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A Close Look at Medi-Cal Managed Care:
Statewide Quality Trends from the Last Decade

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About the Authors

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Executive Summary

Background

In the 1970s, California was the first state to introduce Medicaid managed care.[1] It is now mandatory in 57 of 58 counties for most Medi-Cal enrollees. In 2018, approximately 10.4 million (80%) of Medi-Cal enrollees received services through one of 22 insurers who provided managed care plans (MCPs) specific to the counties in which they operated.

This report examines the performance of Medi-Cal MCPs over the past decade in quality of care provided to members. In addition to reporting on overall trends in performance, this report also examines differences by type of MCP ownership (public, nonprofit, for-profit) and model of managed care (County Organized Health System, Two-Plan model, and a few different models of competing commercial MCPs). These are described below in greater detail.

This analysis comes at an important time. First, California's newly elected governor has expressed interest in the quality of care for Medi-Cal enrollees, particularly after the state's auditor found that millions of children enrolled in Medi-Cal aren't receiving the basic preventive health checkups required by the program. Second, the California Department of Health Care Services (DHCS), which runs the Medi-Cal program and oversees quality of care for Medi-Cal enrollees, is preparing to launch a competitive reprocurement process to determine which for-profit and nonprofit commercial MCPs the state will contract with in the future to deliver Medi-Cal managed care services. Third, the federal government recently updated regulations requiring states to improve how Medicaid programs hold MCPs accountable for their performance.

Data Sources

This report draws primarily from two sources of public information provided by DHCS on the quality of care provided to its members: the Healthcare Effectiveness Data and Information Set (HEDIS), a set of standardized quality measures established by the National Committee for Quality Assurance, and the Consumer Assessment of Healthcare Providers and Systems (CAHPS), a survey designed to capture patients' satisfaction with their health care. This report examines 41 quality measure: 35 from HEDIS and 6 from CAHPS.

Key Findings

- **From 2009 to 2018, quality of care in Medi-Cal managed care was stagnant at best on most measures.** Among 41 quality measures collected in two or more years, more than half (59%) remained unchanged or declined. The picture looks only slightly better when limited to the 31 quality measures still collected by DHCS. Of those, 52% remained unchanged or declined. Specifically, quality of care significantly declined for Medi-Cal enrollees on 4 measures and was unchanged on 12 measures. There was significant quality improvement on 15 measures.

- **While declines in quality in some cases were relatively small on a percentage basis, the clinical significance in all cases could be interpreted as substantial, given the size of the impacted population.** The same is true for observed improvements in quality.

- **Three of the four current measures that declined over time were related to the care of children.** Six of the nine quality measures currently in use that are related to children declined or stayed the same; there was improvement in only three of these measures.

- **Medi-Cal enrollees' rating of their experiences with their MCP were consistently below the 50th percentile nationally.** The only CAHPS measure that improved significantly over time was the one that asked enrollees to rate how well doctors communicate.

- **Medi-Cal MCPs' quality scores varied markedly within and across MCPs by ownership during the past decade.** Most striking was the substantially lower quality scores of the for-profit MCPs, on average, relative to the nonprofit and public MCPs. These differences in quality scores by MCP ownership were not explained by observed demographic differences or the physician supply in the counties in which they were operating.

- **While there was variation of MCP performance within each of the Medi-Cal managed care models, counties that rely on a single public MCP (County Organized Health Systems) had on average better quality scores than counties that furnish Medi-Cal services through either a Two-Plan or competing commercial model.** This remained the case after adjusting county demographics and physician supply, and was even true for the quality measures used as the basis for the enrollment-based "auto-assignment" incentive in counties with competing MCPs.

Opportunities for Improvement

The collection and reporting of data by DHCS has been helpful for monitoring access and quality but has been insufficient for ensuring accountability and driving consistent improvements over time. With this in mind, California lawmakers and DHCS should consider the following actions:

- **Establish specific, measurable, and time-bound quality-improvement targets for each MCP and for the Medi-Cal managed care program as a whole.**

- **Establish meaningful financial incentives that are relevant for all its MCPs.** One possibility is the use of direct financial rewards for achieving improvement targets and direct financial penalties for consistently scoring below specified targets on quality metrics.

- **Support the capacity of MCPs to make improvements through a collaborative learning process guided by robust comparative data and analysis.**

- **Incorporate each MCP's performance and improvement over time into contracting decisions, and establish a process for replacing MCPs that don't meet expectations.**

- **Reconsider the role of for-profit MCPs in furnishing Medi-Cal services, given that their quality for the most part lags behind public and/or nonprofit MCPs.**

- **Reconsider the role of MCP competition, with input from counties and Medi-Cal enrollees.** Although offering enrollees a choice of MCPs may be seen as a way to promote value, it is worth considering whether the administrative complexity is justified, given these models for delivering Medi-Cal services achieve lower quality on average than reliance upon a single MCP. Competition among MCPs can also undermine collaboration among MCPs for shared learning.

State officials must take bold steps to further invest in building California's health care delivery system to help ensure that all Medi-Cal enrollees, regardless of where they live, receive timely access to high-quality care. MCPs can be an important part of the solution, but they require additional guidance and support. DHCS could contribute to building MCP capacity to improve quality by working with MCPs to better understand the underlying factors that contribute to high-quality care and by creating a programmatic structure that fosters cooperation rather than competition among its contracted MCPs.

Introduction

Background

California's Medicaid program (Medi-Cal) relies on managed care plans (MCPs) to furnish services to the majority of eligible enrollees. The Medi-Cal managed care program has evolved and grown tremendously since it was introduced: Both the number of MCPs furnishing services and the number of Medi-Cal enrollees mandatorily enrolled in these MCPs has grown over time.

Medi-Cal managed care was originally targeted toward low-income children and their parents in a small number of counties. The presumed benefit of using MCPs to manage care for Medi-Cal enrollees is to increase the value of the public's investment in caring for the eligible population. The administrative investment in MCPs has the potential to improve access to and quality of care while reducing health care costs by investing in prevention and reducing the amount spent on unnecessary care. Medi-Cal managed care is now mandatory throughout the state for most Medi-Cal enrollees. Among those exempted are enrollees who have a restricted scope of benefits and enrollees who have Medicare or another insurer as their primary source of coverage.[2] Nationwide, one in five Medicaid enrollees in managed care reside in California.[3]

California uses MCPs to manage Medi-Cal services in one of three main types of county-level managed care models: (1) a single public MCP (County Organized Health System), (2) a public MCP (local initiative) in competition with a single commercial MCP (Two-Plan model), or (3) multiple competing commercial MCPs (Geographic, Regional, and Imperial models). The Regional model relies on the same two commercial MCPs to serve 18 rural counties. Among California's 58 counties, San Benito, a small rural county, is the one exception that furnishes Medi-Cal managed care services on a voluntary basis through a single commercial MCP.[4] Most commercial MCPs participating in Medi-Cal managed care are for-profit, but a small number are nonprofit.

Unlike the commercial market for health care services, Medi-Cal MCPs do not compete for members on price. But in geographic regions in which there are multiple MCPs, they do compete on network composition, quality of care, and customer service. All MCPs are paid capitation (per member per month) at rates set by the California Department of Health Care Services (DHCS). Historically, safety-net clinics have played a larger role in Medi-Cal enrollment for public MCPs than they have for commercial Medi-Cal MCPs.[5] State payments to MCPs are adjusted for beneficiary characteristics such as age, gender, and eligibility group, and are adjusted for risk based on use of prescription drugs for certain chronic conditions. As a result, public MCPs in a county are typically paid a higher rate than commercial MCPs.[6]

This review of quality trends in Medi-Cal managed care and examination of the performance of the program's different managed care plan types and models comes at an important time for several reasons. First, California's recently elected governor has expressed interest in Medi-Cal and the quality of care the program delivers for enrollees, particularly after the state's auditor found that millions of children enrolled in Medi-Cal aren't receiving the basic preventive health checkups required by the program. Second, DHCS, the administrator of the Medi-Cal program and the responsible party for the quality of care delivered through the program, will soon launch a competitive reprocurement process to determine which for-profit and nonprofit commercial MCPs California will use to deliver Medi-Cal managed care services. Third, the federal government recently updated regulations requiring states to improve how Medicaid programs hold MCPs accountable for their performance.

The variation in Medi-Cal managed care models across California counties and the diversity of MCP types provides an opportunity to build upon the analysis of statewide trends to examine several questions about how the program is structured and the elements that contribute to the delivery of high-quality services for Medi-Cal enrollees. For example:

- Is there a difference in the quality of care provided by MCPs based on their ownership?
- Within Two-Plan counties, are there consistent differences in the quality scores between public and for-profit MCPs?
- Do Medi-Cal enrollees receive higher-quality care in counties with a single public MCP (COHS) or in counties where a choice of MCPs is offered?

The distribution of county models across geographic regions is not random, but by adjusting for measured differences in Medi-Cal population across these regions, it is possible to strengthen the inferences that can be drawn from the comparisons.

The Growth of Medi-Cal Managed Care

Between 2009 and 2018, the number of Medi-Cal enrollees in MCPs increased threefold, from 3.6 million to 10.4 million (see Table 1). This reflects growth in the population size of the Medi-Cal program, as well as the expansion of eligibility groups required to receive services through managed care, and the number of counties furnishing Medi-Cal services through MCPs. Although the number of insurers participating in Medi-Cal managed care increased only from 20 to 22 during this time period, the number of counties participating increased from 23 to all 58. Information on which insurers were sponsoring Medi-Cal managed care services in which counties over time is shown in Appendix A.

Currently, Medi-Cal enrollees are served by a single public MCP (COHS) in 22 counties; have a choice in 14 counties through a "Two-Plan" model between a for-profit MCP and a local initiative MCP that is typically public; and in 21 counties, Medi-Cal enrollees have a

Table 1. Medi-Cal Enrollment in Health Plans, 2009–18

	ENROLLMENT (*N*)	INSURERS (*N*)	COUNTIES (*N*)	HEALTH PLANS (*N*)	QUALITY REPORTING REGIONS (*N*)
2009	3,633,412	20	23	38	19
2010	3,617,097	19	23	37	19
2011	3,999,338	19	25	39	21
2012	4,014,675	19	24	37	20
2013	4,900,588	21	30	46	26
2014	5,676,711	21	30	46	26
2015	7,685,532	22	58	53	31
2016	9,657,080	22	58	53	31
2017	10,375,671	22	58	53	31
2018	10,400,997	22	58	53	31

Notes: Enrollment in 2009 estimated from health plan enrollments in 2010. Year corresponds to reporting, not measurement, year.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

choice of two or more competing commercial MCPs (see Table 2). San Benito is the only county where managed care remains voluntary, and enrollees can either remain in fee-for-service care or choose a single commercial MCP.

The geographic distribution of the different county models is reflected in the map of California (see Figure 1). Aside from the densely populated counties of Los Angeles, San Diego, and San Francisco, the majority of coastal counties, as well as the northern regions of the state, are served by COHS. Two-Plan models are prevalent in the Central Valley, while competing commercial MCPs are mainly found in the southernmost counties and the rural counties along California's eastern border.

Figure 1. Medi-Cal Managed Care Models, by County

Source: California Department of Health Care Services, Managed Care County Map, June 2019. www.dhcs.ca.gov (PDF).

Table 2. Health Plan and County Counts, by Plan Model Type, 2009–18

	SINGLE PUBLIC (COHS)		TWO-PLAN		COMPETING COMMERCIAL (GMC, IMPERIAL, REGIONAL)		SINGLE COMMERCIAL (SAN BENITO)	
	Health Plans	Counties	Health Plans	Counties	Health Plans	Counties	Health Plans	Counties
2009	6	9	22	12	10	2		
2010	6	9	22	12	9	2		
2011	8	11	22	12	9	2		
2012	8	11	20	11	9	2		
2013	11	14	26	14	9	2		
2014	11	14	26	14	9	2		
2015	11	22	26	14	15	21	1	1
2016	11	22	26	14	15	21	1	1
2017	11	22	26	14	15	21	1	1
2018	11	22	26	14	15	21	1	1

Notes: Year corresponds to reporting, not measurement, year. *COHS* is County Organized Health System; *GMC* is Geographic Managed Care.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

When Medi-Cal managed care was first piloted in California, the state contracted exclusively with public MCPs. With the expansion of Medi-Cal managed care to more counties over time, nonprofit and for-profit MCPs were given a role as alternative choices for Medi-Cal enrollees. Kaiser Health Plan is one of the participating nonprofit MCPs, but its involvement in Medi-Cal managed care is only in a limited number of counties. Unlike other Medi-Cal MCPs, Kaiser is able to set a limit on the number of Medi-Cal enrollees it accepts and to be selective in who is allowed to enroll.[7]

By 2009, approximately 35% of the Medi-Cal population in managed care was in for-profit MCPs, 4% was in nonprofit MCPs, and 61% was in public MCPs.[8] Over the subsequent decade, the percentage of Medi-Cal enrollees enrolled in for-profit MCPs decreased to 27%, while the percentage in public MCPs increased to 69%. However, with the expansion of Medi-Cal managed care into more rural counties during this time period, the number of Medi-Cal enrollees in managed care who do not have the option to enroll in a public MCP doubled to 1.6 million (see Table 3). More than a third of those without access to a public MCP also do not have the choice of a nonprofit Medi-Cal MCP.

Medi-Cal Managed Care Plan Quality Assessment

California assesses and publicly releases information on the quality of contracted MCPs. This is done annually using standardized measures of quality from the Healthcare Effectiveness Data and Information Set (HEDIS), and every three years using standardized patient-reported measures of health care experiences from the Consumer Assessment of Healthcare Providers and Systems (CAHPS). The annual report is publicly released in April following the reporting year. For example, in April 2019, DHCS released the 2018 report on services delivered in 2017.

The unit of analysis for these assessments is the county or, in more rural areas, groups of counties that Medi-Cal has clustered together into a single regional market. In those cases in which the same commercial

Table 3. Medi-Cal Managed Care Enrollees and Choice of Public and Nonprofit Plans, 2009–18

	MEDI-CAL MANAGED CARE ENROLLMENT				
	STATEWIDE	NO PUBLIC CHOICE		NO PUBLIC OR NONPROFIT CHOICE	
	N	*N*	Percentage	*N*	Percentage
2009	3,633,412	740,340	20.4	360,491	9.9
2010	3,617,097	724,025	20.0	360,491	10.0
2011	3,999,338	788,671	19.7	380,463	9.5
2012	4,014,675	634,986	15.8	188,567	4.7
2013	4,900,588	709,566	14.5	204,801	4.2
2014	5,676,711	746,466	13.1	137,139	2.4
2015	7,685,532	1,167,376	15.2	429,242	5.6
2016	9,657,080	1,500,361	15.5	539,235	5.6
2017	10,375,671	1,643,192	15.8	579,661	5.6
2018	10,400,997	1,634,606	15.7	579,204	5.6

Notes: Year corresponds to reporting, not measurement, year. *COHS* is County Organized Health System; *GMC* is Geographic Managed Care.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

insurer covers enrollees in different counties, DHCS has specified a requirement for quality reporting either at the county or regional level.

MCPs submit information on their HEDIS measures which is audited by a third party on behalf of the state before it is made public. HEDIS scores are derived from either administrative data alone or a hybrid of administrative data and sampling of eligible medical records. Over time, California has made some changes in the measures that Medi-Cal MCPs are required to report. Scoring is in the form of a percentage.

CAHPS measures patient experiences with MCPs as well as providers. It is administered to a sample of MCP enrollees by a third party on behalf of DHCS. DHCS publicly reports CAHPS scores for its different measures on a scale between one (lowest quality) to five (highest quality) stars. Each star corresponds to a performance percentile based on national results for Medicaid MCPs:

- 1 star: <25th percentile
- 2 stars: 25th percentile to <50th percentile
- 3 stars: 50th percentile to <75th percentile
- 4 stars: 75th percentile to <90th percentile
- 5 stars: 90th+ percentile

According to the 2009 report (corresponding to services delivered in 2008), there were 19 quality-reporting regions for the 23 counties participating in Medi-Cal managed care, indicating that the reporting region was almost always a single county. By 2018 (corresponding to services delivered in 2017) there were 31 quality-reporting regions for the 58 participating counties (see Table 1 on page 6).[9] This is because rural counties began participating in Medi-Cal managed care more recently than urban counties, and in these rural counties the same MCPs were selected to provide services across a region of relatively less populous counties. The sampling of Medi-Cal enrollees to assess quality for these MCPs is from the multicounty region and is not county-specific as it is in the larger urban counties.

Table 4. Medi-Cal Enrollment, by Type of Insurer, 2009–18

	FOR PROFIT			NONPROFIT			PUBLIC		
	Insurers	Regions	Enrollment	Insurers	Regions	Enrollment	Insurers	Regions	Enrollment
2009	3	19	1,256,508	4	5	150,588	13	14	2,226,316
2010	3	19	1,256,508	3	4	134,273	13	14	2,226,316
2011	3	19	1,316,476	3	4	149,953	13	16	2,532,909
2012	3	17	1,164,146	3	4	170,834	13	16	2,679,695
2013	3	20	1,370,311	3	4	193,684	15	22	3,336,593
2014	3	19	1,496,174	3	4	251,412	15	23	3,929,125
2015	4	26	2,161,426	3	4	281,233	15	23	5,242,873
2016	4	26	2,750,967	3	4	370,268	15	23	6,535,845
2017	4	26	2,922,691	3	4	412,655	15	23	7,040,325
2018	4	26	2,853,536	3	4	417,082	15	23	7,130,379

Notes: Enrollment in 2009 estimated from health plan enrollments in 2010. Year corresponds to reporting, not measurement, year. *Regions* represents the number of regions that reported on quality of Medi-Cal.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

A quality-reporting region will include results from one or more MCPs depending on the model of Medi-Cal managed care in that region. Given the growth of managed care and the varying ways it was expanded across California, the number of MCP-specific assessments increased from 38 in 2009 to 53 in 2018. The increase reflects primarily a growth in regions rather than an increase in the number of participating insurers. For example, while the number of for-profit insurers increased only from three to four between 2009 and 2018, because the number of counties in which they are operating increased, the number of county-based regions for which there are quality assessments increased from 19 to 26 in this time period (see Table 4, page 9). This primarily occurred with expansion into rural counties along California's eastern border through the Regional model, which relies on competing commercial MCPs. During this same time period, the number of public insurers increased from 13 to 15, but because the expansion included MCPs that covered multiple counties, the number of county-based regions in which they operated increased from 14 to 23 during this time period.

Auto-Assignment Incentive

DHCS has encouraged quality competition in multiple-MCP county-based markets by assigning a greater share of enrollees who do not make a plan choice themselves to the MCP in that county that demonstrated the highest scores on a predetermined subset of quality measures in the prior year. An MCP benefits financially from auto-assigned enrollees not only by gaining a greater number of enrollees, but also because these patients tend to use services at a lower rate than those who actively choose an MCP. Thus, they are lower cost relative to the fixed capitated amount DHCS pays the MCP to provide and manage their care.

