BACKGROUND

The unsustainable upward spiral of U.S. healthcare costs demands fundamental changes in delivery and payment systems. Chronic diseases are the most important drivers of higher costs. Effective prevention and disease management at the primary care level could contain these costs. Current payment systems, however, encourage higher volumes of intensive, expensive services – not primary care. "Accountable Care Organizations" (ACOs) have been proposed as a means through which delivery and payment could be realigned: formally organized groups of providers integrating patient care across all settings, with financial incentives based on shared accountability for quality and patient outcomes. In many respects, ACOs would parallel managed care concepts and structures. Large, multi-disciplinary health systems are well-positioned for the ACO model, but smaller, independent hospitals and physician practices may need outside assistance and time to work through a transition phase.

FUNDAMENTAL FLAWS IN DELIVERY AND PAYMENT

Three-quarters of U.S. healthcare spending emanates from chronic diseases like congestive heart failure, depression, chronic obstructive pulmonary disease and diabetes. Not only can some of these diseases be prevented by healthier individual behavior (e.g., smoking cessation, better nutrition, exercise), symptoms and exacerbations of all of these conditions can be ameliorated when primary caregivers engage their patients in managing their conditions.

Sub-optimum primary care and disease management are the root causes of millions of unnecessary and expensive hospitalizations, emergency room visits, bouts of intensive care, multiple specialists, redundant tests, medications, and more (Figure 1). These deficiencies in care, however, aren’t due to uncaring healthcare professionals but to the perversity of our care delivery and payment systems. If health reform and cost containment efforts in Washington, D.C. are to succeed, Congress must take decisive steps to cure fundamental flaws in delivery and payment.

In the U.S., providers are paid by volume, not value; the more services delivered and the higher the intensity of the services, the more that providers are paid. Moreover, each provider is paid according to his or her individual efforts – a fee-for-service – rather than for working as part of a team. There is, on the other hand, a stiff financial price paid by a provider that invests time and effort required to diagnose and coordinate delivery of the right care, and only the right care, to meet the health
and medical needs of each patient.

Notwithstanding that this is the manner in which both healthcare professionals and patients want to engage in every setting, perverse financial incentives embedded in the current system affect care delivery negatively.\(^3\), \(^4\)

For example, the current delivery and payment system maximizes a family physician’s income if he or she sees as many patients as possible and prescribes the most expensive, intensive treatments. Each (preventable) exacerbation of a chronic disease that lands a patient in the hospital is a financial plus for that physician, one or several specialists, and the hospital. In contrast, if a family physician takes the time to listen and counsel with a chronically ill patient, assumes responsibility for coordinating any required specialty care, and encourages and monitors the patient’s adherence to a chronic disease management regimen, that physician suffers a significant financial penalty.

This unequivocally flawed approach causes the U.S. to have the most expensive healthcare system in the world and the least effective treatment of chronic diseases (Figure 2). Universal coverage, cost containment and consistently high quality care are urgent national priorities. But incremental changes to the current system, such as limited pay-for-performance or work-based wellness programs, won’t suffice to reach these goals. There must be simultaneous, complementary transformations of both the delivery and payment systems that incent high value care, not volume.

**ACOs: Solutions Rooted in Managed Care Concepts**

The managed care revolution of the 1990’s was intended to transform the U.S. healthcare system. By changing financial incentives from fee-for-service to capitated payments (under which a participating provider is pre-paid an annual per-patient fee for providing all covered healthcare services), it was believed that quality of care, rather than volume of services, would be emphasized, and that primary care, in particular, would be strengthened.

There was great hope that skyrocketing healthcare costs could be curbed through a new emphasis on maintaining health and managing disease more effectively. Rather than adhering to the managed care concept, and focusing resources at the outset on better primary care prevention and disease management, health maintenance organizations (HMOs) and other managed care plans sought to build market share as quickly as possible. To this end, HMOs concentrated on setting low initial premiums, entering into capitated contracts with groups of providers (also interested in increasing market share), but generally did not invest in technology, utilization and risk management, and disease management. When rising utilization rates exposed the flaws of this short-term strategy, and costs began to rise again in the late 1990s (Figure 3), HMOs sought to contain premium growth by strengthening the roles of gatekeepers and restricting patient access to care.
As one would expect, HMO cost containment efforts were welcomed initially by employers. But patients and providers soon began to chafe at limitations on access to care and low provider payment rates. This culminated in what amounted to a consumer rebellion and calls for government intervention (e.g., Patient Bill of Rights legislation). Less than a decade later, not only was the managed care revolution over, but employers and insurers were retreating together, and as quickly as possible, to heavily diluted managed care coupled to the old fee-for-service approach (e.g., Preferred Provider Organizations, or PPOs, which are organized around discrete networks of “preferred providers,” paid under fee-for-service arrangements (usually discounted), permit subscribers to self-refer to providers in or outside of the preferred network, but incent them with lower co-pays, etc. to stay within the network).

