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ACCOUNTABLE CARE ORGANIZATIONS FIVE YEARS LATER: HOW THE PIONEER ACO INITIATIVE HAS ACHIEVED EXPECTATIONS

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ABSTRACT

The Patient Protection and Affordable Care Act (PPACA), the landmark health care reform legislation of 2010, encouraged the creation and growth of accountable care organizations (ACOs). These unique provider organizations work with payers to negotiate different methods of payment that better align with incentives to provide high-quality care at a lower cost. Part of the legislation established several initiatives run by Medicare to pilot and develop ACOs. One of these initiatives, the Pioneer ACO Model, recently completed its first three-year performance period. This thesis will establish the creation and evolution of ACOs within the larger narrative of American health care, identify the key theorized advantages of ACOs, and draw upon the results of the Pioneer ACO Model to evaluate how ACOs have achieved their initial expectations in the five years since the passage of the PPACA.

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Chapter 1

Health Insurance

A Brief History of Health Insurance

Health insurance in the United States has been slowly evolving since the 1800s, when several insurance companies in Boston and Philadelphia attempted to write the first health insurance policies. These companies were not largely successful - as one doctor wrote in 1915:

> “This was a period characterized by failures. Those engaged in the work were not trained insurance men; the financial backing was insufficient; and the only experience they had to go by was that of the English Friendly societies, which show, with a fair degree of accuracy, the number of weeks of genuine sickness and the actual sickness in England among the middle and industrial classes at the different ages. The cost of conducting these companies and the claim payments that did not represent genuine sickness had to be learned by experience. The result was failure. Not one of these companies survived nor did they furnish any experience in regard to rate of sickness that could be considered of value.” (Wilson 121)

Accident insurance was actually the more prevalent form of insurance at the time, particularly insurance applying to accidents occurring on the job. Health insurance as we recognize it today grew out of these accident policies and the first successful health policies were offered by accident insurance companies in conjunction with their accident policies. These initial policies included both temporary and permanent disability, hospital charges, and surgical

benefits - pretty good for the early 20th century. The companies issuing these policies, experienced in the field of accident insurance, developed strict underwriting standards based on medical history and claim records that are not unlike the underwriting standards used today. These new products were far more successful than the earlier iterations - some of the first companies to offer these products were the Fidelity & Casualty Company of New York, The Travelers Insurance Company, and Aetna (Wilson 121-124).

By the late 1920s, medical care had improved immensely, but the cost had risen along with it. Consumers visited hospitals, but generally only as a last-ditch attempt at being rescued from their deathbed. This wasn't a great business model for the hospitals. In response, in what could be called the earliest effort to transition from sick care to well care, Baylor University Hospital contracted with a group of local schoolteachers to provide specified hospital services in exchange for a monthly payment. Other hospitals picked up the idea and it soon became known as Blue Cross (Blumberg).

Selling insurance to groups of employees was a popular move for a couple reasons. It made marketing easier - companies could pick up entire groups of customers at once. More importantly, it naturally created a risk pool, and one that was likely more favorable than the general population, since it was guaranteed that all enrollees were at least healthy enough to work. However, it wasn't until the 1940s and 1950s that employer-sponsored health insurance really took off.

In 1942, the National War Labor Board instituted a wage freeze as part of its effort to increase production for the U.S. involvement in World War II. At this time, labor was also scarce, and companies were competing to hire the few workers that were available. To get around the wage freeze, companies began offering benefit packages to employees. These

packages included health insurance. Three years later, the war had ended and health insurance coverage in the U.S. had tripled (Fronstin 4). Nine years after that, the Revenue Act of 1954 clarified that employer contributions to employees' health insurance were considered tax-deductible business expenses. This combination of widespread enrollment and significant tax breaks essentially entrenched employer-sponsored health insurance into the fabric of American society.

Where employers cannot offer coverage, the government has stepped in. In 1965, the Social Security Act created Medicare (for retirees) and Medicaid (for the poor). Medicare was originally intended to be a precursor to universal health insurance due to its political strength - it naturally tied in to the already popular Social Security program, and the poor optics of campaigning against care for the elderly quieted opponents (Ball 62-63). Of course, while Medicare alone proved popular, universal health insurance did not follow closely behind. Today's piecemeal health insurance system, made up of both group and individual products, offered by both the public and private sectors, and largely the result of several major historical coincidences, functions poorly yet not poorly enough for an entire overhaul and conversion to a single payer system.

In 2010, the Patient Protection and Affordable Care Act (PPACA), the most significant health care reform to date, was signed into law. The PPACA enacted provisions that affected nearly every aspect of the health insurance system. Insurers were no longer allowed to deny coverage to enrollees with pre-existing conditions; all plans had to cover a list of defined essential health benefits, not subject to coverage caps; and strict pricing guidelines were added, allowing companies to set rates based only on an enrollee's age, geographic location, tobacco usage, and family composition. On the consumer side, an individual mandate required everyone

who was not covered via employer- or government-sponsored health insurance to purchase a health insurance policy. To make this easier, insurance exchanges were set up in each state so consumers could shop for individual insurance policies. To make this affordable, the federal government provided subsidies for anyone purchasing insurance on an exchange whose income fell between 100% and 400% of the federal poverty level (FPL). The PPACA also expanded Medicaid, to ensure that anyone making less than 100% FPL could receive coverage from the government; however, many states with Republican legislatures have refused this Medicaid expansion, leaving nearly four million people uninsured (Kaiser 2). Medicare reimbursements were also restructured in some areas to bundled episode-of-care payments, and the Part D prescription drug coverage gap will be eliminated over time. Lastly, an employer mandate imposed a tax penalty on businesses employing 50 or more employees that do not offer health insurance coverage to their full-time employees. The PPACA is still being implemented in some areas (especially Medicare) and the full effects will likely not be felt for several years.

Payment Systems

With so many players in the health care system, many different methods of payment have been introduced since the 1900s. Most payment systems can be sorted into one of several broader categories. The most common, and most well-known, is the fee-for-service model, where providers are paid via reimbursement based on the quantity of care provided. At the other end of the spectrum are capitation payments and salaries, where providers are paid at the beginning of a period based on estimates of what their patients’ care should cost. In addition, supplementary payment bonuses like pay-for-performance or pay-for-coordination are sometimes added to a

provider's payment if they are part of a larger organization that wants to encourage certain provider behaviors.

Fee-for-service payment is the most common payment model in use today, and also the simplest to understand. Under fee-for-service, a provider is reimbursed a specific predetermined amount for each medical service it provides. For example, performing an X-ray results in a payment of, say, $100. The incentive issues with this type of payment system are obvious. A physician could perform ten X-rays on the same patient, receive $1000 in payment, and glean no further information from the last nine X-rays. One assumes (or hopes) there are safeguards in place to catch this type of fraud, but not all instances of medical waste are as straightforward. The upside is that since fee-for-service encourages providers to provide more care, patients may receive better, more complete care (ignoring for the moment any demand-side cost-sharing, like copayments, that influences the patient's decisions). In most instances, a second X-ray may actually improve the patient's treatment, and under fee-for-service, the provider has incentive to perform it. For these reasons, fee-for-service payment is often coupled with other payment models. Fee-for-service provides the base payment structure, and additional models like shared savings or pay-for-performance bonuses are incorporated into overall payment system as well.

