



MEASURING PROGRESS TOWARD ACCOUNTABLE CARE

Eugene Kroch, R. Wesley Champion, Susan D. DeVore,
Marla R. Kugel, Danielle A. Lloyd, and Lynne Rothney-Kozlak

Premier Research Institute

DECEMBER 2012

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Abstract: Little information exists about the capabilities required to achieve the ultimate aims of accountable care—better, less costly care that improves the health of populations—or about how to measure the “readiness” of providers to implement this new model. This paper reports on 59 hospital-based organizations that were members of a collaborative created to support the transition to accountable care. Assessment of 42 capabilities, divided further into 154 specific operating activities, found that the overall state of readiness was modest. Several characteristics appear to be associated with greater readiness to form an accountable care organization (ACO), including a strong patient-centered focus, full or partial ownership of a health plan, and positive relationships with providers in the market, among others. Variation in the patterns of readiness suggests that organizations are pursuing different paths toward accountable care. Additional study of organizations farther along the journey to accountable care is needed.

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Premier Research Institute (PRI) is a not-for-profit research foundation created by the Premier health care alliance in January 2010 to advance the study of innovative strategies for improving health care quality and costs. PRI conducts research using data collected from Premier members and leverages Premier's experience for the improvement of health care globally. The Institute's research focuses on identifying the strategies and products that improve patient and community health and reduce costs. As a 501(c)(3) charitable organization, the Institute funds its work through government, foundation, and corporate grants.

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EXECUTIVE SUMMARY

Although much has been written about the potential merits of accountable care organizations (ACOs), little information exists to help providers understand the capabilities needed to create and participate in an effective model that can constrain health care costs while improving quality. In concept, an ACO is a shared savings arrangement under which a set of health care providers—principally physicians and hospitals—assume some financial risk for the cost and quality of care delivered to a defined population of patients. If, collectively, an ACO’s participating providers are able to improve quality, enhance patients’ care experience, and limit per capita costs, they are rewarded with a share of the savings.

Currently, there is a lack of data evaluating the “readiness” of providers to implement this complex delivery and payment model. To address this problem, a team led by Premier, a member-owned health care alliance, defined the requirements for a model ACO and on the basis of the model’s requirements, developed a “capabilities framework” tool, designed to assess an organization’s progress toward meeting the ACO model requirements. The model includes six core components: a patient-centered foundation (focused on greater patient involvement in clinical decisions), a health home (focused on essentially a primary care medical home), a high-value network (focused on a set of providers that deliver quality care at an efficient price), payer partnership (focused on ACO providers working with health care payers to create financial incentives consistent with providing high-value care), population health data management (focused on collecting, analyzing, and reporting health services data covering the ACO’s patient population), and ACO leadership (focused on systematic ACO governance and administration). Under the team-developed assessment framework, a set of “capabilities” consisting of “operating activities” is defined for each core component to measure an organization’s progress toward the component’s full implementation.

Premier used the capabilities framework to evaluate 59 organizations operating 88 distinct hospitals of various sizes, characteristics, and regional locations

between August 2010 and June 2011. All assessed organizations were members of the Premier Partnership for Care Transformation (PACT) Readiness Collaborative, which was launched in June of 2010 to help organizations transition to accountable care. The assessments provided insight into the overall state of ACO readiness. Given that these 59 organizations were predisposed to becoming ACOs by virtue of their joining the collaborative, it was surprising to find at the outset of the collaborative that the level of readiness was modest. No organization achieved full implementation of any core component, and it was common to find organizations that had not undertaken any of the activities associated with one or more of the framework’s prescribed capabilities.

Among the assessed organizations, those that appeared most ready to form an ACO were strongly patient-centered and had a focus on building the capacity to deliver advanced primary care. Characteristics associated with greater ACO maturity included full or partial ownership of a health plan, an existing collaboration with other health systems in the community, and positive relationships with providers in the market.

Organizations that were further along the development of the accountable care model generally had existing risk-based contracts with payers, including bundled payments or pay-for-performance arrangements. Outside these forays into shared, risk-based contracting, few assessed organizations had developed any sort of partnerships with commercial or government payers, and most reported poorly developed relationships with their payers.

Based on our analysis of qualitative data collected from on-site interviews, we found ACO readiness to be associated with the availability of capital for investment in requisite infrastructure and financial confidence to shift to a new reimbursement model, the strength of clinical integration, the sophistication of the primary care base, and the relationship between providers, including the hospital and community physicians. In addition, “softer” elements relating to organizational culture, change management, and leadership appeared to be important to ACO readiness.

Development of underlying information technology was found to be another element necessary for accountable care. This technology goes beyond electronic health records and health information exchanges and enables the integration of disparate data, analysis of data across a patient population, stratification of financial and clinical risk in the population, and measurement of the impact of targeted interventions.

The varying patterns of developed capabilities revealed in the assessments suggest that no one path toward ACO development is definitive or is a guarantee of success. Additional study of organizations further along in ACO development is needed.

MEASURING PROGRESS TOWARD ACCOUNTABLE CARE

EVALUATING ACCOUNTABLE CARE

Although much has been written about the potential merits of accountable care organizations (ACOs), little information exists to help providers understand the capabilities needed to create and participate in an effective model that can constrain health care costs while improving quality. In concept, an ACO is a shared savings arrangement under which a set of health care providers—principally physicians and hospitals—assume some financial risk for the cost and quality of care delivered to a defined population of patients. If, collectively, an ACO’s participating providers are able to improve quality, enhance patients’ care experience, and limit per capita costs, they are rewarded with a share of the savings.

Assessing the “readiness” of organizations to become effective accountable care organizations (ACOs) is the first step in identifying the requisite changes for successful transformation. Readiness assessments also help organizational leaders remain “clear-eyed” about the maturity of their organizations in developing accountable care capabilities and the resources needed to accomplish this goal. For example, should leaders mistakenly believe that by simply implementing the appropriate legal structure their organization is ready to delve into accountable care, the potential outcome could be financially dire and could result in unintended consequences for patients, providers, and payers. Clearly the challenge is to provide a data-driven framework that can objectively evaluate providers’ readiness to implement this new care delivery model.

To address this challenge, a team consisting of more than 20 health care experts led by Premier—a member-owned health care alliance of 2,700 U.S. hospitals and more than 90,000 other health care sites—created a model to define the core components of an ACO. The model includes six core components, which are divided into related capabilities (Exhibit 1). From this model, the team developed a capabilities framework,

consisting of 154 discrete operating activities that represent business, clinical, and technical functionalities. The team weighted these activities by priority, which enabled it to use the framework as a tool to assess each organization’s progress toward ACO readiness.

Because of the novelty of accountable care, neither the ACO model nor the capabilities framework could be developed using previous experience or historical accounts. Similarly, the evaluation could not be based on a retrospective analysis of performance benchmarks or objective indicators of progress and achievement. Instead, a variety of resources were used to develop the model and the framework:

- Scientific literature regarding accountable care models, delivery system transformation, population health management, and measurement that supports improved quality, patient experience and cost;
- Input from industry experts regarding efficacy, consumer protection, and best practices related to population health management and patient-centered care delivery;
- Input from external content experts with executive administrative and clinical experience transforming integrated delivery systems and payment models and managing the health, cost, and experience of populations within large regional and national health plans; and

Assessments

The capabilities framework was used to evaluate the ACO readiness of 59 organizations operating 88 distinct hospitals of various sizes, characteristics, and regional locations between August 2010 and June 2011. All assessed organizations were members of the Premier Partnership for Care Transformation (PACT) Readiness Collaborative, which was launched in 2010 to help organizations determine if they should pursue the ACO model. This group is distinct from Premier’s PACT Implementation Collaborative that

