

Examining the Health Care Equation

Actuarial perspectives on cost and quality

ISSUE BRIEF APRIL 2014

Key Points

- Moving toward a system with more patient coordination has the potential to improve quality of care and reduce costs by improving care coordination, aligning financial incentives, and increasing patient engagement.
- Some models of care delivery discussed include an open system, patient-centered medical homes, accountable care organizations, and staff model HMOs.
- Key issues to consider when exploring options for delivery system reform include:
 - How the system is organized
 - How quality is measured
 - What IT and data reporting requirements are necessary to make the system successful
 - How to mitigate the financial risks associated with the new delivery model

Additional Resources

What Drives the Growing Cost of Health Care
http://www.actuary.org/files/HealthCareEquationFlyerCostDriver_040414.pdf
 An Actuarial Perspective on Accountable Care Organizations http://actuary.org/files/ACO_IB_UPDATE_Final_121912.pdf

New Models of Care Delivery

Controlling health care cost growth is essential for a sustainable health care system. A major factor of health care cost growth is that current payment and delivery systems do not effectively align financial incentives with providing services that maximize value and quality of health outcomes. Most health care in the U.S. is provided under an open system with fee-for-service (FFS) payments—in which a patient accesses care through an individual provider and each health care service provided is paid for separately. This approach encourages volume of services but offers little built-in incentive to manage services to provide effective and efficient quality care.

One way to stem health care cost growth and increase health care quality is to focus on how care is delivered. A number of care delivery models operate today with varying degrees of maturity—some with limited reach and others that are used more broadly. Some models are focused efforts to redesign specific delivery for a group of services, and some are intended to redesign health care across the full spectrum of health care delivery. Finally, some models build on the current open system with FFS payments with small adjustments; others were set up to create an entirely new concept in health care delivery. Most newer models are designed to effect an increase in the quality and efficiency of care delivery for the patient's benefit.

It's important to note that care delivery redesign does not necessarily mean reimbursement redesign. For the purpose of this issue brief, *care delivery* is simply how health care is organized and de-

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coordinated among the multiple professionals involved thus increasing the chance that some elements of care may be overlooked. There is significant potential for duplication of services; unnecessary services; and errors from multiple, and sometimes out-of-date, records on the same patient from different providers.

Second, because it primarily reimburses providers on the FFS payment system, it is more suited to acute rather than chronic care needs. It is symptom driven, rather than focused on overall patient health, which minimizes the extent of the patient's engagement level. A primary reliance on FFS reimbursement also can increase utilization because providers have financial incentive to provide more services.

In addition, the physician referral system among providers could be made more objective, if it were based more on cost efficiencies and outcomes.

Improved care coordination, payment reform (e.g., episode-based rather than service-based reimbursements), and a strong technology infrastructure would result in significant improvement in the cost and quality of care for patients. These improvements would better connect providers with one another, which would result in better communications, reducing waste and duplication of services, and moderating the financial motivation to increase services. Ideally, the technology infrastructure should include sophisticated universal electronic medical records. From an enrollee perspective, it would be helpful to align incentives to encourage effective and quality care (e.g., lower cost sharing for high-value services). Reliance on best practice studies would be beneficial for the open system model's sustainability.

Patient Centered Medical Homes (PCMH)

The PCMH model of care delivery is designed to support the primary care physician (PCP) in taking the lead role in coordinating care for patients. It focuses on creating strong relationships between practice staff, patient, and provider, and it relies substantially on clinical systems. Its

foundation is a whole-person orientation—that is, better clinical outcomes and lower costs may be achieved through care coordination and by greater and more meaningful patient contact. Additionally, a reliance on health information technology (IT) and evidence-based medicine may lead to further reductions in unnecessary costs.

A PCMH model calls for automated business and clinical processes, uses clinical decision support tools, and is connected to patients and members of the health care team. The PCMH model is particularly well suited to higher-risk patients, such as those with chronic conditions or economic vulnerabilities. An emphasis on the patient experience is a key characteristic of this model.

