extended care, but do require the continuous availability of skilled nursing care provided by licensed registered or vocational nurses.[163]

State Developmental Centers: State-run facilities that offer 24-hour habilitation, specialized treatment services, and provide SNF, intermediate care facility for the developmentally disabled (ICF/DD) and an acute hospital services for developmentally disabled individuals.

Two-Plan Model: Under this model DHS contracts with one county-developed plan, called a Local Initiative, and one Knox-Keene-licensed commercial plan. Local initiative plans, which are initiated by a county board of supervisors, are operated by a locally developed comprehensive managed care organization. Commercial plans are operated by non-governmental managed health care organizations. Medi-Cal recipients may enroll in either plan.

Veterans Home: A home established by the State for veterans disabled by age, disease or otherwise who due to such disability are incapable of earning a living.[164] Veterans homes provide many levels of care from domiciliary, assisted living, intermediate care and skilled nursing level of services, and special memory care units.

[163] California Code of Regulations, (CCR), Title 22, Section 51124 (b).
[164] U.S Department of Veterans Affairs, Geriatrics and Extended Care, State Veterans Homes Program.

Section XVII: Exhibits

Exhibit A – Discussion of DHCS and non-DHCS Administered Services

Under California's State Medicaid Plan, DHCS is the single state agency designated to administer or supervise the administration of the Medicaid program as required under Title XIX, Sec. 1902 (5) of the Social Security Act. The "single state agency" is strictly a statutory concept. California's Medi-Cal program, like most state Medicaid programs, is administered by several state and local agencies as well as private contractors. The "single state agency" may delegate to other state agencies, to localities, or to private entities, any of its administrative responsibilities other than the issuance of policies, rules, or regulations.[165]

For the purposes of this paper, services are classified under two broad categories; those administered by the DHCS (DHCS administered services), and those administered by other state agencies (Non-DHCS administered services).

DHCS administered services includes most medical services reimbursed by the Medi-Cal program such as: physician and clinic, laboratory, acute hospital inpatient, hospital outpatient, skilled nursing facility, radiology, durable medical equipment, pharmaceuticals, dental, medical transportation, and home health. In most cases, the state's portion of the funding (i.e., state general fund (GF) or other funding)[166] is budgeted by DHCS and such services are either administered by DHCS or through DHCS contractors.

There are a broad range of social support services provided to Medi-Cal eligibles that also qualify for federal matching funds under Title XIX. In some cases, the administration of these services is assigned to other Departments within the California Health and Human Services (CHHS) agency, and to the individual counties; for the purposes of this paper these services are defined as non-DHCS administered services. The Department of Social Services

[165] Chapter IV:MEDICAID ADMINISTRATION, Andy Schneider and Victoria Wachino, Kaiser Commission on Medicaid and the Uninsured. URL: http://www.kff.org/medicaid/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=14262

[166] Note, there are various funding sources that are used to finance the Medi-Cal program. For example, the state's share of the spending may come from certified public expenditures, provider taxes, or quality assurance fees

(DSS) administers the In-Home Supportive Services program which serves incapacitated individuals requiring the attention of a home care giver. A broad array of mental health services are administered by both the Department of Mental Health (DMH) and by the Counties. The Counties administer Short Doyle Medi-Cal (SD/MC) mental health services consisting of inpatient hospital services delivered in acute care hospitals, individual, group or family therapy delivered in outpatient or clinic settings and various partial day or day treatment programs. The DMH also administers State Hospitals for the Mentally Ill. The California Department of Developmental Services (DDS) provides services to Californians with severe cognitive and physical impairments. The Department of Alcohol and Drug Programs (ADP) provides prevention, treatment and recovery programs for individuals suffering from alcohol, drug and gambling addiction. In most cases, the state portion of the funding is budgeted in these non-DHCS departments. In some cases, the other departments budget the state GF and DHCS claims the federal match based on the other Department's state GF spending. For purposes of this paper, non-DHCS expenditures presented include both federal and state expenditures, unless otherwise noted.