The next most common type of payment model, capitation, is popular in managed care organizations such as HMOs. Under the capitation model, providers are paid a fixed amount in advance, based on the size and expected risk of a particular population. These payments are calculated on a "per member per month" basis, commonly shortened to PMPMs. It is easy to see the strengths and weaknesses of the capitation model. Capitation encourages providers to control costs by paying a fixed amount that generally leaves providers responsible for excess cost. To return to the X-ray example, a provider would never perform ten unnecessary X-rays under a

capitation payment model. However, these fixed payments do not entirely guard against fraud. Some providers enroll as many patients as possible (in some cases, patients who do not actually exist) to receive higher capitation payments. Others screen potential patients carefully to try to pick those who are least expensive. Ideally, the PMPM payment calculation adjusts for this risk, paying providers more to care for riskier patients, but in practice it is not always accurate. And for those patients who do receive care, in some cases it may be insufficient. A patient may not get that second, marginally less useful X-ray that is still beneficial to their care. As with fee-for-service, capitation payment can be the primary source of payment for providers in addition to other systems. In managed care organizations especially, pay-for-coordination or pay-for-performance may supplement payment and encourage providers to meet standards of care while controlling costs.

Pay-for-performance, pay-for-coordination, and shared savings programs are all supplementary forms of payment. Pay-for-performance payments typically are simply bonus payments that providers receive for meeting certain quality or performance goals. Sometimes pay-for-performance programs also levy financial penalties against providers who do not meet quality goals. Pay-for-coordination payments, meanwhile, are typically fixed payments allotted to providers that take on an additional role as coordinator of care, such as in a patient centered medical home. These payments are designed to compensate the provider for the extra time spent performing care-coordination duties. Lastly, shared savings programs pay money back to providers if the provider is part of a group that keeps costs below an assigned benchmark - the providers get to share in the savings they generate. Providers in a shared savings program may also have to pay financial penalties if the group’s costs exceed their benchmark.

Chapter 2

Accountable Care Organizations

There are three main players in the health insurance market: payer, provider, and consumer. Payers are health insurance companies (in the commercial market), employers (if self-funded) and the government (for Medicare and Medicaid). Providers are the doctors, hospitals, and specialists - anyone who is providing health care to the consumer. Consumers, in turn, are the millions of Americans buying health insurance and consuming health care.

Accountable care organizations, as defined by the Centers for Medicare & Medicaid Services, are "groups of doctors, hospitals, and other health care providers, who come together voluntarily to give coordinated high quality care to their Medicare patients." Many health policy experts prefer more specific definitions, such as this one from a 2010 *Health Affairs* article:

> "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 (McClellan et al. 982-983).

An accountable care organization (typically abbreviated as an ACO) is a group of providers who work together to provide and manage care for their consumers. An ACO, though the acronym may sound similar, is not a health plan like an HMO or PPO, since ACOs do not restrict access to providers the way some managed-care health plans do. Additionally, consumers can be assigned to an ACO without even realizing it. The purpose of an ACO is to negotiate different methods of payment between the payer and providers that better align with incentives to

provide high-quality care at a lower cost. The ACO concept has been developed to address the limitations of traditional payment arrangements, since the fee-for-service model that prevails today over-encourages volume of care, and the capitation models of the past sacrificed quality for cost. The hope is that the ACO model, with its combined focus on cost and quality of care, will lead to a new payment system that does not conflict with the goals of the payer, provider, and consumer.

ACO Payment Structures

ACOs are unique in that they take on risk. The specific type and amount of risk that an ACO bears differs based on several factors. One major factor is the payment arrangement between the payer, the ACO, and its providers. The four models identified by the American Academy of Actuaries that can be modified to cover most existing payment arrangements include a “one-sided” shared savings model, a “two sided” shared savings model, bundled/episode payments, and partial capitation/global payments (American Academy of Actuaries 5-7).

Under the one-sided shared savings model, if an ACO reduces costs while still meeting quality of care standards, the payer will share a portion of that savings with the ACO by returning it to the providers. The ACO thus has an incentive to reduce costs so that they get a share of the savings. However, the one-sided shared savings model doesn’t change the way providers are paid, which is typically fee-for-service. Since these fee-for-service payments are much greater than a provider’s share of possible savings, the incentive to change behavior is not

very strong. Figure 1 illustrates the flow of payments between a payer, an ACO, and its providers under the one-sided shared savings model.

The greatest benefit of the one-sided shared savings model is that it is relatively easy to implement and makes a good starting place for new ACOs to try to improve efficiency. The difficulty with this model, which is true for all shared savings programs, is that setting a benchmark for the calculation of savings generated by the ACO can be challenging. If ACOs are given a benchmark period, they would have an incentive to increase costs during that period, so that in comparison their next years will be lower and they would receive a bonus. If there is no benchmark period, and the payer simply sets the benchmark based on unadjusted prior experience, ACOs who are already very efficient will receive less of a bonus than an ACO who has been running inefficiently for a period of time. Lastly, under the one-sided shared savings model the payer bears essentially all of the risk, since they are still reimbursing providers for volume of services, and do not levy any penalties against an ACO who exceeds its benchmark.

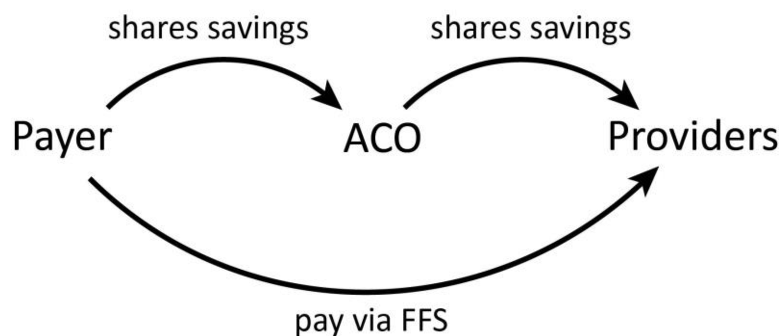

Figure 1. One-sided shared savings model.

The two-sided shared savings model is similar to the one-sided model, but in this case the ACO would have to pay money back to the payer if its costs exceeded its benchmark. This helps reduce the potential for misaligned incentives of the providers since they would now have to pay a penalty for exceeding costs. Figure 2 illustrates the flow of payments under a two-sided shared

savings model. Similar to the one-sided model, the two-sided shared savings model is a good transition step to shift more risk onto the ACO. The disadvantages of the two-sided shared savings model are also similar: benchmarks are difficult to set, and it is hard to tell what is true cost cutting and what is just variation. For this reason, payers often set limits of 2-3% around the benchmark before shared savings or penalties are applied. Under the two-sided shared savings model, an ACO takes on the risk that its costs exceed benchmark. However, the ACO is not responsible for paying the entirety of the difference (typically sharing agreements are in the 50-70% range) so payers still retain considerable risk. As with the shared savings model shown in Figure 1, the dollar amount of the penalty in the two-sided model is still small relative to the total fee-for-service payments a provider receives.

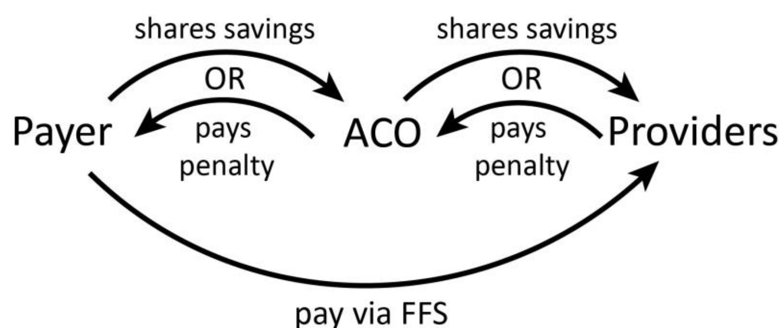

Figure 2. Two-sided shared savings model.