The following elements are essential to care coordination within the PCMH delivery of care model:

- **Quality**—To ensure high quality, core performance measures are established. An interactive approach is taken to discuss, among the providers in the delivery system, areas with potential for improvement. Personalized care plans also are essential, to enable monitoring of chronic conditions and preventive visits, and to track information by risk status. In addition, a process for preventing and reporting errors that occur is included in the PCMH model. Finally, a team approach is used, especially related to care transitions. Integration of acute care facilities, post-acute care providers, long-term care facilities and behavioral health providers—including data sharing and potentially risk sharing—can improve quality and reduce overall costs. A strong quality program is vital if payment is paid on a per member basis and not a FFS basis.
- **Patient-Centered Care**—The foundation of a PCMH is “patient centeredness” and, as such, an emphasis is placed on the patient experience. This includes accommodating same day appointments and extended office hours, utilizing e-mail consultations and

e-prescribing, and providing patient satisfaction surveys on which to consider improvements to care quality. In terms of treatment, the patient's own goals are considered, along with an unbiased presentation of treatment options.

- **Information Technology, Data Reporting and Analytics**—Health IT and data reporting are additional elements of a PCMH, including population health-management tools, evidence-based medicine tools, and a secure system for information exchange among providers, issuers, and patients. The IT platform must support current analytic needs as well as anticipated future needs.
- **Practice Organization**—Physician practices have increased emphasis on financial management capabilities, including cost/benefit analysis. A team-based approach, incorporating new and additional staff resources, including non-clinical staff, can lead to a better patient experience and a more efficient operation. A practice organization may be impacted by the relationship with a particular payer or provider system (i.e., hospital-owned PCMHs).
- **Payment**—Payment typically will shift from FFS and begin to incorporate budget payments, such as care coordination fees paid on a per-member-per-month (PMPM) basis instead of a FFS basis. These payments also could be expected to cover enhanced primary care services such as counseling, patient advocacy, and phone call reminders. As payment systems move away from FFS, a practice must assess its risk tolerance and its ability to provide high-quality care within the payment provided.

PCMHs need to assess several key considerations regarding risk and financial management prior to implementation.

- Establishing PCMH budgets and care coordination fees. It is important that these financial items are based on historical experience and actuarial principles. They should reflect the risk characteristics (e.g., health

conditions, demographics) of the expected population. Budgets are an important component of performance measurement. Key considerations in the actuarial analysis are:

- The risk characteristics of the expected population
 - The key outcomes from a successful PCMH—for example, reductions in hospital admissions, reduced emergency room visits, and shifts to lower-cost procedures or sites of service. The assumptions should be realistic shifts in these metrics over time.
- Evaluation of the capital investment required to transform a practice into a PCMH. Such investments would include IT systems, data analytics and reporting needs, new staff, training, etc.
 - Establish how savings (or losses) will be captured from external sources (e.g., reduced hospital admissions) and how savings (or losses) will be shared by providers within the PCMH.

Established PCMHs need to actively monitor risk, financial outcomes, and quality measures through data reporting and analytics. Actuarial reports and analysis can inform this function as part of a robust process of monitoring outcomes/results. PCMH savings and losses are often shared by providers within specialties, thus interim reporting will give providers information on areas in which they are performing below target. This allows them an opportunity to improve as well as reinforce the practice underlying a well-performing metric. Actuarial analysis may be required to normalize the data for differences in risk in the population by the provider so that providers are not adversely impacted for having a population with higher morbidity. Additionally, actuarial methods can adjust for the credibility of the data so that the results are meaningful and not overly influenced by random fluctuations. Quality metrics, such as percent of members with blood pressure in a recommended range or percent of diabetics with A1C levels in a recommended range, also should

be reported and monitored.

PCMHs that subject the provider to financial risk increase the risk of insolvency. This can be mitigated with appropriate financial safeguards, such as PCMHs seeking reinsurance to limit any potential losses. An actuarial evaluation of the magnitude of the risks will inform these decisions.

