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HEALTHCARE AND HUMAN SERVICES POLICY, RESEARCH, AND CONSULTING—WITH REAL-WORLD PERSPECTIVE.

California State Innovation Model Grant Initiative: Market Assessment

Prepared for: **California Health & Human Services Agency, CalSIM Initiative**

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October 11, 2013

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Executive Summary

In December 2012, the Let's Get Healthy California (LGHC) Task Force published a report that identifies six priority areas for the state: Healthy Beginnings, Living Well, End of Life, Redesigning the Health System, Creating Healthy Communities, and Lowering the Cost of Care. With the LGHC Task Force report as a foundation, and building upon existing private and public sector initiatives already underway, California is drafting a State Health Care Innovation Plan (SHCIP) under a Centers for Medicare & Medicaid Innovation (CMMI) State Innovation Models (SIM) Design award. The Lewin Group conducted this health care market assessment for the California Department of Health and Human Services to inform the development of the California SHCIP. The assessment aims to provide a basis for understanding and measuring future health care transformation as the SHCIP is implemented and evaluated. The market assessment provides an overview of the California health care market in terms of outcomes, spending, payers (or purchasers), and organization, including regional-level descriptions, and where feasible, explores sectors that might be relevant for future health care transformation.

The market assessment shows that, in terms of ***health care outcomes*** **across the lifespan**, California exceeds national performance across a number of quality indicators. Using the LGHC Task Force Report's relevant health care quality indicators as a framework, California has particularly positive outcomes in the priority areas of Healthy Beginnings and Living Well.[1] Despite high performance across many indicators, California still faces a number of challenges, particularly in the area of End of Life, where state performance lags behind that of the nation.

Findings related to outcomes are similar to those related to ***health care spending*** – while state per capita Medicaid spending and total health care spending are lower than the average per capita spending nationwide, per capita Medicare spending exceeds the national average and is one of the highest across all states. Both of these findings suggest significant opportunities to improve care among adults over the age of 65. Average monthly costs exhibit some variation across California's regions, with the highest spending observed in the Bay Area/ Sacramento region for private managed care organizations and the highest Medicare and Medi-Cal spending in the Los Angeles region. Across all payer types, health care expenditures are skewed, with a small minority of individuals accounting for a disproportionate share of the costs. These high-cost individuals exhibit very high rates of chronic conditions and high utilization rates for long-term services and supports.

One of the unique features of California's ***health care purchaser environment*** is a high managed care penetration rate. Statewide, 48 percent of individuals are in managed care compared to only 23 percent nationwide[2]. Among publicly covered individuals, over half of Medi-Cal enrollees are covered by managed care but only about a quarter of Medicare enrollees participate in managed care plans. Across the state, different regions face different uninsured rates, with the highest rate in Los Angeles. In all regions, except for the Bay Area/ Sacramento and Orange County/ San Diego regions, public coverage exceeds private coverage. These two regions also have the lowest uninsured rates across the state, potentially reflecting higher income populations.

The ***organization of California's health care market*** is characterized by varying levels of vertical and horizontal integration. Some regions, such as the Bay Area/ Sacramento region, have high levels of vertical and horizontal integration with large health systems covering many individuals. Other regions, such as the Inland Empire, have more fragmented systems. Even in areas with considerable integration, safety-net providers may operate in a fragmented environment.

This market assessment highlights the many strengths of California's health care system, including the numerous innovations and initiatives underway. It also identifies current issues and challenges the state faces, as well as drivers of health care transformation and specific measures to quantify improvement. The state will use this market assessment as a baseline to measure improvement and progress as the health care system transforms through implementation of the SHCIP.

Introduction

The Lewin Group conducted this health care market assessment to inform the development of the California State Health Care Innovation Plan (SHCIP) for the California Health and Human Services Agency. The goal of the assessment is to provide the basis for understanding and measuring the progress of health care transformation in the state as the SHCIP is implemented and tested. As such, it presents an overview of California's health care market and compares key cost and demographic trends in the state with those observed in the nation. Where possible, it describes key estimates by health care purchasers and regional markets. Finally, the assessment presents relevant drivers of the current state health care market and those most significant for future transformation. The assessment is organized as follows:

I. Background on the California Health Care Market and Key Baseline Demographics, including a description of California's current market demographics by payer type and state region.[3]

II. Detailed Market Findings, including a discussion of the following drivers of and activities within the current state health care market that are significant in its transformation:

- Degree of market integration
- Market integration by Integrated Healthcare Association (IHA) region
- Maternity Care market assessment
- Health Homes for Complex Patients market assessment
- Palliative Care market assessment
- Accountable Care Community (ACC) and Accountable Care Organization (ACO) market assessment

I. Background on the California Health Care Market

Reviewing California's performance on broad health indicators establishes a baseline foundation for understanding the state's current health care market. These indicators reflect how this market has served its population and where there are gaps in market performance. In the state's Let's Get Healthy California initiative, the state developed indicators across six priority areas: Healthy Beginnings, Living Well, End of Life, Redesigning the Health System, Creating Healthy Communities, and Lowering the Cost of Care. Using these indicators, California exceeds national performance on the majority of quality performance outcomes within the areas of Healthy Beginnings and Living Well (**Table 1** – see **Appendix A, Table A.1** for details).[4]

Despite high performance in these areas, health care in California continues to face many challenges. The state performs worse than the nation overall in the End of Life indicators of "Percent of Terminal Hospital Stays that Include ICU Days" and "Hospice Enrollment Rate."[5] According to the Berkeley Forum report, 53 percent of the state's health care expenditures are expended by just 5 percent of the population in a typical year, and the annual health care consumption as a percentage of the Gross State Product continues to grow.[6] Coupled with the trends in growing expenditures, there are wide disparities in access and quality of care among different socioeconomic and racial/ethnic segments of the population, signaling gaps in meeting the needs of all Californians.

Table 1: Percent of Let's Get Healthy California Indicators Exceeding National Norms

Priority area	Indicators with comparable data	CA performance equal or better than U.S.	Percent of indicators where CA equal or better (%)
Healthy Beginnings	8	6	75
Living Well	9	7	78
End of Life [1/]	2	0	0
Redesigning the Health System	3	3	100
Creating Healthy Communities	2	1	50
Lowering the Costs of Care	4	4	100

Source: Lewin analysis of Let's Get Healthy California data, data available in Appendix A, Table A.1

1/ California performs worse than the nation overall in the End of Life indicators of "Percent of Terminal Hospital Stays that Include ICU days" and "Hospice Enrollment Rate." This reflects both a challenge and opportunity for innovations related to expanding palliative care, which will be explored in later sections of this document.

In 2009, Medicare spending per enrollee was nearly $11,000, 6 percent higher than the U.S. average of $10,365. Medicare spending per enrollee ranges from $7,576 in Montana to $11,903 in New Jersey[7]. Medicaid spending per capita is lower than the national average, however. Low private and Medicaid per capita expenditures for the state are attributed to factors including high managed care penetration, a relatively young population, a high percentage of uninsured persons, and low Medicaid payment rates.[8]

While per capita spending on hospital care is lower than the nation overall, approximately one -third of California's health care expenditures are for acute hospital care. Although this category of expenditures grew only slightly faster than overall health expenditures between 2008 and 2009, its contribution to overall cost growth is significant. From 2006 to 2010, daily private insurance payments to hospitals increased by 39 percent.[9]

A. Insurance Coverage Status by Region

Another key baseline factor in describing the California health care market is the total number and distribution of enrollees by region and source of payer, as presented in **Table 2**. Integrated Healthcare Association (IHA) developed a methodology that grouped California's counties into five regions for the purposes of accounting for differences in wages and cost of living, and facilitating comparisons of risk adjusted total costs of care, which captures the costs of care delivered to all commercial health maintenance organization (HMO)/point of service (POS) enrollees.[10]

County-level census population data are used to estimate regional insurance coverage across the state. Using county populations, the uninsured (from Census Small Area Health Insurance Estimates), individuals with Medicare (from the Medicare Enrollment Reports), and individuals with Medi-Cal (from the Department of Health Care Services) are subtracted out to derive an estimate of individuals with private (or other) health coverage (**Table 2**). Individuals with Medicare and Medi-Cal are attributed to the Medicare category.

The regions with the highest percent of uninsured include Los Angeles, which is highly urbanized and densely populated, followed by the Inland Empire and Central Valley/Central Coast/North, both of which are more rural and less densely populated compared to other regions. In only two out of five regions does private/commercial health care coverage actually exceed public coverage or no insurance coverage: the Bay Area/Sacramento and Orange County/San Diego, with 54 percent and 51 percent private/other coverage, respectively.

Table 2: Coverage Source Estimates by Region

	Population [11]	Uninsured [12]	Medicare FFS [13]	Medicare Advantage [14]	Medi-Cal FFS [15]	Medi-Cal Managed Care [16]	Private/ Other Coverage
Bay Area/ Sacramento	9,291,004	14.88%	13.40%	5.17%	4.23%	8.22%	54.09%
Central Valley/ Central Coast/North	7,676,877	20.36%	13.70%	2.86%	10.14%	10.70%	42.25%
Inland Empire	4,418,654	22.95%	11.43%	5.22%	7.20%	10.58%	42.62%
Los Angeles	9,825,761	25.90%	11.78%	4.42%	8.20%	12.24%	37.47%
Orange County/San Diego	6,122,114	19.49%	12.44%	5.12%	2.67%	8.91%	51.37%
Total	37,334,410	20.62%	12.64%	4.50%	6.59%	10.18%	45.48%

Source: U.S. Census Bureau Small Area Health Insurance Estimates, CMS Medicare and Medi-Cal Enrollment Data

B. Regional Health Care Costs by Payer

Table 3 presents the cost per member for 2010 and 2011 by IHA-defined region for commercial (private) health maintenance organizations (HMOs), commercial non-HMOs, Medicare Advantage, Medicare fee-for-service (FFS), and Medi-Cal FFS. Medi-Cal managed care data are not presented. Commercial HMO data are sourced from IHAs Total Cost of Care metric.[17]

Of all regions in 2010, Los Angeles County demonstrated the highest per capita expenditures within Medicare (both for managed and non-managed); here, commercial HMO costs are approximately one-third of the Medicare non-HMO expenditures. Los Angeles County also had the highest regional per capita expenditures within Medi-Cal (non-managed). The Bay Area/Sacramento showed the highest per capita costs within commercial payers (HMOs). Furthermore, as presented in **Table 3**, there is significant variation in per member costs depending on the source of coverage, with Medi-Cal non-managed care having the lowest per member cost and Medicare Advantage having the highest per member cost in 2010. Medi-Cal non-managed care expenditures are also lower, at one quarter to one third of Medicare expenditures per capita. No data are available on Medi-Cal managed care.