Exhibit B - AHRQ CCS Conditions Treated: Aged vs. Blind/Disabled

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
98	Essential hypertension	75.2%	64.4%	10.8%
53	Disorders of lipid metabolism	66.7%	58.8%	7.8%
10	Immunizations and screening for	49.2%	40.0%	9.2%
49	Diabetes mellitus without complication	45.2%	41.9%	3.3%
211	Other connective tissue disease	43.3%	48.3%	5.0%
259	Residual codes; unclassified	42.9%	46.3%	3.4%
204	Other non-traumatic joint disorders	40.3%	42.3%	2.0%
203	Osteoarthritis	39.1%	34.8%	4.2%
133	Other lower respiratory disease	38.5%	39.0%	0.5%
205	Spondylosis; intervertebral disc disorders; other back problems	36.9%	42.6%	5.7%
59	Deficiency and other anemia	36.5%	33.5%	3.0%
102	Nonspecific chest pain	31.2%	32.0%	0.9%
101	Coronary atherosclerosis and other heart	31.0%	25.0%	6.1%
86	Cataract	30.3%	20.0%	10.4%
251	Abdominal pain	29.1%	30.6%	1.5%
106	Cardiac dysrhythmias	28.3%	25.0%	3.2%
99	Hypertension with complications and secondary hypertension	27.9%	22.9%	5.0%
95	Other nervous system disorders	27.4%	33.6%	6.3%
50	Diabetes mellitus with complications	26.9%	25.9%	1.1%
252	Malaise and fatigue	26.7%	26.1%	0.6%
155	Other gastrointestinal disorders	25.8%	26.2%	0.4%
159	Urinary tract infections	25.5%	24.6%	1.0%
163	Genitourinary symptoms and ill-defined	25.4%	23.2%	2.2%
200	Other skin disorders	25.1%	27.2%	2.1%
91	Other eye disorders	24.9%	18.7%	6.2%
48	Thyroid disorders	24.8%	24.9%	0.1%
206	Osteoporosis	23.7%	14.0%	9.8%
138	Esophageal disorders	23.1%	24.8%	1.7%
257	Other aftercare	23.1%	30.4%	7.4%
258	Other screening for suspected conditions (not mental disorders or infectious	22.9%	25.8%	2.9%
117	Other circulatory disease	22.7%	23.2%	0.5%
127	Chronic obstructive pulmonary disease and bronchiectasis	21.3%	24.9%	3.5%
114	Peripheral and visceral atherosclerosis	20.7%	17.4%	3.2%
93	Conditions associated with dizziness or	19.9%	17.2%	2.8%
126	Other upper respiratory infections	19.7%	21.2%	1.6%
96	Heart valve disorders	18.7%	14.3%	4.4%
134	Other upper respiratory disease	18.6%	18.4%	0.2%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
58	Other nutritional; endocrine; and metabolic disorders	17.9%	25.6%	7.7%
88	Glaucoma	17.3%	11.9%	5.5%
4	Mycoses	17.2%	18.2%	0.9%
87	Retinal detachments; defects; vascular occlusion; and retinopathy	17.0%	11.7%	5.3%
164	Hyperplasia of prostate	16.7%	10.0%	6.7%
256	Medical examination/evaluation	16.3%	21.0%	4.7%
90	Inflammation; infection of eye (except that caused by tuberculosis or sexually transmitted disease.)	16.3%	12.5%	3.8%
55	Fluid and electrolyte disorders	16.0%	15.7%	0.3%
108	Congestive heart failure;	15.9%	13.8%	2.1%
140	Gastritis and duodenitis	15.6%	14.2%	1.4%
253	Allergic reactions	14.5%	15.8%	1.3%
94	Other ear and sense organ disorders	14.1%	12.3%	1.8%
244	Other injuries and conditions due to external causes	13.7%	16.8%	3.0%
125	Acute bronchitis	13.7%	13.5%	0.3%
