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OVERVIEW

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In 1910, Abraham Flexner catalyzed a revolution in American medical education with the publication of his, now famous, *Report to the Carnegie Foundation* (Flexner, 1910). In discussing the proper conduct of clinical teaching for physicians, Flexner (1910, pp. 92–93) states that "that method of clinical teaching will be excellent which brings the student into close relation with the patient: close by removing all hindrance to immediate investigation; active in the sense, not merely of offering opportunities, but of imposing responsibilities."

Recently, new hindrances have been placed separating the young clinician from the proper delivery of health care to the patient. It no longer is sufficient for the student of medicine to be aware simply of classic diagnostic and therapeutic techniques. Today's clinician must be prepared to function as a leader and member of a health care team and to perform in a complex health care delivery system that has increasingly become fiscally focused. Unfortunately, as Swick (1998, p. 751) notes, "There is an inherent clash of values between business and medicine: among key business values are profit and competition, while among the traditional values of the medical profession are service, advocacy, and altruism." Success in

this new world of health care will require collaboration between doctors and nonphysician managers (Fitzgerald and Sturt, 1992); however, not only do these professionals often lack common values, but as Orchard (1993, p. 25) notes, they may lack "a common language to discuss them." Moreover, the lack of preparation of physicians to communicate with nonphysician managers and politicians may pose a threat to the practice of the medical profession itself, because, as Gilmore (1992, p. 747) states, "There's no question in my mind that if medical professionals aren't ready to make decisions on health care, other professions will make those decisions for them." Therefore, to work in these divergent worlds and to better serve our patients, in addition to traditional medical skills, today's clinician needs training in health care management and administration.

In its Medical Informatics Objectives, the Association of American Medical Colleges (AAMC) recognizes the manager role for the physician and sets specific goals for knowledge in medical informatics for physicians (AAMC, 1999). The AAMC states, "Physicians must understand and manage costs, manage and work effectively in groups, and effectively manage themselves. They also must understand their roles within the context of the overall health care system" (AAMC, 1999).

PHYSICIANS ARE NOT ALONE IN THEIR INFORMATION NEEDS

This same lack of congruence between the skill set of the practitioner and practical challenges is not limited to health care providers but also afflicts others who would modernize and reform our health care system. Therefore, it is not surprising that, although we have been attempting to institute reforms in the health care system for some years now and have made some gains, there is much more work to be done. Moreover, although we are focused on the American health care system, it is equally clear that the designers of such systems across the world are struggling with the questions of access to care, quality of care, and costs. For us, this means there is an imperative for all those attempting to manage the health care system to gain a greater understanding of how the current system functions and how its component parts are interrelated.

Recognizing these knowledge-base deficiencies on the part of physicians, clinicians from all disciplines, and health care administrators and planners, we believe that it is vitally important that all who share these responsibilities become even more knowledgeable about the administrative aspects of the health care delivery system.

THIS BOOK'S ORGANIZATION

We have assembled a group of readings that we feel address some of the critical knowledge points that such individuals will need to be prepared to contribute to the continuous improvement and redesign of health care delivery systems, whether

in individual practices, hospitals or institutions, health plans, or within regional, state, or federal systems. In short, all of the issues that we discuss are relevant to health care system designers as they move to push their systems into the future.

We will begin with a set of points that characterize the revolutionary forces that have affected health administration over the past 25 years with many continuing into the future. This list is by no means exhaustive. Nevertheless, it is meant to present the diversity of issues driving administrative leaders as they attempt to design their delivery systems for the future.

TRENDS AFFECTING HEALTH ADMINISTRATION

1. *Technology:* The growth and development of technology in all fields of medicine and health care have hardly been overlooked by anyone. At once amazingly positive and troublesome, the management of technological developments and their diffusion is a challenge at every level of the health care system. Individual practitioners need to make careful decisions about which drugs and new equipment are to be added to the practice. Hospital leaders are constantly confronted with competing requests for new technologies that would easily overwhelm the budget, while striving to improve the quality of the care delivered at their institutions. We can be reactionary if we want, but the drive for new developments in medicine is never ending and will rapidly accelerate with such advances as the genome project.

2. *Communication:* Both clinical and administrative leaders have benefited from the advances in communication technology. From simple developments, such as the fax machine and cell phones, to interactive computers that support telemedicine, and complex communication systems, all of these communications advances have greatly facilitated our ability to be connected as a system of providers and administrators. These advances also have served to link physicians and their patients in closer contact than ever before. The future use of the Web, and Internet resources in general, will push communication capabilities even further.

3. *The "Team" Perspective:* As we think about the technical capabilities that communication equipment has brought to us, we cannot fail to recognize the recent developments in the use and building of teams. We have rapidly begun to use teams within institutions and across organizational boundaries. Although team technologies have been around for many years in industry, they have just begun to be used in the health care system by leaders who stress the value of collaborative work across departments and disciplines. Unfortunately, this team-based approach requires both training and new skills that have not been part of traditional medical education and may even be viewed by some as antithetical to the traditional role of the physician.

4. *Information Systems:* Although connected to the general expansion and development of technical and communication capabilities, information systems

have greatly enhanced our ability to assemble and manage data about patients, about institutions, about health care plans, and about systems. The recent investments in information system infrastructure have done much to advance the capabilities of our institutions. Clinical and administrative leaders have been aggressively supporting the development and use of information in the management of patient care and that of the administrative support systems. The recent passage of the Health Insurance Portability and Accountability Act has placed even greater emphasis on the proper use of computerized medical records systems and has increased the financial burden of institutions seeking to modernize their health information systems. Thus, clinical and administrative leaders must continue both their support and their expanding knowledge of this new technology.

5. *Corporatization:* One of the major new developments over the past 20 years has been the gradual evolution of health care institutions from nonprofit community service organizations to economic entities much like modern corporations in any industrial field. Although some clinical and administrative leaders have attempted to resist this movement, most now have accepted the inevitability of the businesslike culture and climate in today's health care organizations. This culture affects organizations at all levels from physician practices to hospitals and extends to health care plans. Many leaders have had to learn to manage their health care institutions in a businesslike manner. This has required them to pay attention to profits, return on investment, and cost management of every aspect of the business. Again, many of these skills are new to clinical leaders. The added challenge provided by this new corporate perspective is to maintain a clear vision of the mission of our health care systems and their ethical underpinnings during this period of medical corporatization.

6. *Consolidation:* With a move to a corporate style of organization and management, we might have foreseen the coming efforts to consolidate many of the health care organizations in the field. For years, hospitals, such as those that are part of academic medical centers (AMCs), could function independently. The development of alliances and mergers, however, has meant that individual independent organizations have had to compete with groups of hospitals and organized providers that have consolidated their clinical capabilities, resources, and economies of scale. The consolidation has been disruptive but has made a contribution to building some efficiencies into the delivery system. There are still a number of organizations in independent or semi-independent status. These organizations will need to seriously evaluate how consolidation will affect their future health as organizations.

7. *Political and Legal Interests:* It is not news to clinical or administrative leaders that politicians have discovered that the health care industry is both a source of problems—with escalating costs being the most outstanding—and a source of never-ending publicity. We have experienced various political reform

efforts, particularly in the past 10 years, and we will continue to see efforts to revise public systems struggling to meet both service delivery goals and cost-containment ceilings. Medicare is one example. Moreover, malpractice attorneys have not been blind to the financial opportunities inherent in the public's demand for the highest quality care and its belief that all untoward medical outcomes must be the result of practitioner error for which blame must be assigned and compensation paid. The rising liability insurance costs and the size of the liability settlements have come to the attention of providers, trial attorneys, and politicians at both the state and the national level. Addressing the issues of public systems and legal liabilities is, without question, a critical issue for the future.

8. *Demographics and Individual Longevity:* We have a health care system that will experience extreme pressures in the coming decades. The demographics of the population in the United States tells us that the rise in aging patients in the next 10 to 15 years will be quite stunning. There will be much pressure on the health care system to address the medical and health care needs of a greatly expanded elderly population. Simultaneously, the growth in new technologies and pharmaceuticals has enabled us to make some gains in longevity while adding considerable expense during the last months of the patient's life. Together, the demographics and the longevity improvements will mean that we need to address capacity to meet this growth in demand, which in turn will increase the financial burden placed on an already stressed health care delivery system.

9. *The Insurance Swamp:* We have been addressing insurance issues in the American health care system for 50 or 60 years at least. We have come to the point, however, at which many Americans—approximately 40 million—are not covered by health insurance. Although many of these citizens receive care through the charity of providers and institutions, not all do. Moreover, the increased financial pressures on health care institutions have severely limited funds available for indigent care. No longer can institutions pass the costs of their indigent patients through the system to their commercially insured patients. Thus, the "insurance swamp"—that is, what we do about the problem—is tied up with the question of how to provide health care to many of our citizens at lower socioeconomic levels. In one of the richest countries on earth, can we afford not to provide minimal care to all citizens? Most would say that we cannot. The problem, however, has been how to provide insurance coverage for the large number of citizens not now covered and how to do so in a financially responsible way.

10. *Changing Doctor–Patient Relationships:* Many of us have grown up with the image of a family physician providing care to us and our family for a lifetime. We have trusted our family physician, and we have depended on seeing him or her on each and every visit to the office. Multiple forces within the health care delivery system, however, have caused the individual family doctor to evolve into a series of busy group practices and clinics that have tended to weaken the

relationship of the patient to a specific physician. Not surprisingly, patients have begun to resent what they perceive to be "factory" or "production line" medicine. Simultaneously, patients have begun to be more assertive about their involvement in care decisions. Thus, we are in a period in which we are trying to determine how best to empower patients while maintaining access to care and the character of the doctor–patient relationship, which traditionally has been perceived to have contributed so much to the quality of medical services. This issue of the doctor–patient relationship is a front-line question for those delivering care and an important one for those attempting to design the future health care delivery system. We must have both a clear policy and an operating style that allows doctors and patients to build the relationships that lead to quality of care, and to understand what are and what are not critical components of that relationship.

11. *Quality of Care:* Beginning in earnest in the late 1980s, the quality of care has been a subject of keen interest. Donabedian's well-known conceptual framework—that understanding and assessing quality is a function of the study of structure, process, and outcome—has driven and continues to drive both research and practical applications of assessment and improvement. We have attended to structure with ratios of beds and physician to patient, with policy and procedure manuals, and other management structures. We have examined process of care with peer review, and most recently, we have focused on assessment of outcomes of care. Thought for some time to be a fad, most recognize that the tracking and improvement of quality of care is a core and continuing element of health administration. We continue to work on methods and procedures even as we struggle for acceptance of quality review by providers.

RESPONSE TO TRENDS: KNOWLEDGE AND SKILLS FOR THE CLINICAL FUTURE

As we developed the structure for this group of readings, we started with a clustering of the issues. What three or four areas of knowledge and skills best describe the needed capabilities of future clinical leaders? We came up with four critical areas:

1. Health care systems, policy, and access
2. Critical organization and management elements
3. Finance, economics, and insurance
4. The future

In the following sections, we introduce the topics and their importance as our authors address them in detail in the balance of the book.

Environmental Issues: Health Care Systems, Politics and Policy, and Access

These are the areas in the health care environment that will determine the milieu in which our health care system must operate. To ignore them is to threaten the integrity of the entire health care deliver system. Therefore, they are vitally important to future clinical and administrative leaders. These also may be cited as "environmental" issues because they are topics that, for the most part, exist outside the boundaries of our health delivery organizations. These areas are systems, politics and policy formation, and access.

Health Systems

The analytical approach taken in this textbook is a "systems" approach, as delineated by Kast and Rosenzweig and expanded in Chapter 1. The systems analytical techniques provide a way of dissecting an organization and studying its critical component parts. In this manner, we can determine what works well and what does not in any organization, thereby providing a basis for designing quality in new systems or formulating repairs in defective ones. The "systems" approach is only one of many ways of viewing organizations. Nevertheless, it provides a unifying theme for this textbook and a useful tool for the individual approaching organizations and their management.

Politics and Policy

The good news is that we live in a democracy. The bad news (from the perspective of the health care planner) is that there is no guarantee that even the best health plans will become health policy unless the planner is successful in making his or her proposals appeal to the populace, and particularly, to legislators. Chapter 2 examines the relationship of politics with policy. Although at first, this issue may seem synonymous with "health law," there are important differences. For the purpose of this discussion, health law refers to specific legislation that ought to be enacted. Unfortunately, even if we believe that the health planner has devised the ideal program, politics and policy conflicts may prevent its successful enactment.

Perhaps at this juncture, the reader is tempted to exclaim, "So tell me something that is not so obvious!" Unfortunately, what may be intuitive to the reader is not so obvious to many health care professionals. Health care providers tend to base decisions on what they perceive to be in the best interest of the individual patient depending on medical studies or their own clinical experience. They are not used to viewing an entire group of individuals as their "patient" and making

decisions for the group, or to delegating clinically important decisions to others, particularly if the decision is to be based on politics. Rather, the physician is experienced in "writing orders" for those treatments that he or she believes are in the best interest of the patient.

If health care providers are to participate in designing the health care delivery system of the future, they must learn a new skill set encompassing lobbying and public persuasion. These skills and the need for them are not part of the health provider's traditional professional education and they must become included in that education.

Poverty, Ethics, and Access

Physicians always have cared for the poor as part of their Hippocratic responsibilities. In the days of the single practitioner family doctor, fees charged to the more affluent patients helped cover the expenses of indigent care. Similarly, even hospitals passed on the cost of indigent care to the more affluent through increased charges to commercial insurance. Recently, however, those third-party payers have balked at funding more than they perceive to be the usual and customary expenses for their insurance customers. Such insurance giants have no interest in funding indigent care through traditional indirect mechanisms. Thus, the indigent have come to depend on the states and federal government to underwrite their health care expenses. Those on the watershed of the poverty line are most likely to go without care, being judged too "wealthy" for government programs and being too poor to afford commercial insurance. Quite literally, their health care needs are "on the line" every day. John Judson has much personal experience in delivering care to needy patients—his chapter (Chapter 3) raises some compelling questions about access and quality.

Environmental Summary

By now, the reader may have surmised that the overall health care environment may seem hostile to the practitioner seeking to deliver the highest quality care. Multiple external forces affect many decisions that 20 years ago would be perceived as purely medical ones on the part of the practitioner. If clinicians are to survive in such an environment and to avoid a sense of helplessness, they must become knowledgeable regarding it, and they must perceive that they have a legitimate role in helping to shape their future practice milieu. The purpose of this book is to provide health care practitioners and administrators with basic information to assist them in understanding the "system" and the tools to participate in shaping their future.

Having explored the external environment for health care delivery, we next turn to internal affairs, specifically, management, and design.

Critical Organization and Management Elements

Leadership

In characterizing a political party, it was once said that if there were two members of the party in one room, there would be three opinions. At times, it seems that the same might be said of health care practitioners, particularly physicians. Those who care for patients tend to perceive themselves as independent practitioners who willingly accept the responsibility for "giving orders." Conversely, they tend to resent direction by others, particularly nonclinicians. Such attitudes emphasize the need for health care practitioners to familiarize themselves with the issues facing our health care delivery system so they are able to assume leadership roles, where appropriate, to meet the challenges that our health care system faces. Moreover, clinicians in training must be prepared to function as members of a health care delivery team even if they are not the one in command of that team. These changes in perspective will represent a paradigm shift from that which is traditional for clinicians. Nevertheless, they must be prepared through their professional training to integrate themselves into the new "system" if they are to function properly. This is indeed "tough work," as Wiley Souba defines the task in Chapter 4.

A rather jaundiced view of leadership states that the way to be a leader is to determine which way the crowd is moving and then to run out ahead of it. In a more refined sense, this definition also might be applied to strategic planning. In reality, effective leaders must be able to envision the future and to motivate people to move or change direction to be prepared for it. Having said this, the acceptable styles of leadership have changed. No longer can clinicians expect to "give orders" and have them followed with unquestioning obedience. Rather, the health leaders of tomorrow must be prepared to motivate others through personal excellence, informed vision, and knowledge of organizational behavior. Such individuals must be prepared to properly consider and analyze the perspectives of the multiple other stakeholders in health care before formulating their future vision.

Networks and Information Systems

Because no individual or group of individuals will control the system, the health leader must be required to seek consensus and to build networks and coalitions of similarly minded providers and organizations. In Chapter 5, Rupert Chisholm discusses this vital skill—designing and implementing networks.

In Chapter 6, Michael Weitekamp notes the rapid and continuing evolution of management information systems for health care, which are being driven by

environmental forces and technological advances. He points out the need for centralized strategic and operational planning and the need for new leadership skills to meet the challenges that these changes present. Although large amounts of capital must be expended for management information systems, the investment is expected to provide a significant return. He uses the ongoing development of the Penn State clinical information system to illustrate key points of his thesis.

Health Care Quality

Although everyone is in favor of increasing the quality of health care in the United States, a key question is "How do we get there?" In Chapter 7, James Ziegenfuss provides a "double-track" process for the application of continuous quality improvement (CQI) programs. In this chapter, he explores the need to understand the root causes for quality gaps in preparation for the process of remedial action. In track 1, he provides five steps to enable leaders to make strategic decisions to support quality. Track 2 contains 10 steps to guide individual group problem-solving work.

Unfortunately, physicians frequently are ill prepared to approach quality care problems. Such inadequate preparation can be a particular problem at AMCs that, ironically, are entrusted with training tomorrow's clinicians. Joseph Sassani (see Chapter 8) uses the systems model to highlight the academic clinician's perspective on CQI by contrasting it with financial issues that are discussed in his subsequent chapter (Chapter 14) as represented by decreased physician reimbursement for clinical services. In this way, reasons why academic physicians, in particular, may be reluctant or less well prepared to embrace CQI are provided. He then discusses means to overcome this resistance.

It is difficult to improve health care quality if we do not know our patients' concerns. In Chapter 9, Christopher McKenna explores various methods that fit into the overarching effort to listen to stakeholders. Each method that relies on self-reports can benefit from a reality check that direct observation provides. He notes that no one method will prove adequate for listening to all classes of stakeholders or to any one class in all circumstances. Often, applying two methods to the same listening task provides a more complete description of what stakeholders have to say. Having an assortment of tools allows the listeners to select one or more tools appropriate for the job.

A key lesson to be learned from the failures of the abortive merger movement is that there are no quick structural fixes for our health care delivery systems. Rather, the "soft" things, such as organization culture and its constituent components of mission, goals, and values, are key to organizational success. In Chapter 10, Kathleen Fisher notes that it is the harnessing of these characteristics that is most dependent on the exercise of effective leadership. Such skills will come only with formal education in the principles of leadership and with search and

selection committees who understand their newfound importance relative to the traditional measures of competence for leadership such as *curriculum vitae* thickness.

Finance, Economics, and Insurance

Although health care providers first and foremost choose their careers based on a desire to better their patients' well-being, clinicians derive personal satisfaction and more than an above-average standard of living from their patient-related activities. The resulting duality of interests, self versus patient, has always created an ethical tension for health care providers. As reimbursement becomes more based on questions of "compliance" rather than of personal judgment, there is great danger that the clinician will see the reimbursement process as a game to be played and not an ethical obligation to the patient both directly and indirectly. Therefore, formal knowledge of the reimbursement system and the principles upon which it is based will be required of ethical clinicians if they are to put these obligations into the proper perspective. In Chapter 11, David Sarcone dissects the physician–patient relationship relative to structural changes in the health care delivery system. He concludes that the role of the patient, the commitment of the physician, and the participation of the insurers in the process must be redefined. He notes the costs that will be incurred by such restructuring but concludes that there should be a net benefit to the public.

As noted earlier, the future health care system will not run without financial support, which is a constant struggle now, and we will no longer continue to be operational without addressing the "insurance swamp." Importantly, clinical leaders must understand the roots and basics of the insurance system as it is currently, to make contributions to its redesign. As a sage observer has opined, "Health insurance... can't live with it and can't function without it." Having expressed the vexation of most clinicians, we now feel compelled to express another verity, "Clinicians, learn to work with it. It isn't going anywhere." If health care providers are to strike any alliances with the insurance entities, no matter how awkward such alliances may seem, clinicians must be prepared to view health care dollars as a limited resource resulting in a zero-sum proposition. Thus, it becomes the responsibility of the health care provider to husband the dollars of the insurance carrier to ensure an adequate supply of funds to pay for necessary care (we overlook investor profits to simplify the discussion). In this way, ironically, relative to the traditional health care perspective, cost containment becomes a component of quality care and at least, in part, the responsibility of the health care provider (a systems and interconnected view of the cost problem is pursued by James Ziegenfuss and J. Marvin Bentley in Chapter 13). Therefore, it is counterproductive for the clinician to exclaim, "This isn't why I went to medical

school!" If the clinician, who has the greatest knowledge of what is necessary for the patient's welfare, does not accept this responsibility, others less knowledgeable will do it for him or her to the detriment of the quality of care.

Nowhere are the economic pressures affecting our health care system being felt more strongly and causing more upheaval than in our AMCs. In the past, surplus clinical dollars could be used to support medical schools and their educational goals. Now, academic clinicians are the focus of acute economic pressures that threaten their ability to maintain their traditional roles in teaching, research, and patient care. In Chapter 14, Joseph Sassani analyzes these multiple economic forces relative to the rewards system structure within the AMC. He provides approaches to the problem for those who must address these issues while continuing to support the education of tomorrow's health care professionals.

The Future

We already have referred to the concept that the health care system is a dynamic entity responding to many inputs and responsible for multiple outputs. In many ways, it represents a vehicle that is constantly in a state of redesign and reconstruction even while it undertakes an arduous journey. Those who crew this vehicle must fulfill many roles if they are to support its mission, which is no less than the continued and future health of the entire community. Therefore, we expect clinical leaders to go beyond an understanding of the health system as it is. We expect them to help design the system of the future by bringing to the work imagination and innovation. We have now some useful tools for pushing out the descriptions of the future; in Chapter 15, James Ziegenfuss presents three:

- For health care providers to meet these responsibilities, they must have an understanding of the principles and tools that go into such processes as strategic planning.
- Moreover, they must understand organizational behavior in order to design organizational structures and reward systems congruent with their future focused vision.
- Such knowledge must be included in professional curricula and provided as continuing education for health providers already in practice.

Who will teach us the skills we must learn? David Chia believes this learning occurs during the physician's primary training (see Chapter 16). AMCs are reeling under all of the forces we already have cited plus their traditional teaching responsibilities. Not only are many such institutions unprepared by virtue of their faculty complement to take on the new teaching responsibilities to which we have alluded, but they also have fewer and, possibly, inadequate financial resources to meet even the demands of the status quo, let alone these newer responsibilities.

Yet, it is to the AMCs that we must turn to educate the health providers of the future.

Kristine Lowther and John Russell believe that we must work in a preventive mode, decreasing the demand for acute care by building healthy populations (see Chapter 17). They cite the Healthy Communities Movement that can be used by groups of citizens to identify health needs and organize to meet them, particularly when these needs are not being met by existing agencies. Most importantly, it provides citizens with the tools to improve their own health through disease prevention. Nevertheless, these activities require important organizational skills to mobilize many sectors of the community.

In the final analysis, the world of health care is a dynamic one, which is evolving continuously. No one textbook can encompass all of its facets. We know that these readings will not answer all questions, but we believe they will provide a foundation for addressing some critical ones, and we hope they will incite greater interest by clinical leaders in health administration as a critical component of total quality care.

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CHAPTER 1

Health Administration

Systems, Policy, and Management[1]

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This chapter discusses the use of the Kast and Rosenzweig systems and contingency model for teaching and practice in organizational analysis and planning, management policy, and organizational development. The need for an organizational model for graduate students and field-based managers and executives is identified. The model is presented beginning with the Kast and Rosenzweig work, with integration of research by Daft, Schein, Trist, Deal and Kennedy, Ackoff, Delbecq, and Mintzberg. The teaching and practice uses of the model in four areas are presented, including the following:

- Organizational analysis
- Organizational planning
- Management policymaking
- Organizational development

[1]First published as "Are you growing systems thinking managers? Use a systems model to teach and practice organizational analysis and planning, management policy and organization development" Systems Practice & Action Research 1992; used with permission.

In each area, case examples of the use of the model in teaching and practice are presented and needs for future research and implications for the use of the model are discussed.

How can academics and professional managers use organizational theory and systems thinking in teaching and practice? Can a shared view of the nature of organization enhance our ability to teach and practice effectively?

This chapter offers one approach used in a graduate administration program and in a variety of field projects that effectively links teaching and practice.

Academics and practicing managers and executives continually search for methodologies and concepts that will help them develop their organizations, including the planning and policymaking work that contributes to efficiency and effectiveness. In graduate schools of business and public administration and in day-to-day management activities, we often forget that a set of assumptions about the nature of organization forms the basis for our thinking about strategies and actions. When managers engage in strategic planning in organizations, for example, they rarely talk about the model of the organization implicit in planning participants' minds. This, too, is the case when we teach graduate students in courses such as planning, management policy, and program evaluation.

Managers, academics, and consultants need to consider the following two changes:

1. We need to make explicit the underlying assumptions that drive our discussions of organizational analysis and planning, management policymaking, and organizational development.
2. We need to develop and use models that will give both students and managers a starting point for thinking about planning, policy, and development in an organizational theory context.

These needs are evident in a series of courses at the graduate level. For example, relevant courses in business school include strategic planning, strategic management, management policy, organizational behavior, and organizational development; in schools of public administration, courses include health care management, in program planning and evaluation, in public policy, and in management information systems. In practice, it is rare to hear managers engage in a dialogue that includes clear recognition of the assumptions of their organizational view of the world.

Some model is needed to engage both students and practicing executives and managers in thinking about their assumptions of the nature of the organization. This chapter discusses the usefulness of one model, originally developed by Kast and Rosenzweig (1985), which has been used and adapted over the last 18 years or more by myself. In systems thinking fashion, the paper is integrationist and practical, linking the work of Kast and Rosenzweig (1985) with that of Schein (1985), Daft (1983), Trist (1981), Deal and Kennedy (1982),

Ackoff (1970, 1981), Delbecq (1986), and Mintzberg (1973), as well as with my own applied work in developing and using systems models in planning (Ziegenfuss, 1985, 1989, 2002). Although there is certainly further developmental work to be done, both students and managers have found this model to be quite helpful and "user friendly."

Four points further establish the argument for selection of a model for use in courses and practice.

THE NEED FOR A MODEL

As stated earlier, there are four areas of teaching and management work where a model of the organization is implicit or explicit: organizational analysis, organizational planning, management policymaking, and organizational development.

First, there are points in public and private company life where managers must analyze the state of the organization—for example, in planning, in program evaluation, and in annual reviews for budgeting purposes. The analysis of the organization's performance necessitates some understanding of the nature of organization, to establish the target subjects. In the not-too-distant organization theory past, analysis would focus on structure as the key set of variables. If organizational performance is suffering, it must be a structural problem. Therefore, a change in the table of organization—a reorganization—would be the recommendation.

However, we have found increasingly that a narrowly defined, structurally focused view of the organization is no longer appropriate. The systems view has brought in the environment, the technology, the psychological system, management behaviors, and corporate culture. Thus, organizational analysis now involves a multisystem perspective based on the systems analyst's view of the nature of organization.

Second, all organizations engage in operational, long-range, and to some extent, strategic planning. We intend to "plan for the whole organization." Often this translates to a focus on technology and management without recognition of the whole organization. It seems that there is an often limited recognition of organizational environment. More currently, strategic planning is best known for its external orientation with an implied organizational model that includes both environment and a variety of organizational subsystems.

Third, management policy is common to all organizations, so we purport to teach management policymaking. However, we have neglected several aspects of management policy work as a result of a set of assumptions about the way in which organizations are defined and function. If we make management policies, recognizing only internal considerations, for example, we neglect the environment. If we make management policies thinking only about the impact of

structure and technology, we neglect policy effects on culture, individual values, commitment, and management development opportunities.

In our university courses on management policy and in our practicing management policy change and development work, we need to focus on those aspects of the organization that are causing a need for change (systems diagnosis) and what the likely organizational systems impacts of a management policy change are. For example, what kind of impact will a smoke-free policy have on the organization as a whole, including personnel turnover, the psychological set of the workforce, and corporate culture beliefs about health?

Fourth and finally, organization development may be too focused on limited aspects of the organization. Some organization development specialists target technology, others structure, and yet others the psychological side of the organization. However, organizational development work "writ large" is intended to subsume all of the systems of the organization from environment to technology, to structure, to psychological set, to management activities and corporate culture. We need a model of the organization that is rich enough to encompass the totality of organizational development initiatives.

To summarize the needs, we must have a model of organization that can become the basis for enhanced understanding through teaching and more effective practice of organizational analysis and planning, management policymaking, and organizational development. We admit at the start that there are many organizational theory models from which to choose. However, it matters less which one we choose than that we choose one. In my experience, the Kast and Rosenzweig (1985) model has been particularly effective for teaching both graduate management students and practicing executives and managers about the nature of the organization for which they would like to analyze and plan, make policy, and develop.

A brief presentation of the model as used will lead us to the teaching and practice examples.

THE KAST AND ROSENZWEIG MODEL: ADAPTED

In my training, I was originally exposed to the Kast and Rosenzweig model in a master's program in public administration. Subsequent reviews of other models in doctoral training and research over the years have led me to conclude that the Kast and Rosenzweig model is one that is both understandable and conceptually useful for student training and for teaching executives, managers, and clinicians. The model presented here uses only the skeleton of the Kast and Rosenzweig presentation (1985).

However, I have found that the model even in brief is a conceptually simple and elegant perspective of the nature of organization that is extremely accessible to students and managers—"user friendly," if you will. My contribution involves

the linkage of other researches with the basic Kast and Rosenzweig model, including work by Schein (1985), Daft (1983), Trist (1981), Deal and Kennedy (1982), Ackoff (1970, 1981), and Delbecq (1986) through my own systems integrationist orientation (Ziegenfuss, 1982, 1985, 1989, 2002).

This section defines the Kast and Rosenzweig model in brief and includes the work of the aforementioned authors presented in the format used for both teaching and practice.

The model has been part of a series of courses in a graduate administration program including the following:

- Strategic planning
- Management policy
- Organization behavior
- Organization and management consultation
- Health systems organization
- Program planning and evaluation
- Seminars on patients' rights and health care reimbursement systems impact

In each of these courses, there was a need for a model of organization that could be briefly communicated and understood by the class—a shared view of the nature of the organization. The following comments on the history of organization theory are a prelude to the organizational point of view of Kast and Rosenzweig (1985).

Organizations: Definition and Systems

Organization theory attempts to define the theory of the creation and functioning of organizations through a collection of schools of thought. Each school of theory, for example, those defined by Scott (1961)—classical/structural, neoclassical/human relations, modern/systems—is an explanation of "organizational reality." As each school's position proves to be limited given new research, a new theory becomes the accepted way of viewing the organization. Almost unconsciously, theorists seem to assume that an integrated model containing many theories is not possible. Integration and understanding are last in the fight for theoretical dominance.

Every school of organization theory offers a view of a complex reality and teaches its followers (i.e., students, researchers, and practitioners) to "see" reality in that way. Although this develops theories, it hinders the ability of students and managers to see the organization in other ways. Recent theories attempt to be more integrationist.

Systems theory is a search for general principles that are the formative guidelines of all organizations. These general principles are either characteristics (e.g., the concepts of purpose, environment, hierarchy, feedback, and boundary)

or actions (e.g., adaptation, exploration, differentiation, and integration). Current organization theory conceptualizes the organization as a system of elements, interacting subsystems, and processes of integration with a constant emphasis on the whole. Organization theory now focuses on integrated systems and socio-technical thinking (Trist, 1981). These subsystems include the nature of the work, the structure of the organization, and the individual and group behaviors that make up a social system.

There are several systems-oriented theorists in this school; Kast and Rosenzweig are the spokespersons used here. Their conception of the organization is consistent with the socio-technical thinking increasingly accepted in the field:

> We view the organization as an open, socio-technical system composed of a number of subsystems ... [Figure 1.1]. It receives inputs of energy, information, and materials from the environment, transforms these, and returns output to the environment. Under this view, an organization is not simply a technical or a social system. Rather, it is the structuring and integrating of human activities around various technologies. The technologies affect the types of inputs into the organization, the nature of the transformation processes, and the outputs from the system. However, the social system determines the effectiveness and efficiency of the utilization of the technology. (Kast and Rosenzweig, 1985)

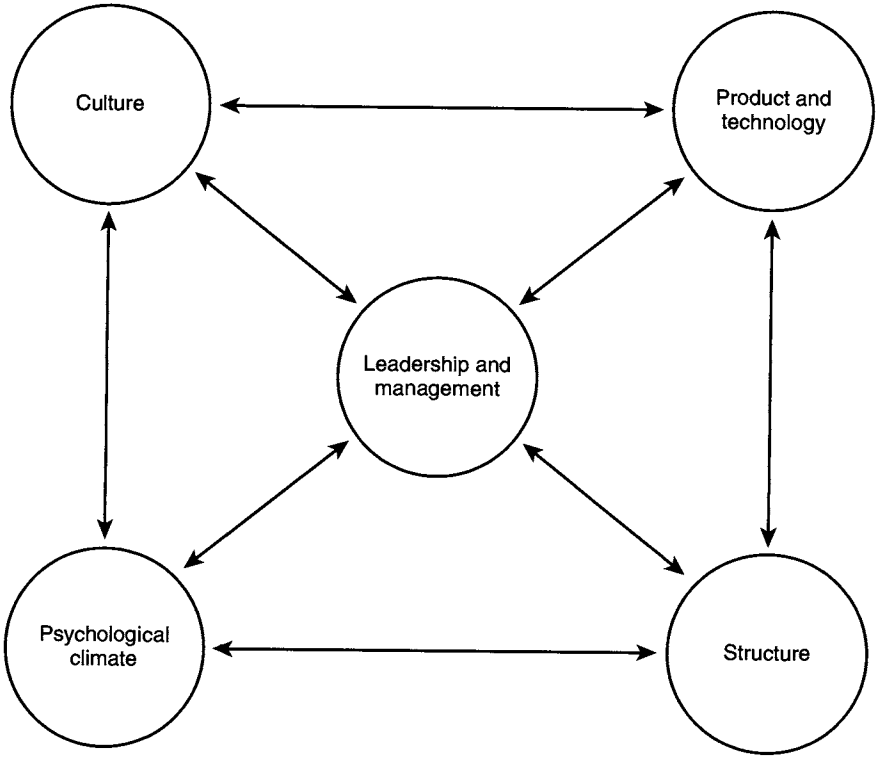
These subsystems are defined by Kast and Rosenzweig under five titles:

1. The goals and values subsystem
2. The technical subsystem
3. The structural subsystem
4. The psychosocial subsystem
5. The managerial subsystem

The subsystems and their relation to the organizational environment and to planning, policymaking, and organization development are represented in Figure 1.1, an illustration of this model of the organization. To illustrate the model's use in teaching and practice, we need a brief description of each of these subsystems defined by Kast and Rosenzweig and other theorists.

Goals and Values

In Kast and Rosenzweig's view, the linkage of organizational goals and values is one subsystem. This subsystem combines the goals and values of the members of the organization with the goals and values of customers, clients, and citizens of the broader socio-cultural environment. Certain goals determined by society must be accomplished by the organization, to generate resources. In a broader sense, this also includes the current notion of corporate culture, particularly the levels of cultural understanding and the concepts of internal and external adaptation (Schein, 1985).



SOCIOTECHNICAL SYSTEMS VIEW

FIGURE 1.1 Organization and management problem solving: the diagnostic targets. (From Ziegenfuss, J.T. (2002), *Organization and Management Problem Solving: A Systems and Consulting Approach*, Thousand Oaks, Califo., Sage. Used with permission.)

The goals, values, and cultural system are defined by the heroes, rites, and rituals that are together called *corporate* or *organizational culture* (Deal and Kennedy, 1982).

TECHNICAL

The knowledge and skills required for task completion—the transformation of inputs into outputs—are called the *technical system*. This system is defined by the task requirements of the organization—for example, varying from manufacturing to medical care to education. Manufacturing automobile technology differs significantly from the technologies used in an oil refinery or an electronics company. University task requirements and technology differ from those of a hospital. The technical subsystem is defined by the physical plant and equipment and the special knowledge and skills required to carry out the work.

As I have defined it, the technical subsystem includes major business activities that would be planned for, such as production, sales, marketing, and support services, at the macro level (Ackoff, 1981) and the variables of the primary work system at the micro level—workgroup, internal regulation, redundancy of functions, discretionary work roles, complementary, and task variety (Trist, 1981). The technology contributes to organization structure and to the definition of the psychosocial subsystem.

Structural

The ways in which the tasks of the organization are divided (differentiation) and coordinated (integration) define the structural subsystem. This subsystem is indicated by organization charts, by positions and job descriptions, by rules and procedures, and by patterns of authority, communication, and work flow. The organization's structure creates the formal relations between the technical and the psychosocial subsystem and is defined in Daft's (1983) view by eight characteristics:

Formalization
Specialization
Standardization
Hierarchy of authority
Centralization
Complexity
Professionalism
Personnel configuration

Other interactions and relationships that link the technical and psychosocial subsystems outside the formal structure are part of the "informal" organization, encompassed by the label "psychosocial subsystem."

Psychosocial

Every organization has a psychosocial subsystem that is composed of individual characteristics and of groups in interaction. Subsystem elements include the following:

Individual behavior and motivation
Status and role relationships
Group dynamics
Influence systems and values, attitudes, and expectations of the people as individuals and in groups

The psychosocial subsystem is shaped both by *external* environmental forces and by the technology and structure of the internal organization. These outside

and inside influences create an "organizational climate" in which managers and employees act out their roles and complete their work activities. Psychosocial systems in different organizations differ significantly, for example, one hospital varies from another and the climate in the clinical laboratory is not the same as that of the surgery department. Psychosocial aspects of the organization are shaped and supported by management.

Managerial

The managerial subsystem addresses these external and internal systems by relating the organization to its environment, by setting goals, by planning, by designing the structure, and by creating control processes. In this system, managers use interpersonal, informational, and decisional roles (Mintzberg, 1973). Through planning, organizing, developing, directing or leading, and controlling, this subsystem coordinates and integrates the goals, values, and technical, structural, and psychosocial elements.

Each managerial activity can be further defined. Here, for example, the planning activity could follow Ackoff's (1981) idealized design model with four steps:

Defining a current scenario
Creating the desired future
Comparing the present and future
Choosing strategy and action

The directing–leading aspect of management incorporates Delbecq's (1986) leadership patterns:

Visioning
Communication
People focus
Endurance
Innovation

Other definitions could be used as well.

Systems in Summary

Early views of teachers and managers emphasized the structural and technical subsystems. The human relationists and behavioral scientists emphasized the psychosocial subsystem, teaching students and managers to focus their attention on motivation, group dynamics, and people-oriented factors. The management–science school emphasized the managerial subsystem and methods for quantifying decision-making and control processes. Each approach to organization and

management (i.e., each school of theory) emphasized a particular subsystem, with little recognition of the importance of the others.

More recent approaches represented by the Kast and Rosenzweig model (with Schein [1985], Daft [1983], Delbecq [1986], Trist [1981], and Ackoff [1981] added) view the organization as an open, socio-technical system with subsystems and interactions. All of the systems are coproducers of organization behavior (Ackoff, 1974). Organization behaviors are explained as a result of the combined influences of goals and values, technology, structure, and psychosocial and managerial characteristics and actions.

MODEL USE IN TEACHING AND PRACTICE

How can organizational systems thinking be used in teaching and practice? To inform teaching and practice in organizational analysis, planning, policymaking, and development, students and managers need an understanding and common conception of what an organization is. The socio-technical system view developed by Kast and Rosenzweig is both a general perspective and a specific model that portrays the organization (all public and private organizations) as being composed of five subsystems:

Goals and values
Technical
Structural
Psychosocial
Managerial

These five subsystems are the internal elements of the organization to be considered when teaching and practicing analysis and planning, policy, and development. As a whole, these subsystems and their interrelationships *are* the organization to be analyzed and planned for—the target of policymaking and organizational development.

Teaching and practice examples of four activities—analysis, planning, policy, and development—illustrate how the model has been used to grow systems thinking managers.

ORGANIZATIONAL ANALYSIS

Executives and managers must conduct organizational analyses to determine how their organization is functioning, both on a day-to-day basis and for planning for the future.

In one graduate planning course, the model is used to guide the internal strengths–weaknesses analysis in strategic planning processes. Developing managers use the model as a guide—a common framework for analysis of the current status of the organization—so they can plan for the future. Which of the subsystems are strengths? Which are needs?

In public administration programs, a course frequently offered is called *program planning and analysis*. The course focuses on the assessment of programs in a variety of federal, state, and local government agencies and on the efforts of nonprofit agencies to provide services to the community. This organizational model can be used to identify the specific targets for analysis at the program and organizational level.

In the private sector, both division managers and executives concerned with the performance of the organization as a whole must engage in "organizational auditing." While executives frequently focus on the output—analysis of the quality of goods and services and the profits resulting from them—they must also be concerned with the way in which the organization operates—process. This organizational auditing is done as a part of strategic planning, is implicit in decisions to merge or be acquired, and is a basis for rethinking organizational designs when problems or crises arise. This model can be used in business school courses to teach new students about these processes.

During analysis, students and managers often want to pay attention to one or two output measures, neglecting the richness of organizational systems. However, they need to learn to consider the full context of their organizations, from technology to structure to people to management to culture, as two practice examples illustrate.

In the first example, an association of truck dealerships was concerned about management–labor relations. This was not a formal conflict in a unionized organization but a feeling that internal labor–management relationships were not "as they should be." The organization secured outside assistance for a diagnostic phase designed to establish an understanding of the nature of the situation.

During early diagnostic discussions, the executive was concentrating on several key aspects of the relationship: the lack of new projects, low motivation, and poor communication. These were used as lead items to introduce a broader analysis of the organizational situation. The table of variables derived from the Kast and Rosenzweig model was used to guide the diagnostic process. A group of approximately 30 staff members in two different sessions engaged in a process of assessing the organization's internal state, including its technologies, its structure, its psychological set, its management behaviors, and management at large. From this analysis came a set of corrective and developmental actions (e.g., personnel policies, regular staff meetings, and more defined structure) that the organization pursued over the next several years. Problem-solving responses were multisystem based, recognizing the "whole" of the organization.

In the second example, a trade association of specialized professionals received a consulting group's report heavily critical of its communication operations. The executive staff and board began to discuss a limited response to the "communications problem," but there was much uncertainty about action. However, discussions with an outside consultant indicated that the communications problem in an association necessitates a wide-ranging review of the core technology of association work—communication with members, with the public, and with a variety of stakeholders. This systems model was used to help the organization identify its organizational strengths and needs in several planning sessions. This perspective pushed the communication problem to a broader strategic context and toward organizationwide responses.

These examples indicate that a systems model such as the Kast and Rosenzweig one is useful in teaching management students and in helping practicing managers to define the target and context of organizational problems. Both groups learn about organizational theory assumptions behind management audits, organizational assessments, and the strengths and needs analyses that are integral to management operations and a part of redesigns that may result from mergers and acquisitions.

There is additional application of the model in the planning area.

Organizational Planning

In choosing different models and methods of planning, students, executives, and managers must be informed about the nature of the organization for which they are planning. Many organizations use a strategic planning process that includes some internal analysis. The internal analysis step requires that planning participants assess the state of the organization. Like the assessment rationale in the relationship and communication discussions noted earlier, strategic planning participants must develop a clear understanding of the strengths and weaknesses of their internal organization. Although some executives, managers, and students want to focus on technology and structure, they must be led to a broader understanding of the nature of the organization—necessitating a more comprehensive internal review (Ziegenfuss, 1989, 2002).

The Kast and Rosenzweig model used in planning enables teachers and facilitators to shift students, executives, and managers into this broader conception of the organization. At the internal analysis point in strategic planning, participants can be asked for their assessment of the strengths and weaknesses of each of the five subsystems of their organization: technology, structure, psychosocial, managerial, and cultural. In two cases in which I was recently engaged as facilitator, this approach was used.

In the first case, I assisted a federal government hospital in strategic planning using a model incorporating the idealized design work of Ackoff (1970, 1981) and the systems thinking of Kast and Rosenzweig (1985) and others. At the planning group's retreat, participants were asked to identify the strengths and needs of each of the five subsystems—internal analysis using a table of variables. There was little concern with forcing an exact classification of individual variables in each of the subsystems. Instead, the model was used as a springboard for generating discussion on multiple aspects of the internal organization. The total systems perspective broadened the areas for review for the planning group, leading the group to a more comprehensive analysis.

In the second example of the model's use, the planning conducted was at the department level of a medical college. The anesthesiology department followed the same steps designed to link their department-level planning to a university-wide strategic planning effort. This case led the planners to an internal analysis of the department's technology, structural, psychosocial, managerial, and cultural subsystems. The chairman and five senior faculty members used the systems model to define their department as it currently existed, a comprehensive view including culture and the medical technology that would naturally be the physicians' primary focus.

Through use of the model, planners in organizations and students in strategic planning began to "see" a broader organizational reality. This same requirement for a broad perspective exists in management policy.

Management Policymaking and Change

The systems model of the organization is also useful for teaching and making management policy. Students and practicing managers confront problems in reducing or redirecting organization behavior or in generating new behavior. A challenge for executives, managers, employees, and students is how to assess the effect of policy changes made in response to organizational problems. The teaching opportunity is great, as nearly every business and public management school has a management policy course.

First, consider the need for management policy action in terms of the model. What is the problem in the organization to which the policy is to be directed? This leads us to the question of the derivation of the problem, that is, where is the subject problem within the managers' and students' conception of the organization?

For those students, executives, and managers with a limited view of the nature of their organizations, policy problems are technological or structural. However, a more encompassing view of the organization suggests that policy problems can be rooted in technology, in structure, in individual and group relations, in management

strategies and actions, and/or in the culture of the organization itself. A systems view enlarges the diagnostic starting point for policy analysis and identifies the range of potential initiating factors for new and altered management policies.

Second, this organizational systems perspective is useful for considering outcomes of proposed management policies. For students, executives, and managers with a limited perspective, the answer to a policy impact question might be quite simply a single-dimension change in individual and group behavior, or structure, or technology. With a broader view, managers can expect multiple effects from policy change. Two examples illustrate this point.

Several years ago one of my students outlined policy change effects in a computer vendor problem. As director of the computer center, she was asked to provide support to all medical school faculty in their personal computer use. The faculty wanted maximum freedom to choose any hardware and software vendors, particularly as some physicians focused on highly specialized medical science problems. However, support for 20–30 differing manufacturing and operations configurations was too much for the computer center's resources. A management policy limiting vendor choice was proposed—a simple policy with surprisingly large implications.

The policy impact began to emerge as systems questions arose. Did this mean the medical school would centralize computer control (structure)? Was faculty freedom being curtailed (decreased technical autonomy), and would faculty job satisfaction decrease (psychosocial)? Was management exercising administrative control where it should not be (managerial)? And what was happening to the culture of the organization? Was administrative efficiency to dominate scientific freedom (goals and values)? Without a careful accounting for multisystems effects, the policy proposal could have been a disaster.

The second case considers the results of a change in a university's tenure and promotion policies. A major policy shift to an emphasis on research in tenure and promotion decisions produced multiple impacts on the university. It signaled to faculty that the primary *technology* was now research, not teaching. It meant that the administration would redistribute financial resources toward research (*managerial* effects). Some long-employed faculty with a teaching orientation became angry and were not committed to the change (*psychosocial* effects). Finally, the policy began to change the *culture,* indicating very significant differences in *goals* and *values* (with a new set of organizational heroes likely to emerge). Whereas few would suggest that a major shift in tenure and promotion policy is a small policy change, the full implications are often underestimated by university managers.

By systematically reviewing the multiple points of management policy impact, students, executives, and managers can survey their intended changes to ensure that the desired organization behavior is the outcome.

There is a close linkage to organizational development, the final activity.

Organizational Development

We can probably agree that managers and students need some perspective of the organization to think about and attempt organizational development. They must determine the nature of the organization they are proposing to develop. Without implicit or explicit ideas, there is no sense of the target for development. We can see that diagnosis (organizational assessment) as the first of four steps can use systems thinking. And if we consider organizational development to be an ongoing process of diagnosis, planning, action, and evaluation, we can use the Kast and Rosenzweig model at each step.

We use the model to help us with organizational *diagnosis*—identifying the subsystems of potential dysfunction.

We can use it to help us in *planning*—to respond with a plan to the problems defined in the subsystem by subsystem diagnosis.

We can see that the *actions* taken are likely to be in multiple systems. The action stage requires a series of activities in two or more of the five subsystems, for "whole organization" development to occur.

Finally, we can *evaluate* the results of the organizational development work, systematically looking for changes in each of the five subsystems of the organization.

Eventually, we could begin to ask which organizational development interventions are helpful for attacking which kinds of problems in which systems. Has organizational development changed technology, structure, individual and group relations, management practices, and/or the culture of the whole organization?

Using this systems model, students quickly begin to understand the framework for organizational development work. Schools of practitioners and researchers in the organizational development field tend to see themselves as process oriented or structure oriented. However, a full organizational development initiative would include sets of practitioners and schools of change strategies and actions that would encompass each of the five subsystems, from technology to structure to people relations to management practices and culture. This systems model helps us to think of organizational development through organizational theory, leading to a comprehensive review of the problem and to a multisystems strategy for development. Two examples illustrate this point.

Concerns about productivity improvement are now prevalent in nearly all public and private organizations, but we often believe that productivity improvement will result from a single initiative (or in the language here, a single subsystem strategy or action). In our research, the productivity improvement task was redefined to address two issues (Ziegenfuss, 1988a). The first issue involves the point that organizations are a set of systems that all must be worked on to achieve a productivity increase. The second involves the question of the major steps an organization can take to increase its productivity.

In the Kast and Rosenzweig model, five areas must be analyzed and potentially attacked, to generate productivity improvement. Technology; structure; psychosocial; managerial; and the goals, values, and cultural subsystems all must be evaluated regarding the level of their contribution toward productivity or against it. We then have recognition of the following:

> Productivity it achieved only by taking action in all five areas of the corporation (using a systems approach to the problem). Productivity increasing action can be systematically sorted using the elements of each of these organizational components ... a set of major recommendations and more limited actions to increasing productivity—five giant steps toward corporate productivity. The steps ... [and] actions are not terribly new, if they are new at all. But they are now arranged in a system-by-system plan or "package of interventions approach... .
>
> The systems view... defines productivity enhancement as a social and technical problem. Five general steps to productivity are suggested with specific actions in each:
>
> 1. Create a productivity oriented corporate culture.
> 2. Constantly evaluate and redesign production processes (of the goods and services).
> 3. Change the structure.
> 4. Improve individual and group relations.
> 5. Manage your way to productivity. (Ziegenfuss, 1988a)

This set of strategies and actions recognizes explicitly the five subsystems. It is a statement that each of the individual subsystems must be addressed with diagnosis, planning, action, and evaluation, for productivity improvement to result organizationwide. This use of the model moves us beyond the single-system, single-dimension approach whereby we choose one productivity improvement method for one system that is expected to generate organizationwide productivity.

The second example follows this model on productivity quite directly. One large community hospital was interested in increasing the level of innovation in its organization to help defend itself against the increasing competition in the health industry (Ziegenfuss, 1988b). A task force including physicians, managers, and employees was assembled to attack the question of how to increase innovation in the hospital.

The first task was diagnostic: How innovative was the organization currently? What areas of the hospital currently support innovation? Using this organizational systems model, the questions address the technological system, the structural system, the individual and group relations system, management practices, and the culture as a whole.

The model was used to help guide the work of the task force. What actions would change multiple systems of the organization, with innovation increased as the result? The hospital task force identified seven strategies and actions

involving the five subsystems:

1. Ensure valuing and clarity of vision.
2. Instill cultural support for innovation (desired and prized).
3. Increase managers' abilities to encourage innovation.
4. Develop and maintain an informal workforce.
5. Create mechanisms to bridge functional barriers.
6. Provide necessary resources.
7. Develop and maintain innovation procedures and mechanisms (e.g., idea processing system).

These recommendations were designed to create action in all five of the subsystems, underscoring the notion that organizational development means development in five subsystems. Students can be taught to think about and structure their organizational development skills and knowledge in relation to the whole model and to specific subsystems. In courses such as organizational behavior and organizational change and development, this is a natural fit.

Other topics indicate the model's usefulness in related fields. For example, the model was used to think through organizational development work in labor–management relations at the community level and to guide the evaluation of a trauma systems accreditation process. In short, the model can be used as a guide to diagnosis, planning, action, and evaluation at the organizational level of analysis.

IMPLICATIONS AND FURTHER WORK

The use of this model for teaching and practice is well under way. However, in teaching and in consulting and applied research initiatives, several questions have surfaced:

1. What are the critical variables in each of the subsystems?
2. How do we measure the variables in each of the subsystems (methods, techniques)?
3. How does each subsystem interact in a given case?
4. What are the methodologies for prioritizing the responses in the subsystems, and which systems should receive work first?
5. Are there limits to the applicability of the model?

These questions can be addressed by research and practice that deepens our understanding of the definitions of these systems and their interrelationships.

The use of the model can be advanced through teaching and practice activities that become the "test data" for evaluation. Questions raised by students and managers in project applications can be fed back to model development.

CONCLUSION

This chapter demonstrates the use of one model of organization for teaching and practicing organizational analysis, planning, policymaking, and development. The needs for a model are identified. The model is outlined in brief, integrating the work of additional researchers into the original perspective. This is followed by examples of teaching and practice in four areas:

Organizational analysis
Organizational planning
Organizational policymaking
Organizational development

The use of the model indicates its contribution to growing systems thinking managers and students in a wide variety of courses and field projects. Other faculty and consultants may choose other models to work with, but some model must be selected to help to surface assumptions and guide analysis, planning, policy, and development.

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CHAPTER 2

How Politics Makes Health Policy

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Politics, broadly defined, drives policy. Much of policy appears in the form of enacted legislation. However, policy can emerge from not only the legislative branch of government, but also the executive and judicial branches. Adding to the complexity of policymaking, policy is made at all levels of government: local, state, and national. Thus, separation of powers, which brings about different government branches, and federalism, which results in various levels of government, both have a tremendous impact on the policymaking process. Policies, therefore, are "authoritative decisions that are made in the legislature, executive, or judicial branches of government" (Longest, 1998, p. 4).

LEGISLATIVE PROCESS

All legislation begins with an idea. An idea can surface in the mind of anyone, a legislator, a legislative staff member, an interest group, a citizen, and so on. A number of factors influence the future of the idea, which initially faces the challenge of getting onto the public agenda.

Books on government often present the development of legislation in a linear fashion. Although this presentation is easier to convey in written word, it omits much of the complexity and appeal of the policy process. Books tell the reader that a bill is introduced by a legislator in either the House or the Senate in a state or in the U.S. Congress. This process is reflective of a representative democracy in which elected officials, rather than the entire polity, make public policy. A bill may have more than one sponsor and may or may not have cosponsors. A lack of cosponsors may be a result of none having been solicited or may be evidence of a lack of widespread support for the legislation. If sponsors and cosponsors represent different parties, evidence of bipartisan support for the bill exists.

The bill is referred to one or more committees or subcommittees with legislative jurisdiction in the area with which the bill is concerned. Having legislative jurisdiction in selected areas is very important. Without it, committees and subcommittees would receive no bills to shepherd through the legislative process. What a sad day that would be for committees and subcommittees! Bills are the grist for the legislative process "mill." Although select committees lack legislative jurisdiction, they provide an important service in studying issues and informing the legislative process on those topics. No bills, however, are referred to them. The committee chair or other members may introduce legislation emerging from the studies.

In a state legislature, a bill might be sent to only one committee. In Congress, however, a bill may be sent to more than one committee or subcommittee, thereby increasing the complexity of the process. The Clinton health care reform legislation, for example, was referred to multiple House and Senate committees. Everyone wanted a part of the action on this bill. Because state processes vary, the focus in this chapter is on the U.S. Congress.

With regard to health care, a number of committees and subcommittees have legislative jurisdiction. In the U.S. House of Representatives, these committees include the Committee on Ways and Means, Committee on Commerce, and Committee on Appropriations. Senate committees include the Committee on Finance, Committee on Labor and Human Resources, and Committee on Appropriations. As an example, the House and Senate Committees on Appropriations have jurisdiction over Department of Veterans Affairs and Department of Health and Human Services appropriations (Longest, 1998, pp. 107–108).

The chair of the committee to which a bill has been referred can assign it to a subcommittee or the bill can be assigned to the full committee. The bill can die at this point or at numerous other points in the process. Public hearings, though not required, may be conducted by either the committee or the subcommittee. Invited to testify at a hearing on a health bill might be representatives of relevant public agencies, organizations, and interest groups. In addition, primarily to

garner media attention, a celebrity may be asked to testify. For instance, Shelley Fabares, who acted in ABC's *Coach*, testified at a hearing on the Alzheimer's Disease Research, Training, and Education Amendments of 1992. As the daughter of a woman with Alzheimer's disease, she spoke movingly about the needs of caregivers of persons with this illness.

Members of the committee(s) or subcommittee(s) can *mark up* the bill if they so choose. This process involves coming to final wording on the bill. During the markup, similar bills may be combined. If the subcommittee approves the bill, it goes to the full committee for a vote. If voted out of committee, the legislation may then be put to vote on the floor of the chamber in which it was introduced. Amendments may be added.

If it passes in one chamber, the bill is introduced in the other chamber, where a similar process unfolds. If the legislation also is passed by the second chamber, it goes to a conference committee to work out any differences in the two versions. Though possible, it is unusual for a bill to make its way through both chambers and to emerge with the very same wording. A bill may be introduced simultaneously in both chambers and follow similar paths through both. Even then, it is rare for the proposal to surface with the same wording.

Appointed to the conference committee, where the final wording is negotiated, are legislators who have been involved with the bill, typically the ranking members of the House and Senate committees that marked up and reported out the bill. If agreement is reached, a conference committee report is written. The bill then goes to both chambers for a vote. If the votes are affirmative, the bill is sent to the president for consideration. The president can sign the bill or veto it. If not signed or vetoed within 10 days, the bill automatically becomes law. By not signing the bill, however, the president has expressed disfavor with the legislation. If Congress adjourns before the end of the 10-day period, a pocket veto results and the bill dies (Wetterau, 2000, p. 53).

Legislation that is not enacted in a 2-year period, called a *session of Congress,* can be reintroduced in a subsequent Congress. Thus, bills that died in the 107th Congress (2001/2002) could be reintroduced in the 108th Congress (2003/2004). Also, a piece of legislation may be added as an amendment to another bill. Especially attractive for amendment are reauthorization bills that are virtually certain of passage, although the process can be lengthy.

The linear model of policymaking, though clearly providing the steps in the legislative process, presents a somewhat misleading picture of the events that underlie these steps. People starting to work on Capitol Hill are often told there are three things to remember in getting legislation passed. They are "relationships, relationships, relationships." The meaning of this statement is not friendship relationships but working relationships. Networks are built of people interested in similar issues. A legislator from the House and one from the Senate may introduce the same bill. Other legislators can be cosponsors of the bill.

Each can claim credit for the legislation, either as sponsor or as cosponsor, when he or she campaigns for reelection.

The linear model tells us that the representative or the senator introduces a bill. That statement is true. However, it lacks the fuller truth that the members of the legislator's staff have generally written the bill and the legislator's speech to introduce it. One or more staff members also wrote the bill's summary, and the side-by-side analysis, which highlights differences in the House and Senate versions of the bill and may provide a brief explanation of the dissimilarities. Legislative counsel review the bill to ensure the use of correct wording and language.

The linear model says that members of a committee mark up a bill that has been referred to the committee. Before the meeting during which the vote takes place, however, the staffs of those members have met to negotiate the wording. Staff members also draft the committee report, an important document that helps establish the legislative history of the bill (Longest, 1998, p. 109).

AGENDA SETTING

From the thought of politics, broadly conceptualized, as a driving force in the creation of policy, other less linear theories of the policy process have been developed. The model developed by John Kingdon (1984) is one that reflects the dynamic flavor of making policy. Kingdon hypothesized that issues become part of the public agenda if three "streams" converge:

Problems
Policy alternatives
Political will

In the first stream, an issue becomes defined as a problem. Of the multitude of issues of public concern, limited numbers are treated as problems at any given time. The second stream entails the generation of policy alternatives to address the identified problem. Unless at least one viable alternative exists, the related issue or problem will not become a part of the public agenda. The political stream is affected by such factors as turnover in the administration or legislature and changes in the national mood. Interest group pressure is evident in each of the streams, as it is in all phases of the policy process.

A convergence of the three streams enhances the chance that the problem will be addressed. "Solutions become joined to problems, and both of them are joined to favorable political forces" (Kingdon, 1984, p. 21). The presence of a window of opportunity facilitates convergence of the streams. A triggering event can facilitate the opening of a window.

For instance, the anthrax-laced letters that were sent to media personalities and legislators after the tragic events of September 11, 2001, and especially the resultant deaths, created a window of opportunity for policy alternatives that

address bioterrorism. Bioterrorism, an issue that was not at the time high on the public policy agenda, became a compelling problem. Policy alternatives were sought. The quantity of anthrax vaccines was examined. The availability of anthrax-sensitive antibiotics was found insufficient. Steps were taken to increase the supply. Other vehicles of bioterrorism were discussed and addressed. Smallpox vaccine supplies were examined. Ways of expanding the supply were proposed.

Military options were examined. The political will to address the problem was strongly bipartisan. "S.J.RES.23, [a] joint resolution to authorize the use of United States Armed Forces against those responsible for the recent attacks" was introduced and passed in the Senate and was received in identical form in the House where it passed as H.J.RES.64. All of these actions took place on September 14, 2001. Signed by the president on September 18, 2001, the resolution became U.S. Public Law 107-40 (THOMAS, 2002a). Rarely does a proposal travel so quickly through the legislative process. The three streams had converged, a window of opportunity emerged, and action was taken.

ADDITIONAL ACTORS

In addition to legislators, public administrators, and judges, other actors take part in the policy process. Among them are policy entrepreneurs, researchers, and interest groups. The former grouping of actors is composed of suppliers of policies, whereas demanders of policies make up the latter set of actors.

POLICY ENTREPRENEURS

Policy entrepreneurs are essential to the process. They become aware of the opening of a window of opportunity and push their pet policy alternative(s) or conception of the problem. The actions of these individuals reflect the "garbage can" theory of Cohen, March, and Olsen. In this nonlinear theory, solutions look for problems. In a linear world view, problems occur first and solutions emerge in response to the presence of a problem. These theorists, however, found that linearity did not accurately reflect reality. They presented the image of a garbage can in which solutions search for problems.

John Kingdon applied this theory to policy entrepreneurs who have seen an issue as a problem long before the public. These individuals have already developed policy alternatives, or more likely a favorite policy alternative, to address the problem. When a window of opportunity opens and the issue becomes a problem in the public's mind, the policy entrepreneur is ready with a solution. Did you ever wonder how, when a problem appears "out of nowhere," proposals to solve the problem appear almost instantly? Kingdon's application of the garbage can theory explains this phenomenon.

Researchers

The results of research can influence the policy process. Health-related research takes place in multiple venues, including academia and public agencies, such as the National Institutes of Health and the Agency for Health Care Policy and Research. Interest groups can join together to conduct research and lobby legislators and/or their staffs to introduce a bill that addresses the problem examined in the study.

For example, the Nutrition Screening Research Act emerged from research conducted by the Nutrition Screening Initiative, a coalition of health- and nutrition-related organizations. The study concluded that screening of older people regarding their risk of malnutrition and subsequent intervention, as indicated, would be beneficial and cost saving. Members of the initiative approached the U.S. Senate Subcommittee on Aging with a request that subcommittee staff develop legislation calling for related legislation. Using the results of the screening initiative's research and other sources including input from the subcommittee staff director and legislative counsel, I wrote the legislation, the bill's summary, and the speech for the subcommittee chair to use in introducing the bill.