Table 3: Per Member Costs by Payer Type and Region (2010 & 2011)

Payer	Type	Geography		
Commercial	HMO	**Region**	**2010**	**2011**
		Bay Area, Sacramento	$4,203	$4,441
		Central Coast, Central Valley, North	$3,689	$4,045
		Inland Empire	$3,028	$3,294
		Los Angeles	$3,104	$3,282
		Orange County, San Diego	$3,465	$3,600
		Total	**$3,433**	**$3,642**
	Non-HMO	Not available		
Medi-Cal	Managed Care	Not available		
	Non-Managed Care	**Region**	**2010**	**2011**
		Bay Area / Sacramento	$2,797	$2,415
		Central Valley / Central Coast / North	$2,344	$2,190
		Inland Empire	$2,417	$2,232
		Los Angeles	$2,752	$2,420
		Orange County / San Diego	$2,309	$2,088
		Total	**$2,555**	**$2,296**
Medicare	Medicare Advantage	**Region**	**2009**	**2010**
		Bay Area, Sacramento	$9,726	$10,241
		Central Coast, Central Valley, North	$9,270	$9,808
		Inland Empire	$8,710	$10,394
		Los Angeles	$8,805	$11,084
		Orange County, San Diego	$8,766	$10,186
		Medicare Advantage Total	**$9,111**	**$10,480**
	Non-Managed Care	**Region**	**2009**	**2010**
		Bay Area, Sacramento	$8,534	$8,968
		Central Coast, Central Valley, North	$8,170	$8,823
		Inland Empire	$9,126	$9,572
		Los Angeles	$10,599	$11,113
		Orange County, San Diego	$9,340	$9,771
		Medicare FFS Total	**$9,251**	**$9,880**

Sources: Commercial data provided by the Integrated Healthcare Association; Medicare data provided by Dr. Brian Biles at George Washington University; Medi-Cal data provided by California Department of Health Care Services.

C. Distribution of Health Care Spending

Nearly all health care cost distributions are skewed and can be attributed to a small number of individuals who consume the majority of the health care dollars. This section presents a profile of high cost enrollees. Key findings include:

- Individuals with multiple chronic conditions and behavioral or mental needs are more likely to be high-cost in both Medicare and Medicaid. In Medicaid, long-term care expenditures compose a large portion of the total spending by high cost individuals. Within Medicare, individuals in the last six months of life are 10 times more expensive than other enrollees.
- In California, average per beneficiary costs in the last six months of life averaged more than $46,000, compared to roughly $10,000 per member per year for Medicare enrollees overall.[18 19] On a per month basis, this is approximately a 10-fold difference. Californians also spend more than the national average of $36,000 in the last six months of life.[20]
- In 2010, The Lewin Group conducted an extensive analysis of the most expensive utilizers in Medi-Cal FFS for the California Healthcare Foundation (CHCF).[21] According to this analysis, it is clear that the majority of spending occurs on behalf of a very small portion of Medi-Cal enrollees. In fact, only 7 percent of enrollees accounted for 76 percent of all expenditures in 2008. **Table 4** summarizes study findings.

Table 4: Distribution of Medi-Cal Expenditures at various annual expenditure thresholds (2008)

Annual beneficiary expenditures threshold	Percentage of Beneficiaries	Percentage of Total Medi-Cal FFS Expenditures
<$10,000	93%	24%
>$10,000	7%	76%
>$25,000	3%	54%
>$100,000	< 1%	14%

Source: California HealthCare Foundation's *where the Money Goes: Understanding Medi-Cal's High-Cost Beneficiaries (2010)*

- Among individuals with expenditures exceeding $10,000 per year, cardiovascular, neurological, and pulmonary diseases were the most common physical health conditions. Reflecting the nature of chronic disease, it is also common for the most costly enrollees to incur substantial expenditures in subsequent years. Among enrollees with more than $10,000 of expenditures in 2006, 59 percent remained in Medi-Cal two years longer and continued to exceed $10,000 in annual expenditures.
- Long-term care expenditures also play a significant role in the most costly subset of FFS Medi-Cal enrollees. In 2008, of those with more than $100,000 in annual expenditures, facility-based long-term care accounted for 32 percent of the dollars used by this group.[22] Thirty-six percent spent more than 181 days in facility-based long-term care.[23].
- Highly skewed spending rates across the health care market are not limited to publicly insured populations. In fact, only 5 percent of the privately insured drive 50 percent of commercial health care spending nationally.[24] Of the 1 percent that account for 25 percent of health care expenditures, a majority spend over $100,000 annually, compared to $3,837 per enrollee on average in the overall population.[25] More than three quarters of the highest spending patients have one or more chronic conditions.[26] Almost half of the substantial annual spending by the top 1 percent is on inpatient care, while the overall population has much higher utilization of outpatient services.[27] The top high cost episodes of care for preferred provider organization (PPO) enrollees include

osteoarthritis, hypertension and its maintenance, breast cancer, angina pectoris, diabetes, maternity care (including both vaginal and Cesarean delivery), and complications of medical and surgical care. For HMO enrollees, the top high cost episodes of care include maternity care (including vaginal and cesarean delivery), neonatal care, joint replacement, heart surgery, uterine surgery, septicemia, bariatric surgery, and cancer.

II. Organization of the California Health Care System

This section describes the organization of the California health care market. After a discussion of the role of integration in the current market, the section describes California's current landscape for palliative and maternity care—two priority areas in the state in which much opportunity exists for lowering costs, improving outcomes, expanding access, and reducing disparities through innovative reforms. Finally, evolving health care delivery models such as health homes for complex patients and ACOs[28] are discussed, as these serve as a basis for statewide reforms aiming to address key priority areas.

A. Market Integration

Role of integration in market innovation

Health system integration is an important focus for transformation and innovation in California because it relates to the critical infrastructure through which finances, populations, services, and information can be linked and coordinated to improve system efficiency and quality.

There are different types and characteristics of health system integration that reflect the nature and range of the relationships and roles among participating organizations. These may include the degree of *direct management control or ownership* - from arms-length, virtual relationships to vertical and direct, as well as the degree to which specific functions, such as how *physician and patient care services* are coordinated with each other, maximize the value of services.[29] There is evidence, for example, that highly integrated multi-specialty groups are more likely to use evidence-based care management, and that groups affiliated with or owned by HMOs or hospital health systems use more recommended processes than free standing groups.[30] Integration facilitates the opportunities for collaboration and communication among member organizations that share common infrastructure. This can support innovation and approaches to improve service delivery and outcomes because these connections decrease barriers to information exchange and learning while lessening financial burdens.

This section explores various forms of integration across California's five IHA-defined regions. The following are key findings:

- There is significant variation in the extent (and type) of health system integration across different geographic areas of California.
- The percentage of insured people covered by ACOs in the Central Valley/Central Coast/North and Inland Empire regions were 0.53 percent and 0.87 percent, respectively. Los Angeles has the most significant ACO activity in the state, with 3.38 percent of its insured population covered by ACOs. In the Bay Area/Sacramento and San Diego/Orange County regions, 2.51 percent and 3.26 percent of their insured populations are covered by ACOs. These areas with higher levels of integration are also among the highest cost areas of the state. Although no evidence exists suggesting a causal relationship, many large purchasers believe this integration contributes to higher costs, thus somewhat inhibiting their interest in integration.
- Different regions of the state have varying levels of ability to adopt integrated models of care, such as ACOs and health homes for complex patients. Areas with less extensive integration have fewer established relationships among providers, hospitals, and

insurers that have the potential to improve the financial, technological, and service environments in a comprehensive manner. There are also few incentives in these regions for further integration, as dominant providers do not feel the market pressures of more integrated areas to improve their efficiency. Establishing integrated care models in these regions is also hampered by the lack of common infrastructure necessary to make them successful.

Safety-net provider integration

Within a community, levels of integration may differ for safety-net providers relative to other providers. Safety-net providers are those institutional providers that serve uninsured and low-income populations and are funded primarily from public sources. Because much of their funding comes from public payers, the financial pressures that safety-net providers face differ from those faced by other providers. Due to these different financial pressures, there are different incentives for and patterns of integration among safety-net providers. Additionally, there appears to be little integration between safety-net and non-safety-net providers due to different business models.

The level of integration among safety-net providers appears to be largely driven by the local environment. San Francisco's safety-net providers are particularly well integrated and have benefitted from support from local government, public bonds, and sales taxes.[31] These have provided funding for electronic health records and provided other supports for facilities.[32]

Expansion under the Affordable Care Act (ACA) has the potential to increase competition between safety-net and non-safety-net providers.[33] As a direct result of the ACA, for example, funding for Disproportionate Share Hospital (DSH) payments will be decreased for safety-net providers, resulting in their need to seek new relationships and more insured patients to stabilize their financial viability.[34]

B. California Market Integration and Description by IHA Region

The following sub-sections describe the nature of market integration for each of the IHA regions.

