area's reimbursement might affect beneficiaries with different conditions differently.

In sum, the committee found that most of the variation among geographic areas is attributable to variation in the use of post–acute care and inpatient services. Moreover, within any area, provider behavior varies substantially, so increasing reimbursement for all providers in an area would unfairly reward poorly performing providers, and reducing reimbursement for all providers in an area would unfairly penalize high-performing providers. The committee's interim report contains no recommendations, but we expect to issue a final report with our recommendations this summer.

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Leading Clinicians and Clinicians Leading

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Stubbornly high costs and the expected care needs of aging baby boomers make more effective models of care delivery a pressing need. Unfortunately, new models often perform below their potential. Their designs — usually comprising some combination of alternative sites of care or caregivers, new care processes, and enabling technologies — promise global improvements in quality or cost. But successful implementation depends on two local factors: effective care teams and good management of local operations ("clinical microsystems"). Clinicians influence both.

The prospects for care redesign and performance improvement depend on clinician leadership in units, wards, clinics, and practices. Models such as accountable care organizations and patient-centered medical homes presume capable leadership and management. Better organizational performance improves health outcomes, and clinical leadership affects performance. Calls for leadership are common, but the specifics of which clinicians need to do what remain unclear.

Although heads of medical and nursing departments have obvious leadership roles, the need for leadership by clinicians deeper in the organization — usually without any formal title, authority, or leadership job description — is increasingly recognized. Clinical microsystems are composed of and controlled by front-line clinicians whose primary work is patient care. Although many have little interest in leading, the success of health care reform depends on them.

Most definitions of leadership include a focus on a shared goal, dependence on others' actions to reach that goal, and a lack of direct control over others. Leaders create conditions that enable and encourage others to achieve a shared goal through collective action — a challenge in health care, since most clinicians were schooled as individualists, don't necessarily view the goal as shared, and generally feel more accountable to professional bodies than local hierarchies.

Front-line clinicians leading local systems have four key tasks. The most important is to establish the group's purpose by emphasizing that the goal is shared and the action needed is collective. Many clinicians presume their organization's purpose is to provide patients with services, and them with clinical resources. Transactional performance measures such as clinic volumes or procedures per operating-room day have reinforced an individualistic perspective. However, recent

policy shifts toward population accountability, global budgets, value-based purchasing, and outcome measurement have put a premium on teamwork.

In this environment, defining the purpose isn't the exclusive domain of chief executive officers (CEOs). Local leaders must help identify care goals that unify diverse multidisciplinary teams and align these with the patient's health goals, the local environment's financial demands, and the wider organization's mission.

The second task is ensuring that clinical microsystems can execute to achieve these goals. Local care systems must address two perceived tensions — one between evidence-based medicine and patient-centered care, which requires the flexibility to deliver standard care where the evidence is strong and customized care where it isn't, or when standard care conflicts with the patient's preferences; and one between medical and human needs, by ensuring caring and compassion as well as clinical precision.

These requirements may suggest that creating an effective microsystem is a technical design challenge: recruiting, staffing, task allocation, information technology selection, and process design. But since a microsystem's performance is as influenced by its culture as by its processes,[1] the challenge is one of leadership. The team's culture guides decision making where protocols fail to provide appropriate variation and encourages compassion in technical settings. And the way local clinical leaders speak and act to model the balance between standard and custom, technical and human, helps define local team culture.

The clinical leader's third task is monitoring system performance. Complex systems demand day-to-day control to ensure that inappropriate variation is minimized, quality and efficiency remain high, improvement opportunities are identified and seized, and microsystems meet patients' needs.

For most clinicians, control at a distance — reviewing aggregate process and outcome data and influencing others' behavior — is challenging. They may be unfamiliar with financial statements or quality-measurement science. Historically, professional etiquette has discouraged explicit judging of peers. Yet recent experience suggests that detailed population-specific data and unblinded peer comparisons discussed in small groups can help reduce inappropriate variation and improve quality and efficiency. Applying this insight can require explicitly setting expectations and calling close colleagues to account. Yet to be effective, a clinical leader must do exactly that.