Accountable Care Organizations (ACOs)

ACOs have the potential for delivering a high degree of integration of care, greater communication across the entire spectrum of care of a patient, and quality-based delivery of care. An ACO comprises providers that work together to provide cost-efficient, quality care for their members. The providers typically have financial incentives that are based on and designed to increase both cost efficiency and quality of care targets.

Many ACOs operate as open networks, in which the members are not required to use providers associated with the ACO. As a result, members must be attributed to a provider or ACO. Attribution is typically done through an analysis of which providers the member used for most of their services. However, services outside the ACO are included when determining the financial incentives to the ACO providers. While this incentivizes the ACO to promote patient satisfaction and encourage patients to seek services within the ACO, it also can hold providers accountable for the inefficiencies of non-ACO providers.

ACOs can consist of physicians or hospitals and physicians together. The efficiency targets and financial incentives are structured to share savings among the providers. Typically, PMPM or percent of revenue health care spending targets are set in advance. These targets may be adjusted based on the demographics or risk profile of the actual population. Shared savings typically are dependent on achieving various quality outcome metrics.

The Affordable Care Act provides an incentive for formation of ACOs by creating two new programs—the Medicare Shared Savings Pro-

gram (MSSP) and the Pioneer ACO program. In general, the Pioneer ACO program includes more established ACOs and offers higher shared savings opportunities, but with more downside risk than organizations in the MSSP program.

The number of commercial ACOs also has been growing. Commercial ACOs range from physician only to broad physician/hospital alliances and use many innovative ideas to provide efficient care—from predictive modeling of high-cost patients to aggressive follow-up care to avoid readmissions. Medicaid ACOs also are evolving, taking lessons learned from the commercial and Medicare ACOs and modifying them to meet the unique needs of the Medicaid beneficiaries.

ACO providers have varying degrees of risk. Shared savings, with bonus-only methods, typically reimburse the provider on a FFS basis and later pay a bonus (upside risk only). While savings are rewarded, the providers' financial benefits are likely greater under the FFS basis portion of this method in comparison to the shared savings portion, thus, limiting the financial incentives to change behavior. Risks also can be two-sided, in which not only are bonus payments available if costs fall below the agreed upon targets, but organizations may have to make payments if costs exceed the targets. Shared savings models that include downside risk provide stronger incentives to the provider to manage care than the bonus-only shared savings models. Finally, global capitation payments provide significant financial incentives and risks to providers. Under global payments, the providers are given a budget and are responsible for any cost overruns (while benefiting from any savings).

ACOs need to consider several issues prior to implementation:

- When evaluating provider performance in a shared savings program, the development of the target PMPM is most often based on historical claims trended to the performance period. Determination as to whether providers have met or exceeded the financial target is based on a comparison of the actual claims

PMPM measured against the target. As such, in evaluating the plausibility of achieving a financial incentive based on efficiency, the potential ACO should analyze the PMPM thoroughly.

- In addition, it typically will be easier for less efficient organizations to achieve savings than organizations that are already highly efficient. Therefore, a realistic savings projection also needs to be developed by the potential ACO.
- An ACO must consider the population it will cover and the number and types of providers it will need to care for that population. For example, a population of dual-eligibles (beneficiaries eligible for both Medicare and Medicaid) will require a different panel of providers than a commercial population.

The actuarial issues associated with ACOs are similar to those that need to be considered when developing PCMHs—ACO budget targets or global capitation payments need to be determined based on historical and projected experience and actuarial principles; measurement of results may require some normalization for differences in risk of the population; ways to mitigate some of the financial risk for the programs would be evaluated on an actuarial basis; sufficient membership would be needed to provide a basis for setting targets and measurements; and access to data on financial results and quality measures throughout the year will be necessary in order to monitor emerging experience.

