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The Need For A National Focus On Health Care Productivity
by Stuart H. Altman, Susan Goldberger, and Stephen C. Crane

The divergent cost containment strategies of the 1980s shared a basic premise: budgets constrained by one or another means would cause providers to become “more efficient” producers of medical care. Identifying and eliminating wasteful practices did not seem so imposing a task. Hospitals, in particular, had been nurtured and shaped by a cost-based payment system that rewarded excess and punished thrift. Yet, as we enter a new decade, we do not find a sleeker and more efficient delivery system. Rather, we find still costly institutions suffering increasing financial distress. The expected revolution in health care productivity based on innovations in service delivery has not taken place.

To be sure, inpatient stays have shortened somewhat, and some outpatient services have replaced inpatient treatments. But little else appears to have changed. Hospitals now employ more people to treat fewer patients than they did in 1983, despite cost-saving incentives under Medicare’s prospective payment system (PPS). Increasing severity of illness does not, by itself, account for this growth in labor inputs. Labor hours per case-mix adjusted admission declined during the first two years of PPS but for the past three years have been on the rise again.

Strategies adopted by private payers to hold down costs both inside and outside the hospital show no better results. The returns from various forms of managed care (for example, health maintenance organizations, preferred provider organizations, and utilization review) have been disappointing. While employers are spending less on inpatient care as a result of managed care than they otherwise would have spent, increases in outpatient costs are absorbing much of this savings.

Labor market trends. The need for the industry to make more effective use of resources has become all the more pressing because of a restructuring of the health care labor market. Health care is an extremely
labor-intensive industry, with labor costs making up 50 percent or more of many hospital budgets. Historically, health employers have been able to take advantage of a large pool of female and minority workers willing to work for relatively low wages. Current demographic and cultural trends underlying the shortage of nurses and other health workers, however, suggest that the days of cheap labor may be over. As the baby boom generation ages, the demand for health care workers is likely to intensify as general labor supply growth slows down. With the demise of a labor market of women who in the past saw few career opportunities outside of nursing and teaching, health care providers compete fiercely with other employers for workers.

Projections of tightening labor markets are not limited to nurses and other skilled health workers. A recent study by the state of New York on supply and demand issues in the health work force highlights the problem facing nursing homes, home health agencies, and other community-based providers in filling nursing aide positions. Shortages at both the high and low ends of the labor market are putting increasing pressure on administrators to raise wages and improve quality of work life. Institutions unable to pass along these costs now face the untenable choice of insolvency or understaffed units. Given the labor-intensive nature of the health industry, if providers cannot tie wage increases and job redesign to productivity improvements, costs will explode.

Promoting Productivity

In the wake of the disappointing results of competition and the cost containment efforts of PPS, it is time to question the assumption that financial necessity alone can serve as midwife to a more efficient health care delivery system. A national effort is under way to advance and disseminate knowledge of the relative clinical effectiveness of various treatments. A comparable effort should be undertaken to find more efficient ways of providing needed services. There is also a clear and separate need to identify organizational arrangements that help clinicians cope with the uncertainty endemic to the practice of medicine in ways other than “if you’re not sure, do more.”

Limitations: past and present. Up until now, our cost containment strategies have placed the full burden on the individual institution—be it hospital, nursing home, or home health agency—to develop more efficient ways to use human and capital resources to produce care. This must change. Absent a tangible plan to help providers become more productive, continuing to ratchet down payments is not likely to lead to the desired result of a health care system that is less costly but still uncom-
promised in quality. Despite increasing pressure from Medicare PPS to limit expenses, hospitals have not been able to sustain the productivity gains they made during the initial years of PPS. This reversal suggests that administrators have reached a limit to the savings they can squeeze out of their institutions through shortened stays, improved scheduling of procedures, and other minor modifications.

Sustainable increases in health care productivity will require a fundamental rethinking of the organization of work. The individual health care institution—the agent expected to adapt to financing incentives on its own—is not likely to be up to that task. Certainly the evidence from other U.S. industries regarding the capacity of individual firms to make productivity breakthroughs is not encouraging. Despite intensifying market pressures to revamp their production processes, broad segments of U.S. industry have not been able to keep pace with the innovations of their Japanese and European competitors. Health care institutions, with no history of efficiency improvements to draw upon and with far more vexing issues to deal with than their counterparts in manufacturing face, are ill-equipped to undertake this reorganization alone.