Under a model with bundled or episode payments, the payer makes a single payment for each “episode of care” required by a patient. This payment includes the projected cost for all expenses associated with an episode - hospital stays, specialist fees, lab services, etc. - and if the actual cost of treatment is greater than the payment, the ACO is responsible for the difference. Under this model, the ACO bears considerable risk, so typically only experienced ACOs opt for a bundled payment model. The benefit is that this additional risk provides additional incentive to coordinate care more efficiently and less expensively. The disadvantages of a bundled payment

model are overly problematic. Payers are generally experienced at determining what the cost of an episode and the corresponding bundled payment should be. While bundled payments may seem to encourage providers to skimp on providing care, ACOs are subject to thorough quality standards that typically negate this issue. The risk sharing under this type of arrangement is more involved than the one- and two-sided shared savings models. In this case, the payer bears the incidence risk (the chance of an episode occurring), while the ACO is responsible for the severity risk (the chance of an episode being more expensive than expected).

Lastly, partial capitation and global payments are options for ACOs that want to take on even more risk. Partial capitation payments could be used for one line of an ACO's business (for example, hospital services) with fee-for-service payments used in all other areas. Global payments are the same concept applied to all areas of business. Under a global payment plan, the payer pays the ACO a predetermined amount, typically annually or monthly, to cover all of the ACO's projected costs for that period. These types of payments encourage efficiency and higher levels of coordination to ensure patients are receiving care in the appropriate channels. They may also encourage alternative treatment methods that wouldn't be reimbursed under the stricter fee-for-service arrangement. However, the disadvantage of a global payment model is substantial: if its payments are much lower than its actual costs, an ACO could easily become insolvent. This model shifts essentially all of the risk onto the ACO and away from the insurer. But the ACO does get to keep all of the savings generated, as opposed to the one-sided and two-sided models where the insurer retains a portion of savings.

An ACO may utilize several different payment structures over the course of its lifetime. ACOs work with both their payers and their providers to determine the most suitable payment structure based on their experience and desired level of risk.

HMOs and ACOs: Similarities and Differences

Accountable care organizations focus on the concept of patient-centered medical care to promote efficiency and reduce waste. ACOs encourage primary care providers to coordinate care for their patients, from specialist referrals to chronic disease management. These ideas are not new. Health maintenance organizations, or HMOs, popularized the concept of "managed care" in the 1970s. HMOs were an early attempt to transition away from the fee-for-service model of payment. Similar to an ACO, an HMO is a group of medical providers who are responsible for the care of a defined population. Unlike an ACO, the term HMO also describes the type of health insurance plan that enrolls its members.

An HMO consists of a network of providers that a policyholder enrolled in the HMO health plan can visit to receive care. The patient is typically assigned to a primary care physician that helps to coordinate care and provide referrals within the network. If a policyholder wants to receive medical care from a provider outside of the HMO's provider network, their health insurance (the HMO plan) will not cover it. Providers within the HMO network are typically paid via capitation, rather than fee-for-service. For each member enrolled in the HMO, providers receive a specified payment based on the member's estimated risk.

In some ways, the HMO model works very well. From an insurer's standpoint, their risks are well-defined and predictable - members enrolling equals pre-calculated premiums in and PMPM payments out. Capitation payments encourage providers to treat patients more efficiently (as opposed to fee-for-service payments) and also allow for more experimental treatments that might not be covered under a fee-for-service payment structure. The response from patients, however, was not always so positive. The limited network of an HMO and high out-of-network costs are often combined with a byzantine specialist referral process that makes it more difficult

for consumers to get timely and appropriate medical care. HMOs have declined in popularity in the last fifteen years as more flexible health plans, like preferred provider organizations and high-deductible health plans, have become more widely offered.

Many of the features of today's ACOs have been designed to address these criticisms. While an ACO's beneficiaries are also specifically defined, beneficiaries can receive care from any medical provider, including those that are not part of the ACO, and the ACO still holds responsibility for their overall health. Some ACOs (like those in the Medicare Shared Savings Program described in the next chapter) even define beneficiaries retroactively, based on where they chose to receive the plurality of their care - essentially the opposite of the HMO's tightly controlled network. ACOs are also not tied to capitation payments; as discussed earlier, ACOs are testing out all matter of diverse payment systems. The risk that costs exceed premiums, generally known as insurance risk, also differs. HMOs act as both payer and provider, bearing all the risk associated with charging premiums and paying claims. ACOs are strictly provider groups, and bear different amounts of risk based on the risk sharing agreements they have negotiated with their payers. The payments an ACO receives are also dependent upon quality scores, a requirement rarely included in the HMOs of the past (Frakt 1955). Lastly, today's ACOs are much smaller in terms of membership than HMOs. The minimum number of enrollees for an ACO to participate in a Medicare program is 5000; HMOs typically run in the hundreds of thousands of members in order to create a larger risk pool. As ACOs grow more experienced and choose to take on more risk, they may also grow in size. However, the ACOs status as a provider group will always be the key distinction between its coordinated care and the managed care of an HMO.

Chapter 3

Medicare ACO Initiatives

The most commonly known portions of the PPACA are the parts that deal with commercial insurance, especially the individual market. Most of the public's attention has been focused on the two Supreme Court cases that dealt with the individual mandate and the subsidies provided for those buying insurance on state exchanges (*National Federation of Independent Business v. Sebelius*, in 2012, and *King v. Burwell*, in 2015). While the changes to individual and employer-sponsored insurance were certainly significant, the PPACA also provided some new directions to the government-funded programs Medicare and Medicaid. The Center for Medicare & Medicaid Innovation was created to test new methods of payment that relied less heavily on fee-for-service, including ACOs.

Medicare Shared Savings Program

Section 3022 of the PPACA directs the Secretary of Health and Human Services to create a "shared savings program…that promotes accountability for a patient population and coordinates items and services…, and encourages investment in infrastructure and redesigned care processes for high quality and efficient service delivery" (PPACA 395). This program is known as the Medicare Shared Savings Program and is one of a handful of ACO programs run by the Centers for Medicare & Medicaid Services (abbreviated as CMS).

The Medicare Shared Savings Program, typically shortened to "Shared Savings Program", or MSSP, contains 404 ACOs covering 7.3 million assigned Medicare beneficiaries as

of April 2015 (Centers for Medicare & Medicaid Services 1). The Shared Savings Program uses the one- and two-sided models of shared savings - ACOs can select either model at the beginning of their three-year agreement period. As of April 2015, 401 of the 404 ACOs opted for the one-sided model, in which ACOs are eligible for shared savings but not losses. In order to qualify for savings, ACOs must meet prescribed quality standards and achieve savings above a Minimum Savings Rate (MSR). The MSR is a percentage of the CMS-set benchmark for ACO expenditures, based on an estimate of total Medicare fee-for-services expenditures for the beneficiaries covered under the ACO. The MSR also takes into account the size of the ACO - smaller organizations are prone to more variation and therefore have a higher MSR.