EXHIBIT 1. ACO MODEL OF CORE COMPONENTS AND RELATED CAPABILITIES

Core Component	Capabilities
People-centered Foundation (e.g., community-, patient-, and family-centered care)	<ul style="list-style-type: none"> ✓ Involve people in decisions that affect their health care ✓ Provide people with easy access to health care ✓ Activate individuals to take responsibility for their own health ✓ Regularly assess and address individuals' and population's health care needs ✓ Measure and improve the care experience of people in the ACO's population
Health home (e.g., patient-centered primary care medical home)	<ul style="list-style-type: none"> ✓ Deliver people-centered primary care ✓ Optimize chronic, acute and preventative care ✓ Manage population segments to optimize health status ✓ Coordinate care across continuum ✓ Establish health home value care systems ✓ Drive continuous improvement in outcomes of the ACO's population ✓ Develop new delivery models to improve coordination of care for complex medical conditions
High-value network (e.g., affiliations with specialists, home care services, behavioral health, long-term care, and palliative care services)	<ul style="list-style-type: none"> ✓ Deliver high-value specialist care ✓ Deliver high-value outpatient facility services ✓ Deliver high-value inpatient services ✓ Deliver high-value post-acute care ✓ Integrate and coordinate care across the spectrum ✓ Drive continuous improvement in ACO's population outcomes ✓ Develop new delivery models to improve coordination of care for complex clinical conditions
Payer partnership (e.g., contracting and joint operations)	<ul style="list-style-type: none"> ✓ Negotiate and manage ACO contract with payer partners ✓ Design aligning incentive systems for ACO members that may be administered by payer partner ✓ Collaborate with payer partners to manage medical encounter experience of ACO's population
Population health data management (e.g., technology and informatics)	<ul style="list-style-type: none"> ✓ Capture and analyze data from multiple sources ✓ Install applications and systems that enable population health management ✓ Create information exchanges and communication pathways for ACO patients and participants
ACO leadership (e.g., governance, leadership, financial and legal structures)	<ul style="list-style-type: none"> ✓ Use reimbursement to align ACO participants with ACO objectives ✓ Report ACO-wide results to all participants ✓ Communicate consistently and routinely with all participants ✓ Provide strategic management of ACO entity ✓ Manage ACO as a combined physician–hospital entity ✓ Centralize medical management functions ✓ Report on and facilitate management of total medical cost ✓ Manage intra-ACO transfer prices/costs ✓ Manage financial performance of ACO ✓ Oversee outcomes for ACO's population ✓ Manage effectively the operational transitions required to create an ACO ✓ Develop an organizational culture consistent with an ACO system ✓ Train physicians and others in order to foster effective leadership in a new ACO system ✓ Enable ACO contracting ✓ Evaluate, analyze, and establish appropriate legal structure ✓ Educate and appropriately manage interactions across and between ACO participants ✓ Assess impact of and monitor ACO regulatory and legislative environment

assists organizations actively seeking payer contracts in building the capabilities required to transition to an ACO. The experience of this more advanced cohort will be highlighted in a paper to be published by the Commonwealth Fund.

When aggregated, the assessments of the Readiness Collaborative participants provide a quantitative picture of the overall state of ACO readiness for the collaborative cohort as a whole. While not representative of the nation as a whole, this review is the most comprehensive study to date of the journey to accountable care and provides us a window into the continued transformation. Having a better sense of the current state of readiness of organizations to become ACOs is important for understanding the gaps, priority needs, and requirements for moving ahead.

Scoring

Participants self-scored the assessments, followed by a two-day in-person visit by Premier staff (as detailed in the appendix), when the scores were reviewed and adjusted as needed. Each operating activity was scored using a Likert scale with whole number values from 0 to 4, with 0 reflecting the least developed and 4 reflecting the most developed.

- 0 = applicable to 0 percent of services for the intended ACO population;
- 1 = applicable to 1 percent to 5 percent of services for the intended ACO population;
- 2 = applicable to 6 percent to 20 percent of services for the intended ACO population;
- 3 = applicable to 21 percent to 50 percent of services for the intended ACO population or a successful demonstration/pilot on less than 21 percent that could be easily scalable across the health system;
- 4 = applicable to more than 50 percent of services for the intended ACO population or standard operating procedure for the entire health system.

Scores reflected the degree to which the population targeted for accountable care had access to or been affected by the operating activity, rather than the degree to which an operating activity had been implemented. For example, if an operating activity, such as processes for measuring patient experience, had been fully implemented in the inpatient setting but not in other settings across the care continuum, it would receive a score of 0 or 1, rather than 4. Additional information about the quantitative analysis is in the Appendix. For example, the 0-to-4 Likert scale was converted to a 0-to-1 scale (by dividing by 4) in order to aid the analysis of scoring results.

FRAMEWORK ASSESSMENT TOOL FINDS MODEST LEVEL OF ACO READINESS FOR ORGANIZATIONS REVIEWED

Overall, assessed organizations were in an early stage of ACO development. On a scale of 0 to 1, the highest weighted score for any component was 0.76, indicating that none of the participating organizations achieved the maximum possible score across the operating activities of any of the six core components. In many instances, organizations received scores of zero for a large number of operating activities. Some organizations received weighted scores of zero for all operating activities mapped to the health home and payer partnerships components. Only four of the 59 organizations (7%) achieved an overall weighted average score of 0.5 or greater.

Mean weighted scores for the six core components (Exhibit 2) fell into a relatively small range of values. The average weighted overall component score of 0.27 (range 0.24–0.33) indicates that organizations had, on average, developed relevant operating activities for about 5 percent of the population for which the organization was accountable. The average component standard deviation (0.11) indicates a fair amount of variability across the 59 health care organizations' structures and processes that support accountable care. The standard deviations varied little across the six components

(0.13–0.15), exhibiting similar variability across the 59 organizations. The median scores were consistently lower than the average scores, indicating the data had positive skew, which reflects a greater number of scores below than above the average score.

These readiness scores, each expressed as a ratio of actual score to the maximum possible score, are depicted in “spider,” or “radar,” diagrams, which display values relative to a central point and can be useful tools for analyzing categories of measures that are not directly comparable. These diagrams, which indicate a score value of 0 at the center and 100 at the outer end of each spoke, allowed for simultaneous display of the scores for all six core components and for the capabilities within each component. Exhibit 3 shows a spider diagram of these results at the component level. The diagram has a symmetrical shape, indicating relatively even development among the components.

Among the six core components, organizations received the highest implementation scores for activities related to the people-centered foundation component (Exhibit 4). Under this component, “Measure and improve the experience of people within the ACO population” received the highest score, which reflects the

existence of well-developed patient experience monitoring programs in the inpatient setting among participating health care systems, likely due to existing Medicare reporting requirements. The lowest component scores were for the payer partnerships and health home components (Exhibit 5). Nevertheless they had reasonably high scores for certain specific capabilities: health home value care systems and activities to negotiate and manage ACO contracts with payer partners. (Appendix Exhibit 4 includes the full set of spider diagrams covering each of the six core components’ sets of capabilities.)

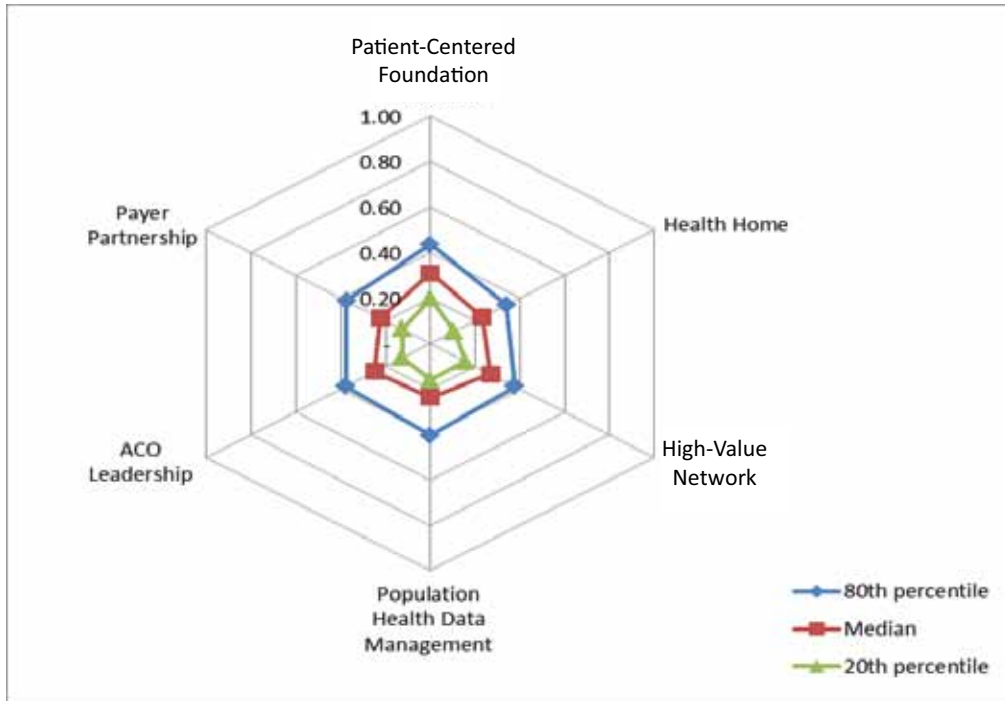
Some organizations were relatively well developed in some core components. Exhibit 6 shows 10 organizations (17%) that achieved a weighted score of 0.5 or greater in one or more components (i.e., scoring 2 or greater on the Likert scale). However, with the exception of Organization 1, organizations were not well developed in any of the six components. Of these 10 organizations, the scoring pattern of Organization 5 was more typical: five components were relatively more developed and one was much less so.

