tervention and the size and characteristics of the population that is targeted. Many clinically proven interventions are relatively cost-effective but not cost saving and may affect only small portions of an overall population,[15] and some clinically effective interventions do not have positive rates of return as investments.[13] Also, many nonfinancial barriers to health improvement must be overcome and other nonhealth problems must be addressed for health effects to translate into economic gain. The outcome depends on the political commitment to improving health, the political and policy decisions that are made, and the prioritization of needs and deployment of resources within a society. What is important is that the role of health as a productive economic investment be captured and that focused efforts to improve health should be part of the economic development plan.

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Health Care Reform Requires Accountable Care Systems

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MOST HEALTH CARE REFORM PROPOSALS FOCUS ON expanding health insurance to cover all US individuals. But the companion challenge is how to make such coverage affordable given the fragmentation, waste, and variation in quality of care of the current delivery system. Comprehensive health care reform will require proposals that both expand coverage and redesign the delivery system so as to achieve greater value for the increased investment.

At the heart of the challenge is transforming a 19th-century craft-oriented delivery system to provide 21st-century biomedical science and technology. Most physicians still practice alone, in partnerships, or in small groups. Small practices generally have less capacity to implement electronic medical records, less frequently use teams to care for patients with chronic illness, and are less able to provide statistically reliable and valid data on quality and efficiency measures. A more solid foundation of physician organizations is needed to avoid having the system crumble under the increased weight of greater demand for care and technological advances.

Accountable Care Systems

To address this challenge, we propose the concept of accountable care systems (ACS). An ACS is an entity that can implement organized processes for improving the quality and controlling the costs of care and be held accountable for the results. These entities also might be called accountable care organizations,[1] but the term system is preferred because systems of care must be established to assume responsibility for patients across providers (eg, physicians, nurse practitioners, other clinicians, etc) and settings (eg, hospitals, nursing homes, etc) over time. An ACS may be made up of several or many accountable care organizations covering the continuum of care (ie, outpatient, in-patient, home health, rehabilitation, long-term, and palliative care). We suggest 5 different ACS models: multispecialty group practice, hospital medical staff organization, physician-hospital organization (PHO), interdependent physician organization, and health plan–provider organization or network.

Multispecialty Group Practice. The potential advantages of the multispecialty group practice model were recog-

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nized as early as 1932 when this model was suggested by the Committee on the Cost of Medical Care.[2] These advantages include having the resources to redesign care processes, take advantage of economies of scale to implement electronic medical records, form health care teams, obtain database feedback on performance gaps, and make the changes needed to improve care.[3,4] A small but increasing amount of evidence shows that multispecialty group practices do make greater use of recommended care management processes, electronic information technology, and participation in quality-improvement activities.[5-8] Multispecialty group practices provide higher quality of care on selected preventive and process measures involving recommended screening tests and diabetes and asthma management than smaller, looser forms of practice.[6]

There also is evidence that Medicare spending is lower for patients associated with multispecialty or hospital-affiliated groups than for other patients.[9] With increased financial incentives for quality and efficiency and the demand for greater external accountability, it is likely that the multispecialty group practice model will increase as some existing small practice units aggregate into larger groups and as newly trained physicians join them. But because the multispecialty group practice models are difficult and expensive to create and do not appeal to all physicians or patients, it is unlikely that they will quickly (if ever) become the dominant organizational form in US health care.

Hospital Medical Staff Organization. Nearly all practicing physicians in the United States are members of hospital medical staffs, and most physicians hospitalize the majority of their patients at 1 hospital.[1] Thus, the hospital medical staff organization could serve as an ACS for both inpatient and outpatient care. Hospitals have the capital to support adoption of electronic medical records, generate performance and accountability data, and assist with providing quality-improvement support. New payment policies such as bundled payments for specific medical conditions or episodes of illness would provide incentives for hospitals and physicians to work together. Legal obstacles to gain sharing would need to be eliminated. Sophisticated leadership also would need to address the long-standing divergent cultures of hospitals and physicians and frequent competition recently evidenced by the development of physician–owned specialty hospitals, ambulatory surgery centers, and imaging facilities.

Physician-Hospital Organization. Physician-hospital organizations are jointly owned organizations that include a hospital and a subset of the hospital's medical staff members. Physician-hospital organizations typically involve those medical staff members whose economic interests are most aligned with the hospital's and who can provide the hospital with the geographic coverage for health plan contracting. There are approximately 1000 PHOs in the United States.[10] Most are loosely governed organizations, but under comprehensive health care reform the PHO model could evolve into an entity that would actively manage the quality and cost of care.[11]

The PHO could establish cost and quality eligibility criteria for membership and evaluate performance for continued membership on an annual basis. Payment could flow to the PHO based on its collective performance. This model has the advantage of not needing all physicians involved and also creates incentives for those physicians not eligible to become eligible in future years as they improve their performance. As with the hospital medical staff organization model, the hospital would provide capital for electronic medical records, performance reporting, quality improvement, and practice management support. Physician-hospital organizations, however, would need to meet clinical integration criteria to avoid anti-trust laws.[12]