Central Valley/Central Coast/North (CVCNN)

In most counties (including Fresno, Tulare, Kings, Madera, and Mariposa), there are no large dominant health systems and few large medical groups, reflecting lower population density.[35] Additionally, there is little presence from Kaiser Permanente (Kaiser) or other integrated health care systems.[36] Several recent efforts for hospitals to align with physicians in the region have not been successful.[37] Acute shortages of physicians have led to little competitive pressure to align and as a result, most remain in solo practices.[38] The physician shortage also makes it difficult for hospitals in the San Joaquin Valley to coordinate post-discharge follow-up care, contributing to the fragmentation of the system.[39]

The lack of integration is further reflected in the extremely low proportion of insured persons enrolled in ACOs, which is only 0.53 percent.[40] Most counties in this region do not contain any ACOs, including larger counties such as Fresno and San Joaquin. ACOs do exist in Placer, Stanislaus, and Kern counties, however.[41]

Inland Empire

Inland Empire is one of the most economically challenged regions in California, resulting in a difficult environment for integration. Hospitals and physicians are fragmented into geographic submarkets and are not aligned.[42] Hospital competition has increased slightly due to the economic recession as well as Kaiser's expansion in the area that has led to additional alignment between hospitals and physicians.[43] Although independent practice associations (IPAs) have grown, most physicians work in small, independent practices.[44] Furthermore, there are very few Federally Qualified Health Centers (FQHCs) and those that do exist are not collaborating with each other.[45] The lack of integration is also reflected by the small amount of ACO activity in the region. Only 0.87 percent of the insured population is covered by ACOs.[46]

However, county hospitals are making progress towards more alignment with physicians[47] and the Blue Shield Foundation recently awarded the California Telehealth Network a small grant to improve health information exchange in San Bernardino County.[48]

Los Angeles

The Los Angeles (LA) health care market has the most ACO activity of any other region in California. Currently, 3.38 percent of the insured population is covered by ACOs.[49]

Despite the prevalence of ACOs, LA is not considered to be well integrated, which is thought to be due in part to the extreme traffic problem in the area, leading patients to seek care close to home.[50] This allows small practices to serve local submarkets, and, as a result, no hospital or health system dominates. Recently, Kaiser's growth created incentives for more competition among physicians but, for the most part, hospitals and physicians are largely independent and operate with minimal alignment.[51]

Mergers and acquisitions are also increasing integration in the LA area by introducing a larger percentage of provider capacity into a smaller number of organizations. For example, the University of California, Los Angeles (UCLA) plans to expand capacity to new LA service areas and more efficiently direct routine admissions from the Ronald Regan campus to other facilities. [52,53, 54] Providence Health & Services is buying Santa Monica Hospital to increase its market share.[55]

The county system operates a large safety-net system as well, which is becoming more integrated. Recent efforts include new collaborative activity between private hospitals and community health clinics (CHCs). Additionally, the county is working to replicate San Francisco's eReferral system.[56] [57]

Bay Area/Sacramento

The Bay Area/Sacramento region has several forms of market integration. Kaiser Permanente and Sutter Health System are the dominant hospital systems in the region and both are strongly integrated.[58] Mercy Medical Group and Dignity Health Hospitals are another smaller system including 300 providers and four hospitals in the Sacramento area that are integrated within a medical foundation. [59,60] Some physicians remain in small independent practices and IPAs, but this is no longer the majority of the practices for this region.[61] [62] For example, only 22 percent of physicians work in solo or small practices in Sonoma County.[63]

Significant ACO activity also exists in this region. Providers and health plans collaborate to develop ACOs and narrow networks in order to compete with Kaiser. The ACO created for the California Public Employees' Retirement System (CalPERS) in Sacramento generated significant savings from fewer readmissions and shorter lengths of stay. ACO development lags a bit in the East Bay area of San Francisco, but there is activity there as well.[64] [65] Overall, 2.51 percent of the insured population is covered by ACOs in this region.[66]

The level of integration of the region's safety-net is more varied, despite high levels of integration among non-safety-net providers. Safety-net providers in Sacramento are relatively fragmented and attempts to bring providers together have failed so each provider focuses on a certain low-income subgroup.[67] This creates opportunity for complex cases to slip through the cracks. Meanwhile, in San Francisco and the Bay Area, the safety-net is strong, integrated, and collaborative. Healthy San Francisco (HSF) is growing and HSF providers focus on using the medical home model and improving clinical outcomes (team-based care delivery, disease registries, etc.).[68] Innovations adopted by one HSF provider) quickly spread to other providers.[69]

San Francisco and Alameda counties are implementing electronic health record (EHR) systems and moving to integrate behavioral health into primary care. San Francisco is also adopting an eReferral system, mentioned previously.[70]

Orange County/San Diego

In Orange County, mergers and acquisitions have resulted in regional integration. St. Joseph Health, an integrated health care delivery system, and Hoag, a network of hospitals, urgent care, and health care centers, merged in early 2013, and provide one-third of the health care in the county.[71] In addition, United Healthcare's subsidiary, Optum, purchased Monarch Healthcare, an association of physicians in private practice, and Da Vita purchased HealthCare Partners, an extensive network of IPAs, accounting for significant market integration.[72]

In San Diego, large hospital systems including Sharp, Scripps, and Kaiser, dominate and continue to expand.[73] Many physicians in this region are practicing within large medical groups that are closely aligned with hospital systems.[74]

The competition from Kaiser has driven plans and providers in the San Diego area to collaborate on low-cost limited provider networks (both narrow and tiered).[75] Sharp, a full-service, low-cost provider is forming ACOs and embracing capitation.[76][77] All major health plans in this region now offer narrow-network HMOs. Sharp is also forming commercial ACOs with Anthem Blue Cross and similar activity is underway in Orange County. Overall, 3.26 percent of the insured population in this region is enrolled in ACOs.[78]

In contrast to other regions, the Orange County/San Diego safety-net system is not as well integrated. Neither Orange County nor San Diego County operate their own safety-net system, and instead rely on a few large hospital systems to perform this function.[79] [80] In San Diego, competition and lack of collaboration among FQHCs is a leading problem, as well as limited commitment by the county government. These factors have caused fragmentation within the safety-net in this region. However, the county government recently drafted a ten-year plan to improve safety-net integration in order to obtain federal funding to facilitate integration.[81]

There are also efforts being made in Orange County to improve integration. For instance, the 2-1-1 Orange County organization is a non-profit that provides information and a referral system in multiple languages in an effort to link people to health care services in the area. [82]

C. Maternity Care in the California Health Care Market

In California, maternity care and deliveries are among the highest cost episodes of care; between 1998 and 2008, utilization of cesarean delivery rose from 22 percent to 33 percent.[83] In addition, the proportion of low birth weight infants is on the rise and maternal mortality rates in the state have increased significantly.[84,85] In response, SHCIP maternity reforms must address issues of high cost and continuous quality shortfalls in maternity care; the market must be better understood to design such reforms.

Improving newborn health, eliminating preventable maternal injury and death, and promoting evidence-based practices are important elements of the LGHC Healthy Beginnings goals. The state has been actively pursuing improvement in these critical areas, having set benchmarks that align with the Healthy People 2020 targets.[86] California's efforts include the Access for Infants and Mothers program, which offers low-cost health coverage for pregnant women who are not enrolled in Medi-Cal or employer-based insurance.[87] The program also helps women pay for private insurance maternity-only deductibles, in a comprehensive effort to increase access to prenatal care.

Over the past two decades, the state has seen vast improvement in its provision of prenatal care, achieving nearly a 17-point decrease in the number of births with inadequate prenatal care.[88] This in turn has helped to lower the fetal mortality, neonatal mortality, perinatal mortality and post-neonatal mortality rates during the period. Other measures, however, suggest that opportunity for further improvement remains. For example, between 1991 and 2010, the statewide proportion of low birth weight infants has slowly but steadily risen, while the percent of very low birth weight infants and preterm infants have barely fluctuated.[89] For additional data about maternal and natal health care in California, see **Appendix E, Table E.1**.

Concurrently, the state has experienced significant fluctuation in the maternal mortality rate, a trend that has not aligned with national patterns (see **Appendix E, Figure E.2**). According to the California Maternal Quality Care Collaborative, the state's maternal mortality rate was 49 percent higher in 2006 to 2008 than in 1991 to 2001.[90] Additionally, maternal health disparities are notable, with pregnancy-related mortality rates among African American women in California three times higher than rates of White or Hispanic women in 2004.

A second trend is the rise in cesarean delivery across most regions of the state. Cesarean delivery has not been shown to offer benefits to women and newborns.[91] In fact, widespread evidence has shown that these deliveries increase the risk of infection, obstetric hemorrhage, and deep vein thrombosis - a frequent cause of maternal morbidity. Yet, cesarean delivery rates seen nationally and in California have continued to rise since the late 1990s, climbing from 22 percent to 33 percent of all births between 1998 and 2008; the rate is expected to increase further.[92]

The California Maternal Quality Care Collaboration (CMQCC) found prior cesarean delivery to be the primary contributor to the rise in cesarean delivery rates across the state.[93] In 2010, a

National Institutes of Health Consensus Development Conference panel determined that for the majority of women who have undergone a cesarean delivery, a trial of vaginal labor for subsequent children was a "reasonable option."[94] Despite this recommendation, however, repeat cesarean delivery remains the standard practice among most obstetricians. As seen in **Appendix E, Figure E.3**, the percent of cesarean deliveries to low risk women giving birth for the first time exhibits an upward trend between 2005 and 2010; cesarean deliveries to low risk women who have had a prior cesarean delivery follow a similar trend.

In hospitals across California Cesarean section deliveries in California rose from 22 to 33 percent between 1998 and 2008 and now total more that 165,000 per year.[25] While the statewide cesarean delivery rate is 33 percent, some outlier hospitals have rates as high as 71.4 percent.[95]
At the county level, trends between 2005 and 2010 indicate that cesarean deliveries occur more frequently than average in the state's most populated counties. This is true for four out of the five top populated counties in the state: Los Angeles County, San Diego County, Orange County, and San Bernardino County[96]. In Los Angeles County, for example, nearly 27.7 percent of births to low risk women giving birth for the first time in 2010 were cesarean deliveries, compared to a statewide average of approximately 32.8 percent. Over the five-year span, this proportion increased by nearly three percentage points, albeit with fluctuation. Similarly, the proportion of cesarean deliveries to women with a prior cesarean birth was higher than the statewide average during this period, though mirroring the statewide rate of growth.

Counties along the northern regions and Central Valley of the state typically exhibit lower rates of cesarean delivery. In 2010, 19.4 percent of the births to low risk women giving birth for the first time in San Francisco County were cesarean deliveries, in contrast to the statewide average of 26.1 percent. In Sacramento County and Kern County, this figure was 24.3 percent and 17.3 percent, respectively.

The rapid rise in cesarean delivery cannot be solely attributed to medical reasons, which suggests that the large geographic variation may stem from social factors, cultural factors, or disparities influencing health care providers and patients. For example, although complications of pregnancy do not vary between racial populations, African American women are three times more likely to die from them.[97] Physicians report that that the practice of defensive medicine is a major contributor to the high cesarean delivery rate. The threat of malpractice litigation for obstetricians and gynecologists is particularly high compared to other specialties, given the nature of the care. Misaligned financial incentives, such as a delivery-based global obstetric fee, may also be at play.[98]

Current Innovations Underway

Purchaser: Private – Pacific Business Group on Health

PBGH is partnered with the California Quality Collaborative (CQC), IHA, the California Maternal Quality Care Collaborative, and Cynosure Health. This private collaborative has developed the **California Maternity Episode Bundled Payment Project**. Funded by the Robert Wood Johnson Foundation, this project establishes a bundled payment per episode for maternity care with the goal of reducing non-medically necessary cesarean deliveries. The collaborative plans to work with one or more commercial health plans and a Medi-Cal managed

care plan, targeting three hospitals within California, to run a pilot of the model from 2012 to 2015.