The final task is improving performance. Neither financial pressure nor the push of new technology will abate soon. The productivity enhancement required to meet future demands with existing resources necessitates innovation and improvement in the execution of health care. Clinical leaders must model the combination of humility, self-doubt, restless curiosity, and courage to explore beyond accepted boundaries that drives organizations to relentless improvement despite colleagues' preferences for stability and familiarity.

Faced with these challenging tasks, how can a leader lead? Clinicians might take on the role more easily if they were in charge or were the acknowledged experts. But few clinicians have access to such tools of authority as budget control or hiring-and-firing ability, and often medical expertise is only one of the elements required to meet patients' needs and achieve shared goals. Typically, other team members have greater expertise in their fields — including such disciplines as operations management — than the leader.

Clinical leadership of expert peers involves inviting the team to define its purpose and design the most effective way of achieving it. Leaders create an appropriate environment, guide the conversation, and occasionally choose among competing options. Clinical leaders are simultaneously part of the team and apart from it.

Without formal authority, the only tool that clinical leaders have is their behavior: what they say, how they say it, and how they model good practice. The choice of language[2] — expressing the team's purpose in terms of creating value, curing disease, preventing harm, and caring for patients — and even tone of voice are essential leadership tools. Above all, leading peers in the four key tasks requires asking questions: "What are we trying to achieve?" "What is the best way to achieve it?" "Are we getting the desired results?" "What can we do to get even better results?" And "are our systems keeping patients safe?"

This model of clinical leadership runs counter to much current practice. A focus on promoting collective action, ceding control to the team, and showing the way by asking others how to get there are contrary to mainstream medical training and culture and the current tort environment. In many places, accepting a clinical leadership role brings

a loss of status and income as well as disdain from peers. Although leadership is making its way into clinical training, the workforce of the near future is already practicing. How can senior leaders enable and encourage front-line leadership among today's clinicians?

Surveys suggest that clinicians want a greater leadership role but feel unprepared[3] or disempowered.[4] Institutional leaders can encourage and support unit-level and front-line clinical leadership by framing the organizational purpose as value creation, giving local leaders the authority to make microsystem changes, tolerating the failure of some new delivery ideas, and creating professional pathways for clinicians who want to make leadership a career option. But data remain the single most important motivator and tool for a clinical leader. High-quality, comparative, unit-level and individual-level clinical and financial data[5] can both create the need for clinician leadership and be the starting point for the four tasks. Other critical resources include protected time, training and mentorship (provided by many academic centers either in house or through collaboration with professional societies and business schools), and clear organizational expectations of clinician performance.

CEOs may resist investing in developing clinical leadership and decentralizing control or may believe the process will be too slow to address current pressures. But the need is evident, the tasks are clear, and the skills are at hand — data orientation, the relentless pursuit of excellence, and a habit of inquiry are all second nature to clinicians. Ultimately, investment in such leaders will be essential to achieving the goals of health care reform.

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The Nursing Workforce in an Era of Health Care Reform

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The foundation of the health care delivery system is its workforce, including the 2.8 million registered nurses (RNs) who provide health care services in countless settings. The importance of RNs is expected to increase in the coming decades, as new models of care delivery, global payment, and a greater emphasis on prevention are embraced. These and other changes associated with health care reform will require the provision of holistic care, greater care coordination, greater adherence to protocols, and improved management of chronic disease — roles that are inherently aligned with the nursing model of care.

Will the nursing workforce be ready to respond to these challenges? Just 10 years ago, the answer would have been far from clear. The number of new entrants into nursing had fallen sharply in the 1990s because the generation of women born after the baby boom was not only smaller in size but had greatly expanded career opportunities in other professions. With fewer people becoming nurses, projections from a decade ago indicated that the size of the workforce would begin declining by the middle of the current decade, resulting in shortages of 500,000 to 1 million RNs by 2020. At the time, few observers thought that interest in nursing would ever increase to the level required to avert the looming shortage.

Yet in a surprising turnaround, merely a decade later, the shortages that were projected to be under way by now have not materialized. In fact, reports indicate that in some areas of the country nursing graduates are experiencing growing delays in obtaining employment.[1] Long-term forecasts now predict growth in the absolute number of RNs and strong per capita growth under certain scenarios.[2] This turnaround is the direct result of unprecedented levels of entry into nursing over the past decade (see graph). After fluctuating at about 80,000 for