The Future of American Healthcare

by

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Introduction

The American healthcare system has been characterized by continuous change for such an extended period of time that it is hard to recall a period of stability. This 30-year period of continuous change has not produced a revolutionary change in the financing and delivery of healthcare, but the cumulative effect of incessant incremental change has fundamentally changed several aspects of the system. Most notably, the U.S. healthcare system, which was once characterized by thousands of small, individual providers operating under a fee-for-service regime, has become a huge industry increasingly dominated by huge corporate providers and investors. But, the U.S. still has no comprehensive national health insurance program and is not likely to have one anytime soon.

In this paper we analyze a number of trends in current healthcare policy and practice and, based on these analyses, predict where we think these trends will take healthcare over the next ten years. The paper consists of four chapters beginning with an overview of demographic and socioeconomic trends and their implications for the future of healthcare. In the second chapter we analyze a number of healthcare delivery and financing issues in terms of current trends and developments in the recent past and describe where these trends are likely to take healthcare policy and practice over the next ten years. Our perspective on the future is shaped by the assumptions that the same kind of incrimination evident over the last 50 years will characterize events over the next ten years. In short, we do not predict the passage of national health insurance, the collapse of Medicare or any other revolutionary break by 2010. The third chapter addresses a number of ethical issues we think will have a significant influence on healthcare policy and practice during the next decade. In the fourth and final chapter, we take a look at trends in the healthcare labor force and identify several issues that we think will have to be resolved if serious shortages are to be avoided.

In healthcare, as in life, the only certainty is change, but the direction of change is never certain. We have used the best available information to develop a ten-year forecast for the U.S. healthcare system. We intend to assess our forecast on an annual basis and make adjustments as needed. Given the extent and speed of change in healthcare, we anticipate that the number of adjustments needed will be numerous.

I. Demographic and socioeconomic trends: The emergence of healthcare tiers

The future of healthcare over the next several decades will be dramatically affected by demographic and socioeconomic trends, the effects of which will just begin to be felt over the next ten years. The most important of these trends will be the aging of the baby boom generation, as over 1.5 million people annually will turn 65 between 2010 and 2040, and the increasing diversity of the population. Several states, led by California, will have a larger population of Hispanics, African-Americans and Asian-Americans than non-Hispanic whites by 2030. The widening socioeconomic gap between the most and the least affluent segments of the population has already been underway for 25 years; and, although not as certain a trend as the aging and increasing diversity of the
population, it is likely to continue with the growth of the Hispanic and African-American populations, which are disproportionately poor.

The number of older Americans will grow from 35 million to 39 million by 2010 and life expectancy will increase from age 74 to 76 for men, and from 83 to 86 for women, which will add to the two-to-one ratio between women and men age 80 plus. The decline in disability rates among the 65 plus will continue, but the huge increase in this population after 2010 will add millions to the ranks of the disabled over the next 40 years. The growth of this age group will cause a huge increase in the number of people with chronic medical conditions (heart disease, strokes, diabetes, arthritis, etc.) which will add substantially and increasingly to the overall cost of healthcare and diminish the quality of life for millions, even as functional impairment is prevented by improved medical care and methods of self-care. Knickman notes that:

The continued aging of the American population will command significant attention among health care providers and policymakers over the next 30 years. Approximately 47% of all hospital admissions currently are made by Americans over 65, who account for just 13% of the population. The number of people over 65 will double in the next 25 years, thus driving up demand for many types of health care, especially care focused on chronic illnesses and support services for the frail elderly. The population growth rates are most dramatic for the eldest of the old, who are among the very highest users of health and support services.

Even if managed care leads to dramatic decreases in the use of health care, person by person, the aging of the population should make health care and supportive services (e.g., home and assisted living) an important growth industry in the United States. The style of health care and the sensitivity of the system to the special concerns of the elderly will have to evolve. All of this growth will take place while informal support systems continue to shrink the number of adults ages 21 to 65—the main cadre of informal caregivers—will decrease from 12.5 per elderly person over age 75 in 1980 to 6.5 per elder in 2025 (U.S. Census Bureau, 1992). (p. 511-512)

Minority ethnic and racial groups will constitute 32% of the population by 2010 and over 50% of the population in California and a few other Western states. Hispanic groups are the most rapidly growing minority population and will be the largest minority population in 2010 when they reach about 15% of the total population. As the minority populations grow, the demand for healthcare services that are culturally informed will increase. Effective care depends on undistorted communication between practitioners and patients in order to reduce the rate of under- and miss-diagnosis of conditions and diseases among minority group members and to increase the awareness of the relationships between cultural and lifestyle differences and health status and compliance with treatment regimens.

The non-Hispanic Caucasian population will increase from 191 million in 1992 to 208 million in 2029 and then begin to shrink to 202 million by 2050, the number of African Americans in the population will increase from 32 million in 1992 to 62 million in 2050, and Latino numbers will increase from 24 million to 81 million. In addition, Asians and Pacific Islanders will increase in population from 9 million in
1992 to 41 million in 2050 (Brownson & Kreuter, 1997; U.S. Census Bureau, 1992).

The impacts of this ethnic transformation of America on health care requirements depend crucially on how quickly the growing ethnic groups assimilate into the economic mainstream of American life. Currently, the African American population and Latino population have greater than average health care needs, principally related to lower incomes and the associated stresses on health-related behaviors. If population growth occurs mostly among the low-income part of the American population and if wealth continues to be distributed as skewedly as in the 1990s, we can expect growing demands for health care and public health services.

In summary, the health status of America will be most affected by two overriding demographic and socioeconomic trends. The aging and increased longevity of the population will cause a rapid and uninterrupted increase in the prevalence of chronic conditions and a gradual systemic shift within the healthcare system from acute to chronic care. Biotechnological advances will reduce impairment rates and extend survival rates, but do little to slow increases in incidence and prevalence rates. Mental illness will continue to increase, especially chronic depression, and will become one of the most common and costly chronic health conditions by 2010. The growth of minority populations, accompanied by the widening income and wealth gap, is likely to increase the number of uninsured or underinsured persons and keep the overall health status of the U.S. well below that of other developed countries.

These trends, among other factors, will keep upward pressure on healthcare costs and efforts to contain costs in the private sector will continue to shift the burden of healthcare to the public sector. Employers and intermediaries, mainly managed care organizations, will continue to move more of the costs of healthcare to consumers, making insurance unaffordable for many, which will cause the percentage of uninsured to slowly, but steadily, grow over the next ten years. This trend, in combination with the growth of minority and less affluent populations and the Medicare population, will increase the percentage of the population covered by publicly funded insurance from under 40% to about 50% by 2010, and substantially more in the following years. In short, consumers and governments will bear an increasingly larger share of healthcare costs which is likely to make healthcare politics even more volatile in the years ahead.

The demographic and socioeconomic trends described above are likely to accelerate the following trends in public and private health insurance coverage and solidify the three-tiered healthcare system that began to emerge several years ago.

- The percentage of the population with employment-based insurance will continue to decline slowly—by 3 to 5% over the next ten years, from about 58% to 53-55%.

- The percentage participating in Medicare will grow from 14% (38 million) to 17% (49 million) with the increase in the 65 plus population. This percentage will exceed 25% soon after 2025 with the aging of the baby boomers.
• Medicaid coverage will grow from about 10.5% (28 million) to over 13% (34 million) in 2010. This percentage could be substantially higher if the federal and state governments decide to reduce the number of uninsured by expanding eligibility or creating new eligibility categories.

• The percentage of uninsured is very difficult to predict over a ten-year period. The number of uninsured is affected by many factors, including economic conditions, employer insurance policies, public policy initiatives, individual choices and the rate actions among these and other variables. Given these imponderables, the most defensible prediction is that the percentage of uninsured will remain in the 15 to 17% range, although the growth of uninsured individuals over the last four years, a period of extraordinary economic growth and prosperity, indicates that the percentage of uninsured could grow to more that 20% of the population over the next several years. About half of those uninsured at any give point in time are uninsured for at least a year.

• The percentage of the population in indemnity plans and relatively expansive and flexible preferred provider organizations (PPOs) will decline from one-half to about one-third of the population over the next seven-to-ten years as employers and Medicare use incentives and disincentives to move more of those covered by these plans into HMOs. As a result, the percentage in HMOs, which will increasingly offer more freedom of choice through more expensive point-of-service and self-referral plans and fewer restraints on utilization (see above), will grow from about 30% to almost 50% by 2010. The long-term uninsured and those in Medicaid will remain at approximately 20% over the next ten years.