A hearing was held and the bill was introduced on March 12, 1992 as S. 2351 that would "provide for research to test the efficacy and cost-effectiveness of nutrition screening and intervention activities in populations of older individuals and to determine the extent of malnutrition in such populations" (THOMAS, 2002b). The bill was referred to the Committee on Labor and Human Resources of which the Subcommittee on Aging is a part. The bill was also introduced in the House of Representatives. It was added as an "Engrossed Senate Amendment" to the National Institutes of Health Reauthorization Act of 1992. Although this bill passed in both chambers, it was vetoed by the president. The legislation was reintroduced in the next session of Congress as S. 1, meaning it was the first bill introduced in the Senate in that session. The bill survived all of the challenges and was enacted into law.

Interest Groups and Advocacy Coalitions

Interest groups may focus their efforts at policymakers either directly or indirectly through public opinion and the media. Certain factors help shape the interest group's strategic behavior. Group resources, including the strength of credibility, expertise, contacts, and prestige, are important considerations. Organizations with strengths in these areas, especially if they have a large staff, are more likely to use the direct approach. Groups with a sizable, active membership may seek the indirect means of influencing policymakers, especially if their cause is a popular one. The character of the group also affects its strategic choices. The indirect approach is likely to be taken by newer groups, although established groups may

continue to follow this avenue if it has repeatedly proven successful for them (Litman and Robins, 1997, pp. 232–233).

Interest groups seek to influence the formulation of legislation in a number of ways. Financial contributions, limited by recent campaign finance reform legislation, to the political parties and to the campaigns of individuals running for office comprise one method. The political action committees (PACs) related to the health care industry direct much of their contributions to members of the key health-related committees, among those mentioned earlier; members of the majority party; and incumbents.

Interest group efforts also focus on the committees with legislative jurisdiction over health care bills. The reason for this emphasis is clear when one realizes that an estimated 90% of legislation passed by either chamber of the U.S. Congress contains the same wording as the bill when it was reported out of committee (Litman and Robins, 1997, pp. 15–17).

After passage of health care legislation, interest groups continue their efforts, seeking to influence the persons in the administrative branch of government who write the regulations through which the legislation is implemented. Regulations, like the acts upon which they are based, are a form of policy.

In the past, legislation and regulations were seen as emerging from negotiations among predictable actors. The metaphor of an "iron triangle" was used, consisting of the relevant legislative committee, the administrative agency, and the interest groups. Sabatier and Jenkins-Smith (1993), however, maintain that the process is much more fluid. Interest groups join together to form advocacy coalitions whose composition may change with different policy proposals. Certain interest groups may join together on one issue, creating an advocacy coalition. On another issue, however, some of those groups might not be involved, and new ones may be drawn to the proposal. Indeed, groups that are traditionally on opposing sides of policy debates may join forces on a specific issue, confirming the adage "politics makes strange bedfellows."

Continuation of the Policy Process

After being enacted into law, legislation is sent to the appropriate public agency, for instance, the Department of Health and Human Services, for implementation. Rules and regulations are written to facilitate implementation. Input is sought from the public. Interest groups continue their activity in this stage of the policy process, providing comment on the proposed rules and regulations. These rules and regulations are also a form of policy. The judiciary also participates in making health policy. Judges make rulings about health-related matters. These rulings take the form of policy.

Health policies are continually being modified. Implementation of a policy may bring unanticipated negative consequences that are addressed through policy

modification. Numerous factors in the environment of policymaking can necessitate changes in existing policies. New health care technologies may be developed that require modification of now-outdated policies. Demographic changes can occur. The increasing size of the older population, for example, is a catalyst for increased attention to policies such as Medicare.

Over time, policy direction may change. Turnover in administration is a contributing factor. When the nonincumbent party is voted into power, opportunities for policy change are replete. An easily understood reason for change in policy direction can be seen in a newspaper account of an 18-year-old man's victory in his campaign to become mayor of his hometown of about 100 people. High school student Jeff Dunkel had attended several borough council meetings as part of a school assignment. When he saw the same items repeatedly appearing without resolution on the council agenda, he questioned the council members. He was told, "If you think you can do better, you run for office."

Waiting until he became 18 years of age, Dunkel registered to vote. He obtained the required 10 signatures on a nominating petition and attended a Democratic National Committee seminar on running a campaign. He was elected mayor of Mount Carbon, Pennsylvania. Mayor-elect Dunkel appeared on national broadcasts such as NBC's *Today* show, as well as the Rosie O'Donnell and David Letterman programs. He was interviewed by employees of radio stations as far away as Australia (Savitsky, 2001, p. A1). Policy change in the little borough of Mount Carbon was underway.

Elected officials and candidates running for office take note of election results. When the little-known Harris Wofford won a special Senate election in 1991, defeating popular Pennsylvania Attorney General Dick Thornburgh, politicians across the country took notice. In the wake of Wofford's surprisingly successful campaign that focused on health care reform, then-President George Bush presented his health care plan. Presidential candidate Bill Clinton made health care reform a key part of his platform (Patel and Rushefsky, 1999).

With Clinton's victory, it seemed a certainty that health care reform would take place. It did but in a very different way than expected. Leaders of health care organizations, certain that reform was about to occur, began to act in anticipation of the change. Therefore, while the reform effort of the 1990s was defeated on the legislative front, change took place nonetheless in the health care marketplace. The direction of health care had taken a decisive turn.

This failed effort to achieve health care reform through major policy change was certainly not the first. Such efforts took place during the Progressive Era and during the administrations of Presidents Roosevelt, Truman, and Nixon. Fearing presumed opposition from the American Medical Association (AMA), Franklin Delano Roosevelt dropped compulsory health care insurance from his New Deal package, convinced that its inclusion might mean defeat for the entire effort.

Harry Truman's Fair Deal prominently included national health care insurance. Opponents branded Truman's proposal as "socialized medicine" and linked it with communism and the then-demonized Soviet Union. Clearly unable to attain Congress's approval, the proposal was presented in a more modest form. Offered instead was a program of health care insurance for recipients of Social Security. Although garnering inadequate support for passage at that time, the proposal would later emerge in the form of Medicare.

Richard Nixon's Comprehensive Health Insurance Plan was a health insurance program that would be mandated for working individuals. Nixon's proposal vied for attention with a number of other plans including the Kennedy–Corman bill, which mirrored the Canadian national health care program, and a bill proposed by Senators Long and Ribicoff that was aimed at catastrophic health care expenses. None of the proposals garnered sufficient support; however, employer-mandated health care insurance, the idea behind Nixon's plan, was later part of Bill Clinton's health care reform plan.

During the administration of Lyndon Johnson, a noteworthy compromise took place. With worries, including those regarding the adequacy of public resources to achieve universal health care, Congress reached a middle ground. Decisions were made to provide health care insurance for the neediest groups: the low-income and older populations (Marmor, 1994, pp. 6–10).

In a surprising move, Chair of the House Ways and Means Committee, Wilbur Mills, who had previously opposed the reform effort, found a way to please each of the key groups. Drawing from the proposals of the Democratic and Republican Parties and the AMA, Mills crafted Medicare and Medicaid. The Democratic proposal became Part A of Medicare, and Medicare Part B was based on the Republican plan. Medicaid grew from the AMA's support for public insurance for low-income individuals.

Medicare and Medicaid have been amended numerous times since their passage in 1965. For instance, in 1983, legislation was enacted that called for a prospective payment system (PPS) in Medicare. Instead of reimbursing on the basis of actual costs, as in the fee-for-service approach, Medicare began a system of reimbursement for hospital care based on a patient's diagnosis. Diagnosis-related groups (DRGs) were established, and Medicare payment was based on the patient's DRG. If the hospital spends less than the set amount of reimbursement for a patient's care, the hospital comes out ahead. Alternatively, if more is spent on a patient's care than the amount set by Medicare, the hospital is in the red for that person's care. Shorter lengths of hospital stays were one result. PPS has since penetrated much more of the medical system.

The Balanced Budget Act (BBA) of 1997 also has brought about significant changes in the program. The legislation calls for reduced provider payments and other cost-reduction measures aimed at producing estimated program savings of $393.4 billion over 10 years. It also applied PPS to outpatient services, home

health care, and skilled nursing care. Through the Medicare+Choice program, it extends the program's managed care options (Patel and Rushefsky, 1999, pp. 125–129). Much of health policymaking involves policy modification. Medicare and Medicaid are themselves amendments to the Social Security Act.

DIRECTION FOR FURTHER STUDY

The multitude of topics related to health policy cannot be addressed in only a chapter; however, there are books that can provide the reader with additional information: Ted Marmor's *Understanding Health Care Reform* (1994), *Health Care Politics and Policy in America*, by Kant Patel and Mark Rushefsky (1999), Beaufort Longest, Jr.'s *Health Policymaking in the United States* (1998), and *Health Politics and Policy*, edited by Theodor Litman and Leonard S. Robins (1997). The *Journal of Health Politics, Policy and Law*, published by Duke University Press, presents thought-provoking articles addressing this dynamic area of policy. The Library of Congress's website, THOMAS, located at *http://thomas.loc.gov,* provides information about each bill introduced in Congress. Included are the text of the legislation, its summary, and major actions taken regarding the bill. States also have electronic bill rooms in which similar information about state legislation is provided. The websites of government entities such as the Centers for Medicare and Medicaid Services also provide data on health policy. Much information exists for the person embarking on an exploration of health policy in the United States.

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CHAPTER 3

Poverty and the Ethics of Equitable Access and Quality

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Today, encounters with physicians, physician assistants, and nurses in well-equipped clinics, hospitals, and emergency rooms are routinely increasing life expectancy with the use of medications and surgical procedures used to treat malignant, cardiovascular, metabolic, endocrine, infectious, and traumatic problems. In addition, quality of life is increasingly dependent on the use of medications for the treatment of diseases such as depression, hypertension, and heart failure, as well as surgical procedures such as joint replacements for disabling arthritis and lens replacement for cataracts. Although basic public health programs benefit everyone, direct care by physicians and other health professionals is costly and generally available only to those who are extremely wealthy or to those who have health insurance. Primary and preventive health care is, furthermore, critical to health maintenance and the prevention of more costly specialty care and hospitalization. Numerous studies (Weissman and Arnold, 1994) indicate that the United States continues to have the highest per capita rate of spending for health care. Despite this, infant mortality and life expectancy rates are considerably better in some other countries. One of the reasons for these health problems is that the United States is the only fully industrialized western nation where basic health care is not automatically provided to all citizens.

POVERTY

Today, in the United States, access to health care is dependent on insurance, and having insurance is dependent on employment or having adequate resources to purchase private insurance. There are public programs to provide health care for some of those without access to private or employment-based insurance. These all depend on income level and are related to Federal Poverty Level Guidelines (FPLG) issued by the United States Department of Health and Human Services. These guidelines are published every year in the *Federal Register* and are on the Health and Human Services website (http://aspe.hhs.gov/poverty/01poverty.htm). The income levels in the federal guidelines are not age related and are identical in all contiguous states but are 25% higher in Alaska and 15% higher in Hawaii. Programs to supply health care for the impoverished use multiples of the income levels in the guidelines, but the multiplier varies from state to state, as is discussed later in the various program sections. Using these guidelines, one can easily calculate that a family consisting of two children and a single mother working full time at minimum wage is just at the poverty level.

WORKING POOR

Health insurance as a fringe benefit of employment began shortly after World War II when workers were in great demand and runaway inflation was feared because of salary competition. To prevent this, the federal government instituted a freeze on wages but excluded fringe benefits from wage calculations. Accordingly, employers began to offer private health insurance plans as a part of their recruitment efforts (Weissman and Arnold, 1994). Today, the rising cost of this fringe benefit is causing increasing numbers of employers to withhold health insurance by using part-time employees or independent contractors. The term *working poor* has been applied to a group of individuals who are working and are able to support their families but have minimal funds for discretionary spending. Hence, they are unable to purchase private insurance but are not qualified for public insurance such as Medicaid or Children's Health Insurance Program (CHIP) because they are childless or have incomes in excess of one to two times the FPLG. The single mother of two, described earlier, will not, in every state, be eligible for medical assistance, may not have a job that offers health insurance benefits, and certainly will not have the $600–800 per month required for private insurance. People such as these may purchase a minimal policy, which, for instance, will pay a certain amount for every day in the hospital but will not cover routine preventive care, dental care, and outpatient treatment. These individuals are the underinsured and have the same problems as those without insurance.

PROBLEMS OF THOSE WITHOUT HEALTH INSURANCE

Emergency care is available to everyone in the United States. Provisions of the Emergency Medical Treatment and Active Labor Act of 1986 mandates that all hospitals that participate with Medicare and have an emergency room must offer medical screening and stabilization to any patient who presents because of disease, injury, or pregnancy regardless of their ability to pay for such services. This works well for a woman in labor who comes for delivery of her baby, but it does nothing to provide her with prenatal care if she comes in her fourth month with anemia and borderline hypertension. Neither can such emergency care provide necessary ongoing management of chronic problems or primary preventive health care.

Basic nonemergency health care is, however, far more important in health maintenance, but the cost of such care is very high in the United States and is highest for those without insurance. Hospitals, clinics, and physician's offices now work with a variety of payers. These include standard insurance companies such as BlueCross/BlueShield, government funding through Medicare and Medicaid, and health maintenance organizations (HMOs). In all of these cases, the amount actually paid for goods and services is never the stated charge but is a negotiated amount.

Providers of medical care actually calculate their charges based on their projected volumes of payer types and actual cost. Many of the payers will not even pay cost and most providers will be serving some who pay nothing. For this reason, providers of medical services set a charge that is significantly higher than actual cost, to offset losses related to their payer bases. The patient who has no insurance and simply pays for his or her own care is expected to pay whatever charge is assigned to the service while other patients receive the same service at lower rates because of their insurance carrier's negotiations. The "self-pay" patient will pay a charge that compensates for those who do not pay enough to cover costs. Hence, without insurance, health care is more expensive for anyone, but most of those without health insurance are the least able to pay because they are among the unemployed, working poor, uninsured, or underinsured. In recent years, approximately 40 million Americans or about 15% of our population at any given time were without health insurance and an unknown number have inadequate insurance for routine health care. Currently, although 16% of all adults younger than 65 years are uninsured, 37% of unemployed adults in the same age-group are uninsured. In the last quarter of 2001, following the World Trade Center disaster, unemployment rates began to rise, and as that occurred, there was a concomitant rise in the number of uninsured persons. Because unemployment is related to lack of health insurance, and because the unemployment rate is expected to continue to rise for the next few years, some estimate that by the end of this decade, more than 20% of Americans will be without health insurance (Landa, 2001).

For a person with marginal income and inadequate insurance, a simple office visit with a physician becomes nearly impossible because of the cost of that visit and the cost of associated tests and/or prescribed medications. Worse yet, some clinics and physician offices will not schedule appointments for people without insurance or obvious financial means. Hence, such people will postpone these visits until a crisis has occurred. There is evidence that the less than optimum indices of health care in the United States are related to this lack of access to health care. Because those without insurance have significant difficulty obtaining basic health care and are less likely to see a physician regularly, they are more likely to come to the hospital with serious illnesses (Clinton, 1994). DeCourtes *et al.* (1995) has documented the fact that children without insurance are more apt to be hospitalized because of asthma because they are not seen on an outpatient basis when they first become symptomatic. In the case of breast cancer, mortality rates are known to be higher in those without access to health insurance (Ayanian *et al.*, 1993; Gorey *et al.*, 2000) because they do not seek early evaluation of small lumps and are unable to have routine mammography. Those without insurance who develop colorectal cancer are also shown to have a higher mortality (Roetzheim *et al.*, 2000), again, because they do not have routine annual examinations including stool testing for occult blood.

SOLUTIONS FOR THOSE WITHOUT ACCESS TO PRIVATE INSURANCE

Health insurance purchased privately or supplied as an employee benefit is most important for people younger than 65 years. In general, approximately 65% of Americans younger than 65 years will have health insurance supplied as an employee benefit and another 10% will purchase private plans (Foley, 1993).

The major federal government programs to provide health care for those without private insurance are Medicare, Medicaid, and State CHIP. They were managed by the U.S. Health Care Financing Administration (HCFA) but, since July 2001, are managed through the Centers for Medicare and Medicaid Services. Information about the program can be obtained by accessing its website at *http://www.hcfa.gov* or *http://cms.hhs.gov*. For more technical details, the Division of Provider Education and Training website *(www.hcfa.gov.medlearn)* can also be helpful.

MEDICARE

People older than 65 years are automatically eligible for Medicare, along with people who have certain disabilities or end-stage renal disease requiring dialysis. This program began as Title XVIII of the 1965 amendments to the Social Security

Act. There are actually three parts to Medicare. Part A is free to everyone who has paid or whose spouse has paid Medicare taxes while employed and covers 80% of hospital costs. Part B must be requested when a person enrolls in Medicare. This covers 80% of costs related to physician visits and other outpatient care and costs about $50 per month, which is deducted from the person's social security payment. The third part of Medicare consists of the Medigap policies, which are private policies covering the deductibles and 20% of copayments prescribed by Medicare.

Nearly all physicians, clinics, and hospitals participate with Medicare and must, therefore, accept the reimbursement approved for whatever service is given. As stated earlier, HCFA pays 80% of this approved reimbursement and the patient or his or her Medigap policy will be responsible for the remaining 20%. Here again, note that these providers of medical care are accepting less than their usual charge as full payment and will, therefore, inflate normal charges so others compensate for losses related to Medicare reimbursement.

Medicare has clearly increased access to medical care for patients older than 65 years (Vladeck and King, 1995). Before the enactment of Medicare in 1965, 50% of elderly people had no insurance. Thirty years later, 97% of the elderly have Medicare coverage. In addition, 90% of those with end-stage renal disease and 3.6 million disabled Americans receive care because of Medicare. In just 8 years after passage of Medicare legislation, the number of hospital discharges per 1000 elderly patients had risen from 190 to 350. This improved access to medical care is one of the significant factors responsible for the increase in the average life expectancy of a 65-year-old man by 3 years from 1960 to 1992. As of 1998, there were nearly 39 million Medicare beneficiaries.

The major problems with the Medicare program relate to funding, overuse, and lack of coverage for prescription drugs, which are discussed elsewhere.

MEDICAID

Title XIX of the 1965 Social Security Amendments created the Medicaid program, which is a federal–state partnership in which individual states and the federal government use matching funds to provide care for low-income groups. Each state sets an income level, based on a percentage of the FPLG (see Poverty, earlier in this chapter), for which it provides insurance (Weissman and Arnold, 1994). Some states, for instance, Alabama, in 1998, used 15% of the federal poverty guidelines as a cutoff for providing health insurance under Medicaid, and other states set the cutoff as high as 140% of the poverty guidelines. Benefits under this program are available to select groups of low-income people. The main groups are those who qualify for aid to families with dependent children and those who receive Supplemental Security Income due to disability, old age, or blindness.

TABLE 3.1 Medicare Beneficiaries

Beneficiaries	No.	% of total beneficiaries	Payments (billions)	% of total payment
By sex				
Male	14,700,000	36	$54.5	38
Female	22,400,000	55	$84.3	59
Unknown	3,500,000	9	$3.5	2
By eligibility status				
Aged, blind, disabled	10,600,000	26	$101.0	71
Children younger than 21 years	18,300,000	53	$20.5	14
Adults with dependent children	9,900,000	19	$14.8	10
Unknown and foster care	3,900,000	5	$6.0	5

These groups were initially defined in the Social Security Act of 1935. Those older than 65 years who fall into these categories will still have standard Medicare benefits but will have Part B and Medigap coverage provided through the state Medicaid program.

A brief look at the Medicaid beneficiaries is interesting because of the perception that Medicaid serves only low-income, younger, minority groups (Table 3.1).

MEDICAID BENEFICIARIES: 1998

In fact, in 1998 (see Table 3.1), 72% of the beneficiaries were younger than 21 years or were adult members of families with dependent children, whereas 26% of the beneficiaries were older than 65 years, blind, or disabled. This latter group was, however, responsible for 71% of program expenditures. In other words, Medicaid serves a larger number who qualify for aid to families with dependent children, but that group uses only about one third of the resources required for the blind, elderly, and disabled.

The disparity between male and female Medicaid beneficiaries illustrates an interesting gap in the public programs to support those without access to private medical insurance. In 1998, 55% of the Medicaid beneficiaries were female, whereas 36% were male. Certainly, the elderly, disabled, blind, and children should be represented in equal numbers. The disparity is related to the adults who qualify for medical assistance as members of families with dependent children. Whereas female adults may be at home caring for children, males may be working and have jobs that provide either no medical benefits or no family medical benefits. If the man's income is added to the rest of the family income,

TABLE 3.2 Eligibility for Medicaid

Age of child (yr)	Family income
<1	<185% of the FPLG
1–5	<133% of the FPLG
6–18	<100% of the FPLG

Note: FPLG, Federal Poverty Level Guidelines.

the entire family may lose medical benefits. If, however, the couple remains unmarried, the mother and children, by not reporting the father's income, can qualify for medical assistance. In some states, however, such as Pennsylvania, a pregnant woman will be required to name the father of her child before she can get medical benefits. There are some exceptions such as cases of domestic violence, but if the father is identified, he will be expected to contribute child support ($150 per month in Pennsylvania in 2001). For such reasons, a pregnant woman may not apply for medical assistance and will depend on overburdened resources designated for the uninsured, will seek unlicensed alternative care, or will deliver without prenatal care in an emergency room.

Benefits under the Medicaid program vary from state to state as described earlier, but medical assistance for impoverished adults is dependent on their having children, and benefits for both children and the adults in these families depends on the age of the youngest child (Table 3.2) and the family income based on a percentage of the FPLG.

Eligibility for Medicaid: Pennsylvania, 2001

In the case of a pregnant woman, the family size includes the unborn child or children. Thus, if a single woman with no living children is pregnant with twins, the family size is three and the maximum income that she may have and still qualify for Medicaid benefits is 185% of the FPLG, or $27,065.50. Once those babies reach age 1 year, her income must not exceed $19,457.90 (133% of the FPLG), and when they reach age 6 years, her income may not exceed $14,630.00. The whole schedule, of course, gets rolled back if and when this woman has another child and could favor childbearing if there were not other solutions for children's health care. Cutoff income levels will increase if the father is married to the mother and lives at home, thus increasing family size.

In addition to the complexities of income and family size, Medicaid benefits may accrue under special circumstances such as breast cancer, cervical cancer, acquired immunodeficiency syndrome, human immunodeficiency virus infection,

and various disabilities. Often families with working adults do not understand all that is available through these programs. With a family of four, for instance, some benefits may be available even with annual incomes higher than $32,000. In many areas, the complicated process and stigma of going to a public welfare office to inquire about such benefits is daunting. As described earlier, the need to give some personal information such as the father's name may be a further impediment. There have been attempts in some states such as Pennsylvania to overcome these problems by establishing enrollment sites in places such as Community Health Centers (CHCs), described later in this chapter, or by allowing a person to enroll through a secure website. In such cases, an application is completed and then a determination is made by the State Department of Public Welfare. In Pennsylvania, if the family does not qualify for medical assistance, the same application will be forwarded to the CHIP, under which health care benefits may still be available to those younger than 19 years.

STATE CHILDREN'S HEALTH INSURANCE PROGRAM

The Balanced Budget Act of 1997 added Title XXI to the amendments of the Social Security Act of 1935. Otherwise known as the CHIP, this program allocated $24 billion over 5 years to be used to fund state programs to provide health insurance for low-income children who do not qualify for Medicaid and do not have access to private employer-based insurance. As noted earlier, Medicaid benefits for families with dependent children begin to phase out as the youngest child passes 1 and then 6 years of age. Title XXI was created to extend health insurance to children whose family income was such that Medicaid coverage was unavailable and had no other access to health insurance. States were required to submit plans for the use of these funds based on expansion of their Medicaid programs, the establishment of specific health insurance, or a combination of these two.

One interesting example is the state of Pennsylvania, which was the 15th state to have its program approved. It was also one of three states that already had a CHIP in place that could be used with only minimal modification. Pennsylvania's program had been in place since 1992 and already had 54,000 children enrolled at the time its federal allotment was approved. Initially, the Pennsylvania CHIP provided insurance for those younger than 19 years with family incomes less than 185% of the FPLG. The first amendment to the state plan expanded free coverage to those with family incomes less than 200% of the FPLG and reduced-cost insurance to those with family incomes less than 235% of FPLG. Other amendments in 2000 allowed income to be modified by deducting certain expenses from gross income and expanded benefits to include outpatient mental health, substance abuse, rehabilitation, and prenatal care. Pregnant women in Pennsylvania can

now qualify for Medicaid with family incomes less than 185% of the FPLG, and if younger than 19 years of age, pregnant women can qualify for CHIP benefits if family income is greater than 185% of the FPLG but less than 200% of the FPLG. Additionally, CHIP is available in that state to all children at a reduced cost if family income is between 200% and 235% of the FPLG. Pennsylvania, like many other states, has had some success with its implementation of CHIP. The program is administered through the State Insurance Department using contracts with private health insurance companies. As mentioned, the program was serving 54,000 children when the federal subsidies began. Using these additional funds, the program, as of October 1, 2000, had enrolled 94,100 children.

Benefits under CHIPs vary from state to state but usually include basic services such as medical, dental, and hospital care. Nationally, every state had a CHIP by the end of 2000 and the number of children enrolled who would not have otherwise had access to health insurance had reached 3.3 million (LaFlair, 2001). Unfortunately, this program suffers from the fact that low-income families do not always know about CHIP and the fact that it is different from welfare, or these families feel that there is some sort of stigma attached to using such public programs. According to the U.S. Bureau of Census, which is an excellent source of population data available on the Internet *(http://www.census.gov)*, from 1995 to 2000, there was a yearly average of 75 million children in the United States and about 30 million, or 40%, lived in families with annual incomes less than 200% of the FPLG. Of these, approximately 25% have no health insurance despite numerous federal efforts to assist state enrollment plans (Pennsylvania Partnerships for Children, 2000). In the state of Pennsylvania, as of October, 2000, there were 258,000 children without health insurance. Overall, this represents 1 of every 12 children in the state, but the ratio is much higher among poor families. Among those right at the FPLG, 1 in 6 children are without health insurance, but those living in families whose income is four times the FPLG, the ratio drops to 1 in 31. Here again we see that lack of health insurance is related to poverty. Paradoxically, the impoverished are the very ones for whom public programs exist, but access to those programs is often impeded by previously mentioned problems of bureaucracy, pride, ignorance, or simple lack of information. A large majority of uninsured children in Pennsylvania are actually eligible for either Medicaid or CHIP.

The federal government has recognized both the lack of health insurance and the problems with access to public programs that provide such insurance as a national problem. The Benefits Improvement and Protection Act (BIPA) of 2000 was signed into law at the end of the Clinton presidency, and the Bush administration has identified still other measures to encourage those eligible to access Medicaid and CHIPs. These initiatives include allowing sites other than state welfare offices such as CHCs to assist applicants with the enrollment process, using online applications that can be completed in privacy and expanding health benefits to adult members of families with children eligible for CHIP (LaFlair, 2001).

COMMUNITY AND MIGRANT HEALTH CENTERS

As mentioned earlier in this chapter, 16% of all Americans and 37% of unemployed citizens have no health insurance. Many of these fall into the category "working poor"(Kaiser, 1997). They earn too much money to qualify for Medicaid or CHIP but still do not have employer health benefits or adequate income to pay for a private insurance plan. The problems with access to public health insurance programs creates another large group of people without health insurance. As described earlier, these people have higher mortality secondary to malignant diseases and higher rates of hospitalization for problems such as asthma. Lack of proper prenatal care leads to a higher incidence of children's problems. A child whose physical or mental problems could have been prevented by such care causes untold grief for his or her family and will require expensive care provided often by community funds. Hence, everyone loses when access to health care is limited for any reason.

Even with insurance through public programs such as Medicaid and CHIP, access to health care is not ensured. Because these programs reimburse physicians and dentists at rates that are generally much lower than those offered by private insurance plans, many patients have difficulty finding medical and dental care in the private sector. Like discounted seats on airlines, appointment times for Medicaid and CHIP patients may be limited in some physicians' and dentists' offices. Patients will be told that the next available appointment is in 3 or 4 months.

In the nineteenth century and the first half of the twentieth century, there were public or city hospitals that were operated by federal and local governments specifically for the care of the poor. These have essentially disappeared because of the growth of employer-based private insurance, implementation of public insurance programs such as Medicaid and Medicare, and widespread cutbacks in funding for such care. There was a thought that these people would be cared for in the private sector because health care insurance would be available to nearly everyone through Medicare and Medicaid. As already discussed, there are wide gaps in our system to provide care for those who do not have private insurance. This problem was recognized in the late 1960s and was addressed as a part of President Johnson's War on Poverty. Migrant Health Centers (MHCs) were initiated in 1962, and shortly thereafter, Neighborhood Health Center demonstration projects were started in major cities throughout the United States. Serving as a safety net for both uninsured and publically funded patients, these centers have grown steadily in both numbers and volumes of patients served. The Neighborhood Health Centers were later designated "CHCs." Both the MHCs and the CHCs are operated by the Bureau of Primary Health Care, which is one of four divisions within the Health Resources and Services Administration (HRSA) of the United States Department of Health and Human Services. Abundant information is available about these programs on the HRSA website *(http://www.dhhs.gov)*.

The Migrant Health Program *(bphc.hrsa.gov/programs/MHCProgramInfo.html)*, with an annual budget of $98,900,000 in fiscal year 2001, provides funding for 125 public and private nonprofit organizations that directly or indirectly operate 400 clinic sites in 42 states and in Puerto Rico. These clinics serve migrant and seasonal farm workers, many of whom are not citizens of the United States. These farm workers move about the country working where jobs are available. Such jobs rarely if ever provide health benefits and the workers are not often able to link with standard health care resources because of their constant moving. Companies who hire such workers will often provide space and facilities for the clinics near the places where the work is done. The health care providers for the migrant health clinics may be nurses, physicians assistants, or nurse practitioners. When necessary, the migrant clinics have access to CHCs or local hospitals where additional care can be provided. Approximately 600,000 migrant and seasonal farm workers were served by these clinics in 1999. Of these, 50% were Hispanic, 35% were African American, and 15% were Asian, Caucasian, or other.

The CHC Program provides federal grants to specifically designated clinics in medically underserved urban or rural areas. In the late 1980s, these clinics were designated "Federally Qualified CHCs" (FQCHCs). The federal funding, as before, was provided under Section 330 of the Public Health Service Act, but the new designation dictated that such clinics would also receive much more favorable reimbursement by Medicaid and, later, CHIP. In a traditional private practice, the Medicaid reimbursement may not cover cost, but this is not thought to be unreasonable because in such practices, there are other patients who have traditional insurance plans with reasonable payment schedules. These other patients offset the losses related to care of the Medicaid patient. Obviously, the private practitioners are not very happy with this situation and will sometimes avoid seeing Medicaid patients for this reason. The government was not sympathetic to this problem but was concerned with the FQCHCs. These clinics were receiving grants to provide care to the uninsured and thus, had no resource backup for Medicaid and Medicare underfunding. In fact, the money allocated for the care of uninsured patients was being used to support care of the Medicaid and Medicare patients.

The designation "FQCHC" confers many financial advantages to a clinic. In addition to receiving federal grants for the care of the uninsured, these clinics are also entitled to Medicaid and Medicare reimbursements of three to six times the amounts allowed for private offices. They are also entitled to cost-based reimbursement from their states. This means that if their reasonable costs for providing care to the Medicaid or Medicare patients in a given year can be documented to exceed the money collected from those patients, the clinic can bill the state for the difference. In the 10 years following the enactment of cost-based reimbursement, the FQCHCs, nationally, were able to care for 80% more uninsured patients. One other significant advantage of the FQCHCs is that the physicians and other health care providers working there have malpractice insurance

provided at no cost through the federal government. In today's marketplace, such insurance in private practice can cost more than $25,000 for a family practitioner and between $100,000 and $200,000 for a specialist in obstetrics and gynecology.

The mission of the FQCHC is to provide comprehensive primary and preventive care to all patients without regard to the patient's ability to pay for such care. Primary care includes adult medicine, pediatrics, obstetrics, and gynecology. Not all of these services will be found at all FQCHCs. Despite the financial advantages noted earlier, these clinics generally have significant financial problems because of the high costs of caring for patients who are uninsured or funded through Medicaid or CHIP. In most FQCHCs, these account for more than 80% of their patients. Such patients have numerous problems related to their poverty and often because prior health care has been marginal. In such clinics, a 30–50% rate of missed appointments is not uncommon and leads to unpredictable underuse of both the facility's and the health care providers' time. Outside grants are always necessary for these clinics to remain operational, and from 1990 to 1999, these revenue sources increased by 500%, from $450 million to more than $2.2 billion. Since the grants for uninsured care are often inadequate and funding by Medicare, Medicaid, and CHIP is favorable, enrollment of eligible patients in these programs is always desirable and sought by clinics. The BIPA of 2000, described earlier, allows FQCHCs to actively seek applications for these programs.

As of 1999, there were nearly 700 FQCHCs with nearly 3000 health delivery sites. In 1998, these organizations employed more than 4000 physicians, 1900 nurse practitioners, 800 dentists, and 250 dental hygienists. These heath care providers were responsible for nearly 25 million patient encounters. Nationally, FQCHCs in 1998 had 8.3 million registered users, 3.3 million of whom had no health insurance.

In the early 1990s, FQCHC Look-Alikes were recognized. Although these do not receive federal funding, they must meet all of the same requirements for need, community impact, and reporting as do the funded CHCs. They are, however, entitled to cost-based reimbursement and other federal agency advantages. The Look-Alikes were created to further strengthen the safety net for the uninsured. They have been quite successful, growing steadily in number to 111 centers with 182 delivery sites with more than 1.1 million users. Eventually, 40 of these have qualified for federal funding.

Managed care has begun to affect the FQCHC. Many states, including Pennsylvania, are requiring Medicaid patients to become enrolled with designated HMOs. This will change the funding mechanisms in the sense that patients will be capitated. They will be required to name a primary care provider who will be given a flat fee at the beginning of the month to provide whatever care is necessary. Cost-based reimbursement will, however, continue. There are potential problems with the new system based on the patient's need to obtain all care from a single primary provider, whereas in the past, they were accustomed to using Medicaid identification to see any health care provider that was convenient.

In addition, FQCHCs will need to guard against limiting the amount of care under the new system because they will no longer be paid by the encounter.

CONCLUSION

Primary and preventive health care delivered by physicians, physicians assistants, nurses, nurse midwives, and nurse practitioners is critical for the health of everyone. When such care is not available to an individual, that person and his or her family will be incapacitated more often by serious illness and can expect to have a shorter, less healthy life. Society in general also suffers as these people's higher costs of illness is passed on to public coffers.

Primary and preventive health care for most Americans depends on their having health insurance, which for those with full-time jobs is often an expected employment benefit. Others without jobs that provide such benefits may be able to purchase insurance privately, but this can cost from $9000 to $15,000 per year. Medicare, Medicaid, and CHIP are available to specific groups of citizens as defined by age of the patient, age of the children in the family, disabilities, and family income. FPLG and multiples thereof form the basis for income qualification. Access to these publically funded insurance programs remains problematic because of a number of social issues.

Despite all of the public programs, 15–20% of Americans at any given time will be without health insurance. The final safety nets for such people are the MHCs and CHCs, which are supported by federal and state funds specifically to provide primary and preventive health care for the uninsured and those with Medicaid, Medicare, and CHIP. All MHCs and CHCs suffer from limited budgets and the high costs of providing care for people with major socioeconomic problems in addition to their purely medical needs.

The health care system in the United States contains the best technical elements in the world, but this country is not a world leader by known statistical indices. Arguments for and against such things as universal insurance and single-payer health systems can be found elsewhere. For the impoverished, the jobless, and the working poor, much has been accomplished in the last 35 years. We have, however, reached a plateau from which further progress will demand radical changes. Hopefully, some of the readers of this chapter will be inspired to make this happen.

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CHAPTER 4

The Tough Work of Leadership

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Organizations are human constructions, collections of people assembled and coordinated for a specific purpose. People create them to meet and serve their needs and wants. In and of themselves, organizations are not alive; they do not plan or execute; they do not have feelings. They are groups of people (who are very much alive and do have feelings) working on a common task. The organization itself is the vehicle or instrument that allows people to accomplish what is important to them.

Our society has become a society of organizations. Most social tasks are being done in and by organizations, and most public goals are achieved through them (Drucker, 1998). Take, for example, academic medical centers (AMCs). They have their origins in religiosity, the healing arts, virtue ethics, and the university (Souba, 2000); their tasks are social missions, which include patient care, research, education, and community service. AMCs exist not only to provide patient care but also to improve that care through research and education. This contribution that AMCs make to society is what gives them purpose and is what attracts certain people to seek employment by them.

AMCs flourished for most of the twentieth century. Among other successes, they posted healthy positive margins, received generous handouts from the state and federal government, hired large numbers of new faculty, and witnessed impressive physical plant expansions. Success was often associated with market dominance and growth. It was not uncommon for AMCs in the 1980s to have an internal focus with an "if you build it, they will come" attitude.

As medical centers increased in size, managing a complex organization that was often hamstrung by a clumsy, bloated bureaucracy became a central challenge. Many AMCs suffered from being overadministered, undermanaged, and underled. A proliferation of rules, regulations, and policies generated a considerable amount of red tape. Basic management tasks, such as organizing and planning, posed challenges because AMCs evolved as "loosely coupled systems" where the forces working toward integrating the entire enterprise are often weak compared to the forces that encourage specialization, even fragmentation (Gilmore, Hirschhorn, and Kelly, 1999). Add to this what could be characterized as insufficient or ineffective leadership, and many AMCs found themselves largely unprepared to deal with the turbulence in the health care industry that began in the late 1980s. An inward-looking culture has been the result, one that has often overlooked or at least did not prioritize highly enough the value of customers. It was a culture that often lacked the critical leadership competencies needed to cope with an environment that was becoming more competitive.

Over the past decade, the amount of significant, often agonizing turmoil and angst resulting from the transformation of the health care industry has been impressive. Stemming largely from a major revision of the industry's payment structure, AMCs have experienced the interplay of powerful market forces and a shift in the power base. In the past, the top echelon at AMCs was first and foremost concerned with fulfilling the venerable tripartite missions of patient care, research, and education. Today, their time and energy are occupied by a different set of responsibilities. These new tasks, which include winning contracts, enhancing revenue, reducing costs, and dealing with consumer satisfaction and marketing, have a distinct business orientation.

Largely unprepared for this transformation, AMCs have scurried around for the past 10–15 years, often frantically, in search of magic bullets and simple solutions to their problems. Expensive consultants, presumed experts in the business of medicine, have been brought in to orchestrate turnarounds, reestablish order, and reintroduce stability. But there are no quick fixes. Managerial functions alone are insufficient for dealing with the "white water" that is making waves for the health care industry today.

Unlike organizations, which indeed need to be managed, people need to be led. This chapter builds on the premise that leadership is the overarching critical success factor that differentiates successful AMCs from unsuccessful ones.

THE CHANGING HEALTH CARE ENVIRONMENT: IMPLICATIONS FOR LEADERSHIP TODAY

A host of external forces and shocks (e.g., reductions in reimbursement, a national nursing shortage, the Balanced Budget Act of 1997, and the rise of for-profit hospitals and insurers, to name a few) has led to a marked increase in both the magnitude and the rate of change that confront AMCs (Figure 4.1). The blow(s) may come suddenly (e.g., a new technology that changes the basis of competition in the industry) or it may be anticipated (e.g., continued emphasis on expense reductions). Either way, the organization usually has little influence or control over the insult, and it is usually viewed as a threat.

Before this jolt, the organization's "theory of the business" fits reasonably well with reality, and business is conducted as usual. In times of relative calm and tranquility, managerial functions sustain organizational performance fairly well. However, in the new environment (see Figure 4.1*B*), a performance gap is created, and prior strategies may not fit the new environment. The resulting paradigm misfit creates strategic misalignment; the organization's (former) formula for resource allocation that enabled it to maintain or improve its performance is no longer valid in the new environment. Fine-tuning the old strategy in the face of a paradigm shift results in short-term gains at best (see Figure 4.1*C*).

If we examine the responses portrayed in Figure 4.1 as a function of time, they can be seen to occur in stages. AMCs often muck around, immersed in unproductive debate (see Figure 4.1*A* and *B*), far too long before they react, and once they do act, they are not infrequently behind the eight ball. The amount of bloodshed that has resulted from unproductive attempts to deal with the new environment, one fraught with fear and uncertainty, has been striking. Strategic thinking has not been a core competency of many AMCs. Moreover, those few powerful individuals who run the organization have little interest in any shake-up that might shift the power base. In the process of acquiring power, these people cut many deals; thus, promises that were made decades ago must be honored.

New visions and strategies must be developed, and this requires leadership (see Figure 4.1*D*), but a clean slate is hard to come by. Organizations cannot change unless and until the people that work within them change first. In building a health care system that truly cares for its patients and has the backing of its physicians, we must begin by conveying a clear sense of what we value in health care and what kind of medical profession we want to have.

All of this has enormous implications for leadership (Figure 4.2). Not only is there a need for greater leadership breadth and depth in the field of medicine, but it is also becoming increasingly difficult to provide effective leadership because the health care enterprise has become progressively more complex with more stakeholders.

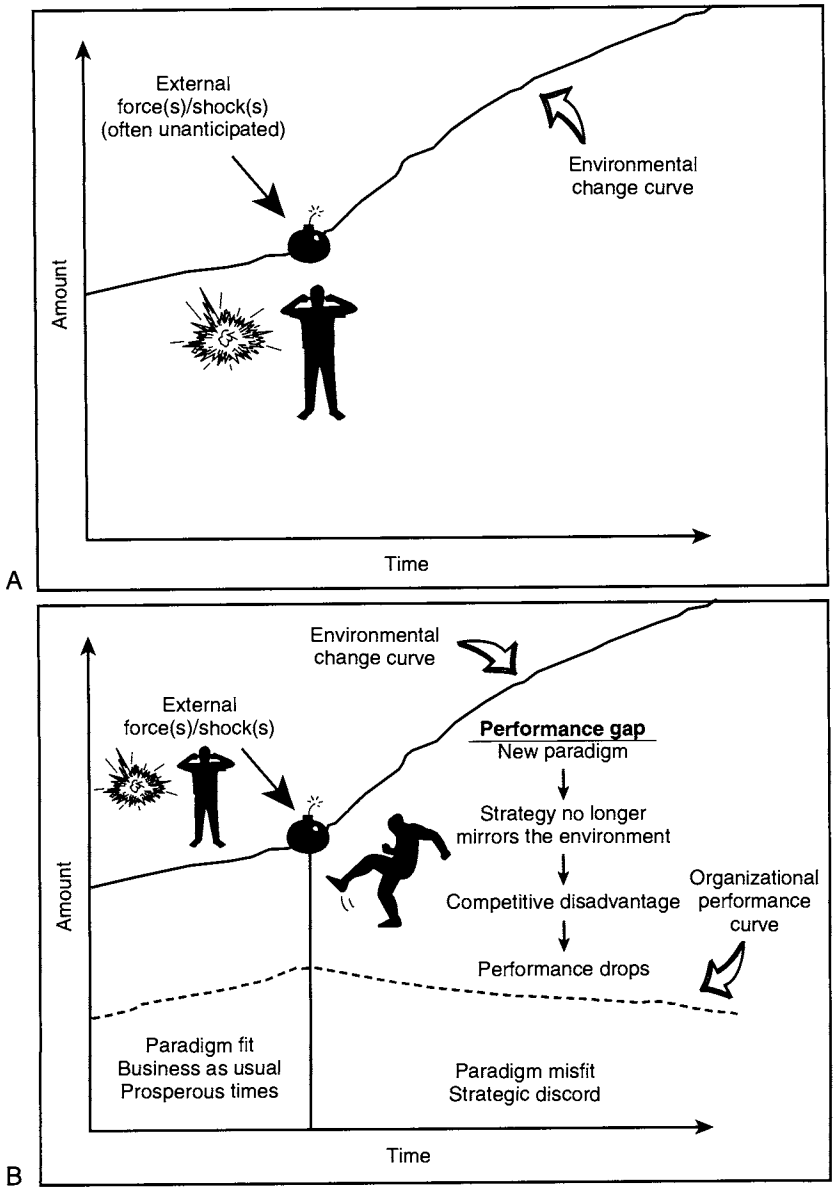

FIGURE 4.1 How changes in the external environment affect organizational performance and transformation. *A*, Often, the change stimulus is a series of external forces (shocks) that markedly increase the amount of environmental "white water." These external forces create a considerable amount of internal turmoil and angst. *B*, Confronted by a turbulent external environment and changing rules of competition, the organization's "old" ways of conducting business are often no longer viable. A performance gap develops.

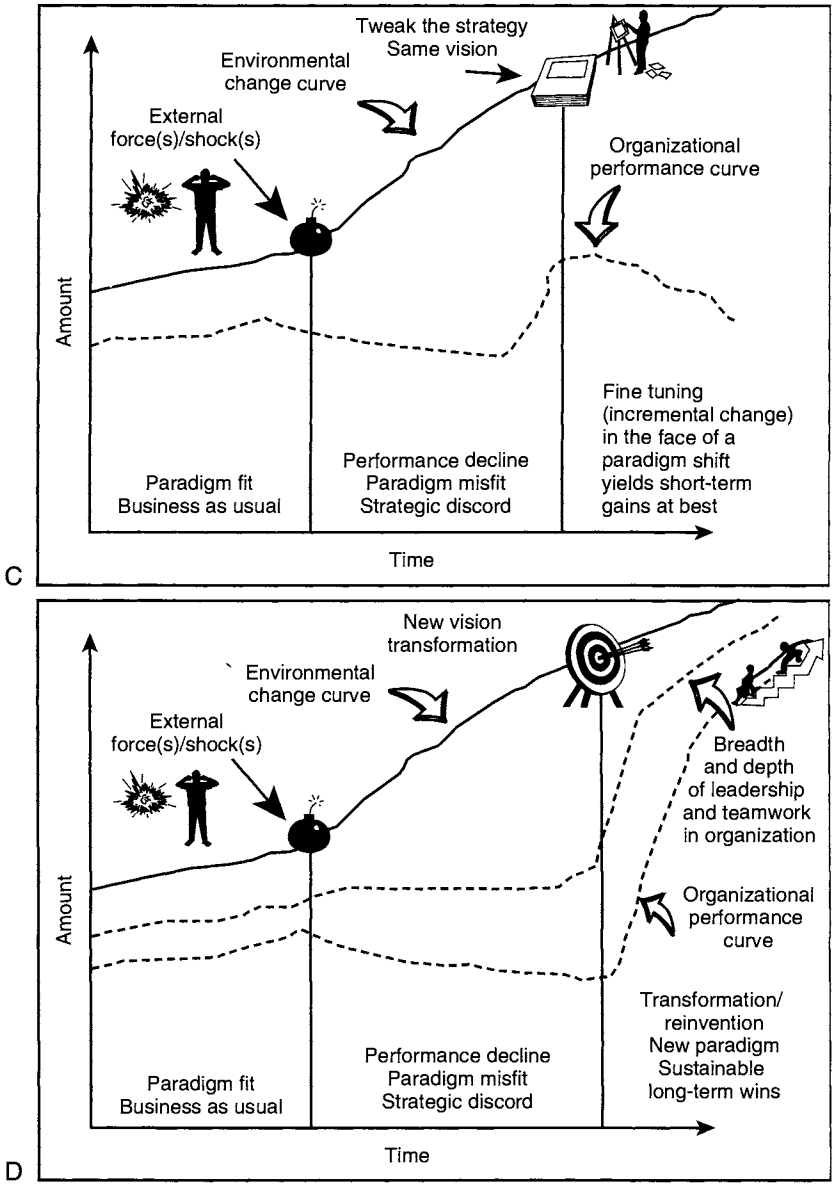

FIGURE 4.1, Cont'd. *C*, Many firms respond by reimplementing old strategies or formulating new ones without changing their mental models or marketplace assumptions. Such actions result in short-term gains at best. *D*, Effective leadership and teamwork is needed to create a strategic vision that is capable of radically improving organizational performance. As part of the transformation process, changes that enhance performance and employee morale (e.g., teamwork and shared leadership) must be incorporated or "institutionalized" into the organizational culture.

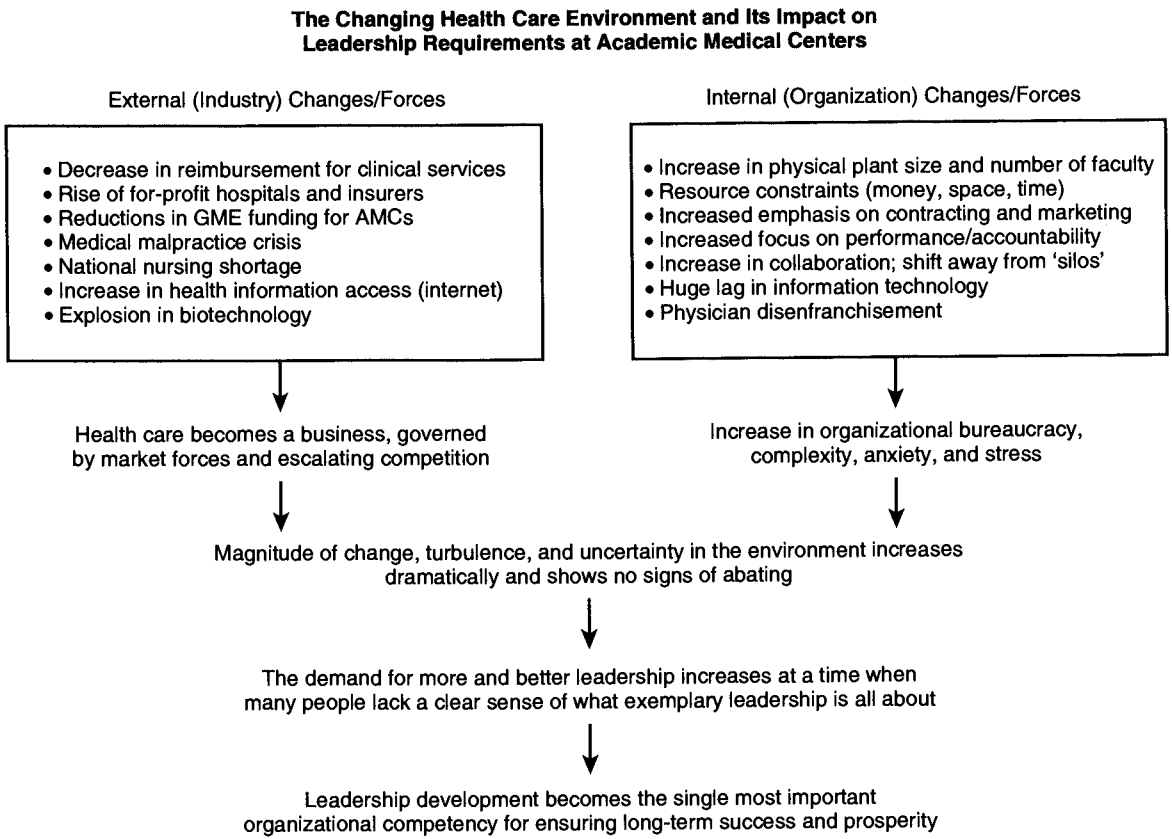

FIGURE 4.2 The urgent need for effective leadership in health care.

HOW WE UNDERSTAND AND TALK ABOUT LEADERSHIP MATTERS—A LOT!

The word *leadership* has two meanings as the term is used in the organizational sense (Kotter, 1990). Occasionally, it refers to a human activity (one anchored in a collection of practices and behaviors) that helps move people and their goals forward, to make progress; leadership, in essence, is about inspiring people to work together to create a better future (Souba, 2000). We say, for example, that so and so is providing effective leadership in the cancer center. More commonly, the term refers to a group of individuals in official positions of authority who presumably provide leadership. The senior leadership team at an AMC might consist of the dean, the vice deans, the hospital director, and the department chairs. Whether these people, individually or collectively, actually provide effective leadership is often debatable.

Used with the first connotation, *leadership*, like *beauty*, is often difficult to define and describe. The unfortunate perception, held by too many people, that leadership is like perfect pitch—you either have it or you do not, and consequently, it cannot be learned—is simply misleading. Leaders must help others overcome the myth that leadership is restricted to individuals in positions of high authority. When we lack a clear understanding of leadership, it becomes difficult to grasp and capture its essence. Effective leaders may fail to develop. When an incompetent person is promoted into a leadership position, it sends a bad message. Worse yet, a poor role model is positioned to set a bad example.

Clearly, there are certain leadership don'ts about which there would be a clear consensus. We would all agree, for instance, that good leadership does not squander precious resources. It does not indulge the egocentric interests of a select few. It does not plot a course that drives people into a brick wall. It is not divisive, that is it does not pit people against one another. However, we are more interested in what effective leadership *is* rather than what it *is not*. How we think about leadership matters. How we understand its purpose in the organization makes a difference. How we view our role, individually and collectively, in exercising leadership will greatly affect organizational performance. How we comprehend leadership will have an impact on our actions, our behaviors, and the language we use. We need a better understanding of what effective leadership involves so we can emulate it, teach it, and circulate it.

Traditionally, leadership has been viewed as something originating from and provided to others by a person in charge, often a charismatic, almost superhuman individual with a magnetic personality. When we think of leadership as residing only with a handful of larger-than-life people (e.g., Michael Jordan or John Wayne), it is frequently viewed as something that is divinely granted; the leader emerges on his or her own by pulling him or herself up by his or her bootstraps,

expressing some preprogrammed set of genes that transforms him or her into a leader. If we understand leadership in this way, we all too often assume it is something we cannot attain and we will dismiss leadership development programs as a waste of time.

Historical leadership approaches have focused on hierarchical leadership (the traditional autocratic model of leadership) and transactional leadership, in which people are motivated through rewards, such as salary incentives. Although organizational reporting relationships are necessary and reward and recognition are key to motivating people, it is becoming increasingly clear that trust is the critical ingredient for building a strong leadership culture.

If we understand leadership as power, muscle, and clout (autocratic model), we will be less likely to trust and enable others. As Dwight Eisenhower said, "You do not lead by hitting people over the head—that's assault, not leadership." People who think of leadership as a dictatorship may become dictators themselves. In addition, if we understand leadership as being about what *I* get versus what *you* get (transactional approach), we may be more inclined to manipulate others and more likely to look at human relationships as being solely about deals or values-free interactions. We may tend to view employees solely as a means to an end, rather than as people to be developed and nurtured.

If our concept of what it means to be a leader brings to mind a headache rather than a privilege, we will have a hard time inspiring people to strive for shared aspirations. We will have difficulty dealing with change, reacting to it rather than viewing it as an opportunity for both professional development and personal growth. And, if we confuse leadership with management, we may spend our time controlling and problem solving instead of motivating people and building commitment.

The way we talk about leadership can be misleading and can cause confusion. On the one hand, we associate the term *leadership* with people like Nelson Mandela, Abraham Lincoln, and Martin Luther King, individuals we admire for their integrity, their resilience, or their vision. We say that Jesus of Nazareth was a great leader because he articulated a vision that had its foundation in compassion and social justice. We look up to leaders who are principled and who have character.

At the same time we often try to ignore or exclude values when we talk about leadership. We talk about Bill Clinton as America's "leader" even though he exhibited behavior that most people find unacceptable. We say that Manuel Noriega was a "leader" even if he was convicted on charges of racketeering, money laundering, and drug trafficking and sentenced to 40 years in prison. And we talk about Ken Lay as Enron's "leader" even though thousands of Enron employees saw their retirement funds evaporate at a time when Mr. Lay landed safely with his golden parachute.

We can no longer sit ambivalently on the fence; we must take a stance. Although it may seem politically correct to study leadership using a values-neutral approach, it will not work. When we act as if exemplary leadership has

nothing to do with a higher set of principles that define what is right and what is wrong, we sell it short. We leave a gaping hole when we approach leadership as divorced from values and think about it solely in terms of its methods (persuasion, allocation of resources), actions (results, achievements), or personal attributes (competencies, style, personality). Methods, actions, and attributes are means that great leaders use to clarify the values that make a difference to their own lives and to the lives of others (Heifetz, 1999; Drath, 2001). When we clarify the principles and values that will govern our lives and the actions we take, we give purpose to the decisions we make. Sadly, people shy away from discussing the topic of values, fearing it is too slippery a slope or too politically sensitive. This must change.

Although leadership is about progress and results, it is ultimately about ideas that are visions of a better tomorrow anchored in basic moral principles and universal values. Both our understanding of and our personal approach to the way we lead at work and in the rest of our lives depend on our perception of what it means to be human, of the purpose and meaning of human life. A leader whose behavior is unethical or who achieves goals that are not in the best long-term interest of the people involved is not an effective leader. In this light, we would say that Hitler, though a powerful figure with a clear vision and strategy, was a poor leader.

Inevitably, there will be some cynics who will argue that the results of poor leadership do not really matter because there are so many other more important forces that affect performance and results. But how a hospital responds to the challenge to cut costs, to meet stretch revenue targets, or to redesign the research enterprise can be influenced tremendously by leadership quantity and quality. When that leadership lacks coherence or is not on target, when it fails to step up to the plate, the outcome can be agonizing, even destructive, as morale drops, tempers flare, and financial performance can go south in a hurry. In extreme cases, the disposition and outlook of the organization can change in a relatively short period.

On the other hand, leadership that permeates deep into the ranks of an organization can be the deciding factor under trying circumstances. It can pull people together and rally them to achieve extraordinary feats. It can resuscitate an organization that is on the verge of cardiac arrest. But loads of committed people are necessary to move initiatives forward and overcome the obstacles and skeptics. One individual, even a genius with fantastic people skills, cannot get it done alone.

LEADERSHIP TASKS AND RESPONSIBILITIES

Although leadership and management are complementary activities, it is helpful to distinguish one from the other. Management primarily involves planning and organizing. Nevertheless, a compilation of works from several academics

(Kotter, 1996; Drath, 2001; Souba, 2001, 2003) on the subject of leadership points to four tasks or key functions of leadership, including the following:

Set direction and strategic intent
Get people on board and engaged with the strategic direction
Build a culture that prepares people to tackle adaptive challenges
Create a work environment that enables people to find meaning and fulfillment in their lives

Set Direction and Strategic Intent

In its direction-setting role, leadership articulates an appealing picture of the future (a vision) and outlines a strategy for attaining that future. An effective vision should always take into consideration the legitimate needs of the various constituencies that have a stake in the organization (Kotter, 1990). In other words, it should be a vision of the people, by the people, and for the people. In building a better future, short-term compromises or temporary concessions may be necessary, but the most powerful visions are shaped by the rightful long-term interests of the people involved, interests such as well-being, professional development, and personal growth and fulfillment (Figure 4.3).

This direction-setting role of leadership is crucial because it clarifies for people what is important and what is not. It not only says, "By next year, we want to be here, and 3 years from now, we want to be there," but an effective vision also expresses unity around what the organization is trying to achieve. Clarity around the fundamental ingredients required to move an organization forward allows employees to make decisions and solve problems without constant supervision. When the vision is effectively communicated and understood, people should be able to say, "Yes, this prospect tells it like it should be. This is exciting; we want to go there. Achieving this is in our best interest."

A compelling vision can inspire and motivate people to accomplish things that exceed the reach of their resources and capabilities. A powerful belief in what might be achieved in 3 or 5 or 10 years can actually yank people into that exciting future. It is as if they were standing in the future and managing the present from that vantage point. They are often willing to deal with all the bleak realities of the present so they can be part of a future that they see as having an almost unlimited range of possibilities. Although imagining that future requires, to use a worn-out cliché, "thinking outside the box," we must heed the words of William James who said, "A great many people think they are thinking when they are merely rearranging their prejudices." Anything short of a radical breakthrough is likely to envision a future that is little more than a one-dimensional, incremental extrapolation of the past–present.

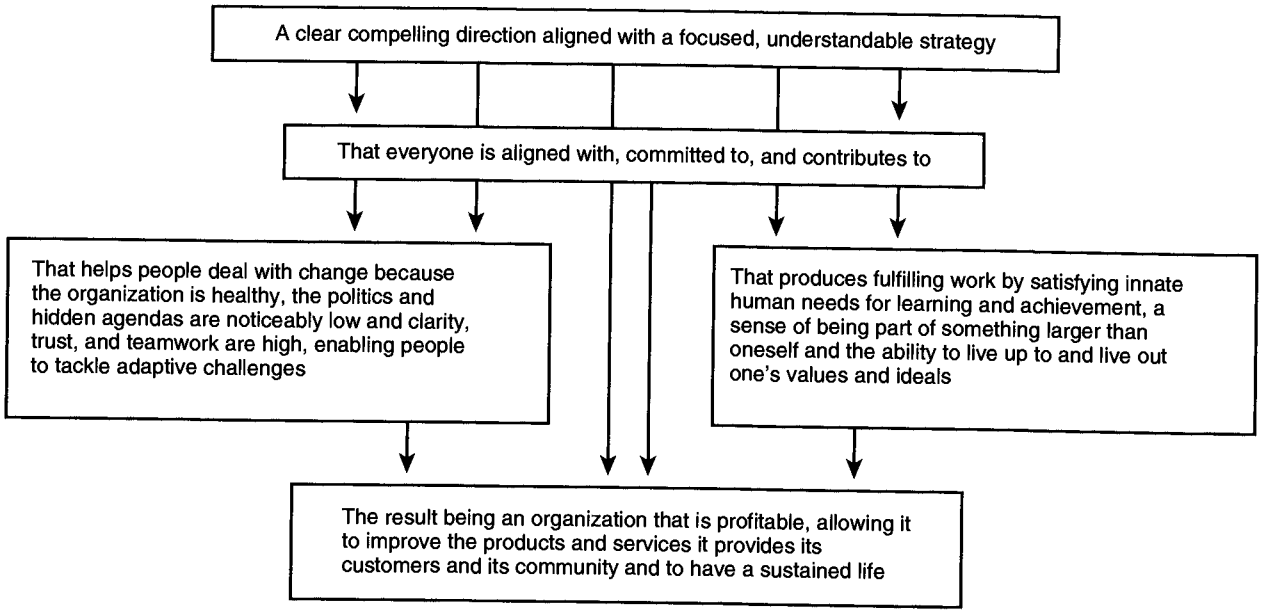

FIGURE 4.3 Effective leadership as a process or activity that circulates in the organization's bloodstream, creates alignment and commitment, builds a healthy organization, and fulfills basic human needs.

How does an organization go about generating clarity regarding the course it has plotted? By paying attention to a few key questions (Lencioni, 2000):

What contribution does the organization make?
What values and behaviors are indispensable?
What is our core business and how do we add value to our customers?
What are our goals for this quarter, this year, and the next 3 years?
Who is responsible for each of these goals?

When people are uncertain or confused about the direction in which an organization is headed, commitment will waver and personal priorities will take precedence over organizational ones. On the other hand, organizations that are clear about their mission, vision, and values and regularly monitor their performance with the specific intent to continuously improve are usually the industry leaders (Figure 4.4).

Organizations get into trouble when they develop vision statements that merely hang on the wall as an anthology of words or when they behave in ways that clash with the message. This happens all too frequently. Consider the following statement. "Our vision is to become the employer of choice in our region, to be the leading provider of patient care, and to improve health through research and education." This statement of aspiration is not unlike the vision a number of AMCs proclaim to embrace. Yet, visit those organizations and the unwritten message is palpably different, "Our vision is to attract doctors and nurses at the lowest possible wages, care only for those patients who have good insurance, and conduct research so we can enhance our national stature." When people get jerked around by this kind of deceptive charade, they become cynical very quickly.

Get People on Board and Engaged with the Strategic Direction

A fundamental characteristic of AMCs is interdependence, where no one has complete autonomy. This feature can present challenges when AMCs must undergo change, particularly major change that requires redefining those interdependencies. Unless people move in unison, in some sort of orchestrated manner, their actions will be disorganized and are unlikely to produce results. Effective alignment links strategy to vision and goals at all levels of the organization to ensure that everyone is rowing in the same direction (Figure 4.5).