Accountable Care Organizations (ACOs, also referred to as accountable care systems and as accountable care entities) are attracting interest because they return to the original managed care concept of incenting providers for keeping their patients as healthy as possible – “by organizing voluntary hospital and physician networks, and by rewarding providers with shared savings in return for greater care coordination or other steps to improve quality and lower cost growth.”

As conceived, ACOs will encourage and reward groups of providers for working together across care settings to improve the full range of healthcare services and outcomes for a defined population of patients. Such integration of care is easy enough to conceptualize, but realization will require ACOs to develop and sustain several complex capabilities, including active care management, rigorous medication reconciliation, team approaches to quality improvement, better transitions of care from hospital to home, and sophisticated health information technology for providers to share patient information. These capabilities are particularly important for managing the health and care of patients with chronic diseases, who account for the large majority of all healthcare spending.

Encouragement and rewards for provider participation in an ACO will come via new payment mechanisms that derive from earlier managed care capitation. In place of fee-for-service reimbursements to individual providers, ACOs would enter into payment arrangements with payors under which ACOs would receive bundled, risk-adjusted payments (in effect, bundled capitation) that could increase if pre-determined quality and

Figure 3. Annual Growth Rate of Health Spending and GDP, 1985–2006

Percent Change

National health expenditure

GDP

Source: Centers for Medicare and Medicaid Services, 2008 (12)
patient outcomes standards were met. These bundled payment(s) would be unbundled and distributed to ACO participants according to pre-agreed internal rules and procedures, but the general thrust would be to align incentives for all participating providers: financial rewards for maximizing patient health, integrating care delivery across all settings, managing disease and preventing exacerbations of illness (Figure 4).

ACO payment mechanisms will require them to establish formal financial and organizational structures to support internal governance, integration of care delivery, development of clinical guidelines, utilization analysis and risk management, group and individual performance measurement, quality improvement and more. Anticipating these needs, ACO proponents have theorized creation of “value-based administrative utilities.” These utilities will be the locus of financial management, information technology and interfaces, medical management, quality measurement and improvement, as well as legal compliance (in particular, federal anti-trust and anti-kickback laws).

**Figure 4.**

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**Accountable Care Pilots for Networks of Smaller Providers**

In state capitals and corporate boardrooms, no less than in Washington, D.C., it is apparent that recent decades of rapidly rising health care costs and widely variable quality must give way to payment-driven insistence on efficiently-delivered, high-quality care. There is great optimism now in healthcare policy circles that ACOs can drive urgently needed, fundamental change in delivery and financing of health care. All of the pending comprehensive federal health reform bills on Capitol Hill have ACOs as prominent parts, if not the centerpieces, of their quality improvement and cost containment provisions. But just as the managed care revolution fizzled due to critical, unanticipated problems, the path to a brave, new world of ACOs will not be without obstacles.

Large, multi-level and comprehensive healthcare systems possess the internal resources and capabilities to become ACOs. Some large systems like Kaiser Permanente and the Mayo Clinic have already developed into sophisticated integrated delivery systems. Imposition of value-based payment approaches should induce their less-organized and less-focused counterparts to evolve more rapidly.

Large, integrated systems, however, comprise a small fraction of the entire healthcare system. Almost one-third of physicians are sole practitioners or practice in pairs. Small, independently owned practices with five physicians or fewer provide nearly three-quarters of all ambulatory care visits. Most areas of the U.S. depend on a single community hospital (usually the largest employer in the area).
Small practices and community hospitals, which are the backbone of health care in most areas, typically lack resources and expertise required to manage patients with complex, chronic conditions. In Congressional committee testimony in June, National Coordinator for Health IT David Blumenthal said that his office, as part of its overall responsibility for leading national implementation of interoperable health information technology, would pay close attention to the needs of smaller providers. He stressed the importance of the special grant programs Congress created in this year’s economic stimulus legislation that directed his office to establish regional extension centers that would help health care providers implement EHRs, added that it was his intention that these extension centers would prioritize small physician practices and those providing primary care.8

Nevertheless, impending challenges are as huge as they are inevitable for this critical set of providers. The independence and self-reliance that have been the hallmarks of family medicine for literally hundreds of years are in many respects incompatible with integrated care management, particularly for chronic diseases. Predictable reimbursement schedules for physicians and hospitals will be replaced by global performance-based payments. Rather than reimbursing for volume of healthcare services, new financial incentives will focus on preventing chronic-disease-related episodes of acute illness that require expensive hospital admissions and emergency room visits.

