

A New Vision for California's Healthcare System

Accountable Care Organizations in California:

PROMISE & PERFORMANCE



CONTENTS

Executive Summary	2
Introduction: Background and Challenge	5
The Landscape – Rapid Growth	6
Characteristics of the Largest ACOs.....	9
Factors Associated With Success	13
Key Challenges and Issues Moving Forward.....	15
Regulation of Accountable Care Organizations.....	19
Conclusion – ACOs and Integrated Care.....	22
References.....	23
Acknowledgments	Inside Back Cover

APPENDICES

APPENDIX 1: Patient-Centered Medical Home Components.....	26
APPENDIX 2: Selected NSACO Survey Questions and Scales	26
APPENDIX 3: Integrated Healthcare Association Quality Measure Summary.....	27
APPENDIX 4: Patient Satisfaction Measure Summary	28

Berkeley Forum Leadership

The Berkeley Forum, established in January 2012, includes select CEOs of California's health systems, health insurers and physician organizations, along with state regulators and policymakers, that are collaborating to improve the affordability and quality of healthcare for all Californians. The University of California, Berkeley's School of Public Health serves as a neutral facilitator for discussions and the analytic staff for this effort.

PARTICIPANT LIST

Anthem Blue Cross

Pam Kehaly, West Region President

Cedars-Sinai Healthcare System

Tom Priselac, President and CEO
Richard Jacobs, Senior Vice President,
System Development and
Chief Strategy Officer

California Health and Human Services Agency

Diana S. Dooley, Secretary*

Healthcare Partners

Robert J. Margolis, Co-Chairman and
Chief Executive Officer Emeritus

Kaiser Permanente

Bernard Tyson,
Chief Executive Officer
Anthony A. Barrueta, Senior Vice
President, Government Relations

Sutter Health

Patrick E. Fry, President and
Chief Executive Officer
Robert Reed, Chief Financial Officer

USC Health

Thomas Jackiewicz, Senior Vice
President and Chief Executive Officer

UC Medical Centers

David Feinberg, Chief Executive Officer,
UCLA Health System

AUTHORS

Stephen M. Shortell, PhD, MBA, MPH

Chair of the Berkeley Forum
Blue Cross of California Distinguished Professor of Health Policy
and Management, School of Public Health and Haas School of Business
Director, Center for Healthcare Organizational and Innovation Research (CHOIR)
University of California, Berkeley

Richard M. Scheffler, PhD

Co-Chair of the Berkeley Forum
Distinguished Professor of Health Economics and Policy,
School of Public Health and Goldman School of Public Policy
Director, Nicholas C. Petris Center on Health Care Markets
and Consumer Welfare, School of Public Health
University of California, Berkeley

Eric R. Kessell, PhD, MPH

Policy Analyst, Berkeley Forum for Improving California's Healthcare
Delivery System, School of Public Health
University of California, Berkeley

Brent D. Fulton, PhD, MBA

Assistant Adjunct Professor of Health Economics and Policy
Associate Director, Nicholas C. Petris Center on Health Care Markets
and Consumer Welfare, School of Public Health
University of California, Berkeley

* Participation by Secretary Dooley in the Forum meeting/discussions does not represent any formal endorsement of the report by her state Agency nor in her official individual capacity as an appointed public official at her Agency.



Executive Summary

The Berkeley Forum Report of 2013 presented a two-fold vision in which: 1) the percentage of expenditures associated with fee-for-service payment would be reduced from 78 percent to 50 percent by 2022; and 2) the percentage of Californians receiving care from more integrated care systems would double from 29 percent to 60 percent by 2022. Accountable Care Organizations that are held accountable for both the cost and quality of care for a defined population of patients were suggested as one means for achieving this Vision.

This Brief has four objectives: 1) to describe the number, growth and future projections of ACOs and their associated enrolled lives; 2) to present evidence on their performance to date and factors associated with success; 3) to explore the impact of emerging market characteristics; and 4) to review current administrative and financial regulation of ACOs as they might affect future growth and development. The Brief draws on multiple data sources including the Cattaneo and Stroud survey of California ACOs; performance data from the Integrated Healthcare Association; patient experience data from the Pacific Business Group on Health; the UC Berkeley National Survey of Physician Organizations; the Dartmouth Institute-UC Berkeley National Survey of ACOs; and the American Hospital Association's Annual Hospital Survey.

California has more ACOs (67) than any other state in the country with particularly rapid growth over the past two years. By February of 2016 over 1.3 million Californians

are projected to receive their care from an ACO. The growth is projected to occur in all regions of the state. All of the largest ACOs are affiliated with either Blue Cross (Anthem/Wellpoint) or Blue Shield of California. California ACOs tend to provide a greater number of services and have more prior experience with payment reform than other ACOs across the country. The next few years are likely to bring continued growth and diversity in accountable care models combining a variety of payment approaches but moving increasingly toward full risk-bearing with expenditure and quality targets.

Using the IHA quality measures based largely on HEDIS, the quality of care provided by ACOs is at least as good and on some measures better than that provided by other medical groups in the state. On patient experience measures, the ACOs score significantly higher on all six including access to care, coordination of care, promoting health, doctor-patient interactions, office staff helpfulness, and overall rating of care. While comparative total cost of care data were not available for analysis, early experience with the Blue Shield, Dignity Health, and Hill Physicians group in the Sacramento area revealed significant savings for CALPERS employees of \$20 million (Markovich, 2012). This is consistent with four years of experience with performance based contracting in Massachusetts (Song et al., 2014). But recent experience with the CMS Pioneer and Shared Savings programs indicate that approximately as many ACOs have not met expenditure targets as those that have.

continued on page 4

Six Key Success Factors for ACOs

1: SIZE/SCALE

Most California ACOs are relatively large. Most commercial ACOs have at least 10,000 enrolled lives (Cattaneo and Stroud, 2014) and many have 25,000 or more. Size is needed to achieve the necessary economies of scale and also to provide a basis for experimentation and learning. At the same time, increased size brings increased costs of coordination, which requires informed clinical and managerial leadership to manage the pace of change within the organization. Smaller practices and those serving vulnerable populations in the state will require continued investment in electronic health records, new care management models, practice redesign and related assistance to be successful under the new value-based payment models.

2: CARE MANAGEMENT

To keep people well and manage patients with complex medical needs efficiently, fundamental changes are required in how care is delivered. Data systems that can be used to develop predictive analytics to identify the high complexity/high cost patients are essential. Based on these data, complex care management programs can be developed, usually led by nurses or nurse practitioners. These include but go beyond care transition programs between hospital discharge of patients to home or other care settings. It is also important to manage specialist referrals to make sure patients see the most cost-effective/high quality specialists.



3: ELECTRONIC HEALTH RECORD FUNCTIONALITY

While almost all ACOs have adopted and implemented electronic health records (EHRs), many have not yet realized the benefits from EHRs' full capabilities. These include the ability to identify patients who need special attention in advance through data aggregation capabilities; to group patients with similar needs; to exchange data across care settings and teams; to provide two-way communication with patients through portals as needed; to provide relevant, timely and accurate performance data feedback to physicians and other members of the health care team; to provide a basis for quality improvement; and to provide point of care clinical information for physicians, the care team, and patients. A robust EHR capability will likely be a key differentiator of the more versus less successful ACOs.

4: EFFECTIVE PARTNERSHIPS

Most ACOs include a medical group and hospital, but there is considerable variability in the extent to which post-acute facilities such as nursing homes, skilled nursing facilities, home health agencies, behavioral health or community and social service organizations are included. Since ACOs are accountable for the entire continuum of care for their enrolled or attributed populations, most need to develop a number of new relationships with organizations with whom they may have had relatively little experience in working with before. This will require skills in forming effective partnerships with others that embrace shared goals, shared knowledge to achieve the goals, mutual trust, and accurate, timely, frequent, and problem-focused communication.

continued on next page

Executive Summary *(continued)*

Based on studies in California and nationwide, six factors in addition to physician engagement have been identified as likely to be associated with successful ACOs. These six – size/scale, care management capability, electronic health record functionality, effective partnerships, patient/family engagement, and measurement standardization and transparency – are highlighted below and on the previous pages.

Ongoing market dynamics are likely to affect future ACO growth in the state. While greater hospital concentration is associated with a lower number of ACO enrollees in a county, the largest number of ACOs are in counties where the level of hospital concentration is below one measure of competition that the Federal Trade Commission (FTC) uses to evaluate the potential for anti-competitive behavior. There is a significant positive association between HMO market share and ACO enrollment. This suggests that ACOs may be a competitive response to HMOs and/ or possibly that health plans are gaining knowledge and experience with the potential of population based payment models to generate savings and, as a result, are initiating more ACO contractual relationships.

The Department of Managed Health Care (DMHC) and the Department of Insurance regulate ACOs under the auspices of regulating health plans/insurance and providers that are already under their purview.

They regulate ACOs in regard to degree of risk undertaken, financial solvency, network adequacy, and timely access to care, with DMHC having stronger oversight of providers through its Financial Standards Solvency Board. While there does not appear to be need at this time for additional regulatory oversight, there are some other actions the state could undertake to promote further growth. Based on experience in other states such as New York, Massachusetts, and Texas these include; 1) providing enhanced technical assistance, particularly for smaller and rural providers and the Medi-Cal population, in the areas of electronic health records and quality improvement training and collaboratives and 2) creation of an All Payer Claims Database (APCD) to provide greater transparency of information for all stakeholders and to assess performance for purposes of learning and continuous improvement.

Creating greater value for California's healthcare delivery system will ultimately depend on the continued growth of value-based payment models, which will facilitate providing care in lower cost settings using lower cost personnel; eliminating current waste and inefficiencies, and developing new modalities of care such as through patient portals, at home monitoring devices, and retail clinics. ACOs have incentives to pursue all such strategies. The extent to which they succeed will greatly impact achievement of the Forum Vision.

Six Key Success Factors for ACOs *(continued)*

5: PATIENT/FAMILY ENGAGEMENT

Nearly all ACOs recognize the need for enhanced engagement of patients and families in their care if the goals of better care, better health and reduced costs are to be achieved. As one person interviewed stated, "Unless we come up with engaged patients, we are probably not going to be successful. Engaged patients [are] a cornerstone of what we are doing." Efforts must extend beyond getting patients to stay within the ACO's network. Greater attention needs to be given to including patients in developing treatment plans, shared decision-making, and involvement in overall practice redesign and quality improvement efforts.

6: MEASUREMENT STANDARDIZATION AND TRANSPARENCY

While larger ACOs have developed the capacity to respond to multiple measures of quality, the task remains challenging for many others. The IHA Pay for Performance Program has been of significant assistance in having providers and insurers agree on a common set of measures and, for the most part, thresholds for rewarding performance. Future consideration should be given to including patient-reported outcome (PRO) measures for such conditions as diabetes, cardiovascular disease, asthma, and orthopedic procedures. This will be facilitated by greater use of electronic surveys of patients to collect such information. There is also need for greater transparency of data and information such as what would be provided by a carefully designed and governed All Payer Claims Database (APCD).

Introduction: Background and Challenge

The Berkeley Forum Report “A New Vision for California’s Health Care System” highlighted two major recommendations to achieve a high value, more cost-effective health care system by 2022. The first involves reducing the percentage of health care expenditures paid by fee-for-service from the current 78 percent to 50 percent. The second involves doubling the percentage of the state’s population receiving care from fully or highly integrated care systems from the current 29 percent to 60 percent by 2022. One suggestion recommended for meeting these objectives was the development of Accountable Care Organizations (ACOs). Incorporated into the Affordable Care Act (ACA) of 2010, ACOs are commonly defined as organizations that are held accountable for both the cost and quality of care for a defined population of patients. There are now approximately 700 ACOs in the

U.S., about evenly split between Medicare Pioneer and Shared Savings ACOs and private commercial risk-bearing contracts between providers and insurers (Muhlestein, 2014). As of February 2014, California had 67 ACOs, more than any other state in the country.

The goals of this Brief are to describe the landscape of ACOs in the state in terms of growth, lives covered and market share; to examine their performance to date and some associated success factors; and highlight some key issues and challenges that will need to be addressed to achieve the Forum’s Vision of “developing a more affordable and cost-effective healthcare system that would contribute to improved population health for all Californians” (Scheffler et al., 2013).



The Landscape – Rapid Growth

California's soil has been richly cultivated for the planting and growth of ACOs. Key developments have included the birth of Kaiser-Permanente in the 1930s and their subsequent growth; the extensive managed care experience of the 1990s; and the emergence of approximately 300 medical groups, of which approximately 200 have participated for a decade in the Integrated Healthcare Association's (IHA) Pay for Performance delegated model based on capitation for all professional services delivered and payouts based on agreed upon, established quality and cost metrics. Thus, unlike most of the country, California medical groups' addition of an ACO contract constitutes a relatively minor change from their existing experience.