A vision will remain idle (and worthless) if the people are not behind it in some sort of unified, committed fashion. Alignment—getting people to line up, sign up, join forces, and rally, in effect, to pledge allegiance to the strategic direction the organization has chosen—is essential to bringing that vision to life. It is the

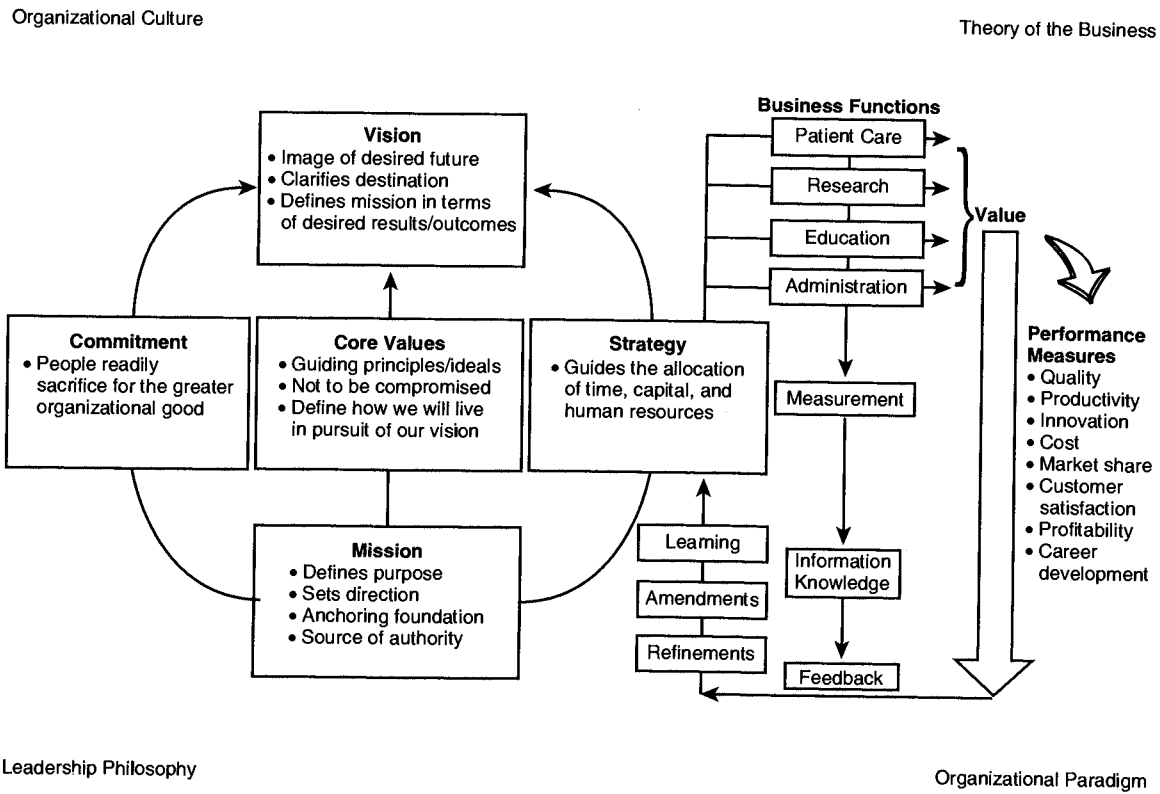

FIGURE 4.4 A framework for leadership. Leadership is the glue that maintains alignment between the organization's mission, vision, values, and strategies. Decision making occurs within an invisible cultural context and is inherently influenced by factors, like the organization's paradigm, its theory of the business, and its leadership philosophy. Modified with permission from Souba (2000).

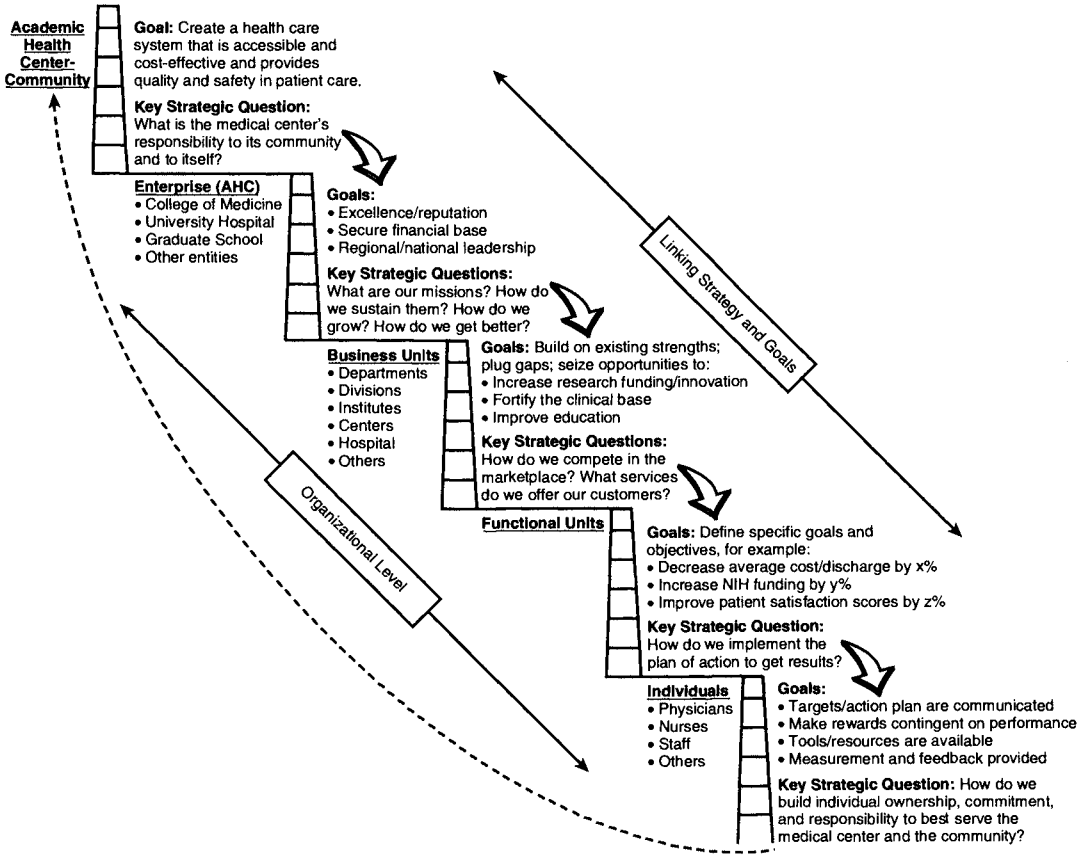

FIGURE 4.5 Creating organizational strategic alignment. Goals at each level are linked to key strategic questions one level above. Mission at each organizational level should be aligned with the overall institutional mission. Used with permission from Souba (2001).

collective energy of many people leading under a common vision that enables an organization to adapt and make progress. Inspiring people to work together and empowering them to act are crucial leadership activities because the journey from here to a more promising future is not a cakewalk; in reality, it is full of obstacles, cynicism, and uncertainties.

There is an enormous difference between being a medical center with a vision statement and being a visionary medical center. The difference lies in the organization's ability to create the key alignments that preserve its core values, reinforce its purpose, and stimulate progress toward its goals and aspirations (Collins, 1996). For example, if an organization proclaims mutual respect as a core value but tolerates physicians who speak discourteously to others, misalignment is present. Similarly, if the hospital continuously emphasizes the importance of being patient focused but fails to address access problems and refuses to conduct patient satisfaction surveys, an effective alignment mechanism is missing. These kinds of inconsistencies become apparent to people very quickly. Lack of alignment can squash morale and derail the best-designed strategies in a short period.

Creating alignment and commitment is vital to accomplishing organizational objectives; without them the teamwork required to succeed is not achievable. One way to build commitment is by appealing to people's sense of achievement, contribution, and basic human desire to be part of something larger than themselves. Pushing responsibility down in the organization builds trust and ownership. It tells people that their opinions and capabilities are valued. It also provides them with opportunities for taking on stretch assignments, which are key to professional development.

Aligning incentives with performance, as a means of linking authority with accountability, is becoming increasingly important in AMCs. Incentives act like a magnet that lines people up, synchronizing them with the organization's strategic goals and objectives. It is extremely difficult to achieve a cultural transformation without changing the reward system. Most AMCs are making physician compensation more contingent on performance, but the incentives are still based primarily on individual performance rather than on both team and individual performance. This must change if the benefits of high-performing teams are to be realized.

Virtually all people have a strong desire to express themselves and their ideals in the workplace, as well as employ their skills at work, but they differ in the mix of values that determine their intrinsic motivation. AMCs, for example, attract individuals with diverse values: For physicians and nurses, helping people who are sick is what motivates them; for researchers, it is the opportunity to discover or create; for others, the dominant values may be autonomy, resolving conflict, or ensuring dignity.

Build a Culture that Prepares People to Tackle Adaptive Challenges

Creating a culture that prepares people to deal with change is among the most challenging leadership tasks. Although alignment and motivation can help organizations cope with change, they are insufficient in and of themselves. Change is intensely personal because it represents loss. Leading transformational change is possible only when people are willing to surface and challenge deeply held beliefs, ask difficult questions, and make sacrifices. Most people are quick to resist when leaders disturb the personal and professional world to which they are accustomed.

All living systems, simple or complex, learn to cope with change by embracing heterogeneity and diversity. They use newness as a means of growing, learning, and adapting. Diversity and heterogeneity often manifest themselves in nature as conflict, discord, or debate. Conflict is natural, intrinsic to all living systems, including individuals, communities, teams, and organizations.

Nature uses conflict to create change (Crum, 1987). Conflict is not negative; it is not a contest; it is not a game of winners and losers. Learning, growing, self-discovery, and cooperating are the goals of resolving conflict. Conflict is essential for the growth and progression of all meaningful long-lasting relationships. Accepting, even encouraging, conflict and managing it by building trust is critical to driving organizational transformation.

Most of us dislike conflict because it brings to mind memories of stressful arguments, power struggles, and bruised egos. Consequently, most people sidestep conflict. We hide from it or squelch it when we see it heading in our direction. When it is unavoidable, we may try to soften the key concerns or we may decide to declare war. Either way, the critical issues are infrequently resolved.

The ability to use conflict constructively is key to facing what Ron Heifetz (1999) calls "adaptive challenges." Heifetz (1999) defines leadership as an activity that fosters adaptive work and addresses the value conflicts that people hold. He distinguishes "technical" problems that may not require leadership from "adaptive problems," which people experience as threatening to themselves or their group. Heifetz (1999) acknowledges that superb leaders are guided by nonnegotiable values and are driven by an unwavering commitment to a worthy cause. This yearning to make a difference in the world is what makes their efforts worthwhile. Leadership is not without pain or peril, and great leaders know this. Although it is often seen as a prestigious and visible pursuit, leading during times of uncertainty is not without risks and is not for the weak of heart.

The success with which people deal with change is very much a function of the amount of trust that has been established. Trust is the glue that enables people to

engage in constructive conflict and dissent; from heated debate and disagreement, creative ideas emerge and understanding is reached. By holding people accountable and insisting that they deal with uncomfortable issues, leaders can help cultivate the fertile soil from which productive work can germinate. This willingness to create an organization that can handle conflict is invariably painful and it is all too easy for leaders to back off from the heat. This is the paradox of leadership; it is not possible to know the joys of leadership without experiencing the pain as well.

Create a Work Environment that Enables People to Find Meaning and Fulfillment in Their Lives

The role of leadership in enabling people to find meaning and purpose in their work applies at both the professional and the personal level (Souba, 2002b). At the organizational level, our best leaders mobilize others to tackle adaptive challenges, to create a better future; in so doing, they create a culture anchored in shared purpose and values. Personal leadership begins with discovering one's true purpose, a purpose far more gratifying than making more money or acquiring more power. When people feel that they are part of and belong to something larger than themselves, they are much more likely to find meaning in their work. Purpose is expressed in how we show up each day for the activities we take part in, which include patient care, research, and developing others.

Most of us are motivated to work for reasons beyond the compensation we receive. Meaning and purpose help us understand what is important in life and why we get out of bed in the morning. "Throughout history," notes John Gardner (1981), "we have shown a compelling need to arrive at conceptions of the universe in terms of which we could regard our own lives as meaningful. We want to know where *we* fit into the scheme of things.... We seek conceptions of the universe that give dignity, purpose, and sense to our own existence."

Virtually every culture looks to its religious and spiritual values as the ultimate source of deep-seated purpose and meaning. Whether we acknowledge it or not, the yearning for a relationship with this ultimate truth resides within each of us; it is the "essence of the human spirit; it is the origin of our highest hopes and dreams" (May, 1988). When clinicians lack a clear sense of how meaning in their work is grounded, they may lose touch with the values that drew them into the profession in the first place. Real meaning in health care comes from an understanding that illness is a significant human condition, a deep awareness that we are all connected to and by a universal energy and a sense of purpose tied to obligation (Figure 4.6).

The Social Missions of Academic Medical Centers: Noble, Caring, and Personally Fulfilling

Patient care

Illness and suffering are threats to individual integrity and well-being. They endanger the patient's autonomy, disrupt relationships, call values into question, and restrict choices.

To participate in the care of the sick is a privilege—it is the reason that medicine is often seen as a calling. Although we cannot "become one with [our patients] in their torment," notes Cassell (1991), we can have compassion for their anguish. In so doing, our values come to life and our work has meaning. "The unique impact of being ill on the person," remark Pellegrino and Thomasma (1997), "the impact on the person's humanity, is the grounding that gives meaning to the whole of the physician's activities."

In displaying compassion for the sick, we learn more about the energy behind the universe, that energy that regards all life as priceless. It is in surrendering to this energy that character is shaped, a moral foundation is wrought, and higher, more conscious choices are made. This gives joy and purpose to our existence.

Research and innovation

While biomedical research has greatly enhanced our knowledge of how the body works and yielded great benefits to society, it cannot provide meaning in and of itself. Truth and meaning are distinct; science can supply the former, but faith is necessary to confer the latter (Wilber, 1998). The "why" of illness and suffering are likely to remain enigmas in this life—to accept this is step one toward acknowledging a higher power. Rather than look solely to science for the answer, we must learn to stand in awe and wonder.

Once we accept this, our understanding of our existence takes on new meaning. We begin to see illness and suffering not as "something broken to be repaired" but as an integral part of our being that can provide us with an appreciation of what it means to be human. This insight, fragile as it might seem at times, gives meaning and hope to our work. Research helps us acknowledge and appreciate that there is more to this universe than meets the eye, something authentically divine about how it all fits together.

Teaching and coaching

One of the joys of academic medicine is teaching—unleashing the latent, hidden potential in our colleagues, residents, and students. It is fundamentally an act of caring. We must pay attention not just to how much knowledge our students and trainees acquire but also to how they make meaning of that knowledge and how it is affecting their capacity to become life-long learners.

To unleash the human spirit, a good teacher must be much more of a coach than a chauffeur or a nursemaid. Paving the road, especially one that is constantly changing and frequently foggy, is a less effective method of mentoring than helping the mentoree become a competent navigator in his own right.

Teaching is one of the primary means by which we shape and develop others, helping them form a moral foundation, a basis for commitment. In the process of imparting our knowledge, we share our beliefs and values as well. In giving of our authentic selves, we derive, in return, tremendous meaning and fulfillment.

FIGURE 4.6 Sources of meaning and purpose for physicians at academic medical centers.

EXTRAORDINARY LEADERSHIP IN TRYING TIMES

Leadership development is ultimately self-development. Unfortunately, it is often seen as a process that occurs externally: We focus on achievements rather than the meaning and purpose behind those achievements; we emphasize what to do, not how to be. The journey of personal leadership involves a self-transformation, one that requires a journey inward, a "hatching of the heart" (Borg, 1997) and subsequently a journey outward. Without this inner journey, we cannot fully connect with the suffering of others, and we lack the wisdom and will to tackle the problems facing health care today. Yet, when our inner work is isolated from others, it implodes upon itself, leading to futility and meaninglessness.

In a recent speech titled *Ethical Leadership in the 21st Century,* H. Norman Schwarzkopf remarked (1998)

> The true rewards of leadership come from striving to live up to a higher moral standard, from trying to do the right thing. Some people get into the "leadership game" for the next tangible reward—the next promotion, the next pay raise, the next headline. But those individuals are inevitably doomed to disappointment. At the end of the day, they cannot point to these things and say that they are the stuff of which genuine happiness and pride are made. Good leaders sometimes—in fact, quite often—lose in the material world. They go right ahead anyway, knowing that they are going to lose. Are they tilting at windmills? Do they have a "can't do" instead of a "can do" attitude? Of course not. They are committed to defending the right values. And the right values are seldom safe, easy, or advantageous.

We need better leadership and more of it from more people. And if we are going to grow all these leaders, we must be as clear as we can be about what exemplary leadership is all about. My sense of how leadership develops, how it sustains itself, and what it looks like in action is described in the following sections (Souba, 2002a).

A Thirst for Learning, Growth, and Self-Discovery

World-class leaders have an unquenchable thirst for learning and growth; while this thirst is for knowledge, more importantly it is for clarity, wisdom, and self-awareness. This desire for learning, growth, and self-awareness is what helps these special people use hardship and adversity to grow stronger and wiser. They have enough strength of will to get back up when they stumble and learn from the experience, rather than letting it be so traumatic that they implode or check out.

A Sense of Purpose

World-class leaders have a sense of purpose that helps them understand what is relevant and important in life. It is often described as a feeling of being part of something larger than themselves. This sense of purpose is always tied to a larger end that serves others.

Ideas that Are Big and Bold

World-class leaders are passionate about visions and beliefs that are big and bold, of the kind that other people often ridicule and claim are pipe dreams. With their idealism and optimism channeled by a clear understanding of reality they forge ahead, inspired by a radical sense of possibilities and an almost irrational sense of hope.

Steadfast Values and Principles

World-class leaders are guided, in all that they do, by a set of core values and first principles that penetrate much deeper than a list of feel-good slogans. As they mature, their values become ways of being; they include embodiments like trust, a transcendent concern for others, and a constant pursuit of excellence.

A Willingness to Search Inside

As world-class leaders grow, they understand that leadership begins as an inward journey. They are connected to an energy deep within themselves that is the source of their leadership. That energy becomes for them the essence of who they are—their ideals, their dreams, and their ability to overcome adversity all come from this energy.

As world-class leaders grow, they become more intentional about a deepening relationship with this energy. They help others connect to their hopes, personal dreams, and highest aspirations. In so doing, leadership becomes a powerful driver that enables people and organizations to achieve the amazing if not the impossible.

LEADERSHIP AS A FORCE MULTIPLIER

Our understanding of leadership is evolving. In the past, leadership was about one person being in charge. Today, leadership, like money, works best when it circulates among people. More than ever, leadership will need to permeate all levels of the organization (Table 4.1) to include those people who have, in the past, viewed their jobs as having nothing to do with leadership. At the various

TABLE 4.1 Layers of Leadership

Leadership level	Relationship level	Leadership responsibilities	Goals and objectives
Organizational	Collegial/spiritual	Set direction, create alignment	A shared vision
Interdepartmental	Collaborative	Build/model trust and respect	Team building
Department Division	Supervisory (interpersonal)	Empower, coach	Human skill development
Personal	Self (intrapersonal)	Seek challenges	Self-discovery/ personal growth

leadership levels, the relationships are distinct, and a different set of tasks and responsibilities are involved. Likewise, the objectives and goals are different. Leadership development is ultimately self-development.

Leadership is leadership whether it originates from the dean's top team or from an outpatient clinic task force that sits buried six layers deep in the organizational chart (Kotter, 1988). At the level of the dean, the vision and strategy will undoubtedly be much more comprehensive and complicated, and the number of people from whom teamwork is needed is many fold greater. The vision for the task force may be no more than a goal of answering all phone calls within four rings, the strategy may only be a couple of simple moves to reshuffle the front desk staff, and the team might include an office manager, two nurses, and two clerical people.

Kotter (1988) would characterize effective leadership emanating from the dean and his or her team as leadership with a capital *L*. Its impact is broad and far reaching, with downstream effects that potentially affect all members of the organization. It establishes direction for the entire organization, thereby imposing some constraints in the sense that strategy in a department, for example, should be aligned with and supportive of the broader institutional vision. At the task force level, the impact of leadership is not nearly as far reaching, in that the effect is generally confined to the work unit. Although this might be categorized as leadership with a lowercase *l*, it is nevertheless effective leadership. It could be a phone attendant whose courtesy is so exceptional that it inspires the entire team to raise the performance bar. It might motivate people in other work units to assume greater responsibility and ownership. It might be the initiating event that leads to a major change in the way employees understand empowerment.

This lowercase leadership is critical because it has the potential to become a force multiplier. Hundreds, even thousands, of these small acts of leadership occurring every day throughout the organization can work collectively, even synergistically to improve performance, increase employee morale, and improve customer satisfaction (Figure 4.7). Organizations with this kind of leadership will eliminate any competitor.

Academic Medical Center #1

1) The prevailing culture views leadership as a gift bestowed upon department chairs, division chiefs, center directors, and a handful of senior executives and administrators.
2) As a consequence, only 75 of the 7500 employees at the medical center are designated as leaders.
3) 75/7500 = 1% leadership. The other 99% assume leadership is not their responsibility. The organization deals ineffectively with change and adaptive challenges.

Academic Medical Center #2

1) The prevailing culture views leadership as being the responsibility of many employees of the organization, not just department chiefs and senior executives.
2) As a result, 4400 of the 6200 employees see their work having an important leadership component; they lead effectively.
3) 4400/6200 = 71%. The leadership culture has created a healthy organization with high levels of trust and teamwork. People deal constructively with the challenges of change.

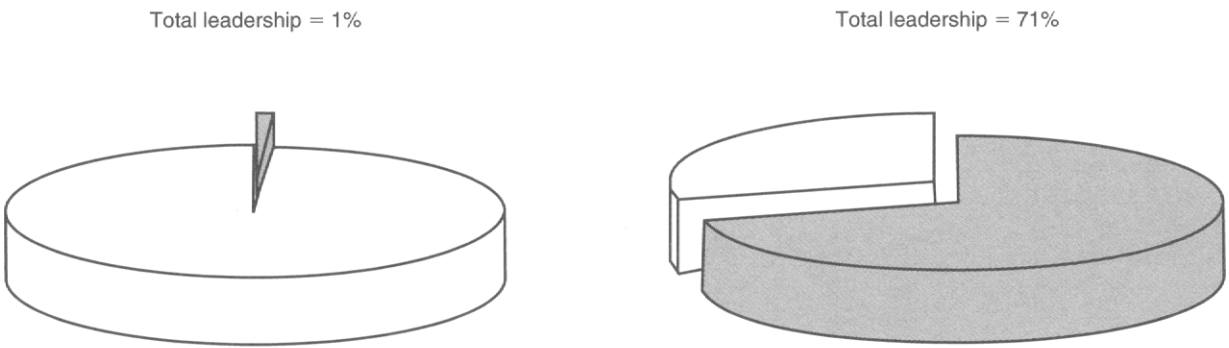

FIGURE 4.7 How a culture that prioritizes leadership makes a difference.

AMCs that have embedded a leadership culture into their organizational fabric provide better care to their patients, have higher morale, and are more enjoyable places to work. They are winning organizations. I am not talking about the kind of winning that is brutal and calculated, designed to wipe out competitors. I am talking about the kind of success that earns the AMC a reputation as a regional and national leader, one that others want to be part of, one that sets standards of excellence for others to emulate. In this kind of environment, people know that what they are doing is worthwhile and makes a contribution. Their work has a purpose that extends far beyond a paycheck. Winning in this kind of environment is fun. It is exciting. It has a ring that says we are doing this together. There is a strong sense of belonging and ownership. It fuels the human spirit. And, in so doing, it gives our lives meaning and purpose.

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CHAPTER 5

Developing Networks to Deal with Complex Health Care Problems

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An interorganizational network is a set of autonomous organizations that come together to reach goals that none of them can reach separately. It represents a comparatively new and increasingly important form of organization—one that reflects the environmental conditions in which organizations operate. These conditions include:

- The growing complexity of key problems or issues
- The increasing interdependence among organizations and institutions
- The accelerating pace of change

This chapter communicates the potential of the interorganizational network as a form of organization suited to dealing with complex problems and issues faced by health care managers in the twenty-first century. To carry out this purpose, I have organized this chapter into five sections. The first section covers key aspects of the emerging environment and the nature of projected crucial problems. The second section describes the nature and key features of interorganizational networks, as

well as the functions these systems perform. The third section deals with stages in the process of developing interorganizational networks, and the fourth section describes using action research (AR) as an integral part of the development process. A concluding section summarizes major points presented earlier. An appendix outlines how the network development process could be used to induce systemic improvement in the quality of long-term care in a community. Network organizations have the potential to help enable health care system stakeholders achieve purposes and goals that cannot be reached otherwise.

THE EMERGING ENVIRONMENT

The emerging environmental conditions in the early twenty-first century place complex, often conflicting demands on organizations. These conditions cause turbulent environments that, in turn, produce complex problems that are often impossible for individual organizations to solve. Hence, new ways of thinking and new organizational forms are required to match problem complexity. Interorganizational networks can help match system capability with complex rapidly changing environments in many situations. Several aspects of the general environment are particularly important:

- Technology
- Growth of knowledge
- Globalization
- Beliefs and values

Further, interaction among these factors exacerbates the turbulence in which individual organizations must operate.

TECHNOLOGY

Medical technology has had pervasive impacts on health care organizations for many years and seems likely to continue to do so well into the future. Magnetic resonance imaging, new prescription drugs, and telemedicine are examples of technological advances that have required changes in the shape and management of health care organizations, as well as the industry as a whole. It seems certain that such technological innovations will continue to emerge.

These within-industry technological pressures are occurring in a context of other changes in the general environment. For example, Emery (1978) noted that computers, microprocessors, and other rapid information-processing devices comprise the lead technology of the postindustrial era. Information systems using these devices make possible the storing and immediate recall of vast quantities of information, and its instantaneous dissemination around the globe. Similarly,

transportation technologies integrated with advanced information systems greatly reduce the importance of physical location for reaching desired outcomes. Increasingly, individuals who require highly specialized medical treatment can be transported over relatively large distances to receive needed care. In short, advanced technologies integrated with organizations to use them effectively are increasingly ushering in an era of "placelessness." Conceptually "placelessness" involves the capacity to make virtually everything, including people, knowledge, and resources, available anywhere, almost simultaneously, regardless of physical location (Knoke, 1996). For example, Bilimoria, Wilmot, and Cooperrider (1996) describe development of an international "knowledge alliance" to replenish a depleted Romanian medical information system in the early 1990s. Certainly, constraints place limits on how far this tendency can go at a particular time in a specific situation. However, ever-increasing possibilities of linking widely dispersed individuals, groups, and organizations apply pressures to create interorganizational networks.

Growth of Knowledge

Advanced industrial societies around the world have entered a postindustrial era (Bell, 1976). Leading features of this transition include increased professionalism of the workplace, rising importance of theoretical knowledge, and a growing share of the economy providing services instead of goods. Creating and using knowledge leads to more complex work roles, and the leading features of such postindustrial work roles include the following (Hage and Powers, 1992, p. 51):

- Customization: increased emphasis on quality and personalized service
- Information use: need for expanded search for information
- Skill levels: higher skill levels
- Discretion: increased employee discretion with fewer specific guidelines and rules

Overall, the growing importance of knowledge in the workplace requires inventing new organizational and job designs. For example, a mismatch between individuals' knowledge, skills, and capabilities and job requirements is a major contributor to the U.S. shortage of nurses. At a higher level, the interorganizational network is a leading form of organization that can help meet increasing requirements to use and generate knowledge.

Globalization

Postindustrialism is generating changes in political institutions (e.g., declining importance of nation states). Parallel changes also are occurring in economic institutions, with some functions shifting to the international level and others

to the subnational level. These shifts will result in the existence of many different types of arrangements. Kanter (1995) believes that we have entered a global era in which U.S. and European dominance is rapidly passing. Instead, organizations must achieve "world class" status to survive and prosper. According to Kanter (1995), such "world class" status requires having the following features:

- Concepts: the best and latest knowledge and ideas
- Competence: the ability to meet the highest operating standards that exist anywhere in the world
- Connections: effective linkages to other individuals, organizations, and institutions around the globe
- Cosmopolitanism: a comprehensive complex view of the world

These changes in economic and political institutions cause many conflicting pressures on managers and political leaders in the new era. Increasingly, health care managers will find it necessary to align activities with forces from various levels, including local, regional, national, and international. Success under these circumstances requires collaboration, not singular activity. It also requires flexibility and the capacity to change organizations rapidly. Interorganizational networks have the potential of enabling managers to meet the complex, conflicting requirements of globalization.

Demographic Changes

Basic demographic shifts will continue to have major impacts on health care in the United States and other countries in the new century. For example, a recent estimate indicates that the proportion of the world population older than 65 years will increase from approximately 10% presently to 20% by the year 2050. This change is occurring on top of pressure from adding approximately 95 million people to the total world population each year with the resulting demands on the carrying capacity of the earth. Moreover, more than 90% of the total global increase is taking place in less developed countries (Laszlo, 1994). These basic shifts make up part of the worldwide context for changes within the United States. Here, basic trends include the following:

- The increasing age of the population
- Growing demand for quality care
- Pressures to allow individual selection of health care providers
- Increasing pressure to contain costs

Overall, national and global demographic changes will lead to strong pressures for change in health care for the future. These changes, in turn, will spur development of interorganizational networks.

Nature of Emerging Problems

The changing environment encourages the emergence of new types of problems. U.S. examples include providing quality medical care to all Americans, reforming education, and improving environmental quality. Authors use various names for such recalcitrant problems. Trist (1983), for example, calls them *problem domains*, whereas Ackoff (1974) uses the term *messes* and others highlight *wicked problems* (Rittel and Webber, 1973). Despite different labels, these problems share several key features:

- Problems are "messes." Problems involve sets of problems that are interconnected. Multiple linkages and the multifaceted nature of these problems make them impossible to solve by simple solutions; a solution to one aspect of the problem that fails to account for impacts on other interconnected organizations and groups usually fails. Complexity and interconnectedness also make them extremely difficult to conceptualize, analyze, and "solve."
- Interorganization action is required. Complexity and interdependence require that different organizations become involved in planning and implementing ways of improving the situation. Concrete, absolute solutions usually are impossible for such large-scale problems; only progress toward a more desirable future state is possible. Working toward a more desirable future requires the collaborative efforts of various organizations.
- Multiple-sector, multilevel focus is required. Often the need to involve organizations from different sectors (e.g., public, private, labor, and higher education) and from different levels (e.g., federal, state, and local) adds to the complexity of dealing with large-scale socioeconomic problems. Existing professional and organizational boundaries, budget and control systems, and preconceived views and feelings about other organizations and professions typically make coordinated action difficult. The level of difficulty also grows when organizations from different sectors are involved, and requirements from regulatory agencies must be satisfied, thereby compounding the difficulty.
- Multiple outcomes are typically inevitable. Actions to deal with complex problems often lead to a variety of outcomes over time, some "positive" and others "negative." In addition, some outcomes can be predicted, and others cannot. Often in complex, interactive systems, planned activities to reach desirable goals cause unintended, undesirable outcomes (Herbst, 1976). Consequently, attempts to deal with messes or problem domains must build in the capacity to monitor outcomes constantly. Online monitoring is needed to make rapid changes in the activities required to continue to move results in a positive direction.

The broad-scale, multifaceted nature of many current key problems and the limitations of traditional attempts to deal with them indicate a need to develop and apply new organizational approaches for addressing them.

KEY FEATURES OF INTERORGANIZATIONAL NETWORKS

The previous section described general environmental conditions in the early twenty-first century that place complex and conflicting demands on organizations. As indicated, these conditions often cause turbulent environments that produce complex problems, which are impossible for individual organizations to solve. Turbulent environments are characterized by great complexity of problems or issues ("messes"), high levels of interdependency among organizations, and an accelerating pace of change. One way of addressing these complex issues is through new organizational forms, such as the interorganizational network.

Table 5.1 identifies several key features of these systems.

As Table 5.1 indicates, interorganizational networks operate largely as abstract conceptual systems that enable members to think about and understand large-scale problems in new ways. Developing a deep, shared understanding makes it possible for members to create new ways of perceiving and organizing to deal with these complex problems.

Second, networks improve the ability of organizations to deal with ill-defined problems or issues that individual members cannot handle alone. Network activity is oriented to the shared vision, purpose, and goals that bind members together (e.g., improving total quality health care for members of a community). The shared vision includes and extends beyond the interests of individual member organizations.

Third, loose coupling of members means that members represent diverse organizations that are physically dispersed and meet from time to time to conduct activities required to carry out the higher level system purposes. Belonging to a network is voluntary with few formal organizational structures and processes that make involvement permanent. Networks are not hierarchical. One organization or member does not have a superior–subordinate relationship with another. Loose coupling provides great flexibility in thinking about, organizing, planning, and dealing with complex issues. It also allows for inventing many ways of adjusting to changing conditions.

Fourth, network organizations are self-regulating. Members, not a centralized source of power, are responsible for developing a vision, mission, and goals, as well as for initiating and managing work activities. Members share their understanding of issues and devise ways to relate to each other in performing the work necessary to bring about a shared vision of the future, the basis for all network activity. Using a network of different organizations that can collaborate and learn

TABLE 5.1 Key Features of Interorganizational Networks

Conceptual system	Member organizations consciously develop networks to help understand and deal with complex, ambiguous problems and issues ("messes").
	Primary work of networks involves devising ways for members to think about, create, plan, conduct, and evaluate collaborative activity.
System level	Networks exist at a level above interorganizational relationships.
	Member organizations come together to deal with complex metaproblems that require collaborative work by many organizations.
	A shared vision and common purpose orient and guide a network and its work. These ground the network at the suprasystem level.
Loosely coupled	Member organizations belong to a network voluntarily and meet as required to conduct work.
	A horizontal form of organization exists. Member organizations are equal, with no superior–subordinate relationships among them.
Self-regulating	Members control the network and its activities.
	Member organizations are responsible for developing a shared understanding of a problem area.
	Member organizations plan, initiate, and manage network activities.
Basic functions	1. Regulation: maintaining orientation of the network to the shared vision and purpose; ensuring development and maintenance of network values and appropriate ways of organizing activities
	2. Appreciation: developing a shared understanding of changes to the network vision and purpose required to incorporate issues and trends that emerge over time
	3. Development support: providing professional organization development resources required to develop, maintain, and manage the network

Source: Chisholm (1998, p. 7). Concepts from Trist (1983 and 1985).

together how to develop designs and practices that meet specific requirements of local conditions has emerged as an alternative to traditional organization designs.

To summarize, essential principles for developing networks include the following:

- Participants are included because of their interest in or their ability to contribute to constructive action.
- Network members are "loosely coupled" and participate in system activities voluntarily.
- Activities and decisions revolve around a broad vision or purpose and a set of general goals that incorporates the interests of the diverse organizations, groups, and individuals involved in work of the system (Brown, 1987).

THE PROCESS OF DEVELOPING NETWORKS

Key features of interorganizational networks, such as loose-coupling/underorganization, dispersed power and leadership among autonomous organizations that comprise the system, and noncontinuous joint problem solving have important implications for efforts to develop these complex systems. This section outlines a general process for the development process.

Network development requires that the system, as it currently exists, must be identified and understood before a change process can be invented. And, the relatively diffuse, underbounded nature of networks makes this extremely difficult. In effect, two perspectives must be maintained throughout the network building process:

1. What the system could be: How should the system function and what characteristics will enable it to engage the situation at hand effectively?
2. What the system is, its history and traditions, and how it is presently functioning.

Network development, then, involves helping the system move from its current undeveloped state toward a more ideal one. The multiple tasks of analyzing the present, identifying outcomes of the system as it now functions, developing shared future visions, and using this information to assist the system develop greater capacity to engage the complexities of change continue unabated during the development process. Creative tension produced by juxtaposing the vision against the current reality provides energy for change (Senge, 1990).

Phases in the network development process include:

- Recognizing the problem
- Holding informal discussions
- Planning network development
- Identifying stakeholders
- Forming a steering committee (SC)
- Convening system stakeholders and visioning the future
- Organizing for action (Chisholm, 1997)

These phases are discussed briefly in the following sections. More complete descriptions and examples of applications appear in works by Chisholm (1997, 1998, 2001). Recognizing that network building involves a process of creating and maintaining an effective human organization that supports and meshes with allocating tangible resources (e.g., machines and physical space) is essential for understanding and carrying out the development process.

Problem Recognition

Recognizing the problem involves having at least one person who recognizes the need for systemic change and can call others' attention to this need. Usually, such an individual is an "opinion leader" who merits respect among peers and can rally them to begin exploring and discussing the existing situation. Problem recognition requires maintaining openness to new perspectives of the issue and its context to allow a deep shared appreciation (Vickers, 1965) to emerge during later stages of the development process.

Informal Discussions

Informal discussions occur among a small number of individuals identified as having potential interest in an issue. Early meetings involve sharing views and feelings about the existing situation and the nature of the issue involved. These discussions also develop understanding and trust among participants and lead to consensus on the need for collaborative action to deal with the focal issue. Typically, informal discussions may continue for 6–12 months or longer.

Planning Network Development and Identifying Stakeholders

Ideally, informal discussions among leaders concerned about a problem fulfill the following roles:

1. Create a preliminary shared definition of the problem
2. Stimulate willingness of individuals and/or organizations to begin working on it

These discussions also should generate a tentative list of organizations, groups, and individuals that have a stake in the problem. Key questions for extending the stakeholder analysis include the following:

- What organizations and/or individuals have critical involvement in the current problem domain?
- Whose support is absolutely essential to bring about change?
- What organizations and groups will be affected by outcomes?

Careful attention to identifying stakeholders is required to ensure that the focal issue is adequately defined and that sufficient support to deal with it is developed.

Forming a Steering Committee

A Steering Committee includes representatives of stakeholder organizations and groups involved in a network. Individual SC members should have enough authority to speak for their organizations and commit them to network decisions. Committee functions include the following:

- Governing the network
- Managing network activities and network development
- Linking the network continuously to the general outside environment and to member organizations

Maintaining an up-to-date understanding of the issue among network members and maintaining the integrity of the network are other SC responsibilities.

Convening System Members and Visioning the Future

The next stage in developing a network involves convening a meeting of the stakeholders identified previously. This phase is crucial to developing the organization required to manage the change process. The following are goals of this meeting:

1. Obtaining increased understanding of trends in the environment
2. Sharing views of the existing situation
3. Developing a shared vision of a "desirable future"
4. Testing and building increased motivation and commitment of participants to engage in a development process
5. Developing general change goals and several broad "next steps" for action

"Searching" or holding a search conference represents one approach that is highly consistent with the network development approach. A search conference rests on the assumption that the individuals, organizations, and groups that have a direct stake in the problem or issue must provide the energy for change by becoming deeply involved in the development process. They also have in-depth knowledge of the system required for successful change. Although specialized expert knowledge and information may be required, this expertise should respond to general guidance and requests from the stakeholders, rather than drive the development process. Stakeholders control the process during continuous cycles of designing, implementing, monitoring, and redesigning the effort through the SC. Search conference design aims to help people restructure their views of reality to see beyond the superficial conditions and events into the underlying causes of problems, and therefore, to see new possibilities for shaping the future

TABLE 5.2 Phases in the Search Conference Process

Phase 1	Preconference activities. Focal issue: design and planning search process to develop network
Phase 2	Exploring the general environment. Focal issue: trends or forces that will affect the problem domain during the next 10 years
Phase 3	Identifying current situation. Focal issue: key features—both positive and negative—of the existing system and its history
Phase 4	Visioning a desirable future. Focal issue: creating a shared vision of an ideal system for the future
Phase 5	Planning board action steps. Focal issue: creating a strategy and defining goals and strategy to progress toward ideal future; establish task forces on key issues identified
Phase 6	Follow through; postconference work. Focal issues: conducting project work to implement plans and strategy; maintaining the network organization as an effective system

Source: Reproduced with permission from Chisholm (2000, p. 204).

(Senge, 1990). This general outcome stems from bringing a different set of participants together in a new forum to deal with development in new ways.

A typical search conference involves six phases of activities that make up a holistic process. Table 5.2 shows the flow of work and purpose of the phases.

Organizing for Action

Phase 6 represents an extension of the discussion process from the previous phase. Here, attention focuses on what action to take to implement the general vision agreed on in phase 5. Typically, task forces or project teams are formed to follow up on general action steps identified during the previous phase. Follow-up activities generated here usually continue long after the search conference has ended.

Network development efforts require continuing careful attention to design, organizing, and management processes. While visioning the future and organizing for action represent the birth of a network system, the future existence and effectiveness of the new system is highly problematic. Each network also must devise ways of making progress on the tasks identified for work. As indicated in the previous section, visioning the future usually results in identifying several issues or topics that require more detailed study. These, in turn, often lead to forming task forces to explore the areas and to develop information on alternatives. Information from the task forces is then brought back to the SC for discussion, development, and planing of action steps.

Using task forces to report back to the SC is a natural way to bridge between the search conference and the next development stage, and properly managed, this mode of organizing may continue to be an effective approach. At the same time, it is critical that the SC recognize that a new phase of system development has been entered, and that this new phase brings different requirements. These include new ways of planning, coordinating, and managing task forces that are consistent with network principles and purposes. Paying attention to sustaining and developing the network over time also is needed.

The need for staff assistance generally increases substantially during this phase. Exploration of issues requires the gathering, assembly, and distribution of information and communication about meeting times. As the task forces develop projects and plans for specific sets of activities, the need for communicating and coordinating grows. In addition, demand for work on designing and facilitating meetings and workshops increases. Such activities typically require help from AR professionals, or others. Constant attention must be paid to working effectively on identified issues and problem areas and to developing the interorganizational system to continue to draw support from the larger external environment. Maintaining the motivation of members to continue to participate and work on issues remains critical. In short, carrying out project work assumes increased importance during this phase. Moreover, attention to maintaining and developing the network organization must continue. This organizational maintenance work is essential to preserve the integrity of the network. Using action research (AR), as described in the next section, helps ensure that required maintenance and development work actually takes place.

ACTION RESEARCH FOR NETWORK DEVELOPMENT AND LEARNING

AR is an approach to network development, not a specific technique. Essentially, it attempts to generate knowledge about a network as an integral part of the development process. AR involves repeated cycles of the following processes (Chisholm, 1998):

- Diagnosis
- Planning
- Implementing
- Collecting and analyzing outcome data
- Reviewing and discussing data
- Reflecting with network members
- Reaching conclusions
- Defining new sets of action plans

Figure 5.1 depicts the AR process.

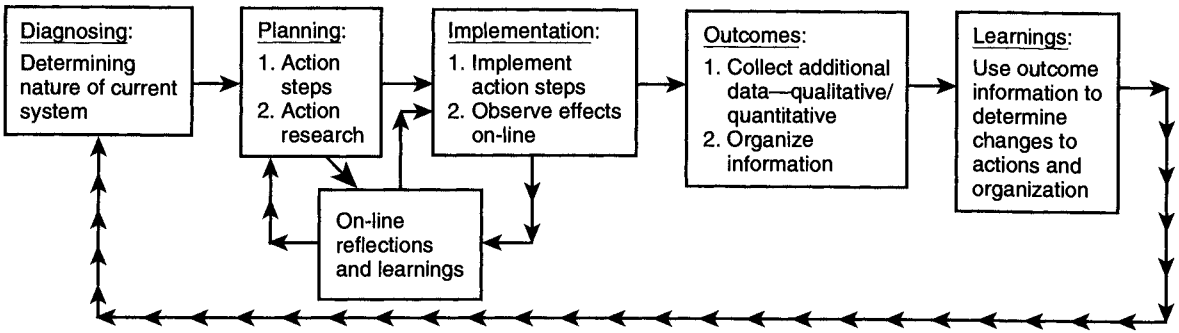

FIGURE 5.1 The action research process.

Developing interorganizational networks to tackle broad problems requires an experimental frame of mind supported by an emerging network organization that is a learning system. Learning occurs when a system processes information that results in increasing its range of potential behaviors (Huber, 1991). This means that higher level learning systems have a greater variety of responses to future events than lower level ones. Fundamentally, they have a high capacity to learn from previous experiences and to perceive and adjust relatively easily to new opportunities and pressures from the environment. Learning systems also are able to reach conclusions from the decision-making process itself, not only from observing the outcomes of earlier decisions (March, Sproull, and Tamuz, 1991). In Table 5.3, "Online reflections and lessons" depicts this ongoing possibility. In effect, learning systems are able to distill deep, complex lessons from ongoing and previous work and to apply these lessons effectively to new circumstances. Thus, such organizations are based on the recognized need for building, thinking, and acting into all parts and levels of the system.

Conducting AR is required to support developing and maintaining the network organization as a learning system. AR involves applying a dual focus on diagnosing, planning, taking action, and examining outcomes of these actions in every aspect of developing and managing the network. Using AR helps enable a developing network organization to be "less concerned with making 'correct' decisions than with making correctable ones; less obsessed with avoiding error than with detecting and correcting for error" (Reich, 1983, p. 107). Such a learning system orientation depends on a continuous flow of valid information about the basic outcomes of actions. It also requires reflecting on plans, actions, and outcomes to derive deeper understandings of phenomena.

Obtaining a continuous flow of information about the actual effects of plans and actions does not occur automatically, rather it requires legitimizing the need for AR, providing the necessary resources, and designing effective structures and processes for gathering the needed information and feeding it back to network members. Effective AR requires that examining the outcomes of plans and actions becomes an integral part of the total development process.

Over time, devising ways of determining the effects of plans and activities should become part of how the network organization functions (i.e., its culture). In effect, network members should devise ways of determining outcomes automatically as a natural part of conducting work and managing the network development process. An AR perspective means that stakeholders are constantly asking such questions as the following:

- What is the current state of the network and its surrounding environment?
- What needs to be done to create and maintain the shared vision and reach defined goals?
- How can we evaluate the total *real effects* of decisions and actions?
- What changes must be made based on feedback about actual outcomes?

TABLE 5.3 Features of a Hypothetical Long-Term Care Interorganizational Network

Ways of thinking	LTC organizations in the community develop a network to help them understand and redefine complex, rapidly changing, large-scale problems.
Work of network	Primary work of the LTC network involves creating ways for members to think about, invent, plan, conduct, evaluate, and learn from collaborative activity.
System level	An LTC network is developed at the community level. A shared vision and mission orient and guide the LTC network and its work. These ground the network at the total community level.
Membership	Member organizations form a network voluntarily to help them deal with complex metaproblems that require collaboration by a set of LTC organizations. Organizations continue membership on a voluntary basis.
Relationships	Member LTC organizations are loosely coupled and meet as required to conduct work.
Organization	An LTC network uses a flat, horizontal form of organization. Members are equal, with no superior–subordinate relationships among them.
Control	Members control the LTC network and its activities. Members are responsible for developing a shared understanding of large-scale LTC issues and problems and how to address them systemically.
Basic functions	LTC networks have three basic functions:

- Regulation: maintaining orientation of the LTC network to the shared vision and purpose; ensuring development and maintenance of network values and appropriate ways of organizing activities
- Appreciation: developing a shared understanding of changes to the LTC network vision and purpose required to incorporate new conditions that emerge over time
- Development support: providing professional system and organization development resources required to develop, maintain, and manage the LTC network

Note: LTC, long-term care.
Source: Adapted from Chisholm (1998, p. 7).

- What have we learned from previous cycles of visioning, goal setting, planning, and implementation?
- How are lessons from earlier work made part of how the developing network operates?

Establishing the value of AR is basic to developing and maintaining a network organization. The AR process reinforces the concept of the organization as a learning system. AR also underlines the transitory nature of specific goals, plans, activities, and organizational arrangements and surfaces differences between espoused and actual values and guiding principles. In addition, it provides the information about actual outcomes of earlier decisions that enable the system to learn for the future and make necessary adjustments. Stated differently, AR is an essential and integral part of the network development process.

CONCLUSION

Interorganizational networks are becoming an increasingly important type of organization in the early twenty-first century. Moreover, it appears that this organizational form will grow in importance in the health care industry well into the future. Several factors in the environment are contributing to the increasing use of networks:

- Technology
- The growth of knowledge
- Globalization
- Demographic shifts

Environmental factors, in turn, lead to complex sets of interrelated problems (problem domains) that are impossible to "solve" and that require collaborative action by various groups of organizations concerned with a particular problem domain. Interorganizational networks are a special type of system that enable organizations to come together in new ways to create novel ideas about how to deal with the complex problems facing them. Understanding the basic nature of these networks is essential to successfully developing them. Using an AR approach to the development process also is required. The following appendix gives a brief description of an approach to developing a hypothetical long-term care network in a community.

APPENDIX: USING THE NETWORK MODEL TO DEVELOP A LONG-TERM CARE NETWORK ORGANIZATION

This brief appendix illustrates how concepts and principles of network development were used to develop a specific AR proposal on improving long-term care (LTC) in a community. Space limitations require that coverage is brief.

Several years ago, two colleagues and I devised a way of using the network development model to improve the overall quality of long-term care in a community. Although the effort has not yet received funding, the approach received considerable praise from the state health department and several LTC organizations. Several aspects of the proposed model are described briefly here to illustrate how network development concepts and principles can be used in actual practice.

Table 5.3 highlights key features of a hypothetical LTC network.

In this example, the goal is to improve the overall quality of LTC by fostering collaboration of stakeholders. Several features of the table deserve comment. First, stakeholders develop the network to help them understand the nature of LTC required in the community, and how to organize to provide it effectively. As

TABLE 5.4 Process for Developing a Hypothetical Network to Foster Systemic Long-Term Care Quality

Recognizing an opportunity: key members of LTC organizations recognize a need to do things differently

Agreeing to participate: informal discussions lead to a small group of organizations agreeing to form an LTC network

Startup to 6 months:

- Research team organizing and planning: Design methods, change strategy, and action steps.
- Form SC: Select members, convene members, and establish role of team, goals, and plans.
- Research team members visit member organizations: Conduct discussions and interviews with member organizations; collect baseline data on perceptions of LTC quality, state of total quality management in member organizations, relationships among network member organizations, network role, and goals.

Network and organization development: 6–12 months

- Design and plan network development workshop: Team prepares with SC input.
- Network development conference: Convene members of LTC network. Conduct search process: General factors affecting future of LTC; features of ideal LTC network; current situation; external input; major components of plan to minisystem; role of network; goals and action plans.
- Workshop on organizational self-design for total quality: Educate members on critical values and features of total quality management; train and develop members' skills on self-design.
- Implement action plans from network development conference and self-design workshop: Assist member organizations in implementing self-design for total quality; form total quality action teams in each organization; diagnose situation in each organization; develop action plans; implement action plans; evaluate development process and impacts of actions; plan new cycle of development steps.

Network and organization development: Year 2

- Network development workshops (bimonthly): Discuss and analyze experiences with self-design for total quality; identify lessons from development work; define next action steps; clarify role of network.
- Second network development conference: Share information on experience in attempting to improve continuous quality improvement via self-design strategy; identify organizational factors that support positive change; identify lessons to date and implications for future research and development steps; assess progress on developing network and impacts of network on enhancing total quality; set targets for next development cycle; repeat data collection on baseline measures.
- Continue cycles of organizational self-design for total quality and bimonthly network development workshops.
- Convene SC as required to review experiences, identify successes, adjust plans, and guide development process.

Network and organization development: Year 3

- Third network development conference: Follow up on action steps; identify impacts on total quality practices in member organizations; evaluate network development process; complete third set of interviews and questionnaires; identify lessons from project; plan future of network; identify ways of disseminating general lessons to outside organizations.
- Disseminate lessons: Create linkages to other LTC organizations to share lessons from development process.
- Institutionalize key features and processes of network and provide ways of examining and changing over time via action research.

Note: LTC, long-term care; SC, steering committee.

indicated, primary work of the network involves creating ways for members to think about, invent, plan, conduct, evaluate, and learn from collaborative activity. Having the network grounded in overall requirements of the community is crucial. Developing a shared community-oriented vision and mission helps ensure this grounding. In addition, maintaining member control of the network is essential. Network members are responsible for developing a shared understanding and determining what to do. Having clarity about the basic network functions identified in Table 5.3 also is key to long-term network success.

Table 5.4 outlines steps in the process of developing a network of organizations to foster quality LTC in a community.

The process outlined in Table 5.4 follows and adds details to the general process covered in the third section of this chapter (see The Process of Developing Networks, earlier in this chapter). Development starts with recognition of an opportunity to enhance LTC quality in the community via building a network among stakeholder organizations. It continues with joint activities of the AR team and the SC of the network. Determining the current state of relationships among constituent organizations of the potential network through discussions and interviews provides the basis for planning, designing, and convening member organizations at the first network development conference. This event represents the birth of the network, although continuation and future success are not guaranteed.

Later tasks involve ongoing cycles of planned work within each member organization and among these organizations at network-level workshops and conferences. Network development work is designed to ensure that activities are grounded in the shared vision of what constitutes quality LTC for the community as a whole. Developing the network as a total system also enables organizations to learn from one another and helps create conditions that foster and support learning. Using the AR approach of diagnosing, planning, taking action, collecting information, and reflecting on previous actions and outcomes, diagnosing the new state, and planning another cycle of work takes place continuously during the network development process. The professional AR team collaborates closely with SC members and network member organizations throughout development. The process covered in Table 5.4 gives an informed basis for starting to engage actual organizations in a real-life development process. It does not provide a blueprint or static plan of precisely what to do. Rather, it gives a set of starting points, applied concepts and principles, and suggested activities that will enable those involved in the building process to discover and invent required details of what to do in their own situation.

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CHAPTER 6

Management Information Systems

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Management information systems (MISs) are computers or linked computer systems designed to inform and enhance management decision making by providing integrated data from various, and often distributed, pertinent sources. Historically, health care MISs focused primarily on finance and the transactions related to revenue cycle and supply management. Making a "business case" for automation of such functions was relatively straightforward. Automating processes improved transaction time and accuracy, required fewer employees, and yielded a favorable "return on investment" (ROI). This functionality was available by "outsourcing" contracts, often to financial services companies or service bureaus using mainframe computers. The cost of onsite computer hardware, software, and the personnel to run them was, therefore, minimal. Eventually, as the cost of hardware dropped, as powerful minicomputers and microcomputers arrived, and as software became more "expert," many of these transactional tasks were brought in house. Functionality was added incrementally to automate such processes as patient registration, scheduling, admission, transfer, and discharge. Other "islands" and "best-of-breed" automation existed in areas such as laboratory services, radiology, and critical care units, but rarely did these systems talk to each other.

Today, the ideal health care MIS is visioned more broadly to include various and distributed computer applications linked for the longitudinal acquisition, verification, processing and analysis, archiving, and sharing of patient-focused data, integrating demographic, financial, and clinical elements. Stated explicitly, the ideal MIS automates the core processes of health care delivery, minimizes data inaccuracy and redundancy of data collection, connects and supports caregiver and patient decision making with structured, evidence-based knowledge, improves health outcomes, reduces medical error, and lowers cost. The most sophisticated systems are designed for the enhancement of data value through knowledge creation. Such systems are not designed for individual professional users or stand-alone facilities. Rather, they are designed for organizations that span the continuum of health care provision to include physicians, other health professionals, ambulatory sites, and hospitals. Some organizations may be so "integrated" they incorporate into a business strategy an insurance product or prepaid financial risk for the health care needs of a defined population or community.

Vendors of health care MIS "enterprise solutions" are numerous. Money being invested in research, development, and marketing these systems is substantial. No clear winners are yet evident. This field is in a state of hyper-evolution, with endless jockeying for position, much marketing hype, and unfortunately, not an insignificant amount of "vaporware"—defined as hardware and software that promises something that it cannot yet deliver. Continuous technological progress, significant learning by trial and error, and in many academic institutions, a fair amount of local development and customization, however, continue to advance MIS toward the ideal. Although MIS must be viewed as a critical area of health care infrastructure, investing in these systems must be done cautiously and with strategic intent, fully aligned to the organization's business model and culture.

Physician executives, other leaders, and clinical users of MISs need not have a technical understanding of computing platforms, relational database warehouse architecture, interface engines, evolving international standards, data capture, or system design. They must, however, have a working knowledge of system attributes and functionality and be able to develop, articulate, advocate, protect, and advance a strategic vision of the power of information technologies to transform health care. They must know what they hope to accomplish through the use of MISs before they make a purchase decision or even begin to explore systems with consultants and/or vendors. They must adopt and maintain a conceptual framework for emerging technologies as tools to aid and abet "knowledge management" and to improve patient care and safety. Furthermore, the leadership within health care organizations must be able to champion, support, and artfully manage the dramatic, indeed transformational, changes in work processes, employee or user attitude, education and deployment, resource allocation, and metrics of success and accountability that accompany full implementation of enterprisewide MISs.

This chapter offers the following:

- A strategic context and rationale for accelerating organizational transformation through the use of MISs in health care
- An inventory of the functional variety of information systems (ISs) in general use, with special attention given to the computerized medical record, computerized physician order entry, and clinical decision support (CDS)
- A look at the evolving organization, leadership, and purpose of "health information services" (HIS) within an enterprise
- An approach to conceptualizing an ROI for MIS
- An idealized, illustrative model for enterprisewide, clinically oriented MIS, with exploration of the technical, structural, and cultural challenges of implementation

Issues of data privacy and confidentiality recently were brought into focus with the passage of the Health Insurance Portability and Accountability Act (HIPAA, Public Law 104–191, 1996). Its implementation will be a logistical and financial challenge to all health care organizations and professionals but is not extensively covered in this chapter beyond the mention of its importance as an environmental driver. For additional up-to-date information and links regarding the organizational ramifications of HIPAA, interested readers are referred to the following Web-based sources:

- *www.hcfa.gov/hipaa/hipaahm.htm:* HCFA; the Centers for Medicare and Medicaid Services (CMS), formerly the Health Care Finance Administration
- *www.wpc-edi.com/hipaa:* the Washington Publishing Company Web site, which contains all the data conditions and the data dictionary for version 4010 transaction implementation guides that can be downloaded free
- *aspe.os.dhhs.gov/admnsimp:* Department of Health and Human Services Website regarding the administrative simplification provision of HIPAA; site allows you to subscribe to e-mail updates on HIPAA
- *www.aha.org/hipaa/hipaa_home.asp:* the American Hospital Association Website specific to HIPAA standards for hospitals
- *www.hipaadvisory.com:* Phoenix Health System Website from which you may subscribe to a free monthly newsletter related to HIPAA topics

STRATEGIC CONTEXT FOR ORGANIZATIONAL TRANSFORMATION

Powerful environmental forces (economic, political, legal, and social) continue to forge tighter linkages between the financing and delivery of health care and accountability for outcomes. Table 6.1 lists some of these forces and consequences

TABLE 6.1 Environmental Forces Driving Management Information System Strategy

Force	Consequence
U.S. health care costs in excess of $1.3 trillion in 2001, estimated to exceed $2.3 trillion by 2008, and consistently outpacing general consumer price index ("inflation") by factor of two or greater (Health Care Financing Administration, 2001)	Continuous pressure to shift financial risk to providers and consumers of care Revenue shortfalls and shrinking operating margins drive need to take additional costs out of business transactional processes and gain clinical efficiencies through automation Strategic advantage and leverage to "managing" the care of the 10% of the population accounting for 70% of costs
Institute of Medicine reports on error and inefficient fragmentation in U.S. health care "system" raise awareness and concern of policymakers, public and purchasers	Ability to remain competitive increasingly depends on ability to both control cost and improve quality, that is, demonstrate accountability and "value" (*www.leapfroggroup.org*)
Increasingly litigious society	Potential for "product liability" with health care services increasingly viewed as a "commodity" drives need to reduce unwarranted variations in practice, increase use of "evidence-based" decision making and improve documentation of informed consent and patient communication Increasing use of theory of "corporate liability" with assessment of "punitive damages" on top of malpractice award when organizational inattention to quality improvement and safe environment demonstrated
Consumerism, patient autonomy, and the Internet	Successful health care organizations increasingly embrace the principles of "business-to-business" and "business-to-consumer" Internet technology to maintain and gain market share and build "brand equity" and loyalty Informed patients and "smart shoppers" seek knowledge for self-care, home monitoring of chronic conditions, best practices, and consumer-oriented health care experiences "Democratization" of health information mandates new role for health care providers to vet information sources, collate data, and engage in collaborative decision making with patients
Professional workforce shortages	Premium on recruiting and retention of "knowledge workers"—physicians, nurses, technicians, others—employing information technologies to redesign work environment and create efficient work processes

(*continues*)

TABLE 6.1 *(continued)*

Force	Consequence
	True "strategy" and tactical implementation "emerges" (Mintzberg, 1994) in a "learning organization" (Senge, 1990) when knowledgeable front-line workers who understand organizational imperatives are provided innovative tools
Health Insurance Portability and Accountability Act (HIPAA)	Information privacy regulations and violation sanctions accelerate move to protected electronic health data Rapid adoption of new electronic standards by information technology industry will accelerate the introduction of enterprisewide information solutions

as important drivers of MIS strategy. Annual increases in health care inflation continue at double the pace of the general consumer price index (CPI). Total private and public spending for health care in 2002 was projected to exceed $1.5 trillion (Health Care Financing Administration, 2001). Those who pay for (government and employers) and those who administrate health care services (insurers and buying cooperatives) increasingly shift fiscal risk and accountability for quality to those who provide (physicians, hospitals, and other health care professionals or organizations) or receive (patient) services. Medical cost inflation, coupled with reimbursement shortfalls from "managed care" and reductions in government payments, strains the operating margins of all health care organizations. Refinements of MIS to realize even greater productivity gains in business operations (lower labor costs, enhance receivables, control inventory, and automate registration, scheduling, and billing) and drive operating margin is imperative. Furthermore, for any unselected population, 10% of patients account for 70% of health care resource consumption, sustainable operations, and competitive advantage derive from an ability to employ clinical applications of MIS to most efficiently "manage" this segment (Zook and Moore, 1980). Properly designed and implemented MISs have significant potential to abet cost-effective clinical management of diverse populations of patients across the entire spectrum of care (Weitekamp, 1997).

Although "managed care" and other health care purchase decisions still focus largely on price, no market makes purchasing decisions based entirely on price. Evidence that "value" (defined as quality divided by price) will increasingly influence decisions comes from the Leapfrog Group (*www.leapfroggroup.org*), a growing coalition of public and private purchasers of health care and Fortune 500 companies. This influential group of buyers is developing purchasing principles that will move business to health care organizations that deploy computerized physician order-entry (CPOE) systems and other evidence-based

practices that enhance quality and safety (Smeltzer, 2000). Though still in its infancy, the science of measuring quality and the public reporting of individual provider and institutional rankings will continue to mature and increasingly influence individual and corporate health care decision making (Bates and Gawande, 2000; Marshall *et al.*, 2000). Recent reports of the Institute of Medicine, *To Err Is Human: Building A Safer Health System* and *Crossing the Quality Chasm*, challenge providers of health care services to recognize and respond to systematic error in a complex, highly fragmented "cottage industry" (Kohn, Corrigan, and Donaldson, 2000; Committee on Quality of Health Care in America, 2001). Within these reports are numerous examples of the potential of information technology (IT) to transform health care.

Senate Bill 1875 in California recently mandated, as a condition of participation in MediCal (California Medicaid), certain medication error reductions strategies including the use of CPOE systems. Two bills currently before the U.S. Senate propose billions of dollars over the next 10 years in financial support to hospitals and other medical facilities for the installation of clinical MISs to reduce error and improve outcome (*Health Information Technology and Quality Improvement Act of 2001*; *Medication Error Reduction Act of 2001*). Medical care has always been a knowledge-based, data- and information-intensive service. The efficient delivery of high-quality medical care across the clinical spectrum, from preventive and ambulatory services through hospital care and chronic disease management, creates demand for integrated clinical information that far exceeds the capability of most existing transactional and freestanding, specialized "legacy" computing applications. In addition, the presence or absence of a "patient-safe environment" will increasingly be weighed in determining individual provider and corporate medical malpractice liability (Making Health Care Safer, (2001). Does the organization have a culture of safety, measurement, and continuous improvement? Has the organization adopted policy, changed practices, and invested in the technologies proven to reduce unwarranted variations in such areas as practice and medication errors?