Improvement Plans

DHCS requires MCPs to create performance improvement plans for measures that fall below its minimum performance level (MPL). Until 2019, DHCS set the MPL at the 25th percentile among Medicaid MCPs nationally. MCPs are exempt from this requirement during the first year they are required to report a given measure. DHCS has also on occasion waived requirements for improvement plans, as they did for the four Children and Adolescents' Access to Primary Care Practitioners measures beginning in 2013. The improvement plan process has evolved over time and is currently comprised of Plan-Do-Study-Act (PDSA) cycle worksheets, which each MCP completes and submits every four months. These improvement plans detail the MCP's strategy to improve its performance, including what the MCP will test, how it will measure improvement, the measurable target for that PDSA cycle, and the MCP's analysis of results.

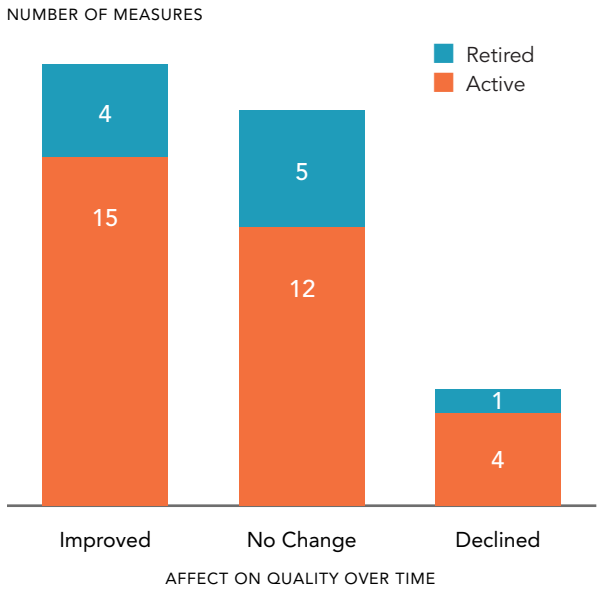
Findings

Medi-Cal Managed Care Quality Trends

Among 41 quality measures collected over time using HEDIS (35 measures) and CAHPS (6 measures), 19 significantly improved on average across all MCPs between 2009 and 2018, 5 declined, and 17 remained unchanged (Appendix B). A similar distribution is observed after excluding 10 HEDIS measures no longer reported by DHCS (see Figure 2 on page 11).

Two HEDIS measures (appropriate use of asthma medications, and diabetes control defined as HbA1c less than 7%) phased out in 2010 did not lend themselves to evaluation over time. While the statistically significant improvement was in some cases relatively small (ranging from 3.2 to 32.1 percentage points), the clinical significance in all cases could be interpreted as substantial, given the corresponding size of the impacted population. For example, even though scores for the breast cancer screening measure improved only from 50.1% to 56.2% between 2009 and 2018, the number

Figure 2. Current Quality Measures, by Change Over Time in Statewide Average Score, 2009–18

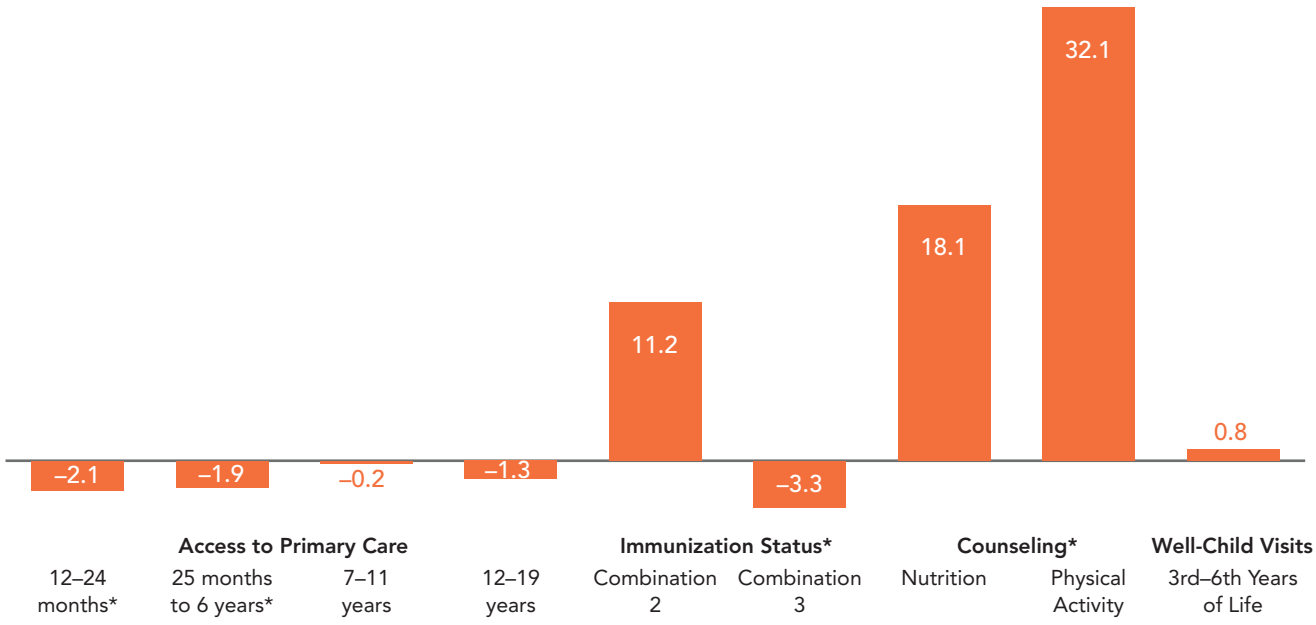


Note: See Appendix B for details.

of women in Medi-Cal managed care eligible for this exam is in the millions, suggesting that tens of thousands of women experienced improvements in their care over time. Of course the same could be said for measures with significant declines. Small differences in measured performance could reflect worsening care for substantial numbers of Medi-Cal enrollees. It is also notable that Medi-Cal enrollees' consistently rated their MCP below 2.0 stars, indicating an average performance among Medi-Cal MCPs that is below the 50th percentile nationally.

Three of the four measures that declined over time on average across all MCPs were related to care of children: "Childhood Immunization Status," "Childhood Access to Primary Care ages 12 to 24 months," and "Childhood Access to Primary Care ages 25 months to 6 years" (see Figure 3). Of the other six quality measures still in use by DHCS in 2018 that are related to children, three showed improvement and three showed no change in quality.

Figure 3. Current Childhood Quality-of-Care Measures, Change Over Time in Statewide Average Score, 2009–18



*Change is statistically significant.

Notes: Not every measure was reported every year. *Change over time* represents percentage points. See Appendix B for details.

Source (Figures 2 and 3): Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

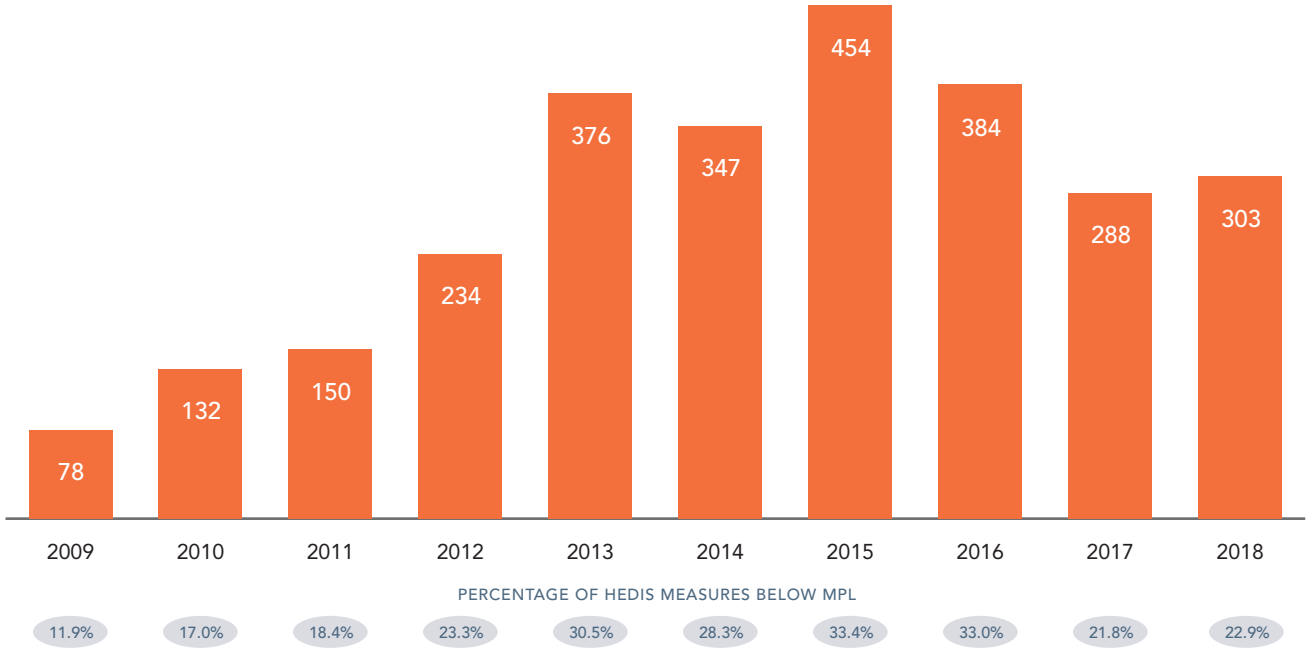
In addition to examining individual MCP performance over time, it is possible to assess trends in quality of care for Medi-Cal managed care enrollees statewide by weighting results by the number of enrollees in each MCP. Statewide, 21 measures improved over time, 9 declined over time, and 11 were unchanged over time (Appendix C). In addition to the three childhood measures noted to decline over time in the unweighted analysis of MCPs, the population-weighted results also reveal declining performance in well-child visits in the third through sixth years of life. The timeliness of prenatal care also declined slightly but significantly over time. Three measures that were declining over time, related to monitoring of patients on digoxin and medication management of patients with asthma, were dropped from ongoing assessment after 2015. The only CAHPS measure that improved over time asked enrollees to rate how well doctors communicate.

Minimum Performance Levels

Consistent with the performance of Medicaid MCPs nationally, 25% (2,746 of 10,879) of Medi-Cal MCPs' HEDIS scores fell below the minimum performance level (set at the national Medicaid 25th percentile). On an annual basis, the percentage of HEDIS scores below the minimum performance level (MPL) varied between 11.9% and 33.4% (see Figure 4).[10]

In most cases, Medi-Cal MCP scores that fall below the minimum performance level on a measure trigger the need for the MCP to implement an improvement plan on that measure. There was no significant change over time in the trend of scores on measures that fell below the MPL, suggesting that the requirement for an improvement plan was not effective in improving scores on these measures.

Figure 4. Number of HEDIS Measures Below Minimum Performance Level (MPL), 2009–18



Notes: Minimum performance level on a HEDIS measure during this time period was below the 25th percentile nationally among all participating Medicaid plans. Year corresponds to reporting, not measurement, year.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

Managed Care Plan Ownership and Quality

Quality scores varied markedly across Medi-Cal MCPs within any given year and by ownership during the study period. This variation was reflected in an annual summary ranking of MCP quality that was created by assigning a rank (1 being the best up through the number of MCPs participating in Medi-Cal managed care in a given year) to each MCP for each of the quality measures. MCPs were then ranked according to the sum of those ranks.[11] For example, in 2018, Kaiser Southern California had the best overall ranked quality among MCPs, and Health Net in San Joaquin had the worst (Appendix D). Nonprofit MCPs have had the best average rank across MCPs since 2011, while for-profit MCPs have ranked the worst on average in every year of the study (Figure 5). The summary performance ranking of nonprofit MCPs has improved over time, while that of public and for-profit MCPs began to noticeably decline beginning in 2013. The performance of nonprofit MCPs is driven largely, but not entirely, by the two participating Kaiser MCPs, which have been the highest-ranked since 2015. Kaiser's high rankings could reflect the superior performance of these MCPs as well as the unique advantage they have to select members. The average decline in public MCP performance can largely be attributed to the addition of public MCPs (CalViva and Partnership HealthPlan of California) expanding into additional rural counties. The decline in the average ranking of for-profit MCPs is partially attributable to the expansion of for-profit MCPs in the same rural regions, but it is also related to a decline in the ranking of for-profit MCPs in counties where they have been operating prior to 2013.

Figure 5. Statewide Average Score, by Plan Type, 2009–18 (lower number reflects higher quality)

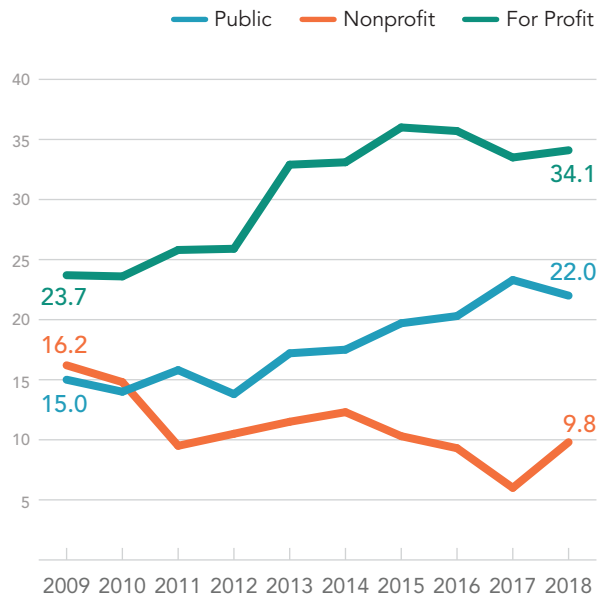
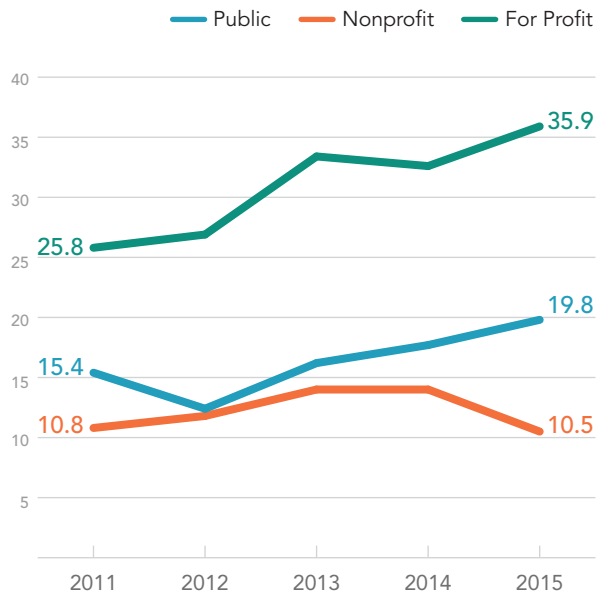


Figure 6. Adjusted Statewide Average Score, by Plan Type, 2011–15 (lower number reflects higher quality)*



**Adjusted* for county race, ethnicity, education, and English proficiency among those below 138% of the federal poverty level as well as for the number of physician full-time equivalents per capita.

FIGURES 5 AND 6:

Note: Year corresponds to reporting, not measurement, year.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

Adjusting the ranking of MCPs for underlying differences in the race, ethnicity, English proficiency, and education level of the population at or below 138% of the federal poverty level[12] as well as by the number of practicing physician full-time equivalents per capita across the regions in which MCPs operate did change the ranking of some individual MCPs (Appendix E), but did not appreciably change the overall results by ownership (see Figure 6 on page 13).[13] The average ranking of for-profit MCPs based on the adjusted quality scores was significantly worse each year than that of public and nonprofit MCPs.

The scale of the difference across the different measures by ownership was substantial, reflected in part by the mean differences but more robustly by the size of the difference in the distribution measured in standard deviations (Appendix F). Standard deviation differences between ownership types of at least 0.2 are considered small, 0.5 are medium, and 0.8 are large. The standard deviation differences between nonprofit and for-profit MCPs was statistically different on 24 of the HEDIS measures. The size of that difference was large on 18 and medium on 6 HEDIS measures. Similarly, the standard deviation differences between public and for-profit MCPs was statistically different on 28 of the HEDIS measures, with most of those being medium differences.

Regardless of MCP ownership types, the majority of measures did not change over time (Appendix G). For-profit MCPs had 14 measures improve, 5 worsen, and 22 remain unchanged; nonprofit MCPs had 12 measures improve, 3 worsen, and 26 remain unchanged; and public MCPs had 11 measures improve, 2 worsen, and 28 remain unchanged. The measures that improved or declined were not generally the same across MCP ownership types.

The number of cases in which MCPs had HEDIS scores below the minimum performance level varies by MCP ownership and reflects the poorer quality observed in for-profit MCPs relative to nonprofit and public MCPs (see Table 5). During the study period, for-profit MCPs represented 47.5% of the MCPs but had 63.1% of the HEDIS scores below the minimum performance level that would typically trigger a need for an improvement plan. For-profit MCPs also took longer on average than nonprofit and public MCPs to resolve HEDIS scores below the MPL. In nearly half of the cases in which nonprofit (49%) and public MCPs (50%) had a score on a measure below the MPL in a given year, that score was above the MPL in the subsequent year. In the case of for-profit MCPs, in only a third (34%) of the cases was this true.

Table 5. Number of HEDIS Scores Below Medi-Cal's Minimum Performance Level (MPL), by Plan Ownership Type, 2009–18

	NUMBER OF HEALTH PLANS	PERCENTAGE OF HEALTH PLANS	TOTAL NUMBER BELOW MPL	PERCENTAGE OF ALL MPLS	AVERAGE TIME TO RESOLVE (YEARS)
For profit	29	47.5%	1,732	63.1%	2.6
Nonprofit	6	9.8%	127	4.6%	2.0
Public	26	42.6%	887	32.3%	2.2
TOTAL	**61**	**100.0%**	**2,746**	**100.0%**	**2.4**

Notes: Minimum Performance Level on a HEDIS measure during this time period was below the 25th percentile nationally among all participating Medicaid plans. Year corresponds to reporting, not measurement, year.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

Two-Plan counties provide an opportunity to observe similarities and differences by MCP ownership in the context of counties with the same underlying demographics and physician supply. For each year of the study, the researchers counted how often in the participating counties the public or for-profit MCP had a significantly better overall quality score based on ranking all the measures. The researchers assigned a half point to each MCP in a county when there was no significant difference between them. In each of the 10 study years, more of the public MCPs than the for-profit plans had a higher overall quality score (see Table 6). This is striking not only in the scale of the difference but in light of the fact that in many counties, the network of clinicians in the two MCPs has a high degree of overlap. Where there is an overlap, an MCP's efforts with clinicians to improve its own quality scores would be likely to create a "spillover" effect that would also improve the scores in the competing MCP. The spillover would create a bias that would tend to make the public and for-profit MCPs' quality scores more similar but in fact public MCPs have a strong tendency to achieve higher quality scores.