The three ACOs operating under the two-sided model are responsible for paying back a portion of losses if incurred, but they are also eligible to share in up to 60% of savings, as opposed to just 50% under the one-sided model. The MSR for an ACO in the two-sided model is a flat two percent of benchmark. An ACO in the two-sided model also has a Minimum Loss Rate (MLR), typically also set at two percent of benchmark. If an ACO's expenditures exceed the MLR, the ACO is responsible for part of the loss, up to a 60% loss sharing rate.

Under both the one- and two-sided models, the percentage of savings (or losses) that the ACO shares in is based on their quality score performance. CMS measures quality over four domains: patient experience, care coordination/patient safety, preventive health, and at-risk population. In an ACO's first year in the Shared Savings Program, their performance standard is set to "reporting only," meaning that the ACO is eligible for their maximum sharing rate if they meet their MSR and simply report all required quality measures with no specific performance scores required. In subsequent years, the ACO will have to meet performance requirements in

order to share in any savings, but this first “reporting only” year offers a chance to build infrastructure and transition to more accountable patient-centered care.

Figure 3. One-sided and two-sided models under the Medicare Shared Savings Program.

The Medicare Shared Savings Program is not the only ACO initiative run by CMS, though it is the only one explicitly laid out in the PPACA. The CMS Innovation Center also offers the Advance Payment ACO model, for smaller ACOs within the Shared Savings Program that need more assistance to transition to an accountable care model. These smaller ACOs are typically located in rural areas. ACOs that do not include inpatient facilities and generate less than $50 million in annual revenue, or ACOs whose only inpatient facilities are critical access hospitals (and/or Medicare low-volume rural hospitals) and generate less than $80 million in annual revenue are eligible for the Advance Payment model. Selection of ACOs for the Advance Payment model also depends on an ACO’s access to capital, service of rural populations, and service of Medicaid beneficiaries.

ACOs participating in the Advance Payment model receive payments at the beginning of their agreement period with CMS to offset the costs of investing in the infrastructure and additional staff needed to start up an ACO. These payments are then recouped over the agreement period from the savings generated by the ACO. If the advance payments are not fully repaid through earned shared savings over the first agreement period, CMS will not pursue recoupment of the remaining payments; however, if an ACO drops out of the Shared Savings Program, they will be responsible for repaying the full advance payment. These advanced payments come in three forms: upfront, fixed; upfront, variable; and monthly, variable. Each ACO receives an upfront fixed payment of $250,000, plus a variable payment “equivalent to the number of its preliminary, prospectively assigned beneficiaries times $36” at the beginning of their agreement period. Each ACO will also receive a monthly variable payment based on the number of its beneficiaries multiplied by $8 (Center for Medicare & Medicaid Innovation 2).

Out of the 404 ACOs in the Shared Savings Program, there are 35 ACOs participating in the Advance Payment model as of April 2015 (Centers for Medicare & Medicaid Services 1). The CMS Innovation Center aims to test two theories with the Advance Payment model: first, if providing advances on payments recouped by future savings encourages participation in the Shared Savings Program; and second, if the advance payments allow for greater quality of care improvement and/or greater Medicare savings.

Pioneer ACO Model

The Medicare Shared Savings Program is CMS’ largest ACO initiative, designed to assist new organizations that are transitioning into ACOs. For those ACOs that are more established

and looking to further explore the impact of different payment systems, the CMS Innovation Center also runs the Pioneer ACO Model. The Pioneer ACO Model is much smaller - during its first performance year (FY2012) only 32 ACOs were enrolled. Since the Pioneer ACOs have more experience providing coordinated care, the risk sharing structure is more aggressive. In the first two years of the three-year agreement period, Pioneer ACOs used a shared savings and loss payment system similar to that of the MSSP, but with higher levels of shared savings and losses. For the third year, those ACOs that had generated savings were eligible to switch to a population-based payment model. This population-based payment model provides participating ACOs with prospective monthly payments calculated per-beneficiary. These monthly payments replace some (or possibly all) of an ACO's fee-for-service payments.

CMS also offered Pioneer ACOs more flexibility in risk sharing (see Figure 4). ACOs who wanted to bear less risk in their first year could select Pioneer Alternative 1, a one-sided shared savings model with no shared losses. In their second year, these ACOs would switch to the same two-sided shared savings model, and in the third year, qualifying ACOs receive a higher percentage of payment (up to 100%) in the form of prospective per-beneficiary per month payments as compared to the Core track. Alternately, experienced ACOs who wanted to take on more risk could select Pioneer Alternative 2, which allows for the full amount of expected Part A and Part B revenue to be paid via prospective per-beneficiary per month payments beginning in the third year of the agreement period. All Pioneer ACOs that qualify for these population-based payments (regardless of the specific payment arrangement) have the option to continue their agreement period for an additional two years, through 2016.

	Pioneer Core	Core Option A	Core Option B	Pioneer Alternative 1	Pioneer Alternative 2
Yr 1	60% 2-sided 5-10% sharing/loss cap 1%-2% MSR[1]	50% 2-sided 5% sharing/loss cap 1%-2% MSR	70% 2-sided 5-15% sharing/loss cap 1%-2% MSR	50% 1-sided 5% sharing cap 2% to 2.7% MSR (depending on number of aligned beneficiaries)[2]	60% 2-sided 5-10% sharing/loss cap 1%-2% MSR
Yr 2	70% 2-sided 5-15% sharing/loss cap 1%-2% MSR	60% 2-sided, 5-10% sharing/loss cap 1%-2% MSR	75% 2-sided 5-15% sharing/loss cap 1%-2% MSR	70% 2-sided 5-15% sharing/loss cap 1%-2% MSR	70% 2-sided 5-15%sharing/loss cap 1%-2% MSR
Yr 3[3]	**Payment:** Population-based payment = 0-50% of ACO's expected part A & B revenue **Risk:** 70% 2-sided, 5-15% sharing/loss cap 1%-2% MSR	**Payment:** Population-based payment = 0-50% of ACO's expected part A & B revenue **Risk:** 70% 2-sided, 5-15% sharing/loss cap 1%-2% MSR	**Payment:** Population-based payment = 0-50% of ACO's expected part A & B revenue **Risk:** 75% 2-sided, 5-15% sharing/loss cap 1%-2% MSR	**Payment:** Population-based payment = 0-100% of ACO's own expected part B revenue, less 3% discount. **Risk:** Full risk for all part B with a discount of 3% to 6% (depending on quality scores[4]) and shared risk for Part A (70% sharing rate, 5-15% sharing/loss cap).	**Payment:** Population-based payment at 0-100% of ACO's own expected part A & B revenue, less 3% discount. **Risk:** Full risk for all part A & B revenue with a discount of 3% to 6% (depending on quality scores[5]).
Yr 4	Same as above. Rebase using 2011, 2012, 2013	Same as above. Rebase using 2011, 2012, 2013	Same as above. Rebase using 2011, 2012, 2013	Same as above. Rebase using 2011, 2012, 2013	Same as above. Rebase using 2011, 2012, 2013
Yr 5	Same as above.	Same as above.	Same as above.	Same as above.	Same as above.

Figure 4. Pioneer ACO Payment Arrangements (Center for Medicare & Medicaid Services). 2013.