These trends will lead to a more clearly tiered system of healthcare which has been gradually emerging for several years. Although these trends are not likely to affect the quality and accessibility of care significantly for most consumers in the top two tiers, the perception among those in the middle-tier (HMO members) that they may be adversely affected by the loss of choice and control in HMOs could generate a political backlash against managed care and the tiered structure of care. This backlash could be inflamed by a serious economic recession which substantially increases the number of uninsured and the level of anxiety among the non-Medicare population in the middle tier about the stability of their health insurance.

Developments within the middle tier are likely to have the greatest significance for the politics of healthcare over the next decade, as it becomes an increasingly larger percentage of the population. This tier will consist of far more politically active persons who are more accustomed to the security of stable and affordable healthcare insurance than those in the third (bottom) tier. They would be a far more formidable political force than the Medicaid and uninsured population, with the political resources necessary to achieve far ranging changes in the delivery and financing of healthcare, if they feel sufficiently threatened. Policy makers and healthcare industry leaders are aware of this potential for a political reaction to cost, access and quality of care concerns with the middle-tier population and are likely to take steps to keep them from reaching critical mass and creating conditions conducive to qualitative change (national health insurance) in the U.S. healthcare system. The kinds of initiatives described earlier on the part of MCOs, the action of several state legislatures to reduce restrictions on utilization and the
current debate over the HMO patients’ rights bill in Congress are products of a growing sensitivity to the worries of those in the middle tier.

II. Healthcare delivery and financing: Current trends and the future

A. Changing patterns in healthcare delivery

Healthcare delivery and financing methods have changed dramatically over the last several years. Individual practitioners and large, stand-alone community and teaching hospitals operating in a pervasively fee-for-service, environment-dominated method were the overwhelmingly dominant modes of care delivery until the early 1990s. Over the past ten years, however, healthcare delivery has been substantially reinvented and we are now in a period of continual rapid change. Any effort to predict where these changes will take us over the next ten years should be accompanied by a long list of humbling caveats, including many contextual (economic, political, cultural) variables that will affect healthcare policy and business strategies in unpredictable ways in the future. All we can know at this point, with any degree of confidence, is that the same motivations largely responsible for change over the last ten years are likely to continue as sources of change during the next decade. These motivations include the need to contain costs, pursue profitability and respond to consumer concern about access to care and the quality of care.

According to Kelly and Phelan (1999), three distinct waves of change occurred in the healthcare industry over the past 25 years, continually consolidating and industrializing what was once a fragmented cottage industry. Underlining these changes is a shifting of risk from employers and insurers to providers. Wave I, the period after WWII until the early 1980’s, was a provider dominated industry with little integration of information between physician groups and other providers like hospitals. Due to the fee-for-service model of payment, there was no way to track quality of care, or to monitor over-utilization of services. Insurance companies thrived during Wave I, although they, rather than physicians or providers, were the risk managers. Beginning in the 1980s, Wave II was characterized by a move away from insurance to managed care. The emerging HMOs negotiated reduced physician and hospital rates for the promise of increased patients. As HMOs became the risk managers, they superimposed practice guidelines that limited services, causing providers to revolt against the system and form group practices. Currently, as Wave II ends and Wave III begins, six-to-ten large HMOs will dominate the market, raising their premiums and decreasing their services.

Wave III will be characterized by integrated delivery systems composed of physician and hospital partnerships that combine medical technology with managerial, marketing and sales skills. In this model, provider-sponsored organizations will again be responsible for risk management, as well as for capturing and controlling the premium dollar. During Wave III, physicians, hospitals and patients will align their focus on quality and cost-effective care which, according to Kelly, will dramatically improve the health-care system. Providers will again be responsible for price and quality of care, and will have the ability to alter the guidelines they have helped create. This emphatically optimistic
view of the future of healthcare in the U.S. is not representative of the views of most observers. In fact, there is no representative view; there is a wide variety of views, many of which are far less optimistic than those of Kelly and his colleagues.

The flux of change notwithstanding, certain trajectories that seem to be rather firmly anchored in current trends are likely to determine, at least in broad outline, the direction of change over the next five-to-ten years. These major trajectories are described below:

- Movement from a dispersion of independent providers and stand-alone organizations (hospitals) to more corporate systems of delivery and management. This is a broad trend that was accurately predicated by Paul Starr in his seminal work, The Social Transformation of Medicine (1983).

- Increasing control of intermediaries (managed care and preferred provider organizations) over the patient/provider relationship and the management of care. Some providers will organize into groups and market directly to consumers and payers (employers), but they will play a relatively marginal role on the healthcare market. The extent of control by intermediaries over the patient/provider relationship and its perceived effects will be a source of continuing political conflict and incremental response from policy makers. Qualitative changes in the relationship, such as universal health insurance, are unlikely by 2010.

- The oversupply of hospital beds will continue, along with a steady increase in the number converted to short-term sub-acute and skilled nursing care, and the physician surplus will increase.

- The nascent search for improved quality of medical care will intensify and become as important an organizing principle in healthcare delivery as cost-containment. Chronic conditions (heart disease, cancer, diabetes, arthritis) will become the major domain for the pursuit of improved quality.

The administrative structures and functional activities of intermediary organizations have evolved steadily over the past 30 years and at an accelerating rate in the past decade. Managed care organizations (MCOs) have evolved from closed staff structure to independent provider associations (IPAs) with overlapping provider networks. Some MCOs are beginning to look like preferred provider organizations offering an array of products including discounted fee-for-service, wide provider networks, partial capitation, point-of-service plans and direct referrals to specialists.

Enrollment in managed care organizations will continue to grow throughout the early part of this decade, and companies will be faced with the challenge of remaining economically viable despite large memberships (McDonald, 1999; Robinson, 1999). Enrollment in HMO's almost doubled between 1988 and 1996. By 1999, more than 6.1 million Medicare beneficiaries were enrolled in HMOs (Gaskin & Hadley, 1997). From 1994 to 2000, growth in Medicare managed care was enormous, occurring at the rate of 100,000 enrollments per month, totaling 15.2% of the 37 million Medicare beneficiaries in the United States. In fact, from 1995 until 1999, individuals 84 years and older constituted the fastest-growing segment of managed care enrollees (Dennett, 1998;
Coleman May-June, 1999). Due to the growing numbers of frail elders who enroll in managed care, the primary thrust of HMOs will become prevention of functional declines (Coleman, May-June 1999; Dennett, 1998) and the treatment of chronic conditions, which will steadily increase the demand for geriatrically trained providers. We discuss these trends at length below.

Changes in reimbursement policies stemming from the Balanced Budget Act of 1997 have temporarily halted the growth in Medicare HMO membership, at least temporarily—forty-three risk plans did not renew their contracts with HCFA in 1999, and 52 reduced their service areas. Approximately 100 plans are expected to withdraw or reduce service in 2000 (Fubini, 2000) and about 900,000 Medicare beneficiaries will be dropped by HMOs. Congress will probably reach a compromise with the managed care industry during the 2001 session and the growth in the percentage of Medicare recipients in HMOs will resume.

The distinction between health insurers with paid claims, and managed care plans have become increasingly blurred. Fewer than 20% of employees currently have indemnity health coverage, compared to 71% in 1988. Many attempts at vertical integration by hospital practices who want to purchase physician practices, or physician practices forming provider-sponsored managed care plans, have largely failed financially. Insurance premiums will continue to rise as will the number of uninsured. One statistical reform that may pass in elections this year is a prescription drug benefit under Medicare; otherwise significant healthcare reform will not occur anytime in the near future. Growth in national healthcare spending is expected to increase to the amount of 7.1% in the year 2000 as opposed to 4.8% in 1997.

Although throughout the 1990's the burden of healthcare expenses was shifted from the private to the public sector, a reversal is expected due to the 1997 Balanced Budget Act. By 2002, however, when the BBA is defunct, the financial burden of the public sector will again increase. Enrollment in private health insurance is expected to rise 9% in the year 2000 due to the increased popularity of less restrictive forms of managed care. Operating incomes of managed care organizations increased more than 20% to $4.6 billion in 1999. Despite declines in income growth in 1998, 76% of physicians participated in an HMO and 44% accepted a capitation contract. Hospitals continue to be the primary purchasers of physician practices.