This pilot will be bolstered by the **California Maternal Data Center (CMDC) Initiative**. Funded by grants from the Centers for Disease Control and Prevention (CDC) and the CHCF, the CMDC collects, links, and analyzes data on maternity care practices. By reporting these data back to providers, the initiative hopes to facilitate quality improvement by tracking maternal mortality, cesarean deliveries, and elective deliveries. Hospitals participate voluntarily, and all California hospitals with labor and delivery units are eligible to participate.

D. Health Homes for Complex Patients in the California Health Care Market

Patient Centered Medical Homes (PCMHs, or medical homes) are a mechanism for coordinating care across a wide variety of individuals in Medicare, Medicaid, and the private sector. The approach addresses care needs for all populations, age groups, and conditions. Health Homes, a type of medical home funded by the ACA Medicaid Health Homes Initiative, are specifically intended to provide integrated care for patients in Medicaid with at least two chronic and/or behavioral health conditions. These structures provide a patient-focused context that facilitates a continuous relationship between the patient, the patient's family when appropriate, and the patient's personal primary care physician.

In California, across all payers, five percent of the population accounts for over half of expenditures in a typical year.[99] Increasing the number of individuals with complex illnesses who receive patient-centered team-based care from a health home is a critical component of the California health care system transformation. Studies show that coordinated care through health homes improves the patient experience and health outcomes while controlling costs.[100],[101] As such, a better understanding of the health homes market is central to developing health homes reforms within the state's SHCIP, as these may be used as vehicles in advancing the LGHC Task Force priority areas—namely, Living Well.

The need for health homes for complex patients is further exemplified by a recent survey that shows that among US adults with chronic conditions, in 2008, 19 percent found it difficult to contact their providers during practice hours and 37 percent only found it somewhat easy, while those who called a help line for advice, 60 percent were unable to get the advice they needed. After hours posed even greater access issues for this population, and 60 percent found it somewhat or very difficult to access the care they need without going to the emergency room. Additionally, of those adults with chronic conditions seeking an appointment with a specialist, 22 percent faced wait times of a month or more.[102]This inconsistency contributes to significant shortfalls in communication between patients and providers, and inhibits the development of coordinated treatment plans.[103] The focus on a personalized and consistent interaction with a primary care provider who coordinates care provides the opportunity for more appropriate care and better engagement for the patient – a necessary condition for improved self-management and outcomes for complex patients.[104]

The section below provides an assessment of the health home (or PCMH) market, beginning with an overview of the geographic distribution of PCMHs and initiatives related to PCMHs. The number of patients served, best practice resources, and the cost implications and outcomes

to date are presented, as well as a review of implementation considerations and barriers to success.

The main findings of this section are:

- California has not sought to define patient centered medical homes explicitly, which has allowed **the safety-net systems** to adapt this model to the needs of the population served and their existing infrastructure. It is difficult to measure the actual market penetration of the medical home model in California, though some medical homes have been certified by such organizations as the National Committee for Quality Assurance (NCQA).
- Physician groups, clinics, managed care organizations (MCOs), and other organizational structures may serve as health teams (i.e. health home entities) or health team members, depending on how a state defines participation within its State Plan Amendment (SPA). Payment structures for medical homes vary significantly, although the majority of models have adapted approaches to include a monthly care coordination payment, a visit-based fee for service component, and a performance-based component. Medicaid has frequently used alternative methodologies, including enhanced FFS for evaluation and management, the addition of new codes for health home activities within FFS payments, per member per month (PMPM) augmentation of FFS visit payments and risk-adjusted, comprehensive PMPM payments. California has not standardized payment structures for PCMHs.
- The majority of NCQA-certified medical homes in the state are located in Orange, Riverside, and Tulare counties. This greater adoption outside areas of high integration associated with ACOs may indicate that the medical home may play a role as a model for accessible value-based care for smaller provider groups who may not have the comprehensive components of an ACO.
- The Bridge to Reform 1115 Waiver, approved by CMS in November 2010, expands coverage to low income uninsured adults through approximately $8 million in federal matching funds, offers incentive payments to safety-net hospitals achieving quality benchmarks, and requires enrollment in managed care for certain seniors and persons with disabilities. The waiver has initiated improved PCMH activity in California related to the coverage expansion and established a number of pilot programs to test new coverage and care delivery models for high-need child populations; this is discussed in greater detail below.

Today, there are 472 physicians practicing in NCQA-rated PCMHs across the state.[105] Almost 80 percent of NCQA-rated PCMHs exist in Orange, Riverside, and Tulare counties as shown in **Table 5** below. (Note: Only counties where PCMHs have been rated by the NCQA have been included.)

Table 5: Distribution of NCQA-rated PCMHs in California by County

County	No. of PCMHs
Los Angeles	3
Orange	8
Riverside	8
Sacramento	1
San Diego	1
Santa Clara	1
Tulare	10
Total	32

Additionally, the Joint Commission has provided accreditation for the following PCMHs in California:[106]

- AltaMed Health Services - Los Angeles, CA (30 sites)
- Arroyo Vista Family Health Center – Los Angeles, CA (6 sites)
- T.H.E. (To Help Everyone) Clinic – Los Angeles, CA (5 sites)
- Family Health Care Network – Visalia, CA (12 sites)
- Family Health Center of San Diego – San Diego, CA (20 sites)
- Santa Rosa Community Health Center – Santa Rosa, CA (8 sites)
- Clinicas del Camino Real – Ventura, CA (15 sites)

Beyond nationally accredited medical homes across California, collection of information on medical home efforts is problematic. Market penetration is difficult to measure at this time because clinic-specific data on physician participation and patients served are not available.

Current Innovations Underway

California's existing initiatives around PCMHs include programs under Medicare, Medi-Cal, and private health insurance, and encompass both managed care and FFS programs. Examples of such innovations are illustrated below.

Purchaser: Medicare

Under the ACA, Medicare funds the **FQHC Advanced Primary Care Practice Demonstration**, which serves all primary care patients in demonstration clinics. However, most programs are designed for or have components specifically targeting medically complex patients. For example, authorized under the Benefits Improvement and Protection Act (BIPA) 2000, **Programs of All-Inclusive Care for the Elderly** (PACE) serve Medi-Cal/Medicare dual eligibles who would otherwise reside in nursing facilities. In California, six PACE programs currently operate in diverse, low-income communities. The PBGH is currently piloting the Intensive Outpatient Care Program (IOCP).[107] This initiative targets high risk, high cost patients, where savings from coordination of care are likely to be significant. Already, PBGH members, including Boeing, CalPERS, and Pacific Gas and Electric Company, have piloted this model with success in improving patient care and reducing health care costs. Last year, PBGH, in

partnership with the California Quality Collaborative, received an innovation grant from CMS to expand this program to approximately 23,000 Medicare enrollees in the state.[108]

Purchaser: Medi-Cal

The use of patient centered medical homes has expanded significantly under California's Bridge to Reform (1115) waiver, effective from November 1, 2010 to October 31, 2015, with programs funded through Medi-Cal. As part of their participation in the **Delivery System Reform Incentive Pool** (DSRIP), public hospital systems in nine counties are using incentive payments to transform their primary care clinics into high performing patient centered medical homes. Although these medical home approaches will apply to all primary care patients, specific elements are aimed at managing the health of high-risk patients, including using team-based care and case managers for high-risk patients. Six hospital systems are using DSRIP to implement or expand chronic care management, including multidisciplinary teams. Unlike previous fee-based models, these systems are targeting particular chronic conditions (diabetes, heart failure, or asthma).

The Bridge to Reform waiver also establishes a set of Medi-Cal funded **California Children's Services (CCS) Demonstration Projects**. Applied across seven delivery systems in five counties, the demonstrations anticipate serving up to 18,650 children. These projects encompass different payment methodologies, including one MCO, two ACOs, a special health care plan, and a county-level enhanced primary care case management (PCCM) program. Each project has replaced FFS payments for high cost illnesses with capitated payments. While some have made this change for specified services, other participating plans have taken on greater risk. All of the CCS demonstrations provide care coordination including primary care and often social and psychological supports.

Provider: Private – Sutter Health

Privately established through Sutter Health in 2001, the **Sutter Care Coordination Program (SCCP)** is one of California's oldest patient centered medical home programs for medically complex patients. In 2012, this program served 7,649 patients receiving primary care through the Sutter Health network of Northern California. The program embeds registered nurses (RNs) and social workers in primary care practices. It proactively targets Medicare Advantage patients, but all patients regardless of payer or age may be referred to the program. Patients are not selected based on specific chronic disease but rather on issues around chronic care management and coordination of medication. These include both complex medical issues and psychosocial issues. Referrals are assessed using a validated risk stratification tool, and utilization for the managed care population is tracked using Sutter's electronic medical records. According to a publication by the Agency of Healthcare Research and Quality (AHRQ), SCCP patients who received care coordination services had fewer hospital admissions and fewer emergency department (ED) visits than the Sutter patients who did not receive care management.[109]

E. Palliative Care in the California Health Care Market

Promoting end of life care is a major priority area identified by the LGHC Task Force. As described by the Task Force, the state performs worse than the nation overall in End of Life indicators such as "Percent of Terminal Hospital Stays that Include ICU Days" and "Hospice

Enrollment Rate;"[110] this has cost implications as well. Evident gaps in palliative care availability and use make this a major area of opportunity, and thus, the market must be better understood.

Palliative care is specialized medical care for people with serious illnesses. These services provide patients relief from the symptoms, pain, and stress of a serious illness—whatever the diagnosis. The goal is to improve quality of life for both the patient and the family.[111] The most widely recognized form of palliative care for end of life is hospice care. Hospice care services are provided by a team of health care professionals who maximize comfort for a terminally ill person by reducing pain and addressing physical, psychological, social and spiritual needs.