Table 6. Number of Plans Ranked as Higher Quality, by Plan Ownership Type Within Two-Plan Counties, 2009–18

	PUBLIC	FOR-PROFIT
2009	7.5	0.5
2010	7	1
2011	5	3
2012	7	1
2013	11	0
2014	11	1
2015	9.5	2.5
2016	10.5	1.5
2017	12	0
2018	10	2

Notes: Comparison of Two-Plan counties limited to those with a public local initiative plan and a for-profit plan. One point assigned per county to the health plan with the better aggregated quality score. In cases where there is no difference in the ranking of the two plans in the county, a half point is assigned to each. Year corresponds to reporting, not measurement, year.

Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

This difference in quality scores between the public and for-profit MCPs in Two-Plan counties was also reflected in the number of measures that fell below the minimum performance level. Of the 1,491 scores that fell below the MPL in Two-Plan counties during the study period, almost twice as many were for the for-profit MCPs (63%) than the public MCPs (37%). For-profit MCPs in Two-Plan counties also took longer on average (2.7 years) than public MCPs (2.4 years) to achieve scores above the 25th national percentile after first recording a score below the MPL.

Among public and for-profit MCPs in Two-Plan counties, the majority of measures did not change over time (Appendix H). Both for-profit and public MCPs improved on nine measures. For-profit MCPs had lower performance on four measures over time, while public MCPs declined on three. The measures on which for-profit and public MCPs improved their quality scores over time was the same for eight of the nine measures. This may be a reflection of overlapping clinician networks in the two competing MCPs. Cervical cancer screening was the only measure for which both the public and for-profit MCPs had worse scores over time.

Within a few of the Two-Plan counties (Fresno, Stanislaus, and Tulare), for-profit MCPs rather than public MCPs functioned as the local initiative for part or all of the study period. This provides an opportunity to examine whether for-profit MCPs that are required to work with local safety-net providers and that receive higher capitation rates as the local initiative performed differently than for-profit MCPs without these expectations. In general there was little difference. On three of the measures, the for-profit MCP functioning as the local initiative had a significantly better score than the for-profit MCP not acting as the local initiative, but on all the other measures there was no statistical difference.

County Model and Quality

In California, competition among MCPs is a prominent feature of the health care landscape.[14] DHCS creates competition to some degree by providing enrollees who reside within 35 of California's 58 counties with a choice of more than one MCP. Since the payment MCPs receive for furnishing Medi-Cal services is related to their enrollment, there is competition among MCPs in these counties. In the 22 counties that furnish Medi-Cal services through a single public MCP (COHS), and in San Benito where there is a single optional Medi-Cal MCP, there is no competition between MCPs for enrollees. The competition between MCPs for enrollment in the 35 counties with two or more MCPs could motivate MCPs in these counties to improve their quality over time as a way to attract enrollment. In contrast, counties that furnish Medi-Cal services through a single public MCP may be less motivated based on concerns about enrollment to improve the quality of care over time, but may be better positioned than multiple competing MCPs to influence providers and to partner with other public and community resources in their county or region to deliver higher-quality care.

Does competition among MCPs lead to higher quality or more improvement over time? To answer this question, an annual ranking by county-based region was created to assess whether there were differences in the quality of care Medi-Cal enrollees received in association with whether enrollees had a choice of MCP and if that choice included a public MCP or only commercial MCPs. To do this, an average score for each measure was created by weighting the scores by the enrollment in each MCP within a county-based region. A rank was then assigned (1 being the best up through the number of county-based regions participating in Medi-Cal managed care in a given year) to each county-based region for each of the quality measures.[15] Next, county-based regions were ranked according to the sum of those ranks. For example, in 2018, San Francisco County had the best overall ranked quality, and Stanislaus County had the worst (Appendix I). Over time this ranking takes account of the potential migration of Medi-Cal enrollees across MCPs within a county-based region by weighting the MCP's quality scores by its enrollment for that year. The color code indicates the managed care model used in the county-based region. Combining results across all the study years, the COHS model had significantly better average rankings (lower scores) than the other models. However, because of small sample sizes, the differences in ranking by county models of managed care within each year were not always significant (see Figure 7 on page 17), particularly as the differences in the rankings of the county models by quality scores has decreased somewhat over time.

A potentially confounding source of the differences observed across county-based regions are the underlying differences in the demographic characteristics of Medi-Cal enrollees and the underlying capacity of the local delivery system to serve them. In an attempt to remove some of these differences, the researchers adjusted the enrollment-weighted, county-based rankings for underlying differences in the race, ethnicity, English proficiency, and education level of the population at or below 138% of the federal poverty level[16] as well as the number of practicing physician full-time equivalents per capita in those areas (Appendix J). This did little to change the rankings of the county-based regions and the overall rankings of models of managed care. On an annual basis, the adjusted average rankings by county model did not rank statistically different, but combining results across study years revealed a statistically better average adjusted ranking in county-based regions receiving Medi-Cal services from a COHS (see Figure 8 on page 17).

The scale of the difference across the different measures by managed care model was substantial (Appendix K). The standard deviation differences between COHS and competing commercial MCPs was statistically different on 28 of the HEDIS measures, with 14 of those differences being large. On one measure (avoidance of antibiotics for acute bronchitis), the competing commercial model was significantly better (medium) than the COHS model. Similarly, the standard deviation differences between the COHS and the Two-Plan model was significantly different on 24 of the HEDIS measures, with 17 of those being large differences.

Figure 7. Average Medi-Cal County Model Ranking, by Plan Type, 2009–18
(lower number reflects higher quality)

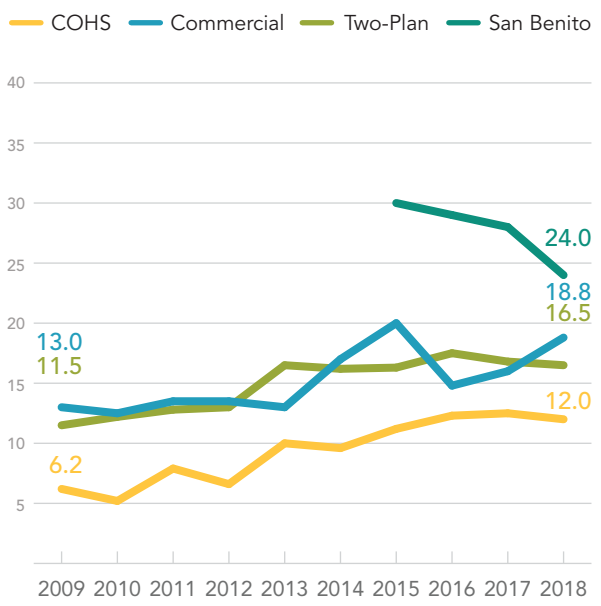
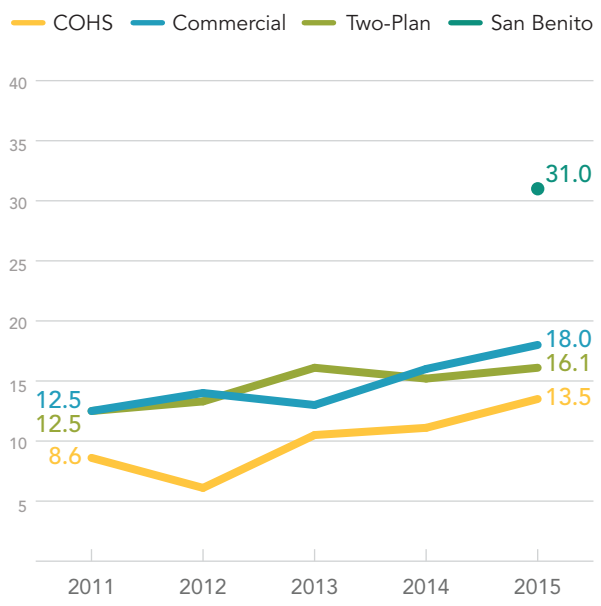


Figure 8. Adjusted Average Medi-Cal County Model Ranking, by Plan Type, 2009–18*
(lower number reflects higher quality)



**Adjusted* for county race, ethnicity, education, and English proficiency among those below 138% of the federal poverty level as well as for the number of physician full-time equivalents per capita.

FIGURES 7 AND 8:

Note: Year corresponds to reporting, not measurement, year. *COHS* is County Organized Health System.

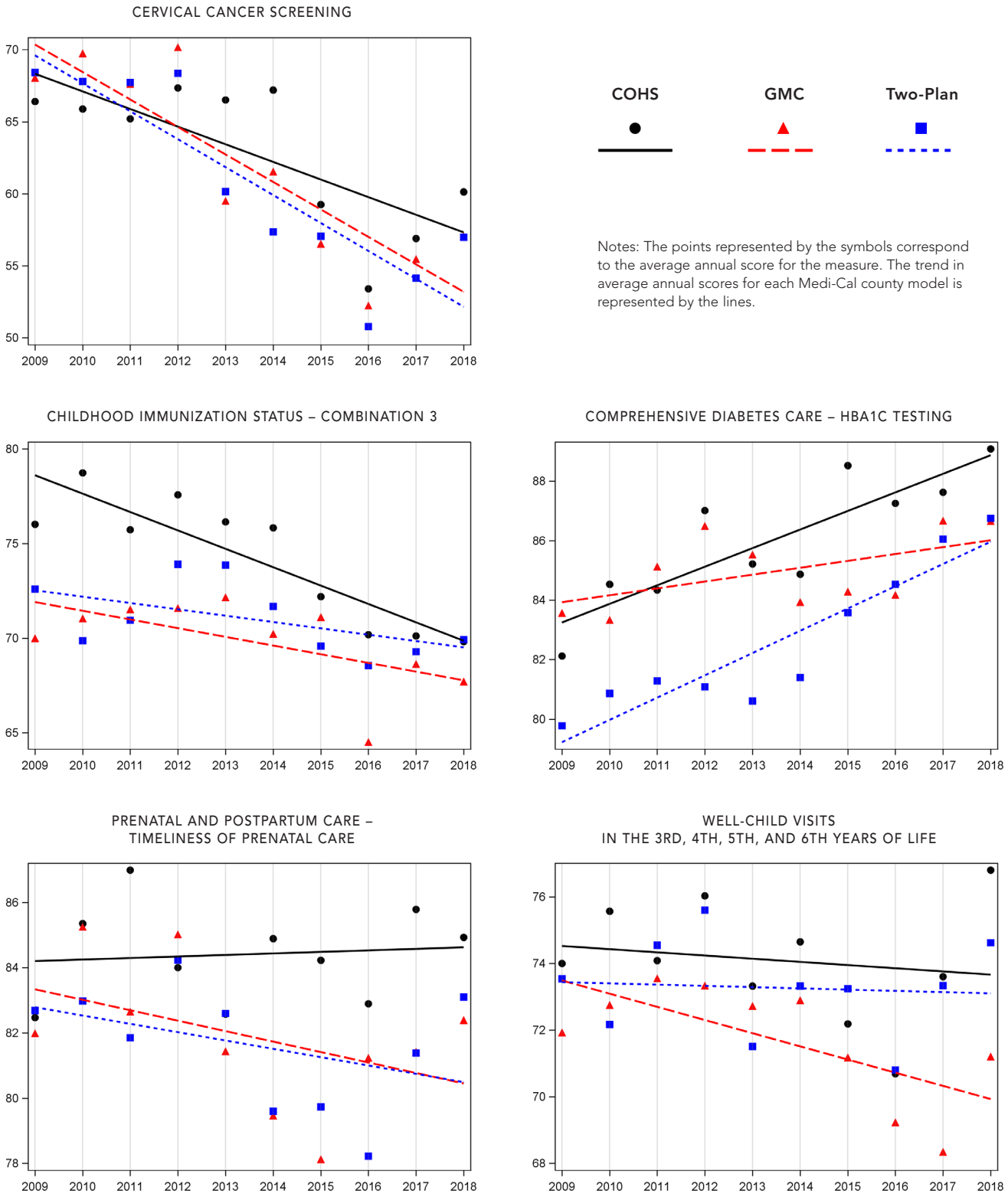
Source: Author analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

When the authors examined trends in quality scores over time, the pattern of improvement was similar among the different county-based models (Appendix L). There were no substantial differences in quality improvement over time in counties where enrollees did not have a choice of MCP or in those where two or more MCPs compete for enrollees. The majority of measures were unchanged over time in all four county models (Two-Plan, competing commercial, COHS, and single commercial). Two-Plan counties had 12 measures improve and 2 decline; competing commercial counties had 12 improve and 5 decline, COHS counties had 8 improve and 3 decline, and the single commercial model had 4 improve and 1 decline.

Auto-Assignment

In counties with competing MCPs, DHCS automatically assigns enrollees who have not chosen one to an MCP based on its quality-of-care ranking from the prior year on a limited number of HEDIS measures. This auto-assignment rewards MCPs with higher quality-of-care scores, as these MCPs would see an increase in the number of enrollees who will presumably be of low cost to the MCP, assuming these enrollees had not chosen an MCP because they were not making prior use of health care services. One might presume that if competition among MCPs was an important driver of quality improvement that the measures being incentivized through auto-assignment would improve more rapidly in counties with MCP choice than in COHS

Figure 9. Trends in Auto-Assignment Quality Measure Scores Over Time, by County Medi-Cal Model



Notes: The points represented by the symbols correspond to the average annual score for the measure. The trend in average annual scores for each Medi-Cal county model is represented by the lines.

Source: Analysis of the annual "Medi-Cal Managed Care External Quality Review Technical Report" released by the Managed Care Quality and Monitoring Division of the California Department of Health Care Services.

counties, where there is not. However, that is not the case (see Figure 9, page 18). Five HEDIS measures have been used as part of Medi-Cal's auto-assignment incentive program in each of the study years: cervical cancer screening, childhood immunizations, diabetes HbA1c testing, timeliness of prenatal care, and well-child visits in the third through sixth years of life. In general, COHS counties have higher scores on incentivized quality measures on an annual basis, and the trend line for the scores over time does not reflect greater improvement in counties with competing MCPs (either Geographic Managed Care or Two-Plan counties) versus counties with a single public MCP (COHS). The regional and Imperial models recently became part of the auto-assignment incentive program, but there are not yet sufficient data by which to judge those counties' performance.

Summary of Findings

During the decade between 2009 and 2018, California rapidly increased the use of managed care to deliver services to Medi-Cal enrollees by broadening the Medi-Cal eligibility groups required to use managed care and by geographically expanding to all 58 counties. As the use of mandatory managed care has expanded over time, so has the variation in county models and the use of commercial MCPs in the sponsoring of Medi-Cal managed care services.

While enrollment in Medi-Cal managed care tripled to more than 10 million during this period, quality of care remained relatively stagnant. The stagnation did not appear to be related to the implementation of the Affordable Care Act, as the rates of change of quality scores from 2009 to 2013 (pre-ACA implementation) and from 2014 to 2018 were not significantly different.

Less than half of the quality measures improved over time. Of note, Medi-Cal enrollees' experience of care was below the national average on the three CAHPS assessments performed during the 10-year period, and these ratings did not improve over time. Several measures related to care of children actually declined over time. For most of the 10-year period (2009–16), the percentage of HEDIS scores below the minimum performance level set at the 25th national percentile increased (from 11.9% to 33%). There has been some improvement over the past two years. In 2018, 22.9% of all HEDIS scores fell below the MPL. Exceeding the 25th national percentile, however, is a relatively low bar by which to judge performance.

While there was variation by MCP, for-profit MCPs, which care for more than a quarter (27%) of Medi-Cal enrollees in managed care, consistently provided substantially lower-quality care, on average, than nonprofit and public MCPs. This was reflected in the percentage of HEDIS scores that fell below the minimum performance level, the magnitude of the difference in average scores on individual measures, and the ranking of MCPs based on their ownership.

Because of the relatively small sample sizes involved in each type of county model of Medi-Cal managed care, it is difficult to draw definitive conclusions about which approach is the best. County-based markets that rely on a single public MCP known as a COHS had the best average ranking during the study period even after adjusting for differences in county demographics and physician supply. Providing a choice of MCPs introduces administrative complexity and typically higher costs, but judging by the analyzed HEDIS and CAHPS scores, it does not offer benefits to the quality of care that enrollees receive relative to those in counties that offer only a single public MCP.

Opportunities for Improvement

Strengthen Data Collection and Reporting

The collecting and reporting of data by DHCS as currently structured is helpful for monitoring access and quality, but has proven to be insufficient for ensuring accountability and driving consistent improvements. HEDIS and CAHPS are useful tools for measuring access to, quality of, and patient experiences with health care, but there are several shortcomings in how DHCS uses these instruments, and they are not sufficient for determining the causes of deficits.

A major limitation with CAHPS is that these scores are collected only every three years. Given the rate at which the Medi-Cal program has been changing, DHCS should collect and report CAHPS scores more frequently. (Notably, after this report's findings were first presented publicly, DHCS announced that it intends to field the CAHPS survey every two years). Recognizing that enormous diversity exists within the Medi-Cal program, sampling within MCPs among important patient subgroups defined by age, sex, race/ethnicity, primary language, and eligibility groups can inform questions about disparities in care at the MCP and program level. If the cost of sampling for each of these characteristics is prohibitive within each year's survey, it would be valuable to develop a rotation across years to oversample enrollees with specific characteristics. Also, sampling at the MCP level is not adequate if the health care service is subcontracted to another entity, such as another MCP or a large medical group. Any organization prepared to accept the financial responsibility for furnishing Medi-Cal services should also be capable of demonstrating the quality of the services it provides.

DHCS would also gain an enhanced understanding of the causes of identified access and quality deficits were there more complete and updated information on the provider networks of its participating MCPs. This would include the level of provider participation with the MCP's Medi-Cal enrollees, such as the number of unique Medi-Cal members seen or number of visits provided as a share of the provider's total practice, as well as information on the demographic and specialty diversity of providers in the network. Public reporting of this information could help enrollees in communities where there is a choice of MCPs to better distinguish the value they might obtain from each available MCP and could support investigations of how the availability, composition, and organization of an MCP's workforce contributes to variation in HEDIS and CAHPS scores across MCPs.

Establish Positive Financial Incentives for Improvement

Improvements in the data collected and reported by DHCS are necessary, but not sufficient, for improving Medi-Cal access and quality. There also needs to be improvement in how DHCS uses these data to support improvement efforts. Two of the current uses — the requirement for improvement plans for scores that fall below the MPL and the allocation of a greater number of auto-assigned enrollees based on a subset of scores — are well-intentioned but ineffective in improving quality. Over the past 10 years, the requirement for an improvement plan has not been associated with a significant change in an MCP's performance over time, and the auto-assignment incentive has not resulted in counties with competing MCPs achieving quality scores that are any better than a noncompeting public MCP without the incentive.