Even with the recent reduction in Medicare HMO memberships, health plans across the country are rapidly expanding and diversifying networks, benefit packages and distribution channels. The multi-product and the multistack health plan are becoming nationwide, full-service corporations that do not market to local organizations or consumer niches. This movement towards consolidation may reflect the varying desires of consumers, purchasers and providers in regard to what services are wanted and needed and what rates are favored. The future of health plans depends on their ability to navigate the conflict-ridden interface between different levels of the market.
The HCFA’s implementation of the Balanced Budget Act of 1997 and the Medicare Choice program created several problems for the industry: HMOs were expected to adjust to new rules and regulations in an unrealistic time frame; and, in a time when HMOs were already losing money, they were expected to invest in new information systems related to the Medicare+Choice data-reporting requirements. The implementation of the Medicare+Choice program forces HMOs to focus first on care management, second on quality management and third on cost management. HMOs will have to adopt new case management approaches to manage growing numbers of frail seniors. In addition, information systems and communication links will become crucial in the prevention of deteriorating health.

The fundamental feature of the managed care marketplace, however, is not its size but its diversity. Recent years have seen partial convergence between managed care and indemnity insurance, with indemnity carriers focusing on prevention and HMOs trying out higher co-pays. The dominant trend has been toward a proliferation of benefit designs in response to the desire of consumers to choose services and cost levels. In addition, health plans are focusing on distribution channel diversification, which is key in signing up the volumes of enrollees necessary to obtain low prices from providers.

Managed care has probably generated most of the savings that are possible from reducing provider payments and eliminating excessive hospital use. Hospital bed occupancy rates are now around 60% or less and many of these beds will be eliminated by more hospital closings and mergers over the next ten years. This does not mean that since managed care has done its cost-containment work, we can return to a comprehensive fee-for-service system. Absent managed care, the days of excessive use of medical services and cost increases twice the consumer price index would likely return. It does appear, however, that demands from payers and consumers for greater ease of access to a wide array of providers, a greater choice of products like point-of-service plans and improved quality of care are growing. Meeting these demands, which will require the rapid adoption of the latest technological advances, is likely to push the cost of healthcare to an annual rate of somewhere between those of the last six years (5%) and those of the period between 1970 and 1990 (10%), which is where the projected increase (7.5%) for 2000 will fall.

In addition to the upward pressure on costs exerted by these growing demands for less restrained access to care and improved quality, health plans will have to cover the increased costs incurred from serving a growing population of “less well” consumers who have remained in the fee-for-service sector but are likely to join MCOs as they respond to the demand for greater access and improved quality. This trend is especially true of the Medicare population which includes many people with chronic conditions and co-morbidities. If the current hiccups in adjusting to the Medicare +Choice program are worked, the central drama in the American healthcare system over the next ten years may be the extent to which MCOs handle these demands generated by the changing composition of their memberships without losing all control over costs. By the end of the next decade, we predict that the linchpin in the resolution of this drama will be the quality
of care issues, which will have major implications for the education and training of the healthcare workforce. We will return to the quality issue later in this chapter.

Although the managed care system has substantially succeeded in making healthcare delivery more efficient and somewhat less fragmented, it repeatedly receives bad press and has become a political and legal target. The industry's failure to earn credit for its positive contributions is the result of several factors: 1) public relations ineptitude; 2) opposition from advocates of a single-payer system; 3) the refusal of Americans to see healthcare as a resource and not a "right"; and, 4) the lack of connection between the payer for and the user of services. Fear of litigation is likely to lead managed care companies to reduce the use of gatekeepers and utilization review, which may in turn lead to higher increases in healthcare costs. Given the hostility managed care is facing, it will be forced to either revert to more indemnity-based insurance practices or find new ways to meet the needs of consumers, while keeping some control over costs. More health plans will strive to become the facilitators of care and the purveyors of useful information. In the future, plans may no longer need to create networks or specific products, but will instead allow consumers to build their own individualized networks online within negotiated limits.

The bad press and political differences notwithstanding, the decade-long growth of MCOs is not likely to be reversed over the next several years. Membership in HMOs is expected to grow from 30% to at least 60% in the next five-to-ten years and participation in PPOs, which is growing rapidly as consumers look for wider options, is expected to approach 20%. A shrinking percentage of consumers, probably less than 10%, will remain in a relatively pure fee-for-service sector. This will leave about 10% who will be uninsured on a long-term basis. The intermittently uninsured may include another 10%. These percentages of uninsured, however, could be substantially higher if MCOs implode from the pressures described earlier and employers continue to curtail the provision of health insurance and eligibility for public insurance programs, principally Medicaid, is not extended.

We predict, however, that a range of public subsidies will be used to keep the uninsured population from growing much beyond 50 million. This population now stands at about 43 million. We do not anticipate that the problems of the uninsured will reach the level of political critical mass necessary to overcome the powerful array of forces against universal health insurance within the next ten years. Incremental changes in Medicaid, however, may substantially increase the number covered but fall well short of making the program a serious threat to private insurance. Access to care and presumably the quality of care received through Medicaid, with its restrictions and low reimbursement rate, will not approach the access and quality available in most private sector plans.

As managed care expands and continues to evolve through experimentation and restructuring over the next ten years, several dominant methods of managing the delivery of care are likely to emerge, including the following:
- The **provider-partner intermediary**. The provider-partner allows providers to be responsible for the medical management of the enrollees. The intermediary takes on responsibilities for customer service to members for marketing its providers' services and for redistributing risk among its providers. . . . The intermediary rigorously audits providers to ensure that they manage patients to an agreed-upon standard but relies on the clinicians to develop protocols and demand-management techniques.

- The **high-end FFS broker**. For upper-echelon Americans, the remnants of the old FFS system will offer indemnity insurance products or PPOs with very rich benefits and less rigorous utilization controls. . . . They are able to select better risks in their enrollee population and charge relatively high premiums for good customer service and access to high-tech and complementary care.

- **Direct to provider**. In a minority of cases, large employers in rural markets and a few big employer coalitions are able to bypass the major plans and set up their own administrative systems that allow them to contract directly with providers. . . . Essentially, the intermediary functions here are shared by employer and provider alike.

- **The low-tier safety-net funding recipients**. Most of the Medicaid population and some of the indigent will end up in a provider-partner or a case-management HMO, but some of them [Medicaid population] and the majority of the uninsured will end up in a “no intermediary, no luck” scenario with limited access to care despite the best efforts of safety-net providers.

- **The case manager intermediary**. The case manager intermediary divides a population into the well and the sick and permits the well to have free access to virtually its entire loosely organized provider network. Its primary focus is the aggressive medical management of the sick, often parsed out by disease state. . . . The intermediary spends much of its energy in directing the activities of providers and sick patients. (Institute for the Future)

The most interesting and far-reaching of these strategies will probably be the development of the case manager model of care delivery. This model has the potential to maximize the promise of managed care by effectively organizing aggressive care of the sickest consumer, including those with serious chronic conditions, through rigorous disease management strategies and by providing primary care case managers to handle acute care cases and routinize the provision of prevention and wellness services.

Managed care organizations (MCOs), mainly HMOs, have been able to constrain costs over the past six-to-seven years and partially redirect the flow of healthcare resources from hospitals and specialty care to primary care organized in risk pools without much global capitation, which is not likely to play any greater role in the financing and delivery of care over the next ten years. As the fee-for-service sector shrinks and global capitation continues to play a limited and possibly diminishing role in the healthcare market, performance-based reimbursement plans are likely to grow, especially toward the end of the decade, as knowledge of the relative effectiveness of
alternative medical procedures and treatment strategies leads to the widespread use of practice guidelines and evidence-based medicine.

As more scientifically grounded guidelines become available, plans will move to develop and implement methods of enforcing them. These enforcement procedures will become the vehicle for shifting the focus of plans away from gatekeeping functions designed to limit unnecessary service utilization and toward the achievement of higher quality outcomes. The procedures will be used to ensure the consistent application of best practices across all care settings (from one practitioner and facility to the next) and patient compliance with their treatment plans, which will include a substantial self-care component, especially for patients with chronic conditions in disease management programs.

These developments will substantially increase the demand for improved and extended education and training services for all providers, including continuing training in biotechnological innovations, new medical procedures and more objective measures of competence. Medical decision-making will increasingly depend less on practitioner judgment and experience and more on objective, knowledge-based criteria and guidelines, which will become the framework for a performance-based reimbursement system. Payments will be designed to reflect providers’ performance as measured by research-based outcomes and consumer satisfaction. In short, objective and consumer-oriented measures of quality and effectiveness will become at least as important as costs in measuring plan performance.

There are, of course, several possible developments that could return healthcare costs in both the public and private sectors to pre-1990 levels. A recession could make more people eligible for Medicaid and increase the healthcare share of the GNP well above 16%. Efforts to shrink Medicare costs by decreasing reimbursements and tightening constraints on some allowable services (Balanced Budget Act, 1997) could dramatically push up utilization and costs in other parts of the system or produce a political response among older voters that leads to an unraveling of cost-containment policies, especially those affecting nursing homes, home healthcare and HMOs. Managed care organizations in both public and private sectors could lose virtually all of their capacity to contain costs if lawsuits and legislative responses to political pressure force them to open up their networks to any provider and give up any effective means of controlling utilization. These modifications in managed care would force MCOs to compete almost entirely on quality of care criteria with much less regard for costs.