Consumers increasingly demand extraordinary levels of convenience and service for commodity and self-pay services. The ability to cost-effectively manage chronic diseases, such as diabetes, congestive heart failure, and asthma, can be demonstrably improved by focused evidence-based protocols and remote monitoring (Silverman and Yetman, 2001). Powered by the Internet, the "democratization" of health care information further stimulates providers of knowledge-based services to explore new ways to demonstrate enhanced value to patients and other customers (Taylor, 1999; Malcolm, 2001). Although no perfect integrated product exists today, health care organizations must continue to move incrementally toward integrated electronic solutions that are focused on connecting people (patient to provider, patient to knowledge, provider to provider, provider to

knowledge, etc.). Integrated clinical systems currently exist that allow for real-time distributed access to such data and information as follows:

- Demographics
- Laboratory results
- Radiology images and interpretation
- Medication and allergy lists
- Clinical summaries and updates
- Preferred care protocols
- Provider order entry
- Demand management and/or scheduling via phone triage
- Literature searches

Shortage of professional "knowledge workers" is becoming a major driver of cost and a barrier to care access in many areas of the country. Nursing, select physicians, and technician shortages are leading to bed closures and curtailed or delayed services. Successful recruiting and retention of scarce human resources goes beyond salary and fringe benefits. Increasingly, a strategic intent of successful organizations is to view people as the most valued asset and to provide them with tools that will enhance the work environment, remove menial tasks from professional and technical experts, and empower "point-of-service" line workers to improve systems and satisfy customers. McDaniel (1997) offers managers and strategic leaders a view from quantum physics and chaos theory. He posits that "learning" must replace control as complex organizations not only adapt to, but also anticipate, the future. He advocates "complicating" your organization by doing the following:

- Engaging in parallel information processing and use of more real-time information
- Using multiple advisors and increased involvement of line workers
- Increasing the number of goals and strategic activities
- Decentralizing and "unformalizing" decision making
- Increasing the number of persons with external contacts and scanning activities

Such a call to diversify an organization in times of turbulence, to make it more complicated rather than less, at first seems counterintuitive. Yet, if one believes that the future is inherently unknowable and that the best one can do is to prepare for a number of alternative futures and to work to create the most desirable of those futures, it becomes evident how diversity and complexity can be powerful hedges against extinction (Senge, 1990; Mintzberg, 1994). For the foreseeable future, health care organizations will struggle to take advantage of the time–space compression that information technologies offer and to redesign work processes

to realize the potential breakthroughs in productivity, performance, and quality promised by integrated clinical MISs.

Finally, strategy must account for the ramifications of the HIPAA (HIPAA, Public Law 104-191, 1996), which was discussed earlier in this chapter. With this legislation, Congress has mandated that the Secretary of Health and Human Services adopt standards for electronic health care data exchange, unique patient identification numbers, security, and privacy. All health insurers, health care providers, suppliers of medical equipment, or others who will conduct transactions with the Centers for Medicare and Medicaid Services (formerly known as the Health Care Finance Administration) will need to be "HIPAA compliant."

Given the size and scope of the federal programs and the likely adoption of HIPAA standards by the entire industry, this legislation, arguably, will do more to catalyze innovation and standardization in MIS than any other environmental force listed in Table 6.1.

INVENTORY OF MANAGEMENT INFORMATION SYSTEMS IN HEALTH CARE

Table 6.2 is a representative inventory of health care MIS components in use today. The classifications "clinical systems," "management and financial systems," and "provider knowledge systems" are imprecise and overlapping but serve as a starting point to visualize the breadth and complexity of robust systems. The strategic planning and IT agenda of virtually every hospital in the United States contains elements of this table in variable stages of implementation and enterprisewide linkage. As alluded to earlier in this chapter, it should be understood that no vendor or series of vendors are yet able to link all these elements into a cohesive, integrated, seamless, enterprisewide MIS. For many years to come, hospitals and health systems will struggle to find balance and tradeoffs between employing "best-of-breed" and legacy systems and a fully integrated approach.

Central to most MIS planning is a movement away from a paper-based medical record to a "computerized patient record" (CPR) or "electronic medical record" (EMR). The potential advantages of such a record are numerous. Some of the most obvious include improved capture, storage, and retrieval of longitudinal patient data, enhanced record legibility, and improved portability (the ability to have the record available at the point of care and to multiple users simultaneously). The greatest potential of the CPR, however, is realized only when we understand this technology as an electronic portal linking health care workers and patients not just to the "patient chart" and to each other, but also to a vast portfolio of additional knowledge tools. Such tools might include instant messaging, evidence-based best-practice guidelines, professional continuing education,

TABLE 6.2 Inventory of Management Information Systems in Health Care

Clinical systems	Management and financial systems	Provider "knowledge" systems
Pharmacy information systems	Registration and "master patient index"	Computerized physician order entry (CPOE) linked to clinical decision/protocol support
Laboratory information systems	Insurance verification and authorizations	Clinical results reporting
Radiology information systems	Purchasing/inventory/ material management	Clinical knowledge resources (Medline, journals, texts, etc.)
Computerized patient record (CPR)	CPR	CPR
Clinical data repository	Patient accounting/charge capture/billing/coding systems	Clinical outcomes and disease management
Clinical unit systems (critical care, operating room, emergency department, "point-of-care" testing, etc.)	Patient scheduling systems	Telecommunication systems (Intranet/Internet, teleconferencing, electronic mail, etc.)
	Utilization, quality and risk management systems	Competitor and benchmarking data
	Contract management systems	
	Accounts payable, accounts receivable, and payroll	
	Human resource management	
	Admission, discharge, and transfer	

patient education and chronic disease management resources, preferred pharmacy formularies, open scheduling for tests and consults, and more. Within this potential reside many of the intangibles that vex anyone attempting to perform traditional "ROI" for dollars spent in this area (see below).

The attributes of an idealized CPR are found in the Institute of Medicine's "Dream CPR" (Table 6.3). One component of the CPR likely to have the greatest impact on patient safety and cost reduction is CPOE systems (Doolan and Bates, 2002). Although products vary, most CPOE systems consist of a software application designed to accept direct physician orders using a keyboard or "electronic pen," replacing paper and handwriting. Sophisticated products are linked to CDS tools (other applications and databases that link the ordering process to specific knowledge-based rules for the purpose of facilitating safe, efficient and effective order writing). This functionality extends from the most elementary "field edits" of orders, through structured order sets and, in the most advanced systems, direct

TABLE 6.3 Institute of Medicine "Dream Computerized Patient Record"

Provides patient problem lists
Measures health status and functional levels
Documents clinical reasoning/rationale
Provides longitudinal and timely computerized patient record linkages with other patient records
Guarantees confidentiality and provides audit trails
Provides continuous access to authorized users
Supports simultaneous user views in the computerized patient record
Provides access to local or remote information resources
Facilitates clinical problem solving
Supports direct physician order entry
Supports cost measuring and quality assurance
Supports existing and evolving clinical specialty needs

links to pharmacy, laboratory systems, and reference databases. Advanced systems "check" orders against real-time patient physiologic parameters, other medications, scheduled tests, and institutional protocols, and then alert and/or prompt providers when an alternative order is preferred. As reviewed later in this chapter, such applications have proven valuable in improving patient safety and lowering costs of care.

Many health care facilities offer computerized laboratory and radiology result reporting and limited capacity for online documentation. CPOE applications will be among the first "interactive" clinical MIS elements implemented by most health care facilities and are likely to be implemented soon. The reasons for this optimistic prediction include the following:

- Political, fiscal, legal, and consumer forces arrayed around cost and error reduction through performance improvement (see Table 6.1)
- Leverage of the fiscal reality that physician orders control in excess of 70% of health care resource use
- Rapidly advancing "open technical architecture," including the Internet, to allow for broader bandwidth data exchange, lower storage costs, and fewer limitations with respect to "linking" or "porting" legacy and "best-of-breed" systems to enterprisewide systems
- Rapidly developing literature documenting improved clinical and financial performance related to CPOE system use in a critical mass of early adopters
- Advances in technology that allow increasingly sophisticated "CDS" tools to be integrated into CPOE systems
- Well-established "mature" vendors and newly capitalized "upstart" vendors focused on improving CPOE applications

- A new generation of professionals more "literate" and, hence, comfortable with respect to using computer technology, coupled with increasingly intuitive graphical user interfaces (GUIs)

CPOE systems integrated with CDS have the potential to enhance performance in many ways. A recent guide published by the American Hospital Association lists the following (Armstrong, 2000):

- Improved patient safety
- Increased timeliness of care
- Better use of current medical knowledge to enhance appropriateness of care
- Better coordination of care
- Fewer missed opportunities for preventive care
- Ability to aggregate data for epidemiological analysis
- Control of costs

The interested reader is directed to the following additional references related to CPOE system, empiric evidence of effectiveness, potential purchase and implementation tips and pitfalls, and a snapshot of the 2001 vendor marketplace.

- *www.fcg.com:* "Computerized Physician Order Entry: A Look at the Vendor Marketplace and Getting Started," a report by Jane Metzger and Fran Turisco (First Consulting Group)
- *www.aha.org:* "AHA Guide to Computerized Physician Order-Entry Systems," a report authored by Dr. Carl Armstrong
- *www.himss.org* and *www.healthmgttech.com:* Directories of MIS vendors

Organization and Purpose of "Health Information Services"

In most modern health care facilities, organization of MIS is moving to a more centralized model, away from smaller shops dedicated to data processing, computer services, medical records, desktop support, and the like. Virtually all organizations of even modest size have a department of "HIS" (or something equivalent) and a "chief information officer" (CIO). Which "islands of automation" or other MIS elements from Table 6.2 fall under the auspices of HIS varies by institution. Nevertheless, even in the most centralized structures, a limited number of software experts reside in a specialty area. For example, radiology or laboratory ISs experts may work in and report through the departments of radiology or laboratory medicine with a "dotted line" or matrix relationship to HIS. Figure 6.1 is a hypothetical organizational chart for HIS of an integrated health

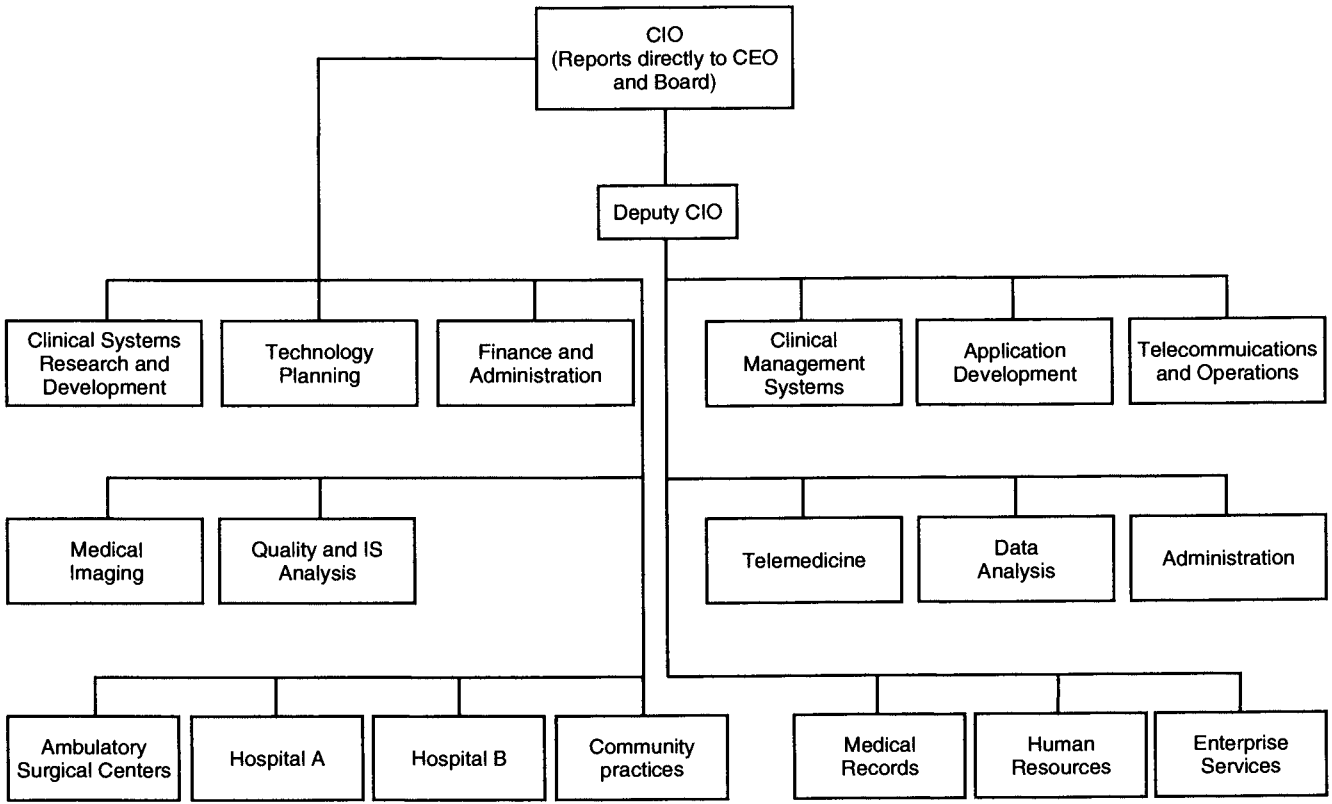

FIGURE 6.1 HIS organization chart.

care organization, based on the actual structure of Partners HealthCare in Boston, Massachusetts. Evident is that under the authority of the CIO falls diverse and resource-intense MIS elements dealing with the acquisition and use of clinical and financial data for performance improvement, research, enhanced communications, direct patient care, regulatory compliance, and more. The technologies employed are myriad and are associated with variable degrees of connectivity. Note also, in this example, HIS spans multiple organizational units and a very diverse population of potential users. This, clearly, is *not* "your grandfather's" HIS shop, located in the basement of the hospital, batching transaction-related punch cards to feed to a mainframe in support of cost reports or payroll! As complex as these structural issues may be for an independent organization, they are magnified many fold in evolving integrated health care systems where issues of numerous additional stakeholders (various physician groups, multiple hospitals, insurance entities, etc. [see later discussion]) must all be reconciled.

In recognition of the evolving critical strategic role of MIS, the position of CIO increasingly reports directly to the chief executive officer (CEO) and board of directors, or to the chief operating officer (COO), rather than to the chief financial officer (CFO) as was common in the past. As CIOs join the executive ranks and begin to help shape organizational strategic direction, new skills are required of these individuals and the HIS staff. The most important skills include expertise in leadership, communication, change management, consensus building, systems thinking, and a service orientation (Shapiro, 1999). Because this skill set may not be found in the most technically knowledgeable individuals, a CIO must often recruit additional technical experts and perhaps, even create the position of chief technology officer (CTO). This movement away from "hands-on" technical excellence as an absolute requirement for the CIO, coupled with the extraordinary cultural challenges (see later discussion; "cultural subsystem") of implementing interactive, transformational clinical tools such as CPOE and the CPR, is creating the opportunity for greater involvement of physicians in MIS leadership. It is increasingly common to have physician informatics experts and IS champions employed by HIS, part time and full time. My institution has recently named as CIO a physician whose professional background is clinical informatics and pathology and has selected informatics-savvy clinicians from medicine, emergency medicine, and pediatrics to have significant portions of their time dedicated to implementation of CPOE systems.

In his book, *The Well-Managed Healthcare Organization*, Griffith (1999) defines the five major functions of an information services department (Table 6.4). The first of these functions is to "maintain the information services plan." A common pitfall for organizations is to fail to make a sustainable resource commitment linked to an espoused strategic intent. For example, the intent may be to continuously develop, deploy, and employ state-of-the-art enterprisewide MISs. This plan will require a multiyear budgetary obligation and focused project

TABLE 6.4 Functions of information services.

Maintain the information services plan
Ensure the integrity, quality, and security of data
Integrate information capture and processing
Archive and retrieve data
Train and support users

Adapted with permission from Griffith (1999).

management. Too often, MIS projects are held hostage to personnel turnover, unclear metrics of progress and success, and annual capital appropriation battles. As alluded to earlier, measuring a traditional ROI for the intangible benefits of clinical IS investments is challenging. Paul Straussmann (1977) in *The Squandered Computer* warns that computers are like drugs: They can either kill you or cure you, depending on informed choices. Success in the use of IT lies in alignment of the technology with organizational objectives. Straussmann (1977) goes on to say that "the principal purpose of investing in IT is not overhead cost reduction but value creation. Cutting costs can contribute to profitability, but in the long run one does not prosper through shrinkage. The objective of all investments is to improve overall organizational performance." With respect to MIS in health care, measurement of this "organizational performance improvement," this *value*, must span activities that will capture much more than the full-time–equivalent (FTE) positions eliminated by moving from paper to an EMR. It must capture direct value and opportunity costs associated with workforce retention and gains in market share, customer (professionals, patients and insurers) loyalty, patient safety and lowered malpractice exposure, improvements in population health, and improved resource use driven by evidence-based protocols "hard-wired" into CPOE systems.

Unfortunately, the health care industry has grossly underinvested in the ITs that have revolutionized other industries (such and banking, financial services, and manufacturing) and fundamentally changed the way business is conducted. Until quite recently, health care institutions have spent less than 3% of operating budgets on MIS. Compare this with MIS expenditures of 3–5% operating budgets in manufacturing and 8–10% for financial services companies (Kissinger and Borchardt, 1996). Clearly, spending alone does not guarantee success, but failure to link strategic decisions with budgetary and operational priorities is a recipe for failure.

To *ensure the integrity, quality, and security of data* is a massive responsibility made extraordinarily complex in health care organizations by many factors,

including the following:

- The numerous potential sources and variety of data elements
- The dynamic nature of subsets of data
- The requirement for distributed access to highly sensitive and private information

For example, the International Standards Organization (ISO-7498-2) defines five classes of distributed security function (Singer, 1997):

- Identification and authentication (who is connecting, where, and when)
- Access control (who can see what elements of a document)
- Data confidentiality via encryption for transmitted information (e.g., over the Internet/Intranet)
- Data integrity (data cannot be unofficially altered or changed—medical–legal issues)
- Nonrepudiation protocols to ensure you cannot deny what you send or receive

Given the reality that most health care organizations maintain numerous "islands of automation" (disparate legacy information systems) that are not fully interfaced (often because of incompatible electronics or standards), the challenge to *integrate information capture and processing* is daunting. With numerous points and venues of potential data entry (registration and billing, point-of-care encounters, order entry, result reporting, human resources/personnel scheduling, electronic mail encounters, etc.), only a highly focused *archival and retrieval* strategy and an extraordinarily robust relational database will succeed.

The need for IS to *train and support users* must go beyond the standardization of software applications, holding computer skill learning classes and establishing a "hot line" to troubleshoot technical glitches and provide just-in-time learning. As described later in this chapter, any deployment of MIS must address the "cultural" barriers to successful implementation (confronting head-on issues of work redesign, adult learning theory, and change management).

Determining a Return on Investment for Management Information Systems

A full, unambiguous, unassailable, and financially explicit calculation of "ROI" for MIS is not practical for most organizations (Brazzoli, 1998; Solovy, 2001; Haugh, 2002; Schmitt and Wofford, 2002). As attractive as the concept may sound, determining full monetary costs for direct and indirect expenses associated with hardware, network infrastructure, software, personnel, training, "down time,"

opportunity cost, and the price of organizational resistance to change is impossible. Capturing full monetary value of enhanced business performance, corporate compliance, market image, enhanced patient safety, recruitment and retention of professional staff, etc. would be a creative estimate at best. Cost avoidance and improvements in the quality of care are more difficult to quantify than revenue generated. Infrastructure, such as network expansions and bandwidth upgrades to accommodate image transfer, often must be considered as simply the cost of doing business or an expected level of service. In developing a "business plan," even a minimally complex organization (such as a small hospital with limited subspecialty inpatient units, few outpatient sites, and a small number of employed physicians) would have difficulty with a fair and noncontroversial allocation of MIS "costs" to end users. Nevertheless, some accounting of the significant resources expended on these systems must be offered. Because these systems are designed to support a clinical enterprise across the spectrum of ambulatory and hospital care, the ROI should be "calculated" across this spectrum as well. Given the constrained fiscal environment for all health care organizations today, such an accounting must be visionary and convincing, and it should include tangible operational/tactical business considerations and the more future-oriented strategic considerations.

One approach, used successfully at Virginia Mason Medical Center, is to calculate a separate ROI for each "functionality" of an MIS (Schmitt and Wofford, 2002). For example, it took "laboratory and radiology order entry" and estimated the reduction in FTE employees that would derive from reduction in time needed to capture, transport, and process written orders. Automated "charge capture" at the point of service provided a measurable return in terms of faster submission of claims, fewer lost claims, less rework of claims due to incomplete documentation of service, fewer staff performing manual entry, and so forth. Preventing serious adverse drug events (ADEs) alone can save millions of dollars of direct costs each year for a modest-sized organization (Bates *et al.*, 1997). Serious ADEs are the most common iatrogenic comorbidity in hospitalized patients, occurring in approximately 7% of admissions. Direct costs of approximately $5000 per event are incurred because of prolonged stay and treatment of complications. Serious ADEs are preventable nearly 50% of the time using CPOE systems with CDS alert (Raschke *et al.*, 1998). A hypothetical 650-bed hospital with 25,000 admissions per year would have an expected rate of 1750 serious ADEs. At $5000 per event, preventing 50% would yield a savings of nearly $4.4 million! Obviously, such calculations do not account for the less tangible but more important issues of patient safety, liability risk reduction, corporate compliance, and improved outcome (Evans *et al.*, 1998; Bates *et al.*, 1999; Teich *et al.*, 2000; Chertow *et al.*, 2001; Dexter *et al.*, 2001). Table 6.5 provides a listing of direct and indirect benefits of MIS that should be considered in any discussion of ROI.

TABLE 6.5 Direct and Indirect Benefits of Management Information Systems Related to Return on Investment

Direct	Indirect
Reductions in personnel required to handle paper processes for both clinical and business functions, coupled with improved efficiency and productivity of remaining personnel through process reengineering	Enhanced organizational image, market share, and ability to recruit and retain best and brightest employees
Reduction in duplication and redundancy of data capture and chance for error	Improved corporate compliance with demands of regulatory agencies
Reduction of adverse drug events and other medical error	Diminished medical malpractice exposure
Improved preauthorization, charge capture, and revenue cycle	Enhanced employee satisfaction and facilitation of "team" management of patients across the continuum of care
Availability of uniform information to multiple users, at multiple sites simultaneously	Enhanced negotiating positions with purchasers of service based on improved and more easily demonstrated quality and cost metrics—lower cost/discharge, higher preventive medicine compliance, etc.
Improved adherence with cost-effective care protocols/pathways and pharmaceutical formularies	Enhanced patient satisfaction through improved organizational performance and ease of access to health care information and service
Improvement in management of supply chain, purchasing, inventory, etc.	

Modeling and Implementation Considerations

A conceptual model for enterprisewide clinically focused MIS requires, at a minimum, consideration of *technical*, *structural*, and *cultural* subsystems (Table 6.6). The technical component deals largely with digital technology, network infrastructure, hardware, software, and engineering issues. Key structural considerations include governance, management, and data ownership. Culture deals with the "people" part, including workflow redesign and overcoming resistance to change. Each is addressed in turn.

Important *technical* pieces and capabilities of an enterprise IS include the following:

- *An open architecture and "interface engine" that takes disparate health care data from a multiplicity of existing "legacy systems" and maps them to a common data model:* Eliminating legacy systems and installing a single system that will meet all the information needs of an organization is neither realistic nor necessarily desirable. Advances in ITs make it increasingly possible to build data repositories that can accept data from multiple sources and platforms and "translate" to common definitions for additional analysis and utility.

TABLE 6.6 Conceptual Management Information Systems Model Implementation: Subsystem Components

Technical	Structural	Cultural
Linked care continuum	Governance	Adult learning theory
Physician offices	System level	
Hospitals		
Ambulatory surgery		
Home health and durable medical equipment		
Insurance products		
Hospice and long-term care		
Skilled nursing and subacute		
Community wellness		
Quality and research		
Demand management		
Disease management		
Transportation		
Central data repository	Management	Participatory planning
	System-level management and reward	
Interface technologies	Data ownership Governance. Negotiated	Transformational change management
Graphical user interface		
Master person index		
Computerized patient record		

- *A central, relational data repository with the capacity to normalize and integrate the disparate data form other systems*: The potential power of centralized, clinically based data repositories that can be "mined" (queried) by those with appropriate access clearance within the organization cannot be overstated. From such repositories will come the recognition of heretofore occult patterns of illness and practice. From that recognition emerges the understanding necessary to redesign care processes to reduce unwarranted variation in practice and improve outcome and value.
- *A "data dictionary" to translate medical terminology into computable code*: Scanning existing medical paper into digital format does not a CPR make! Even within the same medical practice, common terms may mean different things to different persons. "Syndrome X" is used by some to denote the constellation of obesity, hypertension, insulin resistance, and abnormal blood lipid values. To others it means angina with normal coronary anatomy. Was that "headache" from tension, migraine, or some other

cause? Does that person with "anorexia" simply have a situational loss of appetite or a life-threatening psychological disorder? Within the scope of a health care enterprise, and with the hope of reducing unwarranted variations in practice and improving care process, a common language is mandatory.

- *A data orientation to a longitudinal, patient-based record with a "master person index" for enterprisewide linkage to individuals*: Each of us accumulates many identification numbers as we go through life. Developers of enterprisewide clinical ISs acknowledge the critical importance of having only one "master person index" (number) that will link an individual over time and place of encounter. Such an index provides the fundamental tool for developing a longitudinal, portable health record linked not to a specific insurance entity or a specific employer, but to the individual.
- *Distributed computing through client–server networks or the Internet to clinical workstation applications with GUI to support the sharing of information within the organization*: For information to be translated into knowledge and learning at all levels of the organization, it must be accessible in "real time." As mentioned, each organization over the years has accumulated legacy systems with different user interfaces. Distributed information must have a uniform, "user-friendly" interface if it is to be helpful to anyone other than the "digerati." (A term coined by Dr. Necreponte at MIT to describe the information age "in crowd".) No physician or other clinical health care professional will tolerate technology that impedes work processes. Cumbersome combinations of passwords, "driving" through multiple screens to access needed information, slow response time, and inadequate attention to simplification and standardization of clinical data entry will guarantee that a system is not used to full potential.
- *Clinical alert and protocol management applications*: For example, such applications include, as mentioned earlier, a CPOE function that prompts the preferred protocol for management once a diagnosis is entered or a pharmacy system that will automatically alert a prescriber to the potential of an adverse drug–drug interaction as the prescription is written. Professionals will be able to override these systems, but only by intention, not by chance.
- *Scalability for enterprisewide access to patient registration, scheduling, order entry, and results reporting*: Systems must be able to grow as the size and scope of the enterprise grows. The ability to register a patient once for all potential encounters within a full continuum of health-related services is of immense value in terms of cost, accuracy (integrity) of information, and convenience (satisfaction).

- *Capability of supporting enterprisewide communication (e-mail, video conferencing, "Intranet," and Internet access)*: Communication and sharing of information are of paramount tactical and strategic importance. For example, when patient needs are informational, the opportunity cost to both the patient and the organization is significant if an appointment and personal visit must be made. Better ways to transmit information (e-mail, dedicated information phone lines, personalized Websites, etc.) are part of the promise of ITs.
- *Supports the collection and retrieval of clinical information irrespective of the site of care*: Herein lies some of the greatest potential of enterprisewide MIS. Electronic data interchange technologies that allow for the capture of clinical, financial, administrative, and other data at the point of service vastly improve the efficiencies of diverse practice sites. Automated capture and archiving of data from any site of care has the potential to reduce personnel costs normally associated with manual capture, storage and retrieval, limit the potential for transcription error, improve patient and provider satisfaction, and minimize duplicative costs of repeated testing and procedures. Monitoring select "quality" parameters (vaccination rates, mammography or colorectal cancer screening, target laboratory values, or specific medication use in chronic disease management protocols) by way of paper chart audits is extremely labor intensive, intrusive to physician offices, and unreliable. Traditional administrative databases populated only with billing and claims data are likewise inadequate, albeit less labor intense to query. The ideal MIS allows data fields related to specific quality parameters to be populated as the test or procedure is performed or the drug is prescribed. Quality monitoring then becomes a real-time, unintrusive, reliable, and inexpensive proposition with major strategic implications for the organization as it seeks to differentiate itself from competitors.
- *Supports the measurement of clinical outcome, population risk, and clinical research*: The data repositories that can be constructed with inputs from many data domains, across many encounters, and from numerous sources provide health services researchers with a great opportunity to improve care processes and to document the accountability and value that the organization offers the community.

Figure 6.2 is a representative schematic of this conceptual model for enterprisewide clinically focused MIS. Note the relationships and linkages between the elements of the care continuum, the "health plan," the community, quality improvement, research, and the supporting IS technology. Components linked along the "continuum of care" include the traditional physicians, hospitals, home health, pharmacy, subacute care (skilled nursing), ambulatory surgery, and

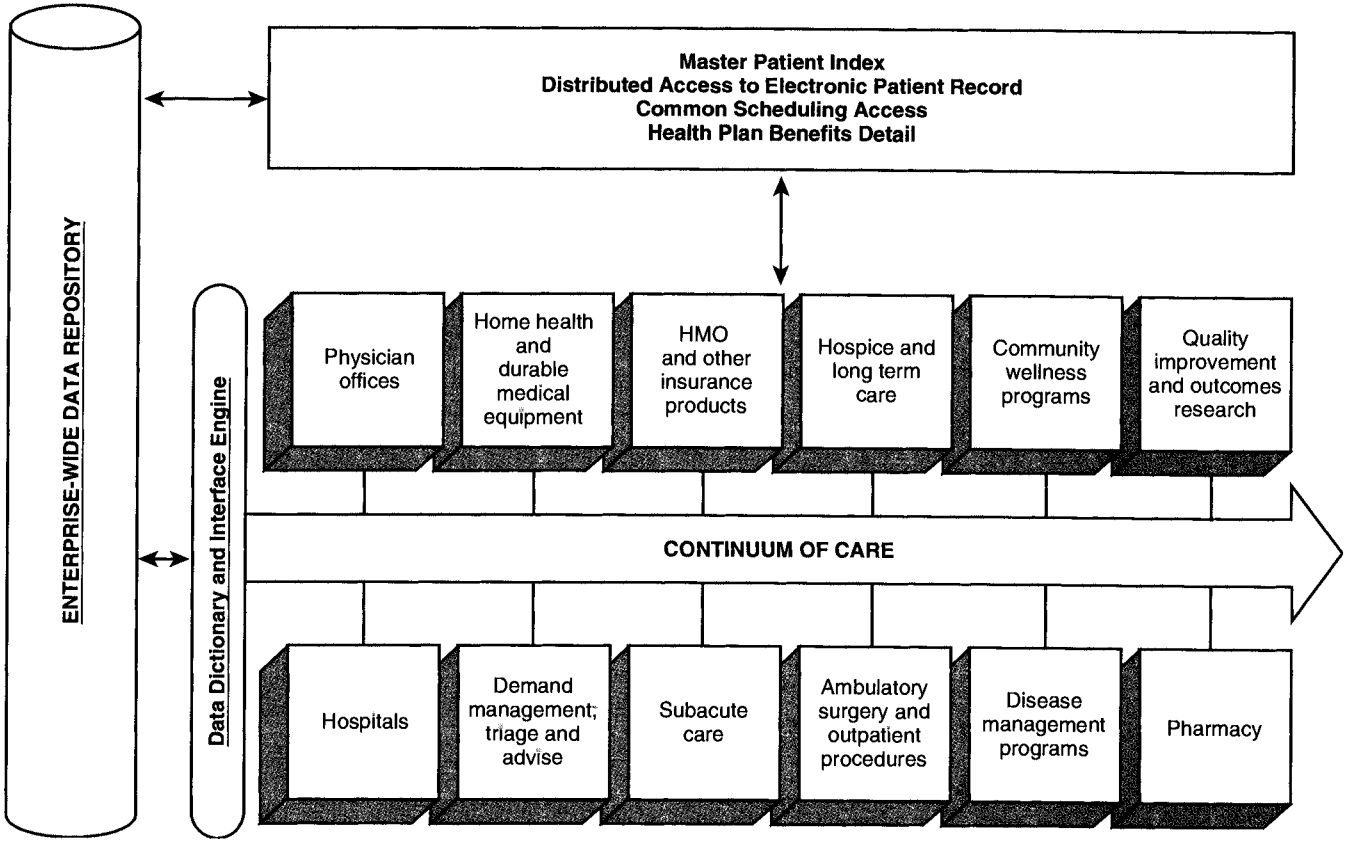

FIGURE 6.2 Schematic for integrated, enterprise-wide, clinical MIS.

hospice. Also incorporated in the model, however, are elements important in the management of population health under prepaid budget (an insurance function (health maintenance organization), wellness, disease and demand management, and quality improvement linked to clinical outcome research). The "data dictionary" and "interface engine" allow incorporation of legacy technology and data from numerous subsystems. The data repository is a tactical and strategic resource for the entire enterprise. Data input from numerous sources, data storage, and data query capabilities facilitate clinical and managerial research and process improvement. Information and knowledge gained offer strategic advantage in marketing, planning, and resource allocation decisions. The master person index, shared electronic record, common access to scheduling, registration, benefits eligibility, and design overlay the entire continuum and facilitate coordination and true integration of care. The interface to access these functions is identical across users and locations.

Figure 6.3 is the "transformational model" employed by the Cerner Corporation to assist organizations in visioning the potential of robust enterprisewide MIS. With a focus on automation of workflow, enhanced decision support, error reduction, efficiency, and cost management, the alignment with the aforementioned strategic imperatives is obvious. Figure 6.3 broadens the vision, presenting a "community health model" emphasizing efficiency and improved integrity of automated processes, community connectivity, structured knowledge, and the potential to transform medical practice and public health initiatives. Only a compelling vision of an idealized future state can sustain an organization and allow it to summon the energy and resources necessary to overcome the inertia and obstacles it will encounter along the way.

Structural issues to consider include governance, management, and data ownership. Health care organizations must come to grips very early with these issues. When previously autonomous institutions and professionals come together in the formation of a more complex organization, managing expectations regarding systemwide information planning, budgeting, and implementation may be the most important, yet most difficult task. Participants may already have significant investment in hardware systems, applications, and data repositories. Some will have previously done substantial planning and multiple-year budgeting. All know that a plan must be crafted that will be aligned with the strategic vision of the new enterprise. Reaching agreement on governance, management, and ownership of something is vital to success and requires significant diplomacy and trust. Deciding governance issues must come first.

For most health care organizations, IT personnel are hired by and report to hospital administration. Governance per se is not an issue. In a more complex organization, handling individual participant's day-to-day IT issue such as systems maintenance, upgrades, user support, etc. may still be primarily a local function. Enterprisewide planning, standards, data security, priority setting, budgeting,

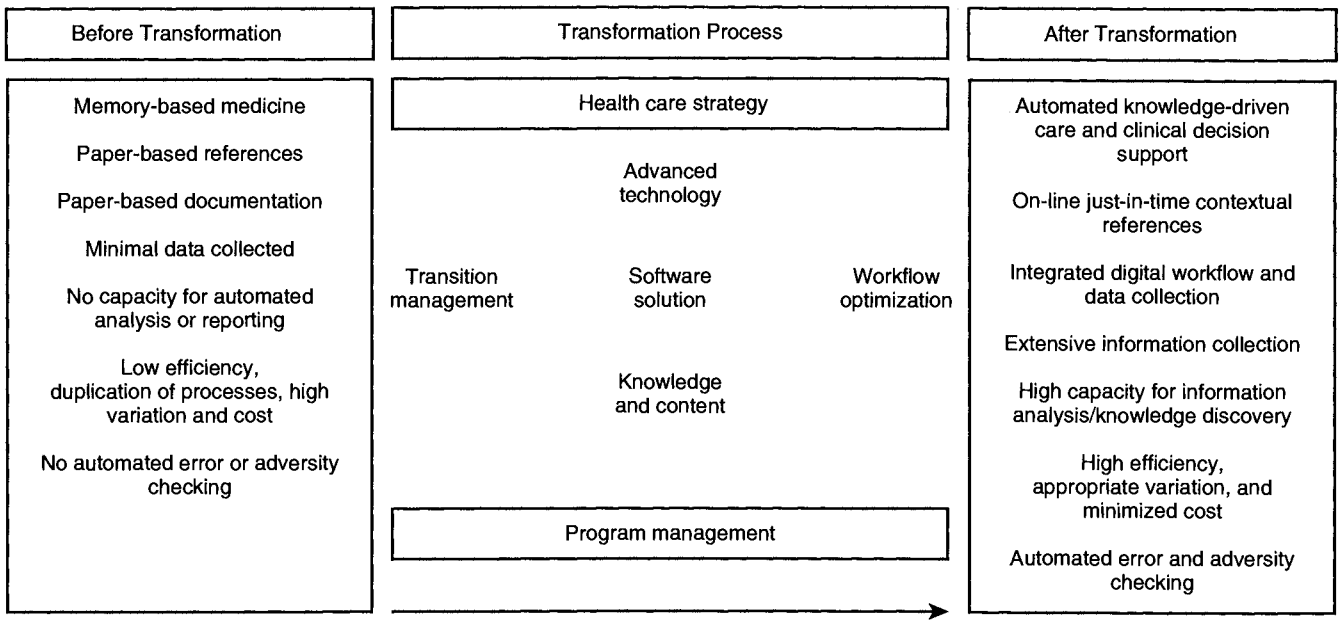

FIGURE 6.3 Cerner Corporation transformation model.

phase-out and replacement schedules for major system components, and more must transcend local issues. Institutional information chiefs may now be accountable to a new system-level CIO who reports to (or may be part of) the overall governance structure of the organization. From this new governance structure comes the mandate for managing information across the entire enterprise, not simply for the benefit and functionality of a single component of the enterprise.

Managing from the perspective of systemic vision, needs, and goals, and not from the perspective of the individual institution or operating unit where one physically resides, is new to most health industry managers. Most hospital "systems" (including most academic health centers) as they are structured today still allow for duplicative management and governance "silos." (Silos are tall, vertical structures standing alone in a field without windows from which to view what is going on around them.) For example, hospital administration, the physician organization (traditional medical staff or other organizational model), and the health plan (if one exists) usually maintain separate governance structures. Even if strategic planning is done at the "system level" (not a given), implementation is hampered by measurement of success at a "silo" level. Careful attention must be paid to how managers will be measured and rewarded. All the systemic "vision speak" in the world will not bring about the desired performance and outcomes if managers are measured and rewarded strictly on the success of unit performance. Governance and management of IT cannot be left at the local level in multi-institutional integrated systems. Yet, to change the focus of those who plan, implement, and maintain these vital system functions is no simple task.

Significant internal and external barriers impede new governance models. Internal barriers derive primarily from real and perceived losses to autonomy, prestige, control, and personal security. Leadership must address these issues. Solutions will vary between institutions based on prior reporting relationships and individual personalities. External market and regulatory barriers also must be confronted. These barriers include the mixed financial incentives of prepaid managed care versus fee-for-service as well as Internal Revenue Service and antitrust considerations related to physician subsidies and/or employment. Often state regulations regarding "corporate practice of medicine" and accreditation bodies (e.g., Joint Commission for Accreditation of Hospitals and Health Care Organizations) policies have not kept pace with new models of governance and systemic accountability. Issues of HIPAA compliance were mentioned earlier. There are no simple solutions to these problems. Some may require legislative action. Others may yield to a coordinated message from the leadership of multiple health care institutions to state agencies or accreditation organizations (Souba, Weitekamp, and Mahon, 2001).

Ownership of data is another contentious area. Along the care continuum in Figure 6.2 are data sources that may be linked, not by ownership but by contract and strategic partnership ("virtual integration"). Will those partners "give up"

proprietary data for the good of the partnership? Some data sources may come from competing health plans or national pharmacy benefits management organizations. How forthcoming will they be in allowing full access to data that may have competitive implications? Many of the problems related to data ownership are solved through appropriate attention to governance. Other problems (e.g., data from competitors) will require negotiated solutions on a case-by-case basis.

Cultural barriers also must be acknowledged and confronted early in MIS planning and implementation. *Culture* refers to the shared beliefs, values, and behaviors of a group or an organization. Culture is the "people part." Culture is unwritten, ubiquitous, and generally unnoticed until challenged. It cannot be ignored, however, particularly in times of rapid fundamental change and threats to organizational survival. Technology deployment and utility are predicated on people, and therefore, are influenced by culture. No technology "solution" will work if people do not want it to work. Even if they want it to work, they still must be able to understand and use it. As the saying goes, culture eats strategy for lunch every day! Although "people" problems will be encountered at all levels of the organization, I will limit my comments to physicians.

It is often said (I believe unfairly) that physicians are fearful or distrustful of computers. Such generalizations are not helpful. Physicians, like most professionals (or most adult learners for that matter), will learn to employ new knowledge and technologies as the relevance of that new knowledge or technology becomes clear to them. Working within developing integrated systems of health care presents its own set of cultural challenges for physicians. A focus on population health, the use of "empowered" multidisciplinary teams to accomplish patient care goals, prepaid reimbursement, continuous quality measurement, external accountability, process standardization, and redesign are new to most physicians. Adapting to new uses of IT may be the lesser challenge for most physicians.

Physicians recognize the limitations of current office-based and hospital ISs. They are acutely aware of the shortcomings of the paper medical record. This is especially true within large multispecialty groups where records must move significant distances and are too often "missing" or incomplete. Granted, you cannot successfully implement an MIS "solution" that significantly impedes a physician's ability to care for patients. I believe, however, that most physicians are willing to make changes in work habits, record documentation, and the like if they are shown convincingly how it will ease paper burden and/or improve the care of patients. MIS will require physicians (and others) to change the manner in which they do their work. Care documentation will eventually be captured electronically with structured text to comply with the standards of a relational database repository. Advances in structured text "pull-down" menus and voice recognition software eventually will obviate the need to type. Prescriptions will be "written" by the touch of a light pen directly linked to the pharmacy. The promise of

remote, Web-based access (home, auto, golf cart!) to interactive patient care systems is quite alluring. If physicians are engaged in IS planning and are given an opportunity to contribute to design and to pilot demonstrations, many "cultural" barriers to MIS implementation can be mitigated (McDonald, 1997).

In summary, the evolution of clinical MIS in health care organizations is accelerating. Environmental forces and technological advances are the engine to this evolution. The inventory of MIS components continues to expand. The need for centralized strategic and operational planning and for new leadership skills and governance is evident. ROI is complex and may never be completely accounted. When viewed in the broadest context or workforce retention, strategic positioning, and market advantage, however, health care leaders are beginning to place large bets on the ultimate value. Organizations recognized as leaders in the evolution to integrated health care systems (Lovelace Health Systems [New Mexico], Scott and White [Texas], HealthSystem Minnesota, Advocate Health Care [Illinois], Intermountain health care [Colorado], to name a few) are committed to spending in a range of $10–20 million each year for the foreseeable future to design and implement enterprisewide ISs with the capabilities outlined earlier in this chapter (Coddington, Moore, and Fisher, 1996). Penn State is currently working with Cerner Corporation on a multiyear contract to codevelop a clinical system with many of the aforementioned technical attributes. The model presented addresses *technical*, *structural*, and *cultural* issues and considerations. Successful implementation of MIS requires understanding and embracing all three.

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CHAPTER 7

Medical Care Quality

Double-Track Thinking and Action[1]

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Quality improvement efforts are the focus of leaders in many fields. Although we have emerging examples of successful efforts, we have fewer presentations of the pathways to follow. This chapter offers a general procedure based on a double-track model. Two procedural processes are offered:

1. At the whole organization level, track 1, as a strategic means to quality improvement
2. At the project level, track 2, for an operational path to quality improvement work at the team level

It is suggested that successful efforts follow this double-track effort already and that further identification and elaboration of the pathways will speed diffusion of quality improvement efforts.

Total quality management, sometimes called *continuous quality improvement,* has clearly excited the private-sector industrial world, with the academies and

[1]This chapter is an extension of an article published in the American Journal of Medical Quality Vol. 9(2) 1994. Included with permission of the American College of Medical Quality.

nonprofits increasingly interested over the last 10 years. To further diffuse the innovation, we must have clear answers to two questions:

- What are the strategic tasks for the leaders of the organization as they engage in quality management?
- What are the protocols and steps for project teams attacking specific quality improvement tasks?

The position here is that a general procedure for quality improvement exists that can be uniquely adapted by each organization. We must examine the process we use to create the quality improvement pathway, beginning with existing quality and planning modes. Recognizing that there is no one best way, this chapter addresses a general procedure for quality improvement to be tailored to fit the specific needs of individual public and private medical and health care organizations.

THE NEED

How do we come to be confronted with quality problems? Clearly, quality problems do not arise by accident, as Juran (1988) notes, "A principal finding has been that... quality problems are planned that way, which means that the quality problems are largely traceable to deficiencies in the methods used to plan for quality. Those deficiencies are still in place. To get rid of those deficiencies we must revise the quality planning process and then learn how to acquire mastery over that revised process." Planning addresses existing quality deficiencies and provides an opportunity to purposely create excellence in the future. Activating quality planning means rejecting the view that what was done in the past will be sufficient in the future. Cost containment, patient and payer satisfaction, and new medical technologies all demand change.

A planned approach to quality improvement contributes to the organization in at least five ways (derived from a strategic planning rationale) (Ziegenfuss, 1989):

- The desired organizational future must include quality as a core value and part of a sought after vision.
- A systematic and ongoing review of the external environment identifies both national and competitors' standards (benchmarks) as a base for comparison.
- A review of the internal position informs clinical and administrative leaders about their starting point (baselines for quality in medical and administrative systems).
- Investment of resources to address quality can result in significant cost savings (improving quality is cost containing).

- In a changing environment, one loaded with cost-versus-quality confrontations, organizations will need to do some things differently to protect quality (planned change).

Disconnected remedial actions to improve quality can reduce discrete problems, such as waiting times in a physician's office, delivery of x-ray reports, patient care product breakthroughs (vonHipple *et al.*, 1999), and patient satisfaction with food and support staff response times. But each organization must individually plan its own unique quality future by considering the whole organization as a co-producer of quality improvement.

Traditional quality improvement work involves reactive responses aimed at attacking quality deficiencies in existing *production* and *delivery* processes. The procedures are often operations oriented, focused on the "shop floor." In contrast, planning is a preventive approach that eliminates quality problems at the process-creation stage. Berwick (1998) identifies this as a change in mental models that guide our improvement strategies. For example, when examining delays in discharge, we must understand how patients are admitted to the hospital, to improve their movement in and out of the full range of services. It is what Ackoff considers to be the dissolving of the conditions that gave rise to the problem in the first place. All organizations could do this, but they need a process that targets quality as a strategic issue *and* as an operations problem. Hospitals' competitive pressures (strategic) demand speedy discharge of patients (operational coordination).

The quality improvement processes described here can be used by a department, a unit, or a whole organization. The procedures are both unit and floor oriented and strategic in perspective, different yet consistent with the way many think of quality planning and improvement action.

THE DOUBLE-TRACK MODEL

There is one leading question about quality improvement that appears so basic that it is often overlooked:

- Can we describe quality improvement processes that encompass the whole organization in clear procedural terms?

The answer to this question leads us to a synthesized general procedure. If we think in a straightforward fashion about the nature of the quality problem, organizationwide strategic commitment and team-level processes are needed. The double-track concept is that successful organizations work the quality problem on two tracks (or levels). Track 1 is the whole organization level. Leaders make a public and strategic commitment to improve quality including decisions to say "no" to both existing and proposed projects (Bishop, 1999). This part of the procedure is

strategic-level activity involving senior managers and particularly top executive leadership. The task is to determine the strategic importance of quality to the enterprise and to create a vision, strategies, and actions that represent an improved future. The "procedure" closely follows the well-established strategic planning path (which is increasingly referenced in regard to total quality improvement processes).

Track 2 is the project or team-level track. This track is the much written about team effort directed at very specific and often operational-level quality problems. Such problems as the discharge planning process in a hospital, the contents of a nursing cart, and the provider payment time in a health maintenance organization (HMO) are examples. Once a quality problem is identified, a team is formed and the question quickly becomes, What do we do?, that is, what problem-solving procedure do we follow as a team?

For example, consider the case of one hospital's trauma care unit. In an effort to constantly improve its services, a team of physicians, nurses, and administrators could focus on various aspects of operations such as response time, clarity of medical command, and use of the helicopter. Every aspect of service operations is a potential target in this track 2 project-level effort. On the other hand, medical and administrative leaders could engage in strategic track 1 discussions about whether to continue to provide trauma care. The shortage of personnel, the effects on other units in the hospital, and the cost might lead to a strategic decision to drop this service, pushing the patient demand and volume to a nearby hospital. Both track 1 and track 2 lead to improvements but in a very different fashion.

This chapter presents a two-level general procedure, beginning with a brief review of some existing protocols.

PREVIOUS PRESENTATIONS OF PROCEDURES

There are numerous published reports of protocols and characteristics that would guide our efforts to improve quality (Carman *et al.*, 1996). An illustration of several will provide the background for this double-track approach. We can sort them roughly by creating two main categories:

1. Macro-level strategic processes that organize and guide the whole organization's effort (track 1).
2. Team-level efforts that provide the steps necessary for small groups to work through the project-level task, micro level (track 2).

Several whole organization procedures are cited, namely the designs of Crosby (1979), Ackoff (1981), Bryson (1995), Juran (1988), and Deming (1982). These are followed by the team-level procedures identified by Plesek (1993) in his review of quality improvement tools. The existing protocols offer us the elements for an integrated double-track design.

Track 1: Macro Level: Whole Organization Procedures

First, we begin with one of the most popular presentations of quality improvement principles, that of Phillip Crosby (1979). His 14 steps are as follows:

1. Management commitment
2. Quality improvement teams
3. Quality measurement
4. Cost of quality evaluation
5. Quality awareness
6. Corrective action
7. Establish an ad hoc committee for the zero-defects program
8. Supervisor training
9. Zero-defects day
10. Goal setting
11. Error cause removal
12. Recognition
13. Quality councils
14. Do it over again

The approach, in general, offers several real strengths: an organizationwide orientation with strong emphasis on the measurement of the cost of quality and recognition of employees for their quality improvement work. Clinical and administrative leadership must be involved and employees as teams must be recognized.

Second, Ackoff (1981) offers a strategic planning framework and simultaneously, a mechanism for continuous individual and organizational development. Ackoff's basic concept is that all organizational systems must be continually seeking an ideal. This continuous process requires constant design and redesign attention with successive approximations to the desired best systems configuration. His process includes the following five phases:

1. Formulation of the mess
2. Ends planning
3. Means planning
4. Resource planning
5. Implementation and control

Defining the state of quality currently (the "mess" you are in—nursing shortages, patient dissatisfaction) is followed by defining a desired future state (of quality organization, all nursing levels filled; patients praise and refer). Interlocking boards ensure wide representation with participation, continuity,

coordination, and integration stressed. The approach offers a view of how to structure the organizationwide improvement effort. For example, many hospitals now have teams, but they are often disconnected from a broader strategy.

Third, Bryson (1995) reviewed the strategic planning literature recommending eight steps in a planning process that would guide our quality efforts:

1. Initiating and agreeing on a strategic planning process
2. Identifying organizational mandates
3. Clarifying organizational mission and values
4. Assessing the external environment
5. Assessing the internal environment: strengths and weaknesses
6. Identifying the strategic issues facing an organization
7. Formulating strategies to manage the issues
8. Establishing an effective organizational vision for the future

Each step can be directed at quality specifically. Or, the improvement of quality can emerge as a part of the greater strategic planning effort that includes financial and human resources concerns. For example, some hospitals have chosen to examine billing procedures, others the recruitment and retention effort. Either way, the organization's leaders are able to establish a process for organizationwide planned change (improved quality).

Juran (1988) offers a process for planning to improve quality that stresses the forward-thinking and whole organization perspective, but that is more directly tracked on quality. Juran's quality planning roadmap involves nine steps:

1. Identify the customers.
2. Determine the needs of those customers.
3. Translate those needs into our language.
4. Develop a product that can respond to those needs.
5. Optimize the product features to meet our needs and the customers' needs.
6. Develop a process that is able to produce the product.
7. Optimize the process.
8. Prove that the process can produce the product under operating conditions.
9. Transfer the process to the operating forces.

These steps are part of a trilogy: quality planning, quality control, and quality improvement. Juran's focus on the customer and his attention to planning, monitoring, and ongoing improvement are key. These processes focus more on the strategic "whole organization" level. Similar processes have been used at Smith Kline Beecham to enhance resource allocation decisions (Sharpe and Keelin, 1998).

How does a team diagnose discharge delays, plan improvement, monitor and control results, and continue to improve?

Track 2: Project and Team Level

The second stream of presentations has been directed at the project or team level of improvement activity. These procedural efforts guide the teams in their work on very specific projects. Again there are many different processes for team-level quality improvement. Plesek (1993) has reviewed several.

One model developed by the Hospital Corporation of America is called the *FOCUS PDCA* and is illustrative of the general approach to quality improvement at the team level. Nine steps are suggested:

1. Find a process improvement opportunity.
2. Organize a team who understands the process.
3. Clarify the current knowledge of the process.
4. Uncover the root cause of variation and poor quality.
5. Start the "plan, do, check, act" cycle.
6. Plan the process improvement.
7. Do the improvement, data collection, and analysis.
8. Check the results and lessons learned.
9. Act by adopting, adjusting, or abandoning the change.

The steps force the team to focus their effort, to experiment with solutions, and to examine data regarding results. For example, improving pharmacy order and delivery requires understanding the internal workings of the pharmacy and the relationships with the clinical units, and data on errors and delivery time are needed. Plesek (1993) identifies another process by Florida Power and Light:

1. Reasons for improvement
2. Current situation
3. Analysis
4. Countermeasures
5. Results
6. Standardization
7. Future plans

And the model created by Juran's Institute is organized as follows:

1. Project definition and organization
2. Diagnostic journey
3. Remedial journey
4. Holding the gains

As often noted, these processes represent a modified scientific methods model as applied to a wide range of organizational problems. Another name for this activity is *action research*, the concepts and methods of organization behavior analysis and organization change and development.

These processes focus on the "ward or shop floor"–level where production system design is in operation. For example, at the University of Pennsylvania, health system quality improvement has been combined with disease management (Joshi and Bernard, 1999). Typically, they do not include attention to the higher level requirements of strategic planning. Importantly, they also do not often address management's role in quality problems at the direct service level.

Thus, the quality leaders offer both a strategic and an operations-level initiative, and at both points there is a strong partnership with physicians (Conway, Keller, and Wennberg, 1995; Carman *et al.*, 1996).

What are essential elements of quality programs generated by the review? Any procedure must engage the leadership, empower personnel, use data, work through teams, provide training, and follow up, recognize, and celebrate success.

The question then is not one of do we have any models or general principles that tell us how to pursue quality. The question is do we pursue them on an integrated two-level path? Consider the following track 1 and track 2 procedures (as an integrated double-track effort).

Track 1: Whole Organization Planning: Macro Level

Track 1 defines an organizationwide planning process used to improve quality preceding or concurrent with project efforts at the team level. Through planning, the organization defines quality improvement as a strategic concern that must be addressed in an organized, purposeful way. Competitors and regulators demand quality improvement, and as external actors, they encourage each department, unit, and organization to plan for quality improvement on both an organizationwide and an individual subunit basis. Total quality improvement strategic-level work follows a general procedure with five steps shown in Table 7.1.

The process encourages and requires leaders to confront the quality problem in a strategic way—strategic for the organization as a whole and for the level of the department, for example, a strategic future for improved quality in radiology, laboratory services, marketing, human resources, or billing.

The procedure requires a review of the external benchmarks such as national and professional standards and internal factors such as process flaws, for example, poor customer response times, product rework costs (repeated laboratory tests or pharmacy orders), and personnel turnover. It leads participants to a vision of a higher quality future of their own choosing, rather than one that is forced on them by regulators and competitors.

Importantly, the underlying concept is double-loop learning. By this, we mean the quality and administrative leaders question operations-level quality *and* they question the rationale for offering the service at all (Elliot, 1996). The procedure

TABLE 7.1 A Five-Step Procedure for Strategic-Level Quality Improvement Activity

Step 1: Plan to plan for quality.
Leadership is engaged; personnel are empowered; teams are formed; planning is initiated.
Step 2: Define the present levels of quality.
Scan the external environment for national industry and competitors' benchmarks—gather comparative data.
Review the internal organization for quality strengths and weaknesses—analyze.
Step 3: Design the quality future.
Create a vision of the quality future identifying a general scenario that describes the improved future and specific progress points.
Create detailed redesign of internal organization including corporate culture, technical production processes, structure, psychosocial climate, and management.
Step 4: Compare the quality future with the present.
Comparison of existing organization with redesign, mapping points of intervention with maximum benefit.
Step 5: Choose strategies and actions and implement them.
Identify quality improvement grand strategy and specific actions.
Link desired quality future, strategy, and actions to operations.

begins with strategic work linked to practical actions in a two-track organizational change process that addresses quality issues organizationwide (total management) and the project work targeted by individual units and teams (problem- and project-oriented interventions).

We must consider the procedure and each of the steps in sufficient detail to understand the common pathway to successful implementation.

Step 1: Plan to Plan for Quality

The first step requires the leadership to commit to creating a plan for quality improvement. This step ensures that the improvement planning process is driven by organized, clear thinking that includes attention to startup issues such as who participates, timelines, and staffing levels and to measuring and monitoring progress.

However, recall that there are two tracks. The whole-organization track 1 procedure requires continuous quality improvement to be undertaken from the top down and is driven and organized by leaders to include purposes, plans and action steps, yearly goals, and measurement and monitor points. The "individual-team" track 2 involves processes that extend from the bottom up. They are effective because of employee commitment, proximity to the actual work, and

speed of action. The operations-oriented track 2 is driven by the company's general direction with much latitude on topic and approach determined by the individual project teams.

The initiatives of the two tracks meet and overlap at various points. While in some organizations the two-level activity is smooth, in others, debate opens up about whether the teams are working on the right problems and whether the right benchmarks have been chosen by those at senior levels. Some conflict is useful, because it rapidly expands involvement, ideas, and actions.

Although some organizations may start with projects, most begin with a top-down total quality improvement plan co-created and led by senior executives. The plan includes a mission statement, level of resources commitment, staffing support, use of pilot projects, defined team membership, a selected problem-solving procedure, and progress monitoring points.

Although different structures are used to lead the effort, some quality experts recommend as a first step, the formation of an advisory board or quality council. This board or council is the overall planning team for the whole-organization track, coordinating the work of the individual project teams. The quality professionals and team chairpersons meet regularly to exchange experiences and to determine actions to move the quality program forward.

Once the planning is started, the improvement steps begin with an analysis of external quality pressures and norms (national and competitor benchmarks) and a review of internal quality baselines.

Step 2: Define the Present Levels of Quality

The purpose of step 2 is to define where the organization is starting from qualitywise with regard to two directions. First, planners look outside the organization for external quality standards and influences (such as competitive pressures and normative data). For example, what are the patient satisfaction levels in other academic medical centers? The outside look is referred to as *benchmarking* (Camp, 1989) (which can also include internal performance trends).

Second, planners look inside to determine current internal quality strengths and weaknesses. What is the quality of our support system, for example, in terms of response time for a laboratory test or medication request? Here, we ask for an assessment of the strong and weak aspects of the organization while building baselines and potential points for action.

The review generates a description of the organization's current internal quality position. With sufficient time, detailed exploration of many structure and process characteristics can be undertaken, but often these are follow-ups on defined targets (taken by team-level projects). For example, in a hospital, the discharge-planning process, if identified as a potential quality problem, could be targeted for improvement over the next year (track 1 whole-organization agenda item) and

then could be examined in depth by a project team that is assembled because of its detailed knowledge of discharge. The strategic-level team would identify the discharge process as a target because of their knowledge of national and local competitive pressures to get patients out of the hospital fast. However, they would not have the operational knowledge needed for effective diagnosis and for implementing change. The detailed examination would study such issues as who is involved, how paper intensive the process is, whether patients and families are consulted, and at what point are they consulted. A flow diagram would be developed to spot process glitches, and a Pareto chart could be developed to identify the most promising points for continuing growth in performance. Pilot changes would be made and evaluated by the project team, with monitoring and support from the strategic-level advisory council.

Whole parts of the organization can be considered strengths or weaknesses. For example, one private medical practice defined its strengths as its technical services (both planned and emergency), its support staff, and its financial position. The surgeons were viewed by patients and colleagues as the best in the area. Technician staff were dedicated and skilled. A strong financial base enabled them to invest in continuing education and new equipment. Weaknesses (in management) included staff scheduling, staff turnover, and hospital relations. All of these became targets for change in a newly envisioned quality future, one that builds on strengths and attacks weaknesses.

Step 3: Design the Quality Future

This step addresses the strategic-level problem of no scenario or vision of the expected future. If we are dissatisfied with the present quality, where is it we would like to get to? Most organizations do not purposely create a vision of the desired quality future. One model for the visioning work is offered by Ackoff (1981). If the planning group were given the opportunity to redesign the quality situation of the company, what would it create? Idealized designs are developed, but not with the goal of utopian perfection.

> The product of an idealized design is not an ideal system, because it is capable of being improved and improving itself. Therefore, it is not a perfect or utopian system. Rather, it is the most effective ideal-seeking system of which its designers can conceive. It is that system with which its designers would currently replace the system planned for if they were free to replace it with any system they wanted. (Ackoff, 1981)

Idealized design is the philosophical match of continuous quality improvement. In both, the point is to strive for higher quality performance, by constantly redesigning all aspects of the organization from culture to service delivery systems to reporting and reward structure to quality of working life and management style.

There are seven tasks in this "visioning" procedure, regardless of the level of the organization:

1. Develop a generalized vision of a desired quality future that is exciting and challenging to clinical, support, and administrative staff.
2. Describe the dominant quality goals and values of the future.
3. Describe the expected quality levels of every aspect of the organization, both clinical and administrative operations.
4. Redesign the structure to enhance the quality of clinical and administrative service.
5. Describe the desired psychosocial climate that would maximize quality in the future.
6. Describe a desired quality-enhancing management, including its planning, leadership, and control activities.
7. Develop an integrated vision of the higher quality organization that is broad yet detailed enough to motivate the project-level teams.

Completing these tasks leads to the development of a vision of the quality future that is both directional and specific. As Ackoff (1981) puts it, "Design is a cumulative process. It is usually initiated by using a very broad brush. Therefore, the first version is a rough sketch. Then details are gradually added and revisions are made. The process continues until a sufficiently detailed design is obtained to enable others to carry it out as intended by its designers."

This sequence ensures that the creative process begins with a vision of the quality of the whole organization, but it also forces the quality team to address specific needs, from technical clinical processes to management control, for example, frequency and design of middle management meetings. The result is a designed quality future that is derived both from broad vision and from operational specifics.

Step 4: Compare the Quality Future With the Present

There are five reasons to compare the present quality situation with the desired quality future. The comparison process does the following:

- Ensures that leaders examine their vision in light of the data that exist regarding the current quality situation, with its barriers and weaknesses
- Forces quality planners to identify the gaps between their current and their future quality levels
- Generates momentum for change that will move quality forward
- Identifies an action agenda for quality improvement (action items that can be taken up by project teams)
- Educates participants regarding the nature of the organization and actions needed for quality improvement

The comparison process assesses the degree of congruence between the present quality situation and the future quality vision. Thus, the comparison means comparing each part of the present with each part of the future organization (technology, structure, and management). It grounds the vision of the quality future with comparative data, forces a focus on quality gaps, generates action ideas, and continues the education process for the participants.

Step 5: Choose Strategies and Actions, and Implement

Step 5 translates the vision of the desired quality future into reality. The task is to link the vision and plans to operating actions, structures, and budgets. Strategy choice requires analysis of the problems. For example, what are the quality deficiencies and the priority issues to attack: discharge processes, referral procedures, billing, or others?

These action targets become the subjects of work for the quality teams. The planning process ensures that these targets can result from both top-level analysis of strategic pressures and competitive standards and "shop floor," "front-line" issues identified by workers who know the operations processes intimately (double-track analysis and response). We could, for example, decide that the expense and loss associated with trauma care make it a strategic question mark. We could also decide that the trauma response time could be improved (operations).

Once the quality targets are identified in the plan, they are taken up by the teams that employ a standardized problem-solving process. The team-level process is the second track of our generalized procedure.

Track 2: The Project- and Team-Level Process

Many continuous quality improvement procedures are in use. The following five-phase procedure is guided by the standard cycle of organizational development: organize, diagnose, plan, act, and evaluate. There are five phases with 10 steps representing a composite of the leading procedural presentations by Deming (1982), Crosby (1979), Juran (1988), and others. Recently, commentary has suggested that these teams can move quickly, also known as "rapid improvement teams" (Alemi and Moore, 1998). The discharge problem is used to illustrate because all hospitals struggle to open beds, moving patients home and reducing costs.