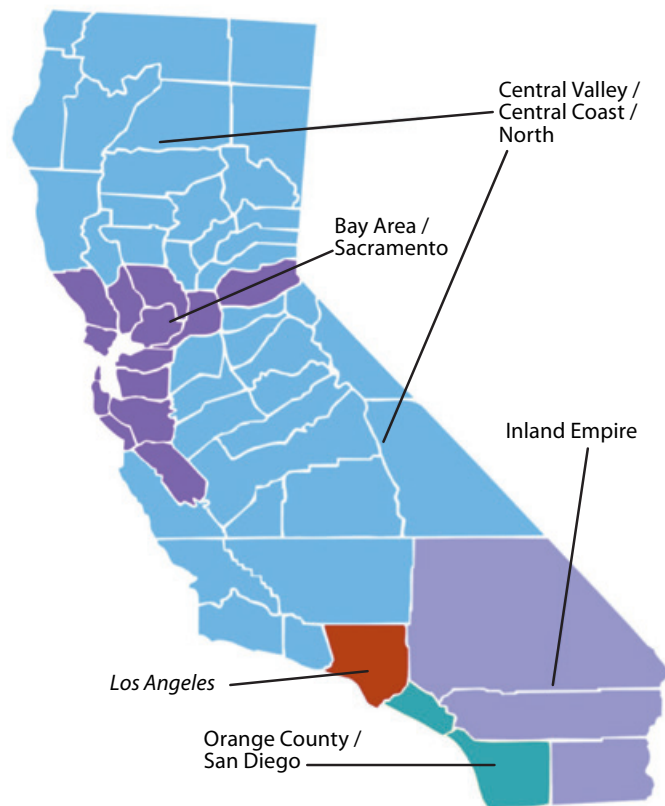
Given their experience in providing care under such risk-bearing contracts, it is not surprising that Accountable Care Organizations (ACOs) have proliferated across California in recent years (Scheffler, Forthcoming 2015). For purposes of this Brief we are defining an ACO as a medical group that has a risk-bearing contract to meet both cost and quality criteria for either Medicare/Medicaid or a commercial plan. From August 2012 to February 2014, the number of active ACOs more than doubled, from 26 to 67 statewide. Although growth has been observed across all regions (see Figure 1 and Table 1), the most rapid increase was in the Central Valley/Central Coast/North (CVCCN) and Los Angeles regions, which each added 13 ACOs over approximately 18 months. Together with the Bay Area / Sacramento region, these comprise over 80 percent of ACOs in the state (Cattaneo & Stroud, 2012-2014).

The rise in the number of lives covered by an ACO has been nearly as dramatic, increasing 78 percent, from nearly 514,000 to over 915,000 (Cattaneo & Stroud, 2012-2014) over the same period. If current trends continue, by February 2016, over 1.3 million Californians will be covered under an ACO contract, an increase of 48 percent from February 2014. Growth in lives covered in the CVCCN

region is projected to be 87 percent over two years, while Orange County/San Diego is projected to grow by 12 percent (see Table 1).

In February 2014, Medicare and Commercial ACOs covered 483,000 and 433,000 Californians, respectively. The Bay Area / Sacramento region held the greatest number of

Figure 1:
Integrated Healthcare Association Regions



SOURCE: Integrated Healthcare Association

Table 1: Projected Growth in ACO Lives by Integrated Healthcare Association Region

Integrated Healthcare Association Region	February 2014	February 2016	2-year Growth
Bay Area / Sacramento	259,525	377,162	45%
Central Valley / Central Coast / North	103,210	192,979	87%
Inland Empire	42,150	53,135	26%
Los Angeles	326,000	525,860	61%
Orange County / San Diego	184,400	206,640	12%
Total	915,285	1,355,776	48%

SOURCE: Authors' analyses using linear trend projection from four waves of survey data from Cattaneo & Stroud

Figure 2: Lives Covered in Medicare ACOs in California Integrated Healthcare Association Regions

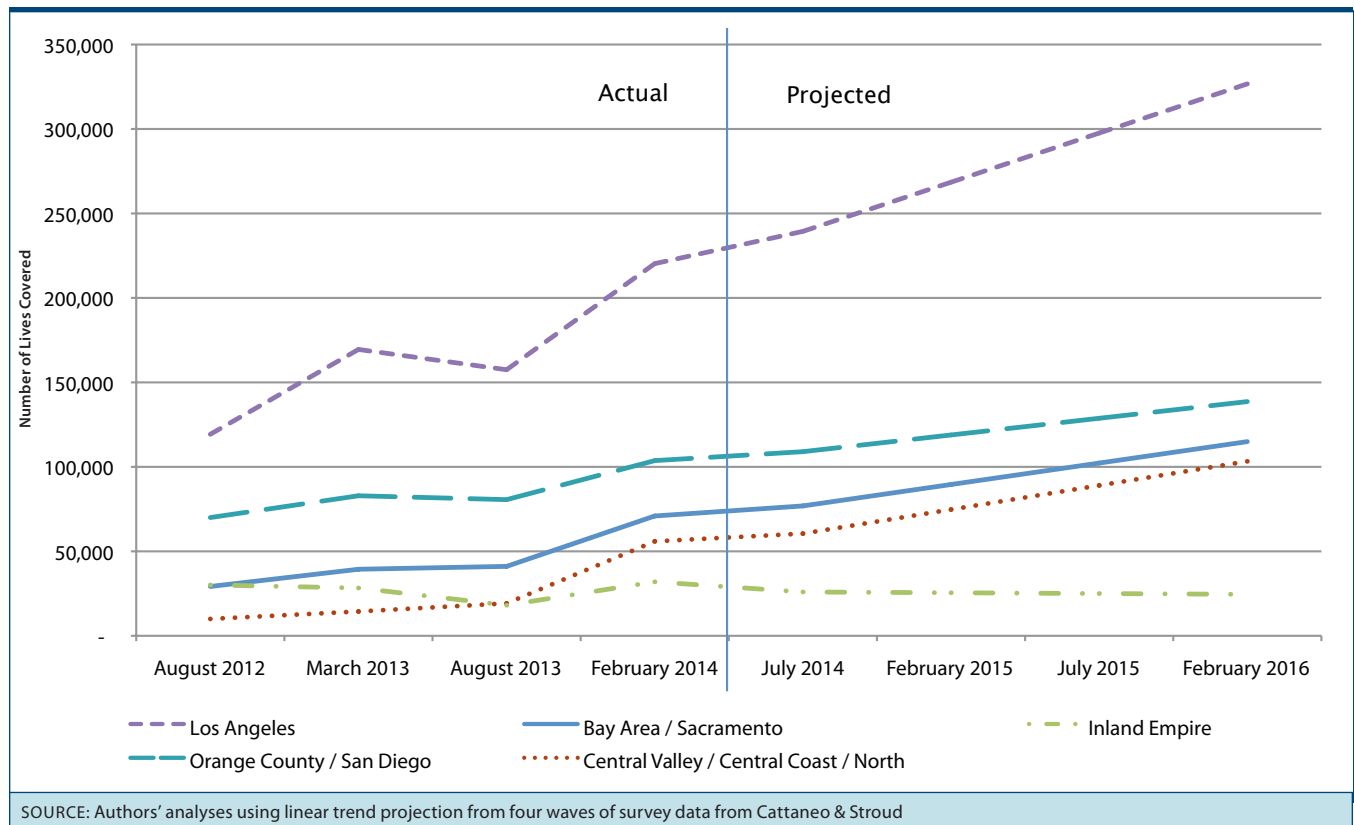
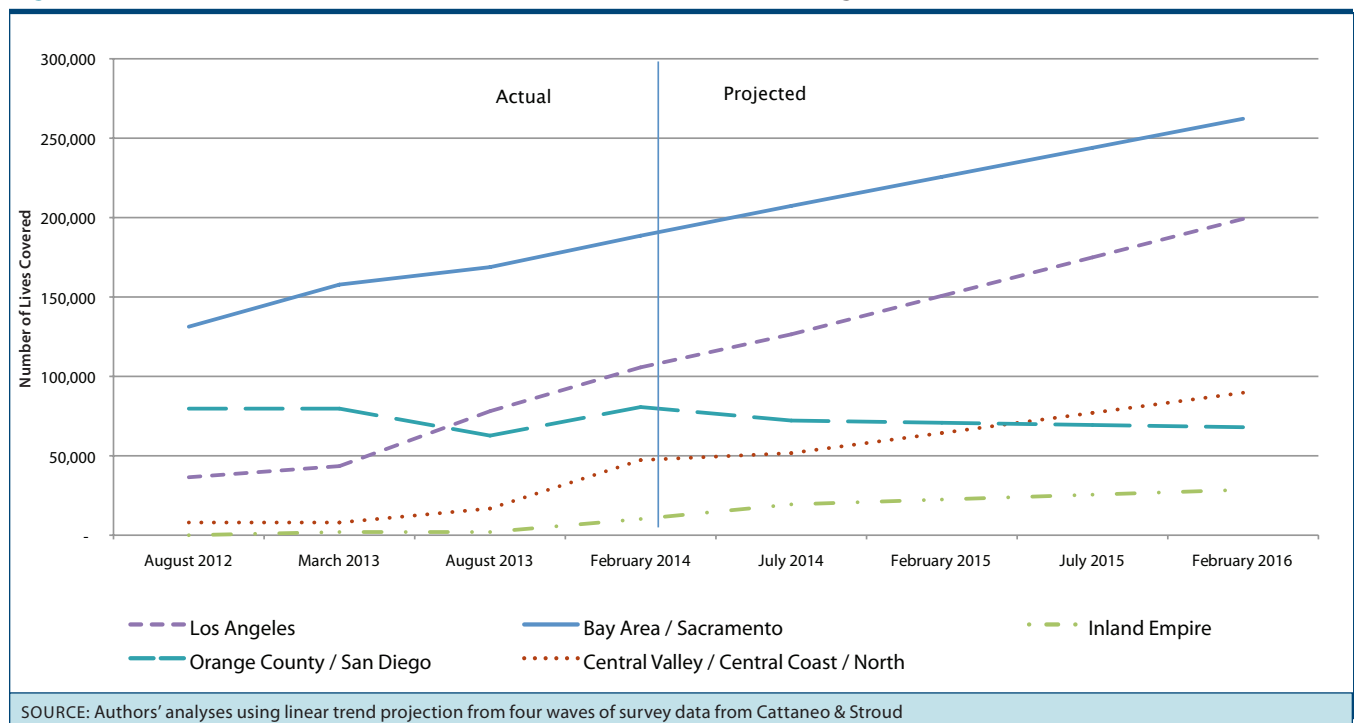


Figure 3: Lives Covered in Commercial ACOs in California IHA Regions

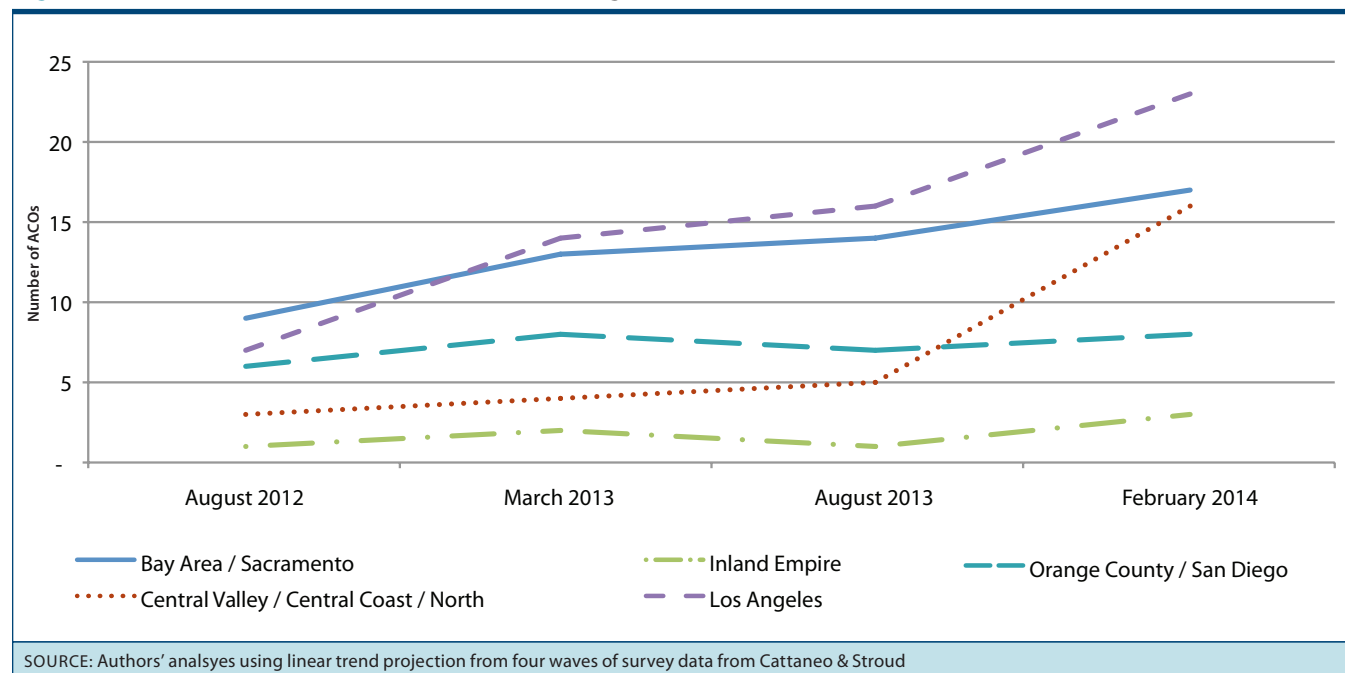


lives in commercial ACOs, 189,000, while Los Angeles led the regions in lives in Medicare ACOs, 220,000. Figures 2 and 3 depict the growth in Medicare and commercial ACOs, respectively, across the regions through February 2014, with projected linear growth to February of 2016. By then, over 708,000 Californians are expected to be covered under a Medicare ACO and 648,000 under a commercial ACO, if current trends continue. The Inland Empire is unique in that it has a nearly flat growth curve in both Medicare and commercial lives covered. Orange County/San Diego experienced an increase in Medicare lives but flat growth in commercial lives.

In California, ACOs are still emerging within Medi-Cal and the safety net. As part of California's "Bridge to Reform" Medicaid Section 1115 Waiver, Medi-Cal is authorized to test accountable delivery models to improve quality and control costs for specific vulnerable populations, including children with special healthcare needs that are

served through California Children's Services Program (Department of Health Care Services, 2010). The program currently uses a fee-for-service payment structure, but is authorized to test several new payment models, including ACOs. The ACO would be developed with a defined set of providers that would be accountable for the quality and cost of care for a defined population of patients. Of the five delivery model reform pilots approved by the Department of Health Care Services, two are provider-based ACOs serving children with special health care needs: Rady's Children Hospital of San Diego County and Children's Hospital of Orange County (Department of Health Care Services, 2014). The Department of Health Care Services expects to use the upcoming 1115 waiver renewal to address several challenges experienced by the pilots that resulted in delays, one of which is the extent to which providers bear financial risk (Department of Health Care Services, 2014).

