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DOI: 10.1377/hlthaff.2012.0354
HEALTH AFFAIRS 31,
NO. 11 (2012): 2379–2387

INNOVATION PROFILE

A Collaborative Accountable Care Model In Three Practices Showed Promising Early Results On Costs And Quality Of Care

ABSTRACT Cigna's Collaborative Accountable Care initiative provides financial incentives to physician groups and integrated delivery systems to improve the quality and efficiency of care for patients in commercial open-access benefit plans. Registered nurses who serve as care coordinators employed by participating practices are a central feature of the initiative. They use patient-specific reports and practice performance reports provided by Cigna to improve care coordination, identify and close care gaps, and address other opportunities for quality improvement. We report interim quality and cost results for three geographically and structurally diverse provider practices in Arizona, New Hampshire, and Texas. Although not statistically significant, these early results revealed favorable trends in total medical costs and quality of care, suggesting that a shared-savings accountable care model and collaborative support from the payer can enable practices to take meaningful steps toward full accountability for care quality and efficiency.

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Providing coordinated, high-quality care within a complex, fragmented delivery system[1,2] is one major challenge facing the US health care system. Another is rising costs that affect both public and private payers.[3–5] Accountable care organizations have been proposed as a solution for these related problems. Under the accountable care model, provider groups or affiliations assume responsibility for the quality and cost of care for the patient populations they serve, sharing in any savings generated if defined quality targets are met.[6–18]

The Affordable Care Act authorized the Centers for Medicare and Medicaid Services to create accountable care programs that sought either to reduce spending while maintaining care quality or to improve quality at no increased cost.[12,16–18] Even before the act's passage, demonstration projects that used accountable care principles were under way.

One was the Physician Group Practice Demonstration, implemented during 2005–10 at ten large practices comprising 5,000 physicians and 224,000 Medicare fee-for-service beneficiaries.[16,19] Results were generally favorable in terms of quality but less positive in terms of cost.[12,16,19–21]

Encouraged by the interim results for this demonstration project and the potential of the accountable care model, private insurers have also begun to experiment with it. One such effort is the Collaborative Accountable Care initiative launched by Cigna in 2008. Now implemented in forty-two practices, this initiative is a shared-savings program that offers practices in their first year of participation up-front support, in the form of a care coordination fee, for investments

in infrastructure that furthers their progress toward quality and cost targets.

In this first year, the care coordination fee is not a payment incentive per se. But in subsequent years it becomes just that, if practices hit quality and cost targets. The better a practice performs in comparison to its goals, the larger its care coordination fee for the following year. Like an accountable care organization participating in the Medicare Shared Savings program, practices taking part in the Collaborative Accountable Care initiative benefit financially when they hit performance goals.

Additionally, Cigna provides substantial support in informatics, care coordination, and consultation to facilitate practice transformation.

Here we report the 2010 results of three structurally and geographically diverse provider practices that participated in the initiative. We discuss what facilitated these practices' progress toward care quality and cost savings goals and what stood in their way, with the aim of helping other organizations that are considering implementing the accountable care model.

Program Features

Based in Connecticut, Cigna is a global health service company with a US health care business covering 12.6 million lives. To participate in Cigna's Collaborative Accountable Care initiative, practices have to meet the National Committee for Quality Assurance's care coordination standards for patient-centered medical homes.[22]

Practices must also commit to establishing an embedded care coordinator position. The registered nurse in this role is employed by the practice to improve care, using reports provided by Cigna that identify patients with care coordination needs—for example, those who have missed screenings or preventive care; those who need complex, acute case management; and those who need education on managing their own conditions.

In addition to supporting the practices with these patient-specific reports, Cigna issues aggregate practice performance reports that identify opportunities for improving care quality and controlling costs across the practice. Cigna also makes consultants available to help the practices define and implement plans that address those opportunities.

For instance, an aggregate provider performance report might show that a practice's patients incur an unusually high level of emergency department charges, indicating that the practice could both better serve its patients and keep costs down by staying open later into the evening and offering weekend hours. The consultant provided by Cigna then helps the practice determine what it needs to do to offer those extended hours and how best to communicate their existence to its patient population.