Some organizations demonstrated considerable variation in scores for different core components, indicating that advancement in accountable care did not

EXHIBIT 2. SUMMARY STATISTICS FOR SIX CORE COMPONENTS, WEIGHTED SCORE ON 0 TO 1 SCALE

Component (N of Operating Activities)	Mean	Median	S.D.	Min	Max
People-Centered Foundation (20)	0.33	0.31	0.14	0.11	0.76
Health Home (32)	0.24	0.23	0.14	0.00	0.64
High-Value Networks (37)	0.28	0.27	0.13	0.10	0.67
Population Health Data Management (21)	0.28	0.24	0.15	0.03	0.70
ACO Leadership (33)	0.27	0.25	0.15	0.04	0.73
Payer Partnerships (11)	0.25	0.22	0.15	0.00	0.72
Overall Weighted Score	0.27	0.26	0.11	0.08	0.61
Legend for Weighted Score					
0.25 = applicable to 1%–5% of services for the intended ACO population (1 out of a maximum score of 4)					
0.50 = applicable to 6%–20% of services for the intended ACO population (2 out of a maximum score of 4)					
0.75 = applicable to 21%–50% of services for the intended ACO population or a successful demonstration/pilot on <21% that is easily scalable across the health system (3 out of a maximum score of 4)					
1 = applicable to >50% of services for the intended ACO population or Standard Operating Procedure (SOP) for the entire health system (4 out of a maximum score of 4)					
Note: S.D. = standard deviation.					

EXHIBIT 3. SPIDER DIAGRAM OF DISTRIBUTION OF SCORES FOR SIX CORE COMPONENTS*



* Score on 0 to 1 scale, as described in Exhibit 2.

EXHIBIT 4. SCORES OBSERVED FOR PEOPLE-CENTERED FOUNDATION COMPONENT

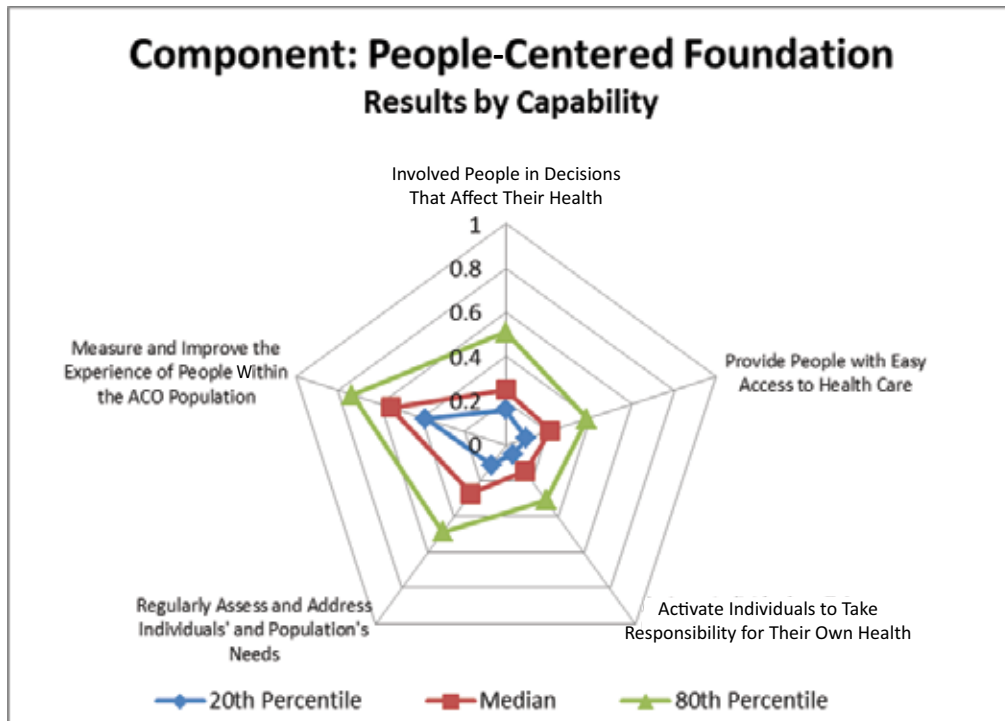
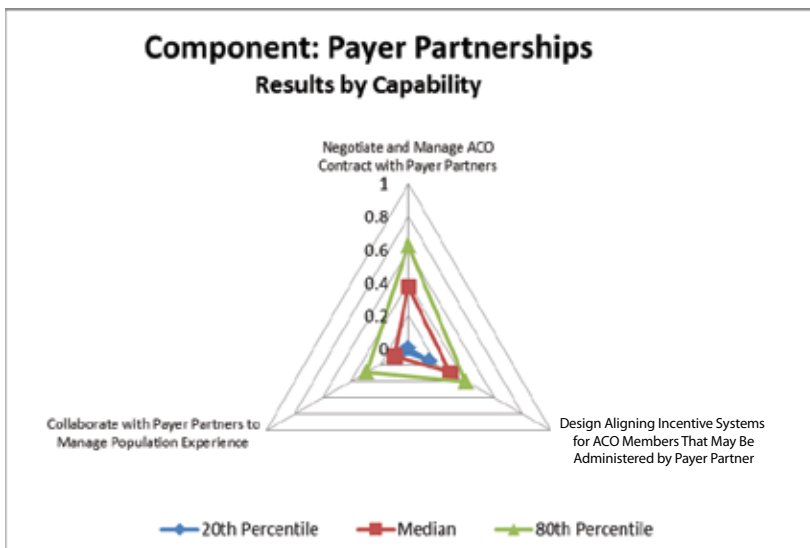
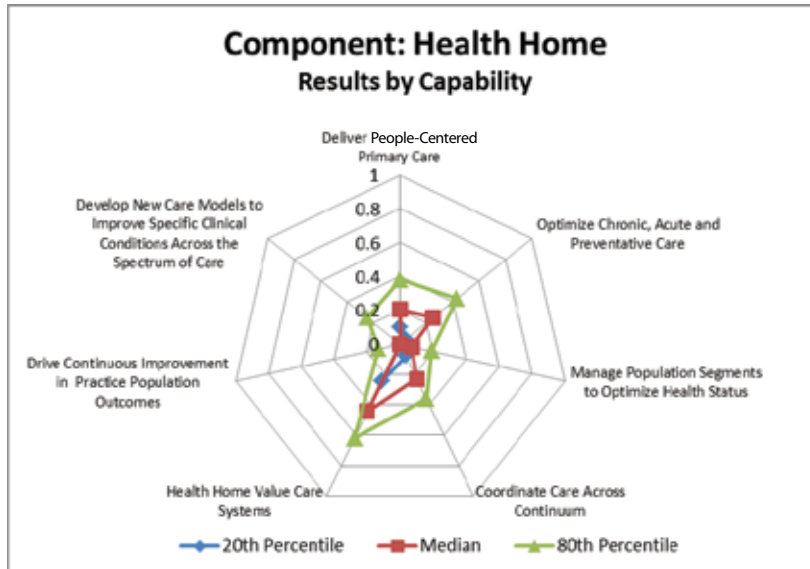


EXHIBIT 5. SCORES OBSERVED FOR PAYER PARTNERSHIPS AND HEALTH HOMES COMPONENTS



develop uniformly across the organization. Furthermore, there was no one component in which either all or most of the 10 organizations showed substantially more advancement compared with the others. These findings are consistent with the framework’s measurement of individual capabilities, the development of which was driven by distinct factors.

The capabilities with the lowest scores were

- Applications and systems that enable population health management;
- Activate individuals to take responsibility for their own health;

- Development of new care models to improve specific clinical conditions across a spectrum of care;
- Manage population segments to optimize health status; and
- Manage intra-organizational transfer prices and costs.

These low scores were not unexpected, because these are some of the most complex functions of accountable care and can be challenging to implement. Moreover, because they are advanced capabilities, they represent functions an organization would likely engage in after completing more foundational work.

