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The Intelligent ACO: A Primer



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Abstract

At no other point in time in United States history has the government, the healthcare industry, and the information technology industry come together and embarked on such a monumental transformational of the healthcare delivery system. Although the implementation of Electronic Health Records (EHR) that meet Meaningful Use criteria were at the forefront during 2010 and 2011, behind the curtain a synergy was pushing forward and focusing on Accountable Care Organizations (ACO).

This endeavor aims to change the way the system provides health care from reactive to proactive, and the way providers get paid for their services from fee-for-service based to quality outcome (performance) based. One could say that December 19, 2011 was the mega-pilot project kickoff date. Starting on January 1 2012, the 32 selected ACO pioneers, out of 80 applicants and 160 who submitted letters of intent, have been blazing the trail towards a model that has as many skeptics as it does firm and passionate believers.

This paper will introduce ACOs in a straightforward language and also present the opportunities and challenges that healthcare organizations will face if they decide to convert their healthcare delivery organization into a shared savings and paid-per-performance agile entity. Although an ACO can be formed by private entities other than Medicare (e.g., health insurance companies), and which most likely will emerge independent of the Affordable Care Act, this paper is mainly focused on the Centers for Medicare and Medicaid Services (CMS) regulated ACOs. However, the same principles should apply to private ACOs which we will analyze from section to section and attempt to provide thoughtful and brief comparisons.

Introduction

The term “Accountable Care Organization”, or ACO, was first used by Congress in the act entitled, “The Patient Protection and Affordable Care Act” (PPACA) in Section 3022. Elliott Fisher, of the Dartmouth Institute for Health Policy and Clinical Practice, is credited with coining the term to describe a primary physician centric healthcare delivery system with a shared savings compensation model.

The ACO concept, or model, in essence is nothing new in the United States healthcare delivery system. It has been attempted several times in different periods and under different names. The underlying financial goal (saving money) will be pursued by what is denominated as “Capitation”. Capitation is somewhat like a recurring subscription payment model; that is, the providers receive a pre-determined payment for an undetermined amount of patient care. In the attempt to overcome the limitations and weaknesses of HMOs, the ACO model ties incentives to quality outcomes. This means the participating ACO must keep its patients healthy and, as much as possible, at home.

The most notable past attempts at pursuing capitated care were the infamous Health Maintenance Organizations (HMO) which occurred during the late 1970s through the late 1990s. However, there are differences between an ACO and its predecessor HMO, most notably:

- **Model:** ACOs are primary physician centric while HMOs were organization centric.
- **Accountability:** An ACO is accountable for the quality of care, of which performance and outcomes will be measured in a report card fashion, but HMOs were mainly responsible for saving money, which resulted in low-quality care and taking shortcuts.
- **Insurance Risk:** ACOs risk little or no insurance but HMOs acted like insurance companies and risked 100%.
- **Size:** ACOs can be as small as 5000 beneficiaries but HMOs were in the size of hundreds of thousands of enrollees.

- **Free Choice for Patients:** A beneficiary that belongs to an ACO is free to choose other providers outside of the ACO for their medical treatment. HMOs locked-in their enrollees, which brought about detrimental results to the patients. Since the word “capitation” has a negative connotation due to the HMO experience, some private ACOs use different terms but in essence they are very similar. Some of these terms are Shared Savings, Shared Risk and Partial Capitation. In a similar way, CMS’ Medicare is also offering various payment models that seem to differ in strategy but in outcome seem to be alike: reduce cost and spending below what is currently standard.

Currently there are many healthcare organizations that implement a similar model to the CMS-endorsed ACO on their own accord, and they have also been successful. Some notable examples include Community Care of North Carolina, Geisinger Health, and Blue Cross Blue Shield of Massachusetts AQC.

As indicated above, the ACO model has been used in the private sector with success in performance measures but savings have been questionable. What should be taken into account is that most attempts have been pilots or demonstrations but with sufficient feedback that they have a high potential of succeeding in quality outcomes if this is the major focus. Almost unanimously it is thought that if the focus is on cost savings it leads to poor healthcare delivery, which was the cause of the practical demise of the HMO model. Aside from the political and economic aspects of an ACO, one must also consider technical feasibility. Reporting quality outcomes depends highly on quality data and this is the problem that most organizations will encounter and which will be discussed below.

The ACO Defined

ACOs are primary physician-centric groups of doctors, specialists, hospitals, and other health care providers, who voluntarily come together with a proper legal structure which aims to provide coordinated high-quality care to the patient population they serve. Coordinated care helps ensure that patients, especially the chronically ill, get the right care at the right time, with the goal of avoiding unnecessary duplication of services and preventing medical errors. When an ACO succeeds in both delivering high-quality care and spending health care dollars more wisely, it will share in the savings it achieves for the Medicare program.