84	Headache; including migraine	12.6%	16.7%	4.0%
161	Other diseases of kidney and ureters	12.5%	10.8%	1.8%
104	Other and ill-defined heart disease	12.3%	10.6%	1.7%
653	Delirium dementia and amnestic and other cognitive	12.3%	7.3%	5.0%
197	Skin and subcutaneous tissue infections	11.6%	15.4%	3.8%
657	Mood disorders	11.5%	29.7%	18.2%
158	Chronic renal failure	11.4%	9.0%	2.4%
47	Other and unspecified benign neoplasm	11.1%	10.4%	0.7%
128	Asthma	11.1%	15.7%	4.6%
151	Other liver diseases	10.8%	12.4%	1.6%
212	Other bone disease and musculoskeletal deformities	10.6%	11.3%	0.7%
52	Nutritional deficiencies	10.6%	10.7%	0.1%
122	Pneumonia (except that caused by tuberculosis or sexually transmitted	9.2%	8.3%	0.9%
110	Occlusion or stenosis of precerebral	9.1%	6.1%	3.0%
130	Pleurisy; pneumothorax; pulmonary	8.5%	7.8%	0.7%
232	Sprains and strains	8.3%	12.6%	4.2%
89	Blindness and vision defects	8.3%	8.8%	0.5%
109	Acute cerebrovascular disease	7.9%	7.1%	0.7%
651	Anxiety disorders	7.7%	16.5%	8.8%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
105	Conduction disorders	**7.7%**	**5.4%**	2.3%
250	Nausea and vomiting	**7.5%**	**10.1%**	2.5%
153	Gastrointestinal hemorrhage	**7.4%**	**6.9%**	0.5%
44	Neoplasms of unspecified nature or uncertain behavior	**7.3%**	**7.2%**	0.1%
239	Superficial injury; contusion	**7.3%**	**9.9%**	2.6%
254	Rehabilitation care; fitting of prostheses; and adjustment of devices	**7.2%**	**7.8%**	0.6%
141	Other disorders of stomach and	**7.2%**	**6.3%**	0.9%
157	Acute and unspecified renal failure	**7.0%**	**6.2%**	0.8%
208	Acquired foot deformities	**6.7%**	**6.9%**	0.2%
146	Diverticulosis and diverticulitis	**6.6%**	**5.7%**	0.9%
81	Other hereditary and degenerative nervous system conditions	**6.2%**	**6.7%**	0.5%
245	Syncope	**6.1%**	**5.2%**	0.9%
202	Rheumatoid arthritis and related disease	**6.0%**	**8.6%**	2.6%
2603	E Codes: Fall	**6.0%**	**6.7%**	0.7%
120	Hemorrhoids	**5.9%**	**5.6%**	0.3%
6	Hepatitis	**5.8%**	**9.2%**	3.3%
54	Gout and other crystal arthropathies	**5.8%**	**4.1%**	1.7%
198	Other inflammatory condition of skin	**5.7%**	**6.8%**	1.0%
199	Chronic ulcer of skin	**5.7%**	**6.5%**	0.8%
139	Gastroduodenal ulcer (except	**5.4%**	**4.2%**	1.3%
149	Biliary tract disease	**5.3%**	**5.1%**	0.2%
62	Coagulation and hemorrhagic disorders	**5.2%**	**5.3%**	0.1%
113	Late effects of cerebrovascular disease	**5.2%**	**4.7%**	0.5%
85	Coma; stupor; and brain damage	**5.2%**	**5.7%**	0.5%
143	Abdominal hernia	**5.2%**	**5.5%**	0.4%
97	Peri-; endo-; and myocarditis; cardiomyopathy (except that caused by tuberculosis or sexually transmitted	**5.0%**	**5.1%**	0.1%
131	Respiratory failure; insufficiency; arrest	**4.9%**	**5.0%**	0.0%
3	Bacterial infection; unspecified site	**4.9%**	**5.3%**	0.4%
663	Screening and history of mental health and substance abuse codes	**4.8%**	**15.3%**	10.5%
175	Other female genital disorders	**4.8%**	**7.3%**	2.5%