Staff Model

An HMO is a managed care organization that provides group and individual health coverage and is licensed as an HMO in the states in which it seeks to offer coverage. Enrollees in an HMO would have to obtain most, if not all, services from the HMO (with some exceptions for services not available in the HMO). The staff model HMO is a specific type of HMO characterized by a closed-panel system in which physicians generally are employees of the HMO. Physician assistants, lab and X-ray technicians, and other

health care professionals also would be employees of the HMO. In more advanced staff model systems, staffed personnel also might include pharmacists or dentists. The HMO may staff and operate facilities that its members use, such as surgery and advance care centers, urgent care facilities, and rehabilitation centers. This model is on the opposite end of the spectrum from the open system, beyond the PCMH and ACO models discussed above.

In certain situations some physician specialists who are not employees of the HMO may be paid on a FFS basis if a required service is not available from a staff physician or professional. The goal of this type of health care system is to increase the quality of care, reduce cost of care through efficient delivery and management of patient-focused care, and lessen the incentive to perform unnecessary or inefficient services that may otherwise be performed under a FFS system.

Many characteristics of the staff model HMO can help reduce costs and improve quality for the patient. For example, having providers all associated with one organization, with many located at one site, will help produce better communication between providers, more consistent treatment methods, a team approach in achieving goals and performance-based bonuses, more effective use of second opinions, more complete patient records, and better development and implementation of best practice guidelines. It also can result in improved access to services such as wellness programs and can encourage patient engagement beyond just disease treatment into overall well-being. Administrative costs may be lower due to centralization of administrative duties than in some other models.

In addition, the salary structure for physicians under the staff model HMO can lower health care costs by reducing the incentive for physicians to perform certain services that may not be part of an effective, efficient treatment plan. A physician in a FFS environment typically receives additional revenue for each service performed, which is not the case for a salaried

physician in a staff model HMO. Further, bonus programs that include quality of care goals help alleviate possible quality issues.

While the staff model HMO has some significant advantages, it faces challenges. Some patients may be concerned that their choice of physicians is being restricted compared to potentially broader selections of physicians in other models. Similarly, patients can sometimes raise concerns that the HMO is essentially rationing care if a service is not allowed by the HMO, even in instances in which services are declined for the benefit of patient health.

On the provider side, being paid a salary instead of on a FFS basis can mean to lower incomes for physicians, particularly for certain specialties. Although this salary structure may help lower health care costs in general, it also may make it more difficult for the staff model HMO to attract and retain physicians. A physician, however, may choose a staff model HMO because it may reduce the administrative burden and leave more time to see patients.

Transparency of charges may not be as extensive unless a cost-allocation methodology is established by the HMO for its services. Variable costs, such as those stemming from the usage of hypodermic syringes and implantable devices, add to overall health care costs and can be uniquely identified; fixed costs, such as provider salaries, are not as volume sensitive and would need to be allocated to procedures. If the explanation of benefits (EOB) sent to a member does not have a fee attached, then the member is not able to effectively assess the costs of the services provided. Even in a FFS environment, which may have more transparency, a beneficiary may pay little attention to EOBs. Beneficiaries should review EOBs even in a staff model environment in an effort to ensure accuracy in the services being billed.

Finally, while it can be an effective part of an overall delivery system, the staff model may be limited in certain situations, such as rural settings.

All health care delivery system models have strengths and challenges, many of which are

highly dependent on the details of how strategic plans are executed. Staff model HMOs were once thought to be an up-and-coming HMO of the future, but the popularity has not increased significantly over the years, in large part due to the challenges stated. Staff model HMOs can be a part of an overall delivery system if accompanied by a good quality-of-care incentive program and a solid physician base.

From an actuarial perspective, a number of items need to be considered with a staff model HMO. Ensuring that networks have enough physicians and qualified physicians in all specialties is crucial. If high-quality physicians are not available in network, then care may be low quality. Further, in certain situations, payment of physicians on a salary basis may lead to incentives to undertreat members if payment to providers is not accompanied by a quality-of-care-based feedback and incentive program. Finally, staff model HMOs have significant overhead costs. A sufficient membership base must be obtained to spread this fixed overhead over a broad premium base.

Care Delivery Enhancements

A number of newer strategies have emerged to help enhance care delivery. These strategies are not delivery models, but they frequently are part of a successful care delivery system. While there are many such emerging strategies, each with its own success factors and actuarial issues, this brief focuses on three: remote care delivery (also referred to as telemedicine or telehealth), mid-level professional providers (e.g., nurse practitioners and physician assistants), and retail or employer on-site clinics.