To support improvements in access and quality, DHCS should establish meaningful financial incentives that are relevant for all its MCPs and support the capacity of MCPs to make improvements through a collaborative learning process supported with robust comparative data and analysis. The auto-assignment incentive is not only an inadequate reward, but it also does not address the relatively stagnant quality scores in counties that do not have competing MCPs. If DHCS is committed to improving quality for Medi-Cal enrollees across all counties, it needs to develop a stronger set of incentives that are relevant for all MCPs. One possibility is the use of direct financial rewards for achieving

improvement targets and direct financial penalties for consistently scoring below specified targets on quality metrics.

Identify and Support Other Contributors to High-Quality Care

Stronger incentives may not be enough if MCPs do not have the capacity to improve. DHCS could contribute to building MCP capacity to improve quality by working with MCPs to better understand the underlying factors that can contribute to high-quality care, such as the capacity of the contracted network. Also, DHCS could facilitate greater cooperation and shared learning across MCPs.

Consider the Relative Values of Competition and Choice on Member Quality and Satisfaction

DHCS could engage counties and Medi-Cal enrollees to reconsider the role of MCP competition. While choice may be seen as a way to promote health care value, it is worth considering whether the administrative complexity is justified, given that these models for delivering Medi-Cal services achieve lower quality on average than reliance upon a single public MCP. Competition among MCPs can also undermine collaboration among them for shared learning.

The results of this study suggest that the model of a single public MCP in a county will, on average, result in better access to and quality of care than competing MCPs. Perhaps this is due to the unmeasured differences in the characteristics of enrollees in counties with different models of managed care, or to differences in the availability of providers across counties. Also, not all COHS plans are among the best-performing MCPs. But from a purely administrative standpoint, it would appear that a single public MCP is better able than competing MCPs in a county to coordinate services for enrollees in collaboration with the local public health department and other community-based organizations. It could be revealing to not only examine differences in MCPs functioning under different models of managed care but also to examine why some COHS plans perform very well and others less so.

Some counties might want to engage with Medi-Cal enrollees in their community and with DHCS to explore changes in how they use MCPs to furnish services. Medi-Cal enrollees can provide information on how they value the choice of MCPs relative to the quality and administrative benefits that a COHS model may be better able to produce. Federal statute limits the number of enrollees California can have within a COHS. It was originally set at 10% of total enrollees and has twice through changes in statute been raised, currently to 16%. In 2018, the COHS enrollment was 2,064,094, which was 15.9% of the Medi-Cal population. Thus, depending on the size of a county considering a change to a COHS model, it might require a change in federal statute.

In the meantime, the majority of California counties will continue to offer enrollees a choice of MCPs. With a reprocurement process underway, DHCS has an opportunity to incorporate MCPs' past performance into contracting decisions and to reconsider the role of for-profit MCPs in furnishing Medi-Cal services. While there is variation in performance across MCPs of all ownership types, for-profit MCPs as a group are consistently the lowest performers. In Two-Plan counties, some of these performance differences are mitigated by the fact that enrollees have migrated from for-profit toward public MCPs over time, but a public or nonprofit MCP is not an option for enrollees in some counties.

Prioritize Continuous Quality Improvement

California has been a leader in expanding Medicaid to reduce the number of uninsured and in establishing the use of Medicaid managed care, but it lags behind other states that have reconsidered how to combine an efficient administrative structure combined with financial incentives to promote quality improvement in their Medicaid programs.[17] For example, Oregon

is using 15 coordinated care organizations (CCOs), which like COHS plans in California, do not compete with one another across different regions in the state. Unlike COHS plans, CCOs receive a global budget for all services, with payment partially dependent on achieving financial and quality targets. More than three years into this experiment, Oregon's Medicaid program overall and most of its CCOs have been successful in improving quality and slowing the rate of spending.[18] California would benefit from harvesting lessons from its own Medi-Cal program and from what other states have learned by creating incentives with MCPs and providers for continuous quality improvement.

Methodology

Data and Methods

In this report, the authors have assembled information from DHCS's quality assessments from the most recent decade of available information (2009 through 2018) to support an evaluation of the quality of care in the Medi-Cal managed care program over time.

In most cases, the scoring of the measures can be interpreted as an indicator of higher or lower quality. However, a few measures, including "Emergency Department Visits," "Outpatient Visits," "Surgical Procedures," "Observation Room Stays," and "All Cause Readmissions," do not by themselves provide an indication of quality, and therefore they were not included in this study.

During the study period, CAHPS was administered three times — in 2010, 2013, and 2016. This study includes six CAHPS measures for which there was adequate sampling at the MCP level to provide stable estimates of performance over time. To analyze the reported results, the authors converted stars to the corresponding numeric values (1 = lowest quality to 5 = best quality).

All of the reported HEDIS and CAHPS scores used in this study by MCPs and year are available for download at www.chcf.org/medi-cal-quality. Details on the methods used to analyze the data are in Appendix C.

Limitations

The results of this report are based on an observational study. Results were adjusted based on available information at the county level, but the findings could still reflect unmeasured differences across Medi-Cal MCPs and county-based models. For example, the authors requested from DHCS but did not receive MCP-level information on the demographics and Medi-Cal eligibility category of all members on an annual basis. Differences in the distribution of patients with different characteristics and health care needs at the MCP level could explain some findings that are attributed in this report to MCP performance. Another potentially important factor is the adequacy of an MCP's provider network. The authors were unable to obtain information from DHCS on the size and makeup of each MCP's provider network, which could help to explain differences in observed performance across MCPs. For example, network clinicians who are organized as part of an integrated delivery system, as is known to occur in the Kaiser Health Plan, may be better able to achieve higher quality scores than clinicians who are more isolated in their practices.

Endnotes

1. Margaret Tatar, Julia Paradise, and Rachel Garfield, "Medi-Cal Managed Care: An Overview and Key Issues," KFF (Kaiser Family Foundation), March 2, 2016, www.kff.org.
2. Medi-Cal enrollees with Medicare (called "dual eligible") in seven California counties (Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Mateo and Santa Clara) where more than 60% of the state's dual eligible population resides, are required to enroll in Medi-Cal managed care and may voluntarily enroll in an integrated Medi-Cal and Medicare managed care plan
3. "Medicaid Managed Care Market Tracker," KFF, n.d., www.kff.org.
4. *Medi-Cal Managed Care Fact Sheet - Managed Care Models*, California Dept. of Health Care Services (DHCS), n.d., www.dhcs.ca.gov (PDF).
5. Deborah Kelch et al., *Exploring Public Options in California: Key Issues and Considerations*, Insure the Uninsured Project, March 20, 2018, www.itup.org.
6. Sandra Hunt, Leslie Peters, and John Saari, *Capitation Rates in the Medi-Cal Managed Care Program*, Medi-Cal Policy Institute, May 1999, www.chcf.org (PDF).
7. Kaiser Health Plan is permitted to select within its limited participation in Medi-Cal managed care those who may have previously had Kaiser Health Plan coverage through a different payer such as an employer.
8. This distribution reflects the ownership of the MCPs in which enrollees directly enrolled. In some cases, enrollees may directly enroll in one kind of MCP — for example, L.A. Care, which is a public MCP — and then have their care delegated to another MCP that may have a different type of ownership. Regardless, the accountability remains with the MCP in which a beneficiary directly enrolled. In Amador, El Dorado, and Placer Counties, some enrollees have access to a nonprofit MCP (Kaiser Health Plan), so for purposes of analysis we considered those counties as providing access to a nonprofit MCP even though Kaiser Health Plan is not available to some Medi-Cal enrollees in those counties.
9. To be consistent with DHCS practices, unless otherwise specified, the years indicated in this report correspond to the DHCS reporting year for services provided in the previous year.
10. Details on the specific HEDIS scores that fell below the MPL are available in the full datafile that can be downloaded from www.chcf.org/medi-cal-quality.
11. The approach used in this study differs from what the DHCS reports as the Aggregated Quality Factor Scoring (AQFS). AQFS creates scoring bands (1–10) for each HEDIS measure relative to national benchmarks of performance. DHCS combines these scoring bands for each measure to calculate MCP performance aggregated across all HEDIS measures. The national benchmarks for this scoring are not publicly available and therefore could not be replicated for this study. In addition, the DHCS approach may mask differences in performance within percentile scoring bands of performance. Since scoring bands vary between 7.5% and 12.5%, differences of this amount on a measure among MCPs could result in them being scored similarly depending on where that difference is along the performance distribution.
12. This is the income eligibility level for Medi-Cal.
13. County demographics by year on race, ethnicity, English proficiency, and level of education among those at or below 138% of the federal poverty level was provided by the California Health Interview Survey. The number of full-time equivalent practicing physicians by county was derived from data reported to the California Medical Board and analyzed by the University of California, San Francisco (www.chcf.org). The data available to perform these adjustments were limited to 2011–15.
14. Alain C. Enthoven and Laurence C. Baker, "With Roots in California, Managed Competition Still Aims to Reform Health Care," *Health Affairs* 37, no. 9 (2018): 1425–30, doi:10.1377/hlthaff.2018.043.
15. For this analysis, the score for Kaiser Permanente North was allocated to its corresponding counties of Amador, El Dorado, Placer, and Sacramento.
16. This is the income eligibility level for Medi-Cal.
17. *Making Quality Matter in Medi-Cal Managed Care: How Other States Hold Health Plans Financially Accountable for Performance*, California Health Care Foundation, February 27, 2019, www.chcf.org.
18. K. John McConnell, "Oregon's Medicaid Coordinated Care Organizations," *JAMA* 315, no. 9 (March 1, 2016: 869–70, doi:10.1001/jama.2016.0206.

Appendix A. Medi-Cal Insurers and Participating Counties, 2009–18

INSURER (OWERSHIP TYPE)	PARTICIPATING COUNTIES									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Alameda Alliance (P)	Alameda	Alameda	Alameda	Alameda	Alameda	Alameda	Alameda	Alameda	Alameda	Alameda
Anthem Blue Cross (FP)	Alameda Contra Costa Fresno Sacramento San Francisco San Joaquin Santa Clara Stanislaus Tulare	Alameda Contra Costa Fresno Sacramento San Francisco San Joaquin Santa Clara Stanislaus Tulare	Alameda Contra Costa Fresno Sacramento San Francisco San Joaquin Santa Clara Stanislaus Tulare	Alameda Contra Costa Sacramento San Francisco San Joaquin Santa Clara Stanislaus Tulare	Alameda Contra Costa Fresno Kings Madera Sacramento San Francisco San Joaquin Santa Clara Stanislaus Tulare	Alameda Contra Costa Fresno Kings Madera Sacramento San Francisco Santa Clara Tulare	Alameda Contra Costa Fresno Kings Madera Region 1* Region 2[†] Sacramento San Benito San Francisco Santa Clara Tulare	Alameda Contra Costa Fresno Kings Madera Region 1* Region 2[†] Sacramento San Benito San Francisco Santa Clara Tulare	Alameda Contra Costa Fresno Kings Madera Region 1* Region 2[†] Sacramento San Benito San Francisco Santa Clara Tulare	Alameda Contra Costa Fresno Kings Madera Region 1* Region 2[†] Sacramento San Benito San Francisco Santa Clara Tulare
CA Health & Wellness (FP)	Orange	Orange	Orange	Orange	Orange	Orange	Imperial Region 1* Region 2[†] Orange	Imperial Region 1* Region 2[†] Orange	Imperial Region 1* Region 2[†] Orange	Imperial Region 1* Region 2[†] Orange
CalOptima (P)	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange	Orange
CalViva Health (P)					Fresno Kings Madera	Fresno Kings Madera	Fresno Kings Madera	Fresno Kings Madera	Fresno Kings Madera	Fresno Kings Madera
Care1st Health Plan (NP)	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego
CenCal Health (P)	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara	San Luis Obispo Santa Barbara
Central California Alliance (P)	Santa Barbara Monterey/ Santa Cruz	Santa Barbara Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz	Santa Barbara Merced Monterey/ Santa Cruz

**Region 1* includes Butte, Colusa, Glenn, Plumas, Sierra, Sutter, and Tehama counties.

[†]*Region 2* includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, Tuolumne, and Yuba counties.

Notes: Ownership type: *P* is public, *FP* is for profit, and *NP* is nonprofit. Year corresponds to reporting, not measurement, year.

Appendix A. Medi-Cal Insurers and Participating Counties, 2009–18, *continued*

INSURER (OWERSHIP TYPE)	PARTICIPATING COUNTIES									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Community Health Group (NP)	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego	San Diego
Contra Costa Health (P)	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa	Contra Costa
Gold Coast Health (P)					Ventura	Ventura	Ventura	Ventura	Ventura	Ventura
Health Net (FP)	Fresno Kern Los Angeles Sacramento San Diego Stanislaus Tulare	Fresno Kern Los Angeles Sacramento San Diego Stanislaus Tulare	Fresno Kern Los Angeles Sacramento San Diego Stanislaus Tulare	Kern Los Angeles Sacramento San Diego Stanislaus Tulare	Kern Los Angeles Sacramento San Diego Stanislaus Tulare	Kern Los Angeles Sacramento San Diego San Joaquin Stanislaus Tulare	Kern Los Angeles Sacramento San Diego San Joaquin Stanislaus Tulare	Kern Los Angeles Sacramento San Diego San Joaquin Stanislaus Tulare	Kern Los Angeles Sacramento San Diego San Joaquin Stanislaus Tulare	Kern Los Angeles Sacramento San Diego San Joaquin Stanislaus Tulare
Health Plan of San Joaquin (P)	San Joaquin	San Joaquin	San Joaquin	San Joaquin	San Joaquin	San Joaquin Stanislaus	San Joaquin Stanislaus	San Joaquin Stanislaus	San Joaquin Stanislaus	San Joaquin Stanislaus
Health Plan of San Mateo (P)	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo	San Mateo
Inland Empire Health (P)	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino	Riverside/ San Bernardino
Kaiser (NP)	Sacramento San Diego	Sacramento San Diego	Sacramento San Diego	Sacramento San Diego	Sacramento San Diego	Sacramento San Diego	KP North‡ San Diego	KP North‡ San Diego	KP North‡ San Diego	KP North‡ San Diego
L.A. Care (P)	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles	Los Angeles
Molina Healthcare (FP)	Riverside/ San Bernardino Sacramento San Diego	Riverside/ San Bernardino Sacramento San Diego	Riverside/ San Bernardino Sacramento San Diego	Riverside/ San Bernardino Sacramento San Diego	Riverside/ San Bernardino Sacramento San Diego	Riverside/ San Bernardino Sacramento San Diego	Imperial Riverside/ San Bernardino Sacramento San Diego	Imperial Riverside/ San Bernardino Sacramento San Diego	Imperial Riverside/ San Bernardino Sacramento San Diego	Imperial Riverside/ San Bernardino Sacramento San Diego

‡*KP North* includes Amador, El Dorado, Placer, and Sacramento.

Notes: Ownership type: *P* is public, *FP* is for profit, and *NP* is nonprofit. Year corresponds to reporting, not measurement, year.

Appendix A. Medi-Cal Insurers and Participating Counties, 2009–18, *continued*

INSURER (OWERSHIP TYPE)	PARTICIPATING COUNTIES									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Partnership HealthPlan (P)	Southeast[§]	Southeast[§]	Sonoma Southeast[§]	Sonoma Southeast[§]	Marin Mendocino Sonoma Southeast[§]	Marin Mendocino Sonoma Southeast[§]	Northeast[§] Northwest[§] Southeast[§] Southwest[§]	Northeast[§] Northwest[§] Southeast[§] Southwest[§]	Northeast[§] Northwest[§] Southeast[§] Southwest[§]	Northeast[§] Northwest[§] Southeast[§] Southwest[§]
San Francisco Health (P)	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco
Santa Clara Family Health (P)	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara	Santa Clara
Western Health (NP)	Sacramento									

[§]Partnership HealthPlan: *Northeast* includes Lassen, Modoc, Shasta, Siskiyou, and Trinity counties; *Northwest* includes Del Norte and Humboldt counties; *Southeast* includes Napa, Solano, and Yolo counties; *Southwest* includes Marin, Mendocino, Sonoma, and Lake counties.

Notes: Ownership type: *P* is public, *FP* is for profit, and *NP* is nonprofit. Year corresponds to reporting, not measurement, year.

Appendix B. Mean Statewide Quality Measure Scores, 2009–18

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Summary												**19**	**5**	**17**
Adolescent Well-Care Visits	41.6	40.9	41.5	51.9							3.13	1	0	0
Appropriate Treatment for Children with Upper Respiratory Infection	89.1	90.2	91.3								1.08	0	0	1
Annual Monitoring for Patients on Persistent Medications – ▸ ACE Inhibitors or ARBs				81.4	81.9	84.4	84.8	85.9	86.9	87.1	1.02	1	0	0
▸ Digoxin				85.9	89.1	89.4	53.8				-12.25	0	1	0
▸ Diuretics				80.3	81.9	84.1	85.2	85.7	86.4	87.1	1.09	1	0	0
Asthma Medication Ratio									61.1	61.4	0.32	0	0	1
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	28.8	31.0	26.7	27.1	29.6	29.2	29.1	30.9	34.5	38.4	0.90	1	0	0
Breast Cancer Screening	50.1	53.4	52.7						56.0	56.2	0.56	1	0	0
CAHPS Rating – ▸ Health Plan		1.3			1.8			1.5			0.03	0	0	1
▸ All Health Care		1.5			2.1			2.0			0.09	0	0	1
▸ Personal Doctor		1.8			3.1			2.5			0.13	0	0	1
▸ Getting Needed Care		1.4			2.2			1.5			0.05	0	0	1
▸ Getting Care Quickly		1.2			1.8			1.4			0.05	0	0	1
▸ How Well Doctors Communicate		1.6			2.2			3.4			0.30	1	0	0
Cervical Cancer Screening	68.0	68.0	67.2	68.6	62.1	60.2	56.2	51.6	55.3	58.2	-1.76	0	1	0
Childhood Immunization Status – Combination 3	72.3	71.6	72.1	74.1	73.8	71.9	68.7	67.5	69.2	69.0	-0.56	0	1	0
Children and Adolescents Access to Primary Care Practitioners – ▸ 12 to 24 Months				95.3	94.8	95.4	93.3	92.6	92.8	93.2	-0.47	0	1	0
▸ 25 Months to 6 Years				86.3	85.2	86.9	85.3	84.5	83.8	84.4	-0.39	0	1	0
▸ 7 to 11 Years				86.2	85.4	86.8	87.5	86.8	85.8	86.0	-0.02	0	0	1
▸ 12 to 19 Years				85.0	85.1	84.2	85.3	84.7	83.2	83.7	-0.26	0	0	1

Appendix B. Mean Statewide Quality Measure Scores, 2009–18, *continued*

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Controlling High Blood Pressure					55.1	52.3	57.2	58.4	60.3	62.7	1.81	1	0	0
Diabetes Care –														
▶ Blood Pressure Control (<140/90 mm Hg)		62.9	64.7	66.0	60.9	58.0	61.7	61.5	63.8	66.9	0.16	0	0	1
▶ Eye Exam (Retinal) Performed	57.3	51.6	48.6	53.9	48.2	49.5	50.9	53.6	55.9	59.2	0.50	1	0	0
▶ HbA1c Testing	81.1	82.1	82.8	83.7	82.4	82.4	85.1	85.0	86.3	87.1	0.62	1	0	0
▶ HbA1c Control (<8.0%)		48.5	48.8	51.6	49.3	45.6	47.6	49.0	51.6	53.4	0.40	1	0	0
▶ Medical Attention for Nephropathy	79.1	79.8	80.1	81.1	80.7	81.5	82.4	89.3	89.4	89.8	1.34	1	0	0
▶ HbA1c Poor Control (>9.0%)*	43.9	35.7	41.2	38.5	41.5	45.3	42.3	40.8	37.8	35.7	-0.33	0	0	1
▶ LDL-C Screening	76.6	77.8	77.2	77.3	76.5	75.1					-0.34	0	0	1
▶ LDL-C Control (<100 mg/dL)	36.5	36.6	38.5	39.6	37.6	36.9					0.13	0	0	1
▶ HbA1c Control (<7.0%)	33.8										0.00			
Immunizations for Adolescents – Combination 1				63.2	70.4	71.9	69.2				1.67	1	0	0
Immunizations for Adolescents – Combination 2									25.4	36.6	11.20	1	0	0
Medication Management for People with Asthma –														
▶ Medication Compliance 50% Total					50.5	49.5	49.7				-0.39	0	0	1
▶ Medication Compliance 75% Total					29.5	28.4	27.8				-0.85	0	0	1
Prenatal and Postpartum Care – Postpartum Care	60.1	59.9	61.7	62.2	58.3	57.1	58.6	59.3	64.7	66.2	0.46	1	0	0
Prenatal and Postpartum Care – Timeliness of Prenatal Care	82.5	83.9	83.1	84.4	82.1	80.4	80.4	79.7	82.9	83.6	-0.14	0	0	1
Screening for Clinical Depression and Follow-Up Plan – Performance									88.9					
Screening for Clinical Depression and Follow-Up Plan – Reporting									12.2					
Use of Appropriate Medications for People with Asthma	88.8										0.00			
Use of Imaging Studies for Low Back Pain*		81.9	80.7	82.0	80.9	80.7	79.5	77.3	73.4	75.5	-1.01	1	0	0

Appendix B. Mean Statewide Quality Measure Scores, 2009–18, *continued*

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents –														
▶ BMI Assessment		51.6	57.4	66.3	67.4	65.7	75.7				4.21	1	0	0
▶ Nutrition Counseling		57.2	63.2	68.9	67.9	65.6	67.8	68.8	73.3	75.3	1.70	1	0	0
▶ Physical Activity Counseling		38.4	45.2	52.5	53.1	55.0	57.2	60.8	66.8	70.5	3.56	1	0	0
Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life	73.2	72.9	74.2	75.1	72.0	73.3	71.5	69.8	72.1	74.0	-0.17	0	0	1
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	56.5			74.7							6.03	1	0	0

*Indicates measure where lower scores are better.

Note: Year corresponds to reporting, not measurement, year.

Appendix C. Mean Weighted Quality Measure Scores, 2009–18

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Summary												**19**	**5**	**17**
Adolescent Well-Care Visits	41.6	40.9	41.5	51.9							3.13	1	0	0
Annual Monitoring for Patients on Persistent Medications –														
▶ ACE Inhibitors or ARBs				81.4	81.9	84.4	84.8	85.9	86.9	87.1	1.02	1	0	0
▶ Digoxin				85.9	89.1	89.4	53.8				-12.25	0	1	0
▶ Diuretics				80.3	81.9	84.1	85.2	85.7	86.4	87.1	1.09	1	0	0
Appropriate Treatment for Children with Upper Respiratory Infection	89.1	90.2	91.3								1.08	0	0	1
Asthma Medication Ratio									61.1	61.4	0.32	0	0	1
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	28.8	31.0	26.7	27.1	29.6	29.2	29.1	30.9	34.5	38.4	0.90	1	0	0
Breast Cancer Screening	50.1	53.4	52.7						56.0	56.2	0.56	1	0	0
CAHPS Rating –														
▶ Health Plan		1.3			1.8			1.5			0.03	0	0	1
▶ All Health Care		1.5			2.1			2.0			0.09	0	0	1
▶ Personal Doctor		1.8			3.1			2.5			0.13	0	0	1
▶ Getting Needed Care		1.4			2.2			1.5			0.05	0	0	1
▶ Getting Care Quickly		1.2			1.8			1.4			0.05	0	0	1
▶ How Well Doctors Communicate		1.6			2.2			3.4			0.30	1	0	0
Cervical Cancer Screening	68.0	68.0	67.2	68.6	62.1	60.2	56.2	51.6	55.3	58.2	-1.76	0	1	0
Childhood Immunization Status – Combination 3	72.3	71.6	72.1	74.1	73.8	71.9	68.7	67.5	69.2	69.0	-0.56	0	1	0
Children and Adolescents Access to Primary Care Practitioners –														
▶ 12 to 24 Months				95.3	94.8	95.4	93.3	92.6	92.8	93.2	-0.47	0	1	0
▶ 25 Months to 6 Years				86.3	85.2	86.9	85.3	84.5	83.8	84.4	-0.39	0	1	0
▶ 7 to 11 Years				86.2	85.4	86.8	87.5	86.8	85.8	86.0	-0.02	0	0	1
▶ 12 to 19 Years				85.0	85.1	84.2	85.3	84.7	83.2	83.7	-0.26	0	0	1

Appendix C. Mean Weighted Quality Measure Scores, 2009–18, *continued*

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Controlling High Blood Pressure					55.1	52.3	57.2	58.4	60.3	62.7	1.81	1	0	0
Diabetes Care –														
▶ Blood Pressure Control (<140/90 mm Hg)		62.9	64.7	66.0	60.9	58.0	61.7	61.5	63.8	66.9	0.16	0	0	1
▶ Eye Exam (Retinal) Performed	57.3	51.6	48.6	53.9	48.2	49.5	50.9	53.6	55.9	59.2	0.50	1	0	0
▶ HbA1c Testing	81.1	82.1	82.8	83.7	82.4	82.4	85.1	85.0	86.3	87.1	0.62	1	0	0
▶ HbA1c Control (<8.0%)		48.5	48.8	51.6	49.3	45.6	47.6	49.0	51.6	53.4	0.40	1	0	0
▶ Medical Attention for Nephropathy	79.1	79.8	80.1	81.1	80.7	81.5	82.4	89.3	89.4	89.8	1.34	1	0	0
▶ HbA1c Poor Control (>9.0%)*	43.9	35.7	41.2	38.5	41.5	45.3	42.3	40.8	37.8	35.7	-0.33	0	0	1
▶ LDL-C Screening	76.6	77.8	77.2	77.3	76.5	75.1					-0.34	0	0	1
▶ LDL-C Control (<100 mg/dL)	36.5	36.6	38.5	39.6	37.6	36.9					0.13	0	0	1
▶ HbA1c Control (<7.0%)	33.8										0.00			
Immunizations for Adolescents – Combination 1				63.2	70.4	71.9	69.2				1.67	1	0	0
Immunizations for Adolescents – Combination 2									25.4	36.6	11.20	1	0	0
Medication Management for People with Asthma –														1
▶ Medication Compliance 50% Total					50.5	49.5	49.7				-0.39	0	0	
▶ Medication Compliance 75% Total					29.5	28.4	27.8				-0.85	0	0	1
Prenatal and Postpartum Care – Postpartum Care	60.1	59.9	61.7	62.2	58.3	57.1	58.6	59.3	64.7	66.2	0.46	1	0	0
Prenatal and Postpartum Care – Timeliness of Prenatal Care	82.5	83.9	83.1	84.4	82.1	80.4	80.4	79.7	82.9	83.6	-0.14	0	0	1
Screening for Clinical Depression and Follow-Up Plan – Performance									88.9					
Screening for Clinical Depression and Follow-Up Plan – Reporting									12.2					
Use of Appropriate Medications for People with Asthma	88.8										0.00			
Use of Imaging Studies for Low Back Pain*		81.9	80.7	82.0	80.9	80.7	79.5	77.3	73.4	75.5	-1.01	1	0	0

Appendix C. Mean Weighted Quality Measure Scores, 2009–18, *continued*

	MEAN SCORE										SLOPES ACROSS YEARS			
QUALITY MEASURE	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	SLOPE	BETTER	WORSE	SAME
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents –														
▶ BMI Assessment		51.6	57.4	66.3	67.4	65.7	75.7				4.21	1	0	0
▶ Nutrition Counseling		57.2	63.2	68.9	67.9	65.6	67.8	68.8	73.3	75.3	1.70	1	0	0
▶ Physical Activity Counseling		38.4	45.2	52.5	53.1	55.0	57.2	60.8	66.8	70.5	3.56	1	0	0
Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life	73.2	72.9	74.2	75.1	72.0	73.3	71.5	69.8	72.1	74.0	-0.17	0	0	1
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	56.5			74.7							6.03	1	0	0

*Indicates measure where lower scores are better.

Notes: Quality measure scores weighted by health plan enrollment. Year corresponds to reporting, not measurement, year.

Appendix D. Ranking of Health Plans on Average Quality Measure Scores, 2009–18

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	San Francisco Health	Central California Alliance-Monterey/Santa Cruz	San Francisco Health	CalOptima-Orange	Kaiser Sacramento	Kaiser SoCal	Kaiser SoCal	Kaiser SoCal	Kaiser SoCal	Kaiser SoCal
2	Kaiser Sacramento	Kaiser SoCal	CalOptima-Orange	Kaiser SoCal	Kaiser SoCal	San Francisco Health	Kaiser NorCal	Kaiser NorCal	Kaiser NorCal	Kaiser NorCal
3	CenCal Health-Santa Barbara	San Francisco Health	Kaiser SoCal	Central California Alliance-Monterey/Santa Cruz	CalOptima-Orange	Kaiser Sacramento	San Francisco Health	San Francisco Health	San Francisco Health	San Francisco Health
4	Kaiser SoCal	CalOptima-Orange	Central California Alliance-Monterey/Santa Cruz	Kaiser Sacramento	Central California Alliance-Monterey/Santa Cruz	CalOptima-Orange	CalOptima-Orange	CenCal Health-Santa Barbara	Community Health Group	CalOptima-Orange
5	Health Net-Fresno	Kaiser Sacramento	Kaiser Sacramento	San Francisco Health	CenCal Health-Santa Barbara	CenCal Health-Santa Barbara	CenCal Health-Santa Barbara	Health Plan of San Mateo	Health Plan of San Mateo	CenCal Health-Santa Barbara
6	CalOptima-Orange	Health Plan of San Mateo	CenCal Health-Santa Barbara	Health Plan of San Mateo	San Francisco Health	Central California Alliance-Monterey/Santa Cruz	Central California Alliance-Monterey/Santa Cruz	Gold Coast Health	CalOptima-Orange	CenCal Health-San Luis Obispo
7	Health Net-Tulare	CenCal Health-Santa Barbara	Anthem Blue Cross-Santa Clara	CenCal Health-Santa Barbara	Health Plan of San Mateo	Health Plan of San Mateo	Santa Clara Family Health	CalOptima-Orange	CenCal Health-San Luis Obispo	Central California Alliance-Monterey/Santa Cruz
8	Santa Clara Family Health	Health Net-Fresno	Anthem Blue Cross-San Francisco	Inland Empire Health	Partnership HealthPlan-Sonoma	Partnership HealthPlan-Sonoma	Partnership HealthPlan-Southeast	Contra Costa Health	CA Health & Wellness-Imperial	Community Health Group
9	Contra Costa Health	Anthem Blue Cross-San Francisco	Health Plan of San Mateo	Anthem Blue Cross-San Francisco	Partnership HealthPlan-Southeast	Community Health Group	CalViva Health-Madera	Central California Alliance-Monterey/Santa Cruz	Contra Costa Health	Health Plan of San Mateo
10	Partnership HealthPlan-Southeast	Health Net-Los Angeles	Health Net-Tulare	Health Plan of San Joaquin-San Joaquin	CenCal Health-San Luis Obispo	Partnership HealthPlan-Southeast	Community Health Group	Community Health Group	Central California Alliance-Monterey/Santa Cruz	CA Health & Wellness-Imperial
11	Health Net-San Diego	L.A. Care	Health Net-Fresno	Health Net-Tulare	Inland Empire Health	Santa Clara Family Health	Health Plan of San Mateo	CA Health & Wellness-Imperial	Anthem Blue Cross-Tulare	Molina Healthcare Plan-San Diego

Appendix D. Ranking of Health Plans on Average Quality Measure Scores, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
12	Health Net-Stanislaus	Health Net-San Diego	Contra Costa Health	Partnership HealthPlan-Sonoma	Community Health Group	Inland Empire Health	Inland Empire Health	CenCal Health-San Luis Obispo	CenCal Health-Santa Barbara	CalViva Health-Madera
13	Central California Alliance-Monterey/Santa Cruz	Health Net-Tulare	Santa Clara Family Health	Santa Clara Family Health	Health Net-Tulare	Molina Healthcare Plan-San Diego	Contra Costa Health	Anthem Blue Cross-Tulare	Anthem Blue Cross-San Francisco	Partnership HealthPlan-Southeast
14	Anthem Blue Cross-San Francisco	Partnership HealthPlan-Southeast	Care1st Partner Plan-San Diego	Community Health Group	Molina Healthcare Plan-San Diego	CenCal Health-San Luis Obispo	Health Net-Tulare	CalViva Health-Madera	Partnership HealthPlan-Southeast	Anthem Blue Cross-Tulare
15	Health Plan of San Mateo	Santa Clara Family Health	Health Plan of San Joaquin-San Joaquin	Health Net-Los Angeles	Central California Alliance-Merced	Central California Alliance-Merced	Molina Healthcare Plan-San Diego	L.A. Care	Molina Healthcare Plan-San Diego	Health Net-Tulare
16	CenCal Health-San Luis Obispo	Contra Costa Health	Community Health Group	Molina Healthcare Plan-San Diego	Santa Clara Family Health	CalViva Health-Madera	Partnership HealthPlan of California-Southwest	Partnership HealthPlan-Southeast	CalViva Health-Madera	Anthem Blue Cross-Madera
17	Molina Healthcare Plan-San Diego	Anthem Blue Cross-Santa Clara	Health Net-Los Angeles	Partnership HealthPlan-Southeast	Health Net-San Diego	Health Net-Tulare	Central California Alliance-Merced	Health Net-Tulare	Care1st Partner Plan-San Diego	L.A. Care
18	Anthem Blue Cross-Fresno	Inland Empire Health	L.A. Care	Alameda Alliance	Health Plan of San Joaquin-San Joaquin	Contra Costa Health	Anthem Blue Cross-Santa Clara	Inland Empire Health	Health Net-Tulare	Contra Costa Health
19	Health Net-Los Angeles	Care1st Partner Plan-San Diego	Partnership HealthPlan-Southeast	Anthem Blue Cross-Santa Clara	CalViva Health-Fresno	Partnership HealthPlan of California-Marin	L.A. Care	Anthem Blue Cross-San Francisco	Partnership HealthPlan of California-Southwest	Alameda Alliance
20	Health Plan of San Joaquin-San Joaquin	Molina Healthcare Plan-San Diego	Health Net-Stanislaus	CenCal Health-San Luis Obispo	Anthem Blue Cross-San Francisco	Health Plan of San Joaquin-San Joaquin	CalViva Health-Fresno	Partnership HealthPlan of California-Southwest	Anthem Blue Cross-Madera	Partnership HealthPlan of California-Southwest
21	Western Health-Sacramento	Health Net-Stanislaus	Inland Empire Health	L.A. Care	Health Net-Stanislaus	Kern Health	Gold Coast Health	Santa Clara Family Health	Alameda Alliance	Anthem Blue Cross-San Francisco
22	Care1st Partner Plan-San Diego	Health Plan of San Joaquin-San Joaquin	Molina Healthcare Plan-San Diego	Care1st Partner Plan-San Diego	L.A. Care	Anthem Blue Cross-San Francisco	CenCal Health-San Luis Obispo	Molina Healthcare Plan-San Diego	L.A. Care	Santa Clara Family Health

Appendix D. Ranking of Health Plans on Average Quality Measure Scores, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
23	L.A. Care	CenCal Health-San Luis Obispo	Partnership HealthPlan-Sonoma	Central California Alliance-Merced	CalViva Health-Madera	CalViva Health-Fresno	CA Health & Wellness-Imperial	CalViva Health-Fresno	Santa Clara Family Health	Anthem Blue Cross-Contra Costa
24	Molina Healthcare Plan-Sacramento	Molina Healthcare Plan-Sacramento	Health Net-Sacramento	Health Net-Stanislaus	Gold Coast Health	Health Net-Stanislaus	Anthem Blue Cross-Madera	Care1st Partner Plan-San Diego	Health Net-Los Angeles	CalViva Health-Fresno
25	Anthem Blue Cross-Santa Clara	Health Net-Sacramento	CenCal Health-San Luis Obispo	Contra Costa Health	Alameda Alliance	L.A. Care	Anthem Blue Cross-San Francisco	Anthem Blue Cross-Madera	Molina Healthcare-Imperial	Inland Empire Health
26	Health Net-Sacramento	Kern Health	Central California Alliance-Merced	Health Net-Sacramento	Contra Costa Health	Health Net-Los Angeles	Health Net-Los Angeles	Alameda Alliance	Inland Empire Health	Gold Coast Health
27	Inland Empire Health	Health Net-Kern	Alameda Alliance	Health Net-San Diego	Anthem Blue Cross-Santa Clara	Molina Healthcare-Riverside/ San Bernardino	Health Net-Stanislaus	Health Net-Los Angeles	Anthem Blue Cross-Santa Clara	CalViva Health-Kings
28	Kern Health	Molina Healthcare-Riverside/ San Bernardino	Health Net-Kern	Molina Healthcare Plan-Sacramento	Kern Health	Gold Coast Health	Care1st Partner Plan-San Diego	Central California Alliance-Merced	CalViva Health-Fresno	Care1st Partner Plan-San Diego
29	Health Net-Kern	Anthem Blue Cross-Fresno	Health Net-San Diego	Molina Healthcare-Riverside/ San Bernardino	Health Net-Los Angeles	Anthem Blue Cross-Tulare	Anthem Blue Cross-Tulare	Anthem Blue Cross-Santa Clara	CalViva Health-Kings	Kern Health
30	Anthem Blue Cross-Tulare	Alameda Alliance	Molina Healthcare Plan-Sacramento	Health Net-Kern	Anthem Blue Cross-Madera	Anthem Blue Cross-Santa Clara	Health Net-San Diego	Kern Health	Central California Alliance-Merced	Anthem Blue Cross-Santa Clara
31	Alameda Alliance	Anthem Blue Cross-Stanislaus	Kern Health	Anthem Blue Cross-Stanislaus	Care1st Partner Plan-San Diego	Anthem Blue Cross-Madera	Health Net-Kern	Anthem Blue Cross-Region 1	Health Net-San Diego	Health Net-Los Angeles
32	Community Health Group	Anthem Blue Cross-Tulare	Molina Healthcare-Riverside/ San Bernardino	Kern Health	Partnership HealthPlan of California-Mendocino	Health Plan of San Joaquin-Stanislaus	Health Plan of San Joaquin-San Joaquin	Anthem Blue Cross-Kings	Anthem Blue Cross-Region 1	Central California Alliance-Merced
33	Anthem Blue Cross-Stanislaus	Community Health Group	Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Tulare	Partnership HealthPlan of California-Marin	Partnership HealthPlan of California-Mendocino	Anthem Blue Cross-Region 1	Health Plan of San Joaquin-San Joaquin	CA Health & Wellness-Region 1	Anthem Blue Cross-Kings

Appendix D. Ranking of Health Plans on Average Quality Measure Scores, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
34	Molina Healthcare-Riverside/ San Bernardino	Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Tulare	Anthem Blue Cross-San Joaquin	CalViva Health-Kings	Health Net-San Diego	Health Plan of San Joaquin-Stanislaus	Molina Healthcare-Imperial	Molina Healthcare-Riverside/ San Bernardino	Molina Healthcare Plan-Sacramento
35	Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Fresno	Anthem Blue Cross-Alameda	Molina Healthcare-Riverside/ San Bernardino	Alameda Alliance	CalViva Health-Kings	CalViva Health-Kings	Gold Coast Health	Health Net-San Diego
36	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Alameda	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Sacramento	Health Net-Sacramento	Health Net-Kern	Molina Healthcare-Riverside/ San Bernardino	Health Net-San Diego	CA Health & Wellness-Region 2	CA Health & Wellness-Region 1
37	Anthem Blue Cross-Alameda	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Stanislaus	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Stanislaus	Care1st Partner Plan-San Diego	Kern Health	CA Health & Wellness-Region 1	Kern Health	Molina Healthcare-Imperial
38	Anthem Blue Cross-Contra Costa		Anthem Blue Cross-Alameda		Health Net-Kern	CalViva Health-Kings	Health Net-Sacramento	Partnership HealthPlan-Northwest	Molina Healthcare Plan-Sacramento	Anthem Blue Cross-Alameda
39			Anthem Blue Cross-Contra Costa		Anthem Blue Cross-Tulare	Molina Healthcare Plan-Sacramento	Partnership HealthPlan-Northwest	Anthem Blue Cross-Fresno	Anthem Blue Cross-Fresno	Anthem Blue Cross-Region 1
40					Anthem Blue Cross-Kings	Health Net-Sacramento	Partnership HealthPlan-Northeast	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Kings	Anthem Blue Cross-San Benito
41					Molina Healthcare Plan-Sacramento	Anthem Blue Cross-Fresno	Anthem Blue Cross-Fresno	Health Net-Kern	Partnership HealthPlan-Northwest	Molina Healthcare-Riverside/ San Bernardino
42					Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Region 2	Health Plan of San Joaquin-Stanislaus	Anthem Blue Cross-Fresno
43					Anthem Blue Cross-Fresno	Anthem Blue Cross-Contra Costa	Alameda Alliance	Molina Healthcare Plan-Sacramento	Anthem Blue Cross-Alameda	Health Plan of San Joaquin-San Joaquin
44					Anthem Blue Cross-Sacramento	Anthem Blue Cross-Kings	Anthem Blue Cross-Sacramento	Health Plan of San Joaquin-Stanislaus	Anthem Blue Cross-Region 2	Anthem Blue Cross-Region 2

Appendix D. Ranking of Health Plans on Average Quality Measure Scores, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
45					Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Alameda	Molina Healthcare Plan-Sacramento	Health Net-Sacramento	Anthem Blue Cross-Contra Costa	Health Net-Kern
46					Anthem Blue Cross-Alameda	Health Net-San Joaquin	Anthem Blue Cross-Region 2	Anthem Blue Cross-Sacramento	Health Net-Kern	Partnership HealthPlan-Northeast
47							Molina Healthcare-Imperial	Health Net-Stanislaus	Anthem Blue Cross-Sacramento	Partnership HealthPlan-Northwest
48							Anthem Blue Cross-Alameda	Anthem Blue Cross-Alameda	Health Net-Stanislaus	CA Health & Wellness-Region 2
49							CA Health & Wellness-Region 1	Molina Healthcare-Riverside/San Bernardino	Anthem Blue Cross-San Benito	Anthem Blue Cross-Sacramento
50							Anthem Blue Cross-Kings	CA Health & Wellness-Region 2	Partnership HealthPlan-Northeast	Health Net-Stanislaus
51							Health Net-San Joaquin	Anthem Blue Cross-San Benito	Health Plan of San Joaquin-San Joaquin	Health Net-Sacramento
52							CA Health & Wellness-Region 2	Partnership HealthPlan-Northeast	Health Net-Sacramento	Health Plan of San Joaquin-Stanislaus
53							Anthem Blue Cross-San Benito	Health Net-San Joaquin	Health Net-San Joaquin	Health Net-San Joaquin

Notes: Year corresponds to reporting, not measurement, year. Partnership HealthPlan: *Northeast* includes Lassen, Modoc, Shasta, Siskiyou, and Trinity counties; *Northwest* includes Del Norte and Humboldt counties; *Southeast* includes Napa, Solano, and Yolo counties; *Southwest* includes Marin, Mendocino, Sonoma, and Lake counties. *Region 1* includes Butte, Colusa, Glenn, Plumas, Sierra, Sutter, and Tehama counties. *Region 2* includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, Tuolumne, and Yuba counties. See Appendix A for each plan's ownership type.

Appendix E. Ranking of Health Plans on Average Quality Measure Scores, Adjusted, 2009–18

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	Kaiser Sacramento	Central California Alliance-Monterey/ Santa Cruz	San Francisco Health	CalOptima-Orange	Kaiser Sacramento	Kaiser SoCal	Kaiser NorCal	Kaiser SoCal	Kaiser SoCal	Kaiser SoCal
2	San Francisco Health	San Francisco Health	Central California Alliance-Monterey/ Santa Cruz	Kaiser SoCal	Kaiser SoCal	Kaiser Sacramento	Kaiser SoCal	Kaiser NorCal	Kaiser NorCal	Kaiser NorCal
3	Health Net-Fresno	Kaiser SoCal	Kaiser SoCal	Kaiser Sacramento	CalOptima-Orange	San Francisco Health	San Francisco Health	Health Plan of San Mateo	Community Health Group	CalOptima-Orange
4	Kaiser SoCal	Kaiser Sacramento	CalOptima-Orange	Central California Alliance-Monterey/ Santa Cruz	Central California Alliance-Monterey/ Santa Cruz	CalOptima-Orange	CalOptima-Orange	Gold Coast Health	CalOptima-Orange	Central California Alliance-Monterey/ Santa Cruz
5	CenCal Health-Santa Barbara	CalOptima-Orange	Kaiser Sacramento	San Francisco Health	CenCal Health-Santa Barbara	Health Plan of San Mateo	Partnership HealthPlan-Southeast	CenCal Health-Santa Barbara	San Francisco Health	CenCal Health-San Luis Obispo
6	Health Net-Tulare	Health Net-Fresno	Health Net-Fresno	CenCal Health-Santa Barbara	Partnership HealthPlan-Sonoma	Partnership HealthPlan-Southeast	CenCal Health-Santa Barbara	San Francisco Health	Contra Costa Health	San Francisco Health
7	Partnership HealthPlan-Southeast	Anthem Blue Cross-San Francisco	Health Plan of San Mateo	Inland Empire Health	San Francisco Health	Central California Alliance-Monterey/ Santa Cruz	CalViva Health-Madera	CalOptima-Orange	Molina Healthcare Plan-San Diego	CenCal Health-Santa Barbara
8	Contra Costa Health	Health Plan of San Mateo	Anthem Blue Cross-San Francisco	Health Plan of San Mateo	Health Plan of San Mateo	CenCal Health-Santa Barbara	Inland Empire Health	Contra Costa Health	Anthem Blue Cross-Tulare	Community Health Group
9	Health Net-San Diego	Health Net-Los Angeles	CenCal Health-Santa Barbara	Alameda Alliance	Inland Empire Health	Community Health Group	Community Health Group	L.A. Care	CenCal Health-San Luis Obispo	Anthem Blue Cross-Tulare
10	Health Net-Stanislaus	CenCal Health-Santa Barbara	Health Plan of San Joaquin-San Joaquin	Health Plan of San Joaquin-San Joaquin	Health Plan of San Joaquin-San Joaquin	Inland Empire Health	Central California Alliance-Monterey/ Santa Cruz	Central California Alliance-Monterey/ Santa Cruz	Central California Alliance-Monterey/ Santa Cruz	Molina Healthcare Plan-San Diego
11	Santa Clara Family Health	L.A. Care	Contra Costa Health	Partnership HealthPlan-Southeast	Partnership HealthPlan-Southeast	Molina Healthcare Plan-San Diego	Santa Clara Family Health	CA Health & Wellness-Imperial	Partnership HealthPlan-Southeast	Partnership HealthPlan-Southeast

Appendix E. Ranking of Health Plans on Average Quality Measure Scores, Adjusted, 2009–18, *continued*

Public Nonprofit For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
12	CalOptima-Orange	Inland Empire Health	Anthem Blue Cross-Santa Clara	Partnership HealthPlan-Sonoma	Alameda Alliance	Santa Clara Family Health	Contra Costa Health	CalViva Health-Madera	Care1st Partner Plan-San Diego	CA Health & Wellness-Imperial
13	Western Health -Sacramento	Health Plan of San Joaquin-San Joaquin	Health Net-Tulare	Anthem Blue Cross-San Francisco	CenCal Health-San Luis Obispo	Contra Costa Health	Health Net-Tulare	Santa Clara Family Health	CenCal Health-Santa Barbara	Health Net-Tulare
14	CenCal Health-San Luis Obispo	Health Net-Tulare	L.A. Care	Health Net-Tulare	Community Health Group	Central California Alliance-Merced	Partnership HealthPlan of California-Southwest	Community Health Group	Health Net-Tulare	Health Plan of San Mateo
15	Health Net-Los Angeles	Contra Costa Health	Health Net-Los Angeles	Health Net-Los Angeles	Molina Healthcare Plan-San Diego	Kern Health	Molina Healthcare Plan-San Diego	Partnership HealthPlan-Southeast	CA Health & Wellness-Imperial	Contra Costa Health
16	Molina Healthcare Plan-San Diego	Partnership HealthPlan-Southeast	Santa Clara Family Health	Community Health Group	Health Net-Tulare	CenCal Health-San Luis Obispo	CalViva Health-Fresno	Health Net-Tulare	Inland Empire Health	CalViva Health-Madera
17	Central California Alliance-Monterey/Santa Cruz	Anthem Blue Cross-Santa Clara	Care1st Partner Plan-San Diego	Molina Healthcare Plan-San Diego	Contra Costa Health	Health Plan of San Joaquin-San Joaquin	Central California Alliance-Merced	Anthem Blue Cross-Tulare	L.A. Care	L.A. Care
18	Anthem Blue Cross-Fresno	Health Net-San Diego	Community Health Group	L.A. Care	Health Net-San Diego	CalViva Health-Fresno	L.A. Care	CenCal Health-San Luis Obispo	Health Net-Los Angeles	CalViva Health-Fresno
19	Health Plan of San Joaquin-San Joaquin	Santa Clara Family Health	Inland Empire Health	Santa Clara Family Health	Central California Alliance-Merced	CalViva Health-Madera	Health Plan of San Mateo	Partnership HealthPlan of California-Southwest	CalViva Health-Fresno	Anthem Blue Cross-Contra Costa
20	Health Net-Sacramento	Molina Healthcare-Riverside/San Bernardino	Health Net-Stanislaus	CenCal Health-San Luis Obispo	L.A. Care	Partnership HealthPlan-Sonoma	Anthem Blue Cross-San Francisco	Molina Healthcare Plan-San Diego	Health Plan of San Mateo	CalViva Health-Kings
21	Anthem Blue Cross-San Francisco	Molina Healthcare Plan-San Diego	Partnership HealthPlan-Southeast	Anthem Blue Cross-Santa Clara	Santa Clara Family Health	L.A. Care	Anthem Blue Cross-Madera	Alameda Alliance	Partnership HealthPlan of California-Southwest	Alameda Alliance
22	Care1st Partner Plan-San Diego	Molina Healthcare Plan-Sacramento	Health Net-Sacramento	Contra Costa Health	CalViva Health-Madera	Health Net-Tulare	Gold Coast Health	Inland Empire Health	CalViva Health-Madera	Gold Coast Health

Appendix E. Ranking of Health Plans on Average Quality Measure Scores, Adjusted, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
23	L.A. Care	Care1st Partner Plan-San Diego	Molina Healthcare Plan-San Diego	Care1st Partner Plan-San Diego	Anthem Blue Cross-San Francisco	Health Net-Los Angeles	CenCal Health-San Luis Obispo	CalViva Health-Fresno	CalViva Health-Kings	Partnership HealthPlan of California-Southwest
24	Molina Healthcare Plan-Sacramento	Health Net-Stanislaus	Central California Alliance-Merced	Central California Alliance-Merced	Health Net-Stanislaus	Health Net-Stanislaus	Health Net-Los Angeles	Anthem Blue Cross-Madera	Anthem Blue Cross-San Francisco	Anthem Blue Cross-Madera
25	Health Plan of San Mateo	Health Net-Sacramento	Partnership HealthPlan-Sonoma	Health Net-Sacramento	CalViva Health-Fresno	Molina Healthcare-Riverside/San Bernardino	Anthem Blue Cross-Santa Clara	Central California Alliance-Merced	Alameda Alliance	Inland Empire Health
26	Inland Empire Health	Kern Health	Health Net-Kern	Health Net-Stanislaus	Health Net-Los Angeles	Partnership HealthPlan of California-Marin	CA Health & Wellness-Imperial	Health Net-Los Angeles	Anthem Blue Cross-Madera	Kern Health
27	Alameda Alliance	Health Net-Kern	Alameda Alliance	Health Net-Kern	Gold Coast Health	Anthem Blue Cross-San Francisco	Health Net-Kern	Care1st Partner Plan-San Diego	Santa Clara Family Health	Anthem Blue Cross-Kings
28	Anthem Blue Cross-Tulare	Anthem Blue Cross-Fresno	CenCal Health-San Luis Obispo	Molina Healthcare Plan-Sacramento	Anthem Blue Cross-Madera	Alameda Alliance	Health Net-Stanislaus	Anthem Blue Cross-San Francisco	Molina Healthcare-Riverside/San Bernardino	Care1st Partner Plan-San Diego
29	Anthem Blue Cross-Santa Clara	CenCal Health-San Luis Obispo	Molina Healthcare Plan-Sacramento	Health Net-San Diego	Anthem Blue Cross-Santa Clara	Health Net-San Diego	Anthem Blue Cross-Tulare	Health Plan of San Joaquin-San Joaquin	Health Net-San Diego	Health Net-Los Angeles
30	Kern Health	Anthem Blue Cross-San Joaquin	Health Net-San Diego	Kern Health	Kern Health	Gold Coast Health	Care1st Partner Plan-San Diego	Anthem Blue Cross-Region 1	Central California Alliance-Merced	Central California Alliance-Merced
31	Health Net-Kern	Alameda Alliance	Kern Health	Molina Healthcare-Riverside/San Bernardino	Care1st Partner Plan-San Diego	Health Plan of San Joaquin-Stanislaus	Health Net-San Diego	Anthem Blue Cross-Santa Clara	Anthem Blue Cross-Fresno	Santa Clara Family Health
32	Community Health Group	Anthem Blue Cross-Tulare	Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Stanislaus	CalViva Health-Kings	Partnership HealthPlan of California-Mendocino	Anthem Blue Cross-Region 1	Anthem Blue Cross-Kings	Anthem Blue Cross-Region 1	Anthem Blue Cross-San Francisco

Appendix E. Ranking of Health Plans on Average Quality Measure Scores, Adjusted, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
33	Anthem Blue Cross-Stanislaus	Anthem Blue Cross-Stanislaus	Molina Healthcare-Riverside/ San Bernardino	Anthem Blue Cross-Tulare	Health Net-Sacramento	Anthem Blue Cross-Madera	Health Plan of San Joaquin-San Joaquin	Anthem Blue Cross-Contra Costa	Molina Healthcare-Imperial	Molina Healthcare Plan-Sacramento
34	Molina Healthcare-Riverside/ San Bernardino	Community Health Group	Anthem Blue Cross-Fresno	Anthem Blue Cross-San Joaquin	Partnership HealthPlan of California-Marin	CalViva Health-Kings	Health Net-Sacramento	CalViva Health-Kings	Anthem Blue Cross-Kings	Anthem Blue Cross-Fresno
35	Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Alameda	Anthem Blue Cross-Tulare	Anthem Blue Cross-Alameda	Partnership HealthPlan of California-Mendocino	Anthem Blue Cross-Tulare	Kern Health	Molina Healthcare-Imperial	Kern Health	Anthem Blue Cross-Santa Clara
36	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Stanislaus	Anthem Blue Cross-Sacramento	Molina Healthcare-Riverside/ San Bernardino	Anthem Blue Cross-Santa Clara	Molina Healthcare-Riverside/ San Bernardino	CA Health & Wellness-Region 1	Anthem Blue Cross-Santa Clara	Health Net-San Diego
37	Anthem Blue Cross-Alameda	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Sacramento	Anthem Blue Cross-Contra Costa	Health Net-Kern	Health Net-Kern	Partnership HealthPlan-Northwest	Molina Healthcare Plan-Sacramento	CA Health & Wellness-Region 1	Molina Healthcare-Riverside/ San Bernardino
38	Anthem Blue Cross-Contra Costa		Anthem Blue Cross-Alameda		Anthem Blue Cross-Stanislaus	Molina Healthcare Plan-Sacramento	Anthem Blue Cross-Sacramento	Kern Health	Partnership HealthPlan-Northwest	CA Health & Wellness-Region 1
39			Anthem Blue Cross-Contra Costa		Anthem Blue Cross-Tulare	Health Net-Sacramento	CalViva Health-Kings	Anthem Blue Cross-Sacramento	Molina Healthcare Plan-Sacramento	Health Plan of San Joaquin-San Joaquin
40					Molina Healthcare Plan-Sacramento	Care1st Partner Plan-San Diego	Molina Healthcare Plan-Sacramento	Health Net-San Diego	CA Health & Wellness-Region 2	Anthem Blue Cross-Alameda
41					Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Sacramento	Health Plan of San Joaquin-Stanislaus	Health Net-Stanislaus	Gold Coast Health	Health Net-Kern
42					Anthem Blue Cross-Sacramento	Anthem Blue Cross-Fresno	Anthem Blue Cross-Fresno	Anthem Blue Cross-Region 2	Anthem Blue Cross-Contra Costa	Partnership HealthPlan-Northeast
43					Anthem Blue Cross-Kings	Anthem Blue Cross-Contra Costa	Alameda Alliance	Health Net-Sacramento	Health Net-Kern	Anthem Blue Cross-Region 1

Appendix E. Ranking of Health Plans on Average Quality Measure Scores, Adjusted, 2009–18, *continued*

Public | Nonprofit | For Profit

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
44					Anthem Blue Cross-Fresno	Anthem Blue Cross-Kings	Anthem Blue Cross-Contra Costa	Anthem Blue Cross-Alameda	Partnership HealthPlan-Northeast	Molina Healthcare-Imperial
45					Anthem Blue Cross-San Joaquin	Anthem Blue Cross-Alameda	Anthem Blue Cross-Alameda	Health Plan of San Joaquin-Stanislaus	Anthem Blue Cross-Sacramento	Anthem Blue Cross-San Benito
46					Anthem Blue Cross-Alameda	Health Net-San Joaquin	Partnership HealthPlan-Northeast	Anthem Blue Cross-Fresno	Health Plan of San Joaquin-San Joaquin	Anthem Blue Cross-Region 2
47							CA Health & Wellness-Region 1	Health Net-Kern	Anthem Blue Cross-Region 2	Partnership HealthPlan-Northwest
48							Anthem Blue Cross-Region 2	Partnership HealthPlan-Northwest	Health Plan of San Joaquin-Stanislaus	Anthem Blue Cross-Sacramento
49							Anthem Blue Cross-Kings	CA Health & Wellness-Region 2	Health Net-Sacramento	Health Net-Sacramento
50							Health Net-San Joaquin	Molina Healthcare-Riverside/San Bernardino	Health Net-Stanislaus	CA Health & Wellness-Region 2
51							Molina Healthcare-Imperial	Partnership HealthPlan-Northeast	Anthem Blue Cross-Alameda	Health Net-Stanislaus
52							CA Health & Wellness-Region 2	Health Net-San Joaquin	Anthem Blue Cross-San Benito	Health Plan of San Joaquin-Stanislaus
53							Anthem Blue Cross-San Benito	Anthem Blue Cross-San Benito	Health Net-San Joaquin	Health Net-San Joaquin

Notes: *Adjusted* for county race, ethnicity, education, and English proficiency among those below 138% of the federal poverty level as well as for the number of physician full-time equivalents per capita. Year corresponds to reporting, not measurement, year. Partnership HealthPlan: *Northeast* includes Lassen, Modoc, Shasta, Siskiyou, and Trinity counties; *Northwest* includes Del Norte and Humboldt counties; *Southeast* includes Napa, Solano, and Yolo counties; *Southwest* includes Marin, Mendocino, Sonoma, and Lake counties. *Region 1* includes Butte, Colusa, Glenn, Plumas, Sierra, Sutter, and Tehama counties. *Region 2* includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, Tuolumne, and Yuba counties. See Appendix A for each plan's ownership type.

Appendix F. Mean and Differences in Standard Deviations for HEDIS Measures, by Health Plan Ownership, 2009–18

	MEAN SCORE			DIFFERENCES MEASURED IN STANDARD DEVIATIONS*		
QUALITY MEASURE	PUBLIC	NONPROFIT	FOR PROFIT	PUBLIC VS. NONPROFIT	PUBLIC VS. FOR PROFIT	NONPROFIT VS. FOR PROFIT
Adolescent Well-Care Visits	46.9	40.7	42.3	0.78†	0.52†	-0.18
Annual Monitoring for Patients on Persistent Medications –						
▶ ACE Inhibitors or ARBs	85.6	90.1	83.3	-1.25†	0.49†	1.45†
▶ Digoxin	78.8	76.6	75.9	0.13	0.16	0.04
▶ Diuretics	85.5	89.7	83.0	-1.18†	0.53†	1.38†
Appropriate Treatment for Children with Upper Respiratory Infection	90.7	94.1	88.9	-0.80†	0.39	1.14†
Asthma Medication Ratio	61.2	68.1	60.3	-0.34	0.11	0.39
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	30.7	37.3	30.0	-0.52†	0.06	0.55†
Breast Cancer Screening	56.3	63.5	50.4	-0.66†	0.97†	1.15†
Cervical Cancer Screening	62.6	71.5	56.9	-0.79†	0.65†	1.21†
Childhood Immunization Status – Combination 3	73.5	76.1	67.3	-0.35†	0.78†	1.20†
Children and Adolescents Access to Primary Care Practitioners –						
▶ 12 to 24 Months	94.6	94.2	93.0	0.07	0.55†	0.27
▶ 25 Months to 6 Years	86.5	86.5	83.6	-0.01	0.64†	0.48
▶ 7 to 11 Years	87.7	87.9	84.9	-0.05	0.65†	0.56†
▶ 12 to 19 Years	85.7	86.4	82.8	-0.11	0.69†	0.54†
Controlling High Blood Pressure	59.5	69.1	54.7	-0.77†	0.63†	1.15†
Diabetes Care –						
▶ Blood Pressure Control (<140/90 mm Hg)	64.8	71.6	59.7	-0.66†	0.70†	1.15†
▶ Eye Exam (Retinal) Performed	55.8	62.3	48.9	-0.54†	0.69†	1.13†
▶ HbA1c Testing	85.4	90.1	81.8	-1.06†	0.77†	1.62†
▶ HbA1c Control (<8.0%)	52.0	57.5	46.0	-0.71†	0.85†	1.45†
▶ Medical Attention for Nephropathy	84.6	87.8	82.5	-0.58†	0.36†	0.82†
▶ HbA1c Poor Control (>9.0%)‡	38.0	31.1	43.8	0.81†	-0.70†	-1.40†

Appendix F. Mean and Differences in Standard Deviations for HEDIS Measures, by Health Plan Ownership, 2009–18, *continued*

	MEAN SCORE			DIFFERENCES MEASURED IN STANDARD DEVIATIONS*		
QUALITY MEASURE	PUBLIC	NONPROFIT	FOR PROFIT	PUBLIC VS. NONPROFIT	PUBLIC VS. FOR PROFIT	NONPROFIT VS. FOR PROFIT
▶ LDL-C Screening	78.6	85.1	73.1	-1.11†	0.96†	1.63†
▶ LDL-C Control (<100 mg/dL)	39.9	50.9	32.6	-1.03†	1.20†	1.69†
▶ HbA1c Control (<7.0%)	33.0	35.0	33.8	-0.30	-0.12	0.19
Immunizations for Adolescents – Combination 1	69.5	77.3	66.9	-0.81†	0.30	1.08†
Immunizations for Adolescents – Combination 2	33.5	35.0	28.1	-0.13	0.52†	0.67
Medication Management for People with Asthma –						
▶ Medication Compliance 50% Total	51.0	53.3	48.1	-0.22	0.28	0.42
▶ Medication Compliance 75% Total	28.8	30.5	27.9	-0.23	0.09	0.27
Prenatal and Postpartum Care – Postpartum Care	64.5	66.0	56.8	-0.19	1.03†	1.13†
Prenatal and Postpartum Care – Timeliness of Prenatal Care	83.5	85.4	80.4	-0.31	0.51†	0.76†
Screening for Clinical Depression and Follow-Up Plan – Performance	99.5	64.8	99.9	1.07	-0.56	-1.08
Screening for Clinical Depression and Follow-Up Plan – Reporting	8.1	56.5	6.5	-1.36	0.30	1.40
Use of Appropriate Medications for People with Asthma	89.0	88.7	88.7	0.07	0.11	0.00
Use of Imaging Studies for Low Back Pain‡	80.0	78.3	77.7	0.24	0.39†	0.09
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents –						
▶ BMI Assessment	67.0	75.1	60.9	-0.47	0.45†	0.83†
▶ Nutrition Counseling	69.5	74.0	65.8	-0.30	0.34†	0.55†
▶ Physical Activity Counseling	58.0	67.7	53.6	-0.50†	0.31†	0.72†
Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life	74.4	72.3	71.1	0.34†	0.48†	0.18
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	69.3	67.6	62.2	0.17	0.56†	0.45

*Effect size measured as Cohen's d: 0.2 = small effect; 0.5 = medium effect; 0.8 = large effect. †Statistically significant two-tailed t-test, $p < .05$. ‡Indicates a measure in which higher value reflects poorer quality.

Note: Year corresponds to reporting, not measurement, year.

Appendix G. Change in Quality Measure Scores, by Ownership Type, 2009–18

	FOR-PROFIT			NONPROFIT			PUBLIC		
QUALITY MEASURE	BETTER	WORSE	SAME	BETTER	WORSE	SAME	BETTER	WORSE	SAME
Summary	**14**	**5**	**22**	**12**	**3**	**26**	**11**	**2**	**28**
Adolescent Well-Care Visits	0	0	1	0	0	1	0	0	1
Annual Monitoring for Patients on Persistent Medications –									
▶ ACE Inhibitors or ARBs	1	0	0	0	0	1	1	0	0
▶ Digoxin	0	0	1	0	0	1	0	0	1
▶ Diuretics	1	0	0	0	0	1	1	0	0
Appropriate Treatment for Children with Upper Respiratory Infection	1	0	0	0	0	1	0	0	1
Asthma Medication Ratio	0	1	0	0	1	0	1	0	0
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	1	0	0	1	0	0	0	0	1
Breast Cancer Screening	1	0	0	0	0	1	0	0	1
CAHPS Rating:									
▶ Health Plan	0	0	1	0	0	1	0	0	1
▶ Personal Doctor	0	0	1	0	0	1	0	0	1
▶ Getting Needed Care	0	1	0	0	0	1	0	0	1
▶ Getting Care Quickly	0	0	1	0	0	1	0	0	1
▶ How Well Doctors Communicate	0	1	0	0	0	1	0	0	1
Cervical Cancer Screening	0	1	0	0	0	1	0	1	0
Childhood Immunization Status-Combination 3	0	0	1	0	0	1	0	1	0
Children and Adolesc Access to Primary Care Practitioners –									
▶ 12 to 24 Months	0	0	1	0	1	0	0	0	1
▶ 25 Months to 6 Years	0	0	1	0	1	0	0	0	1
▶ 7 to 11 Years	0	0	1	0	0	1	0	0	1
▶ 12 to 19 Years	0	0	1	0	0	1	0	0	1
Controlling High Blood Pressure	1	0	0	1	0	0	0	0	1

Appendix G. Change in Quality Measure Scores, by Ownership Type, 2009–18, *continued*

	FOR-PROFIT			NONPROFIT			PUBLIC		
QUALITY MEASURE	BETTER	WORSE	SAME	BETTER	WORSE	SAME	BETTER	WORSE	SAME
Diabetes Care –									
▶ Blood Pressure Control (<140/90 mm Hg)	0	0	1	0	0	1	0	0	1
▶ Eye Exam (Retinal) Performed	0	0	1	1	0	0	0	0	1
▶ HbA1c Testing	1	0	0	1	0	0	1	0	0
▶ HbA1c Control (<8.0%)	0	0	1	0	0	1	0	0	1
▶ Medical Attention for Nephropathy	1	0	0	1	0	0	1	0	0
▶ HbA1c Poor Control (>9.0%)*	0	0	1	0	0	1	0	0	1
▶ LDL-C Screening	0	1	0	0	0	1	0	0	1
▶ LDL-C Control (<100 mg/dL)	0	0	1	0	0	1	0	0	1
Immunizations for Adolescents – Combination 1	0	0	1	0	0	1	0	0	1
Immunizations for Adolescents – Combination 2	1	0	0	1	0	0	1	0	0
Medication Management for People with Asthma –									
▶ Medication Compliance 50%	0	0	1	0	0	1	0	0	1
▶ Medication Compliance 75%	0	0	1	0	0	1	0	0	1
Prenatal and Postpartum Care –									
▶ Postpartum Care	0	0	1	1	0	0	0	0	1
▶ Timeliness of Prenatal Care	0	0	1	0	0	1	0	0	1
Use of Imaging Studies for Low Back Pain*	1	0	0	0	0	1	1	0	0
Weight Assessment and Counseling/Adolescents –									
▶ BMI Assessment	1	0	0	1	0	0	1	0	0
▶ Nutrition Counseling	1	0	0	1	0	0	1	0	0
▶ Physical Activity Counseling	1	0	0	1	0	0	1	0	0
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	0	0	1	1	0	0	0	0	1
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	1	0	0	1	0	0	1	0	0

*Indicates measure where lower scores are better.

Note: Year corresponds to reporting, not measurement, year.

Appendix H. Trends of Quality Measures, by Ownership of Plans Within Two-Plan Model Counties, 2009–18

	FOR-PROFIT			PUBLIC		
QUALITY MEASURE	BETTER	WORSE	SAME	BETTER	WORSE	SAME
Summary	**9**	**4**	**28**	**9**	**3**	**29**
Adolescent Well-Care Visits	0	0	1	0	0	1
Annual Monitoring for Patients on Persistent Medications –						
▶ ACE Inhibitors or ARBs	1	0	0	1	0	0
▶ Digoxin	0	0	1	0	0	1
▶ Diuretics	1	0	0	1	0	0
Appropriate Treatment for Children with Upper Respiratory Infection	1	0	0	0	0	1
Asthma Medication Ratio	0	0	1	0	0	1
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	0	0	1	0	0	1
Breast Cancer Screening	0	0	1	0	0	1
CAHPS Rating	0	0	1	0	0	1
▶ Health Plan						
▶ Personal Doctor	0	0	1	1	0	0
▶ Getting Needed Care	0	1	0	0	0	1
▶ Getting Care Quickly	0	0	1	0	0	1
▶ How Well Doctors Communicate	0	1	0	0	0	1
Cervical Cancer Screening	0	1	0	0	1	0
Childhood Immunization Status-Combination 3	0	0	1	0	1	0
Children and Adolesc Access to Primary Care Practitioners –						
▶ 12 to 24 Months	0	1	0	0	0	1
▶ 25 Months to 6 Years	0	0	1	0	0	1
▶ 7 to 11 Years	0	0	1	0	0	1
▶ 12 to 19 Years	0	0	1	0	0	1
Controlling High Blood Pressure	0	0	1	0	0	1

Appendix H. Trends of Quality Measures, by Ownership of Plans Within Two-Plan Model Counties, 2009–18, *continued*

	FOR-PROFIT			PUBLIC		
QUALITY MEASURE	BETTER	WORSE	SAME	BETTER	WORSE	SAME
Diabetes Care –						
▶ Blood Pressure Control (<140/90 mm Hg)	0	0	1	0	0	1
▶ Eye Exam (Retinal) Performed	0	0	1	0	0	1
▶ HbA1c Testing	1	0	0	1	0	0
▶ HbA1c Control (<8.0%)	0	0	1	0	0	1
▶ Medical Attention for Nephropathy	1	0	0	1	0	0
▶ HbA1c Poor Control (>9.0%)	0	0	1	0	0	1
▶ LDL-C Screening	0	0	1	0	0	1
▶ LDL-C Control (<100 mg/dL)	0	0	1	0	0	1
Immunizations for Adolescents – Combination 1	0	0	1	0	0	1
Immunizations for Adolescents – Combination 2	0	0	1	0	0	1
Medication Management for People with Asthma-Medication Compliance 75%	0	0	1	0	0	1
Prenatal and Postpartum Care – Postpartum Care	0	0	1	0	0	1
Prenatal and Postpartum Care – Timeliness of Prenatal Care	0	0	1	0	0	1
Use of Imaging Studies for Low Back Pain	0	0	1	0	0	1
Weight Assessment and Counseling/Adolescents –						
▶ BMI Assessment	1	0	0	1	0	0
▶ Nutrition Counseling	1	0	0	1	0	0
▶ Physical Activity Counseling	1	0	0	1	0	0
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	0	0	1	0	1	0
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	1	0	0	1	0	0

Note: Year corresponds to reporting, not measurement, year.

Appendix I. Ranking of Counties on Average Quality Measure Scores, Weighted by Plan Enrollment, 2009–18

COHS | Competing Commercial | Two-Plan | San Benito

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1	San Francisco	Monterey/ Santa Cruz	San Francisco	Orange	Orange	San Francisco	San Francisco	San Francisco	San Francisco	San Francisco
2	Santa Barbara	Orange	Orange	Monterey/ Santa Cruz	Monterey/ Santa Cruz	Orange	Orange	Santa Barbara	Orange	Orange
3	Orange	San Francisco	Monterey/ Santa Cruz	San Francisco	Santa Barbara	Santa Barbara	Santa Barbara	Orange	San Mateo	San Luis Obispo
4	Fresno	San Mateo	Santa Barbara	Santa Barbara	San Francisco	Monterey/ Santa Cruz	Monterey/ Santa Cruz	San Diego	San Luis Obispo	Santa Barbara
5	Santa Clara	Santa Barbara	San Mateo	San Mateo	San Mateo	Sonoma	Santa Clara	Contra Costa	Imperial	Monterey/ Santa Cruz
6	Southeast	Los Angeles	Santa Clara	Sonoma	San Diego	San Mateo	Southeast	San Mateo	Monterey/ Santa Cruz	San Mateo
7	San Mateo	Fresno	Los Angeles	San Diego	San Luis Obispo	Southeast	San Mateo	Monterey/ Santa Cruz	San Diego	San Diego
8	Monterey/ Santa Cruz	Southeast	San Diego	Riverside/ San Bernardino	Southeast	Santa Clara	Madera	Tulare	Southeast	Southeast
9	Contra Costa	Santa Clara	Contra Costa	Santa Clara	Sonoma	San Diego	San Diego	San Luis Obispo	Santa Barbara	Tulare
10	San Diego	San Diego	Southeast	San Luis Obispo	Merced	San Luis Obispo	Riverside/ San Bernardino	Ventura	Contra Costa	Madera
11	San Luis Obispo	San Luis Obispo	San Joaquin	Southeast	Riverside/ San Bernardino	Riverside/ San Bernardino	Southwest	Southwest	Tulare	Imperial
12	Los Angeles	Contra Costa	Sonoma	San Joaquin	Santa Clara	Merced	Merced	Southeast	Madera	Contra Costa
13	San Joaquin	Riverside/ San Bernardino	San Luis Obispo	Los Angeles	Madera	San Joaquin	Contra Costa	Imperial	Southwest	Southwest
14	Stanislaus	Kern	Merced	Merced	Fresno	Marin	San Luis Obispo	Madera	Santa Clara	Los Angeles
15	Tulare	Sacramento	Fresno	Alameda	Los Angeles	Madera	Ventura	Sacramento	Los Angeles	Santa Clara
16	Sacramento	San Joaquin	Riverside/ San Bernardino	Tulare	Sacramento	Tulare	Tulare	Los Angeles	Riverside/ San Bernardino	Alameda
17	Kern	Alameda	Tulare	Contra Costa	Contra Costa	Kern	Los Angeles	Fresno	Alameda	Ventura

Appendix I. Ranking of Counties on Average Quality Measure Scores, Weighted by Plan Enrollment, 2009–18, *continued*

COHS | Competing Commercial | Two-Plan | San Benito

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
18	Riverside/ San Bernardino	Tulare	Alameda	Stanislaus	Tulare	Los Angeles	Imperial	Region 2	Merced	Riverside/ San Bernardino
19	Alameda	Stanislaus	Sacramento	Kern	San Joaquin	Stanislaus	Fresno	Merced	Region 1	Fresno
20			Kern	Sacramento	Mendocino	Contra Costa	Stanislaus	Santa Clara	Fresno	Kings
21			Stanislaus		Stanislaus	Ventura	San Joaquin	Alameda	Kings	Merced
22					Ventura	Mendocino	Region 2	Riverside/ San Bernardino	Ventura	Kern
23					Kern	Fresno	Northwest	Kern	Region 2	Region 1
24					Marin	Sacramento	Region 1	Region 1	Northwest	San Benito
25					Alameda	Alameda	Kern	Kings	Kern	Region 2
26					Kings	Kings	Northeast	Northwest	Sacramento	Northwest
27							Sacramento	San Joaquin	Stanislaus	Northeast
28							Kings	Stanislaus	San Benito	Sacramento
29							Alameda	San Benito	Northeast	San Joaquin
30							San Benito	Northeast	San Joaquin	Stanislaus

Notes: Year corresponds to reporting, not measurement, year. Partnership HealthPlan: *Northeast* includes Lassen, Modoc, Shasta, Siskiyou, and Trinity counties; *Northwest* includes Del Norte and Humboldt counties; *Southeast* includes Napa, Solano, and Yolo counties; *Southwest* includes Marin, Mendocino, Sonoma, and Lake counties. *Region 1* includes Butte, Colusa, Glenn, Plumas, Sierra, Sutter, and Tehama counties. *Region 2* includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, Tuolumne, and Yuba counties.

Appendix J. Ranking of Counties on Average Quality Measure Scores, Weighted by Plan Enrollment, 2011–15, Adjusted

COHS | Competing Commercial | Two-Plan | San Benito

	2011	2012	2013	2014	2015
1	San Francisco	Orange	Orange	Orange	San Francisco
2	Orange	Monterey/Santa Cruz	Monterey/Santa Cruz	San Francisco	Orange
3	Monterey/Santa Cruz	Santa Barbara	San Mateo	Southeast	Southeast
4	San Mateo	San Francisco	San Francisco	San Mateo	Santa Barbara
5	Santa Barbara	San Mateo	Santa Barbara	Santa Barbara	Riverside/San Bernardino
6	San Joaquin	Riverside/San Bernardino	Riverside/San Bernardino	Monterey/Santa Cruz	Monterey/Santa Cruz
7	Los Angeles	Southeast	San Diego	San Diego	Merced
8	Santa Clara	Sonoma	Sonoma	Merced	San Diego
9	San Diego	San Diego	Southeast	Riverside/San Bernardino	Madera
10	Contra Costa	Alameda	Contra Costa	Santa Clara	Santa Clara
11	Southeast	Los Angeles	Santa Clara	Kern	San Mateo
12	Riverside/San Bernardino	San Joaquin	Merced	San Joaquin	Contra Costa
13	Fresno	Merced	Sacramento	Sonoma	Tulare
14	Merced	Santa Clara	Los Angeles	Contra Costa	Southwest
15	Sonoma	San Luis Obispo	San Joaquin	Los Angeles	Los Angeles
16	Sacramento	Contra Costa	San Luis Obispo	San Luis Obispo	Fresno
17	San Luis Obispo	Tulare	Madera	Fresno	Imperial
18	Alameda	Kern	Alameda	Tulare	Ventura
19	Tulare	Sacramento	Fresno	Stanislaus	San Joaquin
20	Kern	Stanislaus	Tulare	Sacramento	San Luis Obispo
21	Stanislaus		Mendocino	Madera	Kern
22			Kern	Ventura	Region 1
23			Ventura	Mendocino	Stanislaus
24			Stanislaus	Kings	Northwest

Appendix J. Ranking of Counties on Average Quality Measure Scores, Weighted by Plan Enrollment, 2011–15, Adjusted, *continued*

COHS | Competing Commercial | Two-Plan | San Benito

	2011	2012	2013	2014	2015
25			Marin	Alameda	Region 2
26			Kings	Marin	Kings
27					Sacramento
28					Alameda
29					Northeast
30					San Benito

Notes: *Adjusted* for county race, ethnicity, education, and English proficiency among those below 138% of the federal poverty level as well as for the number of physician full-time equivalents per capita in the county or region. Year corresponds to reporting, not measurement, year. Partnership HealthPlan: *Northeast* includes Lassen, Modoc, Shasta, Siskiyou, and Trinity counties; *Northwest* includes Del Norte and Humboldt counties; *Southeast* includes Napa, Solano, and Yolo counties; *Southwest* includes Marin, Mendocino, Sonoma, and Lake counties. *Region 1* includes Butte, Colusa, Glenn, Plumas, Sierra, Sutter, and Tehama counties. *Region 2* includes Alpine, Amador, Calaveras, El Dorado, Inyo, Mariposa, Mono, Nevada, Placer, Tuolumne, and Yuba counties.

Appendix K. Mean and Differences in Standard Deviations for HEDIS Measures, by Medi-Cal Managed Care Model, 2009–18

	MEAN SCORE			DIFFERENCES MEASURED IN STANDARD DEVIATIONS*		
QUALITY MEASURE	COHS	COMPETING COMMERCIAL	TWO-PLAN	COHS VS. COMPETING COMMERCIAL	COHS VS. TWO-PLAN	COMPETING COMMERCIAL VS. TWO-PLAN
Adolescent Well-Care Visits	52.0	43.0	46.6	0.99†	0.62†	-0.46†
Annual Monitoring for Patients on Persistent Medications –						
▶ ACE Inhibitors or ARBs	87.3	85.4	85.1	0.39†	0.59†	0.04
▶ Digoxin	77.1	75.9	73.0	0.07	0.24	0.16
▶ Diuretics	87.3	85.4	84.6	0.39†	0.76†	0.13
Appropriate Treatment for Children with Upper Respiratory Infection	90.6	92.1	86.1	-0.38	1.18†	1.41†
Asthma Medication Ratio	62.8	62.4	58.8	0.03	0.62†	0.35
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	28.3	33.5	30.3	-0.49†	-0.26	0.33†
Breast Cancer Screening	59.3	55.2	55.9	0.54†	0.64†	-0.08
Cervical Cancer Screening	62.3	57.2	61.5	0.55†	0.11	-0.47†
Childhood Immunization Status – Combination 3	74.8	67.2	73.4	1.03†	0.21	-0.89†
Children and Adolescents Access to Primary Care Practitioners –						
▶ 12 to 24 Months	95.0	92.8	92.8	0.79†	0.98†	0.00
▶ 25 Months to 6 Years	87.8	83.8	83.9	0.95†	1.15†	-0.03
▶ 7 to 11 Years	89.5	85.9	85.8	0.97†	1.17†	0.01
▶ 12 to 19 Years	87.3	83.3	83.4	1.02†	1.32†	-0.03
Controlling High Blood Pressure	63.0	57.3	60.9	0.70†	0.30	-0.46†
Diabetes Care –						
▶ Blood Pressure Control (<140/90 mm Hg)	68.1	61.8	62.1	0.86†	1.05†	-0.03
▶ Eye Exam (Retinal) Performed	61.4	52.0	53.6	0.98†	1.02†	-0.17
▶ HbA1c Testing	86.9	84.7	84.3	0.51†	0.80†	0.08
▶ HbA1c Control (<8.0%)	55.5	50.6	48.2	0.78†	1.30†	0.41†
▶ Medical Attention for Nephropathy	86.2	85.7	85.9	0.09	0.06	-0.04
▶ HbA1c Poor Control (>9.0%)‡	34.6	39.1	40.8	-0.66†	-1.00†	-0.25†

Appendix K. Mean and Differences in Standard Deviations for HEDIS Measures, by Medi-Cal Managed Care Model, 2009–18, *continued*

	MEAN SCORE			DIFFERENCES MEASURED IN STANDARD DEVIATIONS*		
QUALITY MEASURE	COHS	COMPETING COMMERCIAL	TWO-PLAN	COHS VS. COMPETING COMMERCIAL	COHS VS. TWO-PLAN	COMPETING COMMERCIAL VS. TWO-PLAN
▶ LDL-C Screening	81.3	76.4	78.0	0.76†	0.93†	-0.24
▶ LDL-C Control (<100 mg/dL)	43.3	37.6	36.3	0.64†	1.36†	0.16
▶ HbA1c Control (<7.0%)	36.3	33.4	27.1	0.84	2.42†	1.47†
Immunizations for Adolescents – Combination 1	71.6	68.3	71.4	0.34	0.03	-0.38
Immunizations for Adolescents – Combination 2	36.0	28.2	31.9	0.88†	0.44	-0.50†
Medication Management for People with Asthma – ▶ Medication Compliance 50% Total	51.8	49.1	54.0	0.33	-0.24	-0.42
▶ Medication Compliance 75% Total	29.2	28.8	32.1	0.06	-0.33	-0.32
Prenatal and Postpartum Care – Postpartum Care	67.3	60.1	58.7	1.05†	1.41†	0.21
Prenatal and Postpartum Care – Timeliness of Prenatal Care	84.3	80.9	81.0	0.72†	0.69†	-0.01
Screening for Clinical Depression and Follow-Up Plan – Performance	99.8	91.6	99.3	0.43	0.67	-0.41
Screening for Clinical Depression and Follow-Up Plan – Reporting	5.8	13.4	5.1	-0.49	0.15	0.54
Use of Appropriate Medications for People with Asthma	90.3	87.1	88.2	1.19†	0.99†	-0.32
Use of Imaging Studies for Low Back Pain‡	79.0	74.5	77.2	0.71†	0.36†	-0.46†
Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents – ▶ BMI Assessment	72.7	67.9	67.8	0.38†	0.44†	0.00
▶ Nutrition Counseling	75.4	69.4	73.4	0.54†	0.21	-0.41†
▶ Physical Activity Counseling	65.2	60.0	62.4	0.36†	0.22	-0.19
Well-Child Visits in the 3rd, 4th, 5th, and 6th Years of Life	77.4	70.5	73.9	1.18†	0.62†	-0.68†
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	71.2	66.1	65.1	0.47	0.51	0.08

*Effect size measured as Cohen's d: 0.2 = small effect; 0.5 = medium effect; 0.8 = large effect. †Statistically significant two-tailed t-test, $p < .05$. ‡Indicates a measure in which higher value reflects poorer quality.

Note: Year corresponds to reporting, not measurement, year.

Appendix L. Trends of Quality Measures, by Medi-Cal Managed Care Model, 2009–18

QUALITY MEASURE	TWO-PLAN	COMPETING COMMERCIAL	COHS	SINGLE COMMERCIAL
Summary	**12 better / 2 worse**	**12 better / 5 worse**	**8 better / 3 worse**	**4 better / 1 worse**
Adolescent Well-Care Visits	Same	Same	Same	
Annual Monitoring for Patients on Persistent Medications –				
▶ ACE Inhibitors or ARBs	Better	Better	Same	Same
▶ Digoxin	Same	Same	Same	
▶ Diuretics	Better	Better	Same	Same
Appropriate Treatment for Children with Upper Respiratory Infection	Same	Better	Same	
Avoidance of Antibiotic Treatment in Adults with Acute Bronchitis	Better	Better	Same	Better
Breast Cancer Screening	Same	Same	Same	Better
CAHPS Rating:				
▶ Health Plan	Same	Same	Same	
▶ All Health Care	Same	Same	Same	
▶ Personal Doctor	Same	Same	Same	
▶ Getting Needed Care	Same	Same	Same	
▶ Getting Care Quickly	Same	Same	Same	
▶ How Well Doctors Communicate	Same	Same	Same	
Cervical Cancer Screening	Worse	Worse	Worse	Better
Childhood Immunization Status – Combination 3	Same	Worse	Worse	Same
Children and Adolesc Access to Primary Care Practitioners –				
▶ 12 to 24 Months	Worse	Worse	Same	Same
▶ 25 Months to 6 Years	Same	Worse	Same	Same
▶ 7 to 11 Years	Same	Same	Same	Same
▶ 12 to 19 Years	Same	Same	Same	Same
Controlling High Blood Pressure	Same	Better	Same	Same

Appendix L. Trends of Quality Measures, by Medi-Cal Managed Care Model, 2009–18, *continued*

QUALITY MEASURE	TWO-PLAN	COMPETING COMMERCIAL	COHS	SINGLE COMMERCIAL
Diabetes Care –				
▶ Blood Pressure Control (<140/90 mm Hg)	Same	Same	Same	Same
▶ Eye Exam (Retinal) Performed	Same	Same	Same	Same
▶ HbA1c Testing	Better	Same	Better	Same
▶ HbA1c Control (<8.0%)	Same	Same	Same	Same
▶ Medical Attention for Nephropathy	Better	Better	Better	Same
▶ HbA1c Poor Control (>9.0%)	Same	Same	Same	Same
▶ LDL-C Screening	Same	Same	Same	
▶ LDL-C Control (<100 mg/dL)	Same	Same	Same	
▶ HbA1c Control (<7.0%)	Better	Better	Better	
Immunizations for Adolescents – Combination 1	Same	Same	Same	Same
Medication Management for People with Asthma – Medication Compliance 50%	Same	Same	Same	
Medication Management for People with Asthma – Medication Compliance 75%	Same	Same	Same	
Prenatal and Postpartum Care – Postpartum Care	Same	Same	Same	Same
Prenatal and Postpartum Care – Timeliness of Prenatal Care	Same	Same	Same	Same
Use of Appropriate Medications for People with Asthma	Better	Worse	Worse	Worse
Use of Imaging Studies for Low Back Pain	Better	Better	Better	Same
Weight Assessment and Counseling/Adolescents –				
▶ BMI Assessment	Better	Better	Better	Same
▶ Nutrition Counseling	Better	Better	Better	Same
▶ Physical Activity Counseling	Better	Better	Better	Same
Well-Child Visits in the Third, Fourth, Fifth, and Sixth Years of Life	Same	Same	Same	Same
Well-Child Visits in the First 15 Months of Life (Six or More Visits)	Better	Better	Better	Better

Notes: Year corresponds to reporting, not measurement, year. Blank cells under the single commercial model correspond to measures that preceded time when this model was in operation.

Appendix M. Methodology

All the quality data used in this report was publicly available from the California Department of Health Care Services (DHCS). DHCS provides reports annually on quality at the plan level in PDF format, which were entered into a database for statistical analysis. There is a lag between when services are delivered and their quality is assessed. The report for a given year (e.g., 2018) is publicly released in April of the subsequent year (2019) and provides quality scores for services that were furnished in the prior year (2017). The dates shown in the analyses correspond to the DHCS report year, not the year in which the services were furnished.

Changes in the quality scores over time were examined. For each quality measure present in the data for two or more years during the 10-year observation period (2009–18), changes over time were examined. Linear regression and a two-tailed t-test (alpha = .05) were used to determine if the slope of each regression line was statistically greater (improvement over time), less than (decline over time), or equal to zero (no change).

To estimate the statewide changes in quality scores over time, results by enrollment in each plan for each year of the study were weighted.

To estimate the change in quality scores by plan ownership, plans were first categorized by ownership (public, nonprofit, or for-profit) based on information from DHCS. For purposes of classification, COHS and local initiative plans that were not operated by a for-profit organization in Two-Plan counties were considered public plans. In most cases, the county model (COHS, Two-Plan, competing commercial) dictates the types of plans available in a county. For example, a COHS county means that a Medi-Cal beneficiary has access only to a public plan. In Two-Plan counties, Medi-Cal beneficiaries typically have access to a public plan (local initiative) and a for-profit plan, but there are some exceptions.

- Fresno County did not offer a public plan until 2013. Its prior local initiative was a for-profit plan.
- Stanislaus County did not offer a public plan until 2014. Its prior local initiative was a for-profit plan.
- Tulare County did not offer a public plan during the study period. Its local initiative is a for-profit plan.

To compare quality scores by plan, each plan's score for each measure was ranked relative to the scores on the same measure for the other plans in a given year. The ranks were then aggregated across all the measures in a year to create an overall ranking for each plan.

Observable differences in the county demographics and physician supply were adjusted for. Annual county-level demographic data from the California Health Interview Survey were used to estimate the percentage of people at or below 138% of the federal poverty level (FPL) by race/ethnicity, education level, and English proficiency. This income level was selected to correspond to the income eligibility level for Medi-Cal. Physician counts by county were available to UCSF for 2011 to 2015 from data provided by the California Medical Board. Physician counts were limited to active practitioners in California who were not in training. These counts were prorated by the number of hours a physician reported practicing on average each week and divided by the county population to create full-time equivalents per capita for each county. For each year between 2011 and 2015, a regression model was created on the statewide mean of each performance measure using the population proportions as covariates. The coefficients derived from the statewide models of each performance measure were multiplied by the population proportions in each county. The sum of these county-specific products and the intercept derived from the statewide model were used to calculate a predicted county level value for each measure.

The average of the plan rankings (unadjusted and adjusted) were calculated among each ownership type for each year and pairwise comparisions were made using analysis of variance (ANOVA).

To evaluate the size of the difference in scores across quality measures by ownership, a t-test for significance ($p < .05$) was conducted, and Cohen's d statistic, which quantifies the difference in distributions in terms of standard deviations, was calculated. Differences in the standard deviation of at least 0.2 are considered small; differences of at least 0.5 are considered medium, and differences of at least 0.8 are considered large.

In conducting analyses of county models, counties were classified by their DHCS-designated Medi-Cal managed care model regardless of whether the model was operationalized following the general rules of plan ownership or was an exception. In general, quality assessments of a plan corresponded to a specific county or specific set of counties functioning under the same model. The one exception is Kaiser North, which corresponds to Amador, El Dorado, and Placer Counties (Regional) and Sacramento County (GMC). In this case, Kaiser enrollment was allocated to each county in this region.

Quality scores for each measure within a county or county region were derived by creating a weighted average of the scores for that measure from all the participating plans in that county or county region. The weights for the average were based on the enrollment in each plan in the county or county region. To compare quality scores by county or county region, each county or county region's score was ranked for each measure relative to the scores on the same measure for the other counties or county regions in a given year. Then the ranks were aggregated across all the measures in a year to create an overall ranking for each county or county region.

Observable differences in the county demographics and physician supply were adjusted similarly to the comparison of health plans. The average of the plan rankings (unadjusted and adjusted) were calculated among each county model type (COHS, Two-Plan, competing commercial, single voluntary plan) for each year, and pairwise comparisons were made using ANOVA.

To evaluate the size of the difference in scores across quality measures by county model, a t-test was conducted for significance ($p < .05$), and Cohen's d was calculated similarly to the comparison of scores by plan ownership.

To test the impact of the auto-assignment incentive on quality scores, the mean scores of the incentivized measures by county model were compared in generalized linear models. Year, plan model, and interaction in pairwise comparisons by model types were included.