111	Other and ill-defined cerebrovascular	**4.8%**	**3.9%**	0.9%
154	Noninfectious gastroenteritis	**4.7%**	**4.9%**	0.1%
246	Fever of unknown origin	**4.7%**	**5.1%**	0.4%
51	Other endocrine disorders	**4.6%**	**6.4%**	1.8%
7	Viral infection	**4.6%**	**6.3%**	1.7%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
118	Phlebitis; thrombophlebitis and thromboembolism	**4.5%**	**5.4%**	0.8%
165	Inflammatory conditions of male genital	**4.4%**	**3.5%**	1.0%
162	Other diseases of bladder and urethra	**4.3%**	**4.6%**	0.3%
2	Septicemia (except in labor)	**4.2%**	**4.0%**	0.1%
63	Diseases of white blood cells	**4.1%**	**4.7%**	0.6%
112	Transient cerebral ischemia	**4.1%**	**3.1%**	1.0%
238	Complications of surgical procedures or medical care	**4.0%**	**4.7%**	0.7%
167	Nonmalignant breast conditions	**4.0%**	**5.5%**	1.5%
160	Calculus of urinary tract	**3.9%**	**4.5%**	0.6%
166	Other male genital disorders	**3.9%**	**4.6%**	0.7%
173	Menopausal disorders	**3.9%**	**5.7%**	1.8%
121	Other diseases of veins and lymphatics	**3.7%**	**4.5%**	0.8%
209	Other acquired deformities	**3.6%**	**4.0%**	0.3%
237	Complication of device; implant or graft	**3.6%**	**4.7%**	1.1%
92	Otitis media and related conditions	**3.6%**	**4.2%**	0.6%
231	Other fractures	**3.5%**	**3.6%**	0.1%
29	Cancer of prostate	**3.4%**	**1.5%**	1.9%
119	Varicose veins of lower extremity	**3.4%**	**3.4%**	0.0%
213	Cardiac and circulatory congenital	**3.1%**	**3.1%**	0.1%
225	Joint disorders and dislocations; trauma-	**3.1%**	**4.2%**	1.1%
103	Pulmonary heart disease	**3.0%**	**3.0%**	0.0%
659	Schizophrenia and other psychotic	**2.9%**	**16.4%**	13.4%
100	Acute myocardial infarction	**2.8%**	**2.5%**	0.3%
236	Open wounds of extremities	**2.8%**	**4.5%**	1.7%
2617	E Codes: Adverse effects of medical drugs	**2.7%**	**3.5%**	0.9%
115	Aortic; peripheral; and visceral artery	**2.6%**	**2.0%**	0.6%
670	Miscellaneous disorders	**2.6%**	**4.4%**	1.8%
14	Cancer of colon	**2.5%**	**1.5%**	1.1%
145	Intestinal obstruction without hernia	**2.5%**	**2.6%**	0.1%
217	Other congenital anomalies	**2.4%**	**3.3%**	0.9%
83	Epilepsy; convulsions	**2.4%**	**7.1%**	4.7%
24	Cancer of breast	**2.4%**	**2.4%**	0.0%
79	Parkinson`s disease	**2.3%**	**1.5%**	0.8%
2621	E Codes: Place of occurrence	**2.3%**	**4.2%**	1.9%
235	Open wounds of head; neck; and trunk	**2.2%**	**3.2%**	1.0%
82	Paralysis	**2.1%**	**3.9%**	1.7%
168	Inflammatory diseases of female pelvic	**2.1%**	**4.1%**	2.0%
135	Intestinal infection	**2.1%**	**2.1%**	0.1%
242	Poisoning by other medications and	**2.1%**	**3.5%**	1.4%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
42	Secondary malignancies	**1.9%**	**1.7%**	0.3%
129	Aspiration pneumonitis; food/vomitus	**1.9%**	**1.3%**	0.6%
230	Fracture of lower limb	**1.8%**	**2.8%**	0.9%
137	Diseases of mouth; excluding dental	**1.8%**	**2.0%**	0.2%
60	Acute posthemorrhagic anemia	**1.8%**	**1.7%**	0.1%