In an article co-authored by Elliot Fisher, ACOs were defined as follows:

“ACOs consist of providers who are jointly held accountable for achieving measured quality improvements and reductions in the rate of spending growth. Our definition emphasizes that these cost and quality improvements must achieve overall, per capita

improvements in quality and cost, and that ACOs should have at least limited accountability for achieving these improvements while caring for a defined population of patients.”

Ultimately, the goal is to ensure patients get the right care, in the right place, at the right time. This is a contract between payers and doctors. It does not restrict benefits or patient choices. Patients can still vote with their feet. This means that patients can walk away whenever they feel dissatisfied or if they feel the benefits are inadequate.

What is true is that the ACO concept or model is a new one. While the authors were preparing this whitepaper, it was discovered that there are still many ambiguous areas that will most likely evolve and mature with time as many hospitals, physician practices and other caregivers come together to explore various options. Some will be successful and others will fail.

Organizational Requirements to Become a CMS ACO

Participating in an ACO is purely voluntary for providers. CMS realizes that different organizations are at different stages in their ability to move toward an ACO model and try to coordinate with groups at different stages. CMS hopes to introduce various models that will encourage participation in this work, no matter the organization's stage. The following are the currently defined models:

- Medicare Shared Savings Program: A fee-for-service program
- Advance Payment Initiative: For certain eligible providers in the Shared Savings Program
- Pioneer ACO Model: Population-based payment initiative for health care organizations and providers already experienced in coordinating care for patients across care settings

Depending on which model your organization qualifies for there are certain common requirements to become an ACO, among them:

- An ACO should enter into an agreement with the Secretary to participate in the program for not less than a 3-year period
- It should have a formal legal structure that would allow the organization to receive and distribute payments for shared savings to participating providers and suppliers
- It should also include primary care physicians that are sufficient for the number of Medicare fee-for-service beneficiaries assigned to the ACO under subsection
- At a minimum, the ACO should have at least 5,000 beneficiaries or enrollees assigned to it in order to be eligible to participate in the ACO program

The list above is not exhaustive; the complete list may be found in Section 3022 of the Entitled “The Patient Protection and Affordability Act”.

A Provider's Efforts and Benefits of Becoming an ACO

Federal officials estimate the ACO program will save Medicare up to \$1.1 billion over five years and these savings will be shared among the various ACOs. They also estimate that the ACO model will save approximately \$5 billion dollars by the eighth year, which indicates that the savings will be greater the longer the program is in place.

It takes a lot of effort to form an ACO, and it could well end up being a multi-year endeavor. The agile organizations that take a head start and quickly select the appropriate staffing, vendors and tools will position themselves as leaders and will be able to capture more of the shared savings. Most of the associated cost of setting up an ACO comes from training staff and implementing the vendor's solutions and tools that will aid in maintaining the ACO. Another aspect that will determine the success of an ACO is how well it aligns itself with the physicians that will be responsible for managing the health of the patient population being served.

Once set up and running smoothly, the ACO will be able to tap into the shared savings, provided that the patient population they serve is able to prove, via quality reporting, their health improvements by demonstrating several factors:

- Lowering emergency visits
- Reducing re-admissions
- Keeping their patient population healthy and at home. That is, away from the hospital

The Beneficiaries Benefit

Patients are the beneficiaries, also called “enrollees”, a term which is confusing since the patients are free to go to any other provider they desire and they are not bound by a contract with the ACO. ACOs bring together informal networks of hospitals, community physicians, specialists and other caregivers, which form a comprehensive network that would provide coordinated care to the patient populations that it serves. ACOs are motivated to maintain their patient populations' loyalty since they are free to roam; that is, patients can seek care elsewhere, and they are not locked in as they were with the HMO model. The beneficiaries will strongly benefit because of the proactive medical attention they will be receiving from their incentivized care givers.

If the hospital and doctor groups cut the cost of treating their Medicare patients, they keep a portion of what they save. This is intended to reward doctors and hospitals for providing proactive quality care. It is likely to see healthcare providers making house calls, visiting nursing homes, and spending more time helping their patients manage and improve their health.

Under the present model, it is difficult for patients to get time with their doctor when they have questions. Usually this involves a trip to the office and appointments have to be scheduled weeks in advance. Under the ACO model, doctors are motivated to communicate with patients remotely where appropriate. This is in stark contrast to today's model where the doctor is not paid to spend time on the phone with patients, for example.