Figure 4: Number of ACOs in California IHA Regions



Characteristics of the Largest ACOs

Tables 2 and 3 (*below*) depict the five largest Medicare and commercial ACOs, respectively, as of February 2014.

All of the largest commercial ACOs are affiliated with either Blue Cross (Anthem/WellPoint) or Blue Shield of California. They are present in all five IHA regions and range in size from 20,000 to 60,000 covered lives.

All of the largest Medicare ACOs have some portion of their operations in Southern California. The largest Medicare ACO, Heritage California ACO for Regal Medical Group in Orange County/San Diego, covers 88,000 lives. The smallest of the top five, Monarch Healthcare, covers

23,000 lives. The Sharp Healthcare ACO, which covered nearly 30,000 lives, announced that it dropped out of the Pioneer program in the third quarter of 2014 (California Healthline, 2014).

Table 4 (*on the next page*) compares California ACOs for whom complete data are available with ACOs outside of California based on a National Survey of ACOs (NSACO, Dartmouth-Berkeley, 2014). As shown, the California medical groups that have at least one ACO contract have twice as many FTE clinicians than medical groups outside of California that have at least one ACO contract,

Table 2. Largest Commercial ACOs, by covered lives, as of February 2014

ACO Name	Health Plan	Integrated Healthcare Association Regions	Date Established	Lives Covered (Feb. 2014)
HealthCare Partners Associates Medical Group, Inc.	Blue Cross	<div>■ Los Angeles</div> <div>■ OC/San Diego</div>	5/1/2010	60,000
Hill Physicians Medical Group/ Dignity	Blue Shield	<div>■ Bay Area/ Sacramento</div>	1/1/2010	40,000
St. Joseph Health	Blue Shield	<div>■ Los Angeles</div> <div>■ OC/San Diego</div>	1/1/2012	32,200
Heritage Provider Network	Blue Cross	<div>■ Central Valley/Central Coast/North</div> <div>■ Inland Empire</div> <div>■ Los Angeles</div> <div>■ OC/San Diego</div>	7/1/2013	21,500
Santé Community Physicians	Blue Cross	<div>■ Central Valley/Central Coast/North</div>	7/1/2013	20,600

SOURCE: Cattaneo and Stroud, 2014.

Table 3. Largest Medicare ACOs, by covered lives, as of February 2014

ACO Name	Health Plan	Integrated Healthcare Association Regions	Date Established	Lives Covered (Feb. 2014)
Heritage California ACO for Regal Medical Group	Heritage California	<div>■ OC/San Diego</div>	1/1/2012	88,000
HCP ACO California, LLC	HCP ACO California	<div>■ Los Angeles</div> <div>■ OC/San Diego</div>	1/1/2014	55,000
Sharp Healthcare ACO*	Sharp Healthcare	<div>■ OC/San Diego</div>	1/1/2012	29,800
ApolloMed ACO	ApolloMed ACO	<div>■ Bay Area/Sacramento</div> <div>■ Los Angeles</div> <div>■ OC/San Diego</div>	7/1/2012	28,700
Monarch Healthcare	Monarch Healthcare	<div>■ Central Valley/ Central Coast/North</div> <div>■ Inland Empire</div> <div>■ Los Angeles</div> <div>■ OC/San Diego</div>	1/1/2012	23,000

SOURCE: Cattaneo and Stroud, 2014.

*No longer participating.

provide a greater number of services, and have more prior experience with payment reform. While not statistically significant, they are also somewhat more likely to be physician led and have greater exposure to down-side risk than ACOs outside of California. As shown, primary care physicians comprise approximately 50 percent of physicians in the medical groups with at least one ACO contract, whether in or outside of California, which is substantially higher than the national ratio of primary care to specialist physicians, which is approximately 1 to 3 (Hing and Hsiao, 2014). This underscores the importance of primary care for managing a population of patients under risk-bearing value-based payment models.

The next few years will likely bring continued growth and diversity in accountable care models. These are likely to combine several payment approaches, including: 1) directly negotiated fee-for-service (FFS) payments to providers; 2) care management payments per member per month to medical groups or independent physician associations (IPAs); and 3) shared savings between the ACO and health plan based on a pre-determined spending target (Robinson, 2010; Shortell, 2015a). For example, Blue Shield of California has initiated approximately 20 risk-based ACO contracts built largely on Preferred Provider Organization (PPO) arrangements with different physician organizations and hospitals. In Southern California, Anthem/WellPoint recently announced the formation of Vivity, a virtually integrated risk-bearing model with Cedars-Sinai, Good Samaritan, Huntington Memorial,

Memorial Care, Presbyterian Intercommunity, Torrance, and UCLA hospitals/health systems. The arrangement is designed to reduce waste and re-admissions, improve population health, and share both financial risks and gains. The relationships will be based on a common EHR system, a 24 hour online “teledoc,” and shared care management and wellness programs.

Performance

Given California’s longstanding experience with managed care and pay for performance, the question can be raised as to what the ACO model adds? To address this question, we compared medical groups with an ACO contract with medical groups without an ACO contract on widely used HEDIS quality of care measures used by IHA for the commercial HMO population in their Pay for Performance program (*see Figures 5A and 5B on the next page*). The figures show the quality scores for asthma care, cancer screening, chlamydia screening, diabetes care, heart care, and pediatric care. Figure 5A, which includes scores for Kaiser-Permanente as part of the non-ACO group (as a closed internally and fully integrated system they are unlike the other ACOs in the state), indicates no difference between the two groups, with the exception of cancer screening for which the ACOs score significantly better. However, when Kaiser-Permanente is excluded from the analysis altogether, chlamydia screening becomes significant and diabetes care and pediatric care nearly so, all favoring those with an ACO contract.

Table 4. Some Comparisons – ACOs in and outside of California

ACO Characteristic	California ACOs (N=15)	Non-California ACOs (N=158)
Total FTE clinicians, mean**, ^	609.9	357.8
Percent primary care, mean	49.7	56.1
Number of contracted services (range 0-15), mean**	11.6	8.5
MD performance management (range 0-5), mean\$	2.5	2.4
Physician-led, % yes	66.7	50.0
Belong to an Integrated Delivery system (IDS), % Yes \$	53.3	47.5
Experience with payment reform (range 0-5)*, mean \$	4.1	3.3
Exposure to down-side risk, % yes	46.7	30.2
Perceived local market competition (range 0-5), mean\$	4.3	3.8
Multiple ACO contracts, % yes	46.7	42.4
Number of enrolled lives in largest contract, mean^	20667	22306
<p>*p<0.05, **p<0.01</p> <p>^ Total FTE clinicians includes the total full-time equivalent physicians in organizations that report belonging to any ACO, while number of enrolled lives only refers to the number of lives in the largest ACO contract. Therefore, it is not possible to compute the number of physicians per enrolled life with these data.</p> <p>\$For definitions, see Appendix 2</p>		
SOURCE: National Survey of Accountable Care Organizations, Dartmouth-Berkeley 2014		

Figure 5A: Mean Quality Scores for California Medical Groups, Including Kaiser Permanente

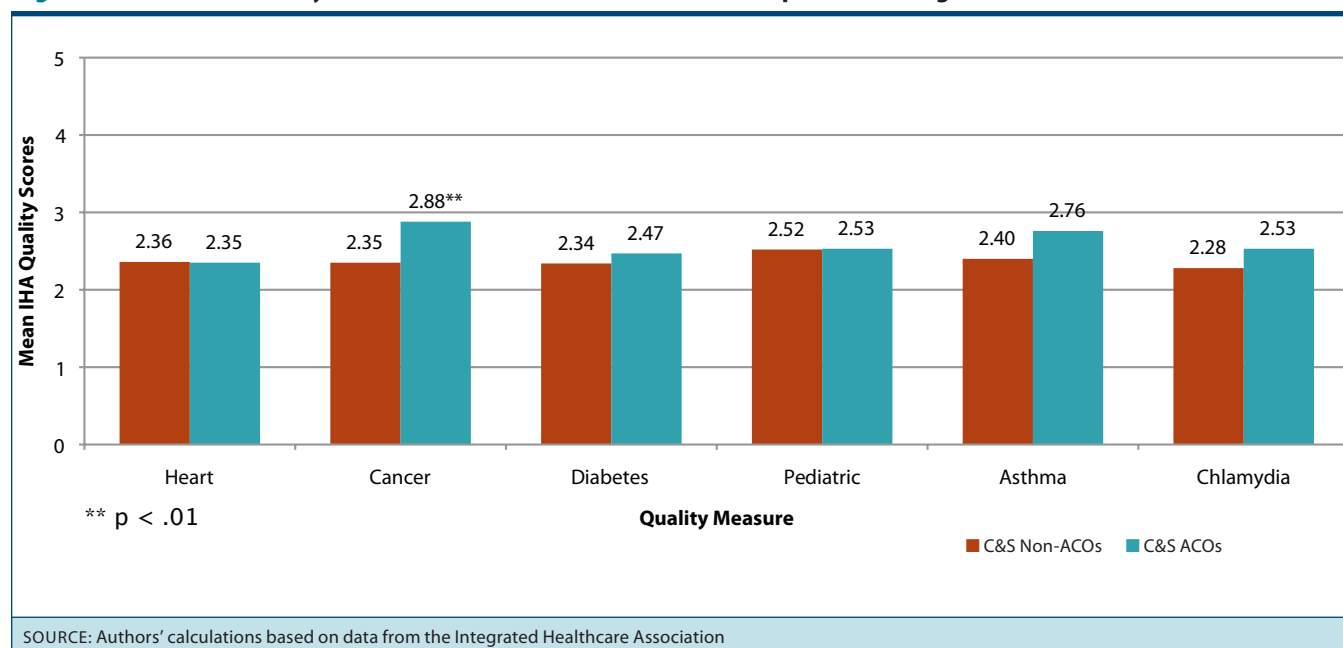
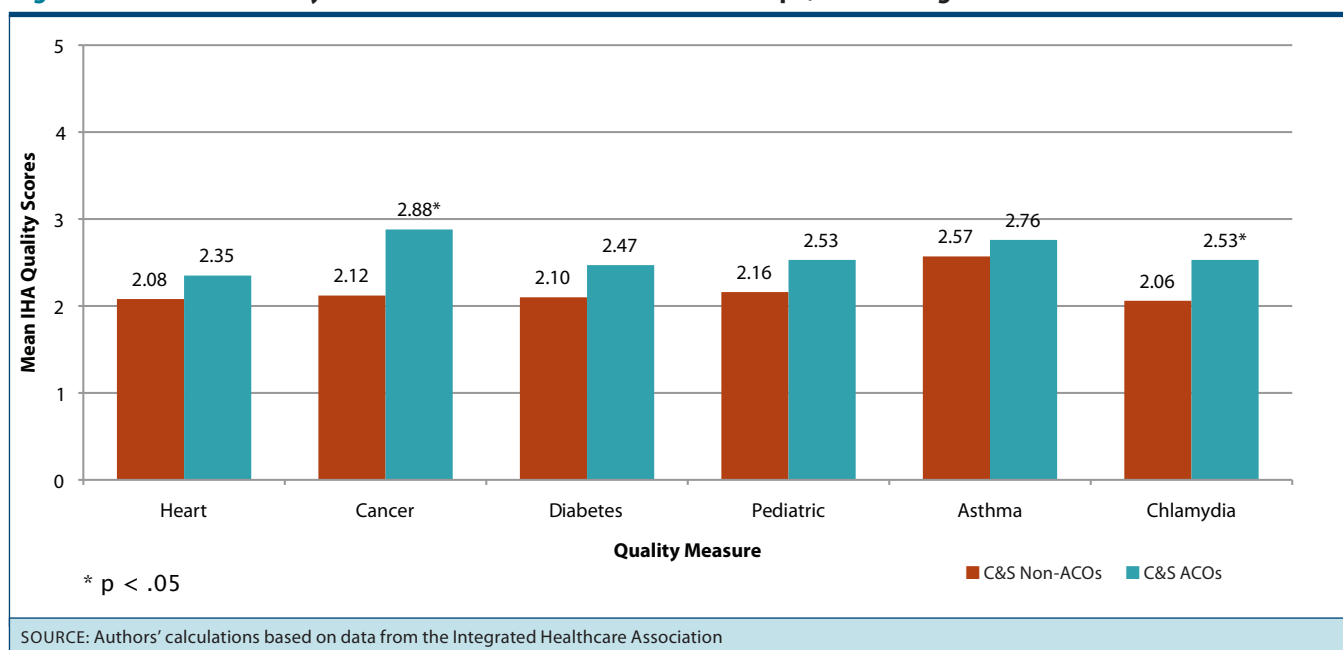


Figure 5B: Mean Quality Scores for California Medical Groups, Excluding Kaiser Permanente



See Appendix 3 for Further Details on Quality Measures

We also examined the difference between ACOs and non-ACOs on six patient experience measures based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS) metrics (see Table 5 below). These include timely care and service, coordinating patient care, health promotion, communicating with patients, satisfaction with office staff, and overall rating of care received. As shown, ACOs have small but statistically significantly higher satisfaction scores on all six measures, and this was true whether or not Kaiser-Permanente was included in the analysis.