EXHIBIT 6. COMPONENT SCORES AMONG THE ORGANIZATIONS ACHIEVING A WEIGHTED SCORE OF 0.5 OR GREATER ON ONE OR MORE CORE COMPONENTS*

Organization (in order of high to low overall weighted score)	Weighted Component Scores						Overall Score
	PCF	HH	HVN	PHDM	ACOL	PP	
Organization 1	0.76	0.47	0.67	0.63	0.64	0.47	0.61
Organization 2	0.59	0.64	0.52	0.60	0.46	0.39	0.53
Organization 3	0.44	0.17	0.53	0.52	0.73	0.72	0.52
Organization 4	0.51	0.42	0.36	0.56	0.58	0.58	0.51
Organization 5	0.55	0.52	0.59	0.52	0.50	0.10	0.46
Organization 6	0.41	0.38	0.44	0.47	0.45	0.55	0.45
Organization 7	0.44	0.50	0.33	0.27	0.57	0.51	0.44
Organization 8	0.52	0.27	0.47	0.46	0.47	0.36	0.43
Organization 9	0.55	0.28	0.27	0.27	0.28	0.13	0.30
Organization 10	0.34	0.21	0.53	0.23	0.26	0.18	0.29

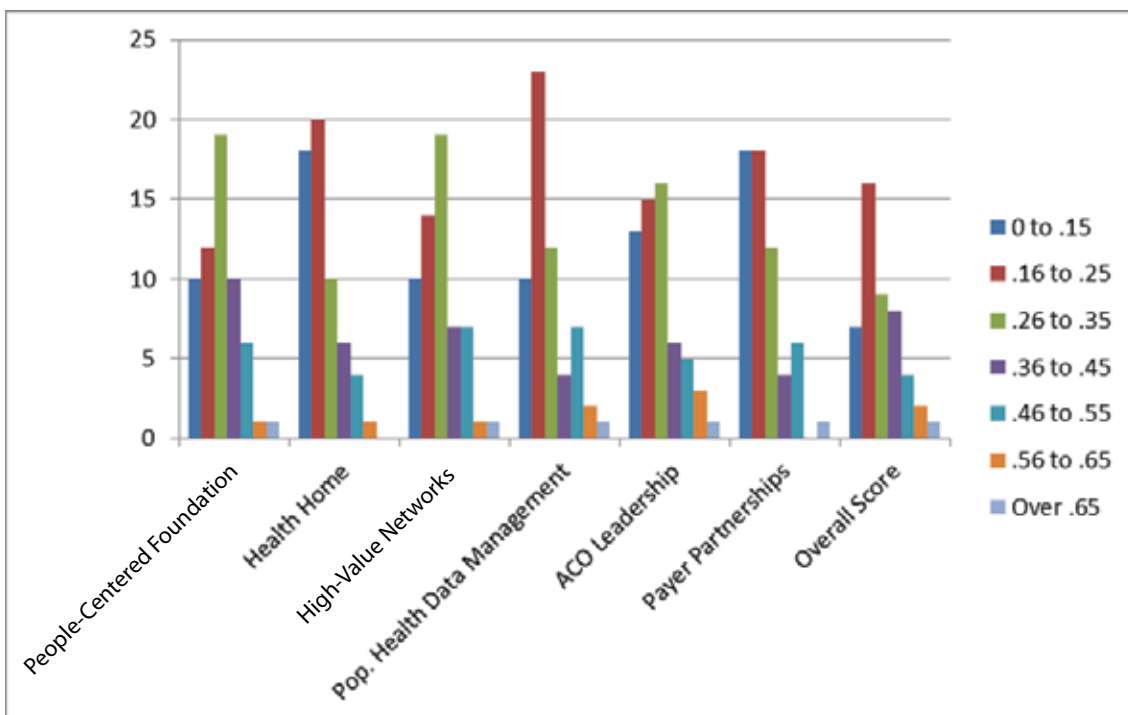
* Score on 0 to 1 scale, as described in Exhibit 2

*Dark red shading indicates comparatively low scores and dark blue shading comparatively

Exhibit 7 shows the distributions of component scores and overall scores. The people-centered foundation component had the most evenly distributed scores. All six core components had a positive-skewed distribution. The ACO leadership component received the

greatest number of high scores (weighted scores of 0.56 and greater). The health home and payerpartnerships components received the greatest number of low scores (less than 0.15).

EXHIBIT 7. DISTRIBUTION OF WEIGHTED COMPONENT SCORES AND OVERALL SCORE



* Score on 0 to 1 scale, as described in Exhibit 2.

EXHIBIT 8. CORRELATIONS AMONG THE SIX COMPONENT SCORES

CORE COMPONENTS	PCF	HH	HVN	PHDM	ACOL	PP
People-Centered Foundation	1					
Health Home	0.56	1				
High-Value Network	0.67	0.59	1			
Population Health Data Management	0.50	0.54	0.65	1		
ACO Leadership	0.57	0.48	0.68	0.67	1	
Payer Partnerships	0.28	0.13	0.31	0.31	0.51	1

Exhibit 8 shows that the high-value network component was highly correlated with ACO leadership and population health data management components. A similarly high correlation existed between the people-centered foundation and high-value network components. The correlations suggest that the work streams necessary to implement these core components are symbiotic and that work in one of the areas often leads to advancements in the others. In contrast, no significant correlation was found between the health home and payer partnerships components. This result may reflect an absence of provider dependency on payer incentives for advancing primary care practices and an ability of providers to develop primary care health homes whether or not they have a collaborative relationship with payers.

Very few of the 154 operating activities correlated with each other; and where they did, they mapped to the same component, indicating some cross validation of these items within the affected capabilities. Of the 861 pairings of capabilities, only 28 (3%) had a correlation greater than 0.50, a finding that indicates that the measurement tool does not have a high degree of redundancy across the capabilities or operating activities and that the tool is measuring unique attributes, as intended. It also confirms that advancement in some areas does not necessarily determine advancement in others.

STUDY INTERVIEWS SUGGEST CERTAIN ORGANIZATIONAL ATTRIBUTES MATTER MORE THAN OTHERS FOR ACO READINESS

To identify attributes that mattered most for an organization's ACO readiness, we selected organizations that appeared most frequently among the highest and lowest scorers. We used information gleaned from interviews conducted during the organizations' readiness assessments and found that the attributes important for readiness were health plan ownership, collaboration with other health systems, positive provider relationships, clinical care integration, a health home, risk-based payments, electronic health record systems, and strong leadership to manage change. Attributes that did not appear to differentiate high-scoring from low-scoring organizations were the existence of an ACO's implementation plan, number of physicians, share of commercially insured patients, financial strength, the local market's Medicare expenditures, and market share dominance.

Attributes That Appeared to Matter

Following are the qualitative factors that consistently differed between the five highest-scoring and five lowest-scoring groups: at least 80 percent of the high-scoring group had the attribute and at least 80 percent of the low-scoring group did not.

Full or partial ownership of a health plan. Of the 10 organizations in our analysis, only two (both in the top five scorers) owned health plans. Organizations that own health plans have experience reducing unnecessary services, hospitalizations, and emergency visits

through utilization management and acute and chronic care management strategies. As these are fundamental requirements for ACOs, these organizations should be poised to move more quickly than others. Moreover, an organization-owned health plan provides a means to capture a higher proportion of savings achieved from delivery system redesign, which otherwise would be realized by an external payer that might or might not share the savings with the health system. However, none of the assessed organizations had a health plan that was well integrated with the delivery system, indicating significant missed opportunities.

Existing collaboration with other health systems or as part of a larger corporate entity. Given the significant investments needed to transform clinical, administrative, and technical infrastructure toward more population-centric care, the capacity to leverage existing resources and capital is crucial. Collaborating with other health systems or being part of a larger corporate structure may allow a provider organization to better fund these investments until shared savings reimbursement compensates for short-term investments and revenue losses as the result of decreased utilization of health care services.

Positive relationships with primary and specialty care providers. Lower-scoring organizations often reported challenging relationships between primary care providers and the health system or hospital. However, although a positive relationship with providers was associated with accountable care maturity, ownership of physician practices was not, suggesting that affiliation with physicians rather than acquisition of groups may be sufficient for the shift to accountable care.

