cians when possible; they can eliminate medication errors and other costly mistakes; and they can ensure better management of chronic care.

These changes will not happen automatically. About one third of the U.S. population lives in rural or small urban areas where one hospital often dominates the market, yet health care is not better or significantly cheaper in those areas. Clearly, some intervention is required.

Setting specific, measurable goals for community health and medical care is the first step. The goals might lie along several axes: access (not exceeding the lengths of acceptable delays encountered in emergency rooms or in the scheduling of appointments), process of care (increasing the proportion of patients whose care conforms to set standards), technology (adhering to deadlines for implementing a medical-records system), and outcomes (reducing the rates of death or disability from certain causes). The goals need to be agreed on by the provider and public health communities and measured over time.

Payment systems then need to incorporate these goals. State governments, through the Medicaid program, can work with private insurers and possibly the Medicare program to formulate alternative compensation arrangements for providers. These might include bonuses when providers meet goals of process and outcome, shared savings models that reward providers for health improvements in their patient population, and global or episode-based payment in place of fee-for-service payment. The specific compensation arrangements would be negotiated among health systems, governments, and private insurers, but having specific community goals and a dominant health care system would allow reimbursement changes to have the maximum impact.

A health system configured along these lines would be very different from the corporate medicine of the past. Doctors would be integral to making such health systems work instead of being dictated to by unaccountable corporations. Patient preferences would be expressed through physicians and the political representatives of the communities in which they live. In many ways, such a system would be closer to a single-payer system than to a traditional corporate model. And it might just work to make health care better for everyone.

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1. Key issues in analyzing major health insurance proposals. Washington, DC: Congressional Budget Office, December 2008. (Accessed July 16, 2009, at http://www.cbo.gov/ftpdocs/99xx/doc9924/12-18-KeyIssues.pdf.)
2. Chartbook: trends affecting hospitals and health systems. Washington, DC: American Hospital Association, 2008. (Accessed July 16, 2009, at http://www.aha.org/aha/research-and-trends/chartbook/index.html.)
3. Report on the economic crisis: initial impact on hospitals. Washington, DC: American Hospital Association, November 2008. (Accessed July 16, 2009, at http://www.aha.org/aha/content/2008/pdf/081119econcrisisreport.pdf.)

The Shifting Mission of Health Care Delivery Organizations

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An important transition has begun in payment for health care delivery in the United States: organizations that have long been paid for transactions, such as visits or procedures, are beginning — at least in some markets — to be paid instead for producing outcomes. As physicians and hospital leaders contemplate the implications of new payment models, they realize that the transition will be long, difficult, and messy, with major ramifications for providers.

After decades of discussion about the problems inherent in fee-for-service medicine, skepticism about whether real change is under way would be understandable. But it would be reckless in an environment in which rising health care costs and an economic downturn have intensified the pressure for cost savings, even as the new presidential administration is seeking to broaden access to insurance coverage. There are probably just two ways to resolve these tensions: providers must be paid less for transactions under fee for service or they must be paid differently. Faced with these options, providers are likely to become increasingly interested in payment reform.

This transition could gain momentum quickly, since other pieces of the puzzle are in place or nearly so. Employers and government purchasers of health care are already demanding "value" — balking at paying for ever-increasing service volumes without commensurate increases in a measurable benefit to patients. The methodologic tools necessary for new payment models are still crude but are improving with use. Administrative claims data are being used to define episodes of care that include periods before and after hospitalization,[1] and clinical data from electronic medical records are enhancing the measurement of outcomes for patients.

And the payment system is already evolving. Hospitals have incentives to reduce readmissions, and some provider systems have pay-for-performance incentives that are based on clinical outcomes (e.g., improvements in blood pressure and glucose control in patients with diabetes) rather than process goals. "Bundled payments" that require hospitals and physicians to share a case rate for an episode of care are being tested in several markets, and this approach appears to be a major potential strategy for Medicare.[2]

The implications for providers are profound — in essence, a complete shift in the mission of health care delivery organizations. For most of the history of medicine, the role of the hospital, clinic, or practice has been to centralize the resources essential for curing disease and relieving suffering: a skilled staff and the diagnostic and therapeutic technologies they need. Delivery organizations served two key customers, doctors and patients; their performance was judged primarily by the quality of their resources and how effectively they brought them and the patient together — in other words, their service.

This model has been challenged by several developments in recent years. First, as medical knowledge has grown, so has expertise in defining and measuring quality. Within organizations, clinical guidelines facilitate the measurement of clinical processes, the assessment of quality according to rates of compliance with guideline-specified care and risk-adjusted outcomes, and the deliberate management of care processes. Outside the organization, public reporting of compliance and outcomes — at the organizational as well as the individual doctor level — allows patients, payers, and regulators to compare providers.