Table 5. Average scores weighted by the group-level response (N) of each measure, 2014 (Measurement year 2013)

Measure	Non-ACO	ACO
Timely Care and Service	54.22%	56.93%*
Coordinating Patient Care	57.34%	59.47%*
Promoting Health	60.00%	61.69%*
Communicating with Patients	76.50%	79.18%*
Office Staff Helpfulness	68.22%	69.63%*
Overall rating of care	62.09%	65.53%*
* ACO score significantly different from non-ACO score at a 99% confidence level		
See Appendix 4 for further detail on patient satisfaction measures.		
SOURCE: California Healthcare Performance Information System Patient Assessment Survey		

Eighteen of California’s ACOs also had physician practices that responded to the 2013 National Survey of Physician Organizations, which obtained information on a comprehensive, detailed 21-item index of patient-centered medical home criteria (Wiley, Rittenhouse, Shortell et al., 2015b – see Appendix 1). Examples included the use of nurse care managers for seriously ill patients, the use of reminder systems, performance feedback to physicians, use of disease registries, use of electronic health records and related items. The five practices who indicated that they were part of an ACO scored 79 points out of 100, while the 13 practices that were not a part of

an ACO scored only 50 points out of 100. While the sample of respondents is small, the results are consistent with those shown in Figures 5A and 5B and Table 5. Overall, the evidence to date suggests that ACOs provide at least equivalent and, on a few measures, better quality of care than other delivery models in the state and consistently achieve slightly better patient experience scores. It is important to note that these are cross-sectional data so one cannot conclude that the better performance is due to having an ACO contract. It is also the case that other variables may account for the relationship, including characteristics of the medical groups that choose to participate in ACO contracts such as their size, ownership, prior experience, and prior performance. As such data become available for larger numbers of ACOs over time it will be possible to conduct such analyses.

In regard to cost savings, the early evidence is also encouraging. For example, a virtual ACO-like alliance developed by Blue Shield of California working collaboratively with Dignity Health System and Hill Physicians group achieved savings of \$20 million for 24,000 CALPERS enrollees in the Sacramento area (Markovich, 2012; Melnick and Green, 2014). The quality and cost findings reported here for California are generally consistent with the evidence emerging nationwide (Colla, Wennberg, Meara et al., 2012; Pope, Kautter, and Leung et al., 2014; Song et al., 2014; and McWilliams et al., 2014). For example, the Massachusetts Alternative Quality Contract organized by Blue Cross/Blue Shield of Massachusetts, has demonstrated ongoing cost savings and improved quality on a consistent basis for over four years (Song et al., 2014). At the same time, it is important to recognize that the Medicare Pioneer and Shared Savings programs have had mixed success. Some ACOs have lost money and, whether or not they experienced any shared savings to date, have left the program. For example, the Sharp Health System ACO in San Diego dropped out of the Pioneer program this past year despite favorable underlying utilization and quality of care performance. This was due to the inability of the Pioneer program to take into account San Diego’s significantly larger-than-national 8.2 percent area wage index increase in calculating shared savings (California Healthline, 2014). Sharp will continue their involvement with commercial risk-bearing contracts where there is greater flexibility to take such considerations into account.

Factors Associated With Success

“No matter how much infrastructure and experience you have, do not underestimate the amount of operational infrastructure ramp up and cost that is needed.”

– ACO participant

Based on our knowledge and experience with California and our ongoing evaluation of ACO developments nationally (Fisher, Shortell, Kreindler et al., 2012; Colla et al., 2014; Lewis, Colla, Schoenherr et al., 2014; Shortell, McClellan, Ramsay et al., 2014) we have identified six factors likely to differentiate those ACOs that will succeed in achieving their objectives from those that will be less successful or fail. In addition to the obvious need to engage physicians, these include size/scale of operations; care management capabilities; electronic health record functionality; effective partnerships; patient/family engagement; and measurement standardization and transparency.

Size/Scale

The investment required in electronic health records, new care coordination models, practice redesign, and related programs is simply too much for small practices to undertake. This is why California ACOs are relatively large. Most commercial ACOs have at least 10,000 enrolled lives (Cattaneo and Stroud, 2014) and many have 25,000 or more. Size is needed to achieve the necessary economies of scale and also to provide a basis for experimentation and learning. At the same time, increased size brings increased costs of coordination, which requires informed clinical and managerial leadership to manage the pace of change within the organization.

Care Management

Most ACOs have learned that given the new payment incentives to keep people well and manage patients with complex needs efficiently, some fundamental changes are required in how care is delivered. Data systems that can be used to develop predictive analytics to identify the high complexity/high cost patients are essential. Based on these data, complex care management programs can be developed, usually led by nurses or nurse practitioners. These include but go beyond care transition programs between hospital discharge of patients to home or other care settings. For example, the Monarch ACO in Orange County has developed a high-risk patient care management and engagement program hoping to reduce the estimated 32 percent of admissions from their high complexity/high risk patients that were hospitalized

last year. The Palo Alto Medical Foundation has developed a program with its Anthem PPO contract that identifies all patients with two or more chronic conditions to receive targeted management, including asking patients to sign a contract for their involvement in the program. The John Muir ACO has developed a tool to identify patients at high risk for readmission within 30 days. These patients then receive a care transition team visit to plan for follow-up care. Almost all ACOs in California and nationally have developed similar programs. Increased attention is also being paid to specialist referral management to make sure patients see the most cost-effective/high quality specialists. Some ACOs, for example, are publishing “preferred specialist directories” for patients to use.

Electronic Health Record Functionality

While almost all ACOs have adopted and implemented electronic health records (EHRs), many have not yet realized the benefits from EHRs’ full capabilities. These include the ability to identify patients who need special attention in advance (*see above*) through data aggregation capabilities; to group patients with similar needs; to exchange data across care settings and teams; to provide two-way communication with patients through portals as needed; to provide relevant, timely and accurate performance data feedback to physicians and other members of the health care team; to provide a basis for quality improvement; and to provide point of care clinical information for physicians, the care team, and patients. A robust EHR capability will likely be a key differentiator of the more versus less successful ACOs.

Effective Partnerships

Most ACOs include a medical group and hospital, but there is considerable variability in the extent to which post-acute facilities such as nursing homes, skilled nursing facilities, home health agencies, behavioral health or community and social service organizations are included (Colla et al, 2014). Since ACOs are accountable for the entire continuum of care for their enrolled or attributed populations, most need to develop a number of new relationships with organizations with whom they may have had relatively little experience in working with before. This will require skills in forming effective partnerships with others that embrace shared goals, shared knowledge to achieve the goals, mutual trust, and accurate, timely, frequent, and problem-focused communication (Gittel, 2005; Rundall, Wu, and Shortell, 2015).

Patient/Family Engagement

Nearly all ACOs recognize the need for enhanced engagement of patients and families in their care if the goals of better care, better health and reduced costs are to be achieved. As one person interviewed stated, "Unless we come up with engaged patients, we are probably not going to be successful. Engaged patients [are] a cornerstone of what we are doing." Two recent national surveys have identified the extent of such efforts along with some of the challenges involved (American Hospital Association, 2015; Shortell, et al, 2015b). These suggest that efforts must extend beyond getting patients to stay within the ACO's network. Greater attention needs to be given to including patients in developing treatment plans, shared decision-making, and involvement in overall practice redesign and quality improvement efforts. As one ACO respondent stated "We must meet patients where they are." Or, as others have expressed, "Instead of starting the conversation with what is the matter with you, we need to ask what matters to you?" A number of ACOs in the state are moving toward greater face-to-face interaction with patients. John Muir, for example, uses pharmacists in face-to-face interaction with patients to reconcile medications. Several other ACOs are developing patient portals for enhanced communication and also adding more home visits. Patient involvement in practice redesign is also occurring. UCLA, for example, involves groups of patients in the re-organization of total clinical service lines such as urology and neurology.

Measurement Standardization and Transparency

While larger ACOs have developed the capacity to respond to multiple different measures of quality, the task remains challenging for many others. The IHA Pay for Performance Program has been of significant assistance in having providers and insurers agree on a common set of measures and, for the most part, thresholds for rewarding performance. New measures are carefully considered and agreed on before adding to the portfolio and, over time, measures that are largely achieved, and those that become less relevant in the light of new evidence are retired. Future consideration should be given to including patient-reported outcome (PRO) measures for such conditions as diabetes, cardiovascular disease, asthma, and orthopedic procedures. This will be facilitated by greater use of electronic surveys of patients to collect such information. Currently measures are made publicly available through the Office of the Patient Advocate. In the future, it is likely that they will also be increasingly available as part of Covered California's Insurance Exchange. The development of a carefully designed and governed All Payer Claims Database (APCD) will assist in increasing transparency for all parties interested in improving high quality, affordable health care in the state.

Most of the above six factors were evidenced in the success of the Blue Shield-Dignity-Hill Physicians Group CALPERS initiative previously noted (Markovich, 2012). In brief, success was due to a package of reinforcing, inter-related innovations. These included integrated discharge planning, care transition programs, patient engagement strategies, creation of a health information exchange, a focus on the 5,000 members generating 75 percent of expenditures, implementation of evidence-based variance reduction programs in target hospitals, and a visible dashboard of measures to track progress that accounted for success.

Key Challenges and Issues Moving Forward

Emerging Market Characteristics

The extent to which further growth of ACOs and related models may help California achieve the Berkeley Forum Vision will also depend on emerging characteristics of the California market, evolving regulatory oversight, and considerations for promoting further growth.

In this section we examine selective market dynamics likely to influence future ACO growth. We look at the evidence on the location and growth of ACOs in California by exploring the relationship between 1) the number and 2) size of HMOs in California counties, 3) the concentration of hospitals, and 4) the market share of Health Maintenance Organizations (HMOs).

The Herfindahl-Hirschman Index (HHI) is an indicator of the degree of competition among organizations within an industry, calculated on a scale from 0 to 10,000, with 10,000 representing a single firm with a complete monopoly of a market.¹ Increases in HHI generally indicate a decrease in competition and an increase in market power. The Federal Trade Commission (FTC) uses a 2,500-point threshold (HHI) as a guideline to indicate a highly concentrated market.²

To determine the market concentration of hospitals and HMO market share, we used data from Whaley et al. (2015, in press). Data from the American Hospital Association's 2010 Annual Hospital Survey were used to calculate county-level hospital HHIs using the number of beds in each hospital. HMO share of the market was determined from the 2009 HealthLeaders InterStudy Survey. For commercial plans, HMO share was defined as the proportion of privately insured individuals who were enrolled in an HMO. For Medicare, HMO share was defined as the proportion of Medicare beneficiaries who were enrolled in Medicare Advantage. We also examined the number of private and Medicare ACOs in a county.

We assessed the correlation between ACO number/enrollment and market concentration using Pearson correlation coefficients and fit a trend line using second- and third order polynomial regression. Pearson correlation coefficients are reported with each result shown in Figures 6 through 11 (*on the following pages*).

Hospital Concentration and ACO Enrollment/Number of ACOs

Figures 6 to 8 (*on the following pages*) depict the negative and statistically significant association between hospital market concentration, as measured by hospital bed HHI, and the number of ACO enrollees in a county. In 39 of 58 counties, the HHI is above the 2500-point FTC guideline for highly concentrated markets. However, since the counties with the largest numbers of enrollees have lower HHI, the vast majority of Californians enrolled in an ACO are in markets with lower HHIs: 828,000 vs. 87,000 of all ACO enrollees, 444,000 vs. 42,000 of Medicare ACO enrollees, and 388,000 vs. 45,000 of commercial ACO enrollees.

HMO Market Share and ACO Enrollment

Figures 9-11 (*on the following pages*) depict the significant and positive association between HMO market share and size of ACO enrollment. This is consistent when Medicare and commercial ACOs are examined as a group and separately.

We see that for both Medicare and commercial ACOs, the numbers of lives covered and number of ACOs in a county are positively correlated with the HMO share of the marketplace. Other work (Whaley, et al., 2015, in press) has found similar associations after controlling for additional variables such as population and physician market concentration. Multiple explanations for this observation are likely to be true. One is that ACOs are a competitive response to HMOs and represent a way for providers who are not in an HMO to capture some of the shared savings that result from innovative processes of care that reduce costs to the providers. But it is also possible that providers in concentrated markets are better able to coordinate care, so that joining an ACO would not produce additional cost savings over coordination already in place. (Frech, et al., 2014). Both of these phenomena may be operating in California's markets.

¹ The HHI is defined as the sum of the squares of the market share of all the firms within the industry. For example, three competitors with a 30/30/40 split of the market would produce an HHI of 3400, or $(30*30) + (30*30) + (40*40) = 900 + 900 + 1600$.