Level of clinical integration across the continuum of care. Given that clinical integration is the ability to coordinate appropriate care for the population served, this capability represented a significant gap across all organizations. Those organizations that did score higher definitely exhibited a greater ability to foster coordination and collaboration across the multiple health care providers during the patient's episode of care. Disease management programs are one example of such care coordination.

Investment in a patient-centered health home with employed or community providers. Fostering the development of advanced primary care is a critical success factor to ACO readiness. Those provider organizations that redesigned scheduling and care delivery processes to be more patient-focused were able to use care teams more effectively to engage patients and use technology to better coordinate inpatient and outpatient services. These organizations are better positioned to assume accountability for the health, experience, and costs of the populations they serve.

Existing risk-based contracts with payers, including bundled payments or pay-for-performance contracts. Risk-based reimbursement arrangements prior to shared savings or other global payments through accountable care allow a provider organization to incrementally build the necessary administrative (e.g., financial) and clinical (e.g., use of evidence-based standards of care) infrastructure. Data support this hypothesis, because the providers who were the most prepared to become an ACO also had taken prior steps toward risk-based contracts with payers. Even though few of the assessed organizations had risk-based reimbursement arrangements with public and private payers, the assessments also suggested that the presence of payer agreements will be a differentiating attribute in the future.

A sophisticated electronic health record (EHR) and health information exchange (HIE) implementation strategy that stretches across the continuum of care. Ideally, an ACO's information technology infrastructure includes the ability to integrate disparate data, analyze data across a population of patients, stratify financial and clinical risk in the population, and measure the impact of targeted interventions. Although information technology was found to be at a low level of development in the organizations studied, the presence of a sophisticated EHR, an HIE implementation strategy, and a robust capacity for population health analytics will become more important over time due to the heavy reliance on data sharing and analytics that will be required in mature ACOs.

Human resource programs such as change management, physician leadership development, and cultural

alignment. Extensive work with health systems indicates that complex human resource attributes such as change management, physician leadership development, and cultural alignment strategies are keys to success. So it is with the ACOs in this study. Those with formal change management programs that train staff and leaders on how to implement transitions and provide internal resources to support discrete projects are better prepared to navigate the difficult changes required as part of ACO implementation. In addition, effective physician leadership across the organization is a key success factor: those that invest in this area will be able to effect deeper change across their organization. Lastly, a common challenge facing health systems embarking on an ACO is the clash between old and new cultures, including provider vs. patient-centered care, individual vs. team-based care delivery, patient vs. population management, and operating in silos vs. coordinating care across inpatient and outpatient settings. Having a formal culture alignment program will likely be a future critical success factor for providers transforming to accountable care.

An existing, active governance structure with physician leadership. An existing, active governance structure with physician leadership is a key readiness determinant due to regulatory and legal requirements. Although the data did not show governance to be a differentiating factor, this is likely due to the fact that most of the organizations studied were in early stages of development. Moreover, some assessed organizations had physician hospital organizations (PHOs) that were inactive at the time of our review. As these organizations mature as ACOs, it is likely that many of these organizations will resurrect their PHOs, creating entities that fit the legal criteria for clinical integration.

Attributes that Appeared Less Important

A system wide accountable care or clinical integration strategy. Having a plan to execute an ACO or clinical integration strategy was not a differentiating factor for ACO readiness. However, this could be explained by the selection bias of the participants, as all participating

organizations had plans to move toward accountable care.

Number of employed physicians. The number of employed physicians within an organization was not a differentiating factor. In fact, some of the highest performers had the lowest proportion of employed physicians. This finding contradicts a widely held belief that physician employment is necessary for a health care organization to move forward with accountable care strategies.

A high proportion of commercially insured patients. Many early theories about accountable care held that greater operating margins, and thus more financial tolerance for risk, was a predictor of ACO readiness. However, our data suggest that organizations with limited operating margins due to a large proportion of noncommercially insured patients are just as likely to move toward accountable care as those with larger profit margins. There are at least two possible explanations for this finding. First, organizations with a high proportion of fee-for-service Medicare beneficiaries could be anticipating the financial opportunity of shared savings with the Medicare Shared Savings Program (MSSP) and are thus eager to move toward accountable care. A second possible explanation is that organizations with a high proportion of publicly insured or uninsured patients may be anticipating a significant financial opportunity from sharing savings because care for these populations has been less carefully managed historically.

Financial strength of the organization. Financial strength was not a differentiating factor, but this may be a reflection of the available data related to cash on hand, margins, and reserve, rather than true financial viability predicted by factors such as the ability and willingness to invest capital in any particular strategy. In addition, the lack of correlation between financial strength and accountable care capabilities could reflect a selection bias in that participating organizations were paying members of a Premier collaborative. The fact that the participant fee was an affordable investment for these organizations may be a reflection of their financial status relative to other organizations. However, it

should also be noted that one of the five highest scoring organizations is a public hospital with a relatively poor financial standing.

Medicare expenditures in the market.

Surprisingly, there was no association between quantitative scores and Medicare expenditures in the local market, as measured by the Dartmouth Atlas. This could be due to the fact that although a high health services expenditure level might reflect a more difficult market in which to establish an ACO, it may also provide more opportunities for savings with the reduction of inefficiencies, better coordination of care, and reduction of duplicative procedures and testing.

Market share. Despite early conjecture to the contrary, the data show that market dominance does not necessarily translate into greater confidence for an organization looking to become an ACO. In fact, there were a few cases that proved the opposite dynamic: leaders of organizations that control a relatively small share of the local market are moving their organizations toward accountable care early to avoid being squeezed out later by more market-dominant organizations.

IMPLICATIONS FOR FUTURE ACO DEVELOPMENT

The elements detailed in our capability framework and the assessment results show the extent to which transforming the health care sector toward accountable care arrangements is a challenging and complex endeavor. The framework and assessment results also show the importance of understanding the clinical, organizational, strategic, and market factors involved in moving to innovative reimbursement models such as accountable care.

As the organizations we studied were in the early stages of ACO development, the principles of readiness for ACO implementation codified in our capabilities framework continue to rely more on informed assumptions rather than empirical evidence. For this reason, we do not claim that adherence to the framework will guarantee a successful transition to accountable care. Instead, the framework, used as

a measurement tool, provides a useful snapshot of an organization's current capabilities with respect to accountable care implementation.

Analysis of the 59 health care organizations in our study sample suggests that the overall state of ACO readiness is modest. These findings are sobering, since the organizations self-selected to participate in the assessments as part of a Premier collaborative designed to help organizations move toward implementation of accountable care models; as such, they tend to be more mature in their ACO readiness than other organizations acting alone without a supportive structure.

The sample organizations were lacking in key areas. For example, organizations scored low on the health home component, which is essential for optimal care coordination, particularly for patients with complex conditions requiring treatment in more than one specialty and delivered in more than one setting. The low score may reflect the difficulty inherent in effecting the culture changes needed to produce a coordinated, collaborative relationship across inpatient and outpatient providers of acute, post-acute, and long-term care and payers that can induce these providers to work collaboratively.

The payer-provider partnership component also remained largely undeveloped. Although some organizations had existing risk-based contracts—a fundamental element of a shared savings payment arrangement—few had developed the sort of partnerships with commercial and government payers needed to implement a shared savings program. This finding was not surprising, as many organizations appeared to be reorganizing internally prior to seeking the type of payer contract needed for an ACO payment structure.

However, the lack of risk-based agreements among these organizations represents a significant impasse that must be resolved, as the absence of innovative reimbursement strategies is likely to impede the development of value-based, population-focused strategies. In principle, payers are able to invest capital in the transformation, provide data to efficiently operate under the model, and generally provide support through joint operations. However, payers associated with participants

in the Readiness Collaborative have not encouraged the model through actively seeking to partner with and investing in the transformation of the participants. Commercial health plans have not supported the growth of these fledgling organizations to the degree that they have pursued contracting with more advanced ACOs (such as those in the Premier implementation collaborative), and specifically physician-led ACOs.

The existing culture—based on a history of discord between payers and providers—may be a significant barrier to the emergence of commercial ACOs. In particular, many assessed organizations commented on the difficulty in obtaining data from payers needed to prepare for and sustain ACO development. The challenge for health policy decision makers is to find ways to foster effective partnerships between the organizations and practitioners providing care and the agencies and private entities paying for that care.