Smaller providers won’t adapt to these changes quickly or in one smooth step. Unlike large healthcare systems, community hospitals and small practices cannot transition directly to ACOs. But their ability to transform will determine whether many of them will be able to survive, which, in turn, will determine the availability of high-quality healthcare services in most areas of the U.S. The ACO development process should assure that all small provider organizations are eligible to join sustainable, fully integrated structures that support and incent high-quality care. But there must be a transitional phase that enables them to move from collaborative disease management to patient-centered medical homes to ACOs. In Pittsburgh, this transition phase for creation of virtual networks of smaller providers is described as an Accountable Care Network, or ACN, that can catalyze new provider relationships and joint capabilities that can eventually lead to and sustain ACOs (Figure 5).

How ACNs take shape will depend to a significant degree on local healthcare market circumstances. Southwestern Pennsylvania was fortunate to be selected as one of four sites for the recently initiated Centers for Medicare and Medicaid Services (CMS) EHR Demonstration. Support and encouragement from local community hospitals and the region’s largest insurer, Highmark Blue Cross Blue Shield, enabled the Pittsburgh Regional Health Initiative (PRHI) to recruit 278 small practices – comprising approximately one-third of the region’s primary care physicians - for this demonstration.

The CMS demonstration aims to show the relevance of EHRs to more effective chronic disease management and better patient outcomes. Separate but related chronic disease projects sponsored by the Governor’s Office of Health Care Reform and the Commonwealth Fund are engaging several dozen more small local practices. Indirectly or directly, all of these initiatives revolve around the aspects of the Chronic Care Model and development of patient-centered medical homes.
These projects’ similar content and the similar characteristics of their participating providers create ideal circumstances for testing the validity of accountable care networks. Due to PRHI’s recruitment strategy for the CMS EHR Demonstration, most participating small practices are clustered around several community hospitals. These clusters comprise the handful of community hospitals and aligned groups of small practices with which PRHI is working on a series of ACN pilots.

Rather than the comprehensive collaboration, legal arrangements and revenue sharing that will be required among providers for ACOs, these pilots are conceived to focus on transitions of care and coordinated disease management for specific patient populations with one, or perhaps two, of the chronic illnesses that have the highest 30-day hospital readmission rates: congestive heart failure, chronic obstructive pulmonary disease and depression. ACN pilots, however, won’t embark on formation of a new legal structure, internal governance, negotiating bundled payments, etc. that will be necessary for ACOs. Instead, they will concentrate on collaborating to evaluate and improve care in a targeted area, either developing internal data and quality measurement capability or (if possible) arranging to receive such information from payors.

Important pilot objectives include trust-building among willing groups of providers (which will center on community hospitals and small practices, but will hopefully also include nursing homes, home health services, medical laboratories, community-based organizations (where relevant) and physical rehabilitation facilities) and demonstrating that virtual networks of providers can boost affected patients’ health status and reduce net healthcare costs, by avoiding use of unnecessary medical services, keeping affected patients out of hospitals and emergency rooms. If the latter objective is achieved, the expectation is that one or more commercial insurers would alter payment policies to assure reimbursement for all key services.

PRHI would help pilot participants to find outside resources to offset some of the costs of shared/jointly implemented services employed by ACN participants to improve care for targeted patients: hospital-employed, shared care managers (nurse or social service) to make home visits; hospital-based clinical pharmacists to conduct medication reconciliation; carefully planned and coordinated transitions of care from inpatient to outpatient; establishing connections to community-based support services; and training small practice staff in screening and initial treatment of frequently occurring co-morbid depression and substance use problems.

ACN’s will also need to develop quality improvement training programs for ACN participants, interoperable or interfaced health information technology systems that allow providers to share patient information, and intra-network data collection and quality measures for the selected chronic disease. Although development of these capabilities will not require creation of the previously mentioned value-based administrative utility, some form of voluntary or formal structure would be required for health information systems, quality measurement, training and best practices standardization, and coordination of responsibilities among providers.

In this regard, the existence of a local Physician-Hospital Organization (PHO) could help with initial organization of an ACN, with the long-term possibility of evolving into an ACO “utility.” PRHI has identified two local PHOs as potential contributors to ACN pilots, and exploring their usefulness to ACNs and their potential long-term ACO relevance is an important secondary purpose of the regional pilot effort.

