Cost Reduction Strategy and Organization of Accountable Care Organizations

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Introduction

When I began the search for my HOD internship last spring, I knew I wanted to pursue a unique work experience and improve my understanding of something I could not satisfy in a classroom. Living in a city known as the "Silicon Valley of Healthcare," I had a prime opportunity to intern in a healthcare management role, and I became driven to find an opportunity to learn about this field. This drive may have been informed by my experiences as the son of a doctor. I grew up hearing first hand about the radical changes the healthcare field is experiencing, from the implementation of the Affordable Care Act to innovations in the care of patients. Furthermore, healthcare seems to be one of the primary issues of my generation. Debate around the access to healthcare has dominated newlines and political discussions for as long as I can remember. Despite my experiences taking coursework in health policy and pursuing internships in medical research, I felt I did not have more than a surface level understanding of the "problems" that plagued our healthcare ecosystem. However, my internship this fall as an intern at the Vanderbilt Health Affiliated Network provided me with a wealth of knowledge about managed care and how managed care is being utilized to help solve some of our nation's biggest economic and social issues: healthcare. In this white paper, I hope to expand upon some of the processes and structural procedures that accountable care organizations use to improve the quality of patient care and reduce the costs of healthcare.

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Part I: History and Background

I. Problems of Fee-for-Service

To understand how accountable care organizations are working to reduce healthcare costs, it is important to understand managed care and how it impacting the future of healthcare. In the past, providers were paid for each service that they performed on a patient. The flaws of this fee-for-service system are numerous. The first issue is that a provider might not have performed a quality service but he is rewarded the same amount as a provider who performed a service that was well below average. The second problem with the system is that it incentivizes providers to perform as many services as possible. Many analysts think healthcare costs are trending far above inflation because doctors are performing far too many unnecessary procedures due to the system's fee-for-service incentives. As such, not only does fee-for-service not distinguish between doctors who are good and bad their jobs, it incentivizes doctors to perform procedures that are neither necessary nor helpful for patients. Misaligned incentives have led healthcare costs to rise exponentially. These costs are unlike many other costs consumers face because they're not directly paid by the people who consume these services. Instead, these costs are mainly paid for by two different bodies: the first being insurance companies and the second being government. Because costs are rising above inflation, these two bodies must compensate for their lost income. For insurance companies, this means that they must charge a higher premium to their customers. For government, this means taking money away from other services that the government can provide, like education, and using this money to pay for healthcare services. In the end, the loser of this equation is always the American citizen. Since most people with insurance get their insurance through their employer, the employer must foot the bill of higher premiums. These higher premiums, some analysts believe, contribute to lower wages for employees. Since other healthcare costs are paid for by government, the American citizen loses because they're not receiving as many services from the government as they could otherwise. This loss to the American citizen became far more obvious in the 1990s as healthcare costs began to exponentially rise. Healthcare expenditures as a percent of the United States Gross National Product represented 5.3% in 1960. This figure rose to over 10.8% in 1983. This trend represents cost of care growth in excess of the rest of the American economy.

II. Rise of Managed Care

The response from employers and the government to rising healthcare costs was the use of managed care organizations. Managed care, as defined by the Medicaid.gov website, is a healthcare delivery system that is organized so as to manage the utilization of care and the quality of that care. The payment structure of many managed care organizations revolves around capitated payments wherein managed care organizations accept a certain amount of money per member per month for their healthcare services. The popularity of these managed care plans can be seen through the growth in their membership. Traditional fee-for-service insurance accounted for over three-fourths of the commercial insurance market in the mid 1980s. By the mid 1990s traditional insurance represented less than one third of the commercial insurance market, replaced by managed care plans like HMO and PPO plans. On the government side of healthcare, the growth of managed-care grew rapidly as well. In 1990, just 10% of Medicaid beneficiaries were enrolled in a managed care plan. By 2000, this figure stood at 56% of all