PROVIDER PRACTICES Implementation of the Collaborative Accountable Care initiative began in 2008 with Dartmouth-Hitchcock Health, one of the ten practices participating in the Physician Group Practice Demonstration. Before deciding to take part in the initiative, Dartmouth-Hitchcock, like the other two practices whose 2010 performance this article reports on, was already working with Cigna to implement changes designed to improve care and align financial rewards with clinical outcomes. In 2010, the study year, Dartmouth-Hitchcock Health—an academic, integrated delivery system—had 1,018 physicians providing care to 16,654 patients in New Hampshire and Vermont.

The Collaborative Accountable Care initiative was implemented in late 2009 in the Medical Clinic of North Texas, the second practice discussed in this article. In 2010 this practice had 141 primary care physicians and 8,753 patients in the Dallas–Fort Worth area.

The third practice examined here is Cigna Medical Group, a division of Cigna of Arizona. It implemented the initiative at the beginning of 2010. A multispecialty group, in 2010 it had 158 physicians serving 14,575 patients in Maricopa County, Arizona.

Approximately 10 percent of patients in the New Hampshire and Texas practices were Cigna members in 2010, as were 67 percent of patients in the Arizona practice. Forty percent of physicians in the New Hampshire practice were primary care providers in 2010, compared with 57 percent and 70 percent of physicians in the Arizona and Texas practices, respectively.

CLINICAL SUPPORT FOR PRACTICES A central feature of the Collaborative Accountable Care initiative is registered nurses employed by the practices to serve as embedded care coordinators. Cigna provides training and support to these care coordinators, including quarterly conference calls and an annual training meeting to discuss experiences and effective strategies for patient management. The typical staffing ratio has been one embedded care coordinator for every 10,000 primary care patients.

Using daily and monthly patient-specific reports provided by Cigna, the embedded care coordinators work to improve patient care. Their primary activities include hospital discharge coordination for patients at increased risk of readmission; outreach to patients identified through Cigna's predictive modeling programs as likely to incur high medical costs; and patient education and coaching regarding gaps in care,

such as lack of preventive care and of adherence to medication.

The embedded care coordinators also refer patients with complex needs to Cigna medical or behavioral case management, chronic condition coaching, or pharmacy services. In some practices, the coordinators work only with Cigna patients; in others, they also work with patients covered by similar initiatives that are sponsored by other commercial payers or by the Centers for Medicare and Medicaid Services.

Cigna also provides practicewide performance reports at baseline and every six months thereafter that compare a practice's performance on quality measures; utilization; and costs associated with admissions, readmissions, emergency department visits, high-technology imaging, and other services with the performance of other practices in the same geographic area. Those practices make up the comparison group for each practice in the initiative.

FINANCIAL INCENTIVES The Collaborative Accountable Care initiative offers practices a care coordination fee on top of standard fee-for-service payments. The coordination fee, paid to a practice at the beginning of the year, is designed to help practices make investments that will improve patient care while keeping total medical costs down. Thus, the fee is designed to benefit patients, practices, and the payer alike.

The amount of the first-year care coordination fee is based on the expected impact of activities implemented by each practice to improve care or reduce costs, such as increasing access to care by offering more urgent care appointments and expanding office hours. At year's end, if the trend in a practice's total medical costs has improved at least 2 percent relative to costs in its comparison group, and if quality of care also has improved, the initiative increases the care coordination fee in the subsequent year. This was the case in 2010 for one of the three practices (Exhibit 1).