Phase I: Organize

All teams must create a miniplan for attacking the problem under study, including ensuring that members are fully represented and that timelines and

procedures are established. Some groups have developed procedures for prioritizing problem targets at this point (Burroughs *et al.*, 1999).

Step 1. *Identify process to improve.* Choose a key process in the organization that you would like to improve, such as admission, discharge, hospital meal delivery, and specific clinical procedures. Discharge delays are a troublesome and expensive problem.

Step 2. *Select team and confirm process.* Select a team that knows the process and is representative of various aspects of it. Discharge would require clinical disciplines, nursing, social work, and administration. Have the team confirm its present interest in the problem.

Step 3. *Define and describe customers.* Begin by identifying the key customers of the process: Who receives the outputs and who benefits from the changes? In a discharge case, the patients, clinical teams, and administrators benefit (quicker exit, open beds, and reduced costs).

Phase II: Diagnose

In the second phase, the search is on for the root causes of the process problem; what Juran (1988) calls the *diagnostic journey*.

Step 4. *Diagram the selected process.* As a group, describe the process to be improved in a flowchart. The flowchart helps to educate the group about the process and begins to target points for redesign. Begin a search for process benchmarks by examining discharge procedures at other hospitals.

Step 5. *Diagram causes and effects.* Identify the expected outcome of the process and diagram its causes and effects (e.g., fishbone chart). Search for the possible reasons for variation in the process, that is, what reasons delay timely discharge?

Step 6. *Collect data on causes and analyze.* Collect data on the major causes and create a chart that defines how much they contribute to process variation (Pareto chart).

Phase III: Plan

In phase III, the project team plans its response to the defined problem including alternatives and time frames.

Step 7. *Create and plan solutions.* Create and plan the solutions that are to be used to attach the major defects of the process. If needed, identify a "quick fix" to take pressure off the problem and allow time to search for root causes. Consider alternative solutions and the costs,

benefits, and resistance of each. This is Juran's remedial journey. What would speed discharge: transportation, more wheel chairs, faster laboratory test results, or a discharge lounge?

Phase IV: Act

In phase IV, the planned solutions are put into place, but with an experimental orientation, embedding the idea that redesign of the action may be necessary.

Step 8. *Implement action solutions.* Develop multiple actions to account for the many causes of process variation.

Phase V: Evaluate

Phase V is the evaluation component designed to make a summative judgment about whether the solution is a success or a failure, but the evaluation can also provide formative information offering data that may help the team redesign and intervene again if the solution is not totally successful.

Step 9. *Identify performance benchmarks.* Search for benchmarks to use to evaluate performance, for example, internal based on past experience; external using competitors and national standards published by professional societies and others. Some hospitals are part of consortia that would share data on discharge, for example.

Step 10. *Evaluate results.* Using the data points identified in the diagnostic phase, evaluate changes in performance and compare your data to benchmarks.

The final action is holding the gains and diffusing the successful solution throughout the organization. Together, the two tracks address the whole organization and the people issues defined by Deming: purpose, philosophy, and the psychology of celebrating and rewarding success (Walton, 1990). Double-track thinking is a systems approach to leadership/management (Ziegenfuss, 1992) and it is a multisystem strategy for improving quality (Maxwell, Ziegenfuss, and Chisholm, 1993; Ziegenfuss, 1993, 2002).

CONCLUSION

The Institute of Medicine has labeled the gap between potential performance and actual performance as a "quality chasm." We need to first understand the root causes of this systemic problem (Newhouse, 2002) before we can move to specific remedial actions and planned redesigns. More medical leaders are suggesting

physician performance profiles will help to close the gap (Rider and Perrin, 2002). Others feel public disclosure of performance information would help as legislators demand more accountability (Lansky, 2002). In the end, we have to think in both medical performance terms and financial terms, "investing" in quality for economic gain (Weeks, 2002). We are, however, still short on broad pathways and strategies for achievement.

Building on an organization perspective regarding both teams and systems thinking, this chapter has described a double-track procedure for the application of continuous quality improvement programs. A review of existing procedural presentations indicated that common elements were present in many of the models. This review demonstrated that the groundwork for a generalized procedure has already been established by theorists and practitioners. An integrationist effort was applied, resulting in a double-track model that offers both a strategic-level process and a set of steps for guiding the work of project-level teams. The strategic process, track 1, consists of five steps that enable the organization's leaders to make strategic decisions to support quality. Track 2, the project-level procedure, offers 10 steps to guide the groups' individual problem-solving work. Organizations seeking to improve quality must first begin to perceive the task in two-level terms. The need for a double-track approach is then a sensible follow up.

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CHAPTER 8

Quality Care and Academic Medical Centers

The Need for Physician Education

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This chapter discusses the ability of the academic physician to respond appropriately to demands to document and improve the quality of medical care. Such quality care issues may represent a more formidable challenge to academic medical centers (AMCs) and to their clinicians than do the financial concerns, which are featured in Chapter 14. If AMCs are to respond effectively to forces directed at quality care issues, they will require not only passive acquiescence of academic clinicians, but their active participation in the change process (Frieswick and Bach, 1993). How then can we motivate clinicians, particularly at AMCs, to exert significant energies on the quality of care issue?

The systems model (Ziegenfuss, 1992) will be employed in addressing these issues. In Chapter 14, the systems model is used to present an overview of the financial issues raised by the current academic practice environment. In this chapter, the systems model is used to highlight the academic clinician's perspective on continuous quality improvement (CQI) by contrasting it with financial issues that are discussed in Chapter 14 as represented by decreased physician reimbursement for clinical services. In this way, reasons why academic physicians, in particular, may be reluctant to or less well prepared to embrace CQI are provided, and means to overcome this resistance are suggested.

SYSTEMS ANALYSIS

TECHNICAL SUBSYSTEM

Although decreasing reimbursement for professional services presents challenges to clinicians, the skill set required to accommodate them is within the purview of most clinicians. For example, focusing on his or her own clinical practice, the physician within the AMC can increase productivity by adding clinic hours, requesting more support staff, or reconfiguring the responsibilities of existing clinic staff. Similarly, clinicians may add new procedures or services to their skill set or change from third-party reimbursed services to those that are purely elective, not reimbursed by insurance, and require out-of-pocket cash expenditures by patients (refractive surgery and cosmetic oculoplastic surgery are examples of such elective services that could be provided by an ophthalmologist).

In contrast, CQI participation requires skills that are alien to most clinicians, having not been encountered during any stage of their professional training. Moreover, clinicians usually cannot obtain these skills as part of their traditional continuing education process. Thus, physicians would be required to divert the scarcest of resources, time, from maintaining or increasing their clinical productivity to learn entirely new skills in an alien discipline. Similarly, academic clinicians are expected to be productive in the arenas of teaching and research in addition to clinical practice if they are to advance up the academic promotion and tenure ladder. Therefore, time constraints might be expected to have an impact on the academic clinician's ability to acquire the requisite skills to an even greater degree than his or her nonacademic colleagues in adjusting to the requirements of CQI versus decreased reimbursement. How will the physician be motivated to undertake such activities?

STRUCTURAL SUBSYSTEM

Physicians expect to report to physicians relative to any quality concerns regarding the care they deliver. Nevertheless, they regard such instances as exceptional, so usually, they function independently or as the supervisor of individuals who answer to them. Even in a large AMC, physicians usually report to a physician department chair on clinical matters.

CQI is viewed by many clinicians as a usurping of their clinical authority by groups of individuals who are less well trained in clinical medicine and who are unwilling to accept responsibility commensurate with their desired level of authority. Thus, CQI teams are perceived as inverting the traditional command structure, thereby deposing the physician as leader of the clinical team and providing a significant disincentive to the physician's participation in such activities.

Cultural Subsystem

In discussing influencing clinicians, Leider (1998) compares the culture of physicians with that of managed care (Table 8.1).

This table is fundamentally valid for comparing the culture of physicians and the culture represented by CQI so that "CQI" can be substituted for "managed care" and applied to the scenario we have described. A brief overview of that comparison follows.

Physicians are the embodiment of personal responsibility and autonomy. From their earliest medical training, they are imbued with the principle that they are individually and personally responsible for their patients, and that fault should be assigned regarding errors or deficiencies relating to patient care. Conversely or perhaps as a result, clinicians usually believe that they render care of the highest quality, and that others including patients or the patient's disease are responsible for treatment failures.

One of the basic tenets of CQI is that we all make mistakes, which usually are the fault of the "system" and not caused by personal negligence. Thus, one reason physicians find it difficult to embrace CQI principles is because it would require them to doubt their own infallibility and to expose themselves to scrutiny by non-physicians. The latter point is of some significance because physicians, as a result of their unique and extended training, make up a society that believes that only fellow members can adequately judge the actions of other members.

The physicians' skills are believed by them to be unique, justifying increased socioeconomic status. Their heavy burden of responsibility demands that they focus on that skill set and believe in it. Thus, they are reluctant to consider that others can advise them of the proper circumstances for using their skills. Similarly, physicians view themselves as treating one patient at a time and feel obligated to use all resources at their disposal in the care of that patient. In contrast, CQI views patients from the perspective of the quality of care delivered to populations.

If one accepts this analysis, it follows that physicians are less likely to regard cost as a primary issue in treating patients in comparison to CQI in which cost is

TABLE 8.1 Physicians and Managed Care: Cultures in Conflict

Culture of physicians	Goals of managed care
Professional autonomy	Work within a system of care (rules and procedures)
Acquire technical skill	Use skills when necessary
Improved health of individuals	Improved health of the population
Practicing alone	Practicing as a team

Used with permission from Leider (1998).

part of the value equation. Thus, until recently, they have had no incentive to undertake cost-containment measures.

Finally, physicians emphasize their one-on-one relationship to their patients or as captain of the health care team rather than as a member of a team of health care partners. In contrast, CQI uses quality teams as a strategy for pursuing quality care. Based on this comparison, even academic physicians would have less difficulty accepting responsibility for their financial productivity and modifying their actions accordingly to increase reimbursement; however, they have great difficulty adjusting to CQI. The major stumbling block for physicians in adjusting to financial pressures is the conflict between their commitment to use all possible means to treat each individual patient and an environment of decreasing reimbursement, particularly in the managed care setting. It is in this area of cost containment that the requisite skills overlap those required for CQI. Nevertheless, the academic clinician would be expected to face less discomfort in addressing the former than the latter issue.

Psychosocial Subsystem

Physicians view themselves as authority figures. They "give orders" rather than "make requests." They expect orders to be carried out, and they accept responsibility for the consequences. These assumptions provide the psychosocial backdrop for all physician professional interactions. If they are involved on a clinical team, they expect to be captain regarding any clinical decisions. At the AMC, such expertise is augmented by the mantle of authority that derives from academic rank (e.g., assistant professor, associate professor, and professor). Thus, it would be relatively congruent with the prevailing AMC institutional environment for physicians to direct a response to financial challenges.

Conversely, CQI requires a major shift in this perspective so physicians must learn to interact on a more or less equal footing with individuals who may be perceived to have far less professional standing and who might act under their direction in a different setting. More damaging from the psychosocial perspective is that many of these individuals probably are better informed regarding CQI principles than the physician team members.

Finally, improved financial productivity would be expected to produce an immediate, tangible reward for the clinician. In contrast, improved CQI produces a remote reward that is somewhat vague and only indirectly accrues to the physician. Nevertheless, self-interest as a motivating factor for physician participation in CQI has been emphasized by Mattison (2001) who states, "We try to get our physicians to understand what's in it for them. We try to show them how the quality processes they learn at the hospital also can help their office practices and even the face-to-face management of their patients." Similarly, it has been noted

that factors related to institutional incentives, such as clinician and manager support, were more important in achieving cost savings than prior experience with CQI (Wyszewianski and Kratochwill, 1997).

Managerial Subsystem

It is in the area of management that physicians may have a similar ability to adapt in large organizations, such as the AMC, to changes in the managerial system resulting from decreased reimbursement or the need for CQI. Put another way, physicians probably would have difficulty adjusting to both. Southon (1996) has compared professional perspectives (as in Table 8.2).

These natural differences between the professional and managerial perspectives would be expected to be compounded by any change in the role of managers that gives them authority over physicians. As Southon (1996) states,

> At the heart of the operation of the health system is the relationship between managers and the various professionals that provide clinical services. While there is inherent conflict between these two groups, this conflict has been avoided in the past by managers playing a supporting rather than a controlling role. However, the current demands of cost control are placing managers and professionals into direct conflict; a situation that many organizations are addressing by putting clinicians into management roles.

Thus, the clinician may resist financial management by nonphysicians in the same way that CQI oversight by teams largely including nonclinicians could be expected to be resisted.

TABLE 8.2 Contrasts Between Professional and Managerial Perspectives

	Professional	Managerial
Principal orientation	The task at hand	The organization
	The client	Resource allocation
Source of power	Expertise	Hierarchical authority
	Reputation	Conferred responsibility
Important organizations	Professional networks	Institutions
	Associations	
Authority	Scientific evidence	Policy
	Accepted practice	Accountability

Used with permission from Southon (1996).

Summary of Systems Analysis

Table 8.3 provides a summary of a systems analysis of the physician's perspective regarding adjustments to reduced reimbursement compared to those required for CQI.

Difficulty for Physicians in Adjusting to Quality Issues vs Financial Issues

It is apparent that extensive participation in CQI activities requires a far greater paradigm shift for physicians than do adjustments resulting from patterns of decreased reimbursement. It is not surprising, therefore, that Lewis (1993) notes, "Of the 60% of U.S. hospitals now undertaking CQI initiatives, two-thirds report that the results of their programs have fallen below expectations." Nevertheless, it is vital that physicians, particularly academic physicians, participate in such CQI activities. As Behr, Mercier, and Schriefer (1996) state, "To realize significant and sustained improvement in quality and in overall performance, hospitals must have the support and participation of the medical staff." The reason behind this finding is fairly straightforward, as delineated by Weber and Joshi (2000). They state, "It has become increasingly clear that quality initiatives cannot be implemented without positive clinical involvement, since physicians are the ones who must actually carry out the changes on a day to day basis." This latter point is most important at AMCs where physicians in training learn by emulating not only the actions but also the attitudes of physician mentors. If these young physicians are to internalize the principles of CQI, they must observe more than lip service in support of them from their academic mentors (Fox, 1999).

TABLE 8.3 Systems Analysis Summary

Subsystem	Reduced reimbursement	CQI
Technical	Extension of existing skills or new skills within the same discipline	New skills required in alien discipline
	Exacerbation of time constraints	Exacerbation of time constraints
Structural	Less marked change in structural relationships (see "Managerial")	New structural relationships to teams
Cultural	Largely extension of existing culture	New culture foreign to physicians
Psychosocial	Extension of existing self-image Reward known and immediate	New self-image and areas of inadequacy Reward unknown and remote
Managerial	May require new responsibilities by managers	Most change in managerial relationships

FUTURE-FOCUSED RECOMMENDATIONS RELATIVE TO CQI

SPECIFIC INCENTIVES

Hellriegel, Slocum, and Woodman (1998) outline the principle that performance is based on a person's level of ability and motivation. This principle can be seen to be reflected in Leider's (1998) statement that three elements are necessary to influence physician behavior:

1. Strong physician leadership
2. Effective incentives
3. Tools for improving performance

These points are echoed by the specific recommendations of Behr, Mercier, and Schriefer (1996) who suggest the following key ways of stimulating physician involvement in CQI:

1. Provide physicians with education and training.
2. Highlight the similarities between CQI and clinical science.
3. Focus on patient-based" projects early in the CQI effort.
4. Provide opportunities to discuss process problems.
5. Foster physician ownership.
6. Promote the development of clinical pathways and algorithms.
7. Prepare a project work plan.
8. Be results oriented and make meetings productive.
9. Be sensitive to physicians' schedules.
10. Recognize and reward physicians for their involvement.
11. Encourage physicians to publish CQI articles.

Appropriate physician leadership appears to be a particularly important element in the success of such initiatives (Biros *et al.*, 1998). Space does not permit reviewing all of the suggestions by authors regarding ways to motivate physicians to participate in CQI activities. Nevertheless, several suggestions regarding ways to motivate physicians to participate in CQI activities are discussed in greater depth.

It would be anticipated that academic physicians will respond to salary incentives aimed at increasing quality and decreasing cost in a manner similar to other employees (Nash, Coughlin, and Caine, 1997). Others have designed systems that translate CQI objectives into physician reimbursement rewards (Metts, 1992; Hopkins, 1999).

Earlier in this chapter, the time constraints placed on academic clinicians who must balance clinical demands with those of teaching and research were

emphasized. By encouraging academic clinicians to publish their experiences and results relative to CQI, the AMC helps the academic clinician to receive extra motivational rewards from his or her CQI activities (Leahy-Gross, Lee, and Charlson, 1994; Biros *et al.*, 1998). Moreover, increased publications regarding CQI in the various specialty journals lend validity to the entire CQI process. This latter point is important because academic clinicians have been trained to respect the importance of the scientific method and "statistical significance." Hence, emphasizing the scientific validity of CQI will enhance acceptance among academic physicians (Giraud and Jolly, 1992). Moreover, such research represents an area of common interest with managed care entities (Blumenthal, Weissman, and Griner, 1999).

Specific Educational Recommendations

The future of health care is in the hands of the young professionals who have not yet completed, or even entered, their training, but who will be the academic clinicians of the future. CQI must be incorporated into their training so they view it as one more tool in a set of skills required for the delivery of quality care.

Bischof *et al.* (1997) have outlined the Jefferson Medical College curriculum on CQI, and at the same time, he has chastised other medical schools for not supporting endowed chairs in quality improvement. Similarly, Baker *et al.* (2001) have presented barriers to change in the health professional's education, itself. Furthermore, they state, "Thus it appears that the relative advantage of continual improvement as an innovation in health professions education may rest on demonstrating that better education can lead to more effective health care and thus better health for individuals and communities."

If we are to inculcate physicians in the value of CQI, the appropriate skill set must be provided to physicians in training beginning in medical school and extending through their graduate and continuing education (Iglehart, 1999; Weeks *et al.*, 2000). One way in which this goal could be facilitated is by showing hiring preference for new AMC faculty with CQI skills (Batalden, 1999). Thus, the academic physician will have a special role not only in participating in current CQI programs, but also in preparing future physicians to use CQI tools as part of their routine practice. As DesHarnais and McLaughlin (1999) state, "True early involvement (with CQI) should occur at the medical student or residency stage, not when one gets into practice. Instead of being sheltered from knowledge of the costs of care, including the cost of quality, students and residents should become knowledgeable about the cost issues involved as they learn the technical alternatives."

Although education in the principles of CQI is vital to the medical curriculum, it is not enough. Physicians must be prepared to function as members of a team, and not necessarily as its captain (Hanwell, 1996; Frank and Cramer, 1998). Thus, physicians must be skilled in working in the team setting if they are to support their critical role in CQI efforts (Alexander, 1992).

The systems-based analysis has been used to present an academic physician's perspective on CQI by comparing it to the impact of adjustments necessitated by decreased physician reimbursements for clinical activities. Methods to motivate academic physicians to participate in CQI activities have been presented. Such participation is vital if CQI programs are to succeed. The consensus statement by Chassin, Galvin, and the Institute of Medicine Roundtable on Health Care Quality (1998) emphasized the need for improvement in U.S. medical care and the importance of professional education in achieving it, when it states, "Serious and widespread quality problems exist throughout American medicine.... Very large numbers of Americans are harmed as a direct result.... Current efforts to improve will not succeed unless we undertake a major, systematic effort to overhaul how we deliver health care services, educate and train clinicians, and assess and improve quality."

Limitations of CQI-Oriented Education

Although CQI techniques will be vital to correcting the aforementioned deficiencies in the quality of care, Casalino (2001) cautions us against seeing CQI measures as the sole arbiter of quality of care. He states of quality measures:

> As they (quality measures) are used more widely, and as they are linked to physicians' pay and organizational budgets, they begin to define what is important and what is real. Future generations of physicians might be taught that it doesn't count if you can't measure it, and they may be paid on that basis. Thus, they might not even understand that most aspects of the quality of medical care are not measured and that medicine is not just a science but also an art.

Thus, CQI must be viewed as an important tool to be added to the armamentarium of new and practicing physicians through the informed and active intervention of academic physicians. Nevertheless, we must be careful not to abandon the humanistic aspects of medicine because of an infatuation with more "scientific" and "objective" tools. In this way, we will increase our ability to treat the whole patient and be able to broaden our skills set to accomplish this goal. The properly trained and motivated academic clinician and the AMC must play an important role in achieving these goals.

OVERALL EDUCATIONAL MANDATES IN RESPONSE TO NEED FOR INCENTIVES

The previous section of this chapter presented the need for CQI skills as an example of a change in the health care environment that is impacting academic physicians. Specific incentives and educational goals have been recommended in

this area. Nevertheless, these incentives will have little effect if physicians are not prepared during their training to respond to them. Today's clinician must be prepared to function as a leader and/or member of a health care team and to perform in a complex health care delivery system that has increasingly become fiscally focused. Unfortunately, as Swick (1998) notes, "There is an inherent clash of values between business and medicine: Among key business values are profit and competition, while among the traditional values of the medical profession are service, advocacy, and altruism." Success in this new world of health care will require collaboration between doctors and nonphysician managers (Fitzgerald and Sturt, 1992); however, not only do these professionals often lack common values, but as Orchard (1993) notes, they may lack "a common language to discuss them." Moreover, the lack of preparation of physicians to communicate with nonphysician managers and politicians may pose a threat to the practice of the medical profession itself, because, as Gilmore (1992) states, "There's no question in my mind that if medical professionals aren't ready to make decisions on health care, other professions will make those decisions for them." Therefore, to work in these divergent worlds and to better serve our patients, in addition to traditional medical and CQI skills, today's clinician needs training in health care management and administration.

New Skills for Successful Clinicians

Some of these areas of expertise are described by Relman (1998) as the "politics, philosophy, and economics of medical practice." Unfortunately, these new societal demands were not the subject of the Flexner report and are only superficially addressed in most current medical school curricula.

Concerns of Younger Physicians

This gap in the education of young physicians has been recognized by the physicians themselves. At a recent meeting of the Young Physicians Section of the American Medical Association, members cited their need for training in the areas of practice management. As one young physician (quoted in Shelton, 1999) stated, "It's become increasingly important for residents and fellows to be knowledgeable about issues related to practice management, regardless of the type of practice they enter." Another member (quoted in Shelton, 1999) opined, "There is concern that young physicians are not well-prepared for the practice management aspects of what we do." Lyall (1995) also has noted that the need for such training is frequently cited by physicians who enter the management field.

Association of American Medical Colleges Goals

In its Medical Informatics Objectives, the Association of American Medical Colleges (AAMC) recognizes the manager role for the physician and sets specific goals for knowledge in medical informatics for physicians. The AAMC (1991) states, "Physicians must understand and manage costs, manage and work effectively in groups, and effectively manage themselves. They also must understand their roles within the context of the overall health care system."

Specific Curricular Recommendations

Relman (1998) makes specific recommendations for curricular changes to prepare physicians to practice in the era of corporate medicine. He suggests that students

> (1) Learn the social and political history of the medical profession of the United States over the past 200 years; (2) be introduced to the economic dimensions of health care—where the money comes from and how it is spent; (3) learn the history of health maintenance organizations, and understand the different forms of managed care and how they work; (4) become familiar with the health care reforms proposed by the Clinton administration in the early 1990s, and understand why they were defeated and what has happened to health care reform since then; (5) examine the conflict between the culture of business managers and that of practicing physicians and consider the recent efforts to achieve "quality control" as a balance to the emphasis on price; (6) be challenged to think about the important ethical, legal, and professional issues raised by the industrialization of health care; (7) consider the political and professional options that might preserve the most important principles of medical professionalism while still addressing the social objectives of cost control, community service, and universal access.

Evans (1992) describes a "health of the public" approach to medical education and makes the following specific curricular and institutional practice recommendations:

> (1) Provide basic competencies in population-based subjects to all health profession students; (2) provide enhanced population-based education for selected students; (3) include clinical-prevention knowledge and skill-building activities at all levels of health professionals' education; (4) conduct substantive scholarly studies in subjects related to population medicine; (5) assume institutional responsibility for maximizing the health of a defined population within available resources; (6) involve the academic health center in decision making about the development and deployment of health resources; and (7) involve the academic health center in the social-political process as an advocate for the health of its public.

Similarly, Makoul, Curry, and Novack (1998) present an overview of four medical school courses that strive "to provide exposure and experience in behavioral science, medical ethics, physician–patient communication, health promotion and

disease prevention, physical examination, clinical reasoning, and health services and financing." Swick, Simpson, and Van Susteren (1995) describe the "Profession of Medicine Program (POMP)" at the Medical College of Wisconsin, a two-year curriculum that is designed to "challenge medical students' conceptions of the physicians' roles, responsibilities, values, and competencies through a series of short didactic courses and small-group preceptor meetings." Such programs complement those specifically aimed at management skills by providing instruction in decision making in the professional context. Swick, Simpson, and Van Susteren (1995) emphasize that the organization of these courses is complex and demanding of numbers of faculty and their teaching time, and that it is difficult to establish "equal footing" with basic science courses. The difficulty in incorporating such courses into the curriculum in the face of scarce resources of time and money also was emphasized by Berns (1996). Moreover, to establish continuity in such education beyond medical school, such principles have been recommended to be incorporated into resident education (Hewson *et al.*, 1998).

No one of these groups of recommendations is comprehensive enough to include all of the means necessary to achieve our educational goals. Nevertheless, by merging them, we will have made an important initial thrust toward achieving our educational goals.

Ways to Encourage Physician Participation

Kataria (1998) has suggested specific measures to increase the number of physician prepared to address these issues. She recommends that

> (1) physicians be encouraged to enhance their training in managed care, health policy management, and other areas of the changing health care environment; (2) opportunities be provided for the kinds of training just mentioned; (3) rewards be given to those who avail themselves of these training opportunities; (4) physicians be encouraged to use their skills in administration; (5) continuing medical education and grand rounds give priority to issues of managed care and health care management; and (6) faculty trained in the areas mentioned above be encouraged to create and participate in mew MD-MHA programs for medical students.

The importance of physician leaders in the process has also been emphasized by others (Wise and Billi, 1995).

Need for Opportunities for Advanced Training

The need for management training was emphasized by Shalowitz, Nutter, and Snarr (1996) who point out that managerial leadership in the evolving health care system will require "more sophisticated managerial skills than were necessary in

simpler times." They note that properly trained physicians "who bring clinical experience and managerial skills to their responsibilities can make important, sometimes unique, contributions to their organization." These physicians can serve as a "bridge" between clinical colleagues and other nonphysician managers. The need for such "bridge building" between the various interests and disciplines involved in medical care has been emphasized by Grol (2001). Nevertheless, proper preparation will be required for these physician managers to function effectively. As Shalowitz, Nutter, and Snarr (1996) state, "Clinical skills and practice experience alone, however, do not adequately prepare a physician for substantial management and leadership positions on the business side of health care. As organizations become more complex, they are increasingly requiring that potential physician leaders have formal management training." Therefore, the authors describe a formal combined MD and master of management degree program initiated at Northwestern University in 1986. They (Shalowitz, Nutter, and Snarr, 1996) outline nine core courses and the ability to concentrate further in the areas of finance or health service management.

The British Experience

The United States is not alone in its need for physicians properly trained in basic and advanced management techniques. Speaking of the British National Health System, Hornick *et al.* (1997) state, "It is disappointing that in 1996 there is no established undergraduate or postgraduate training in basic management for the medical profession." They emphasize the need "to integrate business management training as part of undergraduate and/or postgraduate medical training." Lowry (1992) has cited the call by the British General Medical Council for medical students to "learn about how health services are provided, the importance of a team approach, and how primary and secondary services interact." Additionally, the General Medical Council listed among the specific skills that new physicians should have acquired, an understanding of "organization" [sic] of health services, awareness of ethical and legal responsibilities of doctors, and development of capacity for self audit (Lowry, 1992b, 1992c). As in the United States, an extensive survey completed by 1487 "qualifiers" in the British National Health System and follow-up informal meetings led Parkhouse, Ellin, and Parkhouse (1988) to conclude that "there was considerable feeling that a start should be made at undergraduate level in establishing a basic understanding of management principles as applied to medical practice and the health service in general...." In their article, "The Skilling Field," Gatrell and White (1995) cite their study of 1400 doctors relative to their needs and understanding of management and suggest ways in which such training could be provided for each level of physician in the British National Health Service.

Recently, McClelland and Jones (1999) surveyed all universities providing undergraduate medical education in the United Kingdom regarding the degree to which instruction in health care management and policy was part of the curriculum. Of the 18 respondents, 10 currently included these topics within their curriculum; however, the authors emphasized that the "areas of study included within the courses varied considerably and there appeared to be no consensus of definition as to what comprised health care management and policy" (McClelland and Jones, 1999).

Requirements for New Medical School Undergraduates

The changing outputs desired for undergraduate medical education may require an adjustment in the characteristics of the applicants selected for matriculation. Clinicians are more and more called upon to function as managers. Of such individuals, Teal (1996) states, "Management is a supremely human activity, a fact that explains why, among all the preposterous demands that we make on managers, character means more to us than education." Moreover, as Lowry (1992a) has noted, "The ability to identify gaps in one's own knowledge, seek out new information, assess it sensibly, and act on the new knowledge is more important than the ability to absorb vast amounts of factual information and perform well in tests of recall."

Faculty and Institutions in Crisis

Ironically, those who will be entrusted with conveying such training find themselves at the center of the change maelstrom. Feinstein and Temmerman (1996) note that the old-style medical school academic department is likely to disappear in the future. Moreover, survival of remaining departments will require that physicians throughout the organization be familiar with common business language (Feinstein and Temmerman, 1996). As Blake (1996) points out, "The relatively simple academically driven center—one that is also fundamentally altruistic and placed patients' welfare first—is being replaced by a complex, profit-driven geographically dispersed corporate system with capitalistic values."

Lack of Faculty Preparedness for the Challenge

Unfortunately, the successful introduction of management information into the medical curriculum may be hampered by the faculty themselves. As Magill *et al.* (1998) state, "Business skill is of increasing importance to the survival of the

clinical enterprise but not typically valued by faculty members." These authors conclude "that academic health center faculty must transcend the outdated view that the roles of the scholar, scientist, and healer are in opposition to the leader and manager." A recent *Wall Street Journal* report (Micklethwait and Wooldridge, 1996) cites the rejection of a $35 million grant to establish a new business school at Oxford and quotes one don as stating that management studies were "a phony academic subject, a shallow contemporary shibboleth promoting a noxious cant." Moreover, as Howard (1994) states, "Physicians in academic medical centers are educated to be independent and may be independent by temperament as well. They usually dislike central direction. This characteristic is at odds with a corporate culture and will make it difficult for faculty to work in the more organized atmosphere of corporate medicine." Iglehart (1998) also has noted that " a major obstacle to change at most medical schools is that faculty do not feel a sense of crisis and thus are not motivated to change."

In response to the demands being placed on the academic health center, Blake (1996) has called for "a new Flexner report" that would be "a clarion call to all entrusted with the future of academic medicine to remember our roots and insist that the academic mission not be displaced by the commercial demands on our faculty." Nevertheless, before we conjure up a new Flexner report, we should remember one of the most damning statements of that document, "The one person for whom there is no place in the medical school, the university, or the college is precisely he who has hitherto generally usurped the medical field—the scientifically dead practitioner" (quoted in Evans and Fargason, 1996, p. 1141). Do some of the attitudes of academic faculty regarding the principles of organizational management reflect an alternative form of jaded intellect that would receive a stern condemnation by Flexner?

CONCLUSION

The systems approach can be used to assist us in understanding that the relationships of the AMC and its academic physicians to their internal and external environments are complex. This chapter has noted that, in general, academic physicians are less well prepared through training, experience, or mindset to accept or respond to these new environmental and societal pressures relative to the issue of quality of care than they are to economic restructuring. Moreover, this lack of preparedness should be expected to have a negative impact on the education of future physicians who are to function in this new practice environment. This chapter has cited specific means by which AMCs can respond successfully to the issues that have been raised. Nevertheless, no facile modifications of reward systems are likely to prepare AMCs and their physicians to meet the challenge of their environments, particularly relative to financial and quality challenges.

Rather, such modifications in rewards must be accompanied by changes in the medical education process so that the physicians of the future are prepared to embrace the requisite new managerial and CQI skills as part of their medical armamentarium. Introduction of sound business, management, and organizational information into the medical curriculum may appear to be a daunting task. As Swick, Simpson, and Van Susteren (1995) have stated, "While the current changes affecting academic medicine inevitably bring challenge and a sense of loss, they also bring the opportunity to help reshape medical education to meet the needs of society well into the next century." These changes will not be easy, but they are necessary. In the final analysis, they are backed by the most important incentive, the need for physicians to care for their patients to the best of their ability.

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CHAPTER 9

Listening to Stakeholders

Interviews, Focus Groups, Surveys, and Direct Observation

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Recently, several patients at a new, large multiservice clinic complained to physicians, nurses, technicians, and receptionists—anyone they could find, anyone who would listen. They bemoaned the fact that they were "fed up" with the interminable waiting to be checked in, waiting to be taken to an examining room, waiting for a physician or physician's assistant, and waiting for a follow-up appointment. These patients, these particular stakeholders, had made themselves heard; their complaints became the subject of a series of staff meetings and more than one board meeting. What was not at all clear was whether anyone had actually understood what the patients really meant.

All any staff member—whether physician or receptionist—knew was that patients were complaining about the long wait. Staff reinforced what each other said, creating the impression that waiting time had reached all-time highs for a substantial portion of the clinic's patients. The clinic needed to address the problem of unreasonable waiting times, and address it now. After much debate, finger pointing, and hand wringing, a plan emerged.

Clinic management offered a two-pronged solution that the board reluctantly approved. First, the clinic would immediately address the most obvious points of delay, and second, it would "get some hard data" on the delays themselves. The first prong included hiring one additional intake specialist and one additional nurse practitioner, as well as arranging for a medical records intern to assist with scheduling appointments.

The second prong relied on a survey of patients to identify their actual waiting time. Given the reported problem, all agreed that the survey:

- Needed to be brief and to the point, because taking too much time would exacerbate the problem
- Would be written to minimize misunderstanding
- Would be voluntary because neither persuasion nor coercion seemed feasible
- Would be initiated immediately to get baseline data before the hiring of the new staff members

Management developed a quick-and-dirty questionnaire (see following box) that it believed would confirm or correct the impression about long waiting times.

The Handy Clinic
In Association with the Neighborhood Hospital
To our patients: Thank you for taking the time to participate in our Waiting Time Survey. Your physicians, staff and clinic management appreciate your cooperation.

A number of our patients have indicated lately that the amount of time they spend waiting for health care has increased substantially. In our effort to provide reliable health care with a minimum of inconvenience to our patients, we want to learn more about your visit here today.

1. Have you ever visited The Handy Clinic before today? Yes ... No...
2. Which department did you visit today? Family Medicine... Internal Medicine... OB/Gyn... Orthopedics... Pediatrics... Other... (Which one? .....)

For the following questions, think about your visit here today and try to estimate the times as accurately as you can.

3. How long did you wait to check in? .....minutes
4. How long did you wait to go to an examining room? .....minutes
5. After going to an examining room, how long did you wait before seeing a physician? .....minutes
6. After being seen by the physician, how long did you have to wait to make a follow-up appointment? .....minutes

Please drop this form in either Survey Box by the Receptionist's desk or by the exit door. Thank you for your assistance.

Acting on the basis of anecdotal reports led the clinic not only to address the wrong problem—and therefore not solve it—but also to seek and get additional data that would reinforce its initial error. What might they have done differently? What alternatives might they have considered? What factors might have influenced their decisions?

METHODS OF LISTENING TO STAKEHOLDERS

Although the scenario presented in the previous section focuses on patients, other stakeholders clearly hold important tactical and strategic roles in the life of the clinic. Listening to and understanding the many stakeholders—patients, community at large, staff, insurers, service partners, and others—add value to planning and management. What methods might one use in this effort to listen and understand? The balance of this chapter proposes an answer to that question, first with a listing of the methods and then with more detail on each method.

The most common methods of listening to stakeholders include the following (also Table 9.1):

- Anecdotal reports
- Structured surveys—written or spoken; mail, telephone, or in person; more recently, on the Internet
- Depth interviews—telephone or in person
- Focus groups (group interviews)
- Direct observation

Each method has value, but relying on a single method carries greater risk of "not hearing" what stakeholders mean. Anecdotal reports, for example, typically alert staff and management that a particular class of stakeholders (patients in our scenario) has a problem. However, anecdotal reports do not typically offer a sufficiently broad description that can serve as the sole basis for any decision. We now examine the various methods.

ANECDOTAL REPORTS

Stakeholders' complaints or freely given commentary often create the sense that something needs attention; that is, the organization has a problem. Anecdotal reports by their very nature lack any formal method; people just speak their minds. We note that this very lack of formal method underscores the fact that "speaking their minds" may require very little serious thought. That is all right because voluntary commentators (or complainers) have no obligation to offer thoughtful consideration. However, those who have heard them do have such an

TABLE 9.1 Listening to Stakeholders: A Comparison of Methods

Method	Main components	Main advantages	Main disadvantages	Relative cost
Anecdotal reports	Staff has ear to the ground	First signal of possible problem Requires little effort	Reported problem may be only a symptom Limited scope of investigation	Least cost in time and money
Structured surveys	Questionnaire Sampling Administration Quantitative analysis	With proper sampling, conclusions have measurable confidence	Issue must be fully clarified before administering	Low per respondent
Individual depth interviews	Main questions Sampling Qualitative analysis	Opportunity to probe	High interviewer effect	High per respondent
Focus groups	Moderator's questions Selection of participants Group moderating Qualitative analysis	Answers "why," "how," and "what if" Opportunity to probe Benefits from interactive group	Requires considerable coordination With untrained moderator, can become a gripe session	High per respondent
Direct observation	Record pertinent behaviors (such records may already exist)	Relies on observed behaviors, not reported behaviors	Not all pertinent behaviors are easily observable	Low to high per respondent Very low if records already exist

obligation to offer thoughtful consideration. How might the listeners discharge that obligation? How might listeners apply some thoughtful method to anecdotal reports?

Here, I offer not a method for gathering anecdotes (by their very nature, anecdotes do not have to be gathered; they just arrive freely), but a method for using them. The method includes just a few steps:

1. Verify with the anecdote donors that what was heard coincides with what the donors said and meant to say.
2. Note the factual circumstances surrounding the anecdote (who, to whom, when, where, how).

3. Record the anecdotes as soon as feasible after hearing them. (Certainly not a formal report but sufficient detail that they can serve as data later.)
4. When the anecdotes become part of a subsequent discussion, include the verification—or lack of it—and the factual circumstances.
5. Before taking action, do more listening more systematically. (Use one or more of the other types of listening.)
6. Use the other methods to describe the problem (if there is one), having accepted the anecdotes only as indicators that there may be a problem.

In the clinic scenario, neither staff nor management took any of these steps to increase the chances that any action would remedy the situation. Had they done so, they might have stopped at one of several stages.

1. In attempting to verify or negate, they would have learned that the few "complaining patients" were more upset with the uncertainty associated with the next clinic "event." They just wanted to know when they would be directed to an examining room, when they would be seen, when they would be able to leave and go to work or take children to school, and so on. Reducing the uncertainty would have required far fewer resources than the increased staffing to reduce waiting time.
2. Noting factual circumstances would have made clear that the anecdotes came from just a few patients to many staff members, making it seem like a broader constituency than it really was.
3. Lack of a record allowed anyone's recollection of the anecdotes to change with their retelling.
4. When the anecdotes were introduced at meetings, staff members fell into the trap of confirming what was being said, while having little factual description.
5. With absolutely no systematic listening, management jumped from anecdotes to an expensive, disruptive, and ineffective solution.
6. With no clear description of the problem, management set out to solve a problem that did not exist, ignored the problem that did, and made the clinic's financial footing more tenuous with no improvement in customer service.

COMMON COMPONENTS OF SYSTEMATIC LISTENING

All methods of listening to stakeholders have two things in common. Although the several methods all help us to listen to stakeholders, some methods better

match particular stakeholders and particular circumstances. Regardless of the method, all of them require that we identify two things:

1. The *objective* for listening
2. The people to listen to (the *population*)

The Objective

What do we want to accomplish in listening to stakeholders? What will we do with what we learn from stakeholders? We very likely will have different objectives for different groups of stakeholders.

We may want to know how satisfied our patients are with the service we provide and what aspects could use improvement so we can improve that service and ultimately keep them as patients. Or we may want to know how satisfied the patients are with the service we provide so we can improve that service and ultimately attain higher levels of patient satisfaction in accreditation self-studies.

We may want to know what is important to those who contribute monetarily or who control organizations' purse strings so that ultimately we will gain from their largesse or their influence.

In most cases, we have both short-term objectives and ultimate objectives. Making both explicit helps us choose the methods of listening.

The Population

The population is all the people (or organizations or some such universe) about which we are interested in learning. In a study of prior clinic *patients*, the *patients* would be the population. A general study might have all urban health *clinics* as the population. Listening to stakeholders involves several populations: the patients, the medical staff, the funders, the directors, etc. Both *who* the stakeholders are and *why* we want to listen to them will influence the method of listening that we select.

In the clinic scenario, no one explicitly identified either why the clinic should listen to anecdote donors or what population the anecdote donors came from. Had management or staff done so, they might also have realized that while listening to them serves a purpose, the purpose might not be the complete identification of a problem to be solved. Identifying "patients" as a stakeholder population might have prompted management to find a way to listen to more of the population than just those who volunteered anecdotes.

With an objective and a population—even tentative ones that can further evolve—an organization is better prepared to choose how to listen.

STRUCTURED SURVEYS

Surveys typically involve asking a number of people (the *sample*) a predetermined set of questions (the *questionnaire*) and analyzing the responses in such a way (the *analysis*) that allows us to draw inferences (the *conclusions*) about a larger number of people (the *population* of interest).

Surveys provide a way of measuring the knowledge, attitudes, beliefs, and behaviors (more correctly, *reported* behaviors, beliefs, etc.) of some population of interest. Structured surveys provide useful ways of listening to some stakeholders but may not prove all that useful in listening to others. A survey is likely to provide valuable information about the knowledge and attitudes of prior clinic patients, but not about how potential major contributors develop opinions about and relationships with clinics or other human service providers. (As I describe shortly, depth interviews provide greater opportunity to probe into such questions.) Brief descriptions of the components of surveys appear in the following paragraphs.

The *sample* is simply the part of the population that we select to answer the questionnaire. Although the *size* of the sample often gets the attention, the *method* of selecting the sample has greater bearing on the usefulness of the results. Methods of selecting samples include *random* and *nonrandom* methods.

Random samples, wherein we select members of the population based on chance or probability, allow us to draw conclusions about the whole population, like "Sixty percent of prior patients reported a reasonable waiting time; margin of error is plus or minus 4%." The larger the random sample, the smaller the margin of error. Margins of error are usually reported with 95% confidence.

Nonrandom samples rely on subjective judgment rather than objective probability. Consequently, how well the sample represents the population depends on the quality of the judgment. Results pertain directly to the sample, and just indirectly to the population depending on the quality of the subjective judgment. Results defy any statement of precision or confidence.

Descriptive or explanatory studies of broad populations warrant random samples. Exploratory studies and efforts to delve into the "how" and "why" may allow and even benefit from selective samples.

The sample in the Handy Clinic Survey was merely a convenience sample; that is, whoever had the time and felt like responding did so. As a result, the sample of respondents provided no basis for believing that the sample represented the whole population of patients.

The *questionnaire* is the list of questions to be asked. Researchers exercise considerable care in constructing the questionnaire so the questions yield the information needed to reach the objective.

In the Handy Clinic Survey, question 5 left no meaningful response for patients who were waiting to see either a nurse practitioner or a physician's assistant.

The clinic staff "volunteer question writer" later defended his efforts by saying, "I figured they'd know what I meant."

More importantly, the whole mini-questionnaire sought to gather the details of the problem of "waiting too long," rather than to uncover whether there really was a problem, and if so, what it was.

The *analysis* describes what one does with the data. This can vary from simple counts (e.g., how many said they waited 0–10 minutes; 10–20 minutes; etc.?) to more sophisticated statistical techniques that reveal potential relationships among various factors. (Waiting times on Mondays generally exceeded those on any other days; patients in internal medicine waited an average of 25 minutes longer than those in pediatrics, except on Fridays.)

Inferences are the statements we make about the whole population, after analyzing the sample results. The quality of the inference cannot exceed the quality of the other components of the survey.

In the Handy Clinic Survey, the unspecified objective, the poorly constructed questionnaire, and the haphazard sample led to conclusions that confirmed the misrepresentations put forth in the anecdotes. Clearly, writing such statements does not substitute for providing sound bases in the first place.

DEPTH INTERVIEWS

Depth interviews typically involve only one respondent, or sometimes two or three at the most, at a time. The key components of depth interviews include the *interviewer's guide*, selection of a *sample*, the *interviewing* itself, and the *analysis* of the interviews.

This method of interviewing provides an opportunity to explore topics without respondents being influenced by others and to respondents to share revelations or perceptions that they prefer to hold in confidence. A more practical reason for this method of interviewing arises when respondents' tight schedules or geographical separation makes it impossible or very impractical to gather as a group. As chief executive officers, members of boards, and other community leaders typify this category, listening to them often relies on depth interviews.

The *interviewer's guide* contains the list of questions that represent the core of the needed information. The guide typically includes a set of open-ended questions, sometimes with a probing exercise, wherein one response leads to the next question, with that response leading to the next question, and so on. Neither large group interviews nor surveys by mail or telephone allow for such probing of each respondent.

Depth interviews lend themselves to explanations and fuller descriptions than structured surveys. "How" and "why" questions provide explanations and often

lead to successive questioning or probing. Some have said that in a depth interview as in casual social settings, the "yes/no" question ends a conversation; following up immediately with a "why is that" or "how might that come about" can counter the impending end.

Selecting the *sample* for depth interviews usually relies on judgment rather than random selection. Such a sample, usually small with 10–50 respondents, can represent a broad population—of community leaders or of board members, for example—quite well if the selectors, such as researchers and clients together, have a good working knowledge of the population.

In the Handy Clinic scenario, the donors of the anecdotes may offer quite a different commentary if someone interviewed them in a quiet setting conducive to thoughtful exchange. Such a setting also reduces the danger of the group mentality influencing each anecdote donor.

The *interview* itself builds on the interviewer's guide, with the interviewer maintaining control while pursuing relevant topics that the respondent introduces. The interviewer's skill allows for the exchange with the respondent without leading the respondent to say "what she thinks you want to hear." The fine line between encouraging the respondent to describe and explain freely and expressing agreement—in word, face, or body language—can mean the difference between an interview that provides valid results and one that simply yields answers to questions.

The *analysis* of depth interviews involves a search for common themes, areas of strong agreement, areas of great dispersion, and being alert for the unexpected. The twofold key to analysis of depth interviews—and focus groups, as I shall shortly discuss—is as follows:

1. To follow the evidence to findings and conclusions
2. To avoid drawing conclusions based on impressions and then using the evidence to support those premature conclusions

The content of the interviews should dictate the framework that the analyst uses; the analyst who starts with a preconceived framework may always find only what he or she expects.

FOCUS GROUPS

Focus groups are fundamentally data collection methods, not opportunities for venting or making decisions. Other group methods may serve those other purposes. At the close of a focus group, the moderator may let participants know that he or she understands the feeling of lack of closure, that "we haven't decided anything," and thanks them for sharing their experiences, perspectives, and opinions.

Focus groups, group interviews or guided discussions, have several components:

Moderator's guide
Sample of *participants*
The *moderator*
The *focus group session* itself
The *analysis*

While the session typically takes about 90 minutes, it is common for the preparation, administration, execution, and analysis of a focus group to take up to 2 professional days or more, as well as considerable clerical and administrative support.

The researcher (often the same person as the moderator) and the client (who will use the results of the focus groups and pay the bills) together design the *moderator's guide*. The researcher may use his or her experience in taking the lead to connect the client's need for information with the questions that will provide it. However, the client must approve the guide if the whole exercise is to have any value. Besides containing the list of about 8–12 open-ended questions (some may have subsections) that the moderator will rely on, the guide typically anticipates areas where probing may prove valuable and may have pencil-and-paper or other exercises designed to elicit responses. The objective of the research becomes the focus of the moderator's guide.

As with depth interviews, *participants* are selected to represent the population of interest, not at random but by judgment. In as much as participants come from a particular population, they typically are similar to each other in some key characteristics and differ in others. In the Handy Clinic, representatives of current patients might form a focus group, with variation in their ages, family makeup, and the particular department they visited. Where an organization wants to hear from several distinct populations, several focus groups may be warranted.

Focus groups of employees within an organization require special care. Groups with employee and supervisor combinations tend to depress the honest participation of both, but especially the employee. For this reason, separate groups may be necessary.

The *moderator* needs to have the skills necessary to encourage participation but prevent domination, to progress at a pace that allows for full responses from all participants but not stay too long on any one question, and to convey interest in what is being said without conveying agreement.

The *focus group session* itself often takes place in a room equipped for audience viewing (typically through one-way mirrors) and video and audio taping. Although there is no prescribed length of time, about 90 minutes is brief enough to be acceptable to many potential participants and yet long enough to cover most topics in adequate detail. Participants generally receive an honorarium or gift at the end of the session. To the extent that the moderator can avoid having to take

copious notes, he or she will be free to listen and guide the discussion. With taping, the moderator may keep only scant notes of particularly salient points.

Analysis of a focus group starts at the end of the session, when the moderator records the fuller meaning of the points noted in his or her notes. Later with the notes, the tape, and a transcription of the tape as evidence, the analyst will search for themes, areas of agreement and disagreement, and introduction of new or unanticipated issues. Because neither depth interviews nor focus groups are designed to provide the basis for statistical inference, results of percentages and other statistics must be taken as highly tentative and unworthy of broad conclusion.

DIRECT OBSERVATION

All the methods described thus far produce reported facts, opinions, and experiences. *Direct observation* provides an alternative, the recording of what actually happens. Rather than ask "how long have you waited," for example, recording actual times at various junctures will result in actual waiting times rather than reported waiting times. By relying on such recording, *direct observation* need not have an observer keeping watch over what is going on.

In the Handy Clinic scenario, the anecdotes brought the attention of the clinic staff to the issue of waiting time at various points in the clinic. Recording the time that patients first checked in, were taken to an examining room, were first seen by an attendant, were given a next appointment, etc. would provide a sequence of actual waiting and service times in the clinic. If the times do seem inappropriately long, management can take steps to address a real problem. If actual waiting times are not particularly long, management can focus on getting to the root of the problem that prompted the outcries.

Analysis of direct observation reverts to standard, perhaps statistical, data analysis. As long as the observed or recorded behaviors are appropriate for the "listening" task, the usual array of analytical tools describes what the observations have to say.

CONCLUSION

Each of the various methods fits into the whole effort to listen to stakeholders. Each method that relies on self-reports can benefit from a reality check that direct observation provides. No one method will prove adequate for listening to all classes of stakeholders or to any one class in all circumstances. Often, applying two methods to the same listening task provides a more complete description of

what stakeholders have to say. Having an assortment of tools allows the listeners to select one or more tools appropriate for the job.

SUGGESTED READINGS

Babbie, E.R. (1990), *Survey Research Methods*, 2nd ed, Belmont, Calif, Wadsworth Publishing Company.
- Comprehensive with considerable detail but the reader will not get lost in details; concludes with a chapter for the informed consumer.

Frey, J.H. (1989), *Survey Research by Telephone*, 2nd ed, Newbury Park, Calif, Sage Publications.
- Covers all the bases with a narrow focus, readable.

Jorgensen, D.L. (1989), *Participant Observation, a Methodology for Human Studies*, Beverly Hills, Calif, Sage Publications.
- Chapter 6 in particular focuses on observing and gathering information.

Krueger, R.A. (1994), *Focus Groups, a Practical Guide for Applied Research*, 2nd ed, Thousand Oaks, Calif, Sage Publications.
- The book to read if you will read only one on the subject; it's a how-to as well as a consumer's reference.

Lee, T.W. (1999), *Using Qualitative Methods in Organizational Research*, Thousand Oaks, Calif, Sage Publications.
- Not the first book to read, but provides considerable context as well as some research hints.

Morgan, D.L. (1988), *Focus Groups as Qualitative Research*, Newbury Park, Calif, Sage Publications.
- A good alternative to Krueger (1994).

Weisberg, H.F., Krosnick, J.A., and Bowen, B.D. (1989), *An Introduction to Survey Research and Data Analysis*, 2nd ed, Glenview, Ill, Scott, Foresman.
- Comprehensive with less detail than Babbie; the reader will easily see the skeleton of a survey.

CHAPTER 10

Lessons Learned from Hospital Mergers

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MERGERS AND ACQUISITIONS

In the late 1980s, mergers and acquisitions were the hospital industry's response to economic and environmental pressures. Competing for managed care and other health plan contracts was perceived as critical, because health plans were increasingly contracting with hospital *systems* that offered a full range of services and covered a broad geographic territory. To remain viable, hospitals were restructuring, reorganizing, and merging to become part of hospital "systems" (Wicks, Meyer, and Carlyn, 1998). Merger activity continued through the mid-1990s and eventually slowed in the late 1990s. During the years 1986–1992, a total of 438 hospitals went out of operation, which included an average of about 73 hospitals per year (Sinay and Campbell, 2002).

With mergers and acquisitions, one hospital combines with another hospital or joins its assets and a new entity is formed. A merger or acquisition is a

destabilizing process, in which an unusual rate of growth in the number of hospital beds, employees, services, and facilities has occurred. A goal of the merger, to increase efficiency, comes at a price, partly from consolidating functions and firing people (Aaron, 2001), so it is not surprising that individuals are concerned or anxious when a merger is announced. What starts out as a financial process becomes a human process once the deal is completed. The way people behave after the merger often determines how well the financial investment pays off (Pinkerton, 1999).

Great turmoil, uncertainty, and at times hostility are experienced by employees of the merged entity. A whole range of reactions from employees may be anticipated including the following:

Resistance
Disenchantment with attempts to reduce resources such as staffing and support personnel
Passive acceptance of new leadership
Limited support for management
Failure to coordinate or integrate with the new systems that accompany a merger

Mergers or acquisitions are financially driven and are undertaken to create a more efficient entity. This efficiency is to be achieved through economies of scale, access to capital, group-purchasing benefits, greater negotiating power with health plans, and reduced duplication of service. In addition, they hold the promise of improving the quality of care. Hospitals generally perceive mergers as a way to gain strength through size and improve their bargaining power in negotiations with health plans, and in that way, they are better able to resist pressure to cut rates (Wicks *et al.*, 1998).

Merger Mania?

The merger craze that gripped the hospital industry during the 1990s appears to have slowed, according to the findings of the *2000 U.S. Hospitals and the Future of Health Care Survey* (Bellandi, 2000). The survey identified optimism among hospital leaders with only 25% of chief executive officer (CEO) respondents expressing a fear that their hospitals could fail in the next 5 years compared to 43% who expressed a fear of failure in 1990. Have the competitive and financial threats that created much of the merging, affiliating, networking, and partnering activity of the 1990s disappeared as well? Is there new cause for optimism in the health care industry? Have past economic pressures for the industry simply been replaced with new economic threats?

PAST ECONOMIC PRESSURES

The implementation of Medicare's prospective payment system (PPS), in 1983, created the incentive for hospitals to reduce their average costs per admission or lose money on Medicare patients (Barton, 1999). Reimbursement mechanisms similar to PPS were adopted by other insurers including BlueCross/BlueShield, which encouraged the growth in outpatient services, as hospitals attempted to shift care and costs away from the hospitals (Sinay and Campbell, 2002). Integrated delivery systems became the structure of choice as multihospital systems linked with various organizations such as ambulatory care centers, physician practices, home care agencies, and nursing homes. The purpose of this "corporate restructuring" was to lower costs to the system, achieve economies of scale, and gain greater market share (Burns and Thorpe, 1995; Conrad and Shortell, 1996).

CURRENT ECONOMIC THREATS

The Balanced Budget Act (BBA) of 1997 currently has an impact on reimbursement for health care services. The BBA was enacted to control the growth of Medicare spending and to give Medicare beneficiaries, through prospective payment mechanisms, additional choices for care through private health plans (BBA, 1997). It essentially requires that most of the remaining cost-reimbursed health care services shift to a price-based system similar to that which occurred with PPS for inpatient care in the 1980s (Sinay and Campbell, 2002). Once again, integrated delivery systems and hospitals are feeling the economic pinch, because they currently own and operate many of these services.

DECLINING HOSPITAL PROFITABILITY

Hospital profits continue to decline. The American Hospital Association (AHA) reported that hospital profit margins fell in 2000 to 4.2%, dropping to their lowest level since 1993 (Jaklevic, 2001). This represents the fourth consecutive year of declining profit according to *Hospital Statistics: 2001-2002*, the AHA's survey of all U.S. hospitals. The report identifies that inpatient admissions rose by 2.5% in 2000, to 32.6 million, but the percentage of hospitals that lost money (32%) remained unchanged from 1999 figures (Jaklevic, 2001). According to the report, 59.4% of hospitals lost money on Medicare in 2000, compared to 57.5% in 1999. In addition, 59.6% of hospitals reported losing money on the Medicaid program, with Medicaid payments decreasing to 95.2% in 2000, compared to 95.7% payment of costs in 1999. In effect, hospital admissions are up, but profits continue to decline.

The future of U.S. hospitals continues to be bleak. Hospitals remain under pressure from commercial and government payers, experience poor liquidity, have high capital needs, and have been unable to implement integration (or disintegration) plans (Sinay and Campbell, 2002). It is understood that in U.S. hospitals there are still too many beds. In addition, the demand for beds is likely to continue to decrease because of new drug treatments and medical advances (Aaron, 2001), contributing further to declining revenues.

According to hospital CEOs, net patient revenues are declining as a result of the BBA of 1997 and the Balanced Budget Refinement Act (BBRA) of 1999, which providers have criticized as inadequate payment relief (Bellandi, 2000). The cumulative effects of the BBA and the BBRA will be to lower revenues to all hospitals, but all hospitals will not experience the cuts equally. Academic hospital revenues, for example, are expected to decrease by about 3% in 2002 (Aaron, 2001).

Other environmental pressures that threaten hospitals include staffing shortages, with 86% reporting a shortage of registered nurses and more than 6 out of 10 ancillary service workers (Bellandi, 2000). The impact of these worker shortages is significant because hospitals are forced to cancel nonurgent surgeries, close beds, or divert patients, adding to the problem of declining revenues. Further, increased costs are incurred due to staff overtime, contracts with agencies, and per-diem staff. Hospitals, nursing homes, and home care agencies are going to great lengths (and expense) to recruit and support foreign nurses and nurse's aides. Finally, the public grows increasingly aware that such shortages can affect the quality of care they may receive, and consequently their choice in accessing care at their local hospitals.

It is clear that continued and new financial threats, similar to those hospitals confronted in the 1980s, will once again set the stage for hospital closure, potential merger, or some type of partnering activity. A total of 35 hospitals closed in 2001 (Jaklevic, 2002), and 272 hospitals were acquired or merged with other health care facilities (Galloro and Tieman, 2002). Although the number of hospital closures, mergers, and acquisitions may have slowed, the challenges associated with them have not decreased.

A CHANGING COMPLEX ENVIRONMENT

Health care analysts predict a shift away from hospitals owning system components to increased participation in strategic alliances and partnerships (Haugh, 2001). According to some analysts, 2001 was more about health care systems breaking up and disaffiliation than substantial merger and acquisition activity (Jaklevic, 2001a; Galloro and Tieman, 2002).

In its eighth annual tally of hospital consolidation activity, including mergers, acquisitions, joint ventures, and other partnerships involving a change in the

control of a hospital, *Modern Healthcare* reported mixed opinions about whether 2002 will involve an increase or a decline in the number of transactions (Galloro and Tieman, 2002). It is predicted that hospitals will seek financially stable partners to bolster their own performance if the recession lasts longer than economists predict. Regardless, affiliations or dissolutions create great anxiety, upheaval, and pain for all in the organization.

Although no CEO wants to cut beds and reduce staff or duplicative services to control costs, few incentives exist that reward CEOs for making these tough decisions. This leads many to suggest that if hospitals cannot become operationally efficient, then the "merger craze" may not be over (Sinay and Campbell, 2002). Clearly, the experiences from failed alliances and successful mergers can be instructive to hospital executives who continue to struggle to reduce operating costs. It is important for health care leaders to understand and learn the lessons from such experiences as they confront environmental challenges that are likely to continue over the next few years.

LESSONS LEARNED FROM SUCCESSFUL HOSPITAL MERGERS

Sutter Health is composed of 27 hospitals, a network of physician organizations, and other health services in northern California. Van Johnson, the president and CEO of this nonprofit health system, stresses the need for top management to be actively involved in all aspects of merger integration and maintains that listening, communication, and a willingness to compromise are critical in overcoming resistance (Dixon, 2002).

The absence of an "out clause" was important in the success of two merged entities: Health Midwest of Kansas City, a nonprofit system composed of 15 hospitals, and Sentara Healthcare of Norfolk, Virginia, also a nonprofit health service organization composed of six hospitals. Sentara's CEO, David Bernd, believes that mergers are permanent. When disagreements arise, he feels that the partners should go back to the original purpose and agreements to solve problems. Richard Brown of Health Midwest agrees and uses negative scenario exercises to determine how top management teams would react to difficult situations in the premerger phase, for example, top leaders discuss what it would be like to lose authority and control. Both leaders describe participative decision making, that is, informed-consensus structures and a focus on the common ground or "broader thought," that is, community health and service mission, as it provides a unifying purpose of the merger (Dixon, 2002).

Another successful merger of seven hospitals and other health services is Novant Health of North Carolina. Novant's leader, Paul Wiles, sees organizational culture as the most misunderstood aspect of the entire merger process. Wiles was

based in Winston-Salem but took up residence in the town of Charlotte for 10 months to listen, observe, and experience the partner organization's culture. In so doing, he felt better able to understand the challenges of integration more completely (Dixon, 2002).

These successful mergers identified some important lessons, which include the following:

The need for a sense of purpose and commitment to the merger (i.e., no "out clause")
Good communication
Active listening and willingness to compromise
Participation in decision making and governance structures
Staying mission focused and community centered
The importance of organizational culture in a merger

Mergers of Teaching Hospitals

The force driving the mergers of six teaching hospitals was economic, according to John Kastor, which he describes in his book *Mergers of Teaching Hospitals in Boston, New York, and Northern California*. Kastor (2001) analyzed *Partners*, the corporation that includes Massachusetts General Hospital and Brigham and Women's Hospital in 1993, New York-Presbyterian Hospital, representing the union of the New York and Presbyterian hospitals in 1997, and UCSF Stanford Health Care, created by the merger of the University of California San Francisco and Stanford in 1997.

According to Kastor the Partners merger was successful in maintaining most but not all of the standards of clinical service, research, and teaching for the prestigious Boston hospital partners. He concludes that the New York-Presbyterian system has unresolved issues including unification of clinical services but considers it a "work in progress" and reports on the financial, political, and fundamental differences contributing to the failure of the UCSF Stanford system (Kastor, 2001).

LESSONS LEARNED FROM FAILED HOSPITAL MERGERS

The merger beginning in 1986, from a single hospital with 740 beds and revenues of $195 million to a 14-hospital consortium in 1997 with 4,601 beds and revenues of $2.2 billion, described the Allegheny Health Education and Research Foundation (AHERF) of Pennsylvania. By 1998, the corporation overspent

revenues and resources culminating in the declaration of the largest medical bankruptcy in history (Aaron, 2001). In addition to the egregious activity of top executives, the AHERF debacle raises the question of when is a merger too big to be properly managed? The answer is not known, but Victor Fuchs feels 500 beds is about the optimum size to deliver efficient clinical care and that larger hospitals become increasingly less efficient, costly, and tougher to manage (Kastor, 2001).