beneficiaries. Not only was managed care growing in popularity, these plans were successful in containing costs. Healthcare spending as a percent of GDP stayed level at about 13.3% between 1993 and 2000. However, the success of managed care did not come without significant public backlash. Managed care meant that the utilization of healthcare services would be reduced (since managed care reduced physician incentives to perform unnecessary procedures). This reduction in utilization meant that patients could not see specialists without first seeing a primary care doctor. It also meant that patients could not see whatever provider they wished since their doctor must be in the managed care network. Furthermore, many managed care organizations did not adapt adequately to the rapid growth in their attributed members, causing the quality of care to lag. Public policy began to reflect public disgruntlement with managed care in the late 1990s. Former Pres. Bill Clinton ran for office in 1992 on a policy of universal healthcare. His 1993 proposal relied on a system of managed care for implementing his universal coverage. As history shows, this proposal was never passed, despite widespread support of universal coverage. Furthermore, many states passed what are known as patient protection laws. These laws significantly decreased the ability of managed care organizations to reduce costs. With managed-care out of popularity and hamstrung by various state and federal legislation, healthcare costs began to soar in 2000, jumping from 13.3% of GDP in 2000 to 18% in 2016.

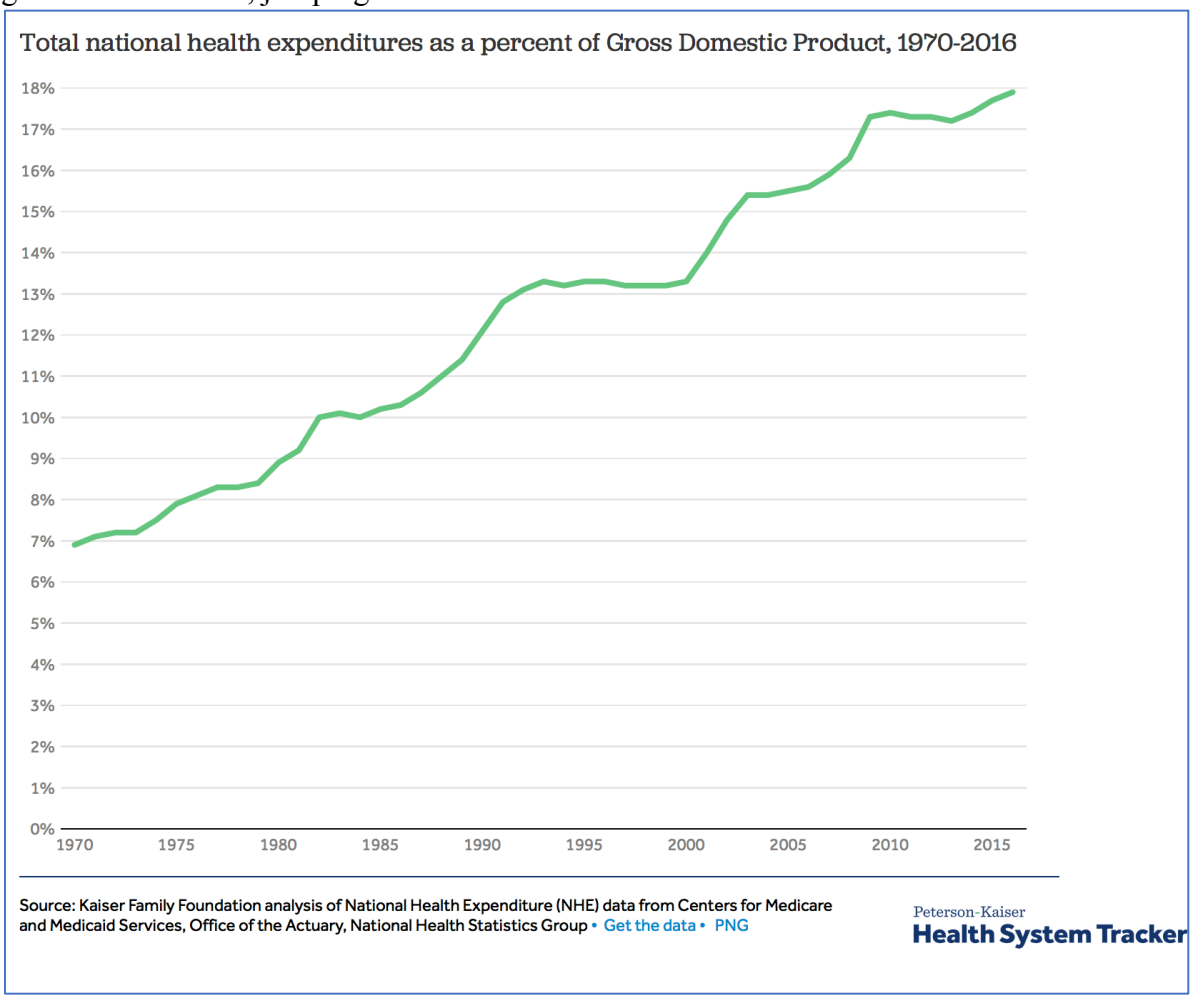

Figure 1. Shows the growth of U.S. health expenditures as a percent of GDP

Managed care experienced a resurgence in popularity following passage of the Affordable Care Act (ACA). The Affordable Care Act was passed into law in 2010 and significantly expanded the coverage of American citizens. With more people receiving coverage for their healthcare services, it became exceedingly important to manage the cost of these services, particularly for the federal government (since the government covered most of the expansion in Medicaid). With the cost of insurance premiums untenable for many companies and even the federal government, innovations in value based care started to transform the healthcare landscape after passage of the ACA. Today, many employers are looking to enroll their employees in health plans that entail many of the qualities of managed care organizations.

The federal government and Centers for Medicare and Medicaid have rolled out many programs that promote managed care in recent years. Some of these programs include provider payor joint initiatives, physician employment by hospitals, and direct to employer health plans. These plans all promote some form of value based care. Value based care describes a system wherein providers are paid for the quality of the care they provide to their patients. If their patients have better outcomes