It is difficult for patients with chronic diseases such as heart failure, obesity, or diabetes to keep track of medications, appointments, and also manage their lifestyle changes. Physicians have delegated some of this management to other staff members to help manage these patients. Pharmacists help explain medication interactions and side effects. Health coaches educate patients about their disease and lifestyle changes that generate improvements. Care coordinators monitor the patients to be sure they show up for tests and follow-up care. Under the traditional model, Medicare won't pay for most of the work they do. Under the ACO model, their pay and influence will grow and ultimately benefit the patient as a result.

With the extended contact, patients will feel they are taken more seriously and will respond accordingly. They will take a more active role in managing their own health and will collaborate more with the care team to do so.

Infrastructure Requirements to Become a CMS ACO

Although CMS is not requiring any type of automated process to be put in place for an ACO, the truth is that being an effective ACO will require a robust infrastructure that can capture the patient population information and assist in producing quality reporting and tracking metrics. To what degree an ACO automates is directly proportional to the size of the patient population it serves. The most typical infrastructure parts that an ACO would require would be:

- ADT system to capture patient population demographics
- Electronic Health Record to maintain accurate medical profiles of the patients
- Business Intelligence Platform for measuring performance and quality of care provided
- Physician portals and possibly a patient portal

As mentioned, investing in an ACO can be costly. Those that have been successful at testing the ACO model have invested heavily in infrastructure, EHRs, business intelligence, and reporting solutions. However, the good news for novice ACOs is that at the beginning, which is for the first year, there is no risk. There is an agreed upon spending target per beneficiary. If there is overspending, then the risk kicks in. If the ACO hospital(s) and physician groups overspend, then they might be caught covering the extra costs themselves due to the shared risk associated with the shared savings model. Financial gain or loss depends on improving the patient's health with certain common conditions tracked by Medicare.

Performance Measurement and Reporting

CMS has laid out 33 quality measures across 4 domains used to evaluate an ACOs performance and quality outcomes. The four domains are:

1. Patient Experience
2. Care Coordination and Patient Safety
3. Preventative Health
4. At-Risk Populations

The quality standards are risk adjusted to account for treating more complex patients. In the first year, ACOs can meet the requirements by accurately reporting across all domains. In years two and three, the shared savings are based on how ACOs perform the measures. As mentioned above, ACO participants are not required to use certified EHRs to report quality measures. They can use claims, administrative data, surveys, and group practice reporting options web interface for ACO quality data reporting for certain measures.

Timeline

The official announcement of the beginning of the ACO program was on December 19, 2011. The ACO pioneer program started January 1, 2012 with 32 participants. For these 32 selected pioneers the first performance period also began on January 1. During the first two years, the ACO pioneer program will experiment with a shared loss and a shared savings payment model. The shared savings are determined by comparing the performance results of the ACO against a CMS benchmark. For others, the applications will be received from January 1, 2012 and their performance period will start April 1, 2012. ACOs starting April or July can opt to receive interim payments if they report on quality measures for 2012. All ACOs must report on quality measures in 2013 to remain eligible for first-year performance savings.

The Link Between ACOs and Healthcare Business Intelligence

Given the nature of ACOs as a shared delivery system between multiple entities, they generate a large amount of data. At the foundation of an ACO we have key players which are also generators of massive amounts of information. Capturing this information is a challenge for most healthcare organizations. As a result, ACOs require analytics to be successful. The inclusion of advanced analytics to manage population health, develop risk models and examine clinical outcomes based on their cost will drive a stronger value proposition and enable accountable care. This will allow for collaboration and coordination of patient care across the continuum and shared payment and responsibility for quality of care for covered patients. Since the key idea behind an ACO is managing the health of fixed number of people on a regional basis, there is a lot of data analysis that will be required. This will include not just looking at past data but on a predictive projected basis as well.

When one looks at this list of key components of an ACO taken from CMS literature, shown below, Healthcare IT is not specifically called out, but it is implied in nearly every item listed. Take the last item, payer partnerships, for example. This component could be challenging due to the lack of data exchange between payers and providers in the past other than billing and claims. It is implied in this component that the provider community will be able to produce quality, efficiency and patient satisfaction analyses to make the ACO work. This can only happen through healthcare analytics.

The reality is that each one of the emerging ACO models will need data from outside their organization and the ability to analyze that information. No healthcare organization is an island anymore. The key will be the ability of a healthcare organization to gather, analyze and act on evidence-based clinical information. Many of the current examples are leaders in healthcare IT. Giesinger, for example, is well known for developing and integrating a clinical data repository with strong data models.