Performance-based reimbursement strategies are likely to emerge in a variety of organizational structures as healthcare delivery continues to evolve away from the individual practitioner and large stand-alone hospitals that characterized healthcare in the heyday of fee-for-service. These structures will include vertically integrated organizations combining a range of providers and health plans, hospital-based horizontal structures, delivery networks of providers and hospitals, centers of excellence, mainly specialty hospitals and provider groups, and virtually integrated organizations based on shared information systems and other administrative functions.
As managed care becomes a more frequent choice for Medicare beneficiaries, the country's healthcare system is being restructured. Some of the advantages of managed care include the availability of preventative and restorative services at a fixed price; programs which care for illnesses and disabilities in communities rather than in the hospital; more flexibility of care delivery; and a wider array of covered services. Managed care often does as well or better than fee-for-service programs in that it offers the promise of increasing drug compliance. Most plans also cover the cost of prescription drugs which traditional Medicare programs do not. Disadvantages of managed care include limitations on choice of care providers and on the extent of care provided. Although underutilization of services by physicians may be a problem with managed care, experts claim that, unlike fee-for-service, managed care can monitor and modify physician behavior to ensure quality care. In the future, managed care may provide physicians with a set of practice guidelines for common diagnoses, ensuring a set of standard tests and procedures. Another concern involves the growing population of frail elderly who need coordination of services with multiple specialists and a primary care physician. Regarding this aspect, managed care has an advantage in that it focuses on prevention of problems that may worsen later; it provides an array of integrated services and is more flexible than the traditional Medicare program. However, experts recommend that options, such as hospice care, be expanded in order to ensure respect of the patient’s individual desires. Experts predict that, in the future, there will be different markets of managed care around the country: Along with a few large integrated care systems, physicians will form independent alliances and patients will organize and form their own integrated systems.

In the future, the healthcare system will continue to move toward integration, but at a slower pace. The concept of virtual integration will hold more weight, as physician groups, hospitals and health plans cooperate through contractual relationships rather than ownership. However, the rate of consolidation will continue due to the amount of hospital beds left unfilled (60% in 1999) and the pressure to compete economically. As managed care organizations continue to grow, they will struggle to retain economic advantages as premiums will rise. Federal and state governments will play an increasingly important role in the oversight and control of managed care and public programs. Physician-owned healthcare organizations will be more prevalent, and care will become more impersonal as doctor-patient time decreases. Disease management will become a more popular mode of treating chronic illness in a way that is cost-effective without compromising quality of care. Medical ethics and medical economics will remain at odds.

One of the major sources of healthcare change over the next ten years will be the search for the most flexible, profitable organizational structure for the delivery of care. According to our perspective, no one structure will soon emerge as the dominant alternative to the individual practitioner and large teaching/community hospital model that prevailed from the 1930s to the early 1990s. In order to satisfy the demands of intermediaries and patients, different types of organizations will use various models, each of which will provide a substantial percentage of care in at least some regions of the
country. In the late 1990s, versions of each of these models were built with more or less aggressive intentions by entrepreneurial physicians and businesspeople. They include:

- **The hospital-centered system.** The series of large hospital mergers in the mid-1990s were intended to create a model that provides all services in a metropolitan area across a range of facilities. The range includes inpatient, outpatient, diagnostic, and ancillary facilities, as well as physician multispecialty clinics, usually owned by or closely aligned with the system. . . . Many of the systems will be based around AMCs [academic medical centers], which will have problems making the transition to this more comprehensive approach, particularly in relation to their faculty and the physician practices with which they contract. Fundamentally, the primary problem for AMCs is their organizational origins as inpatient care centers. The cultural inertia of the principle underlying the former system, which required them to “fill those beds,” will cause many to falter. Nonetheless, in many areas of the country the large capital reserves of these systems and their significant presence in the market will ensure their survival. This is particularly true where their brand name (e.g., Johns Hopkins) is sufficient to ensure their presence in intermediaries’ networks.

- **The virtual physician-group cooperative.** This is an evolved form of the IPA [independent provider association]—the most common current organizational form for physicians. Although IPAs originally were thought of as a transitional model on the path to “real” medical groups, they will continue to be an important factor to 2005 and beyond. Their ability to use information technology and their contractual flexibility to coordinate services will enable virtual groups to enter into contracts with several health plans. In many cases, the “real” medical groups at the core of these networks will be neither large nor cohesive. The organization will be created from independent physicians with a natural set of referrals, on-call coverage, and clinical respect for each other. A management services organization (MSO) will help them make contracts with plans for business, with hospitals, and with other providers for services, and often will help them assume risk. . . . IPAs will remain as an umbrella organization for these physicians, and within them there will be a range of activity, including attempts to build groups. Nonetheless, almost all small groups and individual physicians will find that, as a contracting vehicle, the virtual group provides them with a substantial proportion of their patient revenue stream.

- **The corporate physician practice management (PPM) corporation.** The trail of for-profit PPM companies to Wall Street that started in the early 1990s will continue into the next decade. The main growth in this area has and will come from the PPMs that accumulate existing smaller practices, including purchasing physician groups abandoned by former staff- and group-model HMOs. While pressures from Wall Street will cause many of those corporations to fail, several will develop a common platform across their groups that is similar to the mix of corporate and franchise-owned operations seen in other industries. Considering the administrative inefficiency of most physicians’ practices, there is no reason that these economies of scale should not show some savings. Achieving greater returns may prove difficult over the longer term.
• The single-specialty carve-out. In some specific disease areas, single specialty groups and networks of specialists will market their services either directly to payers or to other providers such as hospital-based systems or multispecialty groups that need particular expertise. A proliferation of networks will provide specialty disease management services for cancer, cardiovascular disease, nephrology, and AIDS (acquired immunodeficiency syndrome), among others. Some multispecialty groups that do not have sufficient volume will refer their patients in some disease categories because they cannot support nearly as large a specialty panel as can a single-specialty network. Patients needing specialty care will appreciate being able to go to these networks, which usually will allow them a wide choice of physicians. Some of these organizations will provide all comprehensive specialty services in a particular specialty area, such as cancer treatment, whereas others will provide niche support services, such as patient monitoring and education, that are used in combination with services provided by other organizations.

• The remnants. Changing an 80-year-old healthcare system that has been supported by government subsidies for the past 30 years is not going to be accomplished quickly. Some independent hospitals, such as profitable community hospitals in some suburbs and cash-strapped public hospitals in inner cities or rural areas, will not find partners or be incorporated into a bigger system. Many of the remaining individual and small-group practice doctors will still be doing what they have always done until their retirement. In that regard, much of the present system will remain in the healthcare system of the future. (Institute for the Future)

Regardless of the organizational structure, however, the focus of healthcare delivery will shift from the conventional managed care emphasis on cost-containment by controlling utilization to managing care in a manner designed to improve outcomes and increase consumer satisfaction. Instead of containing costs by primarily restricting unnecessary utilization of services, MCOs, PPOs and other kinds of plans will pursue increased efficiency through more effective outcomes, especially for chronic conditions, which will increase steadily over the next 40 years with the aging of the baby boom generation.

The principle vehicle for managing the care of patients with chronic conditions will be some form of disease management based on treatment protocols and guidelines, which are already available for several diseases. In fact, there are competing sets of guidelines for each disease category and no substantial research-based consensus has emerged for any one set. As MCOs move from managed to managing care and it becomes increasingly clearer to providers that plans are committed to the use of outcome and consumer satisfaction measures in the implementation of performance-based strategies, provider support for medical effectiveness research and the acceptance of practice guidelines based on the results of the most soundly conducted research will grow.

Plans will also become more responsive to the desire of providers to participate in the development of methods for the application of guidelines in clinical settings and the need to preserve a zone of discretion for practitioner decision-making. Guidelines will never apply to patients in a uniform fashion. This is particularly true of patients with multiple chronic conditions that may interact idiosyncratically and unpredictably. This is one of
the reasons that the growth of effectiveness research and the implementation of more scientifically sound practice guidelines may add as much cost as it reduces in the treatment of chronic conditions. The research is as likely to identify new and more expensive forms of effective treatment, as it is to identify practices that are not cost-effective. In short, the development of effective and integrated protocols for treating chronic conditions is likely to be increasingly expensive; given the costs of technological innovations, including new pharmaceuticals, these protocols will inevitably entail. Nevertheless:

The prospects of positive change in this area are strong. On the medical care side, large analytic investments are well under way to experiment with two quite different but interrelated changes in the service system. First, more sophisticated ways of paying managed care organizations for the care they deliver to the chronically ill are being designed and tested. Second, physicians and other providers are testing new approaches to better manage the way care is delivered to the chronically ill with central emphasis on the principles of primary, secondary, and tertiary prevention. When economic incentives imbedded in payment systems change so that managed care plans are rewarded for enrolling and providing better care for the chronically ill, we should expect widespread implementation of some of the current experiments in chronic disease management.