Health administrators, acting to ensure their institutions’ survival, likely will adopt those strategies that promise the most immediate and certain returns. A recent Institute of Medicine study observes that within health care organizations “there has been little research and experimentation in structuring staffing policies and working environments.”7 Until the task of overhauling the basic organization of work is made more accessible, few administrators will choose this unproven and conflict-laden strategy. Instead, they will resort to those strategies that have worked in the past: limiting access to those unable to pay, shifting costs to vulnerable payers, developing new markets and dropping “unprofitable” services, and lobbying public officials for financial relief.

### Need For A National Focus

If we are to avoid the scenario of more restrictive access and more cost shifting with no noticeable improvement in productivity, there must be specific research and planning on how to do more, or at least the same, with less. And, this new information must be available to those institutions expected to move into the brave new world of efficient health care.

Purpose. Commitment to a national focus on health care productivity would make this task more accessible to all institutions—those well-equipped to meet this challenge and the many smaller, less well endowed institutions that stand little chance of making such an adaptive leap on their own. The purpose of this focus would be to: (1) develop ways to
make better use of resources, both labor and capital, to deliver treatments and services; (2) encourage institutions to improve the “learning curve” of health care organizations so that clinicians and support staff at all levels can share in and build upon the advances of others; and (3) identify organizational arrangements that help clinicians cope with uncertainty without automatically doing more. This effort would complement the task of eliminating inappropriate care through better effectiveness and outcomes research. Thus, progress on cost control would not be completely reliant on the development of new clinical information.

**Public and private sectors.** It is unreasonable to expect that individual health care institutions will undertake the kind of research and development efforts we propose. The hospital that devotes its resources to developing a fundamentally different way of coordinating its labor force could not prevent other hospitals from copying its innovation. By the same token, it could not force these providers to share in the costs of the development of this knowledge. At a minimum, therefore, a cooperative effort among providers is required.

Furthermore, because few providers, or even consortia of providers, could afford the substantial investment required for this kind of research—and even fewer could undertake the risk—both the public and private sectors should be involved. Private foundations, historically key supporters of innovation in health services delivery, once again will need to play an important role to launch this venture. But the major burden must be borne by the public sector, particularly the federal government.

The scope of innovation required to produce a more efficient delivery system and the protective instinct of each sector in the system argue against leaving individual providers to their own devices. The hospital industry probably would not consider innovations that challenge its central role in the delivery system. The same bias likely would hold true for any segment of the health care world. A national focus on health care productivity could encourage all players to rethink how best to fit the different pieces of the delivery system together. It might also provide the direction and leadership to avoid some of the pitfalls of otherwise unmanaged efforts at productivity innovation.

Fundamentally, health care reform is too important to leave to institutional responses and too pressing to leave to chance. The turmoil, uncertainty, and widespread failures and dislocations that mark transition periods in other industries are not tolerable when it comes to health care. We need to find a different path to innovation—a path that moderates disruption and protects patient care without slowing the process of innovation altogether. Social interest in health care is clearly to promote the quick diffusion of any productivity advances and to encourage social
ownership of new ideas. A national effort will help provide the resources to determine what changes are necessary and create the visibility to disseminate the findings.

**Activities For Change**

**Comparative analysis.** What kinds of research and development activities would spur innovation? One important activity would be to compare other health care systems with the U.S. system. Canada, for instance, keeps health costs down not by serving fewer patients or serving patients less in need of care than in the United States, but by using fewer inputs to deliver this care. These savings come from both lower administrative costs and lower direct care costs-per case-mix adjusted discharge. The source of administrative savings—a single public payer and global budgeting of hospitals—is easy to understand. The source of clinical savings is not so obvious. In recent articles on these cost differences, Joseph Newhouse and colleagues and Robert Evans suggest that the next step is to look at the actual ways in which care is delivered in the two countries. For instance, what labor and capital inputs are used for particular treatments? To what extent do different organizational arrangements (for example, methods of clinical decision making, coordination of services, and so on) account for differences in cost? Is Canada experiencing the same trend toward greater reliance on a more specialized and better-educated work force to deliver care? If so, is its system better able to make use of these highly skilled workers to keep costs down? There is a wealth of knowledge to be gained from such comparisons.

Similar comparative and evaluative analyses should be performed on domestic health care institutions and organizations. Staffing ratios and organizational arrangements are known to vary by region and institution. Certain organizations are also suspected to be innovators either by design, by need, or both. Rural institutions, for instance, facing shortages of individuals with critical skills, have developed new ways to deliver services. It is important to identify these innovative institutions and organizational arrangements, to measure their productivity and efficiency, and to assess the reasons for their success or failure. Analysis of a failure can prove as enlightening as consideration of a success. The analyses envisioned here would be similar to the studies of medical practice variations performed by John Wennberg and others, except that the focus would be on productivity and efficiency.