23	Other non-epithelial cancer of skin	**1.8%**	**1.6%**	0.2%
2620	E Codes: Unspecified	**1.8%**	**3.6%**	1.9%
147	Anal and rectal conditions	**1.8%**	**2.2%**	0.4%
152	Pancreatic disorders (not diabetes)	**1.7%**	**2.2%**	0.4%
215	Genitourinary congenital anomalies	**1.7%**	**1.6%**	0.1%
156	Nephritis; nephrosis; renal sclerosis	**1.7%**	**1.9%**	0.2%
2616	E Codes: Adverse effects of medical care	**1.7%**	**2.3%**	0.7%
229	Fracture of upper limb	**1.7%**	**2.1%**	0.5%
207	Pathological fracture	**1.6%**	**1.2%**	0.4%
249	Shock	**1.6%**	**1.5%**	0.1%
136	Disorders of teeth and jaw	**1.5%**	**2.8%**	1.3%
45	Maintenance chemotherapy; radiotherapy	**1.5%**	**1.4%**	0.1%
123	Influenza	**1.4%**	**1.5%**	0.1%
255	Administrative/social admission	**1.4%**	**4.3%**	2.9%
226	Fracture of neck of femur (hip)	**1.4%**	**0.9%**	0.5%
170	Prolapse of female genital organs	**1.4%**	**1.3%**	0.1%
247	Lymphadenitis	**1.3%**	**1.7%**	0.4%
8	Other infections; including parasitic	**1.2%**	**2.6%**	1.4%
64	Other hematologic conditions	**1.2%**	**1.5%**	0.4%
233	Intracranial injury	**1.2%**	**1.6%**	0.5%
116	Aortic and peripheral arterial embolism or thrombo	**1.1%**	**1.2%**	0.1%
19	Cancer of bronchus; lung	**1.1%**	**0.9%**	0.2%
201	Infective arthritis and osteomyelitis (except that caused by tuberculosis or sexually transmitted disease)	**1.0%**	**1.6%**	0.6%
234	Crushing injury or internal injury	**1.0%**	**1.3%**	0.3%
107	Cardiac arrest and ventricular fibrillation	**1.0%**	**0.9%**	0.1%
650	Adjustment disorders	**0.9%**	**1.7%**	0.7%
660	Alcohol-related disorders	**0.9%**	**4.6%**	3.7%
210	Systemic lupus erythematosus and connective tissue	**0.9%**	**2.1%**	1.2%
41	Cancer; other and unspecified primary	**0.9%**	**1.0%**	0.2%
15	Cancer of rectum and anus	**0.8%**	**0.9%**	0.0%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
43	Malignant neoplasm without specification of site	**0.8%**	**0.7%**	0.1%
32	Cancer of bladder	**0.7%**	**0.5%**	0.3%
1	Tuberculosis	**0.7%**	**0.5%**	0.2%
38	Non-Hodgkin`s lymphoma	**0.7%**	**0.8%**	0.1%
144	Regional enteritis and ulcerative colitis	**0.6%**	**1.0%**	0.4%
214	Digestive congenital anomalies	**0.6%**	**0.6%**	0.0%
661	Substance-related disorders	**0.6%**	**6.6%**	5.9%
46	Benign neoplasm of uterus	**0.6%**	**1.4%**	0.8%
124	Acute and chronic tonsillitis	**0.6%**	**0.8%**	0.2%
18	Cancer of other GI organs; peritoneum	**0.6%**	**0.4%**	0.2%
13	Cancer of stomach	**0.5%**	**0.3%**	0.2%
2607	E Codes: Motor vehicle traffic (MVT)	**0.5%**	**1.3%**	0.8%
9	Sexually transmitted infections (not HIV or hepatitis)	**0.5%**	**1.4%**	0.9%
16	Cancer of liver and intrahepatic bile duct	**0.5%**	**0.5%**	0.0%
172	Ovarian cyst	**0.5%**	**1.1%**	0.6%
11	Cancer of head and neck	**0.5%**	**0.5%**	0.1%
248	Gangrene	**0.5%**	**0.5%**	0.1%
39	Leukemias	**0.4%**	**0.4%**	0.0%
2614	E Codes: Struck by; against	**0.4%**	**1.6%**	1.2%
