

Using the ACO Concept to Produce Better Outcomes through Integrated Healthcare

Peter G. Fitzpatrick, Kendolyn Smith, MeriBeth Stegall, Michael E. Dalmat, Latrina Walden
(Clayton State University, Morrow, GA 30260, USA)

Abstract: The current healthcare delivery system of the United States is overly expensive, inefficient, and ineffective based on many measures. Many of these defects can be traced to a basic lack of integration of services and information. This paper will discuss this lack of integration and look at previous attempts to arrest this problem. We will then outline the practical aspects of Accountable Care Organizations (ACO's) and demonstrate how when properly implemented, they could be a very practical way of achieving the much needed integration.

Key words: healthcare outcomes; integrated care; efficiency; healthcare economics; accountable care organizations

JEL code: I

1. Introduction

The healthcare delivery system of the United States has undergone many changes in the last number of years. We have seen changes in both delivery and payment schemes. All of these changes have been accompanied by the almost constant clamoring for healthcare reform. The current operant wisdom is that the U.S. healthcare delivery system is too expensive and too ineffective. We are simply not producing the healthcare outcomes that spending approximately 19% of our GDP on should warrant (Kumar, Ghildayal, & Shah, 2011).

There are many metrics that can be used to measure the outcomes from a healthcare delivery system. Among those that are used to compare healthcare systems from country to country, the most common are life expectancy at birth; infant mortality; low infant birth weights; and, avoidable hospital admissions. To make meaningful comparisons, it is necessary to use countries that have similar socio-economic standards and that use full disclosure and reporting methods. To achieve comparisons that are as accurate as possible, we used data provided by the Organization for Economic Cooperation and Development (OECD). In a report issued by the OECD titled "Health at a Glance 2013", 34 OECD member countries were compared and the United States did not fare

Peter G. Fitzpatrick, Ed.D., R.Ph., Healthcare Management Program, College of Health, Clayton State University; research areas/interests: healthcare outcomes and healthcare policy. E-mail: peterfitzpatrick@clayton.edu.

Kendolyn Smith, PharmD, MPH, Healthcare Management Program, College of Health, Clayton State University; research areas/interests: medication therapy management and healthcare communications. E-mail: kendolynsmith@clayton.edu.

MeriBeth Stegall, Ph.D., MA, Healthcare Management Program, College of Health, Clayton State University; research areas/interests: healthcare policy and long-term care. E-mail: meristegall@clayton.edu.

Michael E. Dalmat, Dr., P.H., MPH, MPA, Healthcare Management Program, College of Health, Clayton State University; research areas/interests: public health issues. E-mail: michaeldalmat@clayton.edu.

Latrina Walden, MPH, Healthcare Management Program, College of Health, Clayton State University; research areas/interests: long-term care. E-mail: latrinawalden@clayton.edu.

especially well. Over two-thirds of the OECD countries have a life expectancy that exceeds 80 years; the United States was not in that group. In 2011, the average infant death rate for the OECD countries was just over four deaths per 1,000 live births; the U.S. rate was 6.1 deaths per 1,000 live births. Also in 2011, the average percentage of children born in OECD countries weighing less than 2,500 grams was 6.8%; in the U.S. it was 8.1%. When we look at avoidable hospital admissions for Asthma, COPD, and Diabetes, we find that the United States has rates that are two to three times higher than the OECD averages (OECD, 2013).

The U.S. ranks last among seven peer countries (Australia, Canada, Germany, the Netherlands, New Zealand, the United Kingdom, and the United States) on health system performance based on measures of quality (effective, safe, coordinated, and patient-centered care), efficiency, access (timeliness of care, cost-related problems effecting utilization), equity, healthy lives (long, healthy productive lives), and health expenditure per capita (The Commonwealth Fund, 2010).

The World Health Organization's ranking of the World's Health Systems ranked the United States 37th WHO compared each country's system to what the experts estimate to be the upper limit of what can be done with the level of resources available in that country. It also measured what each country's system had accomplished in comparison with those of other countries. The assessment system was based on five indicators: overall level of population health; health inequalities (or disparities) within the population; overall level of health system responsiveness (a combination of patient satisfaction and how well the system acts); distribution of responsiveness within the population (how well people of varying economic status find that they are served by the health system); and the distribution of the health system's financial burden within the population (who pays the costs), (World Health Organization, 2000)

Clearly, the case for healthcare reform exists, and yet when we dissect all the noise and debate, we discover that we are not really discussing healthcare reform, we are merely arguing and debating over who is going to pay and what will be covered. Left out of the discussions are meaningful proposals to improve healthcare delivery and meaningful outcomes.

This paper will discuss the current state of fragmented care and then make the case for having a well-integrated healthcare delivery system. We will look at past attempts to achieve integration and then make the case that using an accountable care organizational approach may very well provide a method to achieve this integration and improved outcomes.

2. Fragmented Care

Uncoordinated, complex, and costly, the U.S. health care system has often been depicted as fragmented in both its delivery and payment for services with regulatory and quality assessment systems only reinforcing the fragmentation. Many of the system's deficiencies mirror the disjointed care and failures in communication that poorly impact quality as patients' transition across settings and among providers (Fisher, Staiger, Bynum, & Gottlieb, 2007). In 2001, the Institute of Medicine (IOM) described a system still focused on acute, episodic care and cited its inadequacy to meet the challenges of caring for an aging population with multiple chronic conditions. The IOM report emphasized the need for a "collaborative, multidisciplinary care process" for those with chronic conditions as well as the need for effective communication among caregivers (IOM, 2001).