Accordingly, delivery organizations are marketing themselves not only as places where well-known and well-regarded doctors are to be found but also as institutions that can effect a cure or take care of patients and populations over time. With the changes under way in the payment system, organizations are both promoting and being held accountable for their outcomes.

A shift in organizational mission from a service to an outcome orientation will necessitate fundamental change at all levels in health care delivery organizations, including the roles of clinicians and boards of trustees, the organization's internal structure, and the design of its patient care operations (see table). Rather than focusing on managing the productivity of individual human and technical resources (assessed in terms of transaction measures, such as visits per doctor or imaging procedures per hour), an outcome-oriented organization will concern itself with designing the optimal configuration of those resources — and the clinical processes that link them — with respect to the clinical outcomes it is expected to produce (assessed in terms of process measures and risk-adjusted outcomes).[3]

A shift to an outcome orientation could limit physicians' autonomy in some areas, but it

A Comparison of Service-Oriented Organizations and Outcomes-Oriented Organizations in Health Care Delivery.

Variable	Service-Oriented Organizations	Outcomes-Oriented Organizations
Role of delivery organization	Health care production facility: aggregate and manage essential resources	Health care production facility: improve outcomes by reliably applying medical science to each patient
Primary measures	Transactions	Outcomes
Locus of knowledge	Individual	Organization
Clinical perspective	Individual interaction	System design and effectiveness
Doctor's skill set	Clinical judgment	Leadership

will also increase their range of responsibilities and activities. In circumstances in which the routine that generates a good outcome is well known, physicians will probably be accorded less freedom to deviate; in cases in which there is no such known routine, physicians will have to create the knowledge essential for developing one. They will thus in effect play two roles — one clinical and the other more managerial, in which they help to design, oversee, and improve systems of care.

In the current environment, the connection between private-practice physicians and the community medical centers to which they admit their patients is typically not very tight, and the two groups' missions are not perfectly aligned.[4] Most physicians don't have a large role in designing clinical processes and service configurations — and are certainly not reimbursed for such work.[5] And most delivery organizations are oriented toward physicians as the primary customer, whom they serve by providing clinical resources. Outcomes-based reimbursement will pose a challenge to such arrangements and demand new types of managerial work.

For example, physicians and nurses are best placed to define exactly which processes are essential for generating good clinical outcomes and how those processes can be deployed most effectively. Clinicians will also need to define which elements of clinical data are most relevant, sensitive, and valid for driving improved performance; help interpret the results of clinical performance measurement; and then design effective responses. Moreover, as health care becomes increasingly team-based, the coordination function — sequencing and integrating the key decisions and tasks undertaken by multiple caregivers — will be an important determinant of outcome that requires design and management by clinicians.

Boards of trustees, for their part, will need to take greater interest in clinical performance. Such involvement extends beyond the occasional quality report mandated by boards of registration to a routine and detailed review of clinical outcomes and actions being undertaken to improve performance. These new roles will probably be challenging for board members who don't have a deep familiarity with health care delivery.

Finally, the knowledge of how to configure structures and processes to attain the best possible clinical outcomes will become one of the organization's most important assets. In outcome-oriented organizations, production knowledge — how to go about improving patients' outcomes — is as much an organizational property as an individual one. Of course, these organizations must hire or contract with the best available professionals, but they must also create and maintain the institutional knowledge required to realize good outcomes. Hence, organizational learning will be critical — and will require deliberate action. Evaluating experience and using it to inform ways of improving clinical outcomes will be a new form of managerial work that will also require physicians' input.

These potential changes in responsibilities for board members and physicians are substantial, requiring a major investment of time and training, and will be all the more challenging for physicians and organizations that are unprepared for them. Yet they will be necessary if organizations and physicians are to prosper under a bundled-reimbursement scheme and meet the increased performance expectations that the Obama administration has for "accountable care organizations." They will, however, be hard to implement in organizations that do not recognize and embrace the ongoing shift in mission.

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1. Rosenthal MB. Beyond pay for performance — emerging models of provider-payment reform. N Engl J Med 2008;359:1197-200.
2. Hackbarth G, Reischauer R, Mutti A. Collective accountability for medical care — toward bundled Medicare payments. N Engl J Med 2008;359:3-5.
3. Bohmer RMJ. Designing care: aligning the nature and management of health care. Boston: Harvard Business School Publishing, 2009.
4. Burns LR, Muller RW. Hospital-physician collaboration: landscape of economic integration and impact on clinical integration. Milbank Q 2008;86:375-434.
5. Baron RJ, Cassel CK. 21st-Century primary care: new physician roles need new payment models. JAMA 2008;299:1595-7.