Chapter 4

Proposed Advantages of ACOs

In April of 2009, while the House and Senate were both working to draft the initial versions of what would become the PPACA, Elliott Fisher, the Director of the Dartmouth Institute for Health Policy and Clinical Practice, testified before the House Ways and Means Committee. Fisher's prepared testimony, titled "The Implications of Regional and Provider-specific Variations in Medicare Spending for Medicare Payment Reform," addressed the variation in spending growth nationwide, and also advocated for the creation of ACOs to combat growth in high-spending regions. Fisher argued that the higher spending was driven by fragmented, "supply sensitive" care, where medical organizations that had more resources available used those resources regardless of strict medical need. Medicare beneficiaries in these regions were more frequently hospitalized instead of receiving outpatient treatment, more frequently referred to specialists, and overall visited physicians more frequently. Crucially, Fisher said, these beneficiaries "have a much smaller proportion of their visits to primary care physicians, and they have many more different physicians involved in their care. And more care is not always better for patients. Patients in high-spending regions themselves report lower quality of care. Physicians describe greater difficulty with communication with their patients and with each other."

At the time a handful of ACOs were already in practice across the country, and preliminary results were exciting. Proponents of ACOs believed that they had the potential to achieve the elusive "triple aim" of health care: better care quality, improved population health, and lower per capita cost (Burke 877). ACOs combined the strengths of managed care with a

new increased focus on care quality and patient satisfaction. The final version of the PPACA included several provisions that supported the development and expansion of these ACOs, most notably section 3022, which established the Medicare Shared Savings Program and the CMS Innovation Center. These pilot programs aimed to test the ACO structure on a large scale, to determine if the theoretical advantages of ACOs held true when exposed to a broader market. These theorized advantages of the Medicare ACOs can be sorted into five broader categories:

Focus on Physician-Led Care

The advantage of physician-led care is twofold. First, ACOs as legal entities are groups of providers who contract together to form an organization. These providers agree to take on accountability as a group, encouraging greater involvement and coordination from providers across the care spectrum. Second, ACOs are, after all, managed care organizations. When primary care physicians are in good communication with their patients and act as coordinators of care, patients are more likely to receive care from more appropriate (and cost-effective) channels. The ACO model provides primary care physicians with a financial incentive to better communicate with their patients (McClellan 985).

Reduce Fragmentation of Services to Improve Quality and Efficiency of Care

Improving efficiency is generally touted as one of the key achievements of a successful ACO. Since an ACO is typically made up of a more diverse set of providers than traditional physician groups, the hope is that greater coordination between providers can be achieved, thereby improving patient outcomes and reducing waste. Providers within an ACO are

encouraged to share medical records for their patients in order to better coordinate care. This sharing will help eliminate redundancy; for example, if one provider orders a blood test, all providers working with that patient can access the results, instead of having the patient undergo multiple tests. Record sharing also helps to coordinate care between provider to administer appropriate treatment; for example, encouraging a patient to try physical therapy instead of a more invasive and potentially unnecessary surgery (Gawande 48). The development of Health Information Technology (HIT) is key, both to assist provider communication and to help identify patients who could benefit from targeted care procedures.

Inspire Commercial ACO Growth

The government can leverage its role as payer in the Medicare and Medicaid programs to help create new health care solutions, such as ACOs. However, there are far more Americans covered by commercial insurance than by government-sponsored insurance, so these government programs can only do so much. A successful Medicare ACO initiative will set an example (or, ideally, many different examples) for commercial insurers to emulate. Health insurance companies and providers alike will be watching the Medicare programs to determine if creating an ACO is worth the startup costs. ACOs that are part of the CMS initiatives are also encouraged to develop contracts with private payers, leveraging the ACO structures that already exist and bringing them into the commercial market.

Create Incentives Encouraging Better, Lower-Cost Care

It is clear that the current fee-for-service based payment system sets up conflicting incentives for providers. One of the most highly touted benefits of ACOs is their targeted shift away from fee-for-service payment and towards value-based care. The CMS ACO initiatives use a shared savings strategy to reward providers for appropriate care management, rather than volume of services of provided. Assuming that a Pioneer ACO follows the prescribed year-by-year progression designed by CMS, it will eventually move to a population-based payment model similar to capitation, shifting more risk from the payer to the provider, ostensibly encouraging ACOs to put more effort into managing the health of their population (Frakt 1956). An ACO's payments are also based on their quality scores to ensure that lower cost care does not equal lower quality.

Lower Cost

Finally, the Pioneer ACO program aims to lower health care spending, which is both a result of the other four proposed advantages of ACOs and a goal in and of itself. While the payer (the government, in this case) doesn't get to keep all of the savings generated by an ACO, the ACO's portion is ideally put back into improving its technology and systems to further future efficiency, rather than being spent on wasteful or less efficient services. The government still retains up to 40% of savings or more, depending on the ACO's quality scores, and the ACOs have incentive to reduce their cost that wouldn't necessarily exist outside of the Pioneer ACO program. Proponents of ACOs believe that there is a real opportunity to bend the cost curve of health care spending. Whether they will be ultimately successful remains to be seen.

Chapter 5

Review of Pioneer ACO Results

The initial three-year agreement period of the Pioneer ACO Model began in 2012 and concluded in 2014. Thirty-two ACOs signed up at the beginning of the program; only 23 completed the second year, and as of August 2015, nineteen participants were continuing on to the optional second agreement period (Centers for Medicare & Medicaid Services). While three years is not enough time to determine whether or not the ACO model can fulfill all of its expectations, it is possible to begin evaluating whether the hypothesized advantages of ACOs that were described in Chapter 4 are holding true so far. Based on the results from the first three years of the Pioneer ACO Model, how have ACOs performed five years after the passage of the PPACA?

Focus on Physician-Led Care

Results from the Pioneer ACO program show that there has been an improved focus on physician-led care in some areas, but not completely. The greatest hurdle in the path to achieving physician-led care in the Medicare market is the fact that Medicare beneficiaries are not required to select a primary care physician. Though the unrestricted access to providers that Medicare offers is a good thing (and helps distinguish the Pioneer ACOs from the tightly managed HMOs of the past), it makes it more difficult for ACOs to identify and care for their population of beneficiaries. One strength of the Pioneer ACO program, however, is that beneficiaries are prospectively assigned to the ACO, as opposed to the retroactive assignment practiced in the

Medicare Shared Savings Program.[1] While beneficiaries still have the option to receive care from any Medicare provider, ACOs can proactively identify beneficiaries who may benefit from more closely managed care. Preliminary results from the proactive assignment of beneficiaries look promising; a study of the Pioneer and MSSP ACOs found that among ACO-assigned beneficiaries, 91% of primary care physician office visits were provided inside the assigned ACO (McWilliams et al. 938).

Additionally, the L&M Policy Research Findings Report for the first two years of the Pioneer ACO study found that "Pioneer ACOs appeared to have increased their rates of post-discharge physician follow-up in the week immediately following discharge" compared to the near market (L&M Policy Research 29). However, rates lessened over longer periods of time (14 and 30 days) and were not significant at 30 days post-discharge, indicating that "patients are not necessarily increasing their likelihood of having any visit after discharge, but instead, moving that follow-up visit closer to the discharge date" (L&M Policy Research 29). Whether this constitutes an improvement in physician-led care is rather subjective. Table 1 presents the pooled results for post-discharge physician visits as compared to the near market.

Table 1. Pooled Pioneer Post-Discharge Physician Visits at 7, 14, and 30 days Results Compared to Near Markets (L&M Policy Research 29). 2015.