In order to accomplish this, providers must fundamentally change the way they organize care. The IOM (2001) identified six challenges to be met in changing the organization of care: (1) Redesign care processes for

coordinated, seamless care across settings and clinicians and over time. (2) Improve the information infrastructure to establish effective and timely communication among clinicians and between patients and clinicians. (3) Manage the growing knowledge base and ensure that the health care workforce has the necessary skills. (4) Develop information technologies and well-thought-out and -implemented modes of ongoing communication to coordinate care across patient conditions, services, and settings over time. (5) Continually advance the effectiveness of teams. (6) Improve performance by incorporating care process and outcome measures into daily work (IOM, 2001, pp. 12-13).

The need to improve coordination becomes even more apparent in an examination of the growth of the numbers of people with chronic conditions. The number of those in the U.S. population living with a chronic condition has been rapidly increasing from 125 million in 2000 to 147 million people in 2010 and is expected to increase to 157 million by 2020. Of these, almost half have multiple chronic conditions or comorbidities. It has been estimated that between 2000 and 2030, the number of Americans with chronic conditions will increase by 37 percent, an increase of 46 million people (RWJ, 2010).

The system's fragmented nature has direct implications for waste and its consequent impact on quality and cost. It is widely agreed that up to 30% of health care spending can potentially be considered waste, with other estimates reaching over 40% (Berwick & Hackbarth, 2012). Examining opportunities for waste reduction, Berwick and McCurdy (2012) identified six categories of waste in the health care system that, even if addressed at only their lowest estimated levels, would eliminate about 20% of system waste. One category contained "failures of care coordination" due to the fragmented system with their resultant complications, hospital readmissions, declines in functional status, and increased dependency on others for their activities of daily living. These failures have distinct impact on those more than one in four Americans (nearly 3 in 4 of those age 65 or older) with multiple chronic conditions who are more likely to have preventable hospitalizations, duplicate tests, and other suboptimal outcomes as well as to receive conflicting medical advice (Berry, Rock, Houskamp, Brueggeman, & Tucker, 2013; Parekh, Goodman, Gordon, & Koh, 2011; RWJ, 2010).

In particular, those enrolled in both Medicare and Medicaid, the dual eligibles; especially suffer from the effects of fragmentation. Despite having the most complex care needs of those in both programs, they receive uncoordinated services funded under two separate, misaligned programs functioning under different rules (Banach & Bella, 2013; Justice & Holladay, 2013). Berwick and McCurdy (2013) estimated the cost of waste due to failures of care coordination in the overall US health care system to be between \$25 billion and \$45 billion in 2011, of which \$21 billion to \$39 billion could be attributed to waste from care coordination failures in Medicaid and Medicare. Examining records for nine million Medicaid and dual eligible beneficiaries in five large states, Southeastern Consultants, Inc. estimated that an average of 35% of costs for those with extremely uncoordinated services could be eliminated by addressing coordination failures (Owens, 2010). Applying these estimates to national level data, they calculated an average yearly savings of \$240.1 billion or 8.8 per cent of total annual expenditures per year could be achieved over the 2010-2018 time frame.

3. Fragmented Payment System

The fragmented payment system, however, provides little incentive for the different parts of the delivery system to work together. In fact, there are still strong incentives to provide more care, not higher value care (Stenson & Thompson, 2013). Shortell and McCurdy (2009) propose that the key to improvements in efficiencies

and quality is to provide financial incentives that move providers to be more interdependent in coordinating care. In addition, they note that such incentives should include a focus on better outcomes along with increased efficiencies or lower costs, rather than the process quality measures of current pay for performance incentives which have to date resulted in only small improvements.

Although payers are now moving from a decades old fee-for-service payment system toward performance-based reimbursement, the cost and quality problems resulting from a supply-driven health care system organized around what physicians do, rather than what patients need, must be addressed (Porter & Lee, 2013). Many prior programs that have sought to improve quality have focused on individual providers, with the resultant potential for increasing fragmentation (Fisher et al., 2007). Porter and Lee (2013) suggest that health care organizations that organize to provide care and increase value where value is defined as “the health outcomes achieved that matter to patients relative to the cost of achieving those outcomes” will be the most competitive.