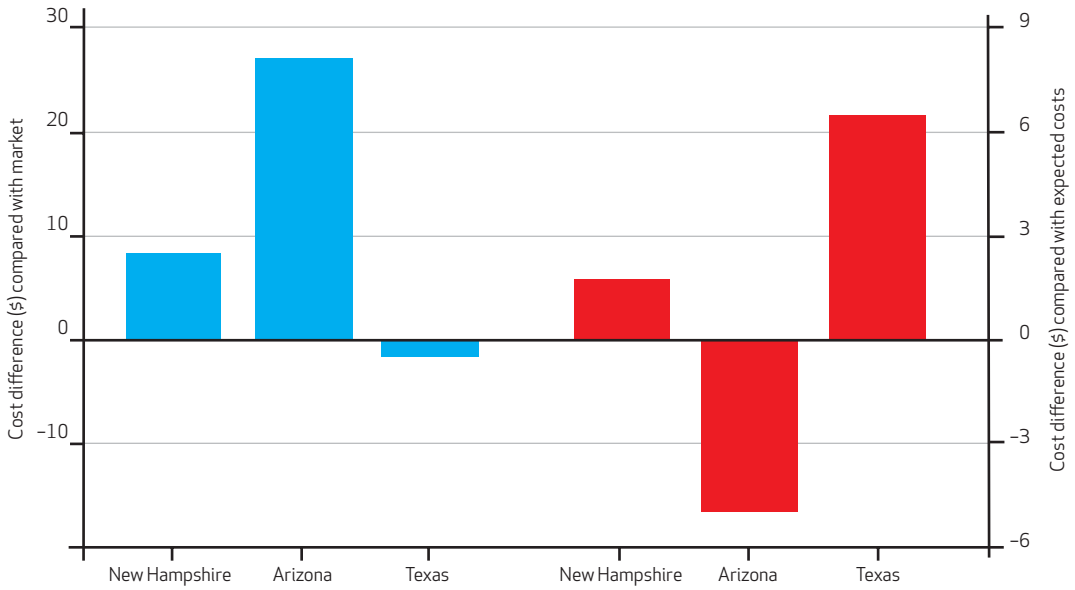
The care coordination fee is counted as a medical cost and contributes to the practice's total medical costs for the year. The goal, of course, is for the practice to make improvements in care quality and efficiency—in part enabled by the care coordination fee—that drive down total medical costs to the point at which there is a net savings.

Rewarding practices for higher quality and greater efficiency in this way is a twist on the shared-savings approach. A practice does not receive a payment for the previous year. Instead, it receives an increase in its care coordination fee for the next year. The fee is thus more analogous to a raise than to a bonus.

During 2010 the New Hampshire and Texas practices received a care coordination fee in the range of $1.00–2.00 per patient per month. The Arizona practice declined the fee. In its market, a number of employers' benefit plans

EXHIBIT 1

Total Medical Costs For Three Practices In Cigna's Collaborative Accountable Care Initiative, 2010



SOURCE Authors' analysis. **NOTES** Cost differences per patient per month. New Hampshire is Dartmouth-Hitchcock Health. Arizona is Cigna Medical Group. Texas is Medical Clinic of North Texas. See text for details about all three practices. Positive values indicate favorable results. The blue bars represent cost differences compared with the market; they relate to the left-hand *y* axis. The red bars represent cost differences compared with expected costs; they relate to the right-hand *y* axis.

give employees incentives to use preferred practices, defined according to their lower costs and higher quality. The Arizona practice believed that if it kept its costs down by not accepting the fee, it would attract additional patients through this mechanism.

Study Data And Methods

Total medical costs and a quality of care index were the two primary outcome measures in the Collaborative Accountable Care initiative. Patients were attributed either to one of the three practices or to practices in the same area not participating in the initiative (the comparison groups). The online Appendix presents additional information about the attribution process and assumptions underlying the analysis.[23]

Aggregate risk-adjusted per patient per month medical cost was calculated to evaluate the effect of the initiative on total medical expenditures. The risk-adjusted costs of practices in the initiative were compared with the comparable costs in their comparison groups.

Total medical costs included allowable charges typically covered under medical plan benefits—for example, inpatient facility, outpatient facility, professional, and ancillary expenses. Retail or mail pharmaceuticals and behavioral health benefits were excluded. Costs were aggregated for each patient, with annualized totals capped at $100,000. We capped totals because in 2010 the three practices discussed in this article had fewer than 20,000 patients each, and the occurrence of cases with costs exceeding $100,000 can be highly variable between years in practices of this size. Capping annualized totals prevented the transfer of this insurance risk to the practices.

Aggregate risk-adjusted per patient per month costs were calculated for the initiative practices and their comparison groups. Risk adjustment compensated for differences in illness burden between the practices and the comparison groups.