Definition of Success

According to Donald Berwick, John Whittington, and Tom Nolan of the Institute for Healthcare Improvement, the strategy for improving the U.S. health care system requires simultaneous pursuit of three aims using the following metrics:

1. Improving the Experience of Care
 - Patient satisfaction
 - Patient Activation Measures (PAM) scores
2. Improving the Health of Population
 - QUEST outcomes

- Select HEDIS metrics
 - Health status – SF12
 - Mortality rates
3. Reducing the Per Capita Costs per Healthcare
 - Total medical PMPM
 - Total Medical Trend
 - Total Rx PMPM
 - Admissions/1000
 - Readmission rate

Preconditions for this triple aim include the enrollment of an identified population, a commitment to universality for its members, and the existence of an organization (an “integrator, or HIE”) that accepts responsibility for all three aims for that population. The integrator’s role includes at least five components:

1. Partnership with individuals and families
2. Redesign of primary care
3. Population health management
4. Financial management
5. Macro system integration

The integrator required is a “pay for population health performance system”, which goes beyond medical care to include financial incentives for the equally essential non-medical care determinants of population health. The challenges are even greater than Berwick and colleagues realize for the Triple Aim within medical care; they include agreement on population health measures, financial incentives, ways to avoid unintended consequences, coordination across sectors, and resistance to the reallocation of resources – all of which must have set goals, tracking of actual performance and actionable information for continuous improvement. Setting metrics and driving to the metrics will be the determinant of ACO success. The enabling technology will be using business intelligence tools.

Data Collection for a Regional Population

In order to support the type of analysis needed to coordinate care and manage cost, there is a focus on drawing on data collected in external and clinical databases to provide a more holistic view of shifts that may occur in the variables that impact healthcare costs.

- Demographics
- Environmental factors

- Socio-economic data
- Medical claims
- Pharmacy claims
- Labs
- Health assessments
- Biometrics
- Remote monitoring
- Biometrics
- Lifestyle/Behaviors

The data would be oriented towards quantifying the variables impacting an individual's health to provide predictive assessments to avoid costs. In addition, the amount of data collected and analyzed will be exponentially greater – far beyond the level of HL7 transactions today. Think of the impact of capturing a patient's exercise data and its impact on their blood sugar, their weight, or even their mood. When harnessing this data to avoid expensive trips to the emergency room or potential hospitalization, the challenge will be building business intelligence systems that can handle this “big data”, analyze it, and recommend a course of action.

The Emerging ACO View

In order to support the ACO concept, the level of information about people, their behaviors, and their current state must be combined with financial information, clinical information and then, most importantly, it must be modeled. The risk model will allow the creation of care plans that are focused on prevention of costly medical intervention. In addition, ACOs will need to benchmark best practice care plans against the actual experience to provide continuous improvement necessary to coordinate care and reduce costs.

The need to have a deployment plan for care will be the hallmark of an ACO. It will answer the questions like, “should the patient remain in the hospital or be moved to skilled nursing or home to continue healing?” Of course, quality reporting will continue to expand from the 600+ measures today that have to be calculated and tracked. Risk management will change from being a function housed in the

payor world to a combined payor and provider collaboration. As such, risk management will be very dependent on the population health information developed in the model.

Conclusion

We do have a long way to go to reach widespread adoption of ACO. Current challenges include:

- Silos lead to a disconnected business and IT infrastructure
- Islands of computing create inefficiencies and underutilized assets
- Missing or competing data standards, limited interoperability
- Struggle with regulatory compliance, volume of information, data integrity and security
- Resource constraints and difficulty managing complexity/change
- Volume of data points and quality measures, in widely dispersed locations
- Limited use of analytics among providers

Organizations can start today in developing the strategies and planning necessary to build the healthcare business intelligence solutions needed to be successful. One of the first important steps is to shift from basic operational analytics to advanced analytics. Operational analytics are in place today in many healthcare organizations. Those same organizations are recognizing the need to move up to the next level of capabilities to predict trends and provide what-if simulations.

ACOs rely heavily on forecasting, predictive modeling and optimization to manage population health and related costs. Many healthcare organizations have moved to advanced analytics and may require more than one business intelligence tool. In order to manage healthcare better, especially within an ACO, BI tools are needed to be able to analyze new potential business models for cost and efficiency. Once an ACO has this intelligence, they will have to find the triggers – the tipping points – that will initiate action. The key is to “future-proof” our healthcare institutions from the challenges that lie ahead for us and our healthcare system.

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