Continued financial losses contributed to the demerger of the following three systems: Heritage Health System of Charleston, West Virginia, which after 2 years was not able to make money or blend with the Appalachian Regional Healthcare of Lexington, Kentucky; the Penn State Geisinger System, which reportedly had lost more than $20 million in 1 year (Jaklevic, 2001); and UCSF Stanford Health Care, which suffered huge financial losses, that is, a loss of $78 million by the end of the fiscal year on August 31, 1999 (Aaron, 2001).

Community opposition or failure to meet the needs of the community was offered as reasons to demerge the Optima Health Manchester System of New Hampshire and the Unity Health Services System of St. Louis. This also became an issue in the UCSF Stanford system, with the threatened closure of Mount Zion, one of its financially strapped hospitals. The public outcry by community activists and politicians alarmed system executives. Participation by the media with provocative statements such as "There's been mismanagement," "Get rid of the executives," and "The rich medical centers should support us" halted the decision to close the hospital (Kastor, 2001, p. 366).

Baptist St. Vincent's Health System, a merged entity of two of the biggest providers in Jacksonville, Florida, demerged in June 2000 after a *profitable* relationship of about 4 years. They cited *disharmony* among their medical staffs as the reason for the breakup (Jaklevic, 2001). Staff discontent, described as differences in faculty and medical staff at the two organizations, was a factor in the UCSF Stanford (Kreiger and Feder, 1999) and the Penn State Geisinger split (Aaron, 2001; Jaklevic, 2001).

THE CASE OF THE PENN STATE GEISINGER SYSTEM

The Penn State Geisinger System began in July 1997, when the 575-bed teaching hospital joined with the Geisinger Health System, which included a health maintenance organization and a group of community hospitals based in Danville, Pennsylvania, about 80 miles from its partner in Hershey. Economic incentives, including the financial viability of the College of Medicine in Hershey, and the potential to grow and expand the Geisinger health plan drove the merger.

According to the former dean of the Penn State Geisinger System, signs were evident early in the process that the arrangement would fail, beginning with lack

of "buy in" at both institutions, differences experienced regarding the authority and accountability of the academic chairs, and negative feedback from the community, which translated into a universal refusal by any of the major community hospitals in the Hershey region to participate in the Geisinger Health Plan (Evarts, 2002).

Major cultural differences regarding organizational structure, governance, management styles, and opinions regarding the value of education and research emerged soon after the merger (Evarts, 2002). The system failed "to recognize that the education, research, and patient care missions of the academic health center and a college of medicine were inextricably intertwined and could not be separated" (Evarts, 2002, p. 13).

Evarts (2002) notes that one system was accustomed to nonphysician managers and the other relied on physicians, which created a "clinic" versus an "academic" clash in cultures. Physicians at the academic medical center, for example, were accustomed to being referred to as "faculty" not "staff," adding to the tension and discontent. In addition, little if any interest in furthering clinical trials and research in the merged entity was noted.

Leadership of the new organization should have recognized and respected the different cultures of the partners, but failed, and this was huge according to Evarts (2002). Retention of faculty became a major problem, and recruitment of new staff was a huge challenge as morale fell. A lack of trust in the overall system became evident among staff and a crisis in confidence arose (Evarts, 2002). The system unfolded roughly 2 years after it started, as the expected financial growth of the health plan never materialized and returns to the College of Medicine were lacking. The system lost money (Jaklevik, 2001).

Important lessons from these failed mergers include the following:

Financial losses
Community resistance
Lack of "buy in"
Lack of commitment to mission and core values
Poor system development regarding integration
Retention and recruitment problems
Culture differences

CONCLUSION

A common problem in mergers is that often leaders do not think beyond the closing of the deal. As the examples point out, mergers involve and create a complex set of management problems. Often executives underestimate the cultural aspects and impact on people, who can be alienated in the process (Dixon, 2002).

In addition, ill will can be felt in the community, which will have a financial impact on the merged entity. It is not the planning that is the most challenging aspect for a merger, but the challenge of strategically managing the entire change process, which includes managing the human factor (Nash and Everett, 1996).

One of the first things executives should do is get a feel and appreciation for the existing culture, because mergers require fusion of some or all of the human resources, which was a successful strategy used by the CEO of Novant Health Paul Wiles. In contrast, cultural differences were not respected by either organization in the Penn State Geisinger merger. According to Evarts (2002), culture differences and clashes were not promptly addressed, and there was no effort to find common ground on which to build a culture in the new entity. Consequences of poor merger management, as seen in these failed mergers, is likely to result in low morale, increased employee stress, absenteeism, higher tension, and lower productivity (Nash and Everett, 1996).

Culture differences, though significant, were not the only issues in failed mergers. Finances, of course, played an important role in the merger dissolutions as previously described.

Back to Basics

Kastor (2001, p. 441) concludes his analysis on the mergers of the six teaching hospitals by quoting Victor Fuchs, the Stanford health economist, "[Given the] control expenditures mind set, a certain amount of merger activity is to be expected. The enthusiasts for the merger always exaggerate the amount to be saved." A review of nearly half of the 750-hospital merger and acquisition alliances formed from 1993 to 1997 found that few had achieved economic advantage (Aaron, 2001). These partnerships are expensive to initiate and costly to dissolve (Kreiger and Feider, 1999; Jaklevic, 2001; Evarts, 2002). With a reported $5 billion spent on integration strategies over the last decade, health care organizations are acknowledging that these investments have not always paid off (Haugh, 2001). Health care executives are concentrating on internal growth, identifying what they do best, and taking a "back to basics" approach as a way to achieve efficiency and market share (Jaklevic, 2001).

Perhaps the overarching lesson from these turbulent times is to be "mission focused" and stay the course.

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CHAPTER 11

It's Really Not about the Money

The Financing and Payment of Physician Services

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Before the middle of the nineteenth century, purchasing medical care was conducted in the same manner as other essential transactions between informed buyers and sellers. From the middle of the nineteenth century until the late twentieth century, this way of purchasing medical services changed as physicians successfully restructured both their clinical and their economic relationships with patients. Through this effort, physicians controlled and directed the growth and development of the health care industry. The profession expertly crafted its dominant position by championing the scientific approach to medical care and the fiduciary responsibility of physicians to act solely in the best interest of their patients. Until the 1980s, this strategy effectively discouraged the formation of countervailing market forces. From 1850 until 1980, physicians independently established their fee schedules and controlled their individual economic destiny (Starr, 1982).

This monopolistic economic pattern began to change in the 1980s as expenditures for health care services continued increasing at an alarming rate.

U.S. institutions were forced to reexamine the autonomy of the physician-directed model. In response to the perceived health care "crisis," reform advocates called for a more rational method of delivering and financing health services. These advocates specifically suggested changes in the health care industry's economic model to more closely approximate a competitive market model. To date, efforts to create this competitive model through the use of managed care contracting have not succeeded. Managed care strategies have succeeded only in restructuring the framework of physician financial incentives (Stone, 1998). Traditional efforts by the physician community to remove the issue of money from the physician–patient relationship were thwarted when managed care plans reintroduced money as a direct factor in the service equation. Physician roles expanded to include health care cost management in addition to patient advocacy. As originally structured, physician failure to meet a varying array of efficiency standards created by each managed care plan had an impact on the individual physician's compensation (Stone, 1998). Because of competing cost and quality goals, the physician community continues to resist this approach to cost control by once again attempting to reassert its collective market dominance.

Simply stated, the manipulation of financial incentives alone will not fundamentally change delivery and financing models in the way required to equitably balance cost, quality, and access issues. Despite the painfully slow progress in meaningful health care reform, is it possible to combine features of previous and current historical periods to achieve a physician-directed health care economic model with the potential for long-term sustainability? Is it possible to fairly compensate physicians for acting, without conflict, in the best interest of their patients and society?

An economic model of this nature, in its ideal form, focuses on the following:

- Encourage physician leadership and autonomy in patient care management decisions
- Ensure physician accountability through established and widely accepted ethical standards and the presence of balancing market forces
- Reward physicians exclusively on their ability to make clinical decisions and achieve outcomes in the best interest of their patients

To explore this subject, this chapter reviews the evolution of the medical profession in U.S. society, outlines current health care reform recommendations and the associated challenges of their implementation, and suggests ways of achieving an alignment of physicians' clinical objectives, financial objectives, and public responsibilities.

PHYSICIAN-DIRECTED PAYMENT PLAN

THE PRACTICE OF MEDICINE: 1750–1850

Until the middle of the nineteenth century, the practice of medicine in the United States was conducted by a wide range of full-time and part-time healers, each with varying levels of training and skills. Individuals were encouraged to enter the trade of medicine as the result of weak entry barriers; modest opportunity for economic gain; and most importantly, opportunity for improvement in social status. The level of medical knowledge possessed by practitioners during this time was elementary and typically within the comprehension level of the patient. In the event medical care could not be adequately provided by a family member, the assistance of a healer was sought. With the availability of options and a good understanding of the reputation and skill of a selected healer, the business transaction between patient and provider was straightforward. The patient directly paid the healer in exchange for services employed to reach an agreed upon outcome (Starr, 1982).

THE PRACTICE OF MEDICINE: 1850–1980

By the middle of the nineteenth century, however, physicians successfully began to redefine their role in society and concurrently the economic model governing the financial exchange between patient and provider. Three underlying causes help explain the rise of physician sovereignty at that time. First, advancements in scientific knowledge resulted in the recognition of the legitimate complexity of medical care. This recognition helped drive unification of the discipline around agreed upon clinical training and practice guidelines. Significant educational reforms accompanied this unification, resulting in the consolidation of training facilities and the limiting of credentialed providers. Additionally, increased complexity fostered specialization of the medical profession increasing both professional and economic dependency among physicians. Second, at a societal level, there was recognition of the economic value of health. As a contributing factor to health, medical care began to be accepted as a necessity for all people. The availability of medical care to all people became recognized as one measure of a just and equitable society. Third, given the importance of health to society, there was a reluctance to rely exclusively on an unrestrained market to guarantee the appropriate and equitable distribution of this valued benefit (Starr, 1982). As outlined by Kenneth Arrow (1963), the growth in specialized knowledge controlled by a limited number of professional experts resulted in the medical care industry developing in a different manner than a normal competitive market.

Characteristics of the medical care market, which differ from a competitive market, include the following:

The nature of demand
The behavior of providers
The uncertainty of medical care benefits
The supply of medical care
Medical care pricing policies

By skillfully taking advantage of market failures, and by soliciting broad support from governmental and nonmarket institutions, physicians collectively consolidated their authority and professional sovereignty by extolling the virtues of the physician-directed model of service provision. This model remained the standard from the mid-nineteenth century until well into the twentieth century. This model championed the sanctity of the physician–patient relationship. Under the direction of the physician, the separation of clinical judgment and financial self-interest was considered expected ethical behavior by both physician and patient. Through self-regulation, the medical profession was expected to police those physicians who put personal financial gain before their patients' health interests. As guardians of a sacred trust, the physician community insisted that personal economic gain was secondary to the physician's overriding responsibility to provide competent patient care (Stone, 1998).

With the movement toward authority and sovereignty, the economic model routinely governing exchange quickly migrated from a competitive market model based on negotiated fees for services to one that was more monopolistic in nature based on physician determined fees (Starr, 1982). Until the second World War, payment was on a fee-for-service basis and physicians directly billed patients for these services. After World War II, payments to physicians were made by insurers on behalf of patients. Even with the advent of insurance, the physician community continued to control payment rates. The role of insurers during this period was essentially restricted to processing claims and paying physicians based on the profession's "usual, customary and reasonable charges" (Teisberg, Porter, and Brown, 1994). During this period, the medical profession established a barrier between money and the practice of medicine. By managing fees and workload, physicians controlled their individual economic destiny while conveying to the public that the practice of medicine was really not about the money (Starr, 1982; Stone, 1998).

MANAGED CARE PAYMENT PLAN

THE PRACTICE OF MEDICINE: 1980–PRESENT

The economic relationship between physician and patient began to change in the late twentieth century. The late 1970s and early 1980s saw increasing public

concern about the health care industry's trade-off between quality and cost. Without question, the leading concern was rising costs. Health care expenditures increased from 5.7% of the gross domestic product (GDP) in 1965 to 8.0% in 1975 and 10.3% in 1985. Expected increases in health care expenditures were projected to represent an amount in excess of 16.0% of the GDP by 2002 (Iglehart, 1999).

The reasons for the amount and rate of increase in health care costs are multiple and complex. The surge in health care expenditures is continually fueled by a number of factors:

Demographic changes
Technological advancements
Changes and growth in the availability of health care financing
Consumer behavior
Physician training and behavior (Barton, 1999)

Physician impact on health care expenditures is considerable. Physicians currently receive approximately 20% of all health care expenditures in the form of direct compensation and control an estimated 75% of all health expenditures through their management of the patient-referral process (Barton, 1999). Given the uncontested leadership role of physicians in medical decision making and the prevalence of the fee-for-service payment system at the time, U.S. institutions were forced to reexamine the autonomy of the physician-directed model and, ultimately, the sanctity of the physician–patient relationship (Stone, 1998).

In response to this perceived health care "crisis," reform advocates called for a more rational method of delivering and financing medical services patterned according to "market-driven" practices (Kuttner, 1999). In an analysis of the inefficiencies of the health care industry, Enthoven (1993) and others proposed a new way of organizing and paying for medical care. Based on structural market theory, this approach commonly became known as *managed competition*. In this model, competition does not take place at the individual provider level but at the system level of integrated financing and delivery plans. According to Enthoven (1993), sponsor organizations would negotiate with and purchase services from integrated community health care organizations. These sponsor organizations would use market forces to motivate providers in each community to develop efficient delivery systems. This conceptual model served as the basis for the Clinton administration's effort at comprehensive health care reform embodied in the Plan for Health Security (Enthoven, 1993).

Interestingly, both government and private industry already had initiated strategies to address the issue of escalating health care costs before the failed attempt to enact comprehensive health care reform. The strategies employed by both private industry and the government focused on modifying supply-side behavior. Private industry embraced the concept of managed care. From 1981

forward, the dominant form of health insurance coverage dramatically shifted from traditional indemnity insurance with free access to all providers to various forms of managed care. In 1981, traditional health insurance commanded 95% of the market. In contrast, this same product, replaced primarily by managed care products, represented approximately 2% of the market in 1997 (Feldstein, 1999).

This dramatic change initiated by private industry, as the primary buyers of health insurance coverage, created a complex reimbursement environment for physicians. Multiple managed care organizational forms grew and developed throughout the 1980s and 1990s, including health maintenance organizations, preferred provider organizations, point-of-service plans, and hybrids of these primary forms (Coile, 2000). A wide range of payment mechanisms incorporating rebates, bonuses, and penalties were employed by these organizations in an attempt to modify physician behavior. Common forms of reimbursement included discounted fee for service withholds, and varying levels of capitation arrangements with built-in bonuses, and penalties (Bohmer, 1999b). Regardless of the managed care payment mechanism structured into the physician contract, the objective remained the same. Physician responsibilities expanded to include the delivery of high-quality clinical services and the management of the associated cost of these services in a way that would maximize the value of the payer's money (Stone, 1998).

Throughout the 1990s, competition among managed care plans dramatically did affect the rate of health care cost inflation. From 1993 until late into the decade, the rate of health care expenditure growth steadily declined. This decline was reflected most noticeably in the declining growth rate of employer-paid health insurance premium costs (Feldstein, 1999). This trend most likely was achieved in four ways:

Decrease in rates paid providers
Decrease in the medical complexity of managed care enrollees
Decrease in the absolute amount of care provided
Operational efficiency improvements in health care delivery
(Bohmer, 1999a)

A significant portion of these one-time savings, according to Debra Stone (1999), resulted from the restructuring of physician financial incentives rather than from comprehensive reform as envisioned by Enthoven (1993). Without the mature structure of a competitive market model in place, managed care efforts to reform the health system were primarily driven by financial concerns rather than combined measures of quality and cost-effectiveness. Although money arguably really mattered before the advent of managed care arrangements (Rice, 1998; Stone, 1998), the barrier between money and medicine was effectively eliminated in a managed care environment. Money mattered as physicians became personally vested in resolving conflicts of competing quality, access, and cost objectives.

As stated by Debra Stone (1998, p. 175) in a discussion on the role of primary care physicians, "The criterion for doctors' decision making is changed from medically necessary to medically necessary and financially tolerable for the primary care doctor."

As predicted, the restructuring of supply-side incentives alone has not resolved health care industry issues in a lasting way. According to Robert Kuttner (1999), those efforts temporarily slowed the growth of health care costs primarily through the deep discounting of service fees and reduction in access to medical care. These remedies, however, have not adequately addressed underlying factors that continue to drive up the costs of medical services. Evidence of the failure of supply-side remedies alone to resolve this issue is seen in the renewed accelerated rate of change in health care insurance premiums. In 1988, health insurance premiums were rising an average of 12% per year. The rise in premiums was down to 0.8% by 1996 as the result of most employers switching to managed care plans. At this time, health insurance premium rate increases are again in double digits on an annual basis. In 2002, U.S. businesses were expected to spend approximately 13% more on health benefits than in 2001. Failure to manage premium cost increases is directly linked to flawed managed care strategies. As consumers demand more choice and physicians improve their negotiating positions through consolidation, managed care companies have been forced to reduce their pressure to hold down costs (Cohn, 2001; Enthoven, 2002).

COMPETITIVE MARKET PAYMENT PLAN

MARKET DRIVEN REFORM

Clearly, piecemeal efforts at managing health care costs have at best resulted in temporary solutions. In the process, the traditional physician–patient relationship has been severely stressed. As the search continues for a way to achieve balance in the health care system, is it possible to create an economic model that successfully aligns physicians' clinical and individual financial incentives with societal objectives?

Current recommendations on comprehensive health care reform begin with recognition for a broad social agreement on issues of equity, efficiency, and effectiveness throughout the health care system. In addition, it is uniformly recognized that physician leadership and increased patient accountability will be required to meet reform objectives. At the operational level, suggestions continue to focus on competitive market solutions. These include, but are not limited to, the following:

Availability of basic universal coverage
Availability of fixed plans with varying benefit levels

Increased direct financial responsibility for health care coverage by the consumer
Availability to the consumer of on-demand health and financial information
Availability of comprehensive care through a centrally managed system
Determination of provider reimbursement and compensation based on cost, outcomes, and patient satisfaction (Teisberg, Porter, and Brown, 1994; Fuchs, 1996; Coile, 2000)

With these recommendations enacted, reform advocates envision a competitive health care market in which consumers receive incentives to invest in their own health, and through their health plan, select physician organizations providing them with the best health care value. Physician organizations are expected to provide high-quality efficient care by using their greatest asset, the management skills of their physicians.

The alignment of physician incentives, in the form of a more rational payment methodology based on the physician's ability to manage health outcomes within agreed upon cost parameters, requires the successful implementation of the aforementioned strategies. Given the historical relationship between physician and patient, the implementation of these strategies will be extremely difficult and challenging. To illustrate the difficulty and complexity of effecting this change, several of the reform recommendations, critical to restructuring the physician–patient relationship, are reviewed in the following sections in greater detail.

The Need for a Social Mandate

Without question, redefining the physician–patient relationship is a daunting task at both policy and administrative levels. As suggested by Reinhardt (1992), a national health care policy should set goals that meet social values of equity and fairness and implement programs that meet these goals in the most efficient manner. In the broadest terms, a national health care system's mission should be to improve and maintain the health status of each citizen over time in a way that is acceptable and sustainable by society.

Physician Leadership

To reach this goal, active physician leadership is required. As observed by Victor Fuchs (1996), government control has not worked well over time in regulating the industry, and market competition has its problems. In commenting on the shortcomings of a purely market-driven health care system, Relman (1998) questions who would want to be cared for in a health system built on the principle of

"let the buyer beware?" In reality, the patient–physician relationship remains a highly personal and confidential social contract. With discretion to employ complex technology in critical medical situations, physicians remain in the principal position as advisor and, as required, decision maker in the relationship. This responsibility, Fuchs (1996) reiterates, holds physicians to a high ethical standard not fully satisfied by governmental regulation or competitive market rules. In this leadership role, the physician community is challenged to meet equity and efficiency goals primarily through strong adherence to the profession's existing norms and ethical guidelines (Fuchs, 1996).

Patient Accountability

The role of the physician leader must be supported by actively engaged patients. Both Fuchs (1996) and Relman (1998) define the essence of good care as the process of an actively informed patient working in cooperation with a health professional providing personalized service. In support, Morreim (1995) suggests it is time to expect patients to exercise responsibility for individual choices. Morreim (1995) believes that direct financial responsibility for service payment and direct accountability for plan and benefit-level selection are the most effective ways for society, through individual choice, to manage cost and access issues.

Operational Solutions

Reform advocates, therefore, believe that a coordinated effort to increase patient and physician responsibility and accountability by employing market-driven solutions will help address many of the economic issues initially outlined by Arrow (1963). The specific operational actions, which will move the health care industry closer to a competitive market model, include the following:

- Increased consumer financial responsibility
- Increased availability of health information for the consumer
- Increased responsiveness to customer needs by integrated, customer-focused health care providers

Consumer Financial Responsibility

As summarized by Teisberg, Porter, and Brown (1994), consumer price insensitivity, resulting from the widespread availability of comprehensive health insurance, skews consumer incentives and drives up health care costs. More specifically, this price insensitivity is believed to result in the indiscriminate use of services. According to Pauly (1968), however, this reaction actually reflects rational economic behavior. When fully insured, the consumer does not pay the full cost of an

additional service because this service is subsidized by the premiums of all health plan enrollees. Therefore, from the consumer's perspective, more is better.

When this payment model is changed, service use is dramatically affected. For example, based on the RAND Health Insurance Experiment (Rice, 1998), individuals responsible for 95% of their health care expenditures spent 28% less on health care services than those who paid nothing. Rice (1998) cautions that cost sharing alone will not guarantee improved health status at a reasonable cost to society. A decline in services and expenditures does not mean that patients have made correct decisions regarding the type and amount of services required to maintain good health. The challenge, then, becomes how to incorporate this behavior into the purchasing process while meeting the goal of improved health status.

Given the complexity of medical care purchasing decisions and the special financial characteristics of the industry, reformers (Teisberg, Porter, and Brown, 1994; Fuchs, 1996) advocate Enthoven's (1993) strategy to introduce price elastic demand into consumer purchasing decisions through the consumer's health plan selection. For this strategy to work, the current relationship between patients and insurers must be redefined. More specifically, Teisberg, Porter, and Brown (1994) recommend that payers' and consumers' incentives must be aligned. Payers should negotiate good value for their enrollees and profit as a result of this effort rather than as the result of shifting payment responsibility back onto patients or physicians. In discussing the role of the patient in the new economics of medicine, Morrein (1995) further offers that it is critical for patients to actively participate in health plan selection and payment. The issue of rising health care costs will not be resolved without patients' involvement on both sides of the value–cost equation. Despite critical concerns (Rice, 1998) regarding the value of increased patient financial responsibility for the purchase of medical care, the movement toward "consumer-driven" health plans has begun as U.S. employers currently look for new ways to manage unacceptably high medical costs (Enthoven, 2002). Employers' acceptance of defined contribution plans is based on the aforementioned belief that greater responsibility for choosing and paying for plans by employees will encourage more prudent use of health care services, and ultimately, greater accountability for lifestyle choices.

Availability of Health Information

The success of selecting the correct health plan and obtaining other health-related information relies on the availability of good information and the ability of the consumer to properly use the information. To date, efforts to employ health information in decision making have been disappointing. Despite the growing availability and quality of health information, there is little evidence that consumers are willing to access this information. Rice (1998) supports this position by citing empirical research showing the absence of "consumerism" in the

selection of health care providers (Hoerger and Howard, 1995) and in consumer reluctance to change purchasing habits when there was perfect knowledge of available provider and service costs (Hibbard and Weeks, 1989).

Researchers (DeBrantes and Galvin, 2001) identify factors related to patients' hesitance to become active consumers, as follows:

Unwavering faith that physicians are practicing good medicine
The patient's incomplete understanding of physicians' treatment decision-making process
The lack of financial and clinical decision support tools designed for the average patient

Creating a sense of responsibility among consumers for individual health care decisions requires a change in the existing physician–patient relationship. This may be increased as patients are forced to take on a greater share of their health care costs. To further encourage this transition, however, practical responses to the last two concerns are required and have been offered.

In addressing the need for understandable and actionable health information, Udvarhely *et al.* (1994) suggest that other complex markets have developed ways to measure the value of competing services in a way that is understandable to the average consumer. Borrowing from the financial marketplace, Udvarhely *et al.* (1994) suggest the development of the equivalent of an aggregate "bond rating" in medicine that allows the public to evaluate competing provider networks based on outcome measures.

Current advancements in Internet-enabled applications today allow for the widespread dissemination of performance measures (Coye, Jacks, and Akay, 2001), DeBrantes and Galvin (2001) caution that this availability alone will not elicit a change in consumer behavior. Active consumers will require ongoing support to appropriately access and use information. Different users will require different levels of support ranging from the availability of a brief independently completed tutorial to the employment of a coach to guide and possibly interpret data for the user. It is expected that this support will be cooperatively provided by the insurer and physician organization.

Coordinated Care

Reform advocates anticipate increased consumer activism as individual financial responsibility increase and barriers to accessing actionable health information are eliminated. To remain competitive, physician organizations are expected not simply to grow larger but to recreate themselves. These organizations must be designed to improve health, not to increase the use of health care services (Teisberg, Porter, and Brown, 1994). To accomplish this task, Fuchs (1996) recommends the development of physician-led integrated delivery systems.

Physicians' decisions are the major determinants of the cost of care. An integrated system can be structured to incorporate the incentives, information, and infrastructure required to make clinical decisions in a reasoned and cost-effective way.

Unfortunately, efforts at physician consolidation and system integration have faired poorly, as documented by the performance of health system–owned physician groups and for-profit physician practice management corporations (Coile, 2000; Robinson, 1998). There are numerous reasons for the poor performance of these ventures. Generally speaking, the rapid growth in the number and size of physician groups has been in response to the rise of managed care. Efforts to obtain immediate gains in market share were given priority over long-term efforts focused on efficient practice management and the development of service-quality measurements.

Despite the current financial status of large integrated physician groups, the core concepts regarding integration remain valid (Coile, 2000). Sustainable business models for managing physicians require ongoing development. Foreman and Andrew Draper (2001) offer an approach based on three guiding principles:

Focus on the consumer
Reconfiguration of the economic model to ensure consumer satisfactions
Continuing support for fiscal and service excellence

In brief, Foreman and Draper (2001) believe that a consumer-focused care model is characterized by the existence of physician-directed team care management; the application of clinical models, which produce measurable superior clinical outcomes; and the establishment of channels for clear and frequent communication with the patient.

In this process, the greatest challenge of redesigning physician organizations may be the development and effective use of outcome measures. As described by Bohmer (1999a), day-to-day medical practice is characterized less by the repetitive application of rules and more by the weighing of probabilities. This uncertainty is present in all clinical care stages, including inputs to the care process, the delivery of care, and care outcomes. The complexity of this process is increased because physicians individually practice medicine along an acceptable range of professional performance standards, rather than in a single uniform manner. To accurately measure and evaluate this dynamic and intricate process requires, at a minimum, four categories of outcome measurement:

Clinical health
Functional health
Consumer satisfaction
Cost of care (Udvarhely *et al.*, 1994)

The development of these sophisticated management tools requires the effective application of practice change strategies consistently supported by true physician commitment and leadership (Bohmer, 1999a).

FUTURE OF PHYSICIAN PAYMENT PLANS

ENVIRONMENT

Clearly, as briefly described, the amount of effort to restructure the health care industry is enormous. Nevertheless, health care experts believe a second stage of health care reform is set to begin as employers shift additional health care costs to employees in a short-term strategy to manage dramatically increasing health care premiums. Given an increased level of consumerism and a corresponding realignment of physician organizational objectives in response to this market change, Coile (2000) offers a market-driven scenario of the near future of the health care industry. In this scenario, Coile (2000) describes a U.S. economy unwilling to double its $1 trillion health care expenditures. As a result, major employers and business coalitions again rely on a managed care solution. This version, however, is characterized by multiyear contracts with moderate annual increases and material incentives for health improvement. Coile (2000) further predicts that employers will broaden employees' choice of health plan alternatives, but at the same time, move toward defined contribution benefit policies. In response, consumers aligned with their health plans will become more discretionary in their choice of health care providers. This rise in consumerism results in a renewed effort by physician organizations to focus on consumer satisfaction, as measured by several categories of outcome performance. In reality, this transition has already begun as employers move more aggressively to defined contribution health plans (Enthoven, 2002) and major health plans, such as Aetna and United, drastically reduce managed care restrictions on consumer selection of providers and on physicians' clinical decision making (Coile, 2001).

PHYSICIAN–PATIENT RELATIONSHIP

In this environment, the physician–patient relationship is poised to enter a new state. This state calls for increased responsibility and accountability on the part of the consumer. It, additionally, advocates reliance on physicians to fully use their professional skills in providing clinically effective and cost-efficient care. This new vision of the physician–patient relationship allows for the restructuring of physician incentives. Physicians, once again, can serve in the primary role of patient advocate by providing the best care possible within the benefit limit chosen by the patient.

This model is captured by Morreim (1995) in her discussion of the medical ethics of health care's new economics. Morreim (1995) urges competent patients to assume greater responsibility in matters of medical care and medical coverage, for the purpose of allowing the physician to provide the best possible care within the expressed desires of the patient.

In further defining the role of the physician, Morreim (1995) suggests that the physician meet the requirements of two standards. The standards of resource use apply to the physician's obligations regarding material resources, medical, and monetary. The standard of medical expertise refers to the level of knowledge, care, and giving provided by the physician to each patient. In this divided standard approach, the physician's role changes most dramatically under the standards of resource use. The physician's role moves away from that of an undisputed commander of resources to that of an advocate of the patient employing only those resources allowed within the patient's medical coverage. The physician's obligations within the standards of medical expertise reflect the traditional role of the physician to fully employ his or her knowledge and skills in the best interest of the patient's welfare.

Payment Plan Guidelines

In transitioning from this conceptual model of the physician–patient relationship to practical solutions for compensating physicians, Bohmer (1999b) recommends several compensation plan safeguards. First, he suggests active leadership support for existing professional ethics and norms. Other checks and balances include evaluating performance based on clinical and patient satisfaction outcomes. To support physician performance improvement, Bohmer (1999b) advocates the dissemination of benchmarking data in the areas of care outcome and resource use. Realizing the inherent unpredictability of clinical outcomes and the variance in patient health status, risk-adjusted capitation rates and stop-loss insurance provisions should be incorporated into plans to reduce physician risk associated with adverse patient selection.

Payment Plan Model

Beyond the establishment of plan guidelines, Bodenheimer, Lo, and Casalino (1999) recommend physician payment models designed to achieve balance between clinical and financial objectives. In their recommendation, Bodenheimer, Lo, and Casalino (1999) define the primary care physician as the coordinator of care. To align clinical and financial objectives from the physician's perspective requires two levels of incentives: the primary care physician level and the specialist level. Regardless of whether primary care physicians are paid via a fee-for-service approach, capitation, or salary, the appropriate level and quality of primary care, and subsequently, specialist referrals should be managed by, additionally, compensating primary care physicians for taking care of complex patients and advising these patients on complex health care alternatives. In contrast, Bodenheimer, Lo,

and Casalino (1999) and Bohmer (1999b) suggest that specialists be paid based on capitation or salary. A hybrid of these approaches, contact capitation, may serve as an intermediate solution encouraging both specialist accessibility to patients and return of patients to their primary care physician when the consultation is appropriately completed.

Regardless of the specific plan structure, physician payment models in a competitive market must reward physicians for consistently providing appropriate care in the best interest of their patient within the guidelines established by the patient and agreed upon by the physician.

CONCLUSION

Is it possible to align physicians' clinical objectives and personal financial objectives in a manner that will satisfy society's need for a sustainable health care system? An economic model in which the physician community independently is allowed to establish the payment plan has not worked for several reasons. First, the public expectation that physicians alone can resolve all medical dilemmas without concern for cost is unrealistic and unsustainable. Second, as observed by Stone (1998), in a fee-for-service environment, the public remained concerned that physicians' commercial motivation is much greater than expressed. A solution was required that would guard against these excesses.

In response, insurers believed the employment of managed care plans would resolve these issues. In a managed care payment plan, Stone (1998) notes that the insurer assumed the role of consumer advocate and medical advisor. Through the restructuring of physician incentives, the insurer would make sure that patients routinely received the correct amount of care required. Although this plan was successful in the short run, a renewed health care crisis is becoming more real.

To effectively resolve this ongoing dilemma, Morreim (1995) accurately states that the physician–patient relationship must be restructured. The role of the patient, the commitment of the physician, and the participation of insurers in the process must be redefined. The challenges and costs associated with restructuring this relationship and the health care industry are great. In a competitive market environment, however, the possibility of aligning physician incentives in a way that benefits the public while minimizing concerns is promising.

As indicated earlier (Fuchs, 1996; Relman, 1998), the essence of good care is the cooperative interaction between an informed patient and an engaged and caring physician. In this scenario, the role of money and the payment plan developed for physicians will be addressed in a way that will meet the requirements of all participants.

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CHAPTER 12

Understanding Health Insurance

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After reading this chapter, one should understand the following:

The recent historical background of health insurance
The concept of bearing risk for medical cost
Types of insurance plan designs currently on the market
Cost-control mechanisms used by health plans (HPs)
The symbiotic relationship between health delivery constituents
The extensive infrastructure needed to administer health care benefits
Mechanisms HPs use to measure quality of health care

RECENT HISTORY OF THE HEALTH INSURANCE INDUSTRY

Health insurance was initially designed to protect the policyholder from catastrophic financial ruin in the event of severe illness. The insurance company

assumed the risk of paying for defined benefits for the policyholder. Initially, many insurance companies sold individual policies that were limited in scope to hospitalization costs. Insurers assumed 80–100% of the risk for payment of defined benefits after patients paid an initial limited deductible. Outpatient costs, doctor visits, preventive care, drug costs, and diagnostic tests were often not covered benefits. Financial risk was usually assessed based on age, sex, and preexisting medical conditions. Actuaries underwrote medical policies based on experience tables that assessed risk for a large group of individuals within a geographic population.

After World War II, many employers started to offer health insurance as a benefit that added a blanket of financial security for employees. Collective bargaining with labor unions increasingly defined benefits to be paid by employers. From 1945 to 1975, an increasing number of employees had their health care benefits paid by their employer. Enactment of the Medicare and Medicaid programs in 1965 vastly expanded medical coverage for the elderly and poor. Government quickly became a large purchaser of health care services.

There arose a sense of entitlement that government and employers were responsible for footing the bulk of health care expenditures. After World War II there was an explosion in medical knowledge that brought about many new drug treatments, new therapeutic and diagnostic devices, and new life-saving procedures. As financial risk for bearing the expense of outpatient care grew, employees demanded that covered benefits be expanded.

Employees expected to pay less for expanded coverage of medical care. Medical economist Kenneth Arrow described the concept of "moral hazard" as it applied to health insurance in 1963. According to this principle, if the consumer does not pay for services, then demand for those services rapidly increases whether or not those services are necessary. It is like paying a small price to dine at an all-you-can-eat restaurant to consume large quantities of high-quality food. The consumer takes more than he or she can possibly eat because he does not pay for it.

During the 1970–1980 period, health care costs soared because of increased technology and the demand for expansion of covered services. Annual medical inflation consistently rose more than 10%. Medical costs for employer groups and government programs skyrocketed. Hospitals continued to expand physical structures and facilities under the Hill-Burton Act. They increasingly billed insurance companies for services based on charges that had a limited basis in cost-accounting reality. The strategic planning mentality was "build it, patients will come, and insurance companies will pay whatever is charged."

In response to medical inflation, former President Richard Nixon temporarily placed price controls on medical spending, and Congress passed the Health Maintenance Organization (HMO) Act in 1973. This act introduced HMOs as an alternative form of insurance coverage employers could offer employees. HMOs would not gain momentum with employers until the early 1980s when medical inflation ran rampant.

In attempts to curb medical inflation in the 1980s the Health Care Financing Administration (HCFA) introduced the prospective payment system (PPS) for hospital payment for Medicare inpatient services. It developed the resource-based relative value system (RBRVS) in the early 1990s to determine payment to physicians for procedures performed on patients with Medicare. Centers for Medicare and Medicaid Services (HCFA renamed, *CMS*) has recently developed PPS for skilled nursing facility (SNF) care, ambulatory payment classifications (APCs) for outpatient facility procedural payment, and a PPS for hospital-based rehabilitation payment. These systems all calculate fixed reimbursement for patient care, thereby limiting medical risk. Hospitals are no longer paid for Medicare based on percentage of charges. Physicians are not paid for Medicare patients based on reasonable and customary fees.

Many HPs use both the PPS and the RBRVS to calculate fixed fee schedules for hospital and physician payment. Over the past decade, HPs have developed products to contain medical costs and to share medical risk.

RISK ARRANGEMENTS

The risk of medical cost must be assumed by any of the following:

The insurance company
Individuals
Employers
Government
Providers

Somebody must pay for medical costs. There is no such thing as a free lunch. Currently, most employees are insured under programs in which employers or insurance companies bear the risk of medical cost. For Medicare and Medicaid programs, the taxpayer assumes the risk of medical costs. As discussed, the CMS has put into place many mechanisms to limit this risk.

Individuals with no insurance bear the full risk of medical costs. Because many of these patients are unable to pay for their medical costs, providers make up for lost revenue by cost-shifting payments received from insurers or government programs. An increasing trend among HPs is to shift payment responsibility to individuals. Such activities translate into higher patient copayments and deductible responsibilities for office visits, diagnostic tests, drugs, outpatient procedures, and inpatient admissions. The intent of these policies is to remove the "moral hazard" of having medical services provided for "free."

Employers may purchase products in which the HP assumes the full risk. In this setting, the insurance company defines benefits and programs designed to efficiently pay for medical care. For example, an employer will pay $150/member

per month (pmpm) for the benefit package. The employer is not responsible for payment of medical costs above and beyond this premium level. So if the costs are $160 pmpm, the HP bears the risk of the cost overruns. The HP must also account for about 12–15% in general and administrative costs to implement a policy. (The justification for these administrative costs is discussed later.) Thus, the HP breaks even if this employer account has medical costs of $127.50 pmpm.

Insurance companies also can act as third-party administrators (TPAs) of policies in which the employer assumes the full risk of medical costs for its employees. Usually large employers with more than 1000 employees and multiple sites of business choose to bear the risk of self-insurance. This self-insurance allows them to retain any leftover budgeted money from premium payments; however, if medical costs outreach premiums paid, then the employer must contribute funding to make up the difference. If a self-funded employer pays $150 pmpm but has medical costs of $160 pmpm, the employer must pay the difference between premium and medical costs. Usually, self-funded employer groups pay the insurance company 4–6% of the premium to implement the policy. Employers benefit from self-insurance because they are protected from liability associated with the administration of the health insurance policy under the Employee Retirement Income Security Act (ERISA). Employees cannot sue the employer concerning issues related to the administration of the health insurance plan. Recent attempts to pass a patient bill of rights would undermine the employer's protection under ERISA and, perhaps, discourage large employers from funding health insurance through a self-funded arrangement.

Occasionally, insurance companies may develop shared risk arrangements with providers. For example, in California, many HPs have delegated risk arrangements in which large physician groups assume the upside and downside risk of primary care and specialty medical costs for a defined number of capitated lives. Many physician groups look only at the upside of the risk arrangement. They often fail to have infrastructure in place to effectively track and manage use of medical services. An example of a provider's inability to manage medical risk deals with insurers was the downfall of the Allegheny Health and Education Research Foundation (AHERF) in Pennsylvania. AHERF's downfall was partially due to its inability to manage medical risk deals with insurers.

Ethical questions have been raised about physician incentives to withhold care because of financial risk arrangements. Many states have laws against gag orders that prohibit physicians from discussing their financial incentives with patients.

PRODUCT AND BENEFIT STRUCTURE

HPs have developed an array of products to meet the needs of employer groups and government programs. These products range from a traditional indemnity program with total open access, to a gatekeeper HMO model with limited benefits

and limited network access. This array of products was developed over 3 decades in response to the economic needs of the times. What physicians often forget is that HPs bring to market those products demanded by those who pay the bills, that is, employer groups and government.

In the early 1970s and 1980s, gatekeeper HMO models were developed in response to runaway double-digit health care inflation. Employers were increasingly interested in seeing what value they were buying for health care. They questioned the quality of care being rendered. As new technology and drugs were developed, they questioned the utility of paying for certain benefits. HMO models relied on providing timely diagnostic screening tests (cholesterol, mammography, sigmoidoscopy) and preventive services (childhood and adult immunizations) at little or no cost to patients. They attempted to measure the quality of care. Their philosophy was "an ounce of prevention was worth a pound of cure." These models were restrictive to patients but reduced health care costs for employers.

During the early 1990s, many employers experienced a slowdown in health care costs when choosing gatekeeper HMOs to manage medical costs. During the economic boom of the late 1990s that saw low unemployment rates and more demands from the workforce, patients demanded greater access to specialists and freedom from the gatekeeper model. There was a backlash against some of the restrictive policies picked by employers and implemented by HPs. Products were developed that allowed greater out-of-network access to specialists and hospitals. Some products allowed self-referral to specialists. Most new products continued to recognize the value of encouraging preventive services and early screening.

In the early years of the new millennium, economic slowdown coupled with rapidly rising health care costs may shift employers back to more restrictive HP models. With the threatened passage of a patient bill of rights that allows employees to sue employers and HPs, employers may embrace the concept of defined contribution. In this scenario employers set up a health care account in which they contribute a fixed amount of dollars to an employee's fund. The employee is responsible for using these funds to choose coverage from several benefit options or directly pay for services rendered from this fund. Thus, the employer is no longer directly responsible for purchasing health care coverage for employees.

Next, I will describe the basic products that are currently offered to employer groups. The descriptions will be generalizations because each HP has its own unique twist on the various product lines.

Most traditional products include a basic percentage of charge payment for inpatient admissions and outpatient diagnostic and therapeutic services. Fees are set by providers and paid as a percentage of charge by insurers. Most plans include an up-front deductible that must be met before the insurer pays a percentage of charges (usually 80–90%). The patient is balance billed the remaining 10–20% of charges. Preventive services and routine physicals may or may not be covered. No gatekeeper is required. Physicians are usually paid on a fee-for-service

basis. Members usually pay for physician office visits out of their pocket because of the yearly deductible. Hospitalization and surgical services may require precertification. Use of a defined provider and hospital network may result in less out-of-pocket expense to the member; however, the patient usually has access to a wide provider and hospital network. For example, a hospital may charge $4000 for an appendectomy. If the patient has a $1000 deductible and 80% coinsurance, he or she would pay the first $1000 plus $600 coinsurance (20% of the remaining $3000).

Preferred provider organization (PPO) products imply a defined discounted fee structure arrangement with a defined network of physicians and hospitals. Access may be limited or members may have a two-tiered payment structure in which they pay more out-of-pocket expenses to use an out-of-network provider or facility. Products typically have deductibles and coinsurance responsibilities (usually 10–20%). Gatekeepers may or may not be necessary for specialty referral. Preventive services and routine physicals usually are covered benefits. Gatekeeper and specialty physicians are paid at a discounted fee-for-service. Members usually pay a copayment for physician office visits or may pay out of pocket until the yearly deductible is met. Hospitalization may require precertification and concurrent review. Surgical services and diagnostic tests may require precertification or referral from a gatekeeper. For example, a PPO patient may be charged $4000 for an appendectomy, but a discounted rate of $2400 has been negotiated by the HP. If the patient has a $1000 deductible and 80% coinsurance, she would pay the first $1000 plus $280 coinsurance (20% of $1400). If the appendectomy occurred at a nonparticipating hospital, she would have to pay the same rates described under the traditional product.

HMO products typically use the gatekeeper model to direct referrals for specialty care. Preventive care, immunizations, and routine physicals are covered services with only minimal ($5–20) copayments to the primary care provider (PCP). Specialty care is obtained through a referral and members pay a minimal ($15–25) copayment for office visits and services if provided within a defined network. Members pay copayments for diagnostic tests, outpatient procedures, and emergency department visits. Hospitalizations are generally covered at 100% or may have a $200–500 copayment. Precertification or referrals may be required for diagnostic tests, surgical procedures, and hospitalization. Inpatient stays undergo concurrent review to determine payment level to the hospital. PCPs are usually paid under a mixed fee-for-service and capitation model, whereas specialists are paid at a discounted fee-for-service rate. An HMO patient undergoing an appendectomy may have no payment responsibility for the hospitalization or a minimal copayment ($200–500). Many HMOs have developed point-of-service (POS) products that allow a second tier of out-of-network benefits. The provision of such alternative products allows members greater access to hospitals and providers.

As mentioned earlier, hybrid products have blurred the line between restrictive HMO products and more flexible PPO or traditional products. Some products have taken a three-tiered benefit-level approach, as follows:

In-network PCP-referred HMO benefits
In-network but self-referred benefits
Out-of-network self-referred benefits similar to a traditional plan

Defined contribution plans discussed earlier allow the member to pick health benefits from a menu option in which the employer gives them a set amount of funds. Members can chose to buy richer benefits with fewer restrictions or have the option to bank the contribution for future health care needs as a type of medical savings account (MSA). These products are available but represent a tiny fraction of current market share.

Another concept not well understood by physicians is that of benefit "carve-outs." This is most commonly done in benefit areas such as mental health and pharmacy benefit management (PBM). Either the HP or the employer chooses to move the risk of funding these carve-outs to organizations that specialize in administering specific benefits. HPs may delegate utilization management, network contract management, credentialing, and quality management components to these specialized entities. Thus, a member may have an insurance plan that delegates pharmacy benefits or mental health benefits to these carve-out vendors. A recent trend is the carve-out of disease management programs to specific vendors.

Physicians need to understand that employer groups often choose not to fund certain health care benefits offered by an HP such as the following:

Infertility treatments
Durable medical equipment (DME)
Physical therapy
Birth-control pills
Antiobesity medications
Injectable medications
Cosmetic and bariatric surgery

Employers faced with paying increasingly higher premiums often opt to reduce premiums by cutting benefits. These benefits may be sold to employers as "riders" to a standard policy. If the employer does not pay for the rider, it is not a covered benefit. The argument of medical necessity in these situations is moot because employers have chosen to not cover the benefit, and members are responsible for payment.

New technologies, procedures, and drugs have rapidly entered the health care market over the past decade. The pipeline for new drugs and procedures is expected to be full in the next decade as well. Most HPs have technology assessment services that use an evidence-based medical literature approach to determine coverage of new technology. One criticism of the health insurance industry is the slow pace and

seemingly nonstandardized approach in approving payment for new technologies. HPs are looking for large (n > 1500) randomized controlled studies that demonstrate safety, efficacy, and superiority to current therapy with at least 18–24 months of follow-up. A series of 100 cases advocating a new procedure or new device with 6 months of follow-up just does not pass the rigor of most insurers' technology assessment units. Physicians must realize that Food and Drug Administration (FDA) approval of a device or drug does not always translate into proven long-term safety and efficacy when applied to a wide population. A recent study by Lasser found 3 percent of new drugs were withdrawn for safety reasons.

HPs will respond to employers' demands for health benefit designs. Employers' demands may change based on the state of the economy and their relationship with collective bargaining units. Consumers will demand more choice and involvement in benefit design. Both employers and HPs will closely watch any incremental changes in health policy legislation that mandate specific coverage or open the floodgate for liability litigation. All of these factors influence the structure of insurance benefits.

COST-CONTROL MECHANISMS

Employers contract with HPs to provide specific cost-control mechanisms such as precertification, referrals, benefit carve-outs, concurrent review, pharmacy formulary, and use of specific preferred provider networks. These mechanisms are perceived by providers as burdensome hassle factors that interfere with the practice of medicine. Believe it or not, there is logic behind these changes. Well-designed and implemented benefit plans remove many of the burdens, but employers must be willing to pay the price for increased utilization.

Precertification of inpatient and outpatient services allows an HP to ensure the following:

The member is currently insured
The procedure or service is covered by the plan
The service is provided at a participating facility

Referrals are a mechanism whereby PCPs act as gatekeepers to access specialty care. The referral process also is designed to encourage better coordination and communication between the PCP and specialists. Such assurances are important, particularly if patients are being seen and prescribed medications by multiple providers.

Benefit carve-outs, such as pharmacy, are common because many HPs do not have the expertise or network to administer this benefit. Employers or HPs may choose to use specialized PBM companies because PBMs can purchase drugs at high-volume discounts. Formulary management is an attempt to encourage the use of generic and formulary preferred drugs because the PBM has been able to negotiate a discount or a volume-related rebate. PBMs design specific formulary

tiered options that employers choose for their employees. Most plans have moved away from totally closed formularies. They offer two- and three-tiered plans in which members pay increasingly higher copayments or percentage of charges for generic, brand preferred, and brand nonformulary drugs. PBMs routinely use step therapy requirements and precertification to limit the use of expensive drugs when other more cost-effective and equally efficacious drugs are available. For providers, it is difficult to keep track of a multitude of HP or PBM formularies. Several software companies have developed products that use palmtop computers to link listings of various formularies and drug prescribing information. Software has also been developed to prescribe medications from palmtops using PBM-specific formularies that apply to the patient's benefit design.

Concurrent review is performed by HPs to ensure that members meet specific criteria for inpatient, rehabilitation, and skilled nursing services. This cost-control mechanism was developed in response to escalating inpatient costs and increased lengths of stay. HPs deny payment or drop levels of payment to facilities if members do not meet specific parameters such as InterQual Criteria or Milliman Care Guidelines. InterQual uses severity-of-illness criteria to determine the need for inpatient admission and intensity-of-service criteria to determine the level of payment for services rendered. Milliman Care Guidelines uses optimal recovery guidelines (ORGs) for specific clinical diagnostic groupings. Physicians should attempt to understand these review criteria and develop clinical pathways that enhance the quality and efficiency of inpatient care.

Recently, HPs began to realize that disease management and case management programs enhance the quality of care, increase patient understanding of specific diseases, and often reduce medical costs by coordinating timely care. These programs are usually designed to work in collaboration with physicians and are not perceived as a hassle by providers.

Providers need to understand the mechanisms that HPs devise to control costs. Physicians need to work with HPs to streamline these processes so both parties' administrative time and cost are minimized. Many HPs have developed electronic connectivity for referrals, precertification, formulary management, provider directories, eligibility verification, and claims payment. The physician of the future must be electronically linked.

UNDERSTANDING CONSTITUENT RELATIONSHIPS: EMPLOYER, BROKER, HEALTH PLAN, MEMBER, PROVIDER

Providers need to understand the bigger picture of the health delivery system. Believe it or not, there is more than the revered patient–physician relationship. Providers, patients, employers, brokers, and HPs all play important

roles in the health care system. Sometimes the interests of these constituents clash.

Members do not pay for most health care expenses; employer groups do. Members have come to feel entitled to unlimited health care benefits paid by someone else but not them. Unions use collective bargaining to advocate and enhance health care benefits for their members. Members often live by the moral hazard principle, to "use the benefit to the fullest extent as long as I don't have to pay for it." Employees often do not understand their health care benefits or the rules of the game. There are often competing interests between employer and employee. The former wants to contain health care costs, and the latter wants to maximize the use of benefits.

Because employer groups and government programs pay for most health care benefits, physicians need to understand the economic reality that payers want value for the dollars they spend. As health care premiums increase at a double-digit rate, employers view this as erosion of their profitability. In economic good times, employers are willing to purchase more expensive less restrictive HPs. During economic downturns, employers may turn to restrictive HPs or, more likely, ask employees to assume additional out-of-pocket expenses such as higher copayments and deductibles.

Employer size influences how health benefits are chosen. Small employer groups purchase benefits based primarily on price and HP service. They are very sensitive to price and may stop providing benefits when premiums rise too quickly. Larger employer groups and Medicare are interested in price, service, network size, and the measurement of health care quality. They rely on the National Committee for Quality Assurance (NCQA) accreditation and Health Plan Employer Data Information Set (HEDIS) as gauges for value, quality, and service. Regardless of company size, employers want healthy productive employees.

Large and medium-size employers (>500 employees) look to health insurance brokers and consultants for advice in purchasing benefits. These brokers typically receive 3–5% of the HP premium as payment for their consulting services. Brokers often design service contracts for HPs to administer a defined set of benefits. They advise employers about the pros and cons of assuming medical risk by self-insuring versus passing the risk onto the HP. Brokers also may sell small group business to HPs through business or professional associations.

Employers choose HPs to administer a defined set of benefits that may include or exclude specific riders. They expect HPs to have a set of policies and procedures that are followed in a consistent fashion. If employers pick a restrictive product, the HP is expected to administer the program with very few to no exceptions. For example, if an employer does not pick an infertility rider, the HP is accountable for not paying claims for that benefit if services are rendered. Employers also expect insurers to use various cost-control mechanisms

such as the following:

Precertification
Referrals
Concurrent review
Drug formularies
Coverage policies for new technologies

Employers also expect HPs to enhance quality and patient satisfaction by developing case and disease management programs, member education programs, and demand management programs. Large employers also may insist that certain hospitals and providers be part of the HP network.

Providers chose to participate with a HP based on potential patient volume covered by the HP, reimbursement methods and rates, ease of administration, and claims payment. By contracting with an HP, providers agree to follow the referral, precertification, and claims policies and procedures. Providers also agree to meet credentialing and quality-of-care requirements defined by the plan.

HPs have the challenging task of working as a medium between the competing interests of employers, members, and providers. Employers want to contain the costs of health care, members want to maximize their benefits, and providers expect reasonable payment for services rendered. The HP plays a role in balancing these competing interests. Employers pay for a defined set of benefits based on coverage policies set forth by the HP. Members are expected to know their rights and responsibilities as defined by the HP. Providers are expected to follow the administrative policies and procedures of the HP.

To help resolve differences between these competing interests, most HPs have mechanisms to resolve complaints and grievances from members, employers, and providers. Many states mandate that HMOs have external third-party review of grievances filed by members. Physicians and hospitals need to better understand and communicate with the business leadership within their communities. Better communication between constituents leads to collaboration instead of conflict.

INFRASTRUCTURE

As a physician I often wondered about the necessity of insurance companies. It seemed HPs had very little value to add to the health system. Like most physicians, I did not realize the extent of administrative infrastructure necessary for the implementation of health insurance. As previously discussed, health insurance has multiple constituents:

Members
Providers

Employers
HPs

HPs must develop systems to track the relationships and transactions between all of these constituents.

HPs and employers interact in many ways. Employers pick from a menu of various benefit selections for their employees. A legal certificate of coverage agreement is signed that defines the expectations of both parties. HPs must enroll thousands of employees with correct demographic data and send each member an identification card that verifies coverage. HPs must track membership by employer group as employees come and go, to bill and receive appropriate premium payments. HPs must employ actuaries that can assess health care risk for a given employer group so quotes can be delivered to employers and brokers in a timely fashion. Aggregate claims data and member service data are shared with employer groups. Payment of brokers for service rendered must be tracked. Specific service centers or customer service groups may be established to meet the needs of large employer accounts. When government is the payer for services, there is a large cost associated with compliance issues ranging from claims payment to marketing of member-related materials.

HPs and members interact constantly as benefits are administered. Because of the number and complexity of these interactions informatics systems are needed to track items such as the following:

Member eligibility
Use of benefits to determine when deductibles have been met
Benefits excluded by employer contract
Pharmacy benefits
Mental health benefits
Copayments for various services
Claims payment for services
Member inquiries about benefits and payment
Member grievances

For every interaction in which a member receives a covered health care service, the HP needs to track the interaction for payment purposes. The HP also must coordinate benefits if two or more insurance policies exist for the same individual, for example, workers compensation, motor vehicle accident, or employer-based health insurance.

HPs and providers interact as the latter care for patients in a host of inpatient and outpatient settings. Providers perform thousands of specific procedures on patients. HPs and providers establish contracts that define claims payment, credentialing, quality oversight, and grievance procedures. As new technology develops, HPs define which procedures are covered benefits and which new drugs

become part of the pharmacy benefit. Claims payment policies need to be defined and communicated to providers. Utilization review and precertification determinations need to be consistently administered and communicated to providers. HPs must have mechanisms to measure and share clinical quality and utilization results with providers.

Because of the complexity of all these interactions, insurers must have appropriate management, technical, informatics, and contractual systems in place to coordinate the policies they sell.

NATIONAL COMMITTEE FOR QUALITY ASSURANCE/HEALTH PLAN EMPLOYER DATA INFORMATION SET

Other chapters of this book discuss clinical quality in great detail. So I will only briefly discuss this extremely important topic. One of the benefits of managed care is the commitment by HPs, employer groups, and providers to measure and improve the quality of care rendered to populations. Under traditional indemnity programs, there was very little attempt to measure quality. Quality was always assumed, poorly defined, and difficult to measure.

Through the NCQA, HPs are challenged to measure quality as defined by predetermined criteria. These criteria are defined by the NCQA as HEDIS, which measures broad areas of clinical care such as the following:

Prenatal care
Postpartum care
Childhood and adolescent immunizations
Pap smear rates
Chlamydia screening
Mammography
Diabetic care
Hypertension treatment
Post–myocardial infarction treatment
Depression treatment

HPs are held accountable for not only measuring these clinical parameters, but also developing interventions that lead to improvement. The NCQA's highest ranking of an HP is the "excellent" accreditation based on quality improvement efforts, credentialing standards, utilization standards, member rights and responsibilities, and member satisfaction. HPs collect the HEDIS clinical data yearly. These data are shared publicly by participating HPs. Large employer groups use the comparative data to help select which HP to offer to employees.

HPs share clinical care results based on chart audits and administrative claims data with physicians. Many HPs have developed sophisticated informatics systems to collect and share quality improvement data with physicians. Physicians can review specific patient information to ensure appropriate care has been rendered. Over the past 5 years, there has been marked improvement in clinical care as measured by HEDIS results. HEDIS has provided physicians with a defined set of quality parameters to be measured on a consistent basis. It has provided employers a tool to measure the value of health care they are purchasing. Although not perfect, HEDIS is a much better way of measuring quality than simply assuming high quality without measurement or accountability.

FUTURE DIRECTIONS

In the future, concepts such as defined contribution and MSAs may move from pilot projects to broader application. These products may give consumers of health care more freedom to select their own benefits based on their needs instead of employers and broker consultants making the decisions. Perhaps medical inflation will be reduced if consumers must pay for more services from their own pocket or from a defined MSA. Two drawbacks to these concepts exist:

1. Members may be unwilling to receive preventive services if they have to pay for them
2. It may be difficult to underwrite policies for the severely ill

Because healthy people choose cheaper policies, there is less premium dollar margin to cover the sicker patients. Thus, sicker patients must pay very high and, often, unaffordable premiums.

In the future, all constituents must work together in a more collaborative way to ensure that a broader population base has access to medical care. (The number of uninsured in 2000 rose to more than 38 million Americans, and it is estimated that 2 million lost benefits during the economic downturn of 2001.) HPs need to reduce some of the hassle factors that chew up physician office administrative costs. On the other hand, providers need to be judicious in appropriate use of medical services. Hopefully, better use of information technology will reduce redundant testing, improve physician–physician communication, prevent medication and other medical errors, and reduce administrative paperwork.

One example of collaboration is the Leapfrog Group (*www.leapfroggroup.org*) made up of more than 100 private and public organizations that have banded together to advocate better clinical quality, customer service, and access to affordable health benefits. The Leapfrog Group is a collaborative effort among employers, HPs, and hospital systems. Leapfrog advocates that HPs pay more for better

quality inpatient care as demonstrated by hospitals that have the following:

Computerized physician order entry
Intensive care unit staffing by physicians trained in critical care
Evidence-based centers of excellence that perform complicated high volume procedures

CONCLUSION

After completing this section, the reader should have a better understanding of HPs. Although physicians may not always agree with the actions of insurers, it is important to understand the rationale behind the activity. The reader should have a richer understanding of the historical context of how health insurance evolved. The concepts of risk bearing and moral hazard are key to understanding the big picture insurance plays in the health delivery system. Health benefit structures are broadly defined so the physician can more clearly see the differences between traditional, PPO, and HMO products. Riders and carve-outs are defined so providers understand why certain benefits are denied by the HP or administered by another entity. Cost-control mechanisms used by HPs are described so the physician has a better insight into "hassle factors." By understanding the constituents involved in health care delivery, physicians should realize that employers pay for the bulk of health care and HPs administer the benefits defined by the employer. Because of the complex interaction between employers, members, providers, and HPs, sophisticated infrastructure and management is needed to administer health insurance. Clinical quality is discussed in the context of HP accreditation through NCQA using HEDIS parameters.

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National Committee for Quality Assurance: www.ncqa.org

RBRVS Information Site: www.rbrvs.com

CHAPTER 13

Implementing Cost Control in Health Care[1]

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In this chapter, we offer a systems approach to assist health care organizations in their cost-containment efforts. A general model of the organization that specifies the various components of this approach is offered. Each system—technology, structure, psychosocial, managerial, and cultural—is linked to illustrative selected actions designed to improve cost performance. In our view, the key to successful interventions to contain costs lies in careful consideration of both the direct and the interactive impact on all systems of the health care organization. A case example of an academic medical center's (AMC) effort to curtail costs illustrates both the model and the sample actions.

[1]From Ziegenfuss, J.T. and Bentley, J.M. (2000), "Implementing Cost Control in Health Care: Strategies Driven by an Organizational Systems Approach," *Systemic Practice and Action Research*, 13, No. 4, 453–474. Used with permission.

Managers of health organizations have been confronted by two classes of problems:

1. Inadequate understanding and definition of the cost containment problem
2. Lack of management experience and skills that are needed to affect the many facets of health organizations contributing to the cost containment problem

Evidence of inadequate definition of cost problems can be seen in the statements of hospital administrators and physicians who have indicated that competition or prospective reimbursement will single-handedly lead to a decrease in costs.

Even though cost containment has been the primary health policy goal since the early 1970s and 1980s (Herzlinger, 1978, 1985; Levine, 1983; Egdahl, 1984; Larson, 1984; Aaron and Schwartz, 1985; Himmelstein and Woolhandler, 1986), many of the policy steps designed to reach this goal—steps such as deregulation, encouraging the organization of health maintenance organizations (HMOs) (Phelan 1985; Flood, 1998), and prospective reimbursement schemes (Ziegenfuss, 1985)—have had only minimal constraining effects on health care organizations and, particularly, hospitals. Health finance experts have long questioned the ability of health care organizations to plan for and institute the changes that could control expenses and improve performance (Hadley, 1984; Herzlinger, 1989; Cleverly, 1999).

In this chapter, we use five organizational systems to organize the attack on cost-containment problems faced by health care administrators. An overall description of this model is presented, and with each system, we suggest illustrative actions managers might take to impact that part of the organization. This set of strategies targets the cost struggles managers have faced and continue to face.

This problem is demonstrated by decisions to reduce staff or institute budget cuts across all departments with no apparent attempt to create a package of cost *control* cuts that has a minimal negative impact. Seemingly, managers automatically define the problems brought on by market contraction in a context that forces them to cut the direct costs of employed resources. We believe that more often than not these steps will miss the factors and systems within the organization that are driving the upward pressure on costs. Although a temporary saving may occur, the ability of an organization to respond and survive over the long run will suffer from this type of one-dimensional, cost-containment strategy.

Even when the cost-containment challenge is broadly defined, and we believe more appropriately "defined," a second set of problems exists, as follows: the lack of organizational skills and management experience required to restructure and redirect health delivery systems. To make these changes, health care managers must coordinate the needs and decisions of a diverse client population while balancing a mission that is constantly pulled between public needs and private wants. This is a formidable challenge. U.S. for-profit manufacturing firms who pursue the singular goal of profits and highly engineered systems for creating customer value are having trouble improving value per dollar of costs. This fact

suggests that health organizations, often driven by public and private goals and organized around interactive systems for creating patient value, face a more challenging task.

To improve cost control within their organizations, we believe health care managers should adopt a broader, systems-based approach. Systems thinking and an organizational model can help define the cost-containment problem more broadly and, subsequently, can help design and manage specific cost-containment strategies.