In addition to the insights gleaned from the sample organizations' assessment scores, we draw inferences about ACO readiness based on interviews with the sample organizations combined with our team experts' familiarity with other ACO development efforts. First, organizational size and financial resources matter in ACO readiness. Organizations pursuing accountable care must have the capital to invest in the requisite infrastructure and financial confidence required to transition from a known reimbursement model to one that is yet untried and will likely reduce revenue in the short term.

Second, although money matters, several other factors are of at least equal importance. These include the ability known as clinical integration to coordinate patient care across multiple provider types; the sophistication of the primary care base, or health home; and a collaborative relationship between providers, including the hospital and community physicians.

Third, “softer” elements, such as culture alignment, effective change management, and leadership competency, are likely strong predictors of successful ACO development.

Fourth, an information technology infrastructure that can support data mining is key, as monitoring

a patient population's health care quality, spending, and utilization is fundamental to operating an ACO effectively. Organizational leaders need to appreciate that the required technology involves more than electronic health records and health information exchanges, although these are also important. Because our sample organizations were pursuing a variety of paths toward accountable care and because none appeared ready for implementation in the near term, we have not used this study to set forth best practices for sequencing and pacing the development of accountable care capabilities. Moreover, the market dynamics specific to each locale play such a significant role in creating either opportunities or roadblocks that a retrospective look at a large number of organizations will be better to identify the factors that explain a successful—or unsuccessful—ACO development effort.

These observations point to the value of conducting an in-depth investigation of a selected group of members of the PACT Implementation Collaborative, designed to identify the paths most likely to lead to success. To begin this investigation, a team from Premier has conducted site visits and interviews of four such participants, and a white paper describing the findings will be published by the Commonwealth Fund in the near future.

Moreover, further study of organizations at an advance stage of accountable care development, including careful retrospective review of the strategies employed by leaders of these established ACOs, along with careful note of local market conditions, will be essential for crafting ACO development guidelines. Such study is critical to guide the national pursuit of innovative reimbursement models that strive to bend the cost curve while improving patient care.

APPENDIX. METHODOLOGY IN DETAIL

Data Collection

The Premier team created an assessment tool based on the capabilities framework (Exhibit 1) to evaluate an organization's progress at developing the operating activities associated with the framework's six core components. Between August 2010 and June 2011, personnel used the tool to conduct on-site assessments of organizations participating in the Premier accountable care collaboratives.

Two-person teams performed the assessments. Each team consisted of a senior reviewer, who facilitated the on-site assessment process and was responsible for the accuracy of the assessment report, and a support reviewer, who facilitated logistics and recorded summary notes of the assessment. Six individuals served as senior reviewers; nine individuals served as support reviewers. All senior reviewers had high-level executive experience in health plan or provider organizations and were knowledgeable about the health care system, health reform, innovative value-based reimbursement models, managed care, informatics, and population health management.

To optimize inter-rater reliability in the absence of a formal training program, assessors were required to follow a standardized protocol and new assessors "shadowed" an experienced team member prior to conducting an assessment on their own. Inter-rater reliability testing was not performed. However, Premier personnel conducted a peer-review process to ensure the consistency of the quality, scope, content, and recommendations of the summary reports.

Prior to the scheduled site visit, each organization's sponsor, who was a representative of the hospital or health system, received an electronic copy of the assessment tool, with instructions for proper completion and guidelines for scoring. Organizations were instructed to select a particular population for which the capabilities would be assessed. The scoring system assessed the degree to which the operating activity had been developed and was available at the time of the assessment to the people being served by the hospital or health system. Participants scored each operating activity using a Likert scale with whole number values from 0 to 4, with 0 reflecting the least developed and 4 reflecting the most developed as detailed in Exhibit 2, where the 0–4 scale was converted to a 0–1 scale by dividing by 4.

Sponsors for the organizations studied were asked to provide contextual information about their organization in advance of the site visit, including demographics, strategic goals, concerns about accountable care readiness, and payer mix. The team reviewed this information prior to the on-site visit, as well as information from publicly available sources about the health system and its environment, such as local demographics and population health status, quality outcomes, regional spending data, provider characteristics, and financial status. This information allowed the assessment team to identify areas of focus and guide the organization in determining the appropriate scores for each operating activity.

The assessments took place during a two-day site visit, scheduled to ensure the availability of key organizational leaders, such as the chief officers responsible for executive leadership, operations, information technology, medical and service line leadership, finance, human resources, marketing, and communications. Leaders of affiliated provider organizations across the continuum of care were also invited to participate.

On-site assessments followed a standardized schedule, during which the assessment team gathered information from chief executives about the current market environment, the organization's readiness for and strategic commitment to a shift to accountable care, and the current level of clinical integration.

The assessment team also reviewed the organization's initial scoring on all operating activities and either validated or corrected the score based on discussions with organizational leaders, a process that may have fostered greater consistency across assessments. Scores were altered only with agreement of the participants and resolution of

any discrepancies between internal stakeholders. Approximately 25 percent of an organization's scores were adjusted using this validation process.

Data Analysis

Quantitative analysis. The quantitative readiness scores provided a means for analyzing variation across the organizations in the sample, including the identification of domains that exhibited the greatest variation and the determination of the strength of correlations between capability scores within the sample.

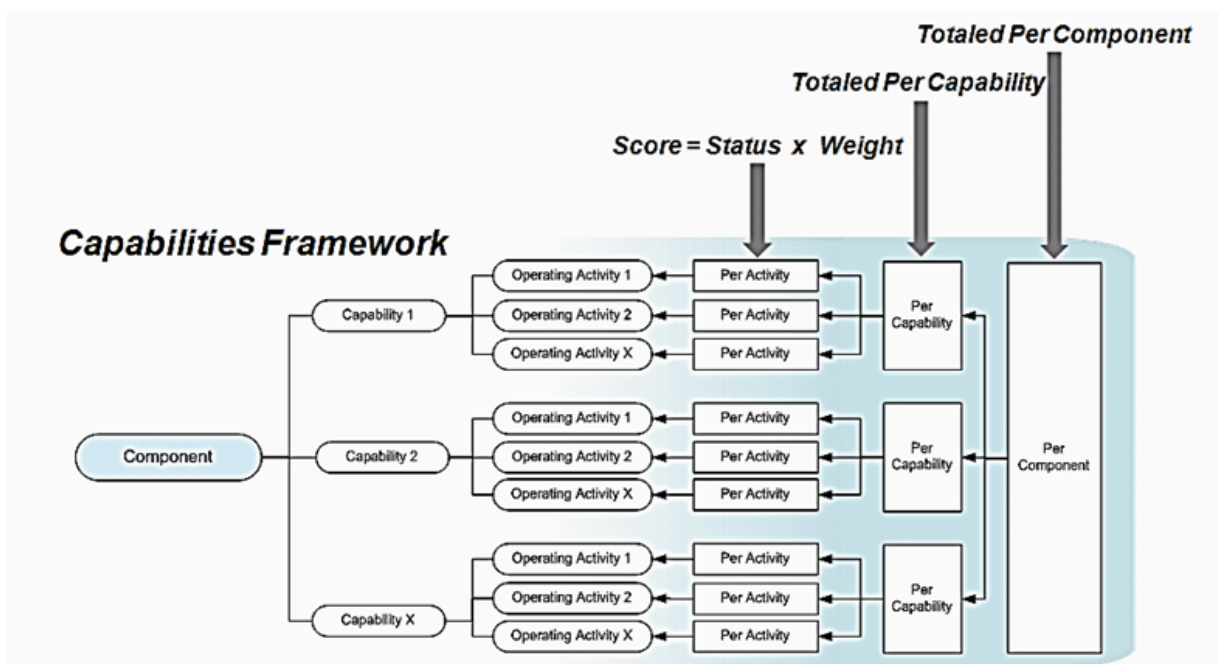
Each of the capabilities framework's operating activities was assigned a weight reflecting the degree to which the framework designers anticipated that the activity would be a determinant of the success of an organization in moving toward accountable care, with 0.2 being the least important and 1.0 the most important. During the scoring process, respondents were not given the weights.

Capability scores were calculated by combining the weighted scores for the operating activities associated with each capability and dividing by the sum of the weights multiplied by four, to ensure that each index fell strictly between 0 and 1. The same process was applied to the capabilities scores to calculate a weighted score for the six core components. Finally, an overall score was calculated by dividing the combined score of all six components by six; thus, each component was weighted equally in the overall score (Appendix Exhibit 1).

A wider and less uniform spread on these diagrams between the 20th, median, and 80th percentile scores indicates a larger range and more variation in scores. Summary statistics of these indicators across all 59 participating organizations revealed the relative magnitudes and variability of the capability scores.