Managing chronic diseases cost-effectively will be one of the biggest challenges confronting managed care industry over the next ten years. HMOs must reengineer their case management models to become more integrative and responsive to the needs of the various groups of elderly they support—the well, the worried well, the acutely ill and the chronically ill. In 1994, The Center for Disease Control estimated that chronic conditions consumed 61% of healthcare costs. This percentage is expected to increase during this century as more people become elderly and life expectancy increases. Medical technology will improve, allowing more people to live longer with chronic diseases. In the future, HMOs will need to implement integrative case management programs, including demand management, case management, and disease management. Demand management includes phone services available to beneficiaries that gauge the severity of the illness or injury and give advice about treatment, health education information, and support groups. Case management programs include intervention services such as health education and support services for acute conditions. Disease management is a coordinated, pro-active, disease specific approach that seeks to manage chronically ill beneficiaries.

B. Increasing need for geriatric acute care and long-term care and their impact on models of care

The increasing focus on chronic care will substantially raise the profile of geriatric care as the gap between the need for the availability of geriatrically trained providers, especially geriatricians, becomes more glaring. Although the number of certified geriatricians continues to rise, the national gap between the number needed and the number available, it is likely to grow in the absence of policy changes in current training
programs. Currently, there is a need for 20,000 geriatricians in the U.S., but there are only 8,000 in practice. The actual number of geriatricians may fall by the early 2000s due to retirement and the difficulty in recruiting sufficient numbers in this subspecialty.

Moreover, Medicare paid nearly $7 billion in graduate medical education costs in 1998. Yet only a fraction of those dollars was directed towards the clinical education of physicians who are involved in healthcare of the elderly. As a result of almost 100,000 medical residency and fellowship programs that Medicare helped to support nationwide, only 324 were in geriatric medicine and geriatric psychiatry.

The future of quality healthcare for older people has many determinants. One of the major and most complex determinants is the development of an adequate level of competence in the health workforce charged with caring for the elderly. Before addressing this issue directly, however, we should be prepared to answer the following question: To what extent does geriatric care and training make a difference with regard to healthcare outcomes?

The results of most studies conducted in the last ten years across different settings indicate that geriatrically trained healthcare professionals are able to effectively modify the existing model of care and improve the outcomes of care for the elderly. Geriatric care is more effective when delivered in hospitals, outpatient clinics, rehabilitation settings, nursing homes, and patients' homes. Geriatric clinicians are more successful when forming a team, addressing multiple health-related problems, targeting elderly frail patients or older people at risk of disability and providing continuing care to their clients.

The beneficial outcomes include enhancing medical service, preserving functional ability, improving quality of life, prolonging survival, and increasing satisfaction of patients, their caregivers and primary physicians. These outcomes seem to be achieved primarily through diagnostic accuracy, more informed discharge placements, reduced medication use, shorter hospital stays, use of more appropriate in-hospital and nursing home services and increased use of home healthcare and community services.

Increased investments in geriatric training are clearly supported by the results of most research. It can certainly be argued that the costs of not providing more geriatric training are high, both in terms of impaired function and quality of life of elderly patients as well as the financial and psychological burdens imposed on the family and the society as a whole.

For example, Bernabei et al. (1998) found that 38% of nursing home residents (65 years and older) with cancer in a five-state area complained of, or showed evidence of, daily pain. Yet, over a quarter of them (26%) received no analgesics, and patients older than 85 years were more likely to receive no analgesics. In the article and the accompanying editorial (Cleeland, 1998), the authors noted that one of the factors contributing to the results was the inadequate knowledge and clinical training of many physicians in the management of pain in elderly patients. Redelmeier et al. (1998) also found that in patients 65 or older who have chronic medical diseases, such as diabetes
mellitus, pulmonary emphysema and psychotic syndromes, unrelated disorders are largely under-treated.

Inadequate and inappropriate care can take the form of under-treatment, mistreatment, or over-treatment, all of which can result in unfavorable outcomes in the elderly patients. In a systematic literature review of iatrogenic conditions (the unintended illness caused by consequences of medical interactions) and aging, Salmon (1997) cited that drug reactions, diagnostic techniques, infections and surgeries were the major sources of iatrogenic complications with an incidence rate as high as 45% in the 65+ population. The author pointed out that prevention of iatrogenic disease starts with the physician, with the help of policy at the level of physician education to improve such aspects as medical history taking and alertness to untoward outcomes.

Clearly, there is a body of knowledge that defines the geriatric subspecialty for physicians, nurse practitioners, physician assistants, and other health providers. This training benefits elders in ways that other general and specialty education does not. The looming increase in the older population and the huge shortfall in the geriatric subspecialty, coupled with the success of geriatric care across most settings, will both increase geriatric education and training and provide incentives to recruit more people to practice geriatric care over the next ten years.

The absence of adequately trained geriatric providers in many HMOs serving the Medicare population may be partially responsible for some of the less than impressive results of several studies of managed care services for older members or those with chronic conditions. Although research on managed care and the elderly is still in its infancy, enough studies have been completed to support a preliminary assessment of the strengths and problems with the approach to financing and delivering healthcare for the elderly. These studies show that managed care participants benefit from reduced out-of-pocket costs and less paperwork when compared to those who receive their care in the fee-for-service system. On the other hand, most of the studies show that managed care is not yet achieving the kinds of outcomes (i.e., functional and health status) most proponents of managed care seem to expect given the theoretical focus in managed care on prevention and follow-up. It should be noted that we are still in a relatively early stage of managed care (only 15.2% of Medicare beneficiaries are in managed care organizations) and we need many more outcome studies with larger samples and better outcome measures than are now available. Nevertheless, we should be prepared to begin using the information we have to make adjustments and refine procedures, including financial incentives, designed to improve the quality of care in both managed care and the fee-for-service system.
Findings from a series of studies by Mathematica, Inc. (Brown, Bergeron, Clement, Hill, Retchin, 1993), of the Medicare TEFRA HMO\(^1\) programs, indicated that the HMO enrollees were not as likely to receive as many chronic and long-term care services (home healthcare, rehabilitative services) as those in the fee-for-service sector (FFS); they had fewer visits with their physicians; and they reported somewhat lower satisfaction with the quality of care received. On the other hand, HMO enrollees were clearly pleased with the lower, out-of-pocket cost of their care and the reduced paperwork. No significant differences in the treatment outcomes (morbidity and mortality rates) were observed between the two groups.

A study by John Ware et al. (1996) found substantial differences in four-year outcomes for the elderly and poor, chronically ill patients treated in HMO and fee-for-service systems. For elderly patients (those aged 65 years and older) treated under Medicare, declines in physical health were more common in HMOs than in FFS plans (54\% vs 28\%; \(P<.001\)). In one site, mental health outcomes were better (\(P<.05\)) for elderly patients in HMOs relative to FFS but not in two other sites.

The study included 2,235 patients (18 to 97 years of age) with hypertension, non-insulin-dependent diabetes mellitus, recent acute myocardial infarction, congestive heart failure, and depressive disorder sampled from HMO and FFS systems in 1986 and followed up through 1990. Those aged 65 years and older covered under Medicare and low-income patients (200\% of poverty) were analyzed separately. Types of practices included both prepaid group (72\% of patients) and independent practice association (28\%) types of HMOs, large multispecialty groups, and solo or small, single-specialty practices in Boston, MA, Chicago, IL and Los Angeles, CA. Outcome measures were derived from differences between initial- and four-year follow-up scores of summary physical and mental health scales from the Medical Outcomes Study 36-Item Short-Form Health Survey (SF-36) for all patients and practice settings.