These delivery enhancement strategies can fill in or connect accessibility of needed services in underserved areas, such as rural areas or more general areas with low access to physician care, by improving access, relieving time pressure on busy physician practices, and improving cost efficiency by potentially transferring cases or care that are less acute in nature to a lower-cost provider or setting.

Comparison of Models of Care Delivery

This table summarizes the numerous actuarial issues discussed for each of the models presented. An "✓" denotes potential improvement with respect to an actuarial issue that may be seen in the new model of care delivery, as compared to our base "open system."

Issue/Model	Open System	PCMH	ACO	Staff Model	Care Enhancers
Utilization	Baseline	✓	✓	✓	✓
Cost		✓	✓	✓	✓
Quality		✓	✓	✓	✓
Service Mix		✓	✓	✓	✓
Malpractice					
Duplication		✓	✓	✓	✓
Right Care, Right Time, Right Place		✓	✓	✓	✓
Technology		✓	✓	✓	
Provider Network		✓	✓	✓	✓
Reimbursement /Contracting		✓	✓	✓	✓
Incentives		✓	✓	✓	
Access to care				✓	✓
Administrative efficiencies		✓	✓	✓	
Continuity of Care		✓	✓	✓	

Timely access to care can be a challenge, especially in rural or other underserved, in both non-emergency and emergency situations. Accessing the right care at the right time potentially can be lifesaving and is essential for high-quality, efficient care delivery. The inability to maintain a system that provides adequate access to the right health care in a timely manner can have several undesirable results, including:

- A decline in patients' health due to significant wait times for a service;
- Physician practices being overburdened by visits that may not require a physician, causing appointment times to increase for patients with more acute needs; and
- Emergency rooms becoming overcrowded with patients who do not require emergency

services but have been unable to secure a physician appointment when care is needed.

A patient living in an underserved area who must be taken to a distant provider will generate additional travel expenses (i.e., car, ambulance, helicopter, as well as family travel expenses), and waiting times for that service due to traveling. There also could be duplication of services, such as imaging, physician and facility visits, especially if services were provided at home or locally, before determining that the appropriate level of service needs to occur elsewhere.

These challenges mean potential waste in the system and potential harm to the patient. Three potential solutions for these problems include remote delivery of health care, also known as telemedicine; mid-level providers within physician practices; and retail clinics.

Telemedicine

Telemedicine is a relatively new model of care delivery being used by a number of health care systems to address remote delivery problems. It uses telecommunications and information technologies to provide appropriate clinical health care from a distance. It helps eliminate distance barriers and can improve access to medical services that often are not consistently available in rural communities. It also is used to save lives in critical care and emergency situations.

Remote tele-monitoring/telemedicine can provide specialist advice and treatment guidance to the patient's local providers of care without the need for travel. It also can minimize unnecessary travel for non-essential treatments, thus increasing the effectiveness of care by "triaging" the patient through telemedicine. With this intervention, the receiving service location can be ready for patients when they arrive, rather than waiting until after arrival.

Mid-level Providers (MLPs)

MLPs include nurse practitioners, physician assistants, and certified nurse specialists. They are certified in their field, typically have graduate degrees, can provide primary care services, and can prescribe medications in many jurisdictions. Because of their lower salaries relative to primary care physicians, MLPs generally are more cost efficient to see less complex patients or for routine visits with more complex patients. MLPs also can relieve pressure on physician practices, by allowing the MLP to evaluate less complex patients, and giving the physician more time with more complex patients. MLPs also may enable a physician practice to expand its hours and improve patient access to care. MLPs that practice in rural areas can help alleviate rural access problems and assist with telemedicine interfaces and links to distant specialists. The role of the MLPs in the health care system continues to evolve and varies based on state laws.