Currently, AMCs are facing significant pressures to adapt in what is increasingly defined as a "hostile organizational environment." In response, various leaders and analysts have undertaken strategic planning (Weitekamp, Thorndyke, and Evarts, 1996). Some centers have sought partnerships with industry (Nash and Veloski, 1998). Other health centers have undertaken major transformation of their organizational structures and processes (Ziegenfuss, Munzenrider, and Lartin-Drake, 1998; Woodward, Fottler, and Kilpatrick, 1999). Their challenge is not just to prosper, but to survive (Topping *et al.*, 1999).

The following case is used to illustrate the resource conservation actions taken by one AMC. Here, the practice changes are linked to our systems model.

CASE OF THE ACADEMIC MEDICAL CENTER–HEALTH PLAN MERGER

To illustrate the many dimensions of our approach to cost containment, we will use the actions of two organizations, an AMC and a health plan, both in the United States. The AMC (AMC-U.S.) faced severe environmental distress with the advent of the Balanced Budget Act of 1997, which in the United States significantly reduced reimbursement for medical school teaching and simultaneously undercut the resources available for research and patient care. AMCs across the country desperately sought remedies.

In our case, the response was to engineer a merger with a health insurance plan. The merger was unique in that it included a nonprofit insurance organization, a large group practice, and a school of medicine. The 200,000-plus member health plan was a rural HMO and was to be tied to the university school of medicine for financial support, to generate greater efficiency and effectiveness, and to expand research. The structural change was to create a synergy to foster both cost containment and new knowledge of care and delivery systems. The 1000-plus physicians would operate in various cities in one state. The consolidation was to save tens of millions of dollars. After 3 years, the merger was reversed. Reasons cited included a clash of cultures and failure to meet financial targets.

THE SYSTEMS MODEL

In one systems model, Kast and Rosenzweig (1985) identify five dimensions or subsystems that they suggest are present in all organizations:

Cultural
Technical
Structural
Psychosocial
Managerial

Because health care firms are complex, we believe a systems-oriented approach to managing cost-containment change is important. Put differently, to manage successful cost-containment programs, health administrators must coordinate both the direct impact on various systems and the reactions to change throughout the organization. The Kast and Rosenzweig model provides a workable filum for targeting and monitoring these effects.

The Kast and Rosenzweig organizational model capably represents the systems-thinking approach described in the organization theory and behavior literature. Given the analytical task we face in this chapter, the way that Kast and Rosenzweig define an organization is particularly helpful. It has been adapted to examine a number of areas:

Health care reimbursement system changes (Ziegenfuss, 1985)
Medical malpractice (Ziegenfuss and Perlman, 1989)
Policy impact analysis and teaching (Ziegenfuss, 1992)
Research in family medicine (Jacques, Bauer, and Ziegenfuss, 1993)
Problem solving (Ziegenfuss, 2002)

In many cost analyses, firms are bounded by the legal or economic obligations of a unit, focusing on costs in this light (Jacobson, 1999). For our purposes, this is too narrow. In contrast, we can identify organizations by the systems and subsystems that define their social and technical components. This feature enables us to view seemingly different roles. The hospital manager thinking in terms of his or her firm's survival and the government analyst thinking in terms of social goals can use the same model.

The scope at which organizational environments are scanned, decisions are made, and programs are implemented varies widely across health care organizations. However, when we define organizations by subsystems, similar analyses can be run on otherwise highly different organizations. This feature is particularly helpful when problems are multidimensional and need to be approached on a number of levels. We believe health care cost containment is this type of problem.

Within every organization, Kast and Rosenzweig identify and analyze areas of structure and process within the five subsystems already mentioned (i.e., cultural

subsystem, technical subsystem, structural subsystem, psychosocial subsystem, and managerial subsystem). This model is one way of viewing the subject of cost-containment efforts. The cultural, technical, structural, psychosocial, and managerial subsystems are shown as the primary parts. The organization is an open, sociotechnical system that considers all the primary subsystems and their interactions with regard to any issue, such as cost containment. The managerial subsystem's role is to coordinate and guide the cooperative opportunities and perhaps conflicting impulses that often exist between the other four subsystems.

This contingency model of organization is not without criticism. Commentators and we would offer the following concerns:

- There is incomplete knowledge of the subsystems so they are somewhat black-box–like, and consequently, there is little work on the construct validity
- The model fosters system-by-system attention with limited focus on the interactive effects
- The model is static in orientation, the structural perspective undercutting our knowledge that social systems are dynamic
- The intuitive clarity of the model may simultaneously help demonstrate the complexity and undercut our recognition of how complex organizations are
- The separation of the systems necessary for the presentation is an artificial construction that blocks the holistic nature of organizations
- Subsystem variables are not yet specific and quantifiable, that is, the metrics as yet partially developed cannot take us beyond the qualitative judgment

Despite these concerns, we believe that the model helps promote a systems perspective of the cost-containment problem, and that it has the potential to sensitize management and policy leaders to the multidimensional aspects of resource stewardship.

Although specific cost-reduction programs tend to focus on a single subsystem, the ultimate impact on health care costs will depend on the effects and reactions that occur in all five subsystems. Successful cost-containment initiatives are ones that consider direct and indirect effects across all subsystems. In the following sections, we describe the systems targets and offer a variety of illustrative actions to contain costs.

Technology

The *technical* subsystem consists primarily of the knowledge organizations need to perform designated tasks, including the techniques used in the transformation of inputs to outputs. The technical system is determined by the task requirements

of the organization. An illustration of how task requirements drive technical systems compares counseling a college freshman with caring for a patient. Both tasks involve a professional client–patient interaction, and in both situations, information is a key input. Each freshman, like each patient, is different. Guiding a student through a well-defined set of options presents a unique set of tasks. For one, the clear and overriding goal is to graduate within 4 years. Intermediate goals are meeting basic course requirements and selecting a major. The technology needed (and the attendant costs) is informational and includes formal graduation requirements and a transcript that allows one to monitor progress.

In contrast, the technology used to treat a new patient is driven by uncertainty. As in the student case, the tasks are informational, comparing patient status with probable outcomes. Both sets of tasks can be routinized and managed. However, in patient treatment, the process is driven from the start by the doctor's obligation and the patient's need to be treated for the worst-case possibility. In fact, this possibility can almost never be determined with certainty. Thus, in the interaction between provider and patient, the doctor's task is to gather information, make inferences, and recommend treatment that often balances risks and benefits in a threatening situation. Though similar, these two sets of tasks lead to technologies that are different in terms of their timing, their approach to risks and expected outcomes, and what constitutes a favorable result at what costs.

In any organization, the technical subsystem is a structured set of special skills, knowledge, and experience associated with the tasks involved, the types of machinery and equipment used, and the location and layout of the facilities. Clearly, there is tremendous variation in technologies used and the ways they are organized and controlled across organizations. In general, firms that offer health care perform tasks that require both high-tech and high-touch technologies. These are, usually, more interactive and thus less programmable and engineered than nonhealth organizations. Implementing cost containment in a health care organization faces a unique set of technical barriers, and we have not fully demonstrated success with such popular strategies as clinical practice guidelines (Merritt, Gold, and Holland, 1989).

Health care analysts typically define cost-containment problems in technical terms. Thus, they tend to recommend one of two approaches to the problem:

1. Programs that encourage physicians to order more cost-effective therapies
2. Programs that promote research and development of more cost-effective therapies

However, by focusing solely on programs designed to increase the cost-effectiveness of already-proven therapies, they fail to address technology issues especially important to physicians, such as new technologies that offer treatments where previously there were no effective treatments, and those that improve outcome compared to current therapies.

The discovery of new therapies, together with better knowledge concerning how these therapies can best be used, is one key to cost containment. However, the results are uncertain. Some new therapies may be helpful in previously untreatable cases but add dramatically to patient cost. For these reasons, programs to encourage improvements often lead to conflict between physicians interested in improving treatment outcomes and policymakers and/or administrators whose primary concerns are cost containment. The conflict sometimes surfaces as ethical uncertainty (Vogel, Manecke, and Poppers, 1999), sometimes as psychosocial distress illustrating the interactive effects.

There are a few cases in which new therapies reduce the resources required to deliver a successful treatment. Recently, the costs of removing cataracts have declined dramatically following the introduction of new technology. In other cases, new diagnostic therapies such as magnetic resonance imaging have improved a clinical medical service. Whether the improvement in treatment outcome is justified by the dramatic increase in cost for the treatment or service is an issue about which physicians and analysts often disagree.

In an ideal state, health organizations are constantly reviewing and redesigning their technical subsystems. These reviews focus on services doctors value and that patients or their insurance companies will pay for they try to keep the costs of these services below expected reimbursement. In the ideal state, an alert competitive organization constantly searches its links, with patients, suppliers, government agencies, and corporations looking to increase the value-provided-per-dollar-spent ratio it offers to patients. Realistically, this looking-for-improvement mode often leads to conflict between managers and administrators responsible for the unit's financial viability and the professional staff, physicians, and nurses, who have direct control over treatment decisions and responsibility for individual patients. Administrators redesign to promote efficiency while physicians push adoption of new technology to improve patient outcomes and ease job demands. These actions rely on interactive systems that, for example, psychologically and culturally promote the continuous improvement of service and quality.

We believe that actions that resolve this conflict in a way that at least encourages staff physicians and clinical teams to conserve organization resources can have a significant impact on cost containment. The following illustrate technical actions that can produce this type of result:

Action 1: Chart the flow of services the health unit provides to patients with similar diagnoses or needs, searching for cost-conservation strategies. Most likely the services rendered during each hospital stay or disease episode, are provided by one or more of the firm's service units. Major service units that offer treatment directly to patients should make a flowchart of specific steps involved in caring for patients with given needs. For adjunct service units that support units that deliver patient care, the team must identify and make a flowchart of the steps required to

deliver an essential element to the process of patient care. For example, special experience or licensing requirements may be necessary to treat patients with heart disease. The personnel department—an adjunct service unit—needs to make a flowchart of specific steps required to hire qualified personnel. Porter (1985) called these flowcharts "value chains" because they model the systems used by the health firm to create health benefits for patients. When employees know the process by which benefits are produced, they are better able to evaluate and make improvements to the process. Having these value chains means that administrators can compare the techniques and procedures their units use with those employed by similar organizations. These comparisons are an incentive to managers and employees to compute the basis of cost and the quality of services (structural and managerial system linkages).

Action 2: Charge a committee with responsibility for setting decision guidelines regarding investment in new medical technology. This group should include nurses, physicians, and administrators and is not a finance committee. Its main concern should be the clinical impact of possible investments in new technologies. In establishing guidelines for judging the clinical value of new technology, the committee should ask how patient outcomes would change compared to currently used therapy. If the newer technology proves more effective, but the cost of additional staff and equipment required to run and maintain the technology is prohibitive, this committee should recommend a search for other health firms to share the use and cost of the superior technology; but the value commitment to state-of-the-art technology can be honored.

Action 3: Approach the companies that sell products and/or provide services to the health unit requesting they suggest ways the hospital could use their product or service more effectively. Such requests encourage suppliers to "seal the deal" by enhancing their clients' ability to use every resource more cost-effectively. Health care managers may discover minor changes in the way they order, store, or use services that greatly increase the value gained for the dollar spent for supplies. A firm that knows its own value chains well (action 1) is in a better position to profit from supplier suggestions. This action is less likely to conflict with the needs of patients or staff physicians and, when successful, results in pure cost savings. Other examples of technical cost-containment interventions already employed include outpatient surgery practice guidelines, preadmission testing, and second opinions.

Although central to successful cost containment, there is a downside associated with too much focus on the technical system. Clinical and administrative leaders lean toward technical strategies to contain costs, and thus, discount strategies that operate primarily through the other subsystems—structure, psychosocial, and managerial.

Subsystem Interactions

The degree to which technology actions succeed will depend on how these actions interact with other systems, particularly the structural and psychosocial systems. The need for highly structured top-down authority to safely and effectively deliver high-tech health care is obvious. Actions that are insensitive to this structural tenet will likely face informal structural resistance. At the same time, it is important that physicians, nurses, and administrative staff offer high-tech care in a high-touch environment. To achieve this goal, technology actions designed to contain the cost of treatment must allow caregivers to develop close, supporting relationships with patients.

Technology: Academic Medical Center–U.S. Case

Let us return to our case. The merged medical school and health plan directed their cost-containment efforts toward the core technical work of the combined enterprise, medical care. The health plan had some considerable experience with the use of clinical pathways and disease management and felt that the transference of these tools to the medical school would aid the cost-containment effort. However, medical school faculty also had experience and were somewhat skeptical about cost-control panaceas (as faculty are naturally oriented). The result was an uneven introduction of the consolidated efforts, with some gains, but not nearly the short-term impact hoped for, partly because of resistance (psychological system) and partly because of the longer gestation period for this type of action.

Structural Subsystems

The *structural* subsystem reflects how the tasks performed by the organization are divided (differentiation) and coordinated (integration). In the formal sense, the structural subsystems are set forth by organization charts, position and job descriptions, and rules and procedures, and they involve patterns of authority, communication, and workflow. The organization's structure is the basis for establishing formal relationships between the technical demands and the psychosocial needs of the people in the organization. However, this linkage is not the exclusive domain of formal structures. In fact, technical and psychosocial subsystems are often linked by informal interactions and relationships that bypass the formal organizational structure. This is particularly true for health care organizations in which employees, such as nurses, are directed by staff physicians who are not paid by the hospital. In this situation, a hospital may have little control over the use of technology that directly affects its ability to complete its mission. Instead,

authority and control rests in an informal structure that links physicians. This type of structure is common within most health care organizations and presents special problems for hospital managers attempting to implement cost-containment programs.

The structure of controls and incentives within health care is a part of the cost-containment problem. The methods used to pay physicians and hospitals can be used to protect or increase their income. To encourage more conservative use of health resources, the structure of the Medicare reimbursement system was revised. As in the now well-known example, the way in which the reimbursement system was structured—that services would be paid for no matter the cost—tended to increase revenue-producing actions on the part of health care managers and service providers. In short, the more you did, the more you were paid. The establishment of a reimbursement structure that places a ceiling on reimbursement for certain procedures has the effect of modifying organizational incentives and encouraging new methods of internal control (structure). This structural intervention was designed to establish a system more consistent with cost-containment objectives.

Other *internal* structural actions to contain costs are illustrated:

Action 1: Take steps that encourage and enable employees to recognize the value of fellow employees and contribute to patients rather than the role they occupy in the organization. This can be done by having employees rewrite their job descriptions, specifying how their own effort or the way they organize their work (structural changes) could contribute to the productivity and cost conservation of fellow employees. Illustrations of this type of improvement relate to the organization of data collection, storage, and transfer. They are both structural reviews and a reintroduction to the holistic nature of the organization. For example, at a hospital admissions interview, a clerk records information indicating how the patient's family plans to provide support. At a later date, this information becomes critical in scheduling a home health care nurse assigned to the case. As a second case, a clinic janitor decides to keep a log documenting problem areas, or perhaps, rates at which expendable materials are used. At budget time, access to this information enables the maintenance supervisor to make more accurate expenditure estimates, which may reduce direct costs of care and the costs of budgeting.

Action 2: Establish a process that involves employees at all levels of the organization in unit budgeting. One way workers below the manager or supervisor levels can contribute to budgets is by collecting and transferring accurate information regarding the time and commitment required to complete their assigned routine tasks. An example would be to ask each employee to document the time required to complete the main task their jobs require. Information from all employees would be collated, and the data used to produce more accurate budget

projections and to propose structural changes in the way work is organized. Such a program would be especially helpful for a firm engaged in rapid development where administrators have little information as a basis for budget assumptions. Requesting workers to collect and transfer accurate, job-related data to improve budgets presumes a level of trust between workers and managers that does not exist in many organizations. This is a valid concern; however, we believe that developing trust opens up communication in the informal structure, which produces results through information flow. These cultural and psychological effects are driven by the structural intervention and should be recognized.

Three other structural interventions would include the following:

1. Centralized information systems that link clinical and financial data
2. Vertical integration of services from primary care to long-term care
3. Focused attention on limited suppliers

These formal structure changes lead naturally to the informal behavioral aspects of the cost-containment problem, but we should first return to our case.

Subsystem Interactions

Structural actions are likely to interact more with management and psychosocial systems. To succeed, managers must integrate work ethics and productivity goals from each of the key systems in an organization. Thus, actions that change the duties and the communication between workers who have different roles in the organization can make management's task more difficult. These same structural actions will make workers less confident in their jobs and question the new directions that the firm may be taking. For these reasons, firms designing structural actions to contain cost should stress open communication and allow workers to participate in designing these actions.

Structure: Academic Medical Center—U.S. Case

Each of these formal, structural actions could lead naturally to the informal behavioral changes that make cost containment successful. However, in the merger between the AMC and the health plan, structural systems within the two organizations tended to discourage employees in the AMC from trusting the cost-containment actions implemented by the health plans. This lack of trust was, no doubt, shaped by the roles of the two merged organizations. Whereas the AMC's role dealt with medical care, education, and research, the health plan's role dealt mainly with the private and government agencies that paid for the care delivered by the AMC. Conflict surfaced when the merged organizations tried to integrate expenditure budgeting in the new entity. It centered on questions related to information at the managerial levels. Each organization was structured to define,

collect, and use a different concept of cost. The AMC focused on overall costs of running the departments and the whole of its operations. In contrast, the health plan, even though it dealt with these same costs, focused on these costs as the key element in premiums it charged purchasers for health insurance coverage provided. Although the cost of delivering medical care was essential to the financial solvency of both the components, their structures made expenditure budgeting difficult and ultimately unsuccessful.

Psychosocial System

Organizations have *psychosocial* subsystems composed of interactions between individuals and groups, and including motivation, status and role relationships, group dynamics, and influence systems. These are the social mechanisms through which the sentiments, values, attitudes, expectations, and aspirations of people are played out in organizational life. The psychosocial subsystem is shaped by external environmental forces and by the tasks, technology, and structure establishing the organizational climate within which the human participants perform their roles and activities.

The character of psychosocial systems differs among health care organizations such as hospitals, which share similar goals and identical technology. In addition, the climate within a single organization varies across departments or divisions. Thus, variations reflect the extent to which the psychosocial climate is created and supported by managers.

In recent years, health analysts at the policy level and health professionals at the clinical level have increasingly identified the expectations and beliefs of individual consumers and employees as a major factor contributing to the cost-containment problem.

For example, the lifestyle choices Americans make—choices regarding smoking, use of guns, and nutrition—are major contributors to the 14% cost of the U.S. gross national income for medical care. Physicians have noted an attitude among patients they serve: Doctors, hospitals and nurses are to be responsible for citizen health status. One mentally subcontracts his or her own health care to the providers in the system. Such choices, including those of health system employees, are made in spite of substantial evidence indicating that a person's lifestyle is the major factor determining health status. Personal neglect produces long-term health costs. Thus, as one strategy for controlling costs over the long term, we need to address individual lifestyle questions, the important attitude and behavior change aspects of the cost-containment challenge.

To an extent, the lifestyle excesses that appeared in decades past reflected Americans' faith in the ability of science to undo all health problems created by individual behaviors. This attitude was encouraged by the increased insurance

coverage of health benefits provided by physicians, hospitals, and other health care organizations. Decreasing out-of-pocket costs of medical care made it easier for patients to subcontract their health status to health providers. Such choices were made despite substantial evidence indicating that lifestyle is a major factor determining health status.

Employer-provided coverage of physician and hospital bills—coverage that required no copayment or deductible—broke the important conservation link between patient and payment (a psychological breach). Health care consumers were, to a high degree, dropped completely out of the payment loop. As in any other system, when you do not have to pay, you think what you are getting is free, eliminating a personal concern for cost. Providers psychologically encouraged the attitude that patients willingly accepted, and insurance companies willingly paid for care.

Within the psychosocial area, we suggest the following actions to attack cost containment in this system of the organization.

Action 1: Promote an attitude of health promotion and self-help among providers and patients. Hospitals should sponsor disease prevention and self-help programs in the community and in their organizations. A public health program designed to reduce the incidence of heart disease in a covered population is an example. These kinds of programs strive to increase motivation, improve patient knowledge of the disease process, and modify behaviors leading to lifestyle changes that reduce the risk of heart attacks. Similar programs that help obese employees lose weight and smokers to quit are practical. In most circumstances, these programs pay for themselves and encourage self-help on the part of patients and the people who support them. Another strategy is for hospitals to sponsor patient support networks in cases in which care is provided primarily by family. For example, treating chronically ill patients with Alzheimer disease in hospitals or skilled nursing facilities is very expensive and often unnecessary. At the same time, the burden on families who must manage this care is severe and perhaps impossible. However, if families in similar circumstances can network, it may become possible to provide more personal and low-tech care patients value. Hospitals can play a key role in ensuring the success of these networks. By providing needed medical expertise and administrative support, the hospital can ensure the authenticity and continuity that are so important to the networks. Each of the aforementioned strategies uses the leverage of hospitals to "demedicalize" the search for better health while they help control the rising costs of medical care by keying to the psychosocial side of the care transaction.

Action 2: Recognize that a variety of behavior patterns can contribute to cost containment within an organization. Some individuals may stress attention to detail in an established clinical process. Others are particularly resourceful at identifying changes in product design that enhance value to the patient or to the nurse or to the physician treating the patient. Still others may be best at

discovering more human and/or cost-effective methods for scheduling staff or labeling inventory in ways that significantly affect the hospital's ability to reduce cost and create value. Using Tolstoy's analogy, we all tend to be either hedgehogs or foxes looking for slow steady progress in cost containment or slick flashy major gains. Both personalities can contribute to cost containment. Managers need to recognize these differences and motivate people to use their unique behavioral characteristics to identify opportunities for cost control.

Action 3: Identify employees whose daily activities or tasks are closely connected around providing treatment to patients in a disease class, and use these groups to set goals to improve patient outcomes and/or to reduce waste. As part of this process, encourage the linked staff to recognize patient attitudes and expectations as a major factor in determining treatment outcomes and costs. Recognizing the importance of this psychosocial domain, staff should focus on methods that are useful in changing beliefs or expectations that might inhibit improvement. This type of initiative is especially appropriate for managing chronic illnesses in special populations such as the elderly, disabled, or addicted. Such initiatives are more effective when the health unit has developed value chains for its major service areas. The goal is to ensure that groups of staff feel responsible for the design and operation of the care they deliver including the cost-effectiveness of treatment, and that they attend to both technical clinical issues and psychological needs. Other psychosocial strategies include the following:

Patient and employee education
Volunteer networks

These examples illustrate the need to increase consumers' and providers' concerns for health care costs at the psychological level of the organization. Management must take the lead, stretching cost-containment strategies in this sometimes overlooked domain.

Subsystem Interactive Effects

Each cost-containment action will have interactive effects in other subsystems of the organization. For example, to engage chronically ill patients psychologically in their treatment, we would recommend that they pay attention to their options in making therapy decisions and to information about their disease. They would be encouraged to use the Internet and other sources. Such actions will make them more informed consumers of doctor-prescribed treatment options (the technical course of treatment). On the other hand, this psychosocial shift will lead them to question cost-containment initiatives such as the use of generic drugs or the restrictions in pharmaceutical choices. Physicians unaccustomed to full patient participation may resist. Leaders will need to affirm that the culture values patient

assertiveness, choice, and open availability of information, recognizing that the technical changes to conserve resources have repercussions in the psychology and cultural systems.

Psychosocial: Academic Medical Center—U.S. Case

Recognizing that there were both technical and managerial needs for cost reduction (to protect education and research and to meet budgetary levels), leaders of the merged organizations initiated cost-containment plans. Expecting resistance from faculty and staff, the medical school leaders used participative task forces to empower staff to identify and enact cost-reduction strategies. At the medical school, the effort produced direct and indirect savings of more than $27 million over several years. Unfortunately, the psychological pressure to cut costs resulted in some unexpected distortion. During the closing of a leg wound, a surgeon asked for additional sutures. The attending nurse replied that there were none. Astonished, the surgeon asked why. The nurse replied that to meet cost-containment goals, they were not to be reordered and stocked until the end of the month. Sutures were quickly found, but the point was made about the misunderstanding.

Management System

The *management* system includes a range of activities that start with the tasks of trustees or elected officials in a public agency and end with the work of online supervisors who oversee daily operations. Because it bears ultimate responsibility for a firm's or agency's performance and survival, management's scope spans all of the subsystems previously discussed. The management subsystem relates the organization to its environment. It sets and implements strategy, controls daily operations, evaluates outcomes, and makes necessary adjustments. In doing so, managers set goals and objectives, select and organize work, and establish performance standards.

Clearly, managerial subsystems vary as to how they approach these roles. These variations reflect a number of both external and internal factors. However, for an analyst interested in the cost performance of health delivery, the style of a management system is probably the most telling characteristic. Trustees, presidents, and supervisors can take an autocratic, top-down approach to management, or in contrast, a participatory, build-from-the-bottom-up style. Which of these styles works best is not predictable because all organizations are unique.

Changing the managerial subsystem presents an array of challenges driven by external influences on health care organizations and by internal dynamics. Perhaps the first and most important is the environment within which health

policy analysts, providers, and managers currently operate. Strong social and moral beliefs about health and public access to medical services have created a politically charged landscape. Health care looks like a social black hole, gobbling up increasing portions of our societal resources making it harder for companies to compete in the world market. The expectations and promises are great while the resource base is squeezed tighter and tighter. In our judgment, the system will not tolerate large amounts of dollars for improving health care management. Instead, improvements will have to come using current or even smaller amounts of resources. This reality is the primary factor behind the suggested actions in the managerial subsystem.

Managers face a whole system of generic problems including planning, organizing, developing, leading, and controlling relative to costs:

- Can management develop *planning* programs that control acquisition of new medical technologies, or will indiscriminate purchasing of new technologies continue?
- Will health managers be able to *reorganize* and assist their organizations to perform more efficiently as a health care business?
- How will management *develop* future managers and employee groups who understand the need to contain health care costs and have the skills to do so?
- How will management both *direct* and *lead* the organization toward cost-containment behaviors that are consistent with the socially and politically charged health care environment?
- What kinds of *control* mechanisms can management develop to monitor health care expenditures of their organization?

Turning to the managerial role in cost containment, we suggest the following illustrative actions:

Action 1: To manage an effective cost-containment program, one should increase the scope and quality of information available to the professionals making the decisions that drive the health delivery system. Government and medical researchers have a role to play in setting priorities and generating the treatment cost and effectiveness data that administrators and clinicians need to make better decisions, a point long know but not practiced (Stein, 1984). In turn, administrators at the micro level, must establish the reliability and relevance of treatment data and make it available at an appropriate time and place to professionals. Building on a broader information base, managers need to establish models that document the procedures that create value for patients. With more information and a model that illustrates how value is created, managers can then focus on the organization's mission and help each employee link his or her contribution to success in achieving this mission. The psychological acceptance of the data and its use illustrates the intersystem effects.

Action 2: Create a cost and quality council. Although many organizations have committees working on quality and separately on costs, few organizations have integrated the two initiatives. Cost and quality are not separate and must be worked on by joint committees. Other illustrations of managerial system interventions include integration in a managed care system, product-line management (with cost requirements defined), gain sharing related to cost reductions, and cost innovation idea programs.

Subsystem Interactions

Management actions taken to contain cost will interact with all key systems. Suppose management adopts a more open style to accommodate structural changes that call for health care providers to value information as a resource to health care organizations. Or, on a similar theme but a different approach, management hires a new director of information systems emphasizing his or her role in a new program to manage the costs of care more directly. This step would have direct ramifications for the psychosocial system of the firm, which could concern workers not sure they have the requisite skills to function in an information-oriented firm. Finally, a management action requiring nurses and physicians to consider treatment outcomes information in treatment decisions would challenge the high-touch, patient-oriented culture that exists in most health care firms. Because the implications for these kinds of management actions reverberate throughout health care firms, they deserve thoughtful consideration and resources to accommodate the changing environment in health care.

Management: Academic Medical Center—U.S. Case

A chief reason for the merger between the AMC and the health plan was to consolidate assets and, as a team, become more competitive in markets for managed care contracts. This strategy meant doing a better job of containing the growth in costs of care delivered by the AMC. The health plan took the lead in this effort by expanding covered lives and budgeting dollars to the AMC, which managed the care delivered to these enrollees. For this strategy to succeed, the health plan had to offer competitive premiums to prospective purchasers. The AMC needed to initiate programs designed to manage the costs of treating enrolled patients more effectively. However, these steps proved difficult because of differences in management styles and in cost-control systems employed by the two entities. Whereas management at the health plan was hierarchal, management at the AMC focused on academic departments and physicians managed the care of individual patients. As a result, when management at the health plan moved quickly to contain the costs of care as a first step toward offering more competitive

premiums, AMC management faced a greater challenge in efforts to change the organization and delivery of medical care.

Conflict also surfaced because the separate organizations employed very different cost-control systems. Whereas the health plan used a version of activity-based pricing and budgeting, the AMC expense budget started out as a line item in the university's academic budget. Although AMC managers recognized that shifting to activity-based budgeting was a necessary step for the merged organizations to remain competitive, it became clear that shifting over to the new accounting system was a major challenge. Therefore, cost-containment actions calling for change in management styles and control systems faced challenges that were difficult to address in a short period.

Cultural: Goals and Values

The *goals and values* subsystem, or culture, represents a blend of the goals and values of the stakeholders of the organization including its clients, trustees, owners, employees, suppliers, regulators, or professional staff; the values and norms of the surrounding culture; and the goals society expects organizations in general or an organization in particular to fulfill. The basic premise is that organizations are units of a larger society, and to remain viable, organizations must provide cost-efficient services that are valued by the people and their social institutions. This subsystem is particularly important for health organizations in which there often is a tension between the goals and norms of professionals and the expectations of patients. Furthermore, the values and goals people expect health organizations to reflect vary across population groups, which differ by economic stature or ethnic background.

The importance of corporate culture is a popular topic within current business and industry circles. A relevant question in terms of health care cost containment is whether our organization cultures—in government, industry, and unions, as well as in hospitals—value conservation and recognize the need to control health care costs? To the contrary, for many years, we have had a "blank check" mentality in the culture of our organizations. Whatever was needed in the health care area was assumed to be appropriate. Costs of health care goods or services were ignored. Health providers geared up to meet these expectations, and as a result, the cultural set in health care is directed toward spending, not conserving.

To combat this cultural aspect of the problem, we need a cultural response. For example, a technique used in teaching hospitals to alter corporate culture is the development of Economic Grand Rounds. Grand Rounds is a procedure in which senior faculty and physicians present, discuss, and analyze clinical cases as both a symbolic and a technical intervention. The notion of Economic Grand Rounds

involves the presentation, discussion, and analysis of health care costs associated with medical casework.

The procedure has two purposes:

1. It provides education and training about health care costs
2. It begins to develop a culture that is sensitive to health care cost containment

Two other examples of culture-oriented actions are as follows:

Action 1: Provide public information—internal and external to the institution—pertaining to the cost and effectiveness of health care. This information should encourage health care purchasers and patients to be more selective and price conscious in choosing treatment. This information will be more effective as it is broken down by hospital and by the physician in charge of treatment. If hospital employees knew how much patients pay for treatment in their hospital as compared to others in the area (competitor data), it would encourage them to be more conscious of ways they could reduce the cost.

Action 2: Adopt an organization philosophy that recognizes the public nature of the care provided by health care organizations. Recognizing the social welfare contribution of improved health care will encourage health care resource conservation. As nations, we strongly believe that all citizens have a right to adequate medical care and expect hospitals to provide this care. Such a belief encourages citizens to expect the best of care without much thought to the costs society must incur to fulfill this entitlement. Stressing the public nature of health care and the public support required to provide health care could encourage more conservative expectations by citizens who use medical services. Other cultural interventions include the following:

- Public presentations of cost-control awards
- Publicity regarding cost issues, both of which help establish the symbols and indications of a cost conservative type of culture

Subsystem Interactive Effects

When health care organizations make data on cost and quality available to internal and external audiences, the change effects are apparent in several subsystems. The development of sophisticated information systems has enabled health care medical and administrative leaders to learn where they are carefully husbanding resources and where they are not. This jump in the technical system capability—to collect, analyze, and present data on cost and quality—has a multisystem-level impact. Some clinicians are very uncomfortable with the public exposure of their practice patterns and fear the follow-up pressures to change behaviors (psychosocial effects), but their fears are sometimes premature as leaders are unable to understand and use the data effectively and/or lack the credibility to do so

(management system effects). Finally, the demands of information system development in the competitive environment necessitate a chief information officer to direct the linkage of clinical and administrative data in a useful way (a structural system addition), adding still more costs.

Culture: Academic Medical Center—U.S. Case

In the AMC case, cost-containment efforts were hampered by what became a very significant culture clash. The health plan was focused on a single goal: to provide clinical care to the covered population at the lowest possible cost. To health plan leaders and staff, the expenditure of resources on teaching and research was to be minimized and carefully managed so that the clinical service needs could be met. However, medical school faculty and staff believed that two thirds of the mission of the combined enterprise was teaching and research and that clinical income was generated to support those aspects of the mission. While plan leaders sought to reduce the costs of teaching and research, medical school faculty and staff saw this as disavowing a core part of their values, their primary mission, and the reasons they had joined the medical school in the first place. Without an emphasis on teaching and research, there would be no way to distinguish the combined enterprise from any other community hospital–health plan jointure. This fundamental conflict in values and mission eventually led to a belief that the linkage was untenable.

CONCLUSION

A major theme in this chapter is the multiple dimensions of the health care cost-containment problem in provider organizations in many countries. It follows that a change strategy that focuses only in one system and does not take into account interdependent effects is unlikely to succeed.

The implications of this problem are several:

- An integrated perspective of the health cost problem needs to be more widely disseminated
- Packages of interventions are in order; packages that address the technical, cultural, structural, managerial, and psychosocial aspects of an organized system for delivering health care
- Expectations of widespread success from single initiatives need to be diminished or eliminated
- The nature of the problem itself—large, complex, and widespread—needs to be considered in terms of the time requirement for resolution, years not months

After 10 years, we support even more a national strategic focus on cost productivity (Altman, Goldberger, and Crane, 1990). But government, labor and industry, the health care industry, and patients need to understand that a complex multisystem problem requires a whole package of intervention strategies. These must be designed, developed, and implemented in an integrated fashion. The health care cost problem is, in effect, a design–redesign problem (Ackoff, 1981), not a single difficulty with, for example, a reimbursement system. It is not just the containment of hospital costs that is a strategic necessity, but health and medical care costs at all individual patient, provider, and organizational levels.

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CHAPTER 14

Physician Rewards in the Academic Medical Center

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Academic medical centers (AMCs) are responding to environmental pressures through restructuring, emphasizing productivity incentives for clinical faculty. Yet, Barondess (1991) has pointed out that the traditional stool upon which the career of the academic physician rests (with the three legs of teaching, research, and patient care) has been replaced by a new stool (with the three legs of cost, access, and quality of care) that more nearly represents society's mandates. Unfortunately, the forces facing academic medicine have impacts that extend beyond the simple economics of medical care delivery.

This chapter uses the systems approach (Ziegenfuss, 1992, 2002) to analyze the impact of the evolving health care scene on the academic clinician. Such an analysis divides the organization and its activities into the following systems:

Technical
Structural
Psychosocial
Cultural
Managerial

I have selected financial and quality care issues as representative of the new Barondess three-legged stool and will use them to illustrate and contrast the challenges facing academic physicians. Although other issues could be selected, I believe these two are representative of a spectrum of professional challenges facing AMCs and their academic clinicians. Moreover, I believe they serve well to highlight adaptive challenges that also must be met by the AMC and academic clinician. These challenges will be analyzed, initially, from the perspective of intended and unintended consequences of changes in rewards and incentives in the prevailing model of academic medical practice. Nevertheless, the thesis of this chapter is that mere modifications in the rewards system are not adequate to address these challenges, and that there must be an accompanying modification in our medical education system.

METHODOLOGY

After a brief presentation of the historical background, this chapter delineates the financial issue, and then it discusses quality care as presenting contrasting challenges for AMCs and academic clinicians. Each of these issues is evaluated using a modified systems analysis, which is based on relevant literature, and is accompanied by recommendations for incentives and educational modifications specific for each topic.

HISTORICAL BACKGROUND

The AMC, as we have come to know it, is a relatively recent development (Johns, 1996). Although the first U.S. medical school was founded in 1766, it was not until the late nineteenth and early twentieth centuries that such schools began to generate a product that could justifiably be called a *medical education*. Prior to that time, our medical schools were proprietary, organized by groups of physicians, and lacked the clinical and basic science integration characteristic of all current AMCs (Starr, 1982). The proprietary medical schools have been described as "doctor mills" that were "run for profit by self-proclaimed experts in medicine" (Evans and Fargason, 1996). Subsequently, improvements in the medical curricula were accompanied by increased control of universities over affiliated medical schools and an increased emphasis on natural sciences and hands-on learning (Evans and Fargason, 1996).

The watershed development in U.S. medical education was the opening of Johns Hopkins Medical School in 1893, which is said to have amalgamated the German medical institution, which emphasized basic science research, and the

British hospital system, which emphasized the combining of clinical research and patient care (Evans and Fargason, 1996; Johns, 1996). Fye (1991) cites the subsequent development of a full-time faculty at such institutions as "the most significant factor in the spectacular growth of clinical research during the twentieth century." Nevertheless, the need for a balance in the careers of such individuals was recognized from the inception of the full-time faculty. The great clinician and medical educator William Osler was concerned that at such institutions, both teacher and student might become completely absorbed in research and neglect, "those wider interests to which a great hospital must minister" (Starr, 1982). Ironically, Fye (1991) also notes that the main goal of establishing such full-time faculty positions was to remove the incentive for academic physicians to devote their main energy to clinical practice.

The "Monastic Model"

For the purposes of analysis, the chapter refers to the successors to the aforementioned institutions as AMCs. Further, it characterizes the prevailing manner of academic medical practice that typified these institutions until 15 years ago as the "monastic model." Others have called it the "traditional model" (Capper and Fargason, 1996). This terminology intends to denote a unanimity of practice style that deemphasized economic productivity and the direct delivery of health care by the clinical faculty, emphasizing, instead, academic productivity in the form of teaching (usually of subspecialists) and research (accompanied by publications in scientific journals). The reward system in the monastic model was centered on the gaining of academic tenure and advancing in the academic ranks (assistant professor, associate professor, and professor). This system was supported by a permissive and ever-expanding health care infrastructure that accepted the medical profession as authoritative on medical matters and did not question the price to be paid for such care.

The monastic model reached its apogee during the 15 years following the passage of Medicare in 1965, which provided a "blank check" to pay the medical fees for our senior citizens and underwrote the training of medical professionals. That permissive system began to crumble in the 1990s, beginning with the implementation of the "resource-based relative value system" and the paying of physicians based on "usual and customary" reimbursement levels.

Thus, when I entered academic medicine 22 years ago, I experienced a system based on this "monastic model." Under this system, the entering postulant agreed to modified vows of poverty and obedience and pledged to worship at the tripartite altar of teaching, research, and patient care. After 6 years of toil, if the individual was found worthy, he or she was granted tenure and promotion to associate professor. If the candidate did not qualify, the individual had to leave the

institution, often moved "across the street," and had to accept the punishment of making much more money than was possible as one of the chosen few. In recent years, this monastic model of the AMC has crumbled in the face of forces that challenge the tenets supporting it.

Advantages of the Monastic Model

The tenure system, which is at the core of the monastic model, has been described by Halperin (1995) as "the enduring controversy of academic life." Nevertheless, the monastic model contained within itself a series of symbiotic relationships that rewarded all parties. Everyone involved in the system was aware of the deadline during which one had to qualify for tenure and promotion. Thus, clinical faculty members had a strong incentive to be academically productive. Additionally, they undertook a number of teaching and other "duties as assigned" because these were understood to be the responsibilities of an academic clinician. Conversely, the department chair recognized that failure to support the academic goals of junior clinical faculty would result in the young clinician being forced to leave the institution at the very time he or she was becoming most productive in terms of clinical service and revenue generation. Having helped the faculty member build a busy practice, the chair was particularly reluctant to have him or her "move across the street" and become a competitor (there were no restrictive covenants at that time).

The monastic model's tenure system also provided protection for faculty who could take disputes to the "main campus" of the parent university for hearings before the Faculty Affairs Grievance Board. Although history or sociology department faculty at the parent university had little interest in the specific problems of a medical faculty member, they had a vested interest in seeing that due process was afforded all tenured faculty.

The Current Academic Model

Times have changed. As noted earlier in this chapter, Barondess (1991) points out that the traditional stool of the AMC (with the three legs of teaching, research, and patient care) has been replaced by a new stool (with the three legs of cost, access, and quality of care) that more nearly represents society's mandates. Barondess (1991) states further, "The new stool is organized around a more or less explicit and enlarging view of health care generally, and medicine in particular, as a social enterprise, and is energized to a substantial degree by a widening perception that the agendas of our academic health centers and of the broader society are on increasingly divergent paths." The next segment of this chapter

describes the environmental factors that have resulted in these radical changes in the demands placed on AMCs and their clinical faculty.

CURRENT EXTERNAL ENVIRONMENTAL FACTORS

Chapman (1998) has outlined the forces impacting modern medical centers and supports the comments of Barondess (1991) quoted earlier. Chapman (1998) states the following:

> Fifteen years ago, the academic medical center began to be transformed again, this time by its competition with or incorporation into managed care and other health care delivery systems. The medical school dean now operates in an environment far different from that of the 1960s. Deans spend 90% of their time on five major issues: too few resources, isolation and division of activity within the institution, poor management, excessive traditionalism, and too few people with too much to do.

Perhaps the most important of these forces are those driving the economies of medical care. According to Ross and Johns (1989), "Today, the academic medical center is learning to function in a new world of cost containment, managed care delivery systems, utilization review, reduced lengths of stay, competition for market share, and external intervention." It has been predicted that there will be decreased demand for specialist services in the future, thereby threatening the cornerstone of academic medical practice (Wise and Billi, 1995). Unfortunately, many centers are not prepared to meet these challenges. In 1985, Petersdorf (1985) wrote, "Given the academic medical center's lack of price competitiveness, as a consequence of teaching costs, an unusually high incidence of indigent patients, and a preponderance of sick patients, this change in the environment represents a very real threat to their fiscal solvency and perhaps even their academic viability."

Some even have advocated divestiture of teaching hospitals by academic institutions as a means of "removing financial risks" for the teaching institution and of achieving "a more business-like way" of operating for the hospitals (Petersdorf, 1985). It is not surprising, therefore, that some AMCs have established an "arm's length" relationship to their teaching hospitals. In such restructuring, formerly full-time academic physicians may become 80% or 90% employees of the clinical corporation with minimal if any direct salary line to the parent university of which they formerly were full-time academicians entitled to the benefits of academic rank and tenure. Thus, the reward system characteristic of the monastic model is severely undermined.

The next section discusses the broader impact of financial issues on the AMC and the ability of clinical faculty to respond appropriately to the challenges that

they present. Particular emphasis is placed on future focused strategies for addressing these issues.

SYSTEMS ANALYSIS OF THE FINANCIAL ISSUE

TECHNICAL AND STRUCTURAL SUBSYSTEMS

These challenges to the AMC may initially appear to be purely fiscal ones; however, their implications for the sociotechnical systems of an academic teaching hospital are significant. Initially, the focus is on structural changes such as institutional mergers. Later, their impact on the psychosocial and cultural (goals and values) systems, which are reflected, in turn, in the institutional rewards systems is discussed.

Merger Strategy

To meet these financial challenges implicit in the new academic "stool" and to broaden the dean's "tax base," academic institutions are merging with nonacademic institutions, and as noted previously, the progeny results in clinical faculty members with a 10% or 20% academic appointment and an 80% or 90% commitment to clinical practice. Initially, this situation is most attractive to chief executive officers (CEOs) who can unilaterally rewrite contracts for former clinical faculty. These contracts may cut benefits packages and refocus salary on clinical productivity. Clinical faculty effectively lose tenure protection and become "tenant farmers" with no equity interest in their institutions. Additionally, the requirement that recently hired individuals sign restrictive covenants precludes their "moving across the street" or possibly even within 50 miles of the parent institution. If you are an administrator, "What's not to like?"

PSYCHOSOCIAL AND CULTURAL SUBSYSTEMS

The restructuring that has occurred in academic institutions actually is a double-edged sword. Nationwide, physicians are mourning the demise of the old health care system. Nowhere may these sentiments be as deeply felt as they are at AMCs. The old-order monastic academic model, which was based on the three principles of teaching, research, and patient care, is deeply ingrained in many academicians who also resent their loss of the rewards encompassed by academic rank and prestige.

Impact on Psychosocial and Cultural Subsystems

These sentiments have had a huge impact on the mission of the AMCs. Clinical faculty, who previously accepted many responsibilities as part of the obligations

of an academic calling, now are questioning whether it is "worth" their time to participate in those same activities, such as teaching, which often are poorly compensated (Shea *et al.*, 1996). They are simply responding to the new emphasis on clinical productivity as exemplified by the fact that separate dollar values are being placed on clinical and nonclinical activities with differential rewards, in the form of financial compensation, for each. Moreover, ever more accurate means are sought to measure clinical productivity, such as assigning relative value units to clinical productivity (Albritton *et al.*, 1997). These efforts serve to further emphasize the importance of clinical activities. Thus, the clinical faculty become aware that it is clinical productivity that is rewarded at the highest value.

Positive Value of Economic Rewards and Recognition

Such economic recognition may be one way of providing increased status to clinicians as advocated by Bentley *et al.* (1991):

> Medical schools traditionally have acknowledged faculty excellence in research and other academic activities through the university's tenure and promotion system. The acknowledgment of excellence in clinical care has been less apparent. If they are to attract and retain patients for clinical research, teaching, and income, academic medical centers must maintain a high standard of faculty interest in clinical care. They must review and analyze the rewards and status afforded to those physicians engaged primarily in clinical care activities. To do this, medical schools may have to use the practice plan to foster fiscal and program interdependence among departments to achieve a cohesive mission.

Nevertheless, based on the principles outlined by Kerr (1975) in his classic management article, "On the folly of rewarding A while hoping for B," the resulting disinterest in nonclinical activities on the part of academic faculty members is not surprising.

Lack of Time for Nonclinical Activities

The increased emphasis on clinical activities, which has demanded a clinical time commitment of 80% of work hours, has left very little time for other interests. Even faculty who might want to contribute to academic endeavors must prioritize their time.

In the past, a 60-hour work week was expected as part of the burden of an academic clinician. Now, absent the mantle of academics, clinical faculty are increasingly returning to the question, "Is it worth my time and that of my family to perform tasks that the institution itself has devalued?"

Impact of Lack of Tenure Protection

Faculty also have lost the protection afforded by the tenure system. They are "at-will employees" and may lack even yearly contracts. Salary negotiations must

be carried out individually with department chairs, and the clinicians' benefits are handed to them by institutional administrators without any negotiations. Institutional faculty organizations often are token bodies that lack teeth. As CEOs are facing strong economic threats, they may view the physicians as vulnerable to salary reductions. Other employees often have strong unions to speak for them.

Psychosocial Impact on the Academic Clinician

Finally, faculty witnessing the declining role of traditional academic values in their daily lives are asking themselves, "How am I different from the doctor across the street?" To many, the answer seems, "I work harder, make less, and feel less appreciated." These feelings may be particularly intense for those individuals generating the largest proportion of the academic institution's revenue. For example, Zelenock *et al.* (1997) have studied patient care workloads at one AMC. They concluded, "Surgeons had a greater collective and individual responsibility than did nonsurgeons for clinical activity and the financial viability of the academic health centers studied. Many proposals for financing health care delivery systems have the potential to exacerbate this differential. Restructuring of reward systems at academic medical centers must address this fact, lest their academic mission and scholarly activity be compromised."

Management Subsystem Implications

Financial Issues

Before resorting to major structural changes that might abolish the monastic order, institutions should consider alternative financial strategies. AMCs must take a broad perspective on their financial problems to be economically successful if there is to be any hope of unburdening their clinical faculty. They must recognize the centers' strengths and weaknesses.

New Associations

One source of revenue is through the formation of new associations with organizations such as health maintenance organizations. In 1982, Hoft and Glaser (1982) discussed the potential risks and benefits of such associations. Although such relationships may be a source of patients and funds for AMCs, one cannot overlook sources of problems such as "disparate styles of practice, the high cost of clinical services at the medical center, and the differing perspectives of HMO and medical-center policymakers" (Hoft and Glaser, 1982).

Limitations of Academic Medical Centers

Moreover, AMCs are not always realistic about their limitations in such negotiations. For example, academic institutions often believe that they bring a cache to the bargaining table that justifies a higher level of reimbursement from insurance carriers. Although name recognition for AMCs has some value, it is not enough for most insurers to pay a large premium for care (Culbertson, 1996, 1997). Some studies have demonstrated that teaching hospitals can provide cost-effective care (Gordon, Sefcik, and Lo Gerfo, 1991); nevertheless, some insurers believe that AMCs have a culture that is "inimical" to fostering prudent management of patients (Culbertson, 1996). Thus, many managed care programs see little intrinsic reward for themselves in providing economic incentives to AMCs or to continue to finance what they perceive to be inefficient care.

Need for Curriculum Emphasizing the Consumer

If AMCs are to receive additional support from managed care programs, they must deemphasize "supply-side incentives" (i.e., what is of importance to the provider and the institution) and emphasize "demand-side" values (i.e., what is desired by the consumer such as insurers) (Evans, 1992). This commitment must be reflected in revised curriculum emphasizing the socioeconomic aspects of medical practice (Hewson *et al.*, 1998). One way in which residents can be exposed to the needs of managed care programs is through contractual arrangements in which such residencies provide clinical services to managed care patients (Corrigan and Thompson, 1992). Although the effect of these arrangements on physician practice style must be documented, clearly such arrangements provide a steady revenue stream to teaching programs. Moreover, experience surrounding the formation of the Johns Hopkins Health System has suggested that deemphasizing the teaching hospital and increasing emphasis on outpatient care provides an incentive to learn and to teach a "more economical practice of medicine" (Ross and Johns, 1989).

Role of Primary Care

Traditionally, AMCs have not been supportive of primary care medicine (Hearst *et al.*, 1995; Block *et al.*, 1996). Now, academic institutions must recognize the value that managed care programs place on primary care and must realize the opportunity that such physicians provide for revenue enhancement for the parent institution and reward them accordingly. For example, Zweig, Lawhorne, and Colwill (1991) cite the significant revenue stream provided to the parent institution by a nursing home practice, which generated only modest direct revenue to the individual primary care provider. The participation of properly recognized

clinician educators, particularly in the education of primary care physicians, is one way academic institutions may enhance the education of primary care providers in a real-world–oriented clinical setting (Jacobs and Tower, 1992). These clinicians also provide an opportunity for clinical research to document the validity of treatment modalities (Charlson *et al.*, 1993). Innovative programs introducing clinical faculty to the principles underlying clinical research may stimulate such research projects for which most clinicians otherwise would be poorly prepared (Charlson *et al.*, 1993). In this way, academic departments may increase revenue and complement their academic research goals. Ironically, it has been suggested recently that "departments of family medicine are increasing their practice activities, perhaps to the detriment of teaching and research" (Anonymous, 1997).

Society/Government as the Consumer

Academic institutions must be prepared to view society as a whole as a consumer and must be prepared to meet the needs identified by the public if they are to continue or increase public and governmental support. In this regard, Hollenberg (1990) has outlined the challenges facing Canadian AMCs. His description of the Canadian system in the 1980s may well describe forces currently impacting our own institutions today. Hollenberg (1990) writes, "These adverse effects were produced by continued uncertainty and insufficiency of federal funding of research, underfunding of Canadian universities and of teaching hospitals, and by a decline within Canadian society of the images of both the physician and the teaching hospital with its technologically based clinical and research programs." His recommendations emphasize the need for academic institutions to build a close working relationship with government.

> For Canadian academic medicine to survive these adverse influences, it must seek relationships and sources of support external to government. Most importantly however, it must strike new arrangements with provincial governments such that the imperatives of the academic health center and government become recognized in the planning process of the other party. For the academic health center this will mean involvement in government approaches to cost containment and health promotion; for provincial governments it will mean a commitment to health research and faculty renewal. (Hollenberg, 1990)

U.S. AMCs must become proficient in establishing such win–win relationships with government.

Social Responsibility

Teaching institutions wishing to garner support from governmental agencies and community groups must demonstrate increased social responsibility. Foreman

(1994) recommends a multifaceted agenda through which AMCs can demonstrate such social responsibility. He recommends "developing community-based systems of primary care, outreach programs, and social supports; training professionals committed to serving isolated and poor communities; and performing research that will extend the knowledge base to include the health and social issues of the disadvantaged." In this way, the AMC provides incentives for multiple parties to support the missions of the AMC.

Unique Assets of Academic Medical Centers

Although academic medical institutions face significant challenges, they also possess unique characteristics that should help them to succeed. In describing their vision of an academic cardiology division properly positioned for the era of managed care, Feldman *et al.* (1997) cite "unique strengths" for such an academic division including "(1) premium quality of care, (2) a single employer, (3) a somewhat uniform practice culture, (4) high-volume operators performing interventional procedures, (5) expertise in highly technical aspects of cardiology, and (6) the availability of physicians for outreach ventures." Although these authors are specifically describing a strategy for cardiology divisions, these advantages can be applied to most academic divisions. Nevertheless, as noted previously, AMCs must be able to demonstrate broader competencies if they are to be rewarded by society and funding sources.

Restructuring Strategies

If all other strategies are insufficient to ensure the survival of the institution, economic restructuring that results in the demise of the monastic order should be considered. If such actions prove necessary, Ross and Johns (1989) make a number of recommendations that can be applied to provide institutional guidelines to mitigate the effects resulting from the extinction of the monastic order. These guidelines include the following:

1. Maintain a commitment to excellence
2. Maintain a commitment to education
3. Maintain a commitment to the indigent
4. State clearly the values of the academic health center that are cherished and develop strategies to preserve them
5. Involve both the hospital and the doctors in the planning process
6. Establish an academic oversight committee to guarantee that the academic health center's goals and values are being maintained and to facilitate communication
7. Ensure that all participants share in potential financial benefits

If institutions proceed in the manner described, they may be successful in fulfilling the goals of an academic health center as described by Heyssel (1989) who states, "Our effort must be aimed at preserving the values of academic medical centers while making sure they survive and continue to prosper for the good of our society in the new environment. If, at the same time, we improve medical practice in the community by participating in and managing a broader segment of community medical care than in the past, we will indeed have served the people." Conversely, failure to address these strategic issues may threaten the survival of our AMCs.

Need for Appropriate Incentives

Our success or failure in this regard will be dependent on our ability to provide incentives for all the participants in the process. Such incentives probably will reflect three types of motivation and corresponding incentives outlined by Coffey and Finger (1990) including altruistic motivation, financial motivation, and recognition motivation. Such a broad perspective on incentives is particularly helpful in addressing the issue of quality care and is explored in greater detail in another segment of the discussion that contrasts the ability of AMCs to adjust to financial and quality care concerns.

CONCLUSION

The U.S. medical system, including its system of medical education, has evolved around a philosophy that every patient should be treated with every means available that might ameliorate the patient's condition. Implicit in this philosophy is the belief that "the doctor knows best" and that the role of society is to supply the funds necessary to support the work of physicians. The paradigm for this system was the traditional, or monastic, model of the AMC. It rested on an academic "stool" with the three legs of teaching, research, and patient care. This stool represented the logical underpinnings for an academic career. Now, however, all of these assumptions and their corollaries have become the subjects of intense scrutiny, and many have been disavowed by our society. The prevailing consensus is that we no longer can afford, both literally and figuratively, to continue the unchecked and unregulated expansion of our medical enterprise without testing its underlying assumptions and evaluating its products. As a result, the academic clinician has been called upon to reevaluate the foundations of the academic career, substituting new underpinnings, such as cost, access, and quality of care (Barondess, 1991). A systems approach has been used to highlight the impact of internal and external environmental forces on each of these challenges. My thesis is that if AMCs are to remain viable and capable of supporting their multifaceted

mission, we must realign reward systems to make them congruent with appropriate responses to our environmental challenges.

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CHAPTER 15

Design and Redesign of the Health Systems' Futures[1]

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In health care, we are now in the organization redesign stage seeking to improve the performance of our current delivery system and to establish a structure for a future health care system. It is clear to administrators, physicians, patients, and corporate payers that the current system is dysfunctional. Similar concerns for redesign exist in education, transportation, and international affairs. Just how do we proceed to design our future organization is the question. An integrated systems-oriented approach to the redesign of organizations is the topic of this chapter.

The roots of this procedural synthesis are in teaching and learning, organization change and development, and evaluation and assessment. This systems approach is based on five assumptions:

- Redesign is a sociotechnical systems task.
- Future building is both intended/rational and emergent/intuitive.
- Redesign procedures are "rough guidance" not a mechanical blueprint.
- Procedural adaptation is required for each unique setting.
- Models will continue to evolve.

[1]Adapted from paper presented at World Multiconference on Systemics, Cybernetics, and Informatics. ISAS '98. Orlando, Fla. 1998.

The model is presented with six steps:

1. Define and describe the present.
2. Define and describe the desired future.
3. Create a critical gap analysis.
4. Define grand and leading strategies.
5. Identify resource requirements.
6. Identify operations requirements, actions, responsibilities, and evaluations.

Do we have an approach and procedure for the redesign of our health organization's future? As we struggle to find a redesign approach, we find that health care professionals are far from alone. Consider the following:

- Many citizens and professional educators find U.S. educational systems fatally flawed.
- Manufacturers face global competition forcing them to find new ways to organize and to produce goods for a worldwide market.
- Bankers, once secure in their community relations and small-town partnerships, are acquired and closed by mega banks.
- Governmental leaders at all levels find dissatisfaction with public service costs, performance, and relations with citizens.
- Individual departments in all of our organizations ask how they can redesign to address the pressures for change.

The redesign problem that is so visible in health care and education turns out to be a common problem across fields and professional disciplines. An integrated systems-oriented approach to redesign is the subject.

PHILOSOPHY AND APPROACH

By building on existing efforts to create redesigns and futures, we can synthesize an approach that transcends disciplinary boundaries and is transferable across manufacturing industries and service companies in the public and private sectors. The approach presented here is both simple and complex. It builds on three organizational improvement pillars:

1. Continuous quality improvement (total quality management)
2. Reengineering
3. Vision building and strategic planning

A first example in my business—university education—illustrates the beginning notions.

Imagine three university faculty members meeting for lunch to discuss the dismal state of teaching and learning. Each agrees that faculty could do much

more to improve. One of the three suggests that they each make a statement of what they would do—as individuals. Their answers capture the need for an integrated approach to improvement, to radical reengineering, and to new visions.

Professor Thomas: I believe in the continuous quality improvement of our well-tested, traditional approach to teaching. I think faculty should be constantly refining and updating their lectures. In-class work should include a variety of occasional films, surprise quizzes, and regular writing requirements with detailed feedback. By continuous incremental improvement of the fundamentals, we should approximate excellence across the faculty.

Professor Franklin: I disagree. Traditional approaches have not worked. It is only through a complete reengineering of our approach to teaching will we achieve excellence. For example, I would organize the students into project teams emphasizing active learning. In-class work would include limited lecturing with much interactive "question and answer," discussion and debate. Outside work sessions would be required. Students would produce group projects and receive both individual and group grades.

Professor Martin: Wrong, we need an entirely new vision of teaching. I propose we put courses on the Internet, using distance learning technologies to take courses to the student. Students would use simulations, learning much from compact disks at home. We would have a worldwide market with an international student base and self-pacing to fit individual needs (through programmed texts).

Obviously, each of the professors could elaborate their individual approaches to the redesign task. This brief anecdote illustrates the three components: continuous incremental improvement of current methods, radical reengineering of classroom approaches, and a completely new vision of the educational future. All three approaches are needed for successful redesign in many domains, especially including health care.

ROOTS OF THE PROCEDURAL SYNTHESIS

The combined approach is based on several common purposes. Each of the procedures—quality improvement, reengineering, and visioning/strategic planning—are used for three purposes:

- Teaching and learning
- Organization change and development
- Evaluation and assessment

Quality improvement work led by Deming (1986), Juran (1988), and Crosby (1979) has been emphasizing the search for quality as an organization-wide

philosophy and approach. Over the past 20–30 years, but particularly during the last 10 years, specific methods and tools have been developed.

Reengineering has both extended and adapted total quality management and systems thinking. Here there is a definitive emphasis on radical results, changes to core business processes. Rather than an incremental continuous improvement of existing processes, designers are asked to think of bold change. Reengineering is a "blowing up" of existing business processes (Hammer, 1990; Hyde, 1995) but not usually a redesign of the whole organization.

Ackoff's (1970) work on idealized design, first offered in the 1970s, takes a systems and whole-organization perspective. Participants are asked to consider the question "if we could redesign our whole organization immediately to be more effective in this environment, what would it look like?" Rather than incremental change, this approach pushes for a radical redesign that will serve as a change incentive.

We will not further consider the history of each stream here other than to remark that their concurrent development reflects the general dissatisfaction with the status quo and the need to develop formal procedures for moving forward into a vastly changed future at both the operating level of production systems and the whole organization (culture values and grand design).

The synthesizing work can begin with any of the three streams. Here we start with Ackoff's work on idealized design because it incorporates some of the continuous improvement and reengineering thinking. In 1970, Ackoff published his approach for creating new organization designs through strategic planning processes. His follow-up works have elaborated this model over the past 30 years (Ackoff, 1981, 1989). At the same time, quality management was unfolding with Deming (1986), Juran (1988), and Crosby (1979) offering both the philosophy and the procedure of continuous improvement. Hammer and Champy's (1993) work on reengineering is both more recent and a derivative of these original streams of quality improvement and new strategic vision.

ASSUMPTIONS AND MODEL

All of these redesign efforts point to a set of five assumptions that are the underpinnings for this generalized model.

1. *Redesign is sociotechnical in nature*. Organizational futures include (1) the *technology* or core business, for example, medical therapies, industrial engineering, and banking services (the technical aspect of sociotechnical), and (2) the values, culture, and psychology of the workplace (the *social systems* side). Most often we think about futures in terms of new techniques and products, paying much less attention to the nature of the

social system we will need to create and grow the business. We cannot redesign manufacturing, medical care, or teaching processes without considering the psychological impact on providers/employees and customers.

2. *Future building is both intended/rational and emergent/intuitive.* We often set out to purposely plan for our desired future—an intended, rational process. However, the future of our organization "emerges" from a complex set of external environmental threats and opportunities and internal decisions and actions (many that are intuitive and not easily explained). Thus, we purposely plan *and* we flexibly take advantage of new options and imaginative ideas. We have moved from the grand plans—blueprints—to a sense of flexibility and adaptability based on experience. I agree with Mintzberg (1994a) that logic does not prevail over emergent creative processes.
3. *Redesign procedures are "rough guidance" not a mechanical blueprint.* The most recent strategic planning and futures literature suggests that a tight set of steps walked out in mechanical fashion is not flexible enough to address the emergent/intuitive flow of ideas and options that make great companies. Thus, redesign should be viewed as a "skeleton" with much room for addition, eliminating the confinement and innovation-killing "boxes" present in many futures processes. The step-by-step procedures of the past have failed because organizational life is not so mechanized. Taken as "general direction," redesign plans help guide us, but without detailed prescriptions.
4. *Procedural adaptation is required for each unique setting—creative, innovative use of the model.* Organizations are all unique. Future design processes must be created to fit each individual culture. Some are very formal and bureaucratic, requiring extensive analyses and follow-up reports. In others, the process is informal with little written (fast-moving decisions seemingly flow from "breakfast meetings"). No single model can be used in all organizations because hospitals, managed care companies, nonprofits, and governments are all unique enough to require tailor-made processes.
5. *The model is still evolving.* We are far from a consensus on a process for development of organization futures. What we are seeing is some increasing recognition of the interconnectedness of quality improvement, reengineering, visioning, and strategic planning. We have not created a definitive model of change because we are still building our knowledge of the philosophy and methods of redesign.

With these assumptions in mind, we can consider a general model of redesign in six model steps:

1. Define and describe the present, including external conditions and internal strengths and needs.

2. Define and describe the desired future.
3. Perform critical gap analysis.
4. Define grand and leading strategies.
5. Identify resource requirements.
6. Establish operational startup: actions, responsibilities, and evaluation.

Define and Describe the Present

To create a redesign of an identified system—medical service delivery process, department, or whole organization—we must have strong knowledge of its structures and processes and the environment in which it exists (external conditions). We begin with the external.