In a survey of 37 recent studies comparing managed care and fee-for-service delivery systems, Miller and Luft (1997) found that the 15 studies addressing quality of care showed an equal number of significantly better and worse HMO results compared with non-HMO plans. They note, however, that:

\[\ldots\text{three of the five observations with significant negative HMO results focus on patients with chronic conditions or diseases who need care the most: chronically ill low-income enrollees in worse health, impaired or frail social health maintenance organization (SHMO) demonstration enrollees (who influenced the overall negative mortality results), and Medicare home health patients, many of whom have chronic conditions and diseases . . . the three significantly negative HMO quality-of-care results for Medicare HMO enrollees with chronic conditions and diseases warrant attention, especially since the studies that provided the data tended to collect substantial information on enrollee characteristics. (p. 15)}\]

\(^1\)TEFRA HMOs are Medicare primary/acute care health maintenance organizations which became operational in 1985 under the Tax Equity & Fiscal Responsibility Act. TEFRA HMOs receive a prescribed amount from Medicare each month to pay for all medical services needed by enrollees.
As the number of Medicare beneficiaries in managed care of some form increases over the next several years and the focus of healthcare management shifts from containing utilization and costs to improving outcomes, the need for geriatric training for all providers will increase and schools of medicine, nursing and ethical health will be pressed to meet the need. School curricula will be modified to incorporate courses and residences in geriatrics and new in-service training programs based on the latest information technology will be implemented in many states.

These developments will occur parallel with a growing recognition of the profound deficiencies in the U.S. long-term care system for the frail elderly and other dependent populations, including the fact that it is largely unrelated to the acute care system.

We do not have a coherent/user friendly system of long-term care services for the frail elderly who are largely dependent on publicly supported services. Over eighty percent of the public funding for long-term care is tied up in Medicaid spending for nursing home care, leaving relatively few federal and state resources available for community-based programs which the elderly and their families prefer.

In the absence of in-home services, which could also be provided in congregate living settings, the pressure to use the Medicare home health benefit to keep frail elderly persons with physical and mental impairments out of nursing homes was too great to resist. No one should have been surprised that the Medicare home health program would eventually become a medicalized substitute for the missing home- and community-based long-term care programs. The Congressional effort to contain the costs of the program through the 1997 Balanced Budget Act, by limiting it more strictly to its original purpose (short-term acute care services), is likely to have unintended consequences, such as increased nursing home admissions, at least as deleterious as those arising from the earlier, more expansive version of the program. The percentage of Americans aged 65 and over who live in nursing homes fell from 4.6% in 1985 to 4.2% in 1995. The expansion of the Medicare home health benefit may have played a major role in this decline.

The Medicare home health misadventure is just one example of the confusion that characterizes current long-term care policy. We have long been spared the full impact of the gaps and inconsistencies in the way we do long-term care by the fact that family (mainly wives and daughters) and friends, or what we call the informal sector, provide most of the care. It is becoming increasingly clearer, however, that we have reached the limits of what the informal sector can absorb. With the aging of the baby-boom generation, which will have proportionately fewer children and spouses, and the growing participation of women in the labor force, the informal system is likely to shrink, leaving more frail elderly persons on their own. The projected growth in the number with long-term care insurance and other private resources and declining disability rates will cushion the effects of declining capacity in the informal sector somewhat. The huge growth, however, in the number of older people and continuing increases in longevity in the first three decades of the next century will generate steady increases in the need for publicly supported long-term care services for the next four decades.
As these trends begin to accelerate over the next ten years, we will have to think more coherently about how to provide long-term care and we will have to address the need for major policy changes. We already know, however inchoately, that federal and state governments cannot afford a continuing dependency on institutional care and that simply ignoring this pending crisis will not be a politically feasible alternative much longer.

The most likely response to the emerging crisis in long-term care over the next ten years will be a major initiative by the federal and state governments to shift resources from institutional to home- and community-based programs, including consumer-directed care programs designed to pay caregivers and publicly supported assisted living and adult foster home programs. Governments will also attempt to improve the overall care of the frail elderly by providing incentives for the integration of acute, chronic and long-term care. The success of these efforts will substantially depend on increasing the number of geriatrically trained providers; the development of efficient case management programs; and the emergence of information systems that permit the rapid tracking and monitoring of patients across services sites.

The growing population of persons 50 plus and the increasing emphasis on care of chronic conditions, long-term care and geriatric medicine will gradually erode the domination of the conventional medical or curative model of care which is characterized by a relatively narrow focus on the treatment of curable, essentially acute, conditions. Goals other than curing disease will become increasingly important over the next ten years and beyond. These goals include preventing illness and promoting health; relieving suffering; restoring functional capacity, slowing the pace of functional decline; helping individuals flourish despite substantial impairment; and providing more palliative care. The increasing prominence of these goals will broaden the focus of medicine as general health and quality of life issues become as important as curing disease. This broader multifactorial focus will incorporate an increasingly sophisticated awareness of the roles played by mental, social and spiritual factors, as well as physical factors, in determining the health status of individuals. Health will be recognized as more than the absence of disease and that disease states are often worsened by such nonbiomedical factors as weak social support networks, relentless stress and chronic depression, which is increasing in prevalence.

The emerging, more encompassing model of healthcare will make the provision of psychosocial and nontraditional services a routine part of medical care, increase the significance of provider-patient relationships and create conditions that support the growth of effective self-care initiatives on the part of patients—a more realistic or integrated approach that recognizes the multiple determinants of health status will identify more things for patients to do in caring for themselves. Managed care organizations will be forced to accommodate these changes in approaches to healthcare (a paradigm shift) by loosening constraints on physicians' and nurses' time with patients and covering a wider range of services, including mental healthcare, that are currently considered unconventional services.
This broader, relatively less empirical perspective on health and medicine will help counterbalance the techno-scientific domination of the more scientifically oriented biomedical model of care and soften the frequently hard edges of a strictly technical approach to diagnosis and treatment. Scientifically informed practices and technological advances are certainly welcome, but patients do not want and will increasingly refuse to be treated as physiological objects whose only important and interesting features are biological. The minds and biographies of patients are often as important as their biomolecular characteristics and provide just as much information about their health status.

These changes will have major implications for the education of health care professionals.

First, the health care professions will find themselves challenged to broaden their curriculum beyond the biomedical core currently regarded as the basic science of health care. A changing epidemiology, a new system of care, and a better understanding of the relationship between mind and body will necessitate a more complex core curriculum that addresses the psychological, social and behavioral aspects of health care in addition to the biomedical aspects. Second, the health care system itself will demand more of a population-based approach to care. Included in such competencies will be clinical epidemiology, clinical prevention, health education, and more effective use of resources. Finally, the increased complexity of patients needs and sophistication of the emerging system will demand a better integration of skills across the professions and effective team competencies. (O'Neil & Finnocchio, p 121-122)

In short, healthcare education and training programs will increasingly be influenced by the need to add value to the healthcare dollar, enhance patient satisfaction, improve healthcare outcomes as measured by empirically based, scientifically valid data and to incorporate information and communications technology in the delivery of care.

C. Role of hospitals

What role(s) will the hospital play in the evolution of the healthcare delivery system over the next ten years? The role of the hospital has already changed substantially over the past ten years as the total number of beds dropped from over one million to 850,000, occupancy rates declined to around 60%, and under 50% in some communities, and hospitals shifted resources to day surgery and out-patient clinics and used to support consolidations and partnerships, which were undertaken in the pursuit of various forms of vertical and horizontal integration. The number of private, for-profit hospitals increased, but seems to have stalled at under 20% of all hospitals. Hospital staffing levels have fluctuated over the last ten years, but levels have been rising in terms of staff per bed in recent years as the percentage of sicker patients has increased. Hospitals now absorb 35% of all healthcare dollars (41% in 1980) and this percentage is likely to decrease slightly over the next ten years as the number of beds drops further in response to low occupancy rates.
It is not clear yet whether hospitals will become the foundation of effectively integrated care delivery systems. Attempts at integration have waxed and waned over the last several years and it is no longer clear what the financial advantages of integration may be for hospitals and other providers. Whether integration is a viable business strategy seems to depend largely on unique local circumstances which vary greatly from one community to another, and this is unlikely to change over the next ten years.

Many hospitals are currently struggling to adjust to the reimbursement reductions imposed by the Balanced Budget Act of 1997 and are seeking some measure of fiscal relief from Congress. Several academic medical centers, which are commonly teaching hospitals associated with medical schools, seem to have been especially affected by lower increases in Medicare payments, which they depend on to cover most of the costs of medical education (about $6 billion in 1998). A few of these centers may choose to become non-teaching facilities in networks, but a new, more direct funding mechanism is likely to be implemented by Congress by 2010 which will stabilize medical education at a somewhat lower capacity than the current level. These trends will also diminish the capacity of academic medical centers to provide care to Medicaid recipients and the uninsured, which will increase the pressure on community hospitals and clinics to provide more care to the poor and uninsured. This response is not likely to occur, however, without increased subsidies from the federal government. Sultz and Young also note that:

As pressures grow to reduce the annual yield of U.S. medical school graduates, to curb the influx of foreign-trained physicians, and to balance the number of medical specialists with an equal number of medical generalists, academic health centers have, so far, only responded by encouraging the practice of primary care. Eliminating a number of medical schools, reducing the size of the entering classes, or stemming the flow of foreign-trained physicians are difficult policy decisions that will be deferred as long as possible and then debated hotly. (p. 295)

In summary, trends in hospital services and financing that emerged over the last ten years will continue over the next ten years. Hospitals will continue to expand their range of services, especially in the areas of out-patient care and post-acute skilled nursing care and reduce their dependency on in-patient care, which will continue to decline, though at a slower rate than over the last several years, as technological innovations, including pharmaceuticals, diminish the need for in-patient care.