Outcome	2012	95% CI	2013	95% CI
Per 1,000 admissions				
Within 7 days	**11.31**	**4.63 to 17.99**	**14.76**	**8.53 to 21.00**
Within 14 days	.11	-6.18 to 6.40	**10.66**	**4.89 to 16.42**
Within 30 days	-3.94	-9.02 to 1.19	2.80	-1.80 to 7.39

Bold estimates indicate statistical significance at the p<0.05 level.

[1] ACO assignments in the Pioneer ACO model are based on where beneficiaries received the plurality of their care in the three years prior to the beginning of the Pioneer performance period.

Reduce Fragmentation of Services to Improve Quality and Efficiency of Care

As with the proposed advantage of physician-led care, progress has been made in reducing the fragmentation of health care services within ACOs, but there is still plenty of room for further advancement. The provider-led structure of an ACO encourages communication and coordination between providers, allowing ACOs to manage care more efficiently and at a higher quality. The L&M Policy Research Findings Report examined ACO provider relationships across the continuum of health services. L&M defined two types of relationships within Medicare ACOs: "core partnerships," with providers who are part of the ACO (for example, a hospital and a physician practice group), and "functional relationships," with providers who do not share in the costs of the ACO. Both types of relationships typically include data sharing agreements and similar care protocols. Figure 5 depicts the percentage of ACOs with core partners across the continuum of care, and Figure 6 depicts the percentage of ACOs with core partners or functional relationships in each provider category. Pioneer ACOs have functional relationships in every provider category, and core partnerships in all except community-based organizations (CBO).

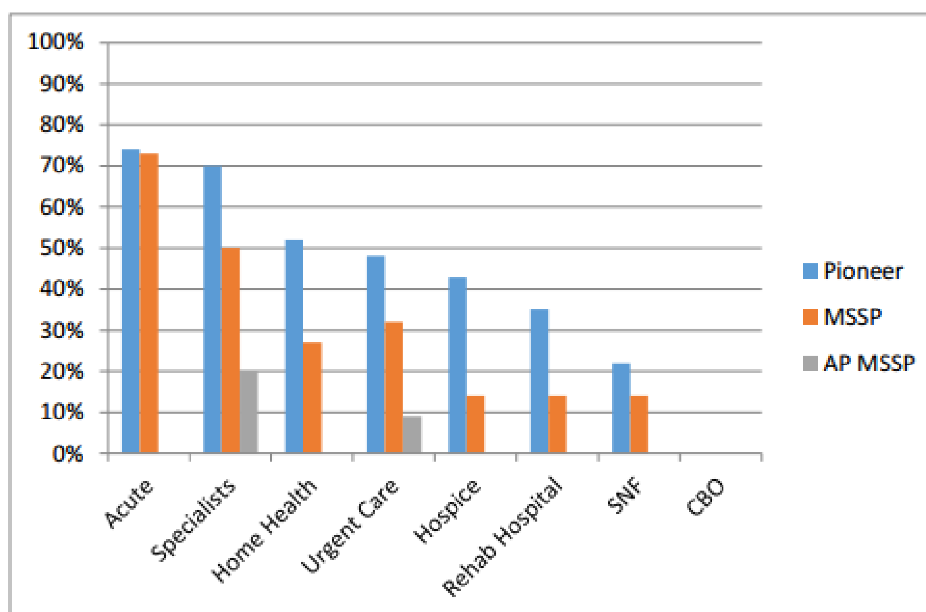

Figure 5. Percentage of ACOs with Core Partners, by ACO Initiative and Type of Provider (L&M Policy Research Reports 55). 2015.

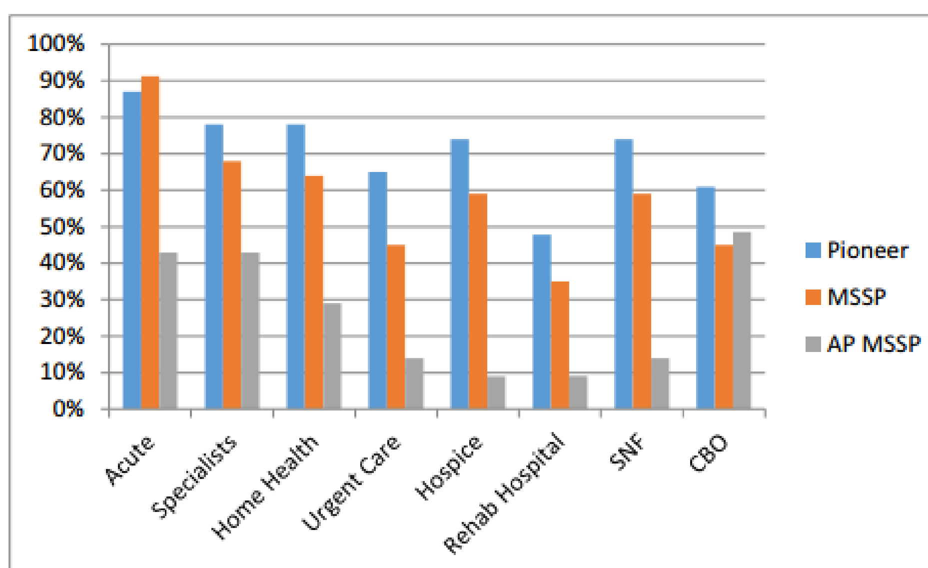

Figure 6. Percentage of ACOs with Core Partner or Functional Relationship, by ACO Initiative and Type of Provider (L&M Policy Research Reports 55). 2015.

While the existence of these relationships is a sign of more coordinated, less fragmented care, in practice the technology necessary to communicate across these partnerships is still lacking. Sixteen of the 23 Pioneer ACOs surveyed by L&M Policy Research reported the usage

of multiple Electronic Health Record (EHR) systems within their provider networks. Of these multiple-system ACOs, only six reported interoperability between EHR systems (L&M Policy Research 46). In addition, ACOs report difficulty sharing information outside of their provider network. This lack of integration decreases efficiency and discourages providers from fully utilizing the available technology (L&M Policy Research 51).

Another highly touted advantage of the coordinated care provided by ACOs is the ability to provide the correct amount of care in the appropriate setting. Measuring increased quality due to this coordination is difficult, but one approach is to measure rates of specific hospital admissions, the idea being that unplanned admissions or readmissions signal prior inefficient care. The L&M Policy Research report analyzed rates of 30-day hospital readmissions, unplanned acute hospital admissions during or after a skilled nursing facility (SNF) episode, and unplanned acute hospital admissions for "ambulatory care sensitive conditions" i.e. conditions for which primary intervention may prevent or decrease the need for hospitalization.[2] They found no significant reduction in either performance year for 30-day hospital readmissions or unplanned acute hospital admissions following an SNF episode, compared to near market trends. The specific ambulatory care sensitive conditions studied were COPD/adult asthma and heart failure, in addition to admission for any of the identified conditions. As shown in Table 2, in the first performance year (2012), results were insignificant for COPD/adult asthma and total Prevention Quality Indicator hospital admissions, and actually increased for heart failure; however, in 2013 admissions significantly decreased in all three categories compared to the near markets (L&M Policy Research 23-29).

[2] These conditions are defined by the Agency for Healthcare Research and Quality's Prevention Quality Indicators (PQIs) and hospital admissions due to any of the defined conditions referred to as "PQI admissions."