4. Systems Employing Elements of Integration

According to Mosby’s Medical Dictionary, an Integrated Health Care Delivery System is a managed care system in the United States that includes a hospital organization that provides acute patient care, multispecialty medical care delivery system, the capability of contracting for any other needed services, and a payer (Mosby’s, 2009). Integrated Care is not a new topic for leaders in healthcare and there have been many attempts made to consider how to incorporate Integrated Health Care and determine how effective different approaches can truly be. There are a number of organizations that provide examples of integrated care models in various institutions across the country. Organizations including Kaiser Permanente, Geisinger Health System, Henry Ford Health System, and the Mayo Clinic and Mayo Health System among others, have established some aspect of Integrated Care as a part of their overall platform to provide patients with necessary services in a variety of areas. Kaiser Permanente has integrated care based on primary care conditions, technology and pharmacy services. Geisinger uses an online patient portal to make appointments and view test results. It also has a disease management plan for its members who are diabetics and a system to measure evidence-based outcomes for heart bypass surgeries. The Henry Ford Health System integrates nurses and pharmacists to monitor patients taking anticoagulation medications, actively integrates basic care with mental health, and extensively pursues smoking cessation programs. The Mayo System has been active in integrating the treatment of diabetes with its most significant comorbidities, streamlining the steps for the care of cardiac patients, and working hard on reducing medication discrepancies (McCarthy & Mueller, 2009).

The Institute of Medicine’s definition of primary care states that “Primary care is the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, practicing in the context of family and community” (IOM, 2001). Taking a look at different approaches and outcomes of the Kaiser System allows for a better analysis of how integrated care can work. Kaiser also provides us with a starting model upon which we can build a truly functional system.

In 2011, a Press Release from Kaiser Permanente confirmed that an Integrated Health Care Delivery System and Electronic Health Records Support Medication Adherence were forged. In this example, Kaiser Permanente established a model of the integrated health system that demonstrated success with over 12,000 patients in their Colorado facility, according to the Journal of General Internal Medicine (Kaiser Permanente, 2013). It is an

example of how significant it is for pharmacy and primary care practitioners to evaluate practices of patients and improve care by determining how often patients who are prescribed medications for diabetes, hypertension, and high cholesterol fill their initial prescriptions as compared to patients who essentially are non-compliant with their medications for these conditions. Additionally, Kaiser has pharmacists closely managing some of their members who are on anticoagulation therapy. As a result of this oversight, the risk of therapy related complications was reduced by 39% (McCarthy & Mueller, 2009).

Kaiser Permanente is headquartered in California and therefore, it has the support of the California Integrated Healthcare Association (IHA) in implementing the Integrated Health Care approach. The Integrated Health Care Association in California has adopted the Pay-for Performance/Value-based purchasing which scores physicians and reports the results on the California Office of the Patient Advocate website (State of California, 2013). According to IHA, the goal is to improve quality and access and while there have been many organizations to show improvement in the clinical quality performances, there have been fewer improvements in patient satisfaction (Integrated Healthcare Association, 2013). This is an indicator of where there is opportunity to look closer and make adaptations. Although Kaiser has many examples of successful integration by being considered one of the largest key players in the field of Integrated Health Care, there is still room for considering how to remain a leader in the area of integration. The World Health Organization (WHO) has combined some major components of defining Integrated Health Care: “The organization and management of health services so that people get the care they need, when they need it, in ways that are user friendly, achieve the desired results and provide value for money” (WHO, 2008). Kaiser’s greatest challenge in reference to maintaining its position as a leader in Integrated Health Care services is to ensure that the patient continues to get what they need as enrollment increases, locations vary and cost to the patient rises in order to receive the services that are needed.

5. The Case for Integrated Healthcare

McCarthy and Mueller analyzed and summarized the results of 15 case studies that demonstrate that organized, integrated, and coordinated care systems improve patient outcomes, increase patient satisfaction, and contain costs. The 15 health care systems were selected by experts through a ranking process based on peer reviewed literature, performance benchmarking data, and experts’ recommendations (McCarthy & Mueller, 2009). Organizing for Higher Performance: Case Studies of Organized Delivery Systems, Series Overview, Findings, and Methods, The Commonwealth Fund).

The 15 organizations are diverse:

- They are located in 13 states and represent urban, peri-urban, and rural care delivery systems.
- **Integrated delivery systems of large multispecialty group practices, with a health plan:** Denver Health, Geisinger Health System, Group Health Cooperative, Health Partners, Henry Ford Health System, Intermountain Health Care, Kaiser Permanente, Marshfield Clinic, New York City Health and Hospitals Corporation, Scott & White.
- **Integrated delivery system or large multispecialty group practices, without a health plan:** Mayo Clinic and Mayo Health System, MeritCare Health System, Partners HealthCare.
- **Private networks of independent providers, such as an independent practice association (IPA) or virtual networks:** Hill Physicians Medical Group, North Dakota Rural Cooperative Networks.
- **Government-facilitated networks of independent providers:** Community Care of North Carolina.

As reported and supported by the findings presented by McCarthy and Mueller that are documented in Table n in this paper, these integrated and coordinated systems share six attributes (McCarthy & Mueller, 2009, Exhibit 1, p. 2):

- **Information Continuity.** Patients' clinically relevant information is available to all providers at the point of care and to patients through electronic health record system (HER) systems. Electronic linkages across organizations within the system (including medical home, specialists including mental health providers, hospitals, patient navigators, pharmacies, long-term care facilities, and public health clinics and programs) provide for timely and seamless scheduling, appointment reminders, prescription reminders, post-visit care instructions, and guided educational tools.

- **Care Coordination and Transitions.** Patient care is coordinated among multiple providers, and transitions across care settings are actively managed. This is commonly assisted by patient navigators, schedulers, physicians, and nurses based on pre-arranged agreements and expectations and the use of electronic systems (HER and others).