D. Medical technology

The effectiveness of medicine has been dramatically improved over the last 60 years with the advent of antibiotics, sophisticated surgery and many other advances produced by the growth of biomedical knowledge and biotechnological application. The foundation for a huge increase in biomedical knowledge and qualitatively more effective treatment of many diseases will be created and between 2010 and 2020; we are likely to see as great an increase in medical effectiveness as occurred during the previous 50 years. These changes will increase the demand for access to care for all consumers and create increasingly favorable political conditions for some form of national health insurance at
some point after 2020. The gap between those in the top tier health plans and those uninsured or underinsured will become more glaring and less sustainable politically as it produces increasingly measurable differences in morbidity and mortality/outcomes between the two groups and for many in between.

These new medical technologies will occur in a wide range of fields including the more rational design of drugs that match therapeutic chemicals to molecular receptors and enzymes and turns them off or on depending on the specific pathology; vastly improved imaging technologies that permit more efficient and greatly enhanced images of tissues, organ systems and functions, minimally invasive surgery based on miniaturization of instruments and devices and image guided techniques which will greatly improve surgical outcomes and decrease collateral damage, especially brain surgery; genetic medicine, which will lead to gene-based preventative care and intervention at the molecular level with gene replacement therapy; new antibiotics and vaccines that will more than watch the mutational resource of bacteria and viruses (or so we hope); and major advances in transplantation science and technology, including techniques to overcome physiological resistance to foreign organs and to transplant the organs from one species to another (but only for chimpanzees killed in car wrecks!)

These biomedical advances are likely to substantially increase the costs of drug therapies and their share of total healthcare costs, but reduce the costs of other treatments through substitution in several areas, including surgery, where telesurgery is likely to reduce the number of providers and enhance overall efficiency.

An optimistic prediction is that there will be a better balance in the introduction of new technologies, with cost-decreasing inventions and strategies somewhat compensating for cost-increasing invention. What will be essential are better social mechanisms for deciding which of the cost-increasing technologies that emerge in fact enhance quality of life and thus are worth investing in. Americans will continue to be willing to pay for quality-enhancing technologies even if they cost more. (Knickman, p. 517)

Technological advances will also have a major impact on information and communication processes in healthcare over the next ten years. This impact will include increased efficiency in the business of healthcare (administration and management) and improved quality of care for consumers. The expansion of increasingly user-friendly computers and decision support systems throughout the healthcare system will create clinical information systems based on easily updated and accessible electronic medical records that preserve a reasonable degree of privacy, increase therapeutic efficiency and improve clinical outcomes. These records will be used to generate data that can be used to analyze clinical outcomes in much larger data sets than are currently available and greatly enhance the scope and validity of medical effectiveness research and the capacity to compare cost-effectiveness among providers and health plans. These data sets will also be used to risk-adjust payments far more precisely and accurately than is possible with current data. These analyses and the use of findings will occur far more rapidly than currently occurs with relatively limited and often out of date data. These expansive information technologies will be used increasingly to monitor patients routinely and remotely and detect adverse events early. Patients will also increasingly use their
personal computers to access the information generated and disseminated by the expansion of information technology to educate themselves for the purpose of self-care and to share in decision-making with their providers. Privacy concerns, however, could have substantially constrained the use of this technology.

Despite the potential for change, an important concern about confidentiality and privacy may inhibit some uses of new information technology. For example, it would be straightforward, with existing technology, to tract the use of multiple providers by one individual so that each provider could better coordinate the care being considered. However, privacy concerns have slowed efforts to implement such tracking systems. Privacy concerns even hamper efforts to implement computerized systems to track immunization information for young children. (Knickman, p. 521)

E. Public health and health behaviors

The role of public health services in improving the health of the general population and increasing the longevity of individuals is indisputable. Most of the increase in longevity (30 years) in the 20th century is attributable to public interventions, including air, water and food sanitation initiatives and health education programs designed to instruct the public about the links between behavior and health status. Public health resources, however, have declined substantially over the last 30 years with the growing perception of nursing policy makers and the public that public health agencies have largely achieved their purposes. Contagious diseases have been controlled and, with the shifting of medical services for most of the poor to the private managed care sector under the Medicaid program, there is little for public health agencies to do in providing primary care. Increasing threats to public health, however, and the near absence of a comprehensive, well-organized capacity to resist them effectively will lead to a slow but steady rebirth of coordinated public health programs over the next ten years. This rebirth will have three principle sources:

- **Promotion of healthy behavior.** Public education campaigns have had success in reducing tobacco use over the last 30 years and more limited, but significant success in reducing alcohol and illegal drug consumptions and behaviors that put individuals at greater risk of contracting HIV. Many of these public education, prevention, early intervention initiatives, however, are fragmented, episodic and not nearly as effective as they need to be. For example, the U.S. does not have a comprehensive, nationwide program to prevent and treat illegal drug use and the increased exposure to HIV/AIDS that comes with drug use. Far more money is spent on interdiction and policing activities, including out-of-control, wildly irrational incarceration rates for nonviolent drug users than is spent on far more cost-effective treatment programs.

- **Combating infectious diseases and environmental threats.** Recent outbreaks of E. Coli and other once rare infections, the increasing resistance of common bacteria and viruses to antibiotics and growing threats to air, water and food quality will gradually raise the profile of public health programs and the failure of private sector resources to respond to these trends effectively. The globalization of virtually all phases of life will accelerate the speed of contagious conditions and threats to the environment everywhere, necessitating the development of international structures for public health programs.
largely funded by developed nations in recognition of the fact that these threats are increasingly borderless.

- **Serving the poor and uninsured.** Until the late 1980s, many public health agencies provided care to a substantial percentage of the Medicaid population and the non-Medicaid poor, both children and adults. Much of this care is now provided through private HMOs with Medicaid resources. Many of the non-Medicaid poor and the uninsured, however, no longer have access to any form of stable primary care and either go without care or seek services in hospital emergency care departments as the primary care infrastructure in public health agencies declined in many communities. The belated response of the policy makers to the growth of the uninsured population, the increasing costs of Medicaid HMO contracts, and fear that the poor health of the have-nots may threaten the more affluent could create propitious conditions for rebuilding the capacity of public health agencies to provide primary care and to undertake population-based prevention initiatives.

Changes resulting from market driven reforms are also creating conditions conducive to a higher profile for public health issues.

As managed care plans take more financial risk and responsibility for the care of enrolled populations, there will be, perhaps for the first time, a powerful entity that has an immediate stake in successfully managing the health of enrolled populations. This means that the system will feel significant pressure to utilize what are known to be effective strategies and programs for preventing the onset of both chronic and acute disease, by changing the behavior of patients, organizing health care resources in a manner that derives the maximum benefit for the lowest costs, changing the environment to reduce health hazards, and lobbying for public laws to prevent or reduce the severity of accidents or disease. Such a dynamic have rarely existed in this country. (O’Neil & Finocchio, p. 132)

In short, public health will probably, once again, come to be seen as important to everyone and not just for the poor—therefore largely expendable. This shift in public attitudes will allow many of the advances in public health developed in university public health schools, including the results of epidemiological research, to be implemented on a broader scale than has been possible in several years.

**F. Conclusion**

Healthcare plans, primarily managed care organizations, are likely to decline in number and increase in size and power over the delivery and financing of healthcare over the next ten years. Some provider service networks will emerge in a few communities across the country and contract directly with employees by passing conventional intermediaries. The slow development of provider service networks, however, will not keep the percentage of consumers covered by managed care plans, including increasingly sophisticated and better managed preferred provider organizations, from continuing to grow. This scenario could be altered if consumer dissatisfaction with managed care reaches critical mass at some point in the future and causes an unraveling of the current managed care architecture and a return to a largely fee-for-service system or the
emergence of managed care plans that are so flexible and provider/consumer driven that they become as expensive as the fee-for-service system. Neither of these developments is likely, but the latter is a significant possibility given the manner in which MCOs have responded to the relatively "low boil" of consumer and employer uneasiness that has emerged in the last few years and could reach critical mass in the next five years. In response to the efforts of policy makers in some states and, to a lesser degree at the federal level, to limit the power of plans to control utilization, MCOs have begun to loosen their review and approval/limit of care procedures, giving increased power to providers and consumers to make medical decisions. There are limits, however, to how far this flexibility can extend before any ability to control costs is lost and the distinction between managed care and fee-for-service becomes purely academic.