than the general population, then the providers will be rewarded. If their patients have worse outcomes than the general population, then providers may need to pay, such as in the form of reduced reimbursements, for the quality of their care. Value based care can be seen as an evolution of the previous managed care movement. Not only are providers allocated a capitated reimbursement for patients under valued based care, this capitated amount may be adjusted for the outcomes of these patients. One federal program that signifies the transition towards value based care is accountable care organizations.

III. Accountable Care Organizations Overview

Medicare Shared Savings Program "MSSP" Accountable Care Organizations are one of the innovative programs rolled out by CMS since the ACA to help combat the rise of healthcare costs. Under the legislation, CMS allows groups of providers to come together and coordinate the care of their Medicare patients. The legislation is very complex, but at its core, ACOs are judged against what the cost and quality of care for their patients would be if the ACO never existed. The estimated cost of patient care if the ACO never existed is referred to as the "benchmark," and it takes into account things like regional healthcare expenditures and riskiness of the Medicare population. ACOs can earn a payout, or reimbursement, from CMS if they can show that they have have reduced costs of care below the benchmark while still meeting quality of care standards. If the ACO has costs that outpace their benchmark, then they will need to pay back CMS a portion of their losses, hence the term "accountable care." This is a very simple explanation as there are many different "tracks," or types of MSSP ACOs, which determine the percentage that an ACO receives in shared savings or losses and the maximum loss an ACO can receive. Furthermore, there are other bonus payments that an ACO can earn for meeting quality of care standards. These are known as Advanced Alternative Payment Model Reimbursements. These reimbursements are not critical to understand when learning about ACOs, but it is helpful to understand that ACOs are judged heavily on both the cost of care and the quality of care that they provide to their patients.

One reason why accountable care organizations are considered both significant and popular is due to the fact that they mark a major transition into value based care. In an accountable care organization, providers are still paid per service that they perform. However, providers receive bonus payments if the cost of services that they provide is less than they would

have otherwise. If they perform more services or have quality that does not meet standards than providers need to pay a portion of their earnings back to the Centers for Medicare and Medicaid. In order to earn the maximum amount of money possible, a provider must strive to give patients the best possible care without duplicating procedures.