- **System Accountability.** There is clear accountability for the total care of patients. Team members participate in the creation of goals, performance incentives are used, and achievement of goals using metrics are monitored on an ongoing basis.

- **Peer Review and Teamwork for High-Value Care.** Providers (including nurses, physicians, administrators, system engineers, and other members of care teams) both within and across settings have accountability to each other; review each other's work; use "Lean" methods to reduce waste, improve efficiency, and reduce errors; and collaborate to reliably deliver high-quality, high-value care.

- **Continuous Innovation.** The system is continuously innovating and learning in order to improve the quality, value, and patients' experiences of health care delivery.

- **Easy Access to Appropriate Care.** Patients have easy access to appropriate care and information at all hours, there are multiple points of entry to the system, and providers are culturally competent and responsive to patients' needs. From the 15 case studies, McCarthy and Mueller reported themes that were important across multiple case study organizations that are keys to the effective functioning of these integrated health care systems. These include (McCarthy & Mueller, p. 3):

Keys to Effective Functioning of Integrated Health Care Systems (McCarthy & Mueller, p. 3)
Values-driven Leadership. Organizational and physician leaders appear to motivate the achievement of higher performance among peers and the workforce by inculcating a mission and culture that appeal to common values, such as patient welfare, professional pride, and shared accountability for outcomes. Leaders also set ambitious goals, communicate with and enlist the workforce in carrying out a strategic vision, and marshal resources to support the implementation of agreed-upon strategies.
Interdisciplinary Teamwork. Takes many forms and is a key mechanism in the coordination of care. For example, it facilitates the orchestration of the functions of extended primary care and care management teams, which may include physicians, nurses, pharmacists, psychologists, social workers, and medical assistants. It can bring together experts from across medical and administrative disciplines to develop standardized and evidence-based care processes, thereby fostering continuous improvement.
Integration. Bringing together services across disciplines and settings for particular conditions or care episodes, for example, diabetes, cancer, cardiac surgery. Or across time and care, for example, by using every patient contact as an opportunity to schedule needed preventive care. In rural areas, this objective may be met by integrating inpatient and outpatient care in critical-access hospitals and associated community clinics.
Aligned Incentives. Alignment occurs at the organizational level by integrating care and coverage and/or by setting budgets centrally, so that services can be organized in ways that make the most sense operationally and clinically. Likewise, provider organizations are collaborating with payers and purchasers to create incentives that support and reward higher performance. At the physician level, compensation is aligned with the organization's objectives, values, and market environment.
Mutual Accountability. At its best, multidisciplinary group practice fosters a cohesive group culture that helps to minimize "turf battles" between disciplines and departments as physicians work together and with other staff to achieve common goals based on

common values. This can take the form of a spirit of collaboration among different organizations with similar interests that join together to pursue common objectives.

Transparency. Supporting a culture of accountability, organizations engage in rigorous performance measurement, reporting, and recognition both internally at the unit and individual level, and externally at the organizational level. “Transparency fosters honesty, awareness, and commitment to improvement throughout the workforce.”

Information Continuity.

Electronic health records support:

- Coordination of care by making patient information available across providers and settings.
- Promote evidence-based decision support and patient education tools.
- Reduce duplication of laboratory or imaging tests because results are available when needed.
- Electronic prescribing or computerized physician-order entry reduces medication errors that result from illegible handwriting, enables reconciliation of medication lists as patients move across care settings, and warns physicians of possible drug allergies and interactions. It also promotes cost-saving through generic drug substitution.
- Electronic linkages with contracted hospitals and collaboration with other stakeholders can create regional networks for electronic information exchange.

Patient web portals

- Expand patients’ knowledge, provide convenience, and promote engagement of patients in their care.
- Improve efficiency and convenience with features like online appointment scheduling, prescription refills, and laboratory test results.
- Some provide an after-visit summary of their treatment plan and self-care instructions (which can improve compliance and self-management).
- Enables authorized community physicians to view records of patients they have in common or can be used to make electronic referrals (and to acknowledge referrals that are completed).

As demonstrated by the high-performing integrated and coordinated health delivery systems included in McCarthy’s and Mueller’s work, these systems, across categories, regions of the country, and settings, have consistently improved access and utilization of services, coverage with preventive services, improved efficiency in performance leading directly to better patient outcomes, cost savings, improved patient satisfaction and timeliness of care received, and strengthen provider team cohesion, coordination, and fuller utilization of each other’s skills, which reportedly in some cases decreased staff burnout. The move to Accountability Care Organizations offers a fertile opportunity to embed the practices of these high-performing health care delivery systems systematically nationwide.