This section presents an overview of the current palliative care market in California and identifies areas for further development. First, the perceptions and utilization of end of life care among Californians are reviewed. Hospital access to palliative services by type and geographic distribution is also reviewed, as well as relevant initiatives including workforce development and patient awareness campaigns within the state. Finally, the barriers for utilization of palliative care are discussed.

The key findings are:

- There is a disconnect between the perceptions of many dying patients about their desired end of life outcomes and their actual end of life care. For example, while 70 percent of Californians would prefer to die at home, only 42 percent do so. This may be due to low patient engagement and empowerment in care decisions, particularly related to end of life or long standing chronic conditions. Insufficient provider training and awareness of palliative care processes and benefits, and insufficient infrastructure to support greater utilization of palliative services also play a role. Very low certification rates among the palliative care workforce, and the care delivery workforce in general, is also likely to significantly inhibit optimal communication and education of patients and their families.
- Although hospice utilization in California lags significantly behind the national average (16.8 versus 21 days of hospice in the last six months of life), there is also significant variation within the state. Enrollees in San Diego and Santa Cruz counties average 24.4 and 23.4 days of hospice care respectively, while enrollees in Stockton County average only 8.7 days of hospice care. This is likely due to regional differences in service availability. In the Bay Area and Sacramento, 38 percent of hospitals offer hospice services. In Central Valley/Central Coast North (CVCCN), 22 percent of hospitals offer hospice services. In Inland Empire, 27 percent of hospitals offer hospice services. In Los Angeles, 33 percent of hospitals offer hospice services. Finally, in Orange and San Diego Counties, 32 percent of hospitals offer hospice services.
- Across California, there are 525 licensed hospice agencies that deliver services through hospital outpatient services, and community-based programming operated by home care agencies.[112] A number of initiatives have led to significant provision of palliative services among California's public hospitals (63 percent); however, private entities have not followed in a similar fashion (32 percent of for profit entities currently have hospice services available). It is likely that palliative care remains less of a priority for institutions that traditionally seek greater profit margins. Larger hospitals are also much

more likely to offer hospice services. This again is likely due to factors related to resources available to a particular provider group and/or health system. It could be inferred that greater utilization of palliative care services could be delivered through greater access to services in institutions that have not previously offered them. However, it is unclear how uptake could be incentivized for private entities that are more inclined to pursue the provision of high margin, specialty care.

- Many commercial payers are already engaged in the incorporation of palliative care benefits for health plan members. There may be opportunity for the state to learn from payers' experience with these benefits to inform further integration of palliative care into the benefit structure.

A recent CHCF survey found that a majority of Californians are interested in speaking with their doctor about palliative and hospice care.[113] The survey also finds a disconnect between what patients state about their care preferences and their actual use patterns.[114]

Relative to the national average, California tends to have higher rates of care utilization in the last two years of life, including:[115]

- 11.7 hospital days compared to the national average of 10.9, and
- 20.3 percent of patients spend seven or more days in the ICU in the last six months of life, compared to the national average of 15.2 percent.

According to an estimate by the Berkeley Forum, 20 percent of potentially appropriate patients have access to community-based palliative care services.[116] [117]

Medicare FFS data collected by the Dartmouth Atlas of Health Care show that California Medicare decedents are lower utilizers of hospice care are less likely to be enrolled in hospice, and cost more in the last six months of life. **Table 6** illustrates the differences between California and the nation. According to these data, Medicare FFS hospice utilization in California falls below the 50th percentile.

Table 6: Hospice Utilization per Medicare FFS Decedent in Last 6 Months of Life (2010)

Region	Hospice Days per Decedent during the Last Six Months of Life	Percent of Decedents Enrolled In Hospice during the Last Six Months of Life	Medicare Reimbursements per Decedent, Last 6 Months of Life
California	16.8	41.30%	$46,686
National Average	21.0	47.50%	$36,392
90th Percentile	28.6	57.30%	$43,728
50th Percentile	19.8	45.90%	$32,591
10th Percentile	11.8	31.00%	$27,272

Source: Dartmouth Atlas of Health Care's Data by Topic: Care of Chronic Illness in the Last Two Years of Life

Utilization of hospice care in California is rising, although the rate of increase has lagged the rest of the nation. Between 2003 and 2010, the average number of hospice days used in the last six months of life increased from 10.2 to 16.8 days.[118] During the same period, the national

average went from 12.4 days to 21.0 days of hospice in the last six months of life. Within California, Santa Cruz led the state in increased hospice utilization, adding 14.2 days of use, to average 23.4 days. Other areas with significant increases in use include Fresno, Redding, Bakersfield and San Jose. Notably, there is significant regional variation among Medicare enrollee use of hospice care.[119] For example, while enrollees in San Diego and Santa Cruz counties average 24.4 and 23.4 days of hospice care respectively, enrollees in Stockton County average only 8.7 days of hospice care.

Although it is difficult to pinpoint the contributing factors to Californians' lower utilization of hospice care compared to other states, a report from 2000 identified geographic variables that may make a difference in the state. According to the report, hospice use is higher among younger older persons, non-blacks, persons living in wealthier areas, and in urban areas.[120] Areas with higher HMO enrollment also have higher hospice use. The report also found a positive correlation between average health care reimbursement and hospice use. An analysis of Medicare FFS enrollee use of hospice services in 2011 confirmed that utilization is highest in southern regions of California, including San Diego and Los Angeles, followed by the Bay Area.[121] This utilization likely reflects regional variation in availability of services, which is highlighted in the market integration assessment section of this document.

Current Innovations Underway

Foundation: Public/Private – California HealthCare Foundation

Palliative care initiatives are less common. CHCF funded an initiative **Spreading Palliative Care in Public Hospitals (SPCPH)**. This joint project with the University of California at San Francisco and the California Safety Net Institute worked with the state's 17 public hospitals to spread and bolster palliative care in publicly funded hospitals, only 4 of which had palliative care programs in 2007. SPCPH provided technical assistance, project management support, and sustainability coaching; as a result, palliative care will be implemented in all 17 hospitals by 2014. In 2012, 12,000 palliative care patients were served in SPCPH hospitals. Although limited to the hospital setting, SPCPH offers resources and lessons for other settings, including the role of interpreters, the importance of culturally responsive approaches, and the importance of training nursing staff.

Provider: Private – Sutter Health

The **Sutter Care Coordination Program** described above includes a component of advanced illness management of patients with end-stage illness who are not yet ready for hospice care. For these patients, SCCP case management includes ongoing telemonitoring, advance care planning, and symptom management. Participating patients may continue disease therapy.

Provider: Private – SHARP HealthCare

The San Diego-based SHARP HealthCare network offers a more dedicated palliative care program called **Transitions.** Although SHARP does include hospice facilities in its network, the Transitions program is focused on home-based palliative care for patients with advancing chronic illness and helps bridge the transition to formal hospice care. The Transitions teams work with primary care physicians and provide access to palliative physicians, nurses, social workers, and complementary care professionals. Services are designed to manage symptoms, support care options and health care planning, coordinate care, and provide education and

support for individuals and their families. The program also seeks to limit unnecessary ED visits and hospitalizations.

Payers: Private – Assorted Organizations

In their report on commercial efforts to increase access to palliative care, CHCF examines the different approaches that California health plans have taken to integrate palliative care into their benefit packages:[122]

- Anthem Blue Cross has limited their liberalized hospice benefit to palliative chemotherapy, radiation, and Total Parenteral Nutrition (TPN).
- Kaiser Permanente Southern California provides home-based palliative care for patients ineligible or uninterested in hospice services and is piloting the provision of interdisciplinary palliative care team consultation in specialist offices and clinics. This includes social worker or case manger support for advance care planning.
- Blue Shield of California is piloting the provision of enhanced case management through case managers that can make benefits flexible and/or refer patients to palliative care providers. As of 2011, it was also considering the addition of home-based palliative care options for certain conditions, as well as the creation of a defined palliative care benefit.
- Health Net provides enhanced case management with initial home visits, a liberalized hospice benefit not limited to palliative chemotherapy, radiation, and TPN. In 2011, the insurer was considering the addition of home-based palliative care benefits; according to an April 2013 report, Health Net is still considering home-based palliative care.
- Aetna has implemented enhanced case management through their Compassionate Care Program and ACOs and has a liberalized hospice benefit for 12-month prognoses.
- United Healthcare offers enhanced case management through a telephonic program with in-home RN support, a liberalized hospice benefit for "terminal" and 12-month prognoses, and home-based palliative care services for Medicare Advantage enrollees.

F. Accountable Care Communities & ACOs in the California Health Care Market

Accountable Care Communities (ACCs) build upon **accountable care organization** concepts but aim to improve the health of the entire community through emphasis on community prevention efforts and upstream environmental and social determinants of health. The mission of an ACC is to improve population health by promoting a collaborative, multi-institutional approach that brings together the health care sector, government, non-profit, and private sectors, including community organizations, and emphasizes shared responsibility for the health of the community. ACCs also support the Let's Get Healthy California (LGHC) Task Force priority area of Creating Healthy Communities.

The ACO market will serve as the foundation for the ACC market and other integration. ACOs are evolving organizational structures in the California market. As such, this section provides an overview of the ACO market in California. The section begins with a description of the initiatives that have fostered and supported the growth of the ACO model. This is followed by a description of the geographic distribution of ACOs in California and the associated costs and outcomes.

The key findings of this section are:

- There is significant ACO activity across California, reflecting the areas with a high degree of integration. San Diego and Orange Counties account for 20.7 percent of all ACOs in the state and 25.8 percent of lives covered. Los Angeles accounts for 20.7 percent of all ACOs in the state and 36.3 percent of lives covered. The Bay Area and Sacramento region accounts for 34.1 percent of ACO activity and 28.8 percent of lives covered. This activity is much less expansive in regions of low integration, and is especially limited in the Inland Empire.
- The established ACOs serve 2.1 percent of the population in the Bay Area and Sacramento, 0.4 percent of the population in CVCCN, 0.7 percent of the population in Inland Empire, 2.5 percent of the population in Los Angeles, and 2.6 percent of the population in Orange and San Diego Counties. Of insured lives, ACOs serve 2.5 percent in the Bay Area and Sacramento, 0.5 percent in CVCCN, 0.9 percent in Inland Empire, 3.4 percent in Los Angeles, and 3.3 percent in Orange and San Diego Counties.
- The Bridge to Reform 1115 Waiver provides significant opportunity for statewide expansion of care integration, including utilization of the ACO model to serve high-risk pediatric populations. Greater alignment of the different ACO initiatives in California provides additional opportunity to integrate care, but may vary by region.
- Obstacles to care integration can include compliance with federal and state regulations related to direction of care, antitrust laws, data sharing and privacy requirements. Small provider groups may not have the capacity to undertake the investment necessary to ensure compliance with all relevant regulations, especially those related to sufficient technological infrastructure.