33	Cancer of kidney and renal pelvis	**0.4%**	**0.4%**	0.0%
240	Burns	**0.4%**	**0.7%**	0.3%
27	Cancer of ovary	**0.4%**	**0.4%**	0.1%
2618	E Codes: Other specified and classifiable	**0.4%**	**0.9%**	0.5%
654	Developmental disorders	**0.4%**	**1.8%**	1.4%
227	Spinal cord injury	**0.4%**	**0.9%**	0.6%
148	Peritonitis and intestinal abscess	**0.3%**	**0.4%**	0.1%
17	Cancer of pancreas	**0.3%**	**0.2%**	0.1%
25	Cancer of uterus	**0.3%**	**0.4%**	0.1%
171	Menstrual disorders	**0.3%**	**2.1%**	1.8%
228	Skull and face fractures	**0.3%**	**0.4%**	0.2%
40	Multiple myeloma	**0.3%**	**0.3%**	0.0%
132	Lung disease due to external agents	**0.3%**	**0.3%**	0.0%
21	Cancer of bone and connective tissue	**0.3%**	**0.3%**	0.0%
2612	E Codes: Overexertion	**0.3%**	**1.1%**	0.8%
2619	E Codes: Other specified; NEC	**0.3%**	**0.9%**	0.7%
36	Cancer of thyroid	**0.3%**	**0.3%**	0.0%
26	Cancer of cervix	**0.3%**	**0.4%**	0.1%
2613	E Codes: Poisoning	**0.3%**	**0.9%**	0.6%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
35	Cancer of brain and nervous system	**0.2%**	**0.4%**	0.1%
2611	E Codes: Natural/environment	**0.2%**	**0.6%**	0.4%
22	Melanomas of skin	**0.2%**	**0.3%**	0.0%
2601	E Codes: Cut/pierceb	**0.2%**	**0.7%**	0.4%
57	Immunity disorders	**0.2%**	**0.7%**	0.4%
224	Other perinatal conditions	**0.2%**	**0.3%**	0.1%
243	Poisoning by nonmedicinal substances	**0.2%**	**0.6%**	0.4%
652	Attention-deficit conduct and disruptive behavior	**0.2%**	**1.3%**	1.1%
216	Nervous system congenital anomalies	**0.2%**	**0.4%**	0.2%
5	HIV infection	**0.2%**	**2.7%**	2.6%
142	Appendicitis and other appendiceal conditions	**0.2%**	**0.2%**	0.1%
28	Cancer of other female genital organs	**0.2%**	**0.2%**	0.1%
76	Meningitis (except that caused by tuberculosis or sexually transmitted disease)	**0.1%**	**0.2%**	0.1%
12	Cancer of esophagus	**0.1%**	**0.1%**	0.0%
20	Cancer; other respiratory and intrathoracic	**0.1%**	**0.3%**	0.1%
662	Suicide and intentional self-inflicted injury	**0.1%**	**2.5%**	2.4%
658	Personality disorders	**0.1%**	**1.3%**	1.2%
80	Multiple sclerosis	**0.1%**	**0.9%**	0.7%
34	Cancer of other urinary organs	**0.1%**	**0.1%**	0.0%
656	Impulse control disorders NEC'	**0.1%**	**0.2%**	0.1%
78	Other CNS infection and poliomyelitis	**0.1%**	**0.4%**	0.2%
77	Encephalitis (except that caused by tuberculosis or sexually transmitted disease)	**0.1%**	**0.2%**	0.1%
2604	E Codes: Fire/burn	**0.1%**	**0.2%**	0.2%
194	Forceps delivery	**0.1%**	**0.0%**	0.1%
37	Hodgkin`s disease	**0.1%**	**0.1%**	0.1%
655	Disorders usually diagnosed in infancy, childhood	**0.1%**	**0.4%**	0.3%
2615	E Codes: Suffocation	**0.1%**	**0.1%**	0.0%
56	Cystic fibrosis	**0.1%**	**0.1%**	0.0%
176	Contraceptive and procreative management	**0.0%**	**0.8%**	0.7%
61	Sickle cell anemia	**0.0%**	**0.2%**	0.2%
241	Poisoning by psychotropic agents	**0.0%**	**0.5%**	0.4%