6. ACO Opportunities and Challenges

With the new Patient Protection and Affordable Care Act (PPACA) that was signed into law by President Obama on March 23, 2010, it contains changes to nearly every aspect of healthcare that we currently have in existence. One of the major changes that it has proposed is the creation of ACO’s, or Accountable Care Organizations. ACO’s is the new term that is supposed to drastically change how America provides healthcare. But the question remains, “How exactly is this ACO supposed to work?” As defined by the Center for Medicare and Medicaid Services, ACO’s are a legal entity recognized and authorized under applicable state law and composed of certified Medicare providers or suppliers (Zezza, 2011). These participants work together to manage and coordinate care for a defined population of Medicare fee-for service beneficiaries and have established a mechanism for shared governance that provides appropriate proportionate control over the ACO’s decision-making process (Zezza, 2011). ACOs that meet specified quality performance standards are eligible to receive payments for shared savings if they can reduce spending growth below target amounts (Zezza, 2011). In essence, ACO’s are required by law to be set up as a legitimate business recognized and operating under their perspective state law that work together to manage a patient’s coordination of care. These specialists, providers and hospitals that make up the ACO are also required to meet specific quality and performance standards in order

to qualify for payments as long as they can reduce the collective spending growth of their patients below an already predetermined number.

The ACO model as described by the PPACA is designed to have 3 goals: improve the quality of healthcare delivered to individuals, improve the level of health of populations and slow the growth of healthcare costs through improvements in the delivery of care (Mirvis, 2011). Prior to the induction of the PPACA, our healthcare system was generally rewarded by the volume of service that was provided. As a fee-for-service society, the more procedures performed by physicians, the more revenue that was generated for the organization. The current system rewards volume without regard to quality (Mirvis, 2011). In addition, the providers are paid independently and have little incentive to facilitate coordination of care for the patient (Mirvis, 2011). With the development of ACO's, our current system will receive an overhaul and specifically work to reduce cost by rewarding providers for saving money by coordinating care for all of their patients. It is critical that savings of costs through delivery also produce anticipated improvement in health outcomes and patient satisfaction; otherwise the cost savings could easily be at the expense of individuals' health, wellness, and satisfaction with the results.

Let's consider a basic ACO comprised of physicians, specialists and a hospital. As required by law, this ACO will have at minimum 5,000 Medicare beneficiaries who are enrolled in Part A or Part B who will then be assigned to the ACO based on their most recent episode of primary care. Thus, beneficiaries can only be assigned to primary care providers as defined by the law if they are assigned to an ACO. As the beneficiary moves through the system and utilizes the inpatient and outpatient care, the providers are paid by Medicare based on the current fee for service payment system for physicians and prospective payment system for hospitals (Mirvis, 2011). Due to the requirements set forth by meeting particular quality measures, at the end of the year the ACO will compile a composite score of all of its clinical performance for the past year across all disciplines to assess meeting governmental goals. The clinical measures encompass 65 measures divided by 5 domains: patient care giver experience, care coordination, preventative health, at risk population/frail elderly and patient safety (Zeza, 2011). In addition, the costs for all cumulative services provided to the beneficiaries will be compiled and compared against a previous years cost. If savings were achieved and quality measures are deemed satisfactory, the ACO would be eligible to receive a portion of those savings — the amount will be based upon that composite score that was determined by the quality measures that were met. The bonus that is returned to the ACO can be distributed among the providers as they see fit. If, however, the past year's costs exceed the historical benchmark, the ACO will be penalized and required to return a portion of its revenues to the payer (Mirvis M. D., 2011). If an ACO fails to meet minimum performance standards in one or more domains, the ACO has one year to improve performance or the agreement will be terminated with CMS (Zeza, 2011). Failure to report a measure or the reporting of inaccurate information could also result in termination with CMS (Zeza, 2011).

There are 2 models for the benefit sharing that have been proposed. Since the initial baseline contract for an ACO is 3 years, all new organizations are contracted as ACO's per CMS for 3 years by which time they will be eligible for renewal barring any earlier program termination. Under the terms of their initial contract, the ACO can sign up for tier 1 bonus sharing which allows the ACO to accept full risk for their health care members; thus being rewarded for savings and penalized for rising costs (Zeza, 2011). In tier 2, they will not assume full risk until after year 2; however, they will receive a smaller portion of any savings than those in the first model (Zeza, 2011). Tier 2 is referred to as the delayed risk model and the maximum amount of bonus received back to the ACO is 50% of the savings versus 60% of the savings to those in tier 1. Although individual providers are paid for specific services, all have a financial stake in the controlling of the overall cost and increasing the quality of care

provided by all members of the ACO (Mirvis, 2011).

7. The ACO Model for Integrated Care

Much of the conversation about ACO's centers on their ability, or lack thereof, to cut healthcare spending (Marmor & Oberlander, 2012). This primary focus on costs we believe, greatly limits the ACO concept from materially improving healthcare outcomes. In effect one of the primary missions of ACO's, improved outcomes, is truncated because the primary measuring matrix for success is cost. It is notable that there is no ACO performance category that measures improvement in health outcomes. The model below provides what we believe to be a better integration of ACO principles and improved outcomes.