To identify variation among the participating organizations and between scored parameters, data on core components and capabilities were displayed in scatter plots that included the standard deviations from the mean weighted score for each component and capability, and the coefficient of variation for each weighted score. In addition, the analysis included a correlation coefficient for each pairing of operating activities, capabilities, and component scores to assess the extent to which these elements moved together, indicating redundant measurement.

APPENDIX EXHIBIT 1. STATUS AND WEIGHT METHODOLOGY OF THE CAPABILITIES FRAMEWORK



Qualitative analysis. Qualitative analysis to posit likely drivers of the variation in readiness scores was based on identifying those organizations with the highest and lowest quantitative analysis scores. The team identified these organizations by calculating the component scores, using the same weighting system employed at the operating activity level. To prevent the inclusion of organizations that scored high or low in only one component—a scoring pattern that may not represent actual degree of advancement toward accountable care implementation—the analysis avoided using the overall score to select the top and bottom scoring organizations. Rather, the team selected the five organizations that appeared most frequently among top scores and the five that appeared the most frequently among the lowest scores for the six core components.

To identify patterns and characteristics related to the development of organizational capacity, a senior reviewer, who was also a co-creator of the capabilities framework, conducted an in-depth analysis of qualitative data in the assessment reports of these 10 organizations, extracting the most salient findings for four main topic areas (market environment, organizational readiness, strategic commitment, and clinical integration). After completing the abstraction, the reviewer conducted an observational analysis, which was validated by fellow reviewers, looking for themes that might explain the observed variation between the high-scoring and low-scoring groups.

The hypotheses used for the qualitative analysis reflect assumptions held by multiple experts across the health care system about characteristics that determine accountable care readiness. On the basis of these assumptions, we expected the following attributes to be associated with higher levels of readiness:

- Integrated hospital and physician relationships;
- Large market share;
- Large proportion of employed physicians;
- Small proportion of public or no insurance in the market;
- Strong financial position;
- Existing legal structure to construct an accountable care model (e.g., physician–hospital organization);
- Health plan as part of the provider’s business model;
- Presence of existing innovative payment models from payers in the market; and
- High level of sophistication of information technology (e.g., electronic health records and health information exchange) across the system.

Characteristics of Participating Organizations

The assessment team evaluated 59 organizations that operated 88 distinct hospital entities. Seventy-nine hospitals (about 90%) in the study sample were short-term acute care facilities paid under the Medicare inpatient prospective payment system (IPPS). Nationally, about 60 percent of hospitals are paid under IPPS; those under a different payment system include critical access, children’s, cancer, psychiatric, rehabilitation, and long-term care hospitals.^{1,2} The remaining 10 percent of hospitals in the sample were mostly critical access and long-term care hospitals. Because of

¹ Department of Health and Human Services. *Federal Register*. Thursday, August 18, 2011. Medicare Program; Hospital Inpatient Prospective Payment Systems, 76 FR 51476. Available at: <http://frwebgate2.access.gpo.gov/cgi-bin/PDFgate.cgi?WAISdocID=1w2L3R/8/2/o&WAIAction=retrieve>. Accessed January 24, 2012.

² Department of Health and Human Services. *Federal Register*. Thursday, August 11, 2011. FY2012 Hospital Impact File released with Medicare Program; Hospital Inpatient Prospective Payment Systems, 76 FR 51675. Available at: <http://www.cms.gov/AcuteInpatientPPS/FR2012/itemdetail.asp?filterType=none&filterByDID=-99&sortByDID=1&sortOrder=ascending&itemID=CMS1250507&intNumPerPage=10>. Accessed January 24, 2012.

the sample’s high proportion of IPPS hospitals, national normative data from IPPS hospitals, rather than all hospitals, were used for descriptive comparisons.

The organizations that underwent the assessment process constituted a diverse group. They varied in size, characteristics, and regional location. However, there was a concentration of organizations in the South Atlantic area and a concentration of organizations that included large hospitals, teaching hospitals, and high disproportionate share hospitals (DSH; i.e., with a Medicare operating payment adjustment of 11.75 % or higher), all characteristics reflective of the Premier membership (Appendix Exhibit 2).

The individual hospitals included in the set of participating organizations displayed a regional distribution and size that was reflective of Premier membership, with a concentration in the South Atlantic region and a relatively large size by bed count. The hospitals differed significantly in distribution and size from IPPS hospitals nationally: more than half were situated in the South Atlantic and East North Central regions; hospitals in the West Central, Mountain, and Pacific regions were underrepresented whereas large hospitals (i.e., facilities with more than 200 beds) were overrepresented. In addition to reflecting Premier member demographics, this distribution could also reflect the likelihood that leaders of large hospitals, with greater patient volume and more resources to put toward process innovation, have a greater tolerance for risk and for some amount of financial loss in the pursuit of even greater financial gain compared with leaders of smaller facilities (Appendix Exhibit 3).

Hospital entities that participated in assessments were almost twice as likely to be teaching hospitals as IPPS hospitals nationally. Teaching hospitals traditionally have better relationships with community physicians and are more likely than other facilities to own physician practices—both characteristics that may help an organization deliver coordinated care. However, teaching hospitals have not generally invested as heavily in primary care as

APPENDIX EXHIBIT 2. DESCRIPTION OF ASSESSED ORGANIZATIONS

Characteristic	Number	Percentage
Region		
New England	4	7%
Middle Atlantic	6	10%
South Atlantic	17	29%
East North Central	6	10%
East South Central	7	12%
West North Central	9	15%
West South Central	5	8%
Mountain	3	5%
Pacific	2	3%
Bed Count		
200 or fewer beds	9	15%
201 to 400 beds	20	34%
401 to 600 beds	13	22%
601 to 900 beds	10	17%
More than 900 beds	7	12%
Additional Characteristics		
At least one teaching hospital	39	66%
At least one high DSH hospital	34	58%
At least one urban hospital	48	81%

APPENDIX EXHIBIT 3. DESCRIPTION OF IPPS HOSPITAL ENTITIES ASSOCIATED WITH ASSESSED ORGANIZATIONS

Characteristic	IPPS Hospitals in Sample (N = 79)		All IPPS Hospitals (N = 3,501)	P-value
	N	Percentage	Percentage	
Region				
New England	4	5.1	4.1	0.0019
Middle Atlantic	6	7.6	11.3	
South Atlantic	24	30.4	17.2	
East North Central	17	21.5	15.1	
East South Central	9	11.4	9.4	
West North Central	9	11.4	8.0	
West South Central	5	6.3	16.1	
Mountain	3	3.8	7.0	
Pacific	2	2.5	11.9	
Bed Count				
Less than 100	5	6.4	38.0	<0.0001
100 to 199	20	25.6	28.9	
200 to 299	20	25.6	14.3	
300 to 399	10	12.8	8.3	
400 to 499	12	15.4	4.7	
500 or more	11	14.1	5.9	
Teaching	45	57.0	29.9	<0.0001
Urban	66	83.5	72.8	0.0316
High DSH (>=11.75%)	39	49.4	43.0	0.2545

Source: Inpatient Prospective Payment System (IPPS) Impact File released with the 2012 Final Rule.