² <http://www.justice.gov/atr/public/guidelines/hhi.html>

Figure 6: Hospital Concentration (2010) and ACO Enrollment (2014) in California Counties

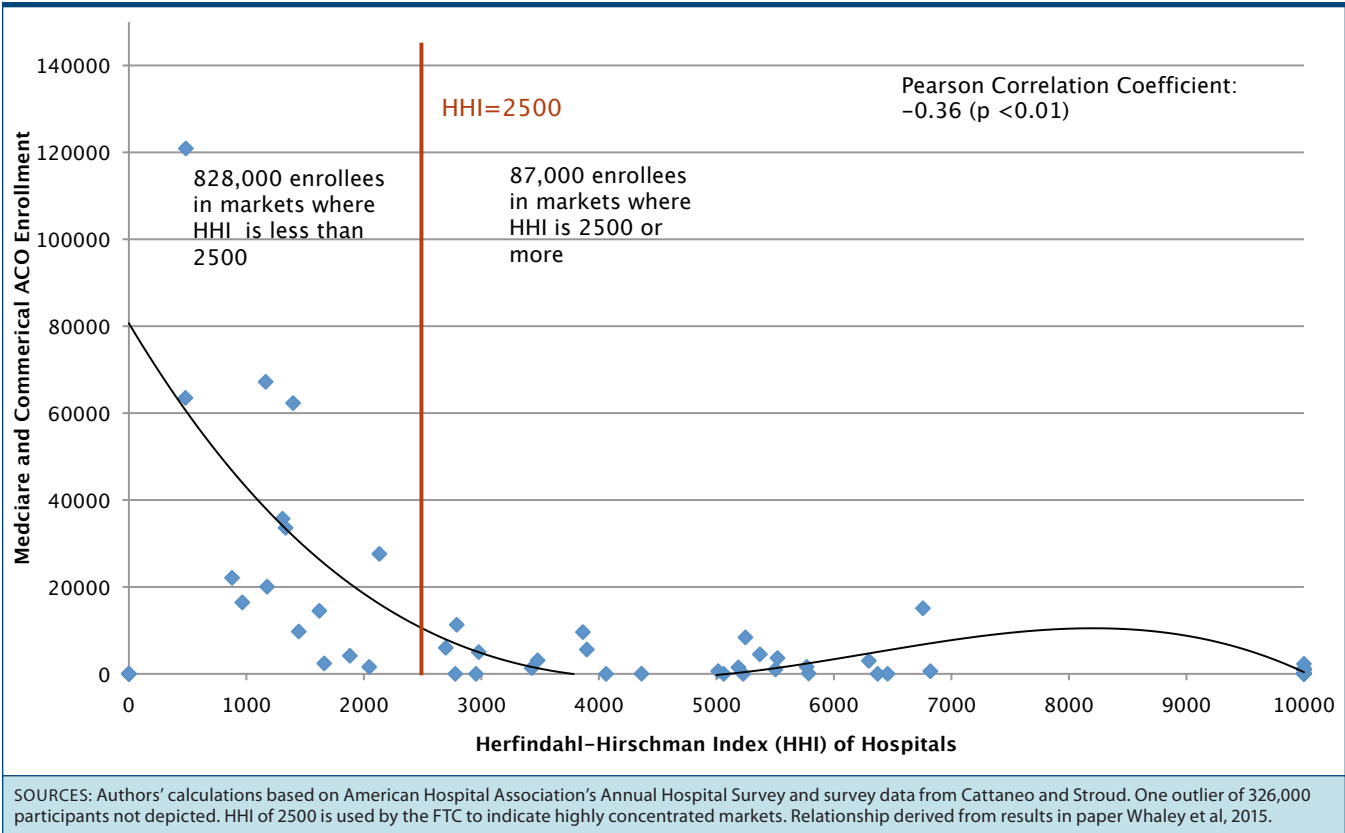


Figure 7: Hospital Concentration (2010) and Medicare ACO Enrollment (2014) in California Counties

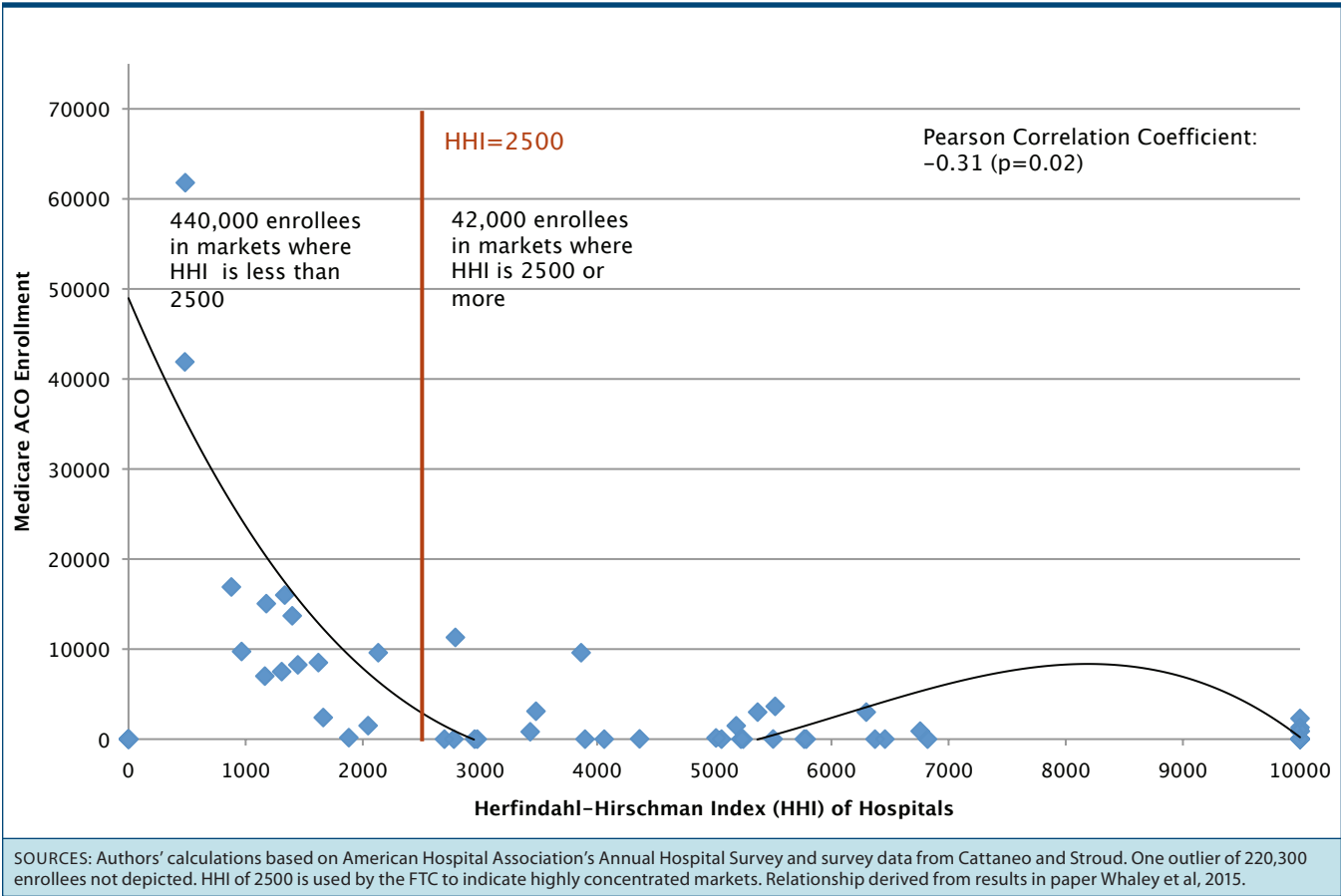


Figure 8: Hospital Concentration (2010) and Commercial ACO Enrollment (2014) in California Counties

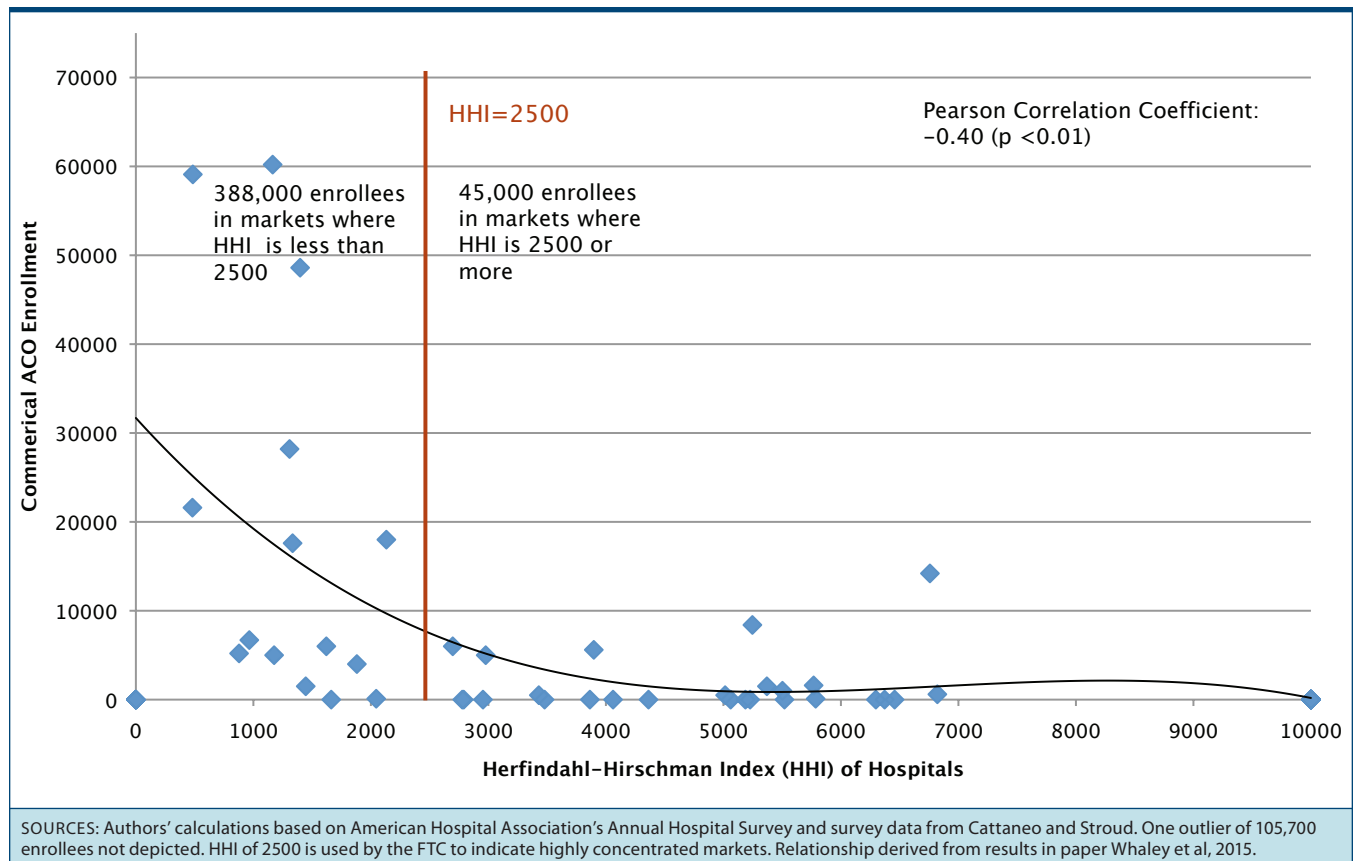


Figure 9: HMO Share of Market (2009) and ACO Enrollment (2014) in California Counties

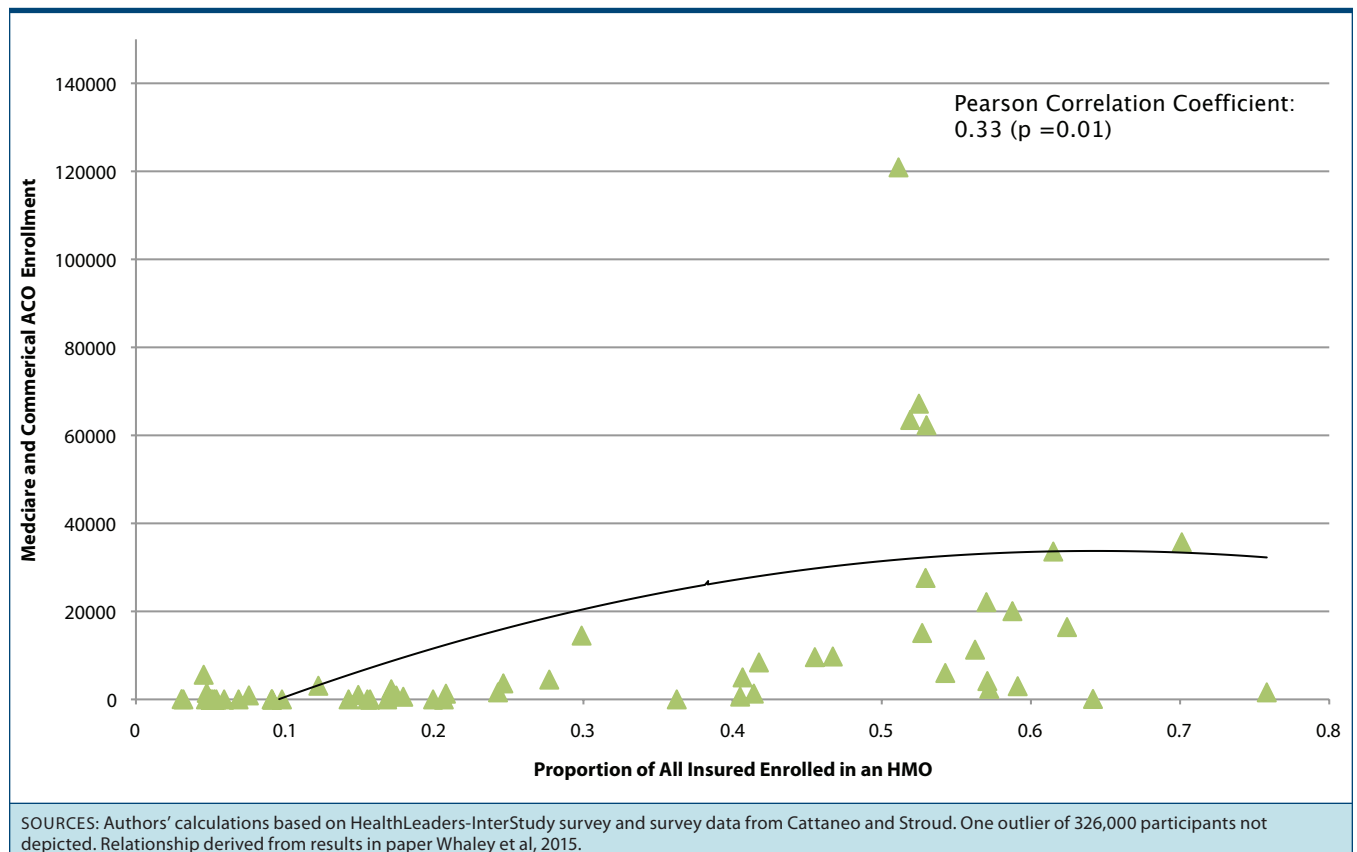


Figure 10: HMO Share of Medicare Market (2009) and Medicare ACO Enrollment (2014) in California Counties