Retail Clinics

Retail health clinics are becoming much more prevalent at local pharmacies and department stores around the U.S. These clinics typically provide basic preventive care and primary care services such as immunizations, child physical exams, and diagnoses for common illnesses. Because they share space with retailers, they typically have longer hours and therefore improve access for the services they provide, and potentially replace expensive ER visits.

Similar to retail health clinics are on-site employee clinics. Like retail clinics in their size and scope of services, they are housed within the place of employment/workplace. This growing trend reflects the recognition by employers that an investment in easily accessible primary and preventive care can improve the health of their employees, potentially improve productivity and also reduce costs.

Components to Ensure Efficient Enhancers

All of these strategies can result in faster and appropriately timed access to needed and high-quality care, at a potentially lower cost.

To ensure that these care enhancers are successful, though, a number of components need to be incorporated. First, in terms of infrastructure, the appropriate equipment is necessary for tele-monitoring/telemedicine at both ends of the process. Telemedicine can be accomplished through different types of communication links, such as phone, e-mail, direct feeds from tele-monitoring equipment, or via web meetings.

Second, processes to communicate and share patient information must be designed and implemented to accept remote services without duplication (e.g., imaging services). Physician practices should integrate MLPs to optimize their time and the physician's time. In some cases this may mean that the MLP and physician share a patient visit, and, in other cases, patients may see only one or the other. Retail clinics are gaining momentum and, through high quality and efficient process, can be seen as a viable alternative to physician visits.

Finally, widely accepted reimbursement strategies must be developed for telemedicine services, recognizing the fact that two provider parties are involved—one local and one monitoring. MLP services need to be reimbursed, reflecting a balance between their lower salary and typically higher capacity to spend time with a patient. Reimbursement also needs to benefit the system as a whole and not just the practice. That is, reimbursement should not necessarily be the same for a shared office visit versus a MLP-only office visit versus a physician-only office visit. Retail clinics typically pass along the efficiency of being housed in larger commercial ventures thus reducing overhead and MLP utilization.

Just as there are actuarial considerations for the various models of care delivery, the following need to be taken into account when developing these care enhancers—provider network adequacy, utilization of services, technology investment, reimbursement, and administrative costs.

For providers who use telemedicine, they need to determine whether they need different contracted amounts (due to reduced administrative expenses), and need to account for both “ends” of the tele-monitoring process. To the extent that MLPs are classified by insurers as a separately identified provider, their contracts also must be reviewed. It may be in the best interest of issuers to include retail clinics in their networks and even to encourage utilization of clinics through plan designs.

In addition to network and contracting issues, it is necessary to develop a reimbursement strategy that supports quality, efficiency, and reduced overall costs through the reduction of unnecessary services. Remote delivery potentially could use bundled payment reimbursement, incentives based on decreasing unnecessary services, or other strategies besides a FFS reimbursement arrangement. Risk-based provider payments can encourage physician practices to utilize MLPs.

Monitoring the various care enhancer treatments will be critical to determine whether these strategies decrease unnecessary services, avoid duplication of services, and replace inappropri-

ate care (in terms of the type of professional and site of care) with more appropriate care.

Finally, it is important to note that there could be additional administrative costs for issuers to administer these strategies, due to the additional contracting requirements.

Conclusion

The current U.S. health care system is primarily based on an open system model with payments made separately for each service provided. This type of system, in which care is often transferred between multiple providers and settings, can be fragmented and inefficient with the potential for duplicated and/or unnecessary services.

Moving away from an open system and toward more patient coordination has the potential to improve quality of care and reduce costs by improving care coordination, aligning financial incentives, and increasing patient engagement. Three examples of new delivery approaches are outlined in this brief – these include PCMHs, ACOs, and staff model HMOs. As noted, these are not the only approaches that could be considered, but they represent several options across a spectrum of delivery and care coordination redesign.

Key issues to consider when exploring options for delivery system reform include:

- How is the system organized, and what does that mean for care coordination for patients?
- How is quality measured? What are the core performance metrics established?
- What are the IT and data reporting requirements to make the delivery system approach successful?
- What are the financial risks associated with the new model? How can those risks be mitigated?