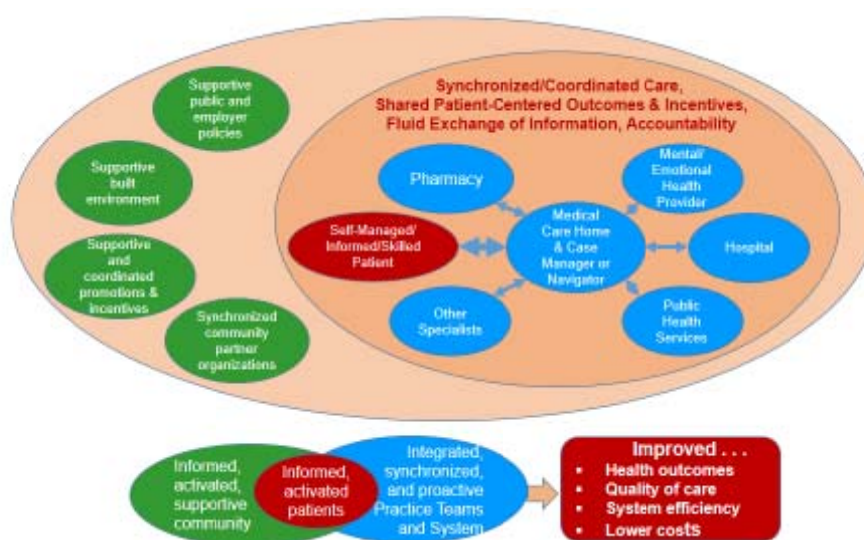


Figure 1 ACO Model of Integrated and Coordinated Care Based on the Chronic Care Model

We are not arguing per se for the ACO as a definitive delivery model, but rather using some of the major ACO components as a way to achieve integrated healthcare delivery. Our modification of the Bodenheimer and Grumbach model demonstrates the varied constituencies that must interact to lead to not only reduced costs, but even more importantly improved health outcomes. A first step in using the ACO approach is the recognition of the importance of creating a local network of providers that will provide the full continuum of care for their patients (Aslin, 2011). This step begins to address the problem of disjointed delivery of services by making providers more contiguous and ensuring an uninterrupted continuum of care. The current widely existent fractionated delivery of healthcare is in our opinion one of main reasons why our system does not work at the levels we would anticipate.

A second important component of the ACO concept that should be adopted is the promotion of evidence-based medicine (Aslin, 2011). While there has been a greater leaning towards evidence-based outcomes, we do not see any concrete evidence that this practice has taken hold in our healthcare delivery system to the point that it is directing the nature of practice. We seem to be paying lip service to the notion of outcomes and not embracing it as a core driver of practice. The previously stated data relative to our outcomes compared to those of other countries attests to this. It is essential, in our opinion, that a set of primary outcomes be decided upon and that the attainment of these outcomes drives payment and policy.

The required element of having primary care physicians as part of the ACO is also a concept that we indorse

for providing integrated delivery of care. The current ratio of specialists to primary care physicians (PCP) of 65% to 35% (Sultz & Young, 2011) promotes, in our opinion, the overuse of specialists. We correspondingly observe that typically there is little communication among specialists of different disciplines or even for that matter of the same discipline. The obvious outcome is fractionated care that many times produces over prescribing and other problems leading to at best mediocre results. Where the core of delivery is centered on a primary care physician we envision a system where the PCP gets all reports and information from all practitioners and can coordinate care to reduce medication misuse and redundancies. In order for this to happen the ratio of specialists to PCPs must be flipped in health care delivery.

A final ACO required component that we would incorporate into a delivery system, to promote integration and better outcomes, is the need for delivery organizations to demonstrate that they are patient centered (Aslin, 2011). The advances in technology which have occurred in healthcare delivery have greatly improved the quality of care. Unfortunately the argument can be made that this technology has also distanced the relationship between provider and patient. Patients and their families are for the most part left out of the decision process and therefore feel disconnected from the care (Barry & Edgman-Levitan, 2012). Patient involvement has been recognized within the medical community as being valuable, and yet within the United States the connection between patient and providers appears to be getting worse (Bergeson & Dean, 2006). In order to reverse this trend both providers and systems must make the patient their central focus. The Institute of Medicine (IOM) has defined patient-centered care as “care that is respectful of and responsive to individual patient preferences, needs, and values and that ensures that patient values guide all clinical decisions” (Barry & Edgman-Levitan, 2012). The obvious intent of the IOM is to make sure that medical care is seen as a partnership between provider and patient and that this partnership will lead to better outcomes. All levels of care need to be adjusted so that patients feel that they are being listened to and are empowered to voice concerns and even ideas about their treatment and care.

8. Conclusion

The importance and need for an integrated healthcare delivery system has been firmly established. There has been a variety of attempts in the past to achieve this integration, but they have either been ignored or ineffective. This has left us with a delivery system in the United States that has little integration compared to other developed countries, which in turn has been a factor inhibiting better healthcare outcomes. The Affordable Care Act of 2010 contained the framework of the Accountable Care Organization (ACO). The reaction to the ACO concept within the healthcare delivery industry has been mixed. We are not necessarily advocating one way or another for its adoption, but rather making the case that the use of the basic ACO principles is a good way to achieve integrated care and better outcomes. This transition would allow for what Fineberg calls a focus on a “health system” rather than a “healthcare system.” He defines a health system as focusing on the health of individuals and populations; while the healthcare system is much more focused on the kinds of systems that are designed to provide treatment of illness (Fineberg, 2012).

References:

- Aslin P. (2011). “Unveiling the unicorn: A leader’s guide to ACO preparation”, *Journal of Healthcare Management*, Vol. 56, No. 4, pp. 245-253.
- Athenahealth (2013). “Clinical integration: 7 myths and a blueprint for success”, retrieved 9/22/2014, available online at: <http://www.athenahealth.com/whitepapers/clinical-integration-model>.