Table 2. Pooled Pioneer PQI Admission Results Compared to Near Markets, 2012 and 2013 (L&M Policy Research 28). 2015.

Outcome	2012	95% CI	2013	95% CI
Per 1,000 admissions				
COPD or adult asthma	-5.50	-11.20 to 0.19	**-9.40**	**-15.29 to -3.52**
Heart failure	**12.81**	**6.33 to 19.30**	**-10.42**	**-17.07 to -3.77**
Any PQI admission	-4.23	-11.67 to 3.21	**-21.32**	**-29.84 to -12.79**

Bold estimates indicate statistical significance at the $p<0.05$ level.

Another measure of quality is, of course, patient satisfaction. A study of beneficiaries in Medicare ACO programs found that ACO patient satisfaction scores are similar to scores of fee-for-service Medicare and Medicare Advantage patients. Pioneer ACOs also scored similarly to other forms of Medicare ACOs (L&M Policy Research 31).

Inspire Commercial ACO Growth

By testing several different arrangements of ACOs through the various Medicare ACO programs, CMS has set examples for the private sector and almost certainly helped accelerate ACO growth in the commercial insurance market. In many cases, ACOs participating in the Pioneer model simply began also contracting with other payers under the same (or similar) ACO model. From the L&M Policy Research Report: “In fact, all but six of the 32 Pioneer ACOs indicated that purchasers such as commercial payers, state payers, and employers in their markets are demanding accountable care-type models” (10). In addition to interest at the ACO level, the report found that providers participating in Pioneer ACOs are “especially open to engaging in conversations with commercial payers about considering additional value-based contracts” (14).

The number of ACOs has increased dramatically in the past four years. Figure 7 shows the change in the total number of public and private ACOs (ACOs with multiple contracts are only counted once) since 2011. Recognizing that correlation does not imply causation, it nonetheless does not seem inappropriate to suggest a relationship between the establishment of the Medicare ACO programs in 2012 and the increase in total ACOs, especially in light of the fact that most ACOs who have dropped out of the Pioneer ACO model have continued to operate as ACOs (L&M Policy Research 1).

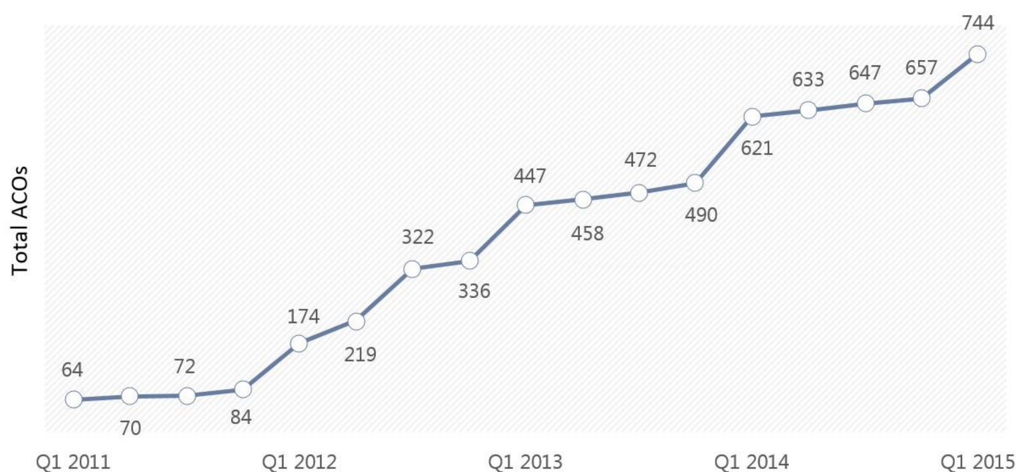

Figure 7. Total Public and Private ACOs, 2011 to January 2015 (Muhlestein). 2015.

Create Incentives Encouraging Better, Lower-Cost Care

From an economic standpoint, the incentives under the Pioneer ACO program are insufficient at both the provider and organizational level. ACOs participating in the Pioneer ACO program must cover at least 5,000 beneficiaries to ensure that performance improvement can be accurately measured with minimal variation. However, as the number of providers within an organization grows, the effect of each individual physician's action on the overall performance of the ACO is decreased, and so the individuals' incentives are decreased as well. Frandsen and

Rebitzer's 2014 study "Structuring Incentives within Accountable Care Organizations" found that it was impossible for ACOs to pay providers adequately large incentive payments without the ACO achieving impossibly large efficiency gains. The amount of shared savings an ACO is able to earn back under the Pioneer program, divided out among all providers in the organization, is negligible compared to the fee-for-service payments received by the provider. As a result, shared savings offers providers little financial incentive to modify their behavior. In practice, of course, providers who have agreed to join an ACO typically agree with the aims of the ACO to reduce volume and increase quality of care.

At the organizational level, many ACOs participating in the Pioneer program were unhappy with their shared savings, and thirteen of the original 32 Pioneer ACOs dropped out before the end of the first three-year performance period. There are two reasons for the stingy savings. First, despite L&M Policy Research's calculations that the top eight performing Pioneer ACOs generated $295 million in savings, those eight ACOs received only $31.4 million in bonus payments over the same two-year period, much less than the 50-70% sharing promised under the Pioneer model (Goldsmith). This discrepancy is due to the fact that L&M estimated savings as compared to the near market, while the savings that determine an ACO's bonus payment are determined by comparing expenditures to a benchmark set by CMS. This benchmark is not based on the market, but rather on the ACO's spending in prior years. Therefore, these well-established ACOs with years of managed-care experience have less fat to trim from their year-to-year spending, simultaneously outperforming the market and underperforming where CMS is concerned.

The second reason shared savings have been unsatisfactory is the high quality standards required for full savings. "We expect ACOs to deliver better care for Medicare beneficiaries, but

the quality benchmark that CMS prescribes is the government example of letting the perfect be the enemy of the good," said Clif Gaus, CEO of the National Association of ACOs, in a 2015 press release. "The unfair quality penalty…is so stringent that unless an ACO scores perfectly on every quality measure, their savings will be reduced" (qtd. in Daly 11). An ACO's quality score incorporates 33 quality measures, which are spread across four domains: patient/caregiver experience, care coordination/patient safety, preventative health, and at-risk populations. The mean quality score across Pioneer ACOs in the first performance year was 71.8% and had improved to 87.2% by the third year. "Pioneers improved by 3.6 percent, on average, across all quality measure from the previous year, with some of the most notable improvements seen in medication reconciliation, screening for clinical depression and follow-up plan, and qualification for EHR incentive payments" (Daly 12). While it does seem unrealistic to expect all Pioneer ACOs to achieve perfect quality scores, it is clear that Pioneer ACOs are improving their quality of care across the board and should be encouraged to continue this improvement in the future.

Lower Cost

The one fairly clear-cut result from the first performance period of the Pioneer ACO initiative is that it did indeed lower costs. L&M Policy Research reports that the Pioneer ACO program generated $384 million in savings compared to the near market in its first two years of performance. Ten of the ACOs showed significant savings in both performance years, ten showed significant savings in one performance year, and twelve had no significant savings or losses in either year. Two ACOs actually suffered significant losses in the second year (2013) despite showing significant savings in the first year.