**Utilization analysis.** The driving force for productivity improvements in industries other than health care historically has been improvement in capital. In the health sector, however, improvements in medical technol-
ogy generally have added further to the cost of health care and have been labor increasing rather than labor saving. Even as new technology becomes more routine, labor requirements often do not change. Moreover, the physical design and structure of health care institutions have remained virtually unchanged over the past thirty years, despite substantial changes in medical practice, reimbursement incentives, and modes of organizing the delivery of health services. Analytic studies and administrative attention thus must focus on ways to better use labor, capital, and facility design to increase the efficiency of health care delivery.

Analysis of barriers and constraints. Yet another activity would be to identify and analyze potential barriers and constraints to productivity improvement. It is not sufficient merely to have an idea about how to improve productivity. It is also necessary to understand the factors that might limit or prohibit these changes. For instance, what role does the existing system of facility and occupational licensing and regulation play in dampening responses to problems of productivity? How can these systems be modified to permit appropriate change? How can financial incentives be used most effectively to stimulate and reward productivity improvement, and to avoid or sanction poor performance? What organizational and professional factors must be overcome to promote the adoption of productivity-enhancing changes?

Teamwork training. It is also time for the health care sector to rethink the way it trains both managers and clinicians. Strategies that call for new work relations among caregivers are bound to fail as long as medical schools and residency programs continue to neglect training on cooperative practice styles and team building between physicians and other health professionals. In general, education programs for all levels of health workers need to be subjected to a new level of scrutiny. What changes should be made in the way we educate and train clinicians and administrative staff to produce a work force capable of initiating efficiency improvements?

**A Focus For Debate**

If the crises of cost, access, and quality are to be addressed effectively through the issue of productivity, the national effort must develop a cooperative working relationship among payers, providers, consumers, and policymakers. Placing increasing burdens and expectations upon providers without involving them in the process of developing the plans and rationale for change is a formula for frustration, if not failure, as recent history has shown. Payers, consumers, and policymakers, however, cannot afford to be held hostage by arguments that only providers are
able to interpret what is best for patients and society. For too long, issues of productivity have been missing in the debate over national health policy. It is time to focus attention on this important dimension of the organization and delivery of health services.

NOTES

1. From 1983 to 1987, the number of adjusted admissions (that is, adjusted to reflect increases in outpatient services) to acute care hospitals declined by 5.5 percent. Adjusted patient days declined by 10 percent. Yet, during that same period, the number of full-time equivalent (FTE) employees increased slightly from 3,139,400 to 3,147,600. This small change in the number of employees becomes more significant once these FTE labor inputs are adjusted to reflect changes in the skill level. From 1983 to 1987, the average skill level of hospital employees increased as a result of the substitution of more highly trained for less well trained employees (for example, the substitution of registered nurses for licensed practical nurses and aides). Once this skill-mix adjustment is applied, labor inputs from 1983 to 1987 actually increased by 1.5 percent. See J. Cromwell and B. Butrica, Productivity Trends in PPS and PPS-Excluded Hospitals, 1976–1988 (Needham, Mass.: Health Economics Research, Inc., 1989), Tables 2-1, 2-3, and 2-4.

2. During 1984 and 1985, labor hours per case-mix adjusted discharge declined by 1.8 percent and 2.1 percent, respectively. This productivity improvement is tied to the large drop in inpatient lengths-of-stay during that period. Once lengths-of-stay stabilized in 1986, labor hours per case-mix adjusted discharge began to rise again–1.6 percent in 1986, 1.1 percent in 1987, and 1.5 percent in 1988. For these calculations, labor hours are adjusted by the skill-mix measure developed by Cromwell and Butrica (see Note 1). The measure of case-mix change used is the estimate of real case-mix change developed by the Prospective Payment Assessment Commission (ProPAC) staff. This real case-mix change estimate does not include increases in case-mix that likely reflect improved coding of cases as opposed to changes in actual severity of the patient mix. See Prospective Payment Assessment Commission, Report and Recommendation to the Secretary, U.S. Department of Health and Human Services, 1 March 1989 (Washington, D.C.: ProPAC, 1989), 63–64.


6. For example, according to the Hospital Compensation Service, salaries for staff nurses moved up 9.4 percent in 1988, more than double the 1987 rate. See “Nurses Improved Their Economic Health in 1988,” American Journal of Nursing 89, no. 1 (1989): 124.

7. Institute of Medicine, Committee to Study the Role of Allied Health Personnel of the Institute of Medicine, Allied Health Services: Avoiding Crisis (Washington, D.C.: National Academy Press, 1989), 231.