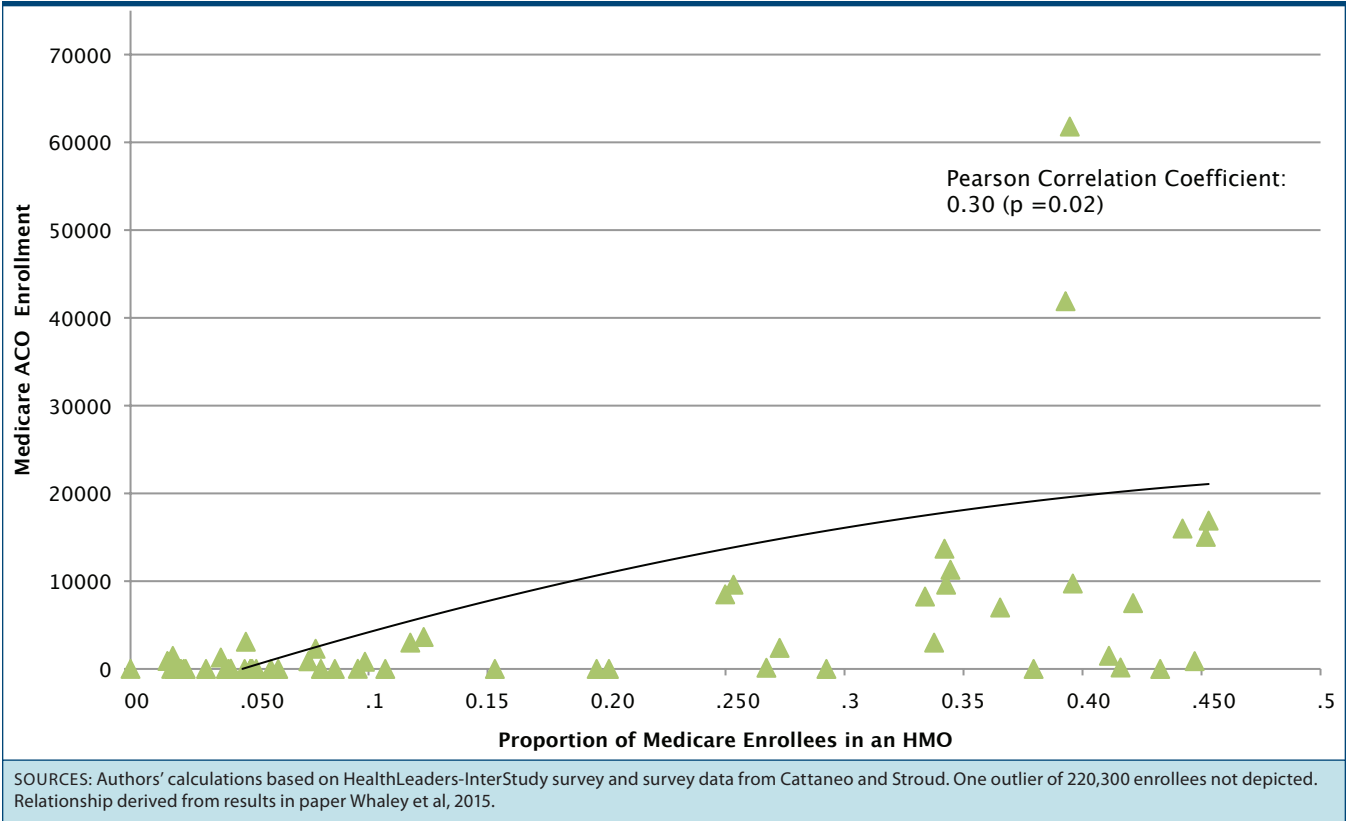
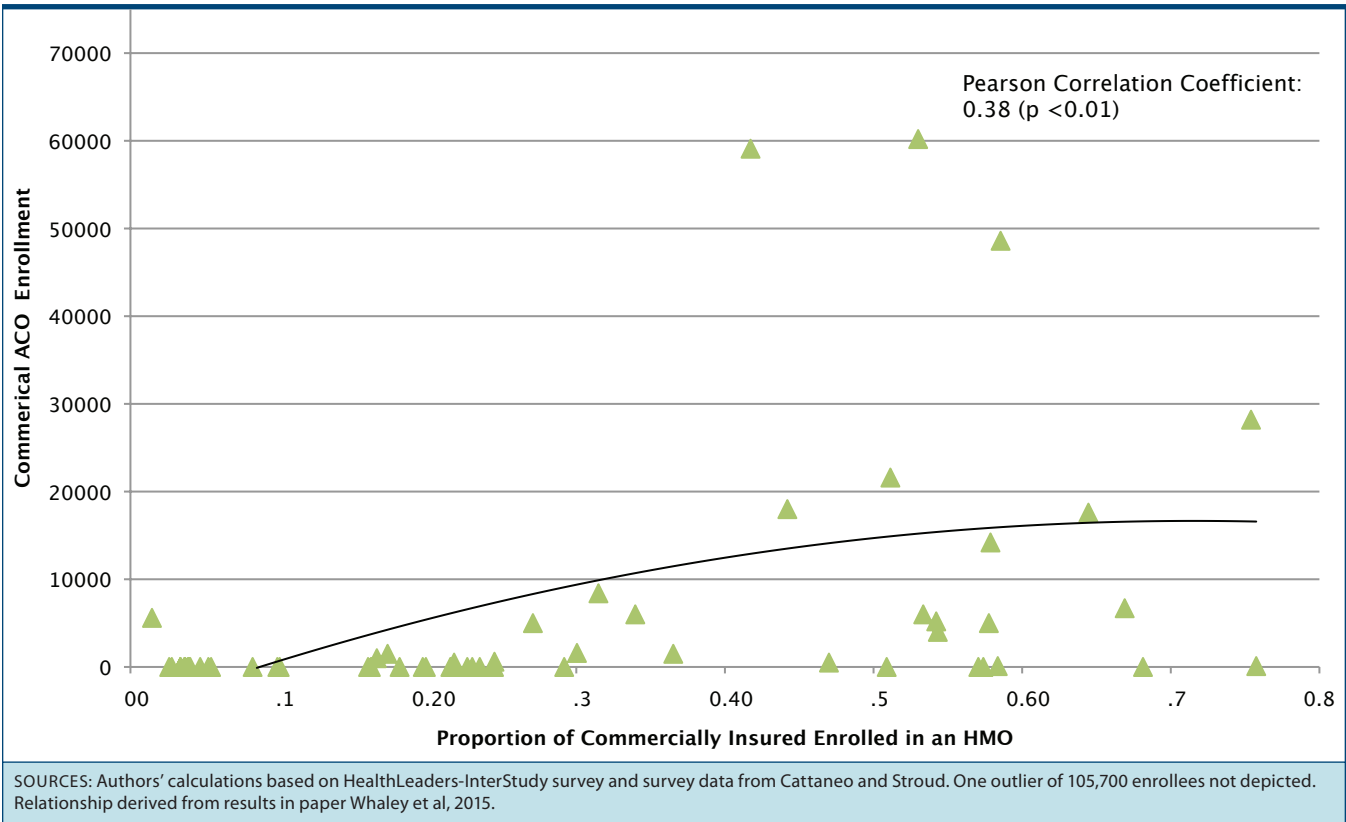


Figure 11: HMO Share of Commercial Market (2009) and Commercial ACO Enrollment (2014) in California Counties



Regulation of Accountable Care Organizations

In this section, we discuss how the California Department of Managed Health Care (DMHC) and the California Department of Insurance (CDI) regulate ACOs, including the payers as well as physician organization and hospital providers that participate in an ACO arrangement.³ Our research is based on reviewing statutes and regulations as well as key informant interviews with officials from these agencies. In addition, we discuss how California and other states are promoting and developing models of accountable care, based on state-level information collected by the National Academy of State Health Policy. In summary, we found DMHC and CDI regulate ACOs under existing statutes and regulations, including financial solvency and network adequacy requirements. Since the passage of the Affordable Care Act, California has not enacted a statute nor issued a regulation that is specific to ACOs under the auspices of these state agencies, likely because current ACO arrangements can be regulated under existing regulations. In addition, at least 19 states, including California, have established statutes, regulations, or programs that are designed to promote and develop accountable care, such as developing ACO support systems, establishing all payer claims databases, and antitrust oversight. We highlight New York, Massachusetts, and Texas, because they have been particularly active and present important lessons for continued California ACO developments.

Financial and Administrative Regulation of Accountable Care Organizations by the California Department of Managed Health Care and the California Department of Insurance

California has two regulatory agencies that oversee the health insurance market. The Department of Managed Health Care (DMHC) regulates health care service plans, including all Health Maintenance Organizations (HMOs) and some Preferred Provider Organizations (PPOs), totaling 22 million lives (California Health Benefits Review Program, 2013). The Knox-Keene Health Service Plan Act of 1975 (hereafter “Knox-Keene Act”) and its subsequent amendments are the governing statutes that DMHC operates under. The California Department of Insurance (CDI) regulates health insurance policies, including most PPOs and traditional indemnity plans, totaling 4 million lives (California Health Benefits Review Program, 2013). CDI is led by an elected State Insurance Commissioner.

In California, ACOs currently operate within Medicare and the commercial market, and are emerging in Medi-Cal and the safety net. As of February 2014, 67 ACOs covered 915,000 lives in the state (Cattaneo & Stroud, 2014). The Medicare ACOs are subject to federal regulation and all ACOs within the state are subject to state regulation, including laws and regulations on financial solvency, administration, governance, anti-kickbacks, self-referral, corporate practice of medicine, antitrust, and data sharing and privacy (Bernstein et al. 2011).

Table 6 (*on the next page*) shows that DMHC and CDI regulate health care service plans and health insurers, respectively. DMHC also regulates its physician organization and hospital providers, based on their activities and financial risk. The Knox-Keene Act requires health care service plans to have a full Knox-Keene Act license. A health care service plan is “any person who undertakes to arrange for the provision of health care services to subscribers or enrollees, or to pay for or to reimburse any part of the cost for those services; and is compensated on a prepaid or periodic charge paid by or on behalf of the subscribers or enrollees” (California Health and Safety Code §1345). DMHC ensures full Knox-Keene Act licensees have the financial viability and administrative capacity to arrange and pay for the care provided to their enrollees (California Health and Safety Code §1375.1). CDI requires health insurers to obtain a certificate of authority, a process that assesses the financial viability of the health insurer (California Insurance Code §§717-718; California Code of Regulations, §2275, Title 10, Chapter 5.)

DMHC regulates physician organization and hospital providers through either a restricted Knox-Keene Act license or as a risk-bearing organization, based on their activities and financial risk. CDI does not have parallel requirement to regulate its providers. DMHC requires providers to obtain a restricted Knox-Keene Act license if they accept downside global risk from health care service plans but do not directly market and sell products to employers and consumers. DMHC ensures these licensees meet its financial solvency and liquidity requirements.

In California’s delegated model, some physician organizations not only provide care, but also assume full or partial financial risk for the cost of care and take responsibility for utilization management and health professional credentialing (Scheffler et al. 2013; Ginsburg et al. 2009). This results in physician organizations accepting capitated payments for professional services and sometimes for hospital services as well. Physician organizations that do not accept downside global risk,

³This portion of the section is based on Fulton et al. (2015), which is in press.

Table 6. State Regulation of Health Care Service Plans, Health Insurers and Providers in California

No.	Health Care Service Plan / Health Insurer and Provider Activities	California Department of Managed Health Care Regulation	California Department of Insurance Regulation
1	Health care service plan or health insurer directly markets to consumers and employers	Full Knox-Keene Act License	Certificate of Authority
2	Physician organization or hospital provider is exposed to global/full risk, but does not directly market to consumers and employers	Restricted Knox-Keene Act License	N/A
3	Physician organization receives “Capitated or Fixed Periodic Payments” and is responsible to pay claims, but is not exposed to global risk	Risk Bearing Organization	N/A
N/A: Not Applicable			
SOURCE: Authors’ analysis of Department of Managed Health Care and California Department of Insurance statutes and regulations and key informant interviews			

but receive “capitated or fixed periodic payments” and take responsibility for paying claims (e.g., to specialists and laboratories) for services covered by the capitated or fixed periodic payment they receive, are considered to be a risk bearing organization (California Health and Safety Code §1375.4). Because of the financial risk this situation poses, several physician organizations closed due to financial distress in the 1990s (Hammelman et al 2009). In 1999, California enacted Senate Bill (SB) 260 that established the Financial Solvency Standards Board within DMHC, by amending the Knox-Keene Act (California Health and Safety Code Section 1347.15). SB 260 requires physician organizations to submit organizational and financial filings to DMHC to ensure they meet solvency requirements.⁴

Although Knox-Keene Act amendments have not included the term “ACO,” an ACO arrangement requires a health care service plan to file a “Notice of Material Modification” for approval with DMHC, pursuant to the California Health and Safety Code Section 1352 (b), if the plan-provider financial and administrative relationship has not been previously approved. The sharing of global risk between the plan and provider would be examined as a part of the payer’s and providers’ overall risk portfolio.

In summary, ACO arrangements are regulated by DMHC and CDI under existing statutes and laws, as a part of the payer’s as well as the physician organization and hospital provider’s overall risk portfolio. DMHC and CDI also ensure ACOs comply with administrative regulations, such as network adequacy for DMHC and timely access to care for both DMHC and CDI.