In California, managed care penetration is higher in the large southern counties; therefore, providers in these counties are more accustomed to the incentive-based performance structure inherent in ACOs. This is reflected in the current landscape: 41 percent of existing ACOs in the state are located in Los Angeles, Orange, and San Diego counties. Nearly 62 percent of all ACO covered lives reside in these three counties alone, as seen in **Table 7** below.

Table 7: ACO Market Distribution and Lives Covered

Region	Number of ACOs	Percent of Total ACOs	Lives Covered	Percent of Total Lives Covered by ACOs	Percent Insured in Region Covered by ACOs	Percent Population in Region Covered by ACOs
Bay Area/Sacramento	28	34.1%	187400	28.8%	2.5%	2.1%
CVCCN	13	15.9%	32200	4.9%	0.5%	0.4%
Inland Empire	7	8.5%	30300	4.7%	0.9%	0.7%
Los Angeles	17	20.7%	236000	36.3%	3.4%	2.5%
Orange/San Diego	17	20.7%	164600	25.3%	3.3%	2.6%

Source: Cattaneo & Stroud's Summary of Operational ACOs by County (2013)

According to IHA, ACOs in the state include both primary and specialty care physicians who "care for defined population of patients, provide or arrange for hospital services, and publicly reported data on their clinical and financial performance."[123] **Table 8**, below, illustrates provider participation in ACOs by region. The primary care and specialty provider ratios vary significantly.

Table 8: ACO Prevalence and Provider Participation by Region

Region	Number of ACOs	Number of Providers in ACOs	Percentage of Providers in ACOs that are PCPs	Percentage of Providers in ACOs that are Specialists
Bay Area/Sacramento	28	8019	31% (2500)	69% (5519)
CVCCN	13	1760	47% (827)	53% (933)
Inland Empire	7	5942	21% (1260)	79% (4682)
Los Angeles	17	15154	37% (5589)	63% (9565)
Orange/San Diego	17	9919	32% (3213)	68% (6706)

Source: Cattaneo & Stroud's Summary of Operational ACOs by County (2013)

Most ACOs in California currently are affiliated with an IPA, which can aggregate multiple solo physician practices and small-to mid-sized group practices and deliver care in the same manner as integrated medical groups. A key difference is that a physician may practice in multiple IPAs, while this is not typically true for a medical group.

Current Innovations Underway

There is significant ACO activity across California that offers a base on which to build Accountable Care Communities (ACCs). The significant resources and infrastructures of established ACOs are important to consider as the ACC model is piloted across the state, as many of these resources and infrastructures may be leveraged and expanded upon in creating ACCs. An overview of Medicare, Medi-Cal, and private payer ACO activity is presented below.

Purchaser: Medicare

California has Medicare-authorized ACO models running in 25 of the state's 58 counties, including **Advance Payment ACOs** serving Medicare patients in 9 counties, **Pioneer ACOs** operating in 13 counties, and **Medicare ACO Shared Savings** programs in 9 counties. Another four counties have ACO-like programs not associated with Medicare. Many ACOs that are not formally part of Medicare ACO demonstrations participate in Medicare bundled payment models.

Purchaser: Medi-Cal

Los Angeles has the largest absolute number of ACOs and covered lives, with 17 ACOs serving 236,000 people through more than 15,000 providers. Notably, Los Angeles is home to the

Regional Accountable Care Network (ACN). This Medi-Cal focused ACO integrates public and private safety-net hospitals and one of the country's largest Federally Qualified Health Centers (FQHCs), AltaMed, which also contracts with private practice physicians. Still in its early stages, the ACN will start by assuming financial risk for LA Care patients by 2013. LA Care is the nation's largest public HMO, serving as an umbrella for patients covered under Medi-Cal, CHIP, and Medicare Advantage. Los Angeles County is one of four sites for the statewide Medicare-Medicaid Enrollee (MME) Financial Alignment pilot program, and LA Care is one of two health plans participating in Los Angeles. Among other components, the ACN is developing a patient centered medical home approach and palliative care services for dual eligibles. Although dual eligibles are the first enrollees assigned to the ACN, over time, the ACN hopes to spread its benefits to include individual payers.

Payer: Private – Blue Shield of California

San Francisco County and the greater Sacramento region have the deepest penetration of ACOs with 5 commercial (non-Medicare) ACOs serving 57,100 covered lives (7 percent of the population). Among these ACOs, one was modeled after the 2010 **CalPERS/Blue Shield of California** pilot, which originated in Sacramento County. During the Sacramento-based pilot, Blue Shield, Dignity Health hospital system, and Hill Physicians Group collaborated in an ACO pilot for CalPERS members to integrate care delivery and align payment incentives between the health plan, the hospital system, and the physicians' group. Based on the success of the pilot in keeping premium costs flat in its first two years, Blue Shield is spreading the model to work with 20 ACOs statewide by 2015.

Appendix A. Let's Get Healthy California Indicators

Table A.1: Let's Get Healthy California Indicators: CA vs. US[124]

Indicator	CA	U.S.
Healthy Beginnings		
Infant Mortality, Deaths per 1,000 Live Births	5	7
All doses of recommended vaccines for children 19-35 months	0.68	0.70
Respondents indicating at least 1 type of Adverse Childhood Experiences	0.59	NA
Reduce Incidents of nonfatal child maltreatment (including physical, psychological, neglect, etc.) per 1,000 children	9	9
Proportion of third grade students whose reading skills are at or above the proficient level	0.46	NA
Emergency department visits, 0-17 years due to asthma per 10,000	73	103
Percentage of "physically fit" children, 5th grade	0.25	NA
Percentage of "physically fit" children, 7th grade	0.32	NA
Percentage of "physically fit" children, 9th grade	0.37	NA
Proportion of adolescents who meet physical activity guidelines for aerobic	0.15	0.18
Adolescents who drank 2 or more glasses of soda or other sugary drink yesterday	0.27	0.20
Adolescents who have consumed fruits and vegetables five or more times per day	0.20	NA
Proportion of children and adolescents who are obese or overweight, 2-5 yrs.	0.12	0.11
Proportion of children and adolescents who are obese or overweight, 6-11 yrs.	0.12	0.17
Proportion of children and adolescents who are obese or overweight, 12-19 yrs.	0.18	0.18
Proportion of adolescents who smoked cigarettes in the past 30 days	0.14	0.20
Frequency of sad or hopeless feelings, past 12 months, 7th graders	0.28	NA
Frequency of sad or hopeless feelings, past 12 months, 9th graders	0.31	NA
Frequency of sad or hopeless feelings, past 12 months, 11th graders	0.32	NA
Living Well		
Overall health status reported to be good, very good or excellent	0.85	0.83
Proportion of adults who meet physical activity guidelines for aerobic physical activity	0.58	0.44
Adults who drank 2 or more sodas or other sugary drinks per day	0.20	NA
Adults who have consumed fruits and vegetables five or more times per day	0.28	0.24
Proportion of adults who are current smokers	0.12	0.21
Percent of adults diagnosed with hypertension who have controlled high blood pressure	Medicare 79%, PPOs, 50%, HMOs 78%	0.46
Percent of adults diagnosed with high cholesterol who are managing the condition	Medicare 76%, PPOs, 50%, HMOs 70%	0.33
Proportion of adults who are obese	0.24	0.34
Prevalence of diagnosed diabetes, per 100 adult	9	9

Indicator	CA	U.S.
Proportion of adolescents and adults who experience a Major Depressive Episode, Adolescents	0.08	0.08
Proportion of adolescents and adults who experience a Major Depressive Episode, Adults	0.06	0.07
End of Life		
Terminal hospital stays that include ICU days	0.22	0.17
Percent of CA hospitals providing in-patient palliative care	0.53	NA
Hospice enrollment rate	0.39	0.42
Redesigning the Health System		
Percent of patients receiving care in a timely manner, Primary Care	0.76	NA
Percent of patients receiving care in a timely manner, Specialists	0.77	NA
Percent of patients whose doctor's office helps coordinate their care with other providers or services, child	0.67	0.69
Percent of patients whose doctor's office helps coordinate their care with other providers or services, adult	0.75	0.69
Preventable hospitalizations per 100,000 population	1243	1434
30-day All-Cause Unplanned Readmission Rate	0.14	0.14
Incidence of measurable hospital-acquired conditions	1 per 1,000	NA
Creating Healthy Communities		
Number of healthy food outlets as measured by Retail Food Environment Index	0.11	0.10
Annual number of walk trips per capita	184	186
Percentage of children walk/bike/skate to school	0.43	NA
Percentage of adults who report they feel safe in their neighborhoods all or most of the time	0.91	NA
Lowering the Cost of Care		
Uninsured rate, point in time	0.15	0.15
Uninsured rate, some point in the year	0.21	0.20
Uninsured rate, for a year or more	0.11	0.11
Health care cost as a % of median household income, Families	0.22	0.26
Health care cost as a % of median household income, Individuals	0.13	0.20
Compound annual growth rate (CAGR) by health expenditures and per capita costs	Total 7%, Per Capita 6%, GSP: 4%	Total 7%, Per Capita 6%, GDP: 4%
High numbers of people in managed health plans	0.48	0.23

Source: Let's Get Healthy California Task Force Final Report

Appendix B. Data and Methodology

The market assessment presents findings for all five California Integrated Healthcare Association (IHA) regions:

1. Bay Area/Sacramento
2. Central Valley/Central Coast North,
3. Inland Empire
4. Los Angeles
5. Orange County/San Diego

Each region is comprised of a varying number of counties, which are presented in **Appendix C**. Analysis of the market is also shown by care delivery type (Health Homes for Complex Patients and Accountable Care Communities/Accountable Care Organizations) and by key areas identified by the California Innovation Grant workgroups and the Let's Get Healthy California initiative (Maternity Care and Palliative Care).