In order to help meet quality and cost goals, these groups of providers often hire managed care organizations to run the ACO. These managed care organizations allow doctors to do the work they are best at, which is treating patients, while outsourcing the work that they are not experts at, which is coordinating the care of these patients. The company that I interned with this fall, Vanderbilt Health Affiliated Network, is one of these managed care organizations. The work of managed care organizations is tricky because there are many competing goals and interests within a network of providers. For example, reducing the cost of care for patients results in decreased revenue for some part of the ACO, since patients will no longer be utilizing their services. The shared savings payment the ACO receives from CMS is not guaranteed and it will not cover the revenue lost from many procedures. As a result, managed care organizations must be sure to prioritize the reduction of services that are unprofitable for a hospital (i.e. the emergency department) and not disrupt profit centers like durable medical equipment (i.e. prosthetics). Even with these conflicting goals, the potential for accountable care organizations to reduce costs and improve quality of care is enormous.

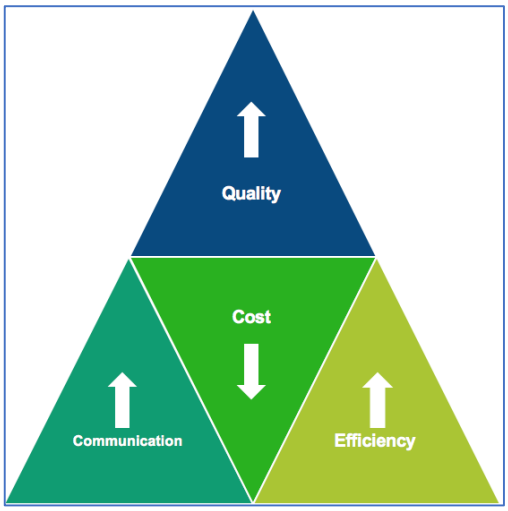

Figure 2. This graphic shows the basic goals of an ACO

Fundamentally, managed care organizations act to decrease the utilization of healthcare without negatively altering the care that patients receive. This means that ACOs must reduce things like unnecessary or redundant procedures. They must efficiently coordinate the care of patients, which means that patients see the right facility and doctor upon the first referral. Finally, they need to prevent the utilization of care in the first place. This prevention is pivotal to an ACO's success and its success can take many forms. For example, proper management of a diabetic patient can mean that the patient does not get sick as frequently which in turn reduces the cost of treating that patient. Prevention can take other forms such as simply ensuring that patients see the primary care doctor regularly and live a healthy lifestyle. Each ACO has their own method of implementing prevention processes, however, there are three systems that are universally accepted for new ACOs to dramatically reduce the cost of care. Three areas of process improvement will be thoroughly explored in further sections. They are listed as follows:

1. Use of an Annual Wellness Visit
2. Management of High Risk Patients
3. Managing Transitions of Care

Finally, these initiatives are implemented by the managed care organization in conjunction with the providers who are part of the network. To understand how these initiatives are implemented, it is important to understand how the ACO and managed care organizations are structured. This section will be explored in detail in the next section. The structure and organization of an ACO contributes heavily to how ACOs achieve shared savings. As such, the organizational structures will be explored and considered as a method of cost reduction in itself.

Part II: Organizational Structure

I. Managed Care Organization

The managed care organization seeks to bring together an array of professional experiences and skill sets. The structure described below is representative of VHAN, but this structure is similar to many other ACOs.