- Bao Y., Casalino L. P. and Pincus H. A. (2013). "Behavioral health and health care reform models: Patient-centered Medical home, home health and accountable care organization", *Journal of Behavioral Health Services & Research*, Vol. 40, No. 1, pp. 121-132.
- Banach E. and Bella M. (2013). "What is the focus of the integrated care initiatives aimed at Medicare-Medicaid beneficiaries?", *Generations*, Vol. 37, No. 2, pp. 6-12.
- Barr V. J., Robinson S. and Marin-Link B. et al. (2003). "The expanded Chronic Care Model: Integrating population health promotion", accessed 9/22/2014, available online at: <http://www.ncbi.nlm.nih.gov/pubmed/14674182>.
- Bodenheimer T., Wagner E. H. and Grumbach K. (2002). "An informed, activated patient interacting with a prepared, proactive practice team, resulting in high-quality, satisfying encounters and improved outcomes", *Journal of the American Medical Association*, Vol. 288, No. 14, pp. 1775-1779, retrieved 9/22/2014, available online at: <http://jama.jamanetwork.com/article.aspx?articleid=195368>.
- Barnette L. P. (2010). "Integrating medicare and medicaid data to support improved care for dual eligibles", retrieved from Center for Health Care Strategies, Inc., available online at: <http://www.chcs.org/resource/integrating-medicare-and-medicaid-data-to-support-improved-care-for-dual-eligibles>.
- Barry M. J. and Edgman-Lvitan S. (2012). "Shared decision making — The pinnacle of patient-centered care", *New England Journal of Medicine*, Vol. 366, No. 9, pp. 780-781.
- Bergeson S. C. and Dean J. D. (2006). "A systems approach to patient-centered care", *JAMA*, Vol. 296, No. 23, pp. 2848-2851.
- Berry L. L., Rock B. L., Houskamp B., Brueggeman J. and Tucker L. (2013). "Care coordination for patients with complex health profiles in inpatient and outpatient settings", *Mayo Clinic Proceedings*, Vol. 88, No. 2, pp. 184-194, doi:10.1016/j.mayocp.2012.10.016.
- Berwick D. M. (2011). "Launching accountable care organizations — The proposed rule for the Medicare Shared Savings Program", *The New England Journal of Medicine*, pp. 1-4, accessed 9/21/2014, available online at: <http://www.nejm.org/doi/full/10.1056/NEJMp1103602>.
- Berwick D. M. (2011). "Making good on ACOs' promise — The final rule for the Medicare Shared Savings Program", *The New England Journal of Medicine*, pp. 1753-1756, accessed 9/22/2014, available online at: http://www.nejm.org/browse?subtopic=24_6&sort=cited.
- Berwick D. M. and Hackbarth A. D. (2012). "Eliminating waste in US health care", *JAMA: Journal of the American Medical Association*, Vol. 307, No. 14, pp. 1513-1515.
- Commonwealth Fund (2010). "U.S. ranks last among seven countries on health system performance based on measures of quality, efficiency, access, equity, and healthy lives: Affordable Care Act holds promise for U.S. performance; focus on information technology and primary care vital to achieving high performance", accessed 10/9/14, available online at: <http://www.commonwealthfund.org/press-releases/2010/jun/us-ranks-last-among-seven-countries>.
- Department of Health and Human Services, Center for Medicare & Medicaid Services (2011). "Medicare program: Medicare Shared Savings Program — Accountability care organizations — Final rule", *Federal Register*, Vol. 76, No. 212, pp. 67802-67900, accessed 9/22/2014, available online at: http://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Statutes_Regulations_Guidance.html.
- Evans M. (2014). "Limited Medicare ACO quality data show sharp variations in performance", *Modern Healthcare*, Vol. 44, No. 18, pp. 1/5-5/5, accessed 9/22/2014, available online at: <http://www.modernhealthcare.com/article/20140503/MAGAZINE/305039990>.
- Fineberg H. V. (2012). "Shattuck lecture: A successful and sustainable health system — How to get there from here", *New England Journal of Medicine*, Vol. 366, No. 11, pp. 1020-1027.
- Fisher E. S., Staiger D. O., Bynum J. W. and Gottlieb D. J. (2007). "Creating accountable care organizations: The extended hospital medical staff", *Health Affairs*, 26w44-w57, doi:10.1377/hlthaff.26.1.w44.
- Gold J. (2014). "FAQ on ACOs: Accountable care organizations, explained", *Kaiser Health News*, accessed 9/22/2014, available online at: <http://kaiserhealthnews.org/news/aco-accountable-care-organization-faq>.
- Greenwald H. P. (2010). *Health Care in the United States — Organization, Management and Policy*, California: Jossey-Bass.
- Heath B. Wise, Romero P. and Reynolds K. (March 2013). *A Standard Framework for Levels of Integrated Healthcare*, Washington, DC., SAMHSA-HRSA, Center for Integrated Health Solutions.
- Institute of Medicine (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*, Washington, D.C.: National Academy Press.