External Conditions

Trends and issues outside of the organization (the "environment") are scanned and analyzed as to their likely impact. The underlying assumption is that the external environment, both perceived and real, plays a major role in the organization's success or failure. Environmental pressures, issues, and trends could mean that the organization should literally be offering different products or services or at the least must adapt to significant environmental changes during the coming 3–5 to 10 years. Each organization's environment is unique, consisting of elements such as education, technology, economics, politics, demographics, sociological, legal, cultural values, natural resources, and international trends.

Organizations engage in scanning at levels that vary in sophistication and depth. For example, one hospital's "environmental scanning activity" is conducted by a small group. The director of purchasing, one marketing representative, and the vice president for operations meet for lunch about once a week to talk about "what's going on out there." This group does not use an analyst's research on economic projections, measures of technological development and change, or data and demographic trends. Instead, they use their own "intuitive sense" of what is happening in the environment, plus information culled from colleagues, customers, and competitors.

At the other end of the scanning spectrum are the groups who use sophisticated, analytical, and data-based methods for plotting various trends and changes in the environment. These reports are developed one or more times a year and are presented as a formal environmental assessment (usually in a formal strategic planning process). Some industry groups publish them as reports for the members.

Internal Strengths and Needs

A second component to defining the present is a review of the "internal" aspects of the organization or department. Just as there is an environmental system

composed of characteristics such as economic, political, and demographic changes, there are internal systems that define the nature of the organization. Future design takes into account both the external and the internal system, the essence of the systems approach. In one illustrative model developed by Kast and Rosenzweig (1985), the organization is defined as consisting of five subsystems:

1. Goals and values
2. Technical
3. Structural
4. Psychosocial
5. Managerial

Each system has components that must be analyzed as to their strengths and needs, suggesting points to build on or correct. As a whole, these subsystems and their interrelationships are the organization to be planned for, the target of the redesign and futures work.

The design–redesign group systematically examines each of the subsystems, searching for significant strengths and needs through five questions. What are the competencies and weaknesses of the technical system? Of the structural system? Of the psychosocial system? Of the managerial system? Of the cultural system (goals and values)? Each participant is asked to identify strengths and core competencies (Prahalad and Hamel, 1990). When participants think of the core work of the organization—medical care in hospitals, counseling in a mental health agency, legislative activity in an association—what is done very well? The analysis strives for as complete a description of the organization as possible. The term *weakness* is not used, because there is often a tendency to assign blame. Instead, *needs* is the identifying term further differentiated into what we need to do that the organization is not now doing, and what we need to do differently. The latter often stimulates discussion of redesign and organization change issues.

Define and Describe Desired Future

Step two of the model is the creative design or redesign of the desired future of the organization (or department). Building on Ackoff's idealized design process, the step requires participants to design and/or redesign their organization in any way they want. According to Ackoff (1981), futures planning involves clearing psychological barriers. In his view, "Probably the most important property of an idealized design [is that] it reveals that the principal obstruction between us and the future we most desire is ourselves. This obstruction can be removed by a set of mobilizing ideas; an idealized design can provide such a set of ideas" (Ackoff, 1981). In this step, participants take the position that the organization does not exist. If it could be designed (it does not really exist in the case of a new

organization) or redesigned in any way at all, how would the participants create it? The purposes of step 2—creative design and redesign—are several. By engaging in the design work, participants achieve the following:

1. Participants must begin to think creatively about their organization's purposes, structure, and work process from the starting point without existing barriers.
2. Participants focus on what they would change, further surfacing issues for organizational attention and development.
3. Participants often inject innovation into organizational structures and processes that may have been in place for years or decades.

The intention is a "zero-based" redesign concept, an opportunity to start fresh. The process attempts to address the problem that prevailing organization structures and processes are too often taken as starting and fixed points. If the environment is changing radically, can we truly believe that the organization does not need to be redesigned? The process itself requires courage from participants because we are called upon to do something new, to confront a "no man's land," to push into a forest where there are no well-worn paths and from which no one has returned to guide us. To live into the future means a leap into the unknown.

An idealized design must have the following features:

1. Technologically feasible
2. Operationally viable
3. Capable of rapid learning and adaptation

> The product of an idealized design is not an ideal system, because it is capable of being improved and improving itself. Therefore, it is not a perfect or utopian system. Rather, it is the most effective ideal seeking system of which its designers can conceive. It is that system with which its designers would currently replace the system planned for if they were free to replace it with any system they wanted." (Ackoff, 1981)

The properties are requirements that ensure that proposed designs for the organization's future are not utopian (divorced from the realities of daily operations including constraints of the marketplace). A first outcome is usually dissatisfaction with continuing as is. This, in turn, creates an impetus to define a more desirable state, the ideal.

Importantly, the idealized design/redesign is not a creative "stand-alone" step. The process advocated is not that a planning group simply begin with a new vision. Beginning a vision-building effort is sterile without data, without sensitivity to the existing external and internal systems. This step is driven by the group's thinking about changes in the external environment and about the strengths and needs in the five internal organizational systems (step 1 processes) (Ziegenfuss, 2002). What then are some topics of the redesign?

The group first is asked to redesign the whole organization, creating a generalized vision. For example, how would a bank of the future be different—triple in size with a greater range of products and services—including securities and insurance? The design group is then asked to construct each subsystem focusing on how these become an integrated and *different* whole.

The technical system is redesigned first, as it is the core work of the organization and what most are focused on. This means a redesign of the products and services and the work system, including production, markets and marketing, product services, support services, and the distribution network. The "core technical work" changes depending on whether the organization is a manufacturing plant, hospital, educational or governmental institution, or a health and welfare agency.

Next, the structure is redesigned, with the redesign group focusing on such issues as degree of formalization, specialization, standardization, centralization, and the personnel configuration. Would the organization be more or less centralized? Is it too formal; are all meetings taped with detailed minutes circulated widely? Are managers forbidden to cross authority lines?

The psychosocial system receives attention next. How would the planning group redesign the organization with respect to behaviors of individuals and groups with regard to motivation, expectations, needs, status and role systems, group dynamics, leadership, and power.

The management system follows, with the redesign efforts directed at the planning, organizing, developing, directing/leading, and controlling work. The planning group considers, for example, whether management has a development orientation and whether they are flexible in their leadership and style.

Finally, the planning group is asked to consider a redesign of the goals, values, and culture of the organization. Is the culture participative and supportive, for example? Are the heroes of the organization recognized, and is there a cultural network that supports the appropriate values, for example, performance, quality, and innovation.

The future change can be linked to existing quality and reengineering efforts. During a recent visit to a state government agency, we reviewed the grantsmanship activities in a design–redesign context. One participant asked how strategic planning fits into the already existing quality improvement initiative. It became clear that this Bureau of Conservation Services could change its resource distribution work by performing the following tasks:

- Continuously improving the current grants system reducing cycle time, proposed requirements and reporting
- Reengineering, eliminating program grants in favor of whole block grants to communities
- Envisioning a whole new approach, eliminating the need for grants altogether

Critical Gap Analysis

In step 3, redesigners conduct a comparative analysis of the present and the future. Analysts look for differences—a gap or gaps—between the current structure and functioning of the organization and the vision of the future. For example, the intention to create a participative, empowered workforce (characteristics of the future) is compared to the current management approach (top down, solitary decision making) and lack of a structure of teams and groups for employee input. System-by-system analysis leads to a set of "gaps" to be addressed during the implementation of the redesign.

Define Grand and Leading Strategies

Strategy has been defined as position, perspective, pattern, and plan (Mintzberg, 1994b). Here we are using strategy to mean a direction, destination, and decision guide. For example, some years ago one medical college determined that the school was too small to support teaching, research, and clinical activities of the region. A growth strategy was announced with the intention of adding beds, research capability, and faculty support. In step 4, a strategy or set of strategies is selected to represent the "direction, or destination, decisions" that are driving the redesign (Ziegenfuss, 1996). For another example, a bank branch office was identified as redundant following a merger of two large regional banks. In an effort to consolidate buildings and people, the new "super regional bank" saw "closure" as the strategy best representing the direction (leaner), designation (fewer branches), and decisions (transfer of employees and accounts). Strategy is here used as a way to organize *perspective* about the future, to begin to develop a *pattern of behaviors* and decisions, and to *position* the redesigned organization for success.

Identify Resource Requirements

Redesign implies and/or requires the addition of new resources or the redistribution of existing ones. Each redesign effort must identify the resource requirements in terms of the following:

- Production process
- Personnel
- Facility
- Equipment and supplies
- Finances

To successfully implement the new design, production process needs such as training must be identified, as well as staff requirements, space, equipment, and an overall budget. The resource requirements sketched out in step 5 are refined in the final step linking the changes to operations work.

Establish Operational Startup: Actions, Responsibilities, and Evaluation

Step 6 links the vision of the desired future, strategies, and actions to operations and budgeting. Following the systems model, the planning participants must now consider five topics:

- Objectives
- Program planning
- Outcome expectations
- Responsibility assignments
- Budgeting

This step—linking redesign to operations—establishes the ties between the "designed desired future" and the near-term work of year-to-year operations. Few organizations need to be introduced to this work for the first time.

There are five parts to this linkage process. First, the planning group must create program objectives. Second, the planning group must subject the programs proposed to detailed operations-oriented analyses. Third, the group must define what the year-to-year outcome expectations are and how to know when yearly progress is successful (performance indicators). Fourth, responsibility analyses and then responsibility assignments must be made to ensure that persons in charge are directly connected to the proposed programs and actions. Fifth, the proposed programs and the whole set of strategies and actions must be connected to the budget: How does the vision of the future and the planning strategies and programs relate to the current and future funding structure?

CONCLUSION

This synthesized procedure for design/redesign is applicable to all health care organizations. Leaders have recognized the need to redesign their organizational systems but are confronted by a bewildering set of process choices. Many of these alternatives have a common systems core. To take advantage of this commonality, we must have more systems thinking leaders with an understanding of the roots of this work (Ziegenfuss, 1992, 1993, 1994, 2002).

Some of us think of future design and strategy as a set of simple rules (Eisenhardt and Sull, 2001). The rules are "mapped" to guide and direct participants (Kaplan and Norton, 2000). Others believe that strategy making and visioning is more "instinctive" (Oliver, 2002). We return again to Mintzberg's notion of "intended/rational" versus "intuitive/emergent." The process presented in this chapter is intended as rough guidelines (intended-rational) that is used in loose enough fashion to allow for and encourage "intuitive emergent" ideas about the future.

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CHAPTER 16

The Need for Health Policy Education in the Medical Curriculum

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Medicine based solely on traditional scientific methods is not enough to treat today's more informed and discerning patient or consumer. "It is difficult to practice medicine at the beginning of the twenty-first century without understanding the wider public policy, economic, legal, and ethical contexts in which care is delivered" (Epstein, Drazen, and Steinbrook, 2001). Yet, these additional issues do not merely reflect changes of sentiment in this country alone because questions regarding health care delivery and financing have been raised on a global scale. These issues include the more widely publicized ones of increasing litigation and cost and of escalating standards of care, equity of access to care, consumer satisfaction, resource rationing, individual versus community rights, environmental determinants of health, and technology assessment. Each country is attempting to formulate a viable health care model to match its respective markets. It is not surprising, therefore, that Boelen (1993) is led to implore, in his remarks to the World Health Forum, "If the medical profession is to continue to play an influential role in health policymaking and to be respected by society, it must definitely adapt to the health requirements now being expressed by political decision-makers and health consumers."

Physicians familiar with the complexities of the current health care delivery system are better able to provide quality patient care. In addition, training in health policy enables caregivers not only to react and comply with policy but also to advocate for their patient's needs and to shape policy with an understanding of the larger issues at stake. Exposure to the tools and concepts of organization and management will enable those suitably educated to participate in the process of formulating and implementing policies favorable to both patient and community (Enthoven and Vorhaus, 1990). The key to substantial change lies in developing these tools for our nation's physicians and "physicians to be." This chapter is focused on building the argument that "to prepare future physicians to practice more effectively in the complex and evolving health care environment, medical schools should educate all students in health policy" (Clancy *et al.*, 1995).

To understand why health policy education in medical education is important, I present a brief review of its constituents.

WHAT IS HEALTH POLICY?

A policy is broadly defined as "a plan or course of action, as of a government, political party, or business, intended to influence and determine decisions, actions, and other matters" (*American Heritage Dictionary*, 1996). Therefore, inherent in its definition, policy contains a larger scope than simply health laws. Rather, it also contains "perspectives of political, social, economic, legal, and organizational theory" (Marinker and Peckham, 1998). Thus, although we commonly associate policy with state and national legislation impacting health care, the broader definition conveys guidelines to lead the administration and regulation of the commonwealth.

More simply put, health policy allows formulation of a plan for the improvement and maintenance of public health, insofar as the "state of complete physical, mental, and social well-being" (World Health Organization's Constitution, 1948) can be achieved using finite resources (Loefler, 1999). Furthermore, health policy is a vitally important "vehicle for behavioral change and prevention" (Jackson, Lee, and Samet, 1999) and an important determinant of individual and population health patterns (Kaplan and Lynch, 2001).

Another definition of *public health* has been defined by an Institute of Medicine committee (1988) as a mission, "the fulfillment of society's interest in assuring the conditions in which people can be healthy." This mission is "an ideology, a profession, a movement, or a set of actions" by both individuals and the community to prevent disease and promote health (Savitz, Poole, and Miller, 1999).

WHAT IS MEDICAL EDUCATION?

Medical education commonly refers to the 4-year programs leading up to the conferment of the medical doctorate or doctor of osteopathy degree, but also includes all aspects of physician training. Therefore, it includes all students in degree-granting programs, residents and fellows in postgraduate training programs, and professionals in active practice.

Further discussion of how changes are made in medical education requires a perspective not only of where we are today but how we got here. The challenges that face medical colleges mirror the same battles being fought to reform the health care industry, and a discussion of one cannot occur in isolation of the other.

A Brief History of Medical Education

In the nineteenth century, medical education consisted largely of apprenticeships with existing medical practitioners. Without standardized instruction, however, practice guidelines and quality of care varied significantly even within the same geographic locales. Advances in the basic sciences and their complex ramifications on clinical care fostered a shift in medical instruction to larger institutions with greater facilities and resources. Nevertheless, these colleges of medicine were still diverse in their curricula, length of training, and teaching capabilities. Some of the better colleges of medicine built laboratories and attempted to institute a third year with practical laboratory experience. Other colleges resisted applying these educational innovations, fearing the loss of tuition revenues from a drop in student enrollment precipitated by the additional educational time requirements. At that time, tuition supplied these colleges with their primary revenue stream. The need for educational standards became magnified in this environment of experimentation. A more in-depth and thorough history of medical education may be found elsewhere (Ludmerer, 1999).

The mid-nineteenth century saw the foundation of the American Medical Association (AMA) as an initial step toward educational reform. Accordingly, the man widely regarded today as the father of the modern American medical school, Abraham Flexner, helped sound this call for reform in medical education at the turn of the century (Fischer, 1999).

Abraham Flexner was a member of a prominent Louisville, Kentucky, medical family. He spent his lifetime interested in education. After attending Johns Hopkins University, he returned to Louisville as a teacher, founding and becoming headmaster of an excellent women's high school (the Collegiate School) in Louisville. Flexner, however, maintained his connection with Johns Hopkins University, and his interest in American medical education continued to dominate

his thinking. In 1908, he applied to Henry Pritchett, the chair of the Carnegie Foundation, for a position.

At the beginning of the twentieth century, the philanthropic leadership of the United States, as exemplified by Rockefeller and Carnegie, began to focus on improving education in general, and medical education more specifically, by providing resources towards these goals. In 1902, John D. Rockefeller created and endowed the General Education Board. The board members initially were academic leaders and confidantes of Mr. Rockefeller. Not to be outdone, Carnegie instituted the Carnegie Foundation for the Advancement of Teaching in 1906. Henry Pritchett, the president of Massachusetts Institute of Technology, became president of the Carnegie Foundation. Pritchett assigned the newly hired Flexner the task of reviewing medical education. In 1907, Flexner had reviewed the American college system in a report that had been poorly received.

Subsequently, AMA President Bevan approached the Carnegie Foundation, urging it to review what the AMA thought was a suboptimal state of medical school teaching. The result, in 1910, was Bulletin No. 4 of the Carnegie Foundation, published by Abraham Flexner with a foreword by Henry Pritchett. Also known as the Flexner Report, it was a wholesale condemnation of medical school education within the United States, urging the closing of many proprietary medical schools and advocating reform of the remainder. In truth, far fewer were closed than intended, but most were reformed (Fischer, 1999).

The Flexner Report codified the tripartite mission of every modern medical school: education, research, and patient care. This unitary model proposed more standardization in premedical requirements, curriculum structure, educational formats, faculty qualifications, and the conduct of clinical training. Even with a road map, reform is not easy, and it always takes time. Dr. Kenneth Ludmerer (1999), in his book on the history of American medical education, describes the period from Flexner's landmark report to World War I as American medical education's first revolution. These educational reforms were the culmination of an intellectual, social and economic revolution that allowed the forging of a social contract. "Society would provide the necessary financial, political, and moral support of medical education and research" (Ludmerer, 1999). In return, medical colleges would remain steadfast in their primary duty to the service of humanity. The measure of success for these colleges of medicine would be "the quality of their academic work and their success at ensuring that medical practice in America was conducted according to high, professional determined standards" (Ludmerer, 1999). In retrospect, few today would deny that the changes resulting from the first revolution in medical education have enabled physicians to deliver better care.

Medical school budgets rarely reflected their tripartite mission equally and changed as both society and revenues changed. The period from World War I to World War II, the educational era, continued to emphasize teaching and learning,

as tuition revenues remained the main source of revenue. The power of medical science was exemplified by the success of life-saving antibiotics like penicillin, which encouraged continued research and public funding into these arenas. After World War II, in the research era, research supplanted teaching in budget allotments, reflecting the remarkable increase in federal grants and contracts available through the growth of the National Institutes of Health.

The clinical era, which followed the passage of Medicare and Medicaid in 1965, came about as "millions of ward (charity) patients became paying patients overnight" and clinical revenues grew to exceed research and education revenues. In addition, growth of the educational enterprise was spurred by essentially unrestricted federal matching funds for construction and renovation of facilities by the Health Professions Educational Assistance Act of 1963 (additional bills were passed in 1965, 1968, and 1971) (Ludmerer, 1999).

> During each of these three eras, medical schools experienced enormous growth. In 1910, a leading medical school might have had a budget of $100,000. By 1940, that budget typically had grown to $1,000,000; by 1965, to $20,000,000; and by 1990, to $200,000,000 or more. At most schools, growth was unplanned and by accretion, with new programs piling on top of existing ones. By the 1980s, medical schools were no longer cohesive organizations. Education, research, and patient care, once interrelated activities held in some sort of balance, had each been magnified to the point that they could no longer be readily balanced with each other. (Ludmerer, 1999)

Thus, the social contract between medical institutions and society perpetuated itself with continued success. Policies that reflected the will of society at each time during this century shaped not only the structure of the colleges of medicine but the medical enterprise as a whole. Unfortunately, the unplanned growth of the medical enterprise as a whole has had unintended, unforeseeable consequences for the state of medical education today.

CURRENT STATE OF MEDICAL EDUCATION

Society, with different demands, needs, and a radically different demographics from the turn of the century, has broken its contract with its medical schools. Society no longer provides the type of financial, political, or moral support for medical education that it did previously. Many academic centers find their ability to cross-subsidize education, research, and charity compromised by present market forces.

To a large degree, the most important factor in clinical education has been ensuring environments "where learners were provided sufficient time with patients so that patients could be studied and understood" (Ludmerer, 1999). This cannot happen if patient visits and stays become even more restricted and abbreviated. In its annual assessment, the Liaison Committee on Medical

Education (LCME) has commented on these environmental factors impacting medical education:

> Ongoing changes in the health care environment, including hospital mergers, government regulations, and payer policies, have the potential to limit the number of patients available for teaching and the ability of students to actively participate in patient care. During 1999, 1 or more of the hospitals used for core clinical clerkships at 18 medical schools (15% of total) merged, were acquired, or closed. This is less than the number in recent years. Thirty schools were affected by mergers during 1998, 35 schools in 1997, and 47 schools in 1996. Six schools (5%) noted that during 1999–2000 the number of inpatients available for teaching had decreased across all clinical sites and in all disciplines, 59 schools (47%) had decreases at some sites or in some disciplines, and 60 schools (48%) were unchanged or had increases. Thirty-two schools (26%) reported that regulations set by payers, such as Medicare and managed care companies, had resulted in limitations on the ability of medical students to perform histories and physical examinations or procedures on patients under supervision. (Barzansky, Jonas, and Etzel, 2000)

These cost-containment efforts not only constrain the physician but also limit the amount of time students can spend with and learn from a patient. In addition to cost considerations and industry consolidation, more nonphysician health care providers are gaining power. Medical schools have not only moved to a more generalist-oriented system but have expanded their programs and partnerships in research and clinical care to keep apace of advances in science and medicine and to broaden the educational experiences of students through the addition of new pedagogic approaches and sites of training. For example, more clinical instruction takes place today not only in the inpatient and outpatient units of hospitals, but also in community settings and other point-of-care areas.

Yet, these changes add complexity in the design and fulfillment of educational objectives. The dispersed nature of clinical education requires additional effort and new methods to ensure all students are meeting the educational objectives regardless of training site. The past few decades have also seen medical school curricula reorganize to provide more integration of basic science instruction around clinical problems and organ systems as opposed to traditional discipline-based instruction. Yet, integrated basic science curricula require a greater degree of cooperation and communication among departments than in discipline-based curricula in order that content is appropriately covered and unplanned redundancy minimized. Such curriculum changes demand an "integrated institutional responsibility for the design and management of a coherent and coordinated curriculum" by the medical school (Barzansky, Jonas, and Etzel, 2000).

Medical School Accreditation

Although control of the curriculum is the duty of the individual medical college, each must conform to national standards set by the LCME. The LCME was

formed in 1942 by the Association of the American Medical Colleges and the Council on Medical Education of the AMA for the purpose of accrediting medical education programs leading to the MD degree in the United States and Canada. The LCME evaluates educational programs according to standards for organization, function, and performance but does not attempt to stratify institutions according to their characteristics. It does attempt to maintain an assurance of educational quality through accreditation.

The accreditation process requires that medical schools specify their educational objectives, organize their programs and resources to accomplish these objectives, and establish procedures to account for the extent to which the objectives are achieved. Quality assurance in U.S. medical schools is based on an ongoing process of assessment within the framework of LCME standards, undertaken by a school's own faculty ("institutional self-study") and validated periodically by a team of outside evaluators appointed by the LCME. Formal reviews of accreditation are performed every 7 years, but the required system of accountability ensures frequent reports on the structure and performance of the educational program.

In the United States, accreditation vouches for the effectiveness of a given educational program to engender professional competency in ways that go beyond what might be measured or inferred from licensing examinations alone. LCME standards for accreditation establish an academic context and specify such requirements as the academic cohesion of the faculty, centralized design and management of the curriculum, functional integration of geographically separate campuses, evidence that dispersed educational experiences are similar in educational quality, and evidence that the medical school controls its academic programs in affiliated hospitals. Although a few other countries are currently developing an American-style system of accreditation, most countries largely sidestep assessment of the educational process and merely accept graduation from a medical school and passage of required examinations as sufficient evidence of preparedness for practice.

The process of accreditation, particularly its focus on the assessment of educational outcomes, has been instrumental in improving higher education in the United States. Commenting on the effect of accreditation on the education of physicians, the Pew Health Professions Commission stated that accreditation and licensure have provided a "legacy of improved academic programs." A review of the influence of accreditation on educational changes in U.S. medical schools during the past decade shows that the LCME has encouraged educational reform, fostering stronger institutional oversight of and accountability for the curriculum, greater coherence of instruction in basic and clinical sciences, and the use of pedagogic methods that are more likely to cultivate habits of self-assessment and lifelong learning. It is no accident that U.S. medical schools have achieved results that are unmatched elsewhere in the world: 97% of students admitted to U.S. medical schools subsequently graduate from them; 95% of the graduates are

accepted into residency programs; 95% of residents complete their programs; and 94% of students and graduates pass licensing examinations on the first try (Kassebaum and Cohen, 2000).

In its document "A Structure and Function of a Medical School," the LCME (2001) states that "a medical school also must contribute to the intellectual growth of its students and faculty through scholarly activity, including research in the biomedical sciences, the cultural and behavioral aspects of medicine, health services, health policy, preventive medicine and health maintenance, and the process of medical education itself." Nevertheless, the LCME fails to state a specific objective for achieving health policy awareness, so no national educational standards exists.

As we have seen, the modern college of medicine is a large, complex enterprise. For better or worse, complexity yields diversity, so each medical school offers a vastly different array of resources, primarily in the three key resources of faculty, facility, and funding. For example, schools differ in their relative emphasis on each aspect of the tripartite mission in budgeting and appropriations, which reflects in the differential in faculties, enrollments, and tuitions. And "while the quality of education is partly determined by the organization of programs and adequacy of resources, it also depends on the dedication of the faculty to teaching and to creating an environment conducive to learning" (LCME Web site, *www.lcme.org/faqlcme.htm*). Computer-aided instruction, a rich repertoire of teaching case reports, and standardized patients are part of the modern educational initiatives to enrich the more limited patient encounters commonplace in today's environment. Without a clear direction toward the future orientation of health care organizations, a considerable diversity in vision, mission, and goals has become apparent between institutions. LCME citations about concerns with strategic planning and educational objectives have grown 10-fold in the 10 years from 1986 to 1996 (Kassebaum, Ellen, and Eaglen, 1997a). Yet in the maelstrom of health care lie the foundations of a second revolution in medical education.

MANDATE FOR HEALTH POLICY EDUCATION IN MEDICAL SCHOOL

Role of Medical Education on Health Care

Health policy education takes a wide variety of forms from institution to institution. Students too have a growing awareness of the importance of "a full appreciation for political, economic, and social influences on health care" (Makoul, Curry, and Thompson, 2000). Despite considerable progress, most graduating medical students continue to feel inadequate not only when dealing

with medical care cost-control issues and cost-effectiveness (Blue *et al.*, 1999; Campbell *et al.*, 2001), but also in their understanding of the nation's health legislation. Still, schools with instruction in ethical problems in medicine as a separate required course exhibited a high significance of association between hours spent in medical socioeconomics and medical ethics instruction and medical graduate ratings of adequacy (Kassebaum, Ellen, and Eaglen, 1998).

The considerable diversity in society, in health care, and in our medical schools forces us, as was done at the turn of the twentieth century, to consider fundamental issues of who, what, how, and where students are taught (Barzansky, Jonas, and Etzel, 2000). Despite the presence of a national accreditation body, the LCME, we continue to lack a national educational standard for health policy education. But the fact that certain standards are not accounted for consistently is "as much the fault of ambiguities in their construction and failure by the LCME to highlight their importance, as it is the result of institutional laxity" (Kassebaum, Ellen, and Eaglen, 1997). LCME objectives are general by construction to permit freedom of interpretation, but the omission of a specific health policy objective is counterproductive to the development of current health imperatives. Increasing complexity, combined with the dilemma of rising patient expectations, results in a dichotomy between what we are able to ensure and what society expects.

Besides the lack of a national standard, a number of factors preclude including increased education in health policy and practice management skills. Given the preceding discussion of fiscal restraints, funding may not be available for additional faculty and resources to commit to these areas of instruction. Next, with the already substantial and ever-expanding amount of basic science material taught in medical school, there is little time remaining within the curriculum to incorporate policy education. Furthermore, altering the curriculum takes time so current medical students would not be prepared in time to receive the information they need for their careers (Martin *et al.*, 1996).

The impact of medical education on the structure of medicine was framed by Dr. Morris Fishbein during the historic meeting in 1942 that served as the birthplace of the LCME.

> Medical education is just one part of the great medical structure in the United States which begins with students coming up and men going out into practice, and it involves the hospitals and the provision of medical service to the public. Now anything that the medical colleges do has vast implications for the whole structural scheme of medical service in the nation. If, for instance, medical colleges provide an over-supply of poorly trained doctors, then the entire scheme of medical practice in the United States suffers. If the medical schools limit too greatly the number of doctors produced, obviously that again will definitely affect the entire medical structure of the United States.... [It] is absolutely vital that every action taken by the medical colleges in relation to standards, the number of students, the method of education, and everything they do, should be suitably integrated with the whole medical scheme... and for that

> very reason there is needed a complete integration of the work of the medical colleges... and an understanding between the Council of Medical Education and the Association of Medical Colleges. (Kassebaum, 1992)

It then follows logically with the profound impact medical colleges have on the nation's medical structure that broader educational objectives incorporating health policy would advance the continued development of patient-centered policies that are both "efficient and medically rational" (Clancy *et al.*, 1995).

Assembly of the products of public health advocacy occurs via three stages: information, strategy, and action (Christoffel, 2000; McKinlay and Marceau, 2000). The information stage centers on awareness. Strategy formulation necessitates educated discourse and debate. "Many of the most significant advances in public health policy can be made only in the context of a political debate" (Collins and Coates, 2000). We require an open and educated discourse on issues such as cloning and genetic engineering, or the controlled and judicious use of antibiotics to minimize resistance (Carbon and Bax, 1998). Political action should then follow accordingly as dictated by need. Thus, medical education is the critical foundation of public health advocacy, whose most profound impact is realized when it changes the very nature of the national political discussion.

Increased exposure to health care finance and policy in medical school also will lead to a greater number of physicians able to "constructively engage in the political and organizational changes" (Weitekamp, 1998) necessary for our profession to meet present challenges. Physician involvement in these areas will help to retain a patient-centered perspective in policy decisions and will add to the continued development of policies that are both efficient and medically rational. A combination of scientists, physician advocates and community activists helped reform seat belts, motorcycle helmet laws, and public smoking prohibitions. Evidence suggests that policy decisions made without the specific involvement of practicing clinicians do not consistently reflect sound clinical judgment. In Florida, a group of physicians recognized that the Medicare admission criteria for diabetic patients were potentially dangerous and collectively fought for review of these criteria (Clancy *et al.*, 1995).

Even within health law, a number of challenges exist requiring educated discussion. One of these challenges involving health law is how to expedite law so desirable rules and procedures are more rapidly adopted. It is argued that the traditional process of generating law in a new area through litigation is "too slow for dealing with the adoption and use of evidence-based medicine" (Marwick, 2000).

The benefits of health policy involvement also include fulfilling the moral, ethical, and professional obligations of health care professionals. The Modern Oath of Hippocrates dictates that the physician "will treat without exception all who seek my ministrations, so long as the treatment of others is not compromised

thereby." Thus, implicit in the Oath is an admonishment to provide care without regard to the ability to be compensated. Thus, the Oath itself is a policy statement. The Oath also promotes patient advocacy, service to others, and placing the interests of patients before those of the profession. If this were not the mandate, care of the individual patient would involve rationing of care and allocation of time and resources among individuals. "Clinicians should be willing to challenge the system when it is in a patient's best interest to do so" (Fletcher *et al.*, 1997). Thus, although the wording of the Oath itself has not changed, the modern interpretation of its scope regarding our duties as physicians has clearly broadened.

In the past, physicians have fulfilled this obligation prescribed by the Oath by actively promoting national vaccination programs, awareness of the dangers of smoking, the fluoridation of water, and screening programs ranging from phenylketonuria to colon cancer. At present, cost containment and access to care also are public health issues that significantly affect individual patients. Thus, physicians have an ethical imperative to advocate for the interests of individual patients at a policy level (Clancy *et al.*, 1995).

EDUCATIONAL INITIATIVES IN HEALTH POLICY

The LCME, addressing criticisms in the early 1990s regarding its perceived antipathy toward educational and administrative innovation (Kassebaum, Ellen, and Eaglen, 1997b), now states that "in view of the increasing pace of discovery of new knowledge and technology in medicine, the LCME encourages experimentation that will increase the efficiency and effectiveness of medical education."

Instituting change at the level of the medical student has inherent advantages. Some have argued that awareness and change need to occur at the medical undergraduate level because adaptations to change are more natural for them than for established physicians. The difficult act of balancing between already established patterns of practice and new patterns evolving from managed care arrangements makes it difficult for these established physicians to respond to change (Mohammadrez *et al.*, 1999). Medical student training needs to foster development of realistic attitudes and expectations so students not only respond appropriately to demands or predict changes, but also are able to shape practice guidelines.

On the other hand, one of the bright hopes for medical education is simply in its student constituents. As Dr. Ludmerer (1999) notes, "Throughout the century, the high quality of American medical education depended far less on the formal curriculum than it did on attracting motivated, capable students and providing them unfettered opportunities to learn." With the blunted allure of financial gain,

applicants today possess a more genuine devotion to altruism and service. Medical school entrants continue to exhibit a high degree of self-motivation and academic excellence. Although there has been some decline in minority applicants, gender diversity has equalized recently (Barzansky, Jonas, and Etzel, 1999). Accordingly, changes in policy concerning admission criteria are powerful factors that affect the future of medicine. Therefore, one way of ensuring the needs of the society that the medical school serves is to strive to achieve a body of medical practitioners who are representative of the community being served.

One Early Initiative

One of the earliest programs of health policy education was begun at the 6-year BS/MD curriculum at the Northeast Ohio Universities College of Medicine by C. William Keck, MD, MPH. Keck began the students' "community" education in the summer of 1976 by developing a required 8-week practicum, a course still taught today between freshman and sophomore years. The course uses a team-based problem-solving approach to analyze a community problem, gather data, and develop a solution. Each team consists of a community preceptor from a local agency, a medical school faculty member, and a small team of students. A few years later, Dr. Keck added a new twist: The teams competed for block grant money in a mock legislative hearing presided over by actual state legislators. "People remember this practicum," said Keck, "because it's often the first time they've had to problem-solve, particularly in front of a legislator." The goal of the program was to impress the relevance of a community orientation and the value of community teachers on the young medical students—most of whom were only 18 or 19 years old—"before they got too old and cynical" (Lasker and the Committee on Medicine and Public Health, 1997).

Health Care Reform Day

In "A Call for Health Policy Education in the Medical School Curriculum" (Clancy *et al.*, 1995), Harvard Medical School advanced its "Health Care Reform Day (HCRD)" as a way to ensure the inclusion of health policy education among their medical students. It designed the HCRD as a single day designed and organized by students aimed at the following goals:

1. Creating a forum to facilitate understanding of the broad issues of the health system reform debate
2. Including the diverse perspective of the medical school community, with participation by faculty and affiliated experts in health system reform

3. Defining those broad areas of health policy that can be meaningfully addressed within a medical school curriculum

With the support of the faculty as advisors and participants, students identified four health policy topics to be discussed in each forum. These topics took the form of resolutions regarding graduate medical education, biomedical research, health care financing, and the ethics of rationing. To raise awareness of pertinent health issues, "Facts of the day," derived from health policy and lay literature, were posted in the weeks preceding HCRD. Selected articles also were distributed to provide general background and opposing perspectives on the resolutions.

> In addition to making the day accessible to all students, we sought to simulate the difficult process of consensus building and legislative enactment. After hearing 5-minute introductions to the four resolutions by pairs of faculty with opposing views, participants adjourned to one of four committee discussions, each of which focused on a separate resolution. In committee, the parliamentary format was used to debate and amend the resolutions into a form the committee could recommend to the general assembly. The committee debates were moderated by students, with faculty experts in attendance to provide factual information. The general assembly reconvened, and each resolution was presented in amended form with the committees' recommendation. A brief period of discussion followed, and all of the participants voted on each resolution. (Clancy *et al.*, 1995)

Although the program succeeds in providing the crucial "initial framework for students to consider complex health policy issues that will affect their future medical careers" (Clancy *et al.*, 1995), devoting only a single day to consider the range of health policy issues is woefully inadequate, though both practical and economical. An inherent weakness of the 1-day strategy also lies in permitting medical students to pick their own areas of interest in health policy. Few medical students, particularly while training in basic sciences, have adequate exposure to the practical issues facing medicine to be conversant enough to educate one another. Moreover, this student selection of topics inherently lacks a cohesive, integrated focus.

Nevertheless, by promoting dialogue about health policy issues, HCRD serves as an important educational model. The State University of New York Health Science Center at Brooklyn subsequently adapted this format by making their Health Care Policy Forum (HCPF) an extracurricular student organization. "A primary advantage of HCPF's being outside the formal curriculum is that guest lectures may be invited from among legislators, medical society officials, community physicians, administrators, and others. The diversity of guest lecturers thus provides faculty, house staff, and students multifaceted exposure to policy issues" (Martin *et al.*, 1996). The disadvantage of this format is that only some students gain exposure to these important topics.

Pennsylvania State University Initiatives

The following sections provide an overview of the Penn State University program to provide medical students with a social perspective on health care issues.

Year 1: Health Policy and Legislative Awareness Initiative

Similarly, Pennsylvania State University College of Medicine also offers a student-run "Health Policy & Legislative Awareness Initiative" program similar to the HCPF just described. The program primarily involves first-year medical students in 8–10 weekly hour-long didactics or open forums from guest lecturers ranging from hospital administrators to state legislators. However, these noontime lecturers are not limited to students and attendance is open to employees of the medical center as well. A collection of background articles is provided to program participants.

In addition, the College of Medicine enjoys close proximity to the State Capitol. As part of this extracurricular initiative, students are divided into one- or two-person groups and assigned to meet several times with a state legislator. Students are also requested to research a health bill, and ideally, observe as it moves through the legislative process. In the least, a visit to the State Capitol and attending a House of Representatives session is required.

Year 2: Health Care Delivery Module in the Course Patients, Physicians, and Society

Pennsylvania State also offers a Healthcare Delivery Module integrated into the second-year medical school curriculum as part of the 2-year Patients, Physicians, and Society course. The module involves four sessions with assigned readings and an hour-long didactic followed by faculty-moderated small group discussion. One session includes presentations by legal professionals, while another incorporates panel discussion that included the medical school dean, the health system's CEO, the President of the Peoples' Medical Society, the President of the Central Pennsylvania Physicians' Organization, and a corporate director of compensation benefits. Topics included health care macroeconomics, physician workforce issues, medical risk management, and the future of health care delivery.

Year 3: Clinical Perspectives on Health Policy

Although clinical experience guarantees exposure to health policy issues, the medical school builds educational objectives to further understanding of public health issues. Requiring students to rotate through a practice in an underserved or rural area addresses the issue of access to care through the primary care

initiative. Efforts also are taken to incorporate experiences in community outreach or government health programs during the family medicine rotation.

Year 4 and Beyond

Additional opportunities for students to pursue health policy issues are incorporated as options for their mandatory fourth-year humanities elective.

The dedication of the organization to its educational mission combined with some unique resources of the medical school, such as its convenient location near a State Capitol, gives an excellent example of how students may achieve broad exposure to health policy issues while still in medical school.

MODELS FOR EDUCATION

As we have seen, most educational initiatives focus on changing the educational experience of medical students. National efforts to uncover and recommend policy changes according to success of these educational experiments, such as the ones described above, are occurring within the LCME and at centers like the American Association of Medical Colleges' Center for the Assessment and Management of Change in Academic Medicine (CAMCAM). Once again, we see that the diversity of educational initiatives is impressive. Some programs offer select opportunities to students to participate in extramural community service volunteer opportunities or elective courses and rotations. Others incorporate a broad perspective in the school's mission and structure, instituting courses, rotations, or practica that are required of all students. Educational initiatives can be broadly classified as follows:

- Intrainstitutional curriculum changes
- Dual-degree programs
- Interinstitutional initiatives involving personnel with dual appointments between schools or programs
- Multiresource initiatives involving academia, medical and public health sites, and the broader community (Lasker and the Committee on Medicine and Public Health, 1997)

In the first model, a medical school incorporates public health skills or perspectives in its curriculum without interacting with schools or programs in public health, or with public health practice sites. The medical school faculty involved in these initiatives; however, usually have formal training in public health.

The second model is the dual-degree program, commonly conferring students either an MD/MPH, or an MD/MBA. The dual-degree medical education programs are said to help "develop physicians leaders who can blend clinical

management skills into an effective vision for the future of health care delivery" (Sherrill, 2000). Graduates from these combined programs are entering management in increasing numbers and at increasing levels of responsibility, a trend that portends well for the medical profession and the health care system (LeTourneau and Curry, 1998).

Collaboration is more pronounced in the third model, which connects faculty and students in different schools and departments. In this model, faculty may have a dual appointment in both medicine and a school of public health and may teach courses in each school, either alone or combined. This type of collaboration also leads to the development of cross-sectorial centers for research and training in areas such as nutrition, injury control, infectious disease, and cancer.

The fourth model establishes connections not only between the two health sectors' schools and departments, but also between academia, medical and public health practice, and the broader community. When dual appointments occur in this model, the health professional often serves as a faculty member at a school of medicine and as an official in a local health department. Cross-sector links between academia and practice develop from faculty and students in their interactions with health departments and community health centers. As we have seen, educational trends are moving toward broader adoption of this fourth model.

In some instances, students from a range of schools, such as medicine, public health, nursing, and allied health, work together in interdisciplinary teams, sometimes for prolonged periods. These teams rotate through settings that coordinate individual-level services. They also participate in projects to assess and address community health problems. By working in teams, students see first hand what professionals in the other health sector can offer and how that expertise is relevant in their own work. This experience helps promote respect and understanding among professionals in different health sectors and provides the students involved with valuable contacts for the future.

Initiatives to educate students have the positive side effect of educating the faculty or health professionals participating in these initiatives. At a formal level, an increasing number of academic institutions are offering MPH, MBA, or MHA programs geared to medical professionals who are actively in practice. Some managed care organizations are establishing "managed care colleges," which provide their medical professionals with practical population-based skills and interdisciplinary team experiences.

CONCLUSION

In our exploration of health policy in medical education, we have seen that health policy has never existed away from medical education as a separate issue. Each necessarily shapes the form of the other. As the turbulence of the present times

suggests, we still have a great many challenges to address. Prominent among these is the "slow erosion" of American health insurance coverage underscoring the inequities of our access to health care (Kuttner, 1999). Appropriately educating our physicians will help us rebuild a spirit of collaboration and strengthen our inner ties; even as we build cross-sector relationships among our policymakers, our industry buyers and suppliers, our substitutes, and our competitors. We will require the worthwhile efforts of all parts of society to reforge our tattered social contract.

This second revolution in medical education will be grounded in a conceptual framework and a set of desired outcomes, as at the beginning of the century (Barzansky, Jonas, and Etzel, 1999). Part of this framework must include a way to empower physicians to make substantive contributions to health policy. As we rebuild our educational foundations, we can be assured of greater certainty. Educational reform will allow us to take that first important step in regaining control of our fate through a renewal of our oath to the service of humanity.

Recommendations for the Future of Medical Education

- Formulation of a national educational objective for health policy
- Incorporation, both informal and formal, of health policy topics and discussions into the medical curriculum
- Development of new educational programs to allow existing practitioners to increase health policy awareness
- Advancement of cross-disciplinary teams that not only educate, but also engage their members in the political process and community health measures
- Increased strategic planning, cooperation, and collaboration among health professionals in an effort to improve patient care

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CHAPTER 17

Healthy Communities

Health Care for All of Us

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HEALTHY COMMUNITIES: INTRODUCTION

The healthy communities movement began in the United States in the mid-1980s, and it has grown rapidly during the 1990s. The movement's vision was to improve the health and quality of life in communities throughout the country. The premise was that if the communities in which people lived were healthier, then the burden would be shifted from the overextended health care system, including areas that are sponsored by both government and private sectors. People would become more responsible for their own health and the health of those people who lived in their community and less dependent on government programs and dollars. The American Association for World Health defined the movement as follows:

> [It is] based on improving the health and well-being of the community through a collaboration of public, private, and voluntary agencies and organizations. The idea builds on the assumption that local structures and policies can have a profound effect on the overall quality of life for all individuals in the community. Developing a healthy community requires the cooperation of many sectors of the community. This includes

public health, housing, business, elected officials, transportation, waste management, urban design, economic development, social services, healthcare and citizens.

This chapter focuses on building healthy communities and on delivering beneficial outcomes from doing so. We discuss the past, present, and future conditions of the movement. The Pennsylvania experience of the movement is highlighted to provide a context for healthy communities.

THE NATIONAL CIVIC LEAGUE

The National Civic League has been the national organization leading the healthy communities movement in America since the mid-1980s, and it has produced outstanding information and support materials for communities and universities. The league has also been the leading consultant on many state and regional efforts to create healthier communities, and its experiences are well documented for educational purposes.

HEALTHY COMMUNITIES: PAST AND PRESENT

The road that the healthy communities movement has traveled has been anything but a smooth one. Challenges and roadblocks have been commonplace. Without the perseverance and commitment of its leaders, the movement would have foundered years ago. The interest started because people recognized that a large number of communities across our country were devastated. Responding to severe economic issues, individuals realized that new approaches to rebuilding their lives and their communities were essential to survival. Without these new approaches, the devastated communities would only get worse, becoming solely a government problem both costly and ongoing (Kretzmann and McKnight, 1993).

Small groups and several national and state associations started the healthy communities movement in the early 1990s. They began with small pilot programs throughout the country, and the movement grew into something of much more substance. In 1998, the U.S. Department Health and Human Services became much more involved, and it was its involvement that became a true catalyst for the initiative. Several departments, the Office of Public Health and Science, the Office of Disease Prevention and Health Promotion, and the Public Health Service banded together to introduce their campaign and to challenge local leaders to create a healthier community. They sent out the following letter to leaders who had already expressed an interest in participating:

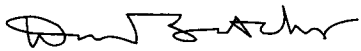
> Dear Colleague:
>
> Congratulations! You, like millions of other individuals and organizations around the world, have accepted the challenge of creating a healthy community. Your task is large, but the rewards are real and measurable.

As we move toward the next millennium, the concept of a healthy city/community is gaining momentum in the United States and worldwide. A healthy city or community is one that embraces the belief that health is more than merely an absence of disease, it includes those elements that enable people to maintain a high quality of life and productivity.

This guide is a tool for you to use in nurturing those elements that make your community healthy. It presents an overview of the process of forming a healthy community coalition, creating a vision, and measuring results. A selected list of Healthy People 2000 national health promotion and disease prevention objectives is included to help you form your healthy community agenda and measure the success of your efforts.

Individuals and organizations have a definite role to play in advancing the health of the people of this Nation and the world. Many are doing just that by forming local healthy community coalitions. I encourage you to join this effort to create a healthier nation. I hope you find this guide especially helpful in creating lasting partnerships dedicated to improving the health of your community.

Sincerely yours,



David Satcher, M.D., Ph.D.
Assistant Secretary for Health and Surgeon General
(Copy of letter obtained from http://odphp.osophs.dhhs.gov/pubs/healthycommunities/hcomm2.html.)

That coalition proceeded to provide interested parties with a packet designed to assist community leaders in implementing a healthy community initiative. Their guidelines were done in an easy-to-follow format that allowed little room for failure. According to their information, the following steps are imperative in getting the healthy communities project started:

- Getting the right people involved
- Evaluating communities' needs and assets
- Creating a vision
- Creating successful partnerships
- Obtaining resources

Getting the right people involved is essential to effectively implementing any program. A key principle of this initiative is that people on any level in the community could be instrumental in getting this program up and running. Each person has different talents, and the success of the initiative rests on the talents of everyone involved. There also are many different entry points; a small group may start the initiative, but it takes many more people to ensure the success of a program. Each program needs at least one key person to monitor the entire program and to pool all of the resources and talents.

Evaluating the communities needs and assets can be a very tedious process but is crucial in achieving success. One can develop an exceptional educational

program for homeless children that would be worthless in a community without a homeless population. The community assessment includes interviewing community members, gathering information from local government and local libraries, studying the demographics of the community, and learning about existing community resources. Interviewing community members is, perhaps, the most important step of all because individuals must recognize the need for change if they are expected to work for it. Many communities find that holding town and community meetings is a successful strategy for facilitating this process.

Creating a vision is essential to any change initiative. The community needs to visualize where it wants to be 5, 10, or even 20 years into the future, and how any program it chooses may need to evolve into the future. Without a common vision, which can energize the process, change would be almost impossible to sustain (Kretzmann and McKnight, 1993). "Health visions state the ideal, establish a stretch, link explicitly to strategies, inspire commitment, and draw out community values..." (Institute for Alternative Futures, 2001, p. 3).

Creating successful partnerships also is a huge factor in this equation. Each partnership can bring unique assets to the project. These partnerships should be developed with religious institutions, cultural organizations, associations, libraries, schools, police, hospitals, businesses, and colleges. There are many untapped resources in a community that could help make any initiative successful. Sustaining the interest of all of these partners is crucial and can be done in a number of ways. The key is to show each institution how they are unique and can bring their own special identity to the program.

The Department of Health and Human Services initiative, mentioned earlier in this chapter, believes there are seven steps in successful partnership building:

- Define problem
- Determine priorities
- Set realistic goals
- Create a shared vision
- Maintain good flow of information
- Leverage resources and expertise
- Measure progress and results

By following these seven steps and maintaining flexibility, the partnerships should be lasting and beneficial to all involved. As institutions see how involved others are in the community, the idea of becoming involved becomes much more enticing.

Finally, no initiative could be successful without obtaining appropriate resources. Successful programs rely on monetary resources, knowledge-based resources, and the donation of people's time. Some coalitions have been successful in obtaining funding through donations, and others have found fundraising

activities to be very successful. The goal is to become self-sustaining, and not to rely on government funding that is liable to change from year to year. Even with the best of intentions, a program lacking adequate public and private financial resources cannot survive.

By following all of these steps, most communities could be successful at implementing and establishing a healthy community initiative. There are so many potential resources that if the community has the desire and the vision, it can make it happen.

The Pennsylvania Experience

Pennsylvania has emerged as a leading state in implementing healthy community initiatives. One of us (J.A.R.) served as the founding chief executive of the Institute for Healthy Communities in Pennsylvania from 1995 to 1998. The Institute also produces the annual Directory of Community Based Partnerships, which is used to help the students understand the mission and primary focus of the communities that have launched partnerships in Pennsylvania during the past 10 years.

Facts about the Pennsylvania healthy communities movement:

- More than 70 community-based partnerships committed to improving the health and quality of life of citizens are active today in Pennsylvania
- Roughly 75% of the hospitals and health systems in Pennsylvania are major partners and leaders in community-based partnerships
- These hospitals and health systems have made significant financial and leadership contributions to support their community-based initiatives
- Most community-based partnerships have diverse member organizations from public, private, and nonprofit sectors that work together to create local solutions for local problems
- Community-based partnerships are recognized by city, county, and state governments as a significant means for citizen participation in decision making and public accountability
- More and more local, regional, and statewide organizations in Pennsylvania are making healthy communities a top priority

Health Care Reform and the Healthy Communities Movement

Improving the health of communities is increasingly viewed as fundamental to the mission and values of health care. All health care provider organizations have important roles in improving the health of their communities and managing

health status. Managing health status and improving the health of the community are important strategic objectives in the rapidly changing health care environment that is being shaped by a number of forces. These forces include the following:

The continuing growth of managed care
The necessity to control costs
The need to quantify community benefits
The public's perception of the health care industry
The threats that are facing their communities

Hospitals and health systems are major participants in the healthy communities movement, especially in Pennsylvania. Nationally the American Hospital Association, the Catholic Hospital Association, and Voluntary Hospitals of America have led and stimulated their members to become leaders in this movement. The Hospital Association of Pennsylvania and the Hospital Council of Western Pennsylvania have led the efforts in Pennsylvania. Hospitals and health systems bring three critical components to ensure the success of efforts to improve community health: leadership, resources, and volunteers. The most successful community partnership programs have strong support from the health care institutions that serve their community.

Since 1997 the health care sector has undergone tremendous change. Financial pressure is the most obvious challenge facing hospitals in Pennsylvania and nationally, and a critical policy question for hospitals and health systems is whether they can remain committed to leadership in the improving community health as part of their core mission. The Lehigh Valley Hospital and Health Network serves a population of 550,000 in mid-eastern Pennsylvania. This impressive regional effort continues in spite of operating losses from patient care operations at the present time.

Government Devolution and the Healthy Communities Movement

Our government's efforts to transform neighborhoods, fight poverty, build community, and improve community services are well documented by Lisbeth Schorr in *Common Purpose, Strengthening Families and Neighborhoods to Rebuild America*. The government devolution movement is occurring because of political and citizen unrest regarding the failure of the federal government to achieve stated goals and results. The premise is that state and local governments are by nature more efficient, more responsive, and more knowledgeable than the federal government about how tax money should be spent and services provided.

Supporters of devolution stress that block grants bring decision making closer to the people and make government more responsible and flexible. Pennsylvania has launched some important programs as part of its devolution efforts during the past few years, and some of them are ideal partners with the healthy communities

movement. Three specific examples of such initiatives are as follows:

The Pennsylvania Department of Health State Health Improvement Program (SHIP)
The Pennsylvania Department of Public Welfare reform program called *Family Services System Reform*
The Pennsylvania Violence Reduction Program called *Communities That Care*

Each of these programs requires local community cooperation to be successful, and all three are most successful when they carry out their programs through local community partnerships. These are the same partnerships that are leading the healthy community initiatives in their communities. The Department of Health SHIP, which is discussed in greater detail in the next section of this chapter, currently is working with 37 community partnerships and ultimately hopes to develop partnerships throughout the state. The SHIP emphasizes a root cause approach to the prevention of illness and disability, effectively engages communities to address local health priorities, and improves access to necessary data and information. The SHIP also encourages the coordination of resources, interagency cooperation, and increasing state responsiveness to local needs. To do this, the SHIP places emphasis on creatively engaging organized health improvement partnerships with broad-based, inclusive, and locally led organizations possessing a broad vision of what it means to have a healthy community.

State Health Improvement Plan: Pennsylvania

Pennsylvania is one of the states that have used the Healthy People Program to its advantage in developing its own program, the SHIP 2001–2005. Robert Zimmerman, the past Secretary of Health, was the primary author of this work. Pennsylvania used a three-pronged approach in developing its strategy:

- Assessment of health status by using data
- Dialogue with communities, stakeholders, and state agencies
- Evaluation of effectiveness of solutions through measurable outcome objectives

SHIP was a call to action of community leaders, health agencies, and local communities to collaborate on health issues. The plan focuses on three primary areas:

- The prevention of death, disease and disability by addressing the root or underlying causes of these conditions
- Engaging in meaningful ways with organized community health improvement partnerships to give communities greater voice in identifying and addressing local health priorities and solutions
- Improving access by communities to relevant health and health related data and information (Pennsylvania State Health Department, no date [online])

The goal of SHIP is to provide a "viable framework from which the Department of Health and its community partners can address health status improvement issues that have been identified on a state level" (Pennsylvania State Health Department, no date [online]).

Although the health plan was distributed to local governments under the guise of a state plan, the state also realized that it cannot be aware of every single issue plaguing local communities, so it encouraged community leaders to add their own initiatives to the plan as well. They also made it clear that the state government would work with them to address the individual local needs if the local governments needed assistance.

Pennsylvania's SHIP discussed the history of public health and how the department of health wants to assist the local communities. It divided public health into four simple characteristics:

- Community based
- Prevention oriented
- Science driven
- Interdisciplinary collaboration

These four characteristics also are the basis for the SHIP, in addition to the mission of the department of health, "to provide leadership to promote good health and healthy communities, prevent disease and injury, and assure the quality and availability of healthcare services for all citizens of the commonwealth" (Pennsylvania State Health Department, no date [online]).

As part of their Healthy Community Initiative, Pennsylvania identified eight priority public health issues:

- Meeting the needs of an aging population: Pennsylvania is second only to the state of Florida in the size of its aging population
- Counteracting the threat of bioterrorism: This issue is more pertinent today than it was when this document was established
- Reducing the threats of new and drug resistant microorganisms: More and more drug-resistant microorganisms are being discovered every day, including the West Nile virus
- Eliminating health disparities: Ethnic and racial minorities fare much worse in the health arena than others
- Expanding managed care/public health collaboration: With the growth of managed care in Pennsylvania in the past several years, the state must find new ways of partnering with these groups
- Developing and implementing a public health research agenda: The state will be increasing its research in four major areas, including, behavioral determinants, evaluation, disparities, and data methodologies
- Increasing collaboration with communities and state agencies: This is imperative to achieve desired levels of local programming and collaboration

- Addressing the challenge of medical errors: Ensuring that health care providers are following reporting regulations and sharing best practices with one another to ensure the safety of all Pennsylvanians who are in need of medical care

These issues were identified from extensive research, interviewing and data accumulation. It is amazing to think that this list was established in July of 2001 and how pertinent it continues to be today, especially with the recent threats of bioterrorism. These issues are listed in no particular order and all hold significant importance to the state continuing to run effectively.

Pennsylvania's SHIP really has three components:

- Focus on prevention through addressing underlying causes of disease
- A process for effectively engaging with local health improvement partnerships on a voluntary basis to address local health improvement priorities
- A commitment to supporting the data needs of local communities

Along with those components, the program has four goals:

- Increasing community empowerment by providing meaningful opportunity for community planning based on local needs
- Linking community based health plans with the allocation of commonwealth resources
- Establishing partnerships with local government to foster coordination of health resources along the entire health care spectrum
- Shifting the mode of community health planning from a prescriptive model to a shared responsibility model

The implementation of SHIP has been ongoing since 1999. The department of health has been working with community leaders and health care providers throughout the state to implement the program in the most effective way possible. Pilot programs were adopted, minigrants were used to get them started, and ongoing research and development has been done. Pennsylvania developed an Institute for Public Health that has been doing continuous training on the program and it's implementation. The program is continually in evaluation mode to determine best practices and share them with all who are participating.

Pennsylvania has become one of the leading states in the healthy communities initiative. Since its inception, the following have occurring:

- More than 70 community-based partnerships have become and remained active.
- Approximately 75% of the states hospitals and health systems are involved in the initiative.
- Most community-based partnerships have a diverse membership working together on this initiative.

- Local, regional, and statewide organizations are making healthy communities a top priority (Institute for Healthy Communities, 1997).

Pennsylvania, along with many other state governments, has made a true commitment to this program and the results are very promising. If Pennsylvania continues to work on its initiatives with the same dedication that it has to the present, there will be even greater strides made and the health of the entire state will improve even more dramatically.

Foundations

Foundations have made tremendous contributions to the healthy communities movement in the past decade. Pennsylvania currently has more than 300 foundations that exist to improve their communities ranging from the largest, Pew Charitable Trusts to small local foundations. The Kellogg and Robert Wood Johnson foundations have made important contributions to the healthy communities movement nationally and in Pennsylvania. Other leading foundations supporting the movement in Pennsylvania include the Jewish Foundation, the Poole Trust, the Heinz, Penn, and locally the Kline and Harrisburg community foundations. The Health Alliance of Pennsylvania Foundation created by the Hospital and Health System Association of Pennsylvania distributed $1 million in 2000 to promote and support healthy community initiatives throughout the state.

Foundations bring discipline and the "Good Housekeeping Seal of Approval" to the healthy communities movement. They require data, measurement, and assessment of community activities; publish the results in the form of lessons learned; produce models; and drive the recipients of their funds crazy with accountability requirements to ensure that the contributed funds are used for their intended purposes. Some have been the catalyst for an entire statewide healthy community such as the Colorado Trust, and these efforts and experiences have been invaluable in assisting others to learn and to be successful. One of Pennsylvania' best models, the Community Health Initiative in the Lehigh Valley gives high praise to the Dorothy Rider Pool Health Care Trust for the leadership, funding, encouragement, and support that it has given to this project. Students become familiar with foundations through a foundation executive who serves as a guest lecturer to bring current information on foundation activities.

Healthy People 2000/2010

Healthy People 2000 was a national initiative started in the early 1990s, which established a health agenda for the entire nation. It developed a set of 22

priority areas or areas that needed special attention with 319 supporting objectives for those areas. The program had three overall goals that it wanted to meet by the year 2000 (Department of Health and Human Services, 1998/1999 [online]):

- Increase years of healthy life for all Americans
- Reduce disparities in health among different population groups
- Achieve access to preventive health services for all Americans

This national health initiative was a stepping stone for many of the nation's healthy community initiatives. Many of the state and local governments adopted the same objectives for their individual programs, but tailored them to their individual needs.

In 1993, a survey showed that 70% of local governments were using some of the same elements in their individual programs. The latest Healthy People 2000 review (Department of Health and Human Services, 1998/1999 [online]) showed that 15% of the goals had been reached or surpassed, including reducing child and adolescent death rates.

As part of an ongoing effort to tailor goals and objectives to the need of the nation, Healthy People 2010 was developed and published in January of 2000. There were new objectives added to reach specific goals in the next 10 years. It also encouraged more communities to take the responsibility for community member's health into their own hands and begin more programs to do so. Healthy People 2010 also put a lot more of the responsibility for health on the individual. It encourages us all to take care of our own health, have regular checkups, make our health care decisions known to others, and be involved in health-related organizations. It was realized, however, that for people to do this, there was a great need for education, and that was one of the aspects of the program.

Healthy People 2010 revolves its program around Leading Health Indicators (LHIs), which they feel are problem areas for many Americans. Those indicators are as follows:

- Physical activity
- Overweight and obesity
- Tobacco use
- Substance abuse
- Responsible sexual behavior
- Mental health
- Injury and violence
- Environmental quality
- Immunization
- Access to health care

"The Leading Health Indicators were selected on the basis of their ability to motivate action, the availability of data to measure progress, and their importance as public health issues" (Office of Disease Prevention and Health Promotion [online]).

It is most advantageous for the success of this movement that the President is very health conscious and supports the health care initiatives of our country. Having that reminder at a national level could be very instrumental in helping the public achieve the goals set forth by Healthy People 2010. President Bush has been helpful in this regard by repeatedly reminding the nation about the importance of exercise and personally takes the time to contribute to his physical health through exercise on a daily basis.

One reason for the widely recognized success of the Healthy People 2010 project is the number and caliber of the partnering organizations. Their partners include, but are not limited to Secretary's Council (council formed by the Secretary of Health and Human Services to help guide this initiative), federal agencies (including the Department of Health and Human Services), the Healthy People Consortium (which consists of more than 400 national membership groups), foundations, associations, and individual communities. There are thousands of programs across the nation that aim to achieve the goals of this initiative, many developed even before it began. The success of the program relies greatly on the individual contributions of the various partners. Also, many state governments adopted the national plan, tailored it to their needs, and implemented it in their individual states.

In looking for some more information on the current status of the program in Pennsylvania, one of us (K.L.) contacted the director of the state's Bureau of Health Planning. He was asked if there were any updates on the program and he answered that health status outcomes move very slowly so they will be updating the data on a much broader interval. We estimate that the updates will be available toward the end of the 5-year period, perhaps in 2004 or 2005.

HEALTHY COMMUNITIES: FUTURE

The Healthy Communities Initiative continues to grow. Although no one can be sure what will happen in the future, it appears that this initiative will not founder. It may be called different things in different communities, but the goals are consistent. With increasing budgetary cuts on the state and federal levels of government, the community focus becomes even more important. New community programs are surfacing every day, and more and more people are becoming empowered to help each other help themselves. Healthy communities may be the basis of our country's future health, and if programs continue to grow at the rate they have during the past 15 years, it will be a bright future indeed.

Supplementary Reading

In 1997, one of us (J.A.R.) served on a task force to develop a workbook to assist communities in taking action aimed at improving the health of the community. The book was published by the Institute for Healthy Communities and has served as a catalyst to assist many community partnerships to become successful in Pennsylvania. The book is called the *Apple 2 Book* and can be of utility to the reader in understanding the core principles of the healthy communities movement. The topics covered include the following:

- Community health planning
- Elements of successful partnerships and collaboration
- Citizenship and rebuilding community
- Turning ideas into actions
- Program evaluation
- Community progress measures
- Program funding
- Asset-based community development for mobilizing an entire community

A second edition of the book, *Remaking Health Care in America*, by Shortell *et al.* (2000) is also very informative. This book is a useful tool for anyone who is interested in helping the United States move toward a more integrated, community-oriented health care system. The community health care management system advocated by this author explores the potential of the community health care management system concept for managing the health of individuals and communities, creating new types of value, and responding to multiple demands for accountability. The system proposed by this author and his colleagues offers great potential for linking health care reform and healthy community initiatives in creating our health care system for the future.

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