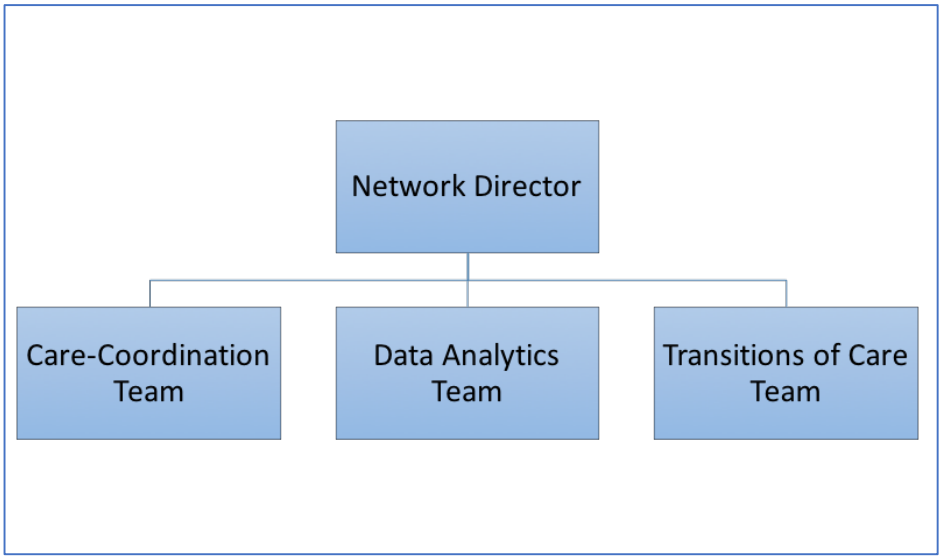

Figure 3. The graphic is a high level overview of the three teams within the VHAN MSSP ACO operations group.

Care-coordination is a group of registered nurses who are responsible for a number of the clinical objectives of the ACO operations team. They also support the efforts of the doctors who work within the system. Their roles range from implementing electronic health record (EHR) coding practices to scheduling primary care check-ups with attributed patients.

The data analytics team is comprised of a team of analysts who support the ACO's efforts by providing crucial cost and health data. Their work is essential for supplying the data that supports and identifies the ACOs initiatives. One of the team's primary responsibilities is to identify high risk patients who are attributed to the ACO. More info on high risk patients will be provided in later sections of this white paper. Their other functions revolve around the identification of patterns within data. They use data from claims and electronic health records to

determine areas where the ACO can improve the quality and cost of care. One challenge for the group is to identify what data trends are significant or important to analyze. Since the data analytics group is not comprised of medical professionals, they work in tandem with other groups such as care-coordination and transitions of care to determine what types of data they should analyze. For example, the analytics team might crunch claims data at the request of transitions of care to see what the readmission rate is for patients who received an appendectomy. Many of their other projects can be considered ad-hoc and at request of team members or ACO participants. For example, the network director may ask the analytics team to collect data on the costs of patients attributed to a specific provider.

The transitions of care team is responsible for ensuring that patients attributed to the network are seen by physicians within the network for the totality of their care. Whenever a patient sees a doctor out of network, it becomes more difficult to provide an efficient care effort. When the patient returns in-network, their records may not appropriately show their testing or procedures of the out of network doctor, precipitating redundant procedures. Furthermore, there is a lack of communication between in-network and out-of-network physicians which may hinder the cost and quality of care for the patient. A second major effort the transitions of care team is to ensure that procedures are in place for in-network participants that help to place patients in the proper care setting. This description encompasses things such as ensuring that patients are referred to the proper specialists, implementing emergency department discharge procedures, and facilitating Annual Wellness Visits.

II. ACO Organizational Structure

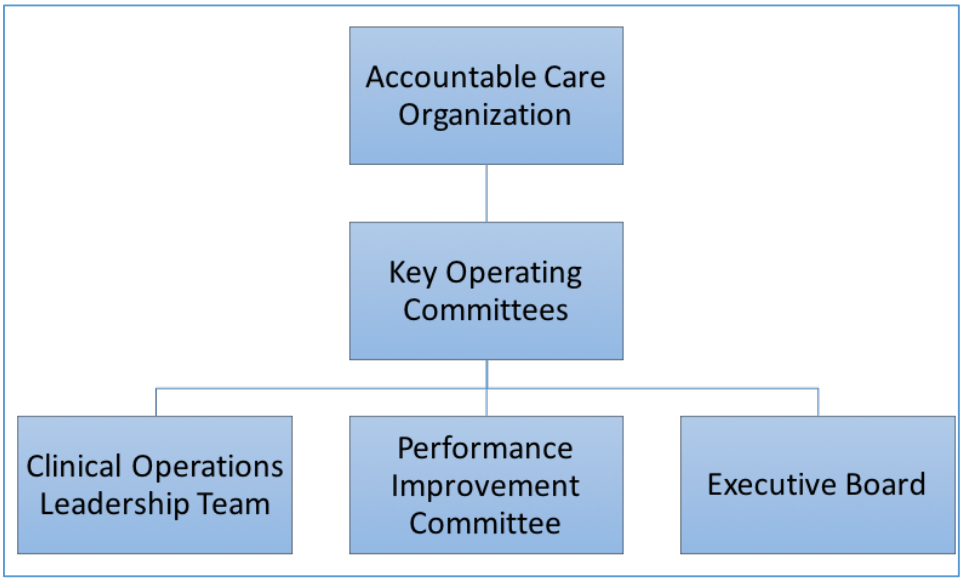

Figure 4. This graphic shows three committees of the Connected Care ACOs of Tennessee