**Physician-Hospital Organizations**
Changing economic forces in the late 1980’s and early 1990’s led to
development of new models for physician-hospital relationships. Health care was increasingly brokered by large managed care organizations, mostly health maintenance organizations (HMOs). Increased managed care penetration and increased competition in many healthcare markets, as well as pricing pressures, caused many physicians and hospitals to form new organizations to increase their bargaining power and competitive positions.

PHOs were the most widely used and best known of these new models: formally organized, contractual, and including physicians outside hospital medical staff. Participating hospitals and physician practices retained their autonomy, while making common cause to negotiate contracts with payors and improve administrative services. According to the 1995 Report of the Physician Payment Review Commission (precursor to the Medicare Payment Advisory Commission), 15-20% of all hospitals had a PHO in 1994, and most others reported plans for a PHO. Ten years later, however, most PHOs were gone, and remaining PHOs were undergoing significant changes.10

A PHO’s primary purpose then was negotiation of managed care organization contracts between participating providers and HMO’s and other payors. Most HMO-PHO contract negotiations revolved around capitated payments for providing covered services to HMO members. These arrangements were either fully capitated (i.e., PHO accepted full financial risk for any and all medical services for the covered HMO population, even if expenses exceeded the capitated payment) or partially capitated (i.e., PHO and HMO agreed to share financial risk in the event that medical expenses exceeded the capitated payment).

PHO members usually entered into these risk-based arrangements as a means to increase patient volume and market share. The assumption of risk under these capitated payment contracts, however, proved to be problematic for many PHOs. Not only were they generally capitalized insufficiently to endure ordinary underwriting cycles, few developed the capacity to analyze and manage utilization as effectively as tightly capitated payments required. PHO ranks were further depleted in the early 2000’s as HMO market share declined, and they were supplanted by new, consumer-friendly preferred provider organization (PPO) options that allowed consumers to self-refer for virtually any kind of care within a defined network of specialists, hospitals and other providers. As emphasis on managed care decreased, capitated contracts became less relevant, and insurers returned to fee-for-service contracting with individual providers.

Adding to the PHOs’ difficulties, the late 1990s saw a spate of Justice Department anti-trust actions against individual PHOs. “It is illegal for competitors to agree on the prices they will charge, except where they come together and integrate in a legitimate joint venture that results in efficiencies or other pro-competitive benefits that outweigh the restriction of competition,” stated Susan A. Creighton, director of the Bureau of Federal Trade Commission (FTC) at a program on Legal Issues Affecting Academic Medical Centers and Other Teaching Institutions in January of 2004.11, 12 In each case brought against a PHO, it was alleged that the PHO lacked “meaningful integration among the providers.” Added to the financial reserves and insurance market issues that already beset PHOs, the anti-trust actions spurred dissolution of many PHOs.

Nevertheless, several hundred PHOs of various sizes and attributes survived by eschewing their first roles as negotiators of provider contracts, and finding new ways to impart value to their hospital and physician members. These value-added services typically include physician credentialing, training and technical assistance, group purchasing of goods and services, internal health benefits administration for member hospitals.

Among the remaining PHOs, a literal handful are now attempting to return to their original roots by offering delivery of fully integrated services to a defined population of patients under the rubric of a single, capitated, payor contract. One of these is Tri-State Health Partners (THP), a PHO located...
in exurban, central-western Maryland. THP is comprised of Washington County Hospital and its affiliated physicians, as well as a number of independent but aligned physicians. THP's vision is to be the "most comprehensive healthcare solutions company in the region, fostering collaboration among community practitioners and providers to create a fully integrated medical delivery system ... that will make patients healthier and healthcare more affordable." The linchpin of this shared vision for the local hospital and 200 physicians is contracting with both private insurers and public payors as a risk-bearing, fully integrated and exclusive network of providers.

Before moving forward, THP had to be certain that its plans would not run afoul of federal anti-kickback and anti-trust laws, and it sought an advisory opinion from the Federal Trade Commission (FTC). After considering the likely benefits and potential anti-competitive effects of THP's proposal, the FTC decided that THP's plans for clinical integration were credible and would result in substantial quality improvement and lower healthcare costs for the surrounding community that far outweighed the potential harm from anti-competitive effects.13

With favorable FTC advisory opinion in hand (one of three such approvals across the nation), THP has moved ahead with a clinical integration program that includes electronic health records for all of its members, establishment of up to 50 clinical best practice guidelines to which members must adhere, development of evidence-based quality indicators, and enhanced case and pharmacy management. A key part of THP plans is the use of health information technology to identify high-cost, high-risk patients, manage their treatment, and facilitate sharing of relevant information among providers.