Table B.1 below presents the sources of data, the regions analyzed, and the methods used for each section of the assessment. Data for regional analysis were not consistently available for each section, though all the state's regions, purchasers, and relevant populations are addressed to provide a description and baseline understanding of California's current health care environment and trends.

Table B.1: Data and Methods

Assessment Category	Data Source	Geographic breakdown	Methods
Beneficiary Estimates	U. S. Census Bureau; Centers for Medicaid & Medicare; State of California, Department of Health Care Services	Statewide/ Regions/ County	For each geographic area, obtained the population, percentage uninsured, Medicare and Medi-Cal enrollment. Other/commercial enrollment by geography was estimated by subtracting those insured in Medicare and Medicaid from the total insured population.
Current Innovations Underway	Centers for Medicare & Medicaid Services; California HealthCare Foundation; California Department of Health Care Services; Pacific Business Group on Health; California Maternal Quality Care Collaborative; BlueShield of California; Integrated Healthcare Association; Colorado Health Insurance Brokers; SHARP; CalDuals; Cope Health Solutions	County	Conducted a comprehensive scan of health care policies and initiatives implemented by public and private actors in the state of California, including bundled-payment demonstrations, California's Medicaid Section 1115 Waiver, Delivery System Reform Initiative hospital plans found on the California Department of Health Services' website, and initiatives implemented by private actors. The criteria for inclusion of these initiatives in the table was largely determined by the impact of these initiatives on the triple aim of improving patient experiences, better clinical outcomes, and lower costs. Special emphasis was directed towards initiatives that related to patient centered medical homes.

Assessment Category	Data Source	Geographic breakdown	Methods
Matrix	Integrated Healthcare Association; Centers for Medicaid & Medicare Services; George Washington University; State of California, Department of Health Care Services, Let's Get Healthy California Report	Statewide/ Regions	Compiled average cost per beneficiary by payer and geography, quality metrics common to multiple payers, and population health metrics from Let's Get Healthy California. No single source of data available to measure commercial non-HMO expenditures.
Integration Assessment	California HealthCare Foundation; Health Leaders InterStudy; Cattaneo & Stroud	Regions	Regions were classified as high, medium and low integration based on specified criteria, including ACO market penetration and physician group size.
Maternity Care Market Assessment	California Maternal Quality Care Collaboration (CMQCC)	State and County	Qualitative analysis of current maternity market outcome and financial performance trends as well as payment models.
Health Homes for Complex Patients Market Assessment	California HealthCare Foundation; National Committee for Quality Assurance; The Joint Commission	Counties	Collected available information from accrediting entities on PCMH activity and distribution in California; evaluated regulatory issues related to PCMH standards at the national and state level; provided an overview of PCMH initiatives in California, analyzed potential barriers to adoption.
Palliative Care Market Assessment	California HealthCare Foundation; The Dartmouth Atlas of Health Care; The Center to Advance Palliative Care	Statewide/ Regions	Compared state and national utilization rates of hospice services; reviewed hospice service availability in hospitals by type and region; provided a qualitative analysis of workforce contribution to palliative care, as well as resources and initiatives related to expansion of palliative care.
ACC/ACO Market Assessment	California HealthCare Foundation; Cattaneo & Stroud	Regions	Reviewed regional market distribution of ACOs including patients served and physician participation; provided explanation of ACO-related initiatives and market changes related to the ACA; analyzed potential barriers to adoption.

Appendix C. Integrated Healthcare Association County – Regional Crosswalk

Table C.1: Counties in IHA Regions

Region	County
Bay Area / Sacramento	Alameda, Contra Costa, El Dorado, Marin, Napa, Sacramento, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, Yolo
Central Valley / Central Coast / North	Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Fresno, Glenn, Humboldt, Inyo, Kern, Kings Lake, Lassen, Madera, Mariposa, Mendocino, Merced, Modoc, Mono, Monterey, Nevada, Placer Plumas, San Joaquin, San Luis Obispo, Santa Barbara, Shasta, Sierra, Siskiyou, Stanislaus, Sutter, Tehama, Trinity, Tulare, Tuolumne, Ventura, Yuba
Inland Empire	Imperial, Riverside, San Bernardino
Los Angeles	Los Angeles
Orange County / San Diego	Orange, San Diego

Appendix D: Coverage Source Estimates by County[125]

Table D.1: Coverage Source Estimates by County

	Population	Uninsured	Medicare FFS	Medicare Advantage	Medi-Cal FFS	Medi-Cal Managed Care	Other Coverage
Alameda	1,513,586	15.10%	12.12%	4.99%	5.20%	7.75%	54.84%
Alpine	1,160	15.70%	14.22%	0.00%	14.91%	0.09%	55.08%
Amador	37,829	15.80%	22.36%	4.99%	9.05%	0.10%	47.71%
Butte	219,968	19.00%	18.68%	0.97%	19.31%	0.06%	41.98%
Calaveras	45,488	16.50%	22.19%	2.81%	12.07%	0.08%	46.35%
Colusa	21,444	24.20%	14.72%	0.76%	18.31%	0.02%	42.00%
Contra Costa	1,052,887	14.30%	13.87%	6.10%	4.64%	6.31%	54.77%
Del Norte	28,583	16.20%	17.91%	1.42%	24.07%	0.04%	40.37%
El Dorado	181,143	13.60%	16.46%	4.83%	8.43%	0.06%	56.62%
Fresno	932,696	21.90%	11.56%	3.11%	8.40%	21.12%	33.92%
Glenn	28,098	22.60%	15.78%	0.53%	21.86%	0.07%	39.16%
Humboldt	135,039	20.20%	16.75%	0.49%	16.37%	0.03%	46.16%
Imperial	174,667	22.60%	13.29%	0.59%	26.12%	0.11%	37.29%
Inyo	18,531	19.90%	16.24%	0.39%	14.85%	0.02%	48.61%
Kern	841,687	23.40%	10.95%	3.77%	9.05%	15.61%	37.22%
Kings	152,301	19.60%	8.84%	0.90%	20.38%	0.06%	50.22%
Lake	64,748	20.20%	21.92%	2.04%	21.23%	0.20%	34.41%
Lassen	34,820	14.30%	12.02%	0.24%	12.04%	0.05%	61.35%
Los Angeles	9,825,761	25.90%	11.78%	4.42%	8.20%	12.24%	37.47%
Madera	151,177	22.80%	13.72%	4.08%	25.65%	0.13%	33.62%
Marin	252,971	11.80%	17.66%	6.13%	6.93%	0.09%	57.39%
Mariposa	18,254	16.90%	20.46%	1.73%	11.93%	0.24%	48.75%
Mendocino	87,776	21.50%	19.51%	1.05%	21.22%	0.15%	36.58%
Merced	256,877	21.70%	10.47%	0.69%	1.44%	26.87%	38.82%
Modoc	9,706	22.50%	21.06%	1.20%	18.43%	0.04%	36.77%
Mono	14,268	23.60%	12.80%	0.25%	8.00%	0.01%	55.34%
Monterey	416,335	24.30%	11.59%	0.33%	3.39%	16.77%	43.62%
Napa	136,824	18.70%	17.34%	6.16%	0.28%	9.44%	48.08%
Nevada	98,787	17.50%	20.11%	3.08%	9.10%	0.04%	50.17%
Orange	3,018,181	19.90%	12.29%	5.18%	0.58%	11.42%	50.62%
Placer	350,206	12.40%	16.77%	7.57%	6.71%	0.06%	56.49%
Plumas	19,940	18.90%	24.40%	1.40%	11.63%	0.02%	43.64%
Riverside	2,202,361	23.40%	12.23%	5.84%	5.44%	9.71%	43.38%
Sacramento	1,422,316	16.00%	13.25%	5.52%	5.95%	13.08%	46.20%
San Benito	55,583	20.50%	10.57%	0.69%	15.24%	0.27%	52.72%
San Bernardino	2,041,626	22.50%	10.41%	4.96%	7.48%	12.41%	42.25%

	Population	Uninsured	Medicare FFS	Medicare Advantage	Medi-Cal FFS	Medi-Cal Managed Care	Other Coverage
San Diego	3,103,933	19.10%	12.59%	5.05%	4.70%	6.46%	52.10%
San Francisco	805,607	14.50%	15.42%	5.50%	5.28%	5.38%	53.91%
San Joaquin	687,516	19.40%	12.17%	3.39%	7.79%	14.33%	42.93%
San Luis Obispo	269,954	18.20%	16.89%	2.31%	1.67%	8.23%	52.70%
San Mateo	720,105	13.40%	14.20%	6.01%	0.24%	7.66%	58.50%
Santa Barbara	424,403	21.30%	14.39%	2.79%	1.81%	14.40%	45.30%
Santa Clara	1,786,540	13.80%	11.81%	4.21%	4.76%	6.93%	58.49%
Santa Cruz	263,435	18.30%	12.94%	2.05%	0.75%	12.76%	53.21%
Shasta	177,324	17.70%	21.95%	1.74%	18.18%	0.03%	40.39%
Sierra	3,226	18.20%	22.44%	0.59%	11.72%	0.03%	47.02%
Siskiyou	44,964	19.50%	24.37%	1.71%	18.77%	0.06%	35.59%
Solano	414,095	14.30%	12.88%	5.66%	1.80%	12.05%	53.30%
Sonoma	484,801	17.50%	15.47%	5.61%	0.07%	10.15%	51.20%
Stanislaus	515,326	19.60%	12.99%	5.01%	9.15%	13.16%	40.09%
Sutter	94,879	21.60%	14.65%	0.81%	19.79%	0.07%	43.08%
Tehama	63,666	21.50%	16.71%	1.12%	23.50%	0.05%	37.12%
Trinity	13,777	20.20%	36.47%	1.34%	17.38%	0.05%	24.56%
Tulare	443,218	23.30%	11.01%	1.31%	10.43%	23.09%	30.85%
Tuolumne	55,162	16.30%	23.16%	1.71%	11.74%	0.06%	47.03%
Ventura	825,378	18.20%	13.25%	3.46%	12.83%	0.05%	52.22%
Yolo	201,111	16.20%	11.37%	5.11%	0.10%	12.72%	54.50%
Yuba	72,366	18.60%	13.19%	1.09%	24.62%	0.10%	42.40%
Total	37,334,410	20.62%	12.64%	4.50%	6.59%	10.18%	45.48%