Interdependent Practice Organization. The interdependent practice organization is distinguished from the independent practice associations that exist today. Like the PHO, the interdependent practice organization would be based on an association of physicians in numerous independent practices. As with PHOs, most independent practice associations are loosely organized, although exceptions show that this model is capable of providing high-quality, efficient care.[5] The interdependent practice organization requires strong leadership, governance, and enough patients aggregated across individual practices to support investments in information technology and care management systems. This model might be particularly attractive to physicians practicing in rural areas. Given sufficient incentives, existing independent practice associations could become interdependent practice organizations by strengthening their governance and leadership structure and by developing a stronger shared culture of performance improvement. Examples include the Hill Physicians Group in Northern California and the primary hea1th care organizations in New Zealand.[13]

Health Plan–Provider Organization or Network. Like the PHO, the health plan–provider organization or network would be based on an association of independent physician practices of varying sizes. The health plan would be the major capital partner. Given pressure from employers, health plans have incentives to encourage more cost-effective health care delivery. Many have capabilities in disease management, electronic information technology implementation, and quality-improvement systems that could potentially be used effectively in collaboration with physicians. But, given that health plans do not directly provide care, the likely success of this model would depend on the local physician practice leadership, which is likely to vary.

Suggestions and Directions

At present there is little incentive for physicians to join or form organizations that can produce better patient outcomes at the same or lower cost. What is needed is the coevolution of incentives and the development of capabilities to respond to the incentives. The difficult policy issue will be to provide these incentives and capabilities while maintaining patient and physician choice and without picking

winners and losers in advance. Some suggestions include the following.

First, patients could be encouraged, but not required, to select an ACS as their medical home.[14] For results-based payment and public reporting purposes, claims-based algorithms could be used to retrospectively assign patients who have not chosen an ACS. This maintains patient choice and encourages ACSs to coordinate their patients' care within and outside the ACS to demonstrate to patients that using the ACS for this coordination is valuable, and to treat equally patients who have and who have not selected an ACS. For purposes of measurement and results-based payment, some degree of risk adjustment will be needed.

Second, physicians would not be required to be part of an ACS. Physicians who choose not to be part of an ACS could be paid with the basic payment methods used by Medicare, Medicaid, and commercial heath plans. They also could be eligible to compete for quality- and efficiency-based rewards. Whether physicians who join an ACS of whatever model perform better than those choosing not to join an ACS is an empirical question.

Third, physicians and hospitals (and potentially other health care organizations) that are part of an ACS could have both more potential reward for improving quality and controlling costs and more potential risk. At a minimum, the rewards could be a broader, deeper set of measures for results-based payment and public reporting plus an increased amount of money that could be earned from these measures, along with some downside risk for poor performance. Annual payment updates for physicians and other health care provider organizations in each ACS could be based on the performance of the particular ACS, while other physicians and health care provider organizations could continue to receive the national payment rate. Further, bundled payments for certain services or procedures (eg, coronary bypass graft surgery) using a combination of capitation, results-based payment, and permitting gain sharing between physicians and hospitals could be used within the ACS. Physicians within the ACS also could benefit from the brand name of the established ACS (eg, Geisinger, Kaiser-Permanente, Mayo) or that new ACSs could establish. Physicians also might benefit from the assistance that the ACS could provide with electronic medical records and with the implementation of organized processes to improve quality and efficiency.

Fourth, tiered incentives could be created for patients to select the highest value-added ACSs for care based on available data. Patients might have no co-insurance or deductibles for selecting ACSs performing in the top tier based on efficiency and quality measures, moderate deductibles and co-insurance for those in the middle, and higher deductibles and co-insurance for those in the lowest third. Alternatively, premium rates could be adjusted to take into account the selection of higher value-added ACSs.

Finally, changes would be needed in laws and regulations for anti-kickback, fraud and abuse, anti-trust, scope of practice, and the corporate practice of medicine.[12] Laws and regulations that permit greater flexibility in developing new medical practice arrangements could provide an additional incentive for organizational innovation.

Summary

Accountable care systems could be designed to create value by improving quality and patient outcomes at the lowest possible cost. They also could be designed to be accountable for the patient experience across the continuum of care and not just within silos of care. Based on the 5 different models and the accompanying suggestions for implementation, the number of ACSs could increase rapidly if incentives for improving quality and efficiency become more widespread and of greater magnitude. At present, relatively few physician organizations have the capability to manage both quality and costs. But the increasingly available measures and tools which, when combined with greater incentives and public accountability for improved performance, may offer physicians and hospitals choices of practice organizations that may meet the challenges of 21st-century medicine.

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