We assessed both the practices and the comparison groups collectively on absolute total medical cost performance and performance improvement in total medical costs. Current performance was the difference in risk-adjusted 2010 total medical costs between the initiative practices and their comparison groups. Performance improvement was based on the difference between a practice's risk-adjusted expected costs for 2010 and its actual costs in the same year.

Expected costs for 2010 were calculated based on the practice's risk-adjusted 2009 total costs and its comparison group's 2009–10 trend in risk-adjusted total medical costs. This trend-based approach is similar to the method used in the Physician Group Practice Demonstration. We calculated an alternative performance improvement estimate for the initiative based on the difference-in-differences method to confirm the trend-based evaluation of changes in total medical costs. For a description of the calculation of the difference-in-differences approach, see the online Appendix.[23]

To assess care quality, we compared the compliance rates between practices in the initiative and their comparison groups for each patient on sixty-nine evidence-based measures of care. For each patient on each measure, the practice would receive one score—either adherent or nonadherent—for the measurement period.

The three practices were superior to their comparison group peers on all care quality measures, with one exception.

Study Results

In 2010 total medical costs for the Arizona practice were $27.04 per patient per month more favorable than the costs in its comparison group (Exhibit 1), a difference that is significant ($p < 0.10$). Compared with expected costs, the New Hampshire and Texas practices achieved modest performance improvements in their per patient per month costs—$1.78 and $6.56, respectively—although a decrease of $4.94 was evident for the Arizona practice. None of these results was significant. The difference-in-differences method yielded similar results.

We examined the performance of the Collaborative Accountable Care practices in 2010 on five evidence-based standards of care (Exhibit 2). The New Hampshire practice, for example, had an 81.1 percent compliance rate in 2010 for all standards combined. This was 0.6 percentage point better than in 2009 and 0.7 percentage point better than its comparison group in 2010.

The three practices were superior to their comparison group peers on all care quality measures, with the exception of the New Hampshire practice's screening of hemoglobin A1c levels among

EXHIBIT 2

Compliance With Five Evidence-Based Standards Of Care In Three Collaborative Accountable Care Initiative Practices And Comparison Groups

	Percent compliance, 2010			Percentage-point difference between initiative practice and its comparison group, compliance 2010			Percentage-point difference between initiative practice and its comparison group, change in compliance between 2009 and 2010		
Standard	**NH**	**AZ**	**TX**	**NH**	**AZ**	**TX**	**NH**	**AZ**	**TX**
All standards	81.1	81.0	84.2	0.7	2.6	4.7	0.6	−0.3	0.7
Screening mammogram in past 24 mos. for female patients ages 42–69	80.0	78.3	77.5	1.4	0.7	1.5	−1.2	3.3	8.4
Serum creatinine test in past 12 mos. for patients with hypertension	88.9	87.8	91.7	3.1	2.9	2.0	0.5	−1.7	−1.2
HbA1c test in past 12 mos. for patients with diabetes, ages 18–75	97.8	98.5	98.7	−0.1	2.2	2.1	0.6	0.8	−1.1
LDL cholesterol test in past 12 mos. for patients with diabetes, ages 18–75	93.6	94.3	96.7	3.3	1.7	3.7	0.2	0.1	0.8
Annual nephropathy screening for patients with diabetes, ages 18–75	91.3	86.2	86.3	12.8	10.9	8.6	0.4	−2.6	13.2

SOURCE Authors' analysis. **NOTES** NH is Dartmouth-Hitchcock Health. AZ is Cigna Medical Group. TX is Medical Clinic of North Texas. See text for details about all three practices. HbA1c is hemoglobin A1c. LDL is low-density lipoprotein cholesterol.

patients with diabetes (Exhibit 2). The New Hampshire and Texas practices showed modest improvements between 2009 and 2010, while the Arizona practice showed a slight decline in performance, but these differences were not significant.

Factors That Helped And Hindered Implementation

Leaders at all three practices in the initiative reported that the support provided by Cigna was essential to their improvements in costs and care. The initial care coordination fee helped fund the embedded care coordinator positions, and the patient-specific reports that Cigna provided identified patients who required improved care coordination.