Managed care organizations are not necessarily experts in the clinical care of patients, or even in running hospitals. They are experts in implementing processes into hospital systems. To devise what processes to implement, they rely on various committees of clinical leaders. An example of these committees is shown in figure 4. Most ACOs will have a committee comprised of hospital operators. In the case of the ACO shown in the graphic, the "clinical operations leadership team (COLT)," represents this group's interests. This committee will usually meet

quarterly once an ACO has been established. The COLT will discuss high level hospital objectives and goals and figure out the feasibility of implementing care coordination processes from a profitability perspective. A second committee represents the interests of the physicians who are a part of the ACO. This group will meet and develop processes that are grounded in a physician's perspective to help improve patient coordination. In the case of the ACO in the graphic, the "performance improvement committee (PIC)," is the name of the group of physician leaders. Like the COLT, the PIC meets quarterly and meetings are facilitated by the managed care organization. Finally, every ACO has an executive board that meets quarterly. These executive boards are staffed with physician and hospital leadership across the ACO. The executive board is responsible for setting long term goals and objectives for the ACO. For example, the board may set a goal for the ACO to reduce costs against the benchmark of 2.5% for the second year of operations. They may then set sub-goals to achieve this target for things like Annual Wellness Visits and Care Coordination.

Part III: Initiatives

I. Annual Wellness Visits

An Annual Wellness Visit (AWV) is a type of patient evaluation by a primary care physician (PCP) that is fully reimbursed by Medicare. In an AWV, the PCP will perform a typical physical exam on a patient to determine the patient's condition. The doctor will obtain vitals like height, weight, body mass index, blood pressure and vision, and discuss recommended screenings and vaccinations. The physical is important to catch and treat illness before it develops into something more serious.

In addition, an AWV allows the PCP to spend a greater amount of time with a patient than is usual during a regular physical exam. This extra time is allocated towards coordinating the care of the "whole" patient. The doctor will review the patient's medical history, document any procedures the patient has had and then have a discussion about any proactive measures the patient should be taking to stay healthy. In the process, the PCP will be able to update the medical records of a patient so that they are properly coded within the system. This has the benefit of properly recording the riskiness of the patient, which is important for determining the ACO's performance on quality metrics. Furthermore, it ensures that procedures and screenings are not duplicated in the future. For example, the AWV provides the PCP the opportunity to code for things that other doctors may have missed in the past year, such as an x-ray of a patient's arthritic hands. This will help to decrease utilization.

To help relieve the time burden from primary care doctors, ACOs may develop "wellness clinics" staffed by registered nurses. Instead of seeing their primary care physician, patients would be referred to the clinic where they could receive their Annual Wellness Visit. The nurse would record a write-up of the patient's current state for the primary care physician to review later and in future sessions.

II. Management of High Risk Patients

The Pareto principle states that 80% of the effects are attributed to about 20% of the causes. This principle has been applied to many situations outside of the world of mathematics, with the world of consulting fully embracing its potential to determine the most

confounding problems. In the case of healthcare, it has been found that a few of the patients are responsible for most of the costs of a healthcare system. The advantage of having an accountable care organization, or any managed-care organization for that matter, is the ability to track which of these patients are accounting for most of the costs. Accountable care organizations such as Vanderbilt health affiliated network, use data analytics software to track the cost of patients using claims data. These ACOs will then see what common factors these high-cost patients have in common. Armed with the knowledge of what diagnoses, conditions, and treatments account for a patient's high cost, ACOs can determine which patients are likely to be expensive in the future. In this manner, ACOs can direct their efforts towards ensuring that these patients do not develop into expensive patients.