CCS Code	Disease	Aged Percent of Total	Blind / Disabled Percent of Total	Difference
169	Endometriosis	0.0%	0.2%	0.2%
181	Other complications of pregnancy	0.0%	0.4%	0.3%
221	Respiratory distress syndrome	0.0%	0.0%	0.0%
223	Birth trauma	0.0%	0.0%	0.0%
2610	E Codes: Transport; not MVT	0.0%	0.1%	0.1%
196	Normal pregnancy and/or delivery	0.0%	0.4%	0.3%
31	Cancer of other male genital organs	0.0%	0.0%	0.0%
174	Female infertility	0.0%	0.1%	0.0%
220	Intrauterine hypoxia and birth asphyxia	0.0%	0.0%	0.0%
2608	E Codes: Pedal cyclist; not MVT	0.0%	0.1%	0.1%
30	Cancer of testis	0.0%	0.1%	0.0%
179	Postabortion complications	0.0%	0.0%	0.0%
183	Hypertension complicating pregnancy; childbirth; and the puerperium	0.0%	0.1%	0.1%
2606	E Codes: Machinery	0.0%	0.0%	0.0%
186	Diabetes or abnormal glucose tolerance complicatin	0.0%	0.1%	0.0%
222	Hemolytic jaundice and perinatal jaundice	0.0%	0.0%	0.0%
219	Short gestation; low birth weight; and fetal growth retardation	0.0%	0.0%	0.0%
2609	E Codes: Pedestrian; not MVT	0.0%	0.0%	0.0%
178	Induced abortion	0.0%	0.1%	0.1%
187	Malposition; malpresentation	0.0%	0.0%	0.0%
182	Hemorrhage during pregnancy; abruptio placenta; placenta previa	0.0%	0.1%	0.1%
191	Polyhydramnios and other problems of amniotic cavity	0.0%	0.0%	0.0%
190	Fetal distress and abnormal forces of labor	0.0%	0.0%	0.0%
2605	E Codes: Firearm	0.0%	0.1%	0.1%
177	Spontaneous abortion	0.0%	0.0%	0.0%
188	Fetopelvic disproportion; obstruction	0.0%	0.0%	0.0%
2602	E Codes: Drowning/submersion	0.0%	0.0%	0.0%
193	OB-related trauma to perineum and vulva	0.0%	0.0%	0.0%
192	Umbilical cord complication	0.0%	0.0%	0.0%
180	Ectopic pregnancy	0.0%	0.0%	0.0%
218	Liveborn	0.0%	0.0%	0.0%
195	Other complications of birth; puerperium affecting	0.0%	0.3%	0.3%

		Aged	Blind / Disabled	
CCS Code	Disease	Percent of Total	Percent of Total	Difference
184	Early or threatened labor	**0.0%**	**0.1%**	0.1%
189	Previous C-section	**0.0%**	**0.0%**	0.0%
185	Prolonged pregnancy	**0.0%**	**0.0%**	0.0%