Cigna's clinical resources—including medical and behavioral case management, chronic condition coaching, and pharmacy consultation—facilitated the care of patients with complex conditions. And the overall performance reports showed how the initiative practices and their comparison groups differed on service utilization and costs and identified improvement opportunities.

Several external factors also facilitated the implementation of the Collaborative Accountable Care initiative. A substantial portion of patients at the Arizona practice was in full-risk capitation models for Medicare Advantage or commercial health maintenance organizations. Consequently, the practice had already begun to shift its focus toward improving total medical costs and quality of care and away from providing the highest possible volume of services reimbursable under a fee-for-service model.

The New Hampshire practice's prior participation in the Physician Group Practice Demonstration was advantageous because changes required for the demonstration could either be applied to, or be easily extended to include, Cigna commercial patients. The practice thus expanded the proportion of its patient population for which it was rewarded for achieving better total medical costs and quality. The Texas group had previously participated in pay-for-performance programs rewarding quality improvements, and the Collaborative Accountable Care initiative provided additional support for improvements in costs for a substantial proportion of the practice's patients. Therefore, all three practices had begun transforming their cultures toward full accountability for cost and quality prior to participation in the initiative.

Participation in the initiative provided the impetus for further efforts along the same lines. For example, the Texas practice reported that providing a "patient dashboard" to clinicians at the time of service that summarized current diagnoses, medications, immunizations, and laboratory tests facilitated care improvement. Both the Texas and Arizona practices implemented policies regarding the selection of preferred specialty groups when referrals outside the practice were necessary. This selection was based, in part, on quality and cost efficiency data provided by

Cigna. The Texas practice reinforced this policy with point-of-care reminders to physicians at the time of referral to specialists. The Arizona practice regularly provided feedback to providers on service use and quality performance.

One barrier to the implementation of the Collaborative Accountable Care initiative was the challenge of earning the full cooperation of specialists and hospitals outside the practices. An additional barrier cited by the New Hampshire practice was the problem of competing organizational priorities. The practice was implementing a new electronic health record system at the start of the initiative, which required the simultaneous management of systemic and cultural changes associated with both innovations.

In addition, previous payments to both the New Hampshire and Texas practices for all lines of service were primarily fee-for-service. As a result, their physicians needed time to embrace the challenge of improving costs and quality of care.

Discussion

The results of the Collaborative Accountable Care initiative's first year revealed favorable trends in quality of care and in total medical costs compared with market trends. These results suggest that a shared-savings model and traditional fee-for-service payments, combined with collaborative support provided by the payer, promote improvements in costs and quality in typical commercial populations where most patients are in preferred provider organizations rather than health maintenance organizations.

Cigna created the Collaborative Accountable Care model to address three barriers faced by medical groups when transitioning to full accountability (capitation) for total cost and quality of care for their patient populations.

The first barrier concerns benefit design. Capitation arrangements are typically seen in health maintenance organization benefit plans, where patients identify a primary care physician, coordinate access to all care through that physician, and rely on a limited network of providers. Among commercially insured populations, many beneficiaries have preferred provider organization benefit plans that do not require care coordination by a primary care physician and that allow some coverage outside the preferred network. Physicians have less direct control over the care of patients under this model than under models that require patients to select a primary care provider and receive all care and referrals from that provider.

The second barrier is organizational structure. Typical accountable care initiatives focus on integrated delivery systems or comprehensive multispecialty groups that provide the majority of care to their patients. However, much of US health care is not provided by such systems. Cigna wanted to determine if primary care and smaller multispecialty groups could improve their quality and costs of care through direct influence over their own services and indirect influence over services provided by providers outside their organizations.

Complete reorganization of the US health care system is not necessary to achieve improvements in costs and quality of care.

The third barrier is funding the infrastructure development required for the transformation to a full capitation model. The Physician Group Practice Demonstration did not provide any initial funding to participants. That fact limited participation in the demonstration to organizations with the resources that allowed them to invest in practice transformation, hoping that they would receive sufficient returns on their investment through the shared-savings incentive. Employers who sponsor self-funded plans are reluctant to provide initial funding in light of an uncertain return on investment.