- Justice D. and Holladay S. (2013). "A process with promise: How the new integration demonstrations may align care for dual eligibles", *Generations*, Vol. 37, No. 2, pp. 13-20.
- Kumar S, Ghildayal N. and Shah R. (2011). "Examining quality and efficiency of the US healthcare system", *International Journal of Care Quality Assurance*, Vol. 24, No. 5, pp. 366-388.
- Longworth D. L. (2011). "Accountability care organizations, the patient-centered medical home, and health care reform: What does it all mean?", *Cleveland Clinic Journal of Medicine*, Vol. 78, No. 9, pp. 571-582, accessed 8/25/2014, available online at: <http://www.ccm.org/content/78/9/571.full.pdf+html>.
- Marmour T. and Oberlander J. (2012). "From HMOs to ACOs: The quest for the holy grail in U.S. health policy", *Journal of General Internal Medicine*, Vol. 27, No. 9, pp. 1215-1218.
- McCarthy D. and Mueller K. (July 2009). "Organizing for higher performance: Case studies of organized delivery systems — Series overview, findings, and methods", *The Commonwealth Fund Pub.* 1288, Vol. 21, pp. 3-16, Bartlett.
- Mirvis M. D. (2011, October). "Accountable care organizations: A real change, maybe", *Tennessee Medicine*, pp. 29-31.
- Mosby's Medical Dictionary* (n.d.). Available online at: <http://www.mosbysmedicaldictionary.com>.
- National Research Council and Institute of Medicine (2013). "U.S. health in international perspective: Shorter lives, poorer health — Panel on understanding cross-national health differences among high-income countries", *National Academy of Sciences*, pp. 21-90.
- Niles N. (2015). *Basics of the U.S. Health Care System*, Jones and Bartlett.
- O'Donnell A. N., Williams B. C., Eisenberg D. and Kilbourne A. M. (2013). "Mental health in ACOs: Missed opportunities and low hanging fruit", *American Journal of Managed Care*, Vol. 19, No. 3, pp. 180-184.
- OECD (2013). "Health at a glance 2013", available online at: http://dx.doi.org/10.1787/health_glance-2013-en.
- Owens M. K. (2010). "Costs of uncoordinated care", in: P. L. Yong, R. S. Saunders & L. A. Olsen, (Eds.), *The Healthcare Imperative: Lowering Costs and Improving Outcomes: Workshop Series Summary*, Washington, DC: National Academy Press, pp. 131-140.
- Parekh A. K., Goodman R. A., Gordon C. and Koh H. K. (2011). "Managing multiple chronic conditions: A strategic framework for improving health outcomes and quality of life", *Public Health Reports*, Vol. 126, No. 4, pp. 460-471.
- Porter M. and Lee T. (2013). "The strategy that will fix health care", *Harvard Business Review*, Vol. 91, No. 10, pp. 50-70.
- Robert Wood Johnson Foundation (2010). *Chronic Care: Making the Case for Ongoing Care*, Princeton, NJ: Anderson.
- RTI International (2014). "Accountability Care Organization 2014 program analysis quality performance standards narrative measure specifications", accessed 9/22/2014, available online at: <http://www.cms.gov/medicare/medicare-fee-for-service-payment/sharedsavingsprogram/downloads/aco-narrativemeasures-specs.pdf>.
- Schoen C., Osborn R., How S. K. H., Doty M. M. and Peugh J. (2008). "In chronic condition: Experiences of patients with complex health care needs, in eight countries, 2008", *Health Affairs*, accessed 9/21/2014, available online at: <http://content.healthaffairs.org/content/28/1/w1.abstract?keytype=ref&siteid=healthaff&ijkey=cOSQSi1j6fDlo>.
- Shortell S. M. and McCurdy R. K. (2010). "Integrated health systems", *Information Knowledge Systems Management*, Vol. 8, No. 1-4, pp. 369-382, doi:10.3233/IKS-2009-0147.
- Stenson J. and Thompson M. (2013). "Accountable care organizations-the promise, perils and pathway to value for plan sponsors", *Benefits Quarterly*, Vol. 29, No. 4, pp. 8-13.
- Sultz H. A. and Young K. M. (2011). *Health Care USA: Understanding Its Organization and Delivery*, Sudbury, MA: Jones & Bartlett.
- World Health Organization (2000). "The World Health Report 2000 — Health systems: Improving performance", accessed 10/9/14, available online at: <http://www.who.int/whr/2000>.
- Zeza M. A. (2011). "Proposed rules for accountable care organizations participating in the Medicare Shared Savings Program: What do they say?" *The Commonwealth Fund*, available online at: <http://www.usatoday.com/story/news/nation/2014/08/06/kaiser-permanente-obamacare-accountable-care-organizations-hospitals/12763591/%20citation>.
- Available online at: <http://share.kaiserpermanente.org/article/integrated-health-care-delivery-system-and-electronic-health-records-support-medication-adherence/#sthash.8HGIRd3o.dpuf>.
- Available online at: <http://www.integration.samhsa.gov/about-us>.
- Available online at: <http://www.mentalhealth.va.gov/coe/cih-visn2/>, VA Center for Integrated Healthcare's website.
- Available online at: <http://vaww4.va.gov/pcmhi>, Website of VA's Primary Care-Mental Health Integration (PC-MHI) program, a shared responsibility of the Office of Mental Health Services and the National Primary Care Program.