State-Level Promotion and Development of Accountable Care Organizations

The National Academy for State Health Policy (NASHP) maintains a website that tracks state-level actions that are designed to promote and develop accountable care (National Academy for State Health Policy, 2014; Purington et al., 2011). As of April 2014, 19 states, including California, have taken action in at least one of the seven accountable care domains defined by NASHP: project scope, authority, criteria for participation, governance, measurement and evaluation, payment, and support for infrastructure. For California, the NASHP highlighted California Public Employees’ Retirement System (CalPERS) pilot ACO with Blue Shield of California (discussed above). In this section, we discuss ACO laws and regulations in New York, Massachusetts, and Texas – three states that have significant activity in this area – as these states present important lessons for continued California ACO developments. In 2011, New York passed Chapter 59 of the Chapter Laws of 2011, a state certification process for ACOs that aligns closely with the federal requirements. Massachusetts passed its key ACO law in 2012, Chapter 224 of the Acts of 2012, *An Act Improving the Quality of Health Care and Reducing Costs through Increased Transparency, Efficiency and Innovation*. Texas also passed its key ACO law in 2011, called Senate Bill 7, which provides a legal framework for health care collaboratives, which is Texas’ term for ACOs.

⁴The Department of Managed Health Care currently only regulates physician organizations as risk-bearing organizations, because they generally have a higher share of risk-based payments and tend to be less capitalized than hospitals. However, health care service plans have a general obligation to ensure that risk-bearing providers, including hospitals, have the administrative and financial capacity to meet their contractual obligations (California Code of Regulations, Title 28, §1300.70(b)(2)(H)). The California Department of Public Health’s Licensing and Certification Division is the key state agency that regulates health care facilities, such as hospitals, skilled nursing facilities, and nursing homes. However, the Division’s regulatory focus is on patient safety and quality, not facilities’ financial risk, including the financial risk that a hospital bears within an ACO.

New York has a sophisticated model of support for ACOs, whereby the Department of Health provides a range of services, including consumer assistance to ACO patients, technical assistance to health care providers participating in an ACO; and information sharing assistance among ACOs (National Academy for State Health Policy, 2014). Using this model as a blueprint, California could support the further development of ACOs by offering a support system that includes information technology, staff support, data analysis and feedback, and the convening of learning collaboratives. Such support could be targeted to areas of the state without accountable care models; to smaller groups of providers interested in assuming increased accountability under risk-bearing contracts; and, in particular to those serving the Medi-Cal population.

All Payers Claims Databases (APCD) are another avenue by which California could promote the growth of more accountable care by providing more transparent information for purposes of assessing ACO performance with that of non-ACO providers. As of October 2014, 18 states have implemented or are implementing All Payers Claims Databases to help payers and providers make better healthcare decisions (All Payers Database Council, 2014). For example, the Massachusetts All-Payer Claims Database is maintained by the Center for Health Information and Analysis and began releasing data in 2012 (Massachusetts Center for Health Information and Analysis, 2014). New York is currently implementing its All Payer Database (New York Department of Health, 2014). In California, there are three voluntary efforts underway to establish claims databases, including California Healthcare Performance Information System (<http://www.chpis.org/>), California Integrated Data Exchange (<https://www.calindex.org/>), and the California Department of Insurance efforts from a \$5.2 million grant it received from the Center for Consumer Information & Insurance Oversight to collect claims data to be made

available for analyses. However, these data currently do not include cost and pricing information. Senator Ed Hernandez has introduced Senate Bill 26 “California Health Care Cost and Quality Database” to mandate carriers to provide these data (Hernandez, 2014). An All Payers Claims Database in California would enable comparing the performance of ACOs to other delivery and payment models.

While ACOs have the potential to improve quality and reduce healthcare costs (Kessell et al, 2015), there is a concern that they may foster anti-competitive behavior, resulting in higher prices. In Texas, health care collaboratives (Texas’ term for an ACO), must be approved by the commissioner of insurance, who considers whether the pro-competitive benefits of the proposed collaborative are likely to outweigh the anticompetitive effects of an increase in market power (Greenberg Traurig 2011). Prior to certifying the health care collaborative, the commissioner must forward the application to the Attorney General for approval. California has not enacted a similar process, likely because at present the state’s 67 ACOs (outside of Kaiser-Permanente) cover a small share (2.4%) of California’s population, and are located in areas below the cut off point for one of the FTCs measures of market concentration. Should this change in the future, California regulators could engage in dialogue with providers and with payers to discuss new payment methods and related arrangements that meet desired objectives.

In summary, there is significant state-level activity promoting and developing accountable care in the seven domains defined by NASHP. The initiatives in New York, Massachusetts, and Texas provide helpful lessons for California and other states to consider when enacting laws and issuing regulations to promote and develop accountable care.

Conclusion – ACOs and Integrated Care

Based on the analysis in this Brief, ACOs offer a promising approach for advancing the Forum's Vision of moving away from fee for service (FFS) payments and increasing the number of Californians who receive care from integrated provider organizations that are rewarded for keeping people well. However, the move toward capitation and global budget/payment approaches requires Knox-Keene financial solvency and oversight, which may pose challenges for smaller provider organizations in the state (Robinson, 2010). We offer three suggestions for addressing this challenge. First, state commercial insurers and the state Medi-Cal program, working with smaller provider organizations, might develop a "glide path" in gradually moving away from FFS to capitation and related risk-bearing contracts. This will allow provider organizations time to more fully develop the capabilities to manage risk; particularly for medically complex patients. Second, California insurers can use their robust data infrastructure capabilities and analytic teams to assist smaller provider organizations in managing risk and in developing shared savings and related models. Third, the state could consider using some of the funds under the 1115 waiver program and in continued collaboration with the State's health care foundations to provide necessary infrastructure support for those provider organizations interested in serving a high percentage of Medi-Cal patients under risk-bearing accountable care models. Given the overall low percentage market penetration of ACOs in the State and the market concentration data presented, there appears

to be little need for any new legislation or regulatory action to address potential anti-competitive concerns at this time. But this is an issue that warrants ongoing assessment and monitoring.

Ultimately, creating greater value in California's health care system will require the continued growth of value-based payment models, which will provide incentives for provider organizations to make significant changes in the current model for delivering health care. This will require a combination of three actions. First, provide care more efficiently and in lower cost settings (e.g. in outpatient rather than inpatient settings; at home rather than in the hospital); redistributing and delegating tasks to lower cost health professionals; and using less expensive inputs such as the use of generic versus brand name drugs. Second, eliminate steps that do not add value. This involves re-engineering the entire value chain of health care production. For example, reducing physician office visits when available technology makes possible more care and communication taking place via email, patient portals and in home monitoring devices. Third, add new modalities of care in which the benefits outweigh the costs so that net value is added. Examples include retail clinics, integrating behavioral health providers into primary care practices, and early childhood developmental screening and follow up. Given increased accountability for both cost and quality, ACOs have the incentives to pursue all three strategies. The extent to which they succeed will have a marked impact on achieving the goals set out by the Berkeley Forum leaders.

REFERENCES

- All Payer Database Council. Interactive State Report Map. 2014. <http://apcdouncil.org/state/map>, accessed December 17, 2014.
- Bernstein, W.S., et al. (2011). *Accountable Care Organizations in California: Programmatic and Legal Considerations*. Oakland, CA: California HealthCare Foundation. <http://www.chcf.org/~media/MEDIA%20LIBRARY%20Files/PDF/A/PDF%20ACOProgrammaticLegalConsiderations.pdf>.
- California Code of Regulations, §1300.70, Title 28, Chapter 2. [https://govt.westlaw.com/calregs/Document/ID2336BE0D44911DEB97CF67CD0B99467?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/ID2336BE0D44911DEB97CF67CD0B99467?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)). Accessed December 2014.
- California Code of Regulations, §2275, Title 10, Chapter 5. [https://govt.westlaw.com/calregs/Document/ICCC7B7B00FCC11DF9A13C3ABA6273B68?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/calregs/Document/ICCC7B7B00FCC11DF9A13C3ABA6273B68?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default)). Accessed December 2014.
- California Health and Safety Code Section 1345. <http://leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1340-1345>. Accessed March 2014.
- California Health and Safety Code Section 1347.15. <http://leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1346-1348.96>. Accessed March 2014.
- California Health and Safety Code Section 1352. <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1349-1356.2>. Accessed March 2014.
- California Health and Safety Code Section 1375.1. <http://leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1375.1-1385>. Accessed March 2014.
- California Health and Safety Code Section 1375.4. <http://leginfo.ca.gov/cgi-bin/displaycode?section=hsc&group=01001-02000&file=1375.1-1385>. Accessed March 2014.
- California Health Benefits Review Program. 2013. *Estimates of Sources of Health Insurance in California for 2014*. Oakland, CA: California Health Benefits Review Program.
- California Healthline. "San Diego-Based Sharp Healthcare Pulls Out of Pioneer ACO Program." August 28, 2014. <http://www.californiahealthline.org/articles/2014/8/28/san-diegbased-sharp-healthcare-pulls-out-of-pioneer-aco-program>. Accessed December 2014.
- California Insurance Code §§717-718. <http://leginfo.ca.gov/cgi-bin/displaycode?section=ins&group=00001-01000&file=699-728>. Accessed March 2014.
- California Public Employees' Retirement System. *Facts at a Glance*. <https://www.calpers.ca.gov/eip-docs/about/facts/facts-at-a-glance.pdf>, accessed December 20, 2014.
- Cattaneo & Stroud, Inc. (2012-2014). *ACO Activities in California*. Burlingame, CA: Cattaneo & Stroud, Inc. <http://www.cattaneostroud.com>.
- Center for Health Care Strategies. <http://www.chcs.org/project/advancing-medicare-accountable-care-organizations-a-learning-collaborative-phase-ii/>, accessed December 18, 2014.
- Center for Health Information and Analysis. *Overview of the Massachusetts All-Payer Claims Database*. Boston, MA: Center for Health Information and Analysis, 2014, <http://chiamass.gov/assets/docs/p/apcd/apcd-overview-2014.pdf>, accessed December 20, 2014.
- Colla, C.H., Wennberg, D.E., Meara, E., Skinner, J.S., Gottlieb, D., Lewis, V.A., Snyder, C.M., and Fisher, E.S. (2012). Spending differences associated with the Medicare physician group practice demonstration. *JAMA*, 308(10), 1015-1023.
- Colla, C.H., Lewis, V.A., Shortell, S.M., and Fisher, E.S. (2014). First National Survey Of ACOs Finds That Physicians Are Playing Strong Leadership And Ownership Roles. *Health Affairs*, 33(6), 964-971.
- Department of Health Care Services. 2014. *Questions and Answers from September 26, 2014: Webinar California Children's Services (CCS) Redesign Stakeholder Process*. September. <http://www.dhcs.ca.gov/services/ccs/Documents/Webinar2014QA.pdf>.
- Department of Health Care Services. 2010. *California Section 1115 Comprehensive Demonstration Project Waiver: Implementation Plan*. May. http://www.dhcs.ca.gov/provgovpart/Documents/Waiver%20Renewal/Waiver_ImpPlan_5-2010.pdf.
- Fisher, E.S., Shortell, S.M., Kreindler, S.A., Van Citters, A.D., and Larson, B.K. (2012). A framework for evaluating the formation, implementation, and performance of accountable care organizations. *Health Affairs*, 31(11), 2368-2378.

Frech III, H.E., Whaley, C., Handel, B.R., Bowers, L., Simon, C.J., and Scheffler, R.M. (2014). Market Power, Transactions Cost and the Entry of Accountable Care Organizations in Health Care. Working Paper, Nicholas C. Petris Center. Berkeley, CA.

Fulton, B.D., Pegany, V., Keolanui, B., and Scheffler R.M. (2015, in press). Growth of Accountable Care Organizations in California: Number, Characteristics and State Regulation. *Journal of Health Politics, Policy and Law*.

Ginsburg, P.B., Christianson, J.B., Cohen, G.R., and Liebhaber, A. (2009). Shifting Ground: Erosion of the Delegated Model in California. Oakland, CA: California HealthCare Foundation. <http://www.chcf.org/~media/MEDIA%20LIBRARY%20Files/PDF/S/PDF%20ShiftingGroundErosionDelegatedModel.pdf>. Accessed December 2014.

Gittell, J.H. (2005). Relational coordination: Coordinating work through relationships of shared knowledge, shared goals, and mutual respect. O., Kyriakidou, M., Ozbilgin (Eds.), *Relational perspectives in organization studies*. Northampton, MA: Edward Elgar Publishers.

Greenberg Trauig, LLP. 2011. *Texas Passes Major Health Care Related Legislation During Special Session*. Health and FDA Business. July. Accessed 24 December 2014. Available from: <http://www.gtlaw.com/News-Events/Publications/Alerts/151706/Texas-Passes-Major-Health-Care-Related-Legislation-During-Special-Session>.

Hammelman, E., Ipakchi, N., Snow, J., and Atlas, B. (2009). Reforming Physician Payments: Lessons from California. Oakland, CA: California HealthCare Foundation. <http://www.chcf.org/~media/MEDIA%20LIBRARY%20Files/PDF/R/PDF%20ReformingPhysicianPaymentsLessonsFromCA.pdf>.

Hernandez, E. *California Health Care Cost and Quality Database*, Senate Bill 26, 2014. http://www.leginfo.ca.gov/pub/15-16/bill/sen/sb_0001-0050/sb_26_bill_20141201_introduced.pdf, accessed December 17, 2014.

Hing, E, and Hsiao, J. (2014). State Variability in Supply of Office-based Primary Care Providers: United States, 2012. *NCHS Data Brief* 151. <http://www.cdc.gov/nchs/data/databriefs/db151.pdf>. Accessed January 2015.

Kessell, E.R., Pegany, V., Keolanui, B., Fulton, B.D., Shortell, S.M., and Scheffler, R.M. (2015, in press). Review of Medicare, Medicaid and Commercial Quality of Care Measures: Considerations for Accountable Care Organizations. *Journal of Health Politics, Policy and Law*.

Lewis, V.A., Colla C.H., Schoenherr, K.E., Shortell, S.M., Fisher, E.S. (2014). Innovation in the Safety Net: Integrating Community Health Centers Through Accountable Care. *J General Internal Medicine* 29(11):484-90.