These savings seem to be largely driven by reduced utilization, specifically by lower rates of acute care hospital stays. Beneficiaries in Pioneer ACOs showed significantly lower utilization than their near market comparison group across all six services measured (acute inpatient stays, acute inpatient days, primary care evaluation and management services, procedures, imaging services, and tests). Additionally, the Pioneer ACOs that achieved savings in both performance years (”two-year savers”) showed steeper reductions in acute hospital stays than the one-year or non-savers. “The 10 Pioneers in the two-year savers group were more likely than the other Pioneers to have significantly fewer acute care stays and they also showed larger differences in acute care stays relative to baseline compared to their near markets. In contrast, only two of the non-savers group ACOs… had significantly fewer acute care stays in both 2012 and 2013” (L&M Policy Research 19). Figure 8 illustrates the correlation between reduced acute care utilization and per beneficiary per month (PBPM) savings.

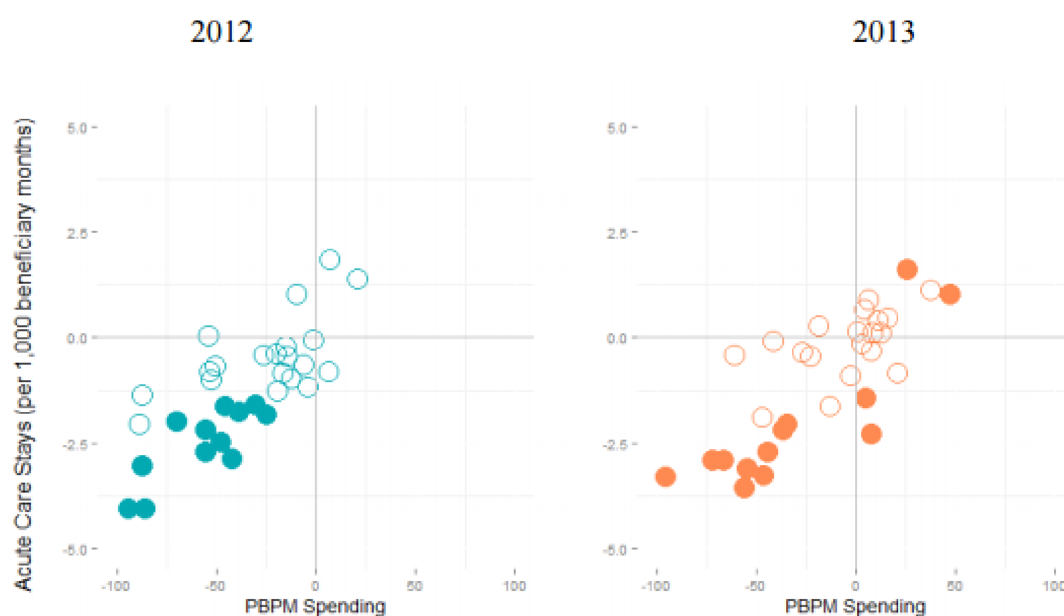

Figure 8. Pioneer ACOs' Differences in Acute Care Stays from Baseline (y-axis) by Differences in PBPM Spending from Baseline (x-axis) Compared to Near Markets (L&M Policy Research 19). 2015.

Non-statistically significant results are shown with hollow circles; significant spending results are shown by solid points at the p<0.05 level.

Two-year savers were also more likely to have significantly lower utilization of procedures, imaging services, and tests than the near market in both performance years. The one-year savers and non-savers were more likely to have lower utilization in only one year, or neither year (L&M Policy Research 15).

The relationships between these cost savings and reduced utilization measures suggest that the primary driver of an ACO's savings is its ability to minimize unnecessary services and procedures.

Chapter 6

Conclusions

Accountable care organizations, as defined by the Centers for Medicare and Medicaid Studies, are "groups of doctors, hospitals, and other health care providers who come together voluntarily to give coordinated high quality care to their Medicare patients." ACOs are the latest evolution of the shift away from fee-for-service payment in the American health care system. Individual ACOs may vary when it comes to their mix of providers and risk sharing structures, but all ACOs share the same goal of providing quality care at a lower cost.

Based on the results from the first performance period of Medicare's Pioneer ACO Model, it seems that ACOs have been successful at improving efficiency and quality of care. Patients appear to be interacting more effectively with their primary care physicians and receiving more preventative care, as evidenced by decreased hospital admissions for certain diseases. Lower utilization rates among Pioneer ACOs also suggest that ACO providers are becoming more successful at eliminating unnecessary procedures. Quality scores across Pioneer ACOs are high, and increased by an average of fifteen percentage points over the three-year performance period.

However, the financial outlook of the ACO model may not be so sustainable. While the estimated savings of $384 million are certainly substantial, utilization rates can only shrink so far. Eventually efficiencies will have to be found elsewhere, or ACOs will have to be more successful at implementing preventative wellness measures. ACOs will also have to figure out ways to successfully compensate providers for these new types of care, and the current financial incentives in place are not sufficient. Payers and ACOs must also work together to negotiate

shared savings programs that are mutually beneficial, specifically the calculation of spending benchmarks. Pioneer ACOs had so much difficulty achieving shared savings during this performance period that 40 percent of the ACOs that began the program elected to leave it, a result that may discourage new ACOs from forming or joining the Medicare pilot programs.

There is hope for the future. Health information technology and electronic health record sharing have a lot of room for improvement, and the key to future efficiencies may lie in this further development. Lastly, the growth trajectory of ACOs in the past five years suggests that many payers and providers are interested in fine tuning the ACO model to adapt to the various unique health care markets across the country. ACOs, it appears, are here to stay.

Appendix A

Glossary of Terms

ACO – Accountable care organization. A group of health care providers who work together to provide high-quality, coordinated care to their patients.

CMS – The Centers for Medicare & Medicaid Studies. A federal agency managed by the Department of Health and Human Services, responsible for managing the Medicare and Medicaid health insurance programs.

HMO – Health Maintenance Organization. A type of managed care health insurance plan that relies on a restricted network of providers. This provider network is also referred to as an HMO.

Medicaid – A government-sponsored health insurance program for low-income Americans.

Medicare – A government-sponsored health insurance program for elderly and disabled Americans.

PBPM – Per beneficiary per month. Typically used to describe capitation payments in Medicare.

PMPM – Per member per month. Typically used to describe capitation payments in commercial insurance.

PPACA – Patient Protection and Affordable Care Act. Landmark 2010 health care reform legislation.

PPO – Preferred Provider Organization. A type of managed care health insurance plan that relies on a network of providers, with high out-of-pocket costs to the consumer for receiving care outside of the network

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Schreyer Honors College Student Council — August 2012 – 2015
President — *May 2014 – April 2015*
- Represented the student voice and served as a link connecting scholars with the administration and alumni of the Schreyer Honors College
- Delegated and supervised event planning, program development, and other student council activities
- Innovated ways to improve the student experience within the Schreyer Honors College

Secretary — *May 2013 – April 2014*
- Managed communications between executive board and general members
- Documented meetings with organized minutes and tracked attendance for 80 members

THON 2013 Weekend Stands Captain — *February 2013*
- Organized stands and morale activities for 30 students during THON

Actuarial Science Club — August 2012 - 2015
Exam P Review Session Leader — *February 2014 – April 2015*
- Led weekly group sessions to review material for students studying for Exam P/1
- Created original lesson plans and supplemental materials

Skills: Proficient in MS Office (Access, Excel, Word, and PowerPoint), Visual Basic for Applications (VBA), and SQL