No small amount of national attention will be focused in coming months on THP and the two other PHOs that are attempting to transform into high-performing, integrated care delivery systems. If they can achieve levels of efficiency and quality similar to large, multi-level integrated systems like Kaiser Permanente and Geisinger Health System, it will light the path for other PHOs, community hospitals and small physician practices to do the same.

In southwestern Pennsylvania, the two extant PHOs -- Vale-U-Health and the Washington (Pennsylvania) Physician Hospital Organization – are typical of the other 99% of PHOs. The member providers of both organizations serve sub-regional healthcare markets that are comprised mostly of communities in the Pittsburgh suburbs that were once steelmaking and heavy manufacturing centers. Each PHO includes primary and specialty physicians (almost all in small or very small practices), several ancillary service providers and a community hospital. They offer their member-providers an array of support services: administration of the member-hospital's internal health plan, care management services, chronic disease management, risk management and utilization review, behavioral health services, rehabilitation, home health and hospice care, ambulance services and durable medical equipment supply. Both are also engaged in an important new area of support activity – assisting member-providers with implementation of electronic health records.

**Government-sponsored Demonstrations Are Essential**

Although widely conceived to be one of the keys to improving patient care, implementing sophisticated health information technology, like EHRs, will pose daunting problems for thousands of small practices. As Stephen Shortell and Lawrence Casalino observed in a recent issue of the Journal of the American Medical Association, "Most physicians still practice alone, in partnerships, or in small groups. Small practices generally have less capacity to implement electronic medical records... A more solid foundation of physician organizations is needed to avoid having the system crumble under the increased weight of...technological advances.” 14
The “weight” of new technology falls heavily on small practices because of financial and know-how limitations. Rates of EHR adoption among 1-2 physician practices are particularly low, less than 10% nationally – and for understandable reasons. EHR acquisition costs of up to $50,000 per physician and significant ongoing maintenance expenses are prohibitive for most small practices. Over the next several years, the financial inducements for EHR adoption (and eventual penalties for failure to adopt) in the federal economic stimulus bill can offset much of EHR implementation costs. However, recent reports on EHR implementation by small practices describe technology adoption, physician and staff training, and practice culture problems that can persist for two years or more – an adaptation period during which practices and their patients suffer through recurring small and large disruptions.

In the context of EHR implementation, transitional ACN’s and eventual ACOs, PHOs are promising resources for the future. They can, as the two Pittsburgh area PHOs are doing currently, assist member-practices with technical analysis during the EHR selection process, negotiate favorable group purchasing of EHR systems and maintenance contracts, and facilitate practice staff training. In addition, they can coordinate patient information-sharing interfaces, disease management, data collection and quality measurement, and supplying providers with actionable quality improvement information.

PHOs can also be valuable outlets for EHR implementation information that will be disseminated through the network of regional health information technology centers that will be established in the next several months by the Office of the National Coordinator of Health Information Technology in order to accelerate EHR adoption.

Versions of pending federal health reform legislation would encourage ACO development directly by having CMS enter into outcomes-based, shared savings arrangements with ACOs. Legislation would also authorize related CMS demonstrations in bundled payments, disease management innovation and value-based hospital payments. A share of the resources eventually made available in these areas should be reserved for stimulating ACOs and integrated care among networks of smaller providers (through ACN transitions). Rather than the physicians-only ACOs that some envision, federally-supported demonstrations should include testing the feasibility and value of models comprised of a community hospital and the local physician practices that are aligned with it (plus skilled nursing, laboratory services, rehabilitation, home health and community-based services).

Also relevant regarding PHOs and hospital-physician integrated care networks are recent legal developments: (a) limited safe harbors for Stark and anti-kickback rules that, for instance, allow hospitals to purchase EHRs (but not computer hardware) for aligned practices; and (b) FTC willingness to consider the public interest in quality and efficiency improvements in the context of anti-trust reviews of proposed PHO conversions into incorporated, integrated care networks. The handful of cases reviewed thus far (e.g., Tri-State Health Partners, described above) indicate that federal regulators are prepared to give considerable weight to the public interest in healthcare efficiency and quality, and to recognize that improvements in same can emanate from formally integrated care delivery and network contracting by a community hospital and voluntarily aligned local physician practices.

Where PHOs exist, they can serve as an intermediary for transitional hospital-physician partnerships (i.e., ACNs). Should an ACO succeed from such a transition phase, the PHO could undertake directly to provide financial, clinical, technological and other needed support services (i.e., become the ACO’s value-based administrative utility), or serve as the foundation for developing a new structure for providing such services.

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