The Collaborative Accountable Care initiative provided assistance to practices for infrastructure development in two ways. First, practices had the option to accept the care coordination fee that was contingent on their commitment to improve care. Second, Cigna provided substantial support services in informatics, care coordination, and consultation to facilitate practice transformation.

Cigna's goal was to establish an initiative that addressed these three barriers to engage a broader spectrum of providers, including those not in integrated delivery systems, and a broader spectrum of patients, including those with preferred provider and health maintenance organization benefit designs, self-funded employer-sponsored plans, and fully insured plans.

The Collaborative Accountable Care initiative

The interim results from the initiative highlight the synergy fostered by collaboration between health plans and delivery systems.

aligned incentives around total medical costs and quality management for commercial patients in preferred provider plans in a way that motivated providers to participate and that did not make them fear uncontrollable risk. The initiative also showed that the payer could accelerate practice transformation through a combination of the care coordination fee in the first year and substantial clinical resources that were acceptable to self-funded employers, thereby increasing the scope of patients involved.

Our interim results suggest that complete reorganization of the US health care system is not necessary to achieve improvements in costs and quality of care. The most intensive and effective efforts will come only when the health care system is organized in comprehensive, integrated groups with full capitation responsibility for improving total medical costs and quality of care for all patients. However, this initiative demonstrates what initial steps can be taken in that direction.

These interim results are encouraging. Further research is needed to confirm that improvements can be achieved in both cost and quality of care for commercial populations in an open-access environment with organizations that manage only a portion of the care for their patient populations.

Previous reports on commercial populations focused on health maintenance organization–type settings[24,25] that required approval of specialist visits or on Medicare fee-for-service populations.[16,19] Importantly, the three practices in the Collaborative Accountable Care initiative had no formal affiliations or potential shared financial arrangements with outside specialists or hospitals. In fact, the practices provided only 10–40 percent of total medical care to their patient populations. Yet each achieved favorable changes in costs compared with market trends or maintained better-than-market performance.

The interim results from the initiative highlight the synergy fostered by collaboration between health plans and delivery systems. Aligned financial incentives, the availability of actionable information identifying opportunities to improve patient care and avoid higher costs, referral of patients with complex conditions to case management services provided by the plan, and periodic performance reports on costs and quality measures enabled the three practices to make progress toward achieving the "Triple Aim" of better population and individual health and lower costs.[26]

Cigna provided an initial level of financial incentives that self-funded employers would support. The incentives could be implemented for commercial populations, including preferred provider plans, and at existing practices without requiring the formation of integrated delivery systems. The achievement of small improvements in costs while maintaining or improving quality of care compared with market averages during the first year of the Collaborative Accountable Care initiative supports the continuation of the program. ■

The authors acknowledge the efforts of Harriet Wallsh, of Cigna, as overall manager and developer of the Collaborative Accountable Care program. Wendy Sherry, also of Cigna, provided critical resources and guidance for the development of the program. Jeff Kang, previously of Cigna and currently of Walgreens, provided guidance and leadership for the program. The authors also acknowledge the assistance of Carole Chrvala, of Health Matters, with the writing and editing of this article, and the assistance of Timothy K. Allen, of Cigna, with the statistical analysis. Lazar Partners was instrumental in providing support for the preparation of the article.

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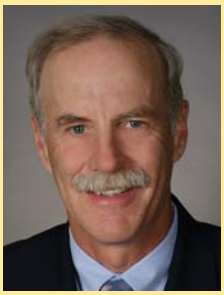

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In this month's *Health Affairs*, Richard Salmon and coauthors report on early results from Cigna's Collaborative Accountable Care initiative as it was implemented in three geographically and structurally diverse provider practices in Arizona, New Hampshire, and Texas. Central to this initiative were such features as support for practice transformation; the use of "embedded" registered nurses, who functioned as care coordinators; and care coordination fees on top of traditional fee-for-service payments. Although not statistically significant, the results from 2010 showed favorable trends in total medical costs and quality of care.

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