Until just a few years ago, it looked as if healthcare would increasingly fall under the total domination of a business model as control shifted from providers, operating in a professional model, to corporate managers. This inexorable trend of the market becoming the final arbiter of issues related to access, costs and the overall allocation of resources would make the healthcare system increasingly less stable and predictable, as new competitors and products entered the market as provider and health plan mergers, consolidations and alliances increasingly defined the parameters of healthcare delivery through the pursuit of increased profitability based on cost control, price competition and the shifting of risk on to providers and consumers. The increasing dominance of the business model would greatly diminish consumer choice of providers and services through the following procedures: 1) controls (capitation, review and approval procedures) on utilization; 2) limit provider autonomy as professional standards gave way to health plan standards and protocols; 3) increase incentives to avoid bad risks and reduce the potential to serve the uninsured through cost shifts; 4) substitute the traditional emphasis on access to quality care for some notion of satisfactory care for most consumers; and 5) undermine community rating strategies by making sicker and older consumers pay more.

The domination of the business model and the complete marketization of healthcare delivery and financing no longer appears to be inevitable. The emergence and growing power of countervailing forces in the provider community (physicians and nurses) and among consumers has led to modifications of the priorities and strategies of health plans described above. These changes reflect a greater balance of power between health plans (MCOs primarily) and providers/consumers than existed just two-or-three years ago and the probably inherent limitations of a purely business approach to healthcare. The balance of power in healthcare is likely to be made even more equal by the aging of the baby boomers who are increasingly contesting the constraints imposed on the care of their parents by health plans and on their own care as they experience the increase in medical needs associated with aging. This increasing balance of power and resistance to a fully realized business model of healthcare may cause some investors to move their funds out of health plans and search for better returns elsewhere in a thriving stock market.
The future of healthcare delivery and financing will be shaped by the kind of compromise MCOs, providers, consumers and their political representatives are able to construct between controlling costs and protecting profit margins and consumer (employees to a lesser extent) demands for access to care and an acceptable quality of care. As noted earlier, MCOs and other intermediaries are and will continue to respond by giving greater control to providers and consumers. They will attempt to offset this shift in power over medical decision-making and the partial loss of control over costs this shift will entail through increasing the price of contracts with employers and by requiring consumers to bear a greater share of costs through increased premium co-payments and deductibles, which will be designed to reduce costs to employees as well. This *quad pro quo* pattern is already evident in contracts negotiated over the last two-to-three years and is likely to become a more dominant trend in the future. MCOs will also attempt to control costs, as described earlier, by improving the quality of care through effectively enforced practice guidelines which accurately reflect the best available medical research, technology and care management strategies (e.g., disease management) that ensure consistency of care across settings and providers and consumer compliance with regimens of care.

The future of healthcare delivery and financing will be substantially shaped by the extent to which intermediaries can balance efforts to respond to consumer dissatisfaction by relinquishing a significant degree of control over medical decision-making to consumer providers with efforts to contain their costs by shifting them to employees and consumers and by achieving increased efficiencies through improved healthcare outcomes. The best bet at this point is that they will be able to decrease the currently wide variations in the use of medical procedures and interventions among practitioners and achieve some measurable improvement in medical outcomes, but their efforts to consistently contain costs will be only minimally successful. Plans will be increasingly caught between the resistance of employers and consumers to bearing a substantially greater share of the cost of care and the increasingly upward pressure on costs caused by technological developments and the accelerating rate of scientific breakthroughs in medical research.

Consider this quote from a 1999 article entitled, “The Future of Managed Care Organization,” by James C. Robinson:

Public policymakers and industry analysts often assume that there exists somewhere a truly efficient form of physician and hospital organization, an optimal benefit package, an evidence-based set of clinical protocols, and one best method of marketing and enrollment. But even a cursory examination of the medical marketplace quickly reveals that no one size fits all and that consumers do not agree on what they want, purchasers on what they are willing to pay for, and providers on what they are willing to deliver. The future of the health plan lies at the often conflict-ridden interface between consumers, purchasers and providers, in the development, pricing and distribution of managed care products that reconcile preferences with pocketbooks throughout the healthcare system.

(p. 12)
And even though mergers and consolidations will reduce the number of plans and increase the power of the bigger ones, these conflicts at the borders will continue.

The concerns about saliency of healthcare policy and practice have gradually risen since the healthcare reform debacle of 1994. These concerns seem to be driven by the fact that the number of uninsured has continued to rise during a period of extraordinary economic growth; overall healthcare costs have begun to increase at rates approaching historical levels without any perceptible increase in quality; huge variations in costs and treatments occur across the country; and, managed care has not substantially curbed the fragmentation of services for the episodic treatment of illnesses in many part of the country. The percentage of the public reporting unsatisfactory experience with managed care has increased since the mid-1990s. The cumulative effect of these concerns on the part of the general public could create conditions for a major political debate over the direction of healthcare policy within presidential and congressional campaigns during this decade. Although much of this debate will focus on matters related to the solvency of Medicare/Medicaid methods of addressing the rising tide of uninsured and regulations of managed care, they will also increasingly touch on a wider range of issues related to the style and substance of care (greater focus on prevention and wellness and chronic care); accountability for outcomes of care; population-based health status; incentives to provide continuous, appropriate care; and limit excessive use of resources. This expanding politics of healthcare agenda, in combination with developments in the healthcare market, will have a major impact on the healthcare labor force in terms of demand for and supply of personnel and the kinds of education and training services that will be required over the next ten-to-twenty years. These issues are addressed in Chapter IV, the future of the healthcare labor force.

The ten-year scenario described here is largely based on the broad, rather heroic assumption that there will be no deep, qualitative changes in U.S. healthcare policy and practice during this period. Instead, we predict that the major trends which have emerged over the last 15 years will continue to unfold over the next ten years with incremental adjustments along the way. In short, we predict that:

- Universal healthcare proposals will continue to be part of the national health care debate, but will not muster the political support necessary for the passage of federal legislation. Incremental initiatives will be taken to cover selected populations (children from low-income families) and limit the growth of the uninsured population, which will not exceed $50 million, and curb the capacity of managed care organizations to control utilization of healthcare services.

- Employer pressure on health plans will limit annual healthcare costs to between 5 and 10% on average, or 1 to 5% above inflation, with overall healthcare costs reaching 16 to 17% of GNP.

- Employees will continue to bear an increasingly larger share of healthcare costs as defined benefits slowly give way to defined contribution plans and out-of-pocket costs increase.
• Some adjustments will be made to Medicare and Medicaid cost-containment initiatives undertaken in 1998 for HMOs, hospitals, nursing homes and home healthcare, but these provisions will remain largely intact and providers will respond by rearranging funding sources.

• The struggle between health plans and physicians and other individual providers over reimbursement rates and control of utilization will continue without reaching any final, comprehensive resolution.

• Biomedical and technological innovations and the implementation of outcome measures will steadily improve the quality and effectiveness of medical care, although the fragmentation of healthcare delivery will continue.

• The focus of healthcare training and delivery will gradually shift from acute to chronic care with the aging of the population.

On the other hand, the economics and politics of healthcare could become increasingly turbulent with major implications for the design of managed care and the Medicare/Medicaid programs, government response to the uninsured population and the overall cost of healthcare. The managed care backlash, which seems to have gained momentum over the last three years could lead to legislated restrictions on the autonomy of HMOs and greatly reduce their capacity to control costs—this capacity has already been significantly enabled in a few states. Provider groups could grow in both number and size, become more sophisticated bargainers and political actors and, as a result, tilt the playing field away from HMO control of prices and salaries. Growing consumer knowledge and participation in healthcare decision-making could increase pressure on HMOs to concur to consumer preferences and further erode their ability to contain costs. Medical technology and treatment innovations could expand at an accelerating rate and frustrate all efforts to rationalize their use and contain their costs. Fear among aging baby boomers that Medicare, as we know it, will not be available for them could greatly restrict the political feasible options that Congress could use to control Medicare costs. If some combination of these events were to occur over the next ten years, healthcare costs could reach 18 to 20% of the