The management of high-risk patient populations is very patient specific. The data analytics team will share the lists of an ACO's high risk patients with all the system's primary care doctors so that they can manage the care of high risk patients more closely. However, it is the job of healthcare professionals, who are mainly nurses, to develop treatment and prevention plans for each patient. These professionals are known as the care coordination team. Each ACO has a care coordination team staffed with nurses or in some cases doctors. This team develops plans in conjunction with the attributed patient's primary care doctor to manage the patient's chronic diseases. This may take the form of following up on doctors visits to inquire about social determinants of health like transportation, access to food, and housing, and coordinating solutions to these issues.

The management of high-risk patients is essential to the success of any ACO for the fact that these patients account for so much of an ACO's costs. Even a small percentage reduction in the cost of high-risk patients can prevent large expenditures for hospital systems. These patients are often a critical factor in an ACO strategy towards reducing the cost of healthcare.

III. Managing Transitions of Care

As medical knowledge advanced through the years, it became increasingly difficult for doctors to become a master of everything. The consequence of these developments can be seen in the percent of doctors who specialize in primary care. The percentage of all doctors who practiced primary care stood at 50% in 1961 as compared to about 33% in 2014. Take the example of cardiology. Cardiology first emerged as one of the first specialties of internal medicine in 1940. For many years after, doctors would complete a residency in internal medicine and then complete a three-year fellowship in cardiology. Afterward, the physician would be licensed to diagnose and use all available treatments related to cardiovascular disease. In the 1980s, subspecialties within cardiology began to develop as new technologies emerged. This meant that these physicians began to exclusively treat and diagnose very specific ailments of the heart. This trend towards sub specialization continues to the current day. For example, in 2016, CMS began to recognize the subspecialty of Heart Failure and Transplant Cardiologists as separate from clinical cardiologists. While signifying the development of healthcare, this trend in specialization also often means that many specialists have a very narrow understanding in the total care of patients. Unfortunately, this era of hyper specialization also requires a strong understanding of the total care of patients so that patients can be properly referred to the proper facility or physician. The total care of a patient is important to ensuring that patients are seeing the proper physicians and that their

information is seamlessly communicated. This process is known as transitions of care, or the process wherein patients are handed off between providers, facilities (inpatient vs. outpatient), and the home setting. While this concept might appear simple upon first glance, providers have struggled significantly in successfully coordinating the care of patients between all these practitioners and settings. One study documented that about "80 percent of serious medical errors involve miscommunication during the hand-off between medical providers."

There is an inherent advantage to improving transitions of care within an ACO. Providers within the network often share record systems and resources, as well as communicate regularly for meetings. This communication flow allows providers to easily learn about a patient's history and ask questions without repeating testing. Most of the work within ACOs to improve transitions of care is directed at process improvements. There is a wide array of solutions that are being implemented across all ACOs. Within VHAN, one major initiative is the proper coding of patients. For example, all patient records should be available for viewing by any practitioner. This ensures that if someone is admitted to an emergency department or to a specialist, then the patient will not need to undergo unnecessary testing if that testing has already been performed. This saves precious time and resources. Other transitions of care initiatives are directed at specific cost improvement areas. For example, the transition for a patient between acute and post acute facilities is especially difficult because they require different skill sets. Furthermore, this transition can become exorbitantly expensive for a system as many Medicare patients may need to spend time in a skilled nursing facility (SNF) after their admission to a hospital. These skilled nursing facilities provide full time care to patients to help them recover and live a normal life. Following admission to a hospital, many Medicare patients are assigned to an inappropriate setting. Patients may be admitted to a skilled nursing facility when they are actually able to recover at home, which is a far cheaper alternative. In other cases, patients may be sent home, when they really needed to spend time in a skilled nursing facility to recover properly. Being sent home too early can cause readmission rates to the emergency department of hospitals to increase drastically. These improper admissions cause a tremendous strain on our healthcare system. The average cost nationally of keeping someone in a skilled nursing facility costs Medicare $92,376 annually (for a private room). Furthermore, the cost of hospital readmissions is drastic. For each ED visit, the average Medicare expense is ~$1,400. To ensure that patients are treated in the appropriate post acute facility after hospitals admission, ACOs may implement processes as simple as a discharge checklist based on prior conditions and current state of care. This checklist may be informed by the ACO's data analytics team who tracks patient costs through claims data. Discharge checklists were implemented last quarter in all three hospitals that are a part of VHAN's Middle Tennessee ACO.