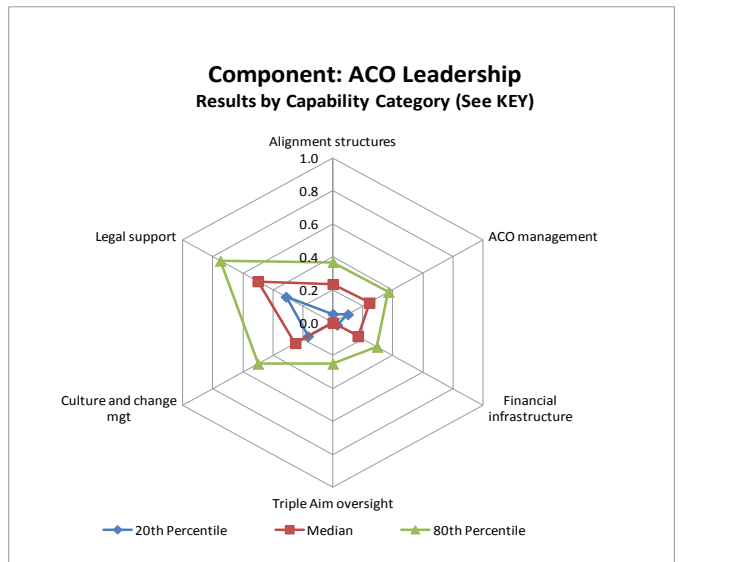
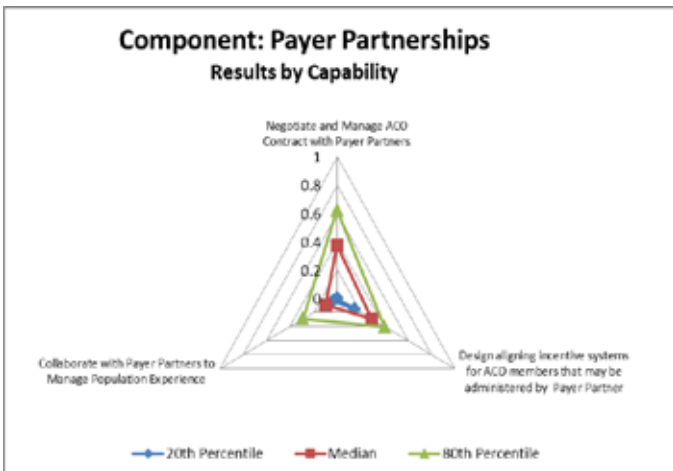
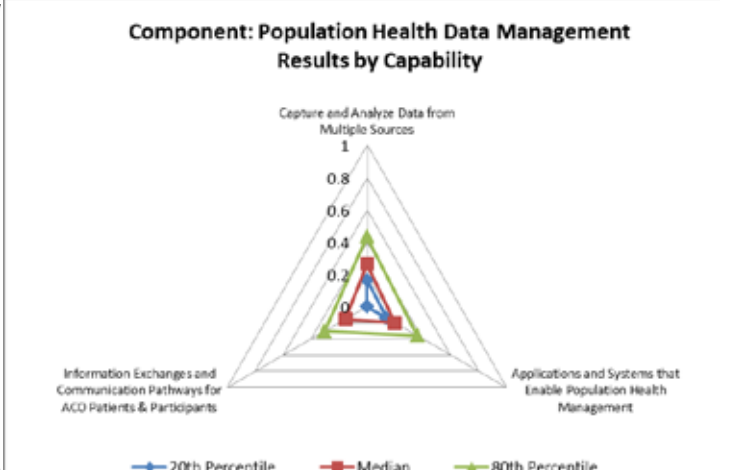
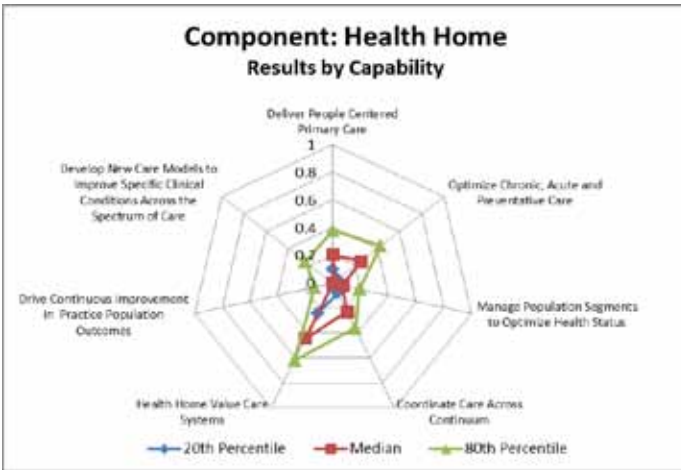
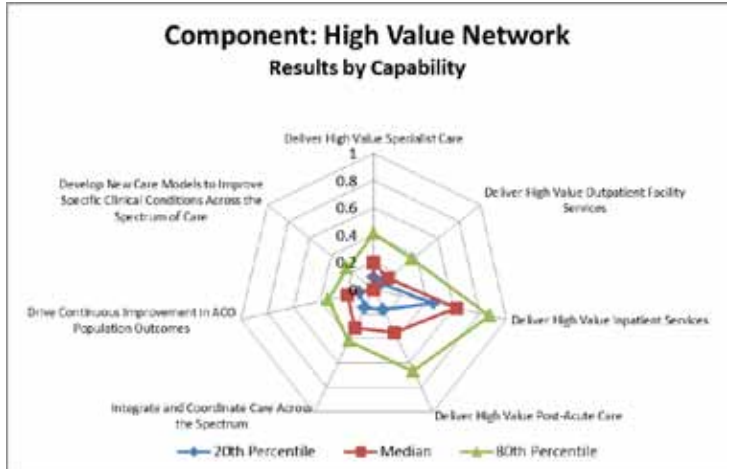
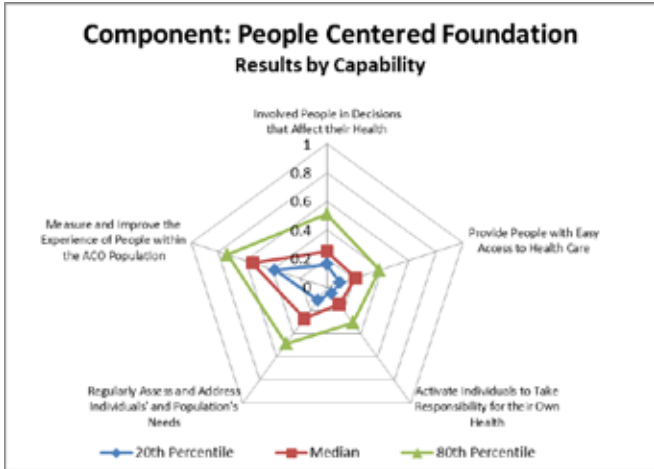
specialty care, even though such development is considered a critical success factor for accountable care. Thus, the sampling bias reflected in the high proportion of teaching hospitals may exert mixed or contradictory effects on our results.

The majority (84%) of hospitals in the sample were located in urban areas. Half of the hospitals in the sample were considered to have high DSH adjustment for Medicare payments, which is not significantly different from the proportion for IPPS hospitals nationally. This distribution may also reflect the tendency for large, urban teaching hospitals to have a relatively high DSH designation, as they often provide a greater volume of indigent care than other facilities.

Limitations

This study had several limitations with regard to representativeness. In addition to being skewed in size and geography, our sample’s hospitals and health systems were already contemplating or undergoing the transition to accountable care. As such, the sample may represent a more progressive and financially sound cohort than peer organizations. This bias may have been somewhat moderated, however, as these organizations chose not to join a more advanced collaborative working toward implementation, possibly reflecting a degree of hesitancy around accountable care. In addition, the sample consisted exclusively of health systems and hospitals. Physicians or other provider

APPENDIX EXHIBIT 4. SPIDER DIAGRAMS OF CAPABILITIES SCORES FOR THE SIX CORE COMPONENTS



groups pursuing accountable care would likely have a different perspective and experience from those described in this study. Further, the data collection methodology, while rigorous, was not designed with scientific method as its foremost consideration; rather it was designed to help organizational leaders determine whether to pursue the formation of an ACO in the current health care environment.

APPENDIX EXHIBIT 4. SPIDER DIAGRAMS OF CAPABILITIES SCORES FOR THE SIX CORE COMPONENTS, CONTINUED

	KEY for ACO Leadership Capabilities
	Alignment structures
A	Use Reimbursement to Align ACO Participants with ACO Objectives
B	Provide ACO Wide Results Reports to all Participants
C	Communicate Consistently and Routinely to all Participants
	ACO management
D	Provide Strategic Management of ACO Entity
E	Manage ACO as a Combined Physician Hospital Entity
F	Provide Centralized Medical Management Functions
	Financial infrastructure
G	Report on and Facilitate Management of Total Medical Cost
H	Manage Intra-ACO Transfer Prices / Costs
I	Manage Financial Performance of ACO
	Triple Aim oversight
J	Oversee Triple Aim™ Outcomes for Entire Population
	Human resources, culture and change management
K	Effectively Manage the Operational Transitions Required to Create an ACO
L	Develop an Organizational Culture Consistent with an ACO System
M	Train Physicians and Other Leaders in Leadership Development in Order to Foster Effective ACO Leadership
	Legal support
N	Enable ACO Contracting
O	Evaluate, Analyze, Establish Appropriate Legal Structure
P	Educate and Appropriately Manage Interactions Across and Between ACO Parties
Q	Impact and Monitor ACO Regulatory and Legislative Environment

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