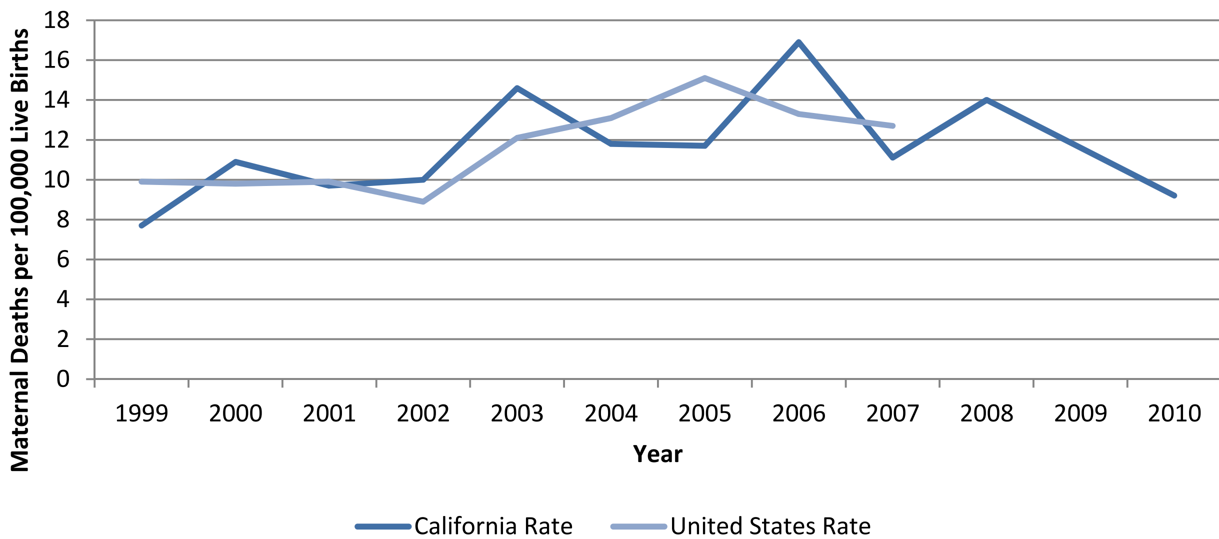
Appendix E: Supplemental Data on Maternity Care

Table E.1: California Statewide Fetal, Neonatal, Perinatal, and Post-Neonatal Statistics

Statistic	1991[126]	2010[127]
Births with Inadequate Prenatal Care	37.0%	20.4%
Fetal Mortality Rate	6.3%	5.0%
Neonatal Mortality Rate	4.5%	3.5%
Perinatal Mortality Rate	7.4%	5.3%
Post-neonatal Mortality Rate	3.0%	1.5%
Infant Mortality Rate	7.5%	5.0%
Percent of Low Birth Weight Infants	5.7%	6.8%
Percent of Very Low Birth Weight Infants	1.0%	1.1%
Percent of Preterm Infants	10.0%	10.0%

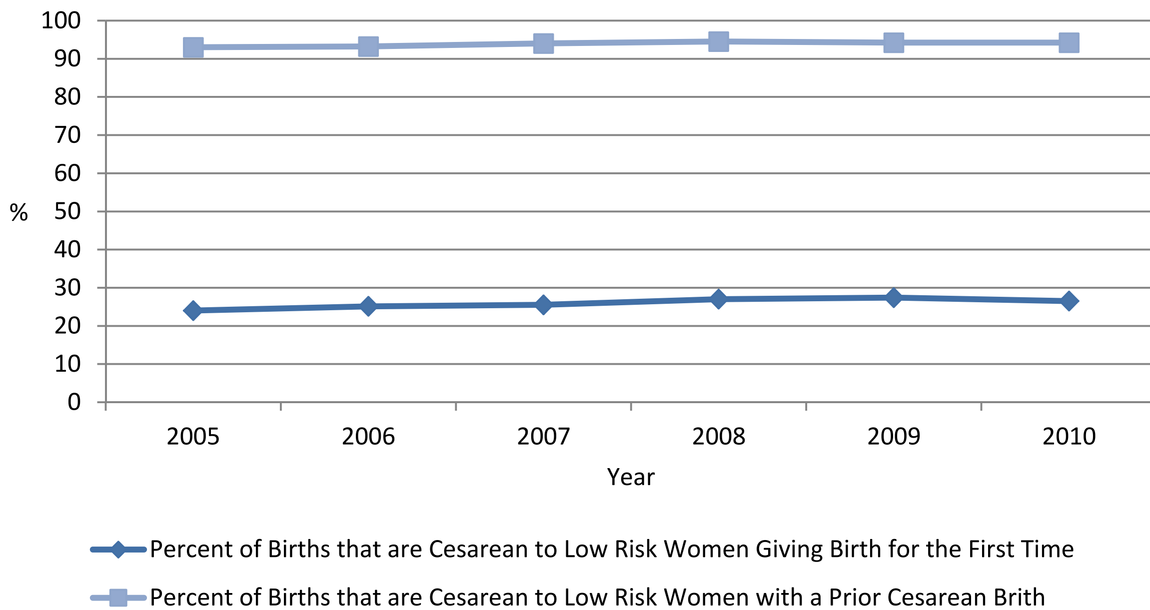
Source: State of California, Department of Public Health, 2010 Statistical Master File (BSMF)

Figure E.2: Maternal Mortality Rate, California and United States; 1999-2010[1/]



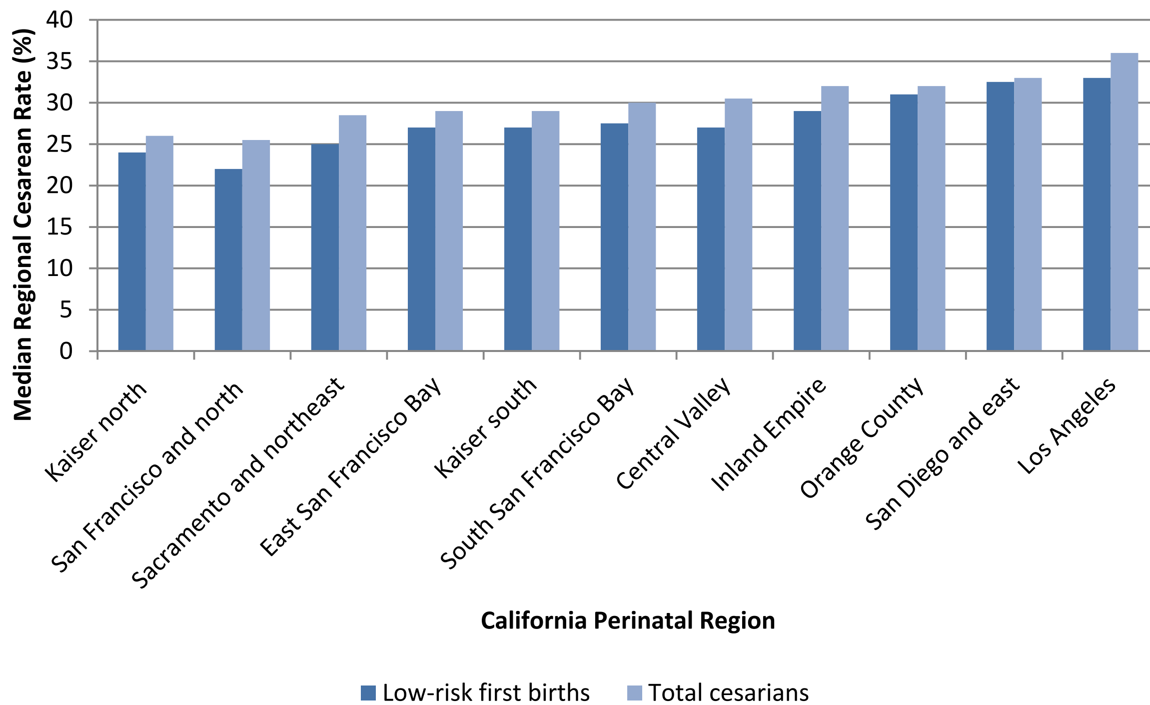
Source: State of California, Department of Public Health, California Birth and Death Statistical Master Files, 1999-2010. Adapted from analysis originally produced by California Department of Public Health, Center for Family Health, Maternal, Child and Adolescent Health Division, December, 2012. 1/U.S. maternity data is published through 2007 only.

Figure E.3: Cesarean Deliveries in California, 2005-2010



Source: California Department of Public Health, 2010 BSMF, 2005 through 2009 Birth Cohort File

Figure E.4: Median Hospital Low-Risk First Birth Cesarean Deliveries for California Perinatal Regions, 2007



Source: All-California Rapid Cycle Maternal/Infant Database, California Maternal Quality Care Collaborative, 2011. Adapted from Figure 2 in Main et al., 2011.

Endnotes

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10. IHA initially used the CalPERS actuarial regions as a basis for developing the IHA regions with adjustments based on: committee discussion, which "included reference to PBGH's PacAdvantage markets and CMA/CMS cost indices, as well as the input from committee members, including purchasers and providers. The committee discussed whether special treatment was needed for Academic Medical centers and single hospital communities; however, this approach was ultimately decided against. Generally, it seems that the committee wanted to avoid excusing price differences due to market power."
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17. No single source of claims data was available to measure commercial non-HMO expenditures. All Medicare information is sourced from the work of Dr. Brian Biles at George Washington University. Medicare Advantage payments are not publicly reported and have been estimated using bid data submitted by plans. While Medi-Cal data is not currently available, it will be will be added to this matrix once it becomes available.
18. Based on beneficiary estimates in Coverage Source Estimates by Region table above (Table 2).

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[25] Ibid.

[26] Ibid.

[27] Ibid.

[28] The ACO is a healthcare organization characterized by payment and health care delivery that ties provider reimbursements to quality metrics and reductions in the total cost of care for an assigned population of patients. The organization is typically comprised of at a minimum, primary care physicians, specialists, and hospitals that are held accountable for the cost and quality of care delivered to a defined patient population. Care for patients is provided across the continuum of care, in different institutional settings. The overall goal of the ACO is to reduce costs through enhanced preventative care and disease management, improve quality through coordination of care, and to develop the necessary skills and resources to meet the cost and quality health care goals in the present and future. ACOs that achieve quality and cost targets receive a financial bonus resulting from savings. (*source:* http://www.transformed.com/CEOReports/PCMH-and-ACO.cfm)

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[45] Ibid.

[46] Cattaneo and Stroud, Inc.

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