Markovich, P. (2012). A global budget pilot project among provider partners and blue shield of California led to savings in first two years. *Health Affairs* 31(9), 1969-1976.

McWilliams, D., Landon, B., Chernew, M., Zaslavsky, A., (2014). Changes in Patients' Experiences in Medicare Accountable Care Organizations. *The New England Journal of Medicine*; 371:1715-1724

Melnick, G., and Green, L. (2014). *Four Years Into A Commercial ACO For CalPERS: Substantial Savings And Lessons Learned*. Health Affairs Blog. <http://healthaffairs.org/blog/2014/04/17/four-years-into-a-commercial-aco-for-calpers-substantial-savings-and-lessons-learned/>. Accessed in September 2014.

Muhlestein, D., "Accountable Care Growth in 2014: A Look Ahead," Health Affairs Blog, January 29, 2014; Accessed on 9/3/14 at <http://healthaffairs.org/blog/2014/01/29/accountable-care-growth-in-2014-a-look-ahead/>.

National Academy for State Health Policy. *State "Accountable Care" Activity Map*. 2014. Washington, DC: National Academy for State Health Policy. <http://nashp.org/state-accountable-care-activity-map>, accessed December 17, 2014.

National Survey of Accountable Care Organizations, Dartmouth-Berkeley 2014.

New York Department of Health. *All Payer Database*. http://www.health.ny.gov/technology/all_payer_database/, accessed December 20, 2014.

Pope, G., Kautter, J., Leung, M., Trisolini, M., Adamache, W., and Smith, K. (2014). Financial and Quality Impacts of the Medicare Physician Group Practice Demonstration. *Medicare & Medicaid research review*, 4(3).

Purington, K., Gauthier, A., Patel, S., and Miller, C. (2011). *On the Road to Better Value: State Roles in Promoting Accountable Care Organizations*. Washington, DC: National Academy for State Health Policy.

Robinson, J.C., and Dolan, E.L. (2010). *Accountable Care Organizations in California: Lessons for the National Debate on Delivery System Reform*. White paper, Integrated Health Association, Oakland, CA. http://www.iha.org/pdfs_documents/home/ACO_whitepaper_final.pdf. Accessed January 2015.

Rundall, T.G., Wu, F.M., Lewis, V., Schoenherr, K.E., and Shortell, S.M. (2015). Contributions of Relational Coordination to Care Management in ACOs: Views of Managerial and Clinical Leaders. *Health Care Management Review*, in press.

Scheffler, R., Bowers, L., Fulton, B., Connors, C., Shortell, M., and Morrison, I. (2013). *A New Vision for California's Healthcare System: Integrated Care with Aligned Financial Incentives*. Berkeley, CA: Berkeley Forum for Improving California's Healthcare Delivery System, School of Public Health, University of California, Berkeley. <http://berkeleyhealthcareforum.berkeley.edu/report/>.

Scheffler R.M., Shortell S.M., and Wilensky G.R. (2012). Accountable Care Organizations and Antitrust: Restructuring the Health Care Market. *JAMA* 307 (14): 1493–94. doi:10.1001/jama.2012.451.

Scheffler R.M. (2015). Accountable Care Organizations: Integrated Care Meets Market Power. *Journal of Health Politics, Policy, and Law*. In Press.

Shortell, S.M., McClellan, S.R., Ramsay, P.P., Casalino, L.P., Ryan, A.M., and Copeland, K. R. (2014). Physician Practice Participation in Accountable Care Organizations: The Emergence of the Unicorn. *Health services research*. Volume 49, Issue 5, Pages 1519-1536.

Shortell, S.M., Colla, C.H., Fisher, E., Kessell, E., and Ramsay P.P. (2015a, accepted for publication). ACOs: The National Landscape. *Journal of Health Politics, Policy and Law*.

Shortell, S.M., Sehgal N., Bibi, S., Ramsay, P., Neuhauser, L., Colla, C. and V. Lewis. (2015b, under review) "An Early Assessment of Accountable Care Organizations Efforts to Engage Patients and Families."

Song Z., Rose, S., Safran D.G., Landon B.E., Day M.P. and Chenew, M.E. (2014). "Changes in Health Care Spending and Quality 4 Years into Global Payment." *New England Journal of Medicine*, 37 (18): 1704-1732.

Whaley, C., Frech III, H.E, Scheffler, R. (2015, In Press). Accountable care organizations in California: Market forces at work? *Journal of Health Politics, Policy and Law*.

Wiley J.A., Rittenhouse D., Shortell S.M., Casalino L., Ramsay P. P., Bibi S., Ryan A. M., Copeland, K. and Alexander, J. Managing Patients with Chronic Illness: Is Delivery System Reform Getting Traction, *Health Affairs*, 34, no.1 (2015): 78-86.

Wu, F.M., S.M. Shortell, T.G. Rundall and J.R. Bloom (2015, under review) "Using Health Information Technology to Manage a Patient Population in Accountable Care Organizations."

APPENDIX 1: Patient-Centered Medical Home Components

Care Coordination/Integration <ul style="list-style-type: none"> ■ EMR ■ Access to medical records ■ Pharmacy electronic coordination ■ Chronic disease registries ■ Nurse care managers for chronic disease ■ Collect information on race/ethnicity/language ■ Hospital transitions ■ Patient tracking 	Quality and Safety <ul style="list-style-type: none"> ■ Participate in quality improvement ■ Rapid-cycle quality improvement ■ Collect data from electronic records ■ Performance feedback to physicians ■ Clinical decision support ■ Patient educators with dedicated time ■ Patient reminders ■ Incorporate feedback from physicians ■ Tobacco cessation ■ Patient receives office visit summary
Additional Measures <ul style="list-style-type: none"> ■ Personal Provider ■ Physician Directed Medical Practice ■ Enhanced access (extended hours, group visits, e-mail) 	

SOURCE: S.M. Shortell and S. McClellan, et al. "Physician Practices Participating in ACOs: The Emergence of the Unicorn," Health Serv Res, 2014 Vol 49, Issue 5, pp. 1519-1536

APPENDIX 2: Selected NSACO Survey Questions and Scales

Integrated Delivery System	<p>Do you consider you organization to be an integrated delivery system?</p> <p>Response options: Yes, No, Don't Know</p>
Physician Performance Management	<p>Which of the following approaches are used to manage physician performance in the ACO (choose all that apply)?</p> <p>Response options: Individual physician performance measures on quality are reported and shared among peers within the organization; Individual physician performance measures on cost are reported and shared among peers within the organization; Active management through one-on-one review and feedback; Individual financial incentives; Individual nonfinancial awards or recognition; None</p>
Experience with Payment Reform	<p>Has the ACO or any of its participating provider organizations participated in any of the following payment reform efforts?</p> <p>Response options: Bundled or episode-based payments; Patient centered medical home (PCMH), Pay-for-performance programs,; Publicly report quality measures; Other risk-bearing contracts, for example, capitation; Other payment reform effort.</p> <p>Responses: ACO, ACO Provider Group, Neither ACO nor Group, Don't know</p>
Perceived Local Market Competition	<p>On a scale of 1 to 5, where 1 equals "not at all competitive" and 5 equals "very competitive," how intense is the competition for patients in your market?</p>

SOURCE: Dartmouth-UC Berkeley National Survey of ACOs, 2012

APPENDIX 3: Integrated Healthcare Association Quality Measure Summary

Heart	<ul style="list-style-type: none"> ■ The percentage of patients 18–75 years of age who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) from January 1–November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year (January 1–December 31) and the year prior to measurement year and had a LDL-C screening during the measurement year. ■ The percentage of patients 18–75 years of age who were discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG) or percutaneous coronary interventions (PCI) from January 1–November 1 of the year prior to the measurement year, or who had a diagnosis of ischemic vascular disease (IVD) during the measurement year (January 1–December 31) and the year prior to measurement year and had LDL-C controlled (<100 mg/dL) during the measurement year.
Cancer	<ul style="list-style-type: none"> ■ Women 21 years of age and older who received cervical cancer screening in accordance with evidence-based standards. ■ The percentage of women 50–69 years of age who had a mammogram to screen for breast cancer. ■ The percentage of adults 50–75 years of age who had appropriate screening for colorectal cancer.
Diabetes	<ul style="list-style-type: none"> ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) who received testing for HbA1c ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) whose HbA1c was <8.0% ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) received testing for LDL-C ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) whose LDL-C Control was <100 ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) received testing for Nephropathy ■ The percentage of patients 18–75 years of age with diabetes (type 1 and type 2) whose blood pressure was <140/90
Pediatric	<ul style="list-style-type: none"> ■ The percentage of female adolescents 13 years of age who had three doses of human Papillomavirus (HPV) vaccine by their 13th birthday. ■ The percentage of enrolled children two years of age who were identified as having completed the following antigen series by their second birthday: four diphtheria, tetanus, acellular pertussis (DtaP) vaccinations; three polio (IPV) vaccinations; one measles, mumps, rubella (MMR) vaccination; three flu (HiB) vaccinations; three hepatitis B (HepB) vaccinations; one chicken pox (VZV) vaccination; and four pneumococcal conjugate (PCV) vaccinations ■ The percentage of adolescents 13 years of age who had one dose of diphtheria toxoids and acellular pertussis vaccine (DtaP) by their 13th birthday. ■ The percentage of children 2–18 years of age who were diagnosed with pharyngitis, dispensed an antibiotic and received a group A streptococcus (strep) test for the episode. ■ The percentage of children 3 months–18 years of age who were given a diagnosis of upper respiratory infection (URI) and were not dispensed an antibiotic prescription.
Asthma	<ul style="list-style-type: none"> ■ The percentage of patients 5–50 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medication of 0.50 or greater during the measurement year.
Chlamydia	<ul style="list-style-type: none"> ■ The percentage of women 16–24 years of age who were identified as sexually active and who had at least one test for chlamydia during the measurement year.

SOURCE: Integrated Healthcare Association, Oakland, California

APPENDIX 4: Patient Satisfaction Measure Summary

Each question within each composite scored as the percentage of patients who responded with the most positive response option (on a scale of "Always," "Usually," "Sometimes," or "Never").

Measure	Questions
Timely Care and Service	<p>In the last 12 months:</p> <ul style="list-style-type: none"> ■ When you phoned this doctor's office to get an appointment for care you needed right away, how often did you get an appointment as soon as you needed? ■ When you made an appointment for a check-up or routine care with this doctor, how often did you get an appointment as soon as you needed? ■ When you phoned this doctor's office during regular office hours, how often did you get an answer to your medical question that same day? ■ When you phoned this doctor's office after regular office hours, how often did you get an answer to your medical question as soon as you needed? ■ How often did you see this doctor within 15 minutes of your appointment time? Wait time includes time spent in the waiting room and exam room.
Coordinating Patient Care	<p>In the last 12 months:</p> <ul style="list-style-type: none"> ■ How often did this doctor seem informed and up-to-date about the care you got from specialists/other doctors? ■ When this doctor ordered a blood test, x-ray or other test for you, how often did someone from this doctor's office follow up to give you those results?
Promoting Health	<p><i>(The percentage to this rating is a reflection of the percentage of patients who answered "yes" to the questions.)</i></p> <p>In the last 12 months:</p> <ul style="list-style-type: none"> ■ Did you and this doctor talk about a healthy diet and eating habits? ■ Did you and this doctor talk about the exercise or physical activity that you get?
Communicating with Patients	<p>In the last 12 months:</p> <ul style="list-style-type: none"> ■ How often did this doctor explain things in a way that was easy to understand? ■ How often did this doctor listen carefully to you? ■ How often did this doctor give you easy-to-understand information about these health questions of concerns? ■ How often did this doctor seem to know the important information about your medical history? ■ How often did this doctor show respect for what you had to say? ■ How often did this doctor spend enough time with you?
Office Staff Helpfulness	<p>In the last 12 months:</p> <ul style="list-style-type: none"> ■ How often were clerks and receptionists at this doctor's office as helpful as you thought they should be? ■ How often did clerks and receptionists at this doctor's office treat you with courtesy and respect?
Overall Rating of Care	62.09%
SOURCE: Patient Assessment Survey, Reporting Year 2014. Pacific Business Group on Health	

Acknowledgments

We are grateful for the research assistance provided by Meghan Hardin of the Pacific Business Group on Health, Dolores Yanagihara and Brian Goodness of the Integrated Healthcare Association; Kati Phillips, Program Manager of the Petris Center; Patricia Ramsay, Administrative Director of the Center for Healthcare Organizational and Innovation Research (CHOIR), Salma Bibi, Research Analyst (CHOIR), Beth Keolanui, Vishaal Pegany, graduate student researchers, and Sharath Reddy and Evan Williams, student assistants at the School of Public Health, University of California, Berkeley. We also thank James Robinson, Leonard D. Schaeffer Professor of Health Economics at UC-Berkeley for his insightful comments on an earlier draft of this Brief, and Emilio Varanini of the Attorney General's office for California for his comments on an earlier version of this Brief.

FUNDING

We acknowledge funding support by the Forum participants, provided as a gift to the University of California, Berkeley School of Public Health. The research and analyses for this report were conducted independently by faculty and staff, who take responsibility for its contents.





Berkeley Forum

for Improving California's Healthcare Delivery System

<http://berkeleyhealthcareforum.berkeley.edu>



UNIVERSITY OF CALIFORNIA, BERKELEY
SCHOOL OF PUBLIC HEALTH

<http://sph.berkeley.edu>



THE NICHOLAS C.
PETRIS CENTER

<http://petris.org>



CENTER FOR HEALTHCARE ORGANIZATIONAL
AND INNOVATION RESEARCH

<http://choir.berkeley.edu/>

A NEW VISION FOR CALIFORNIA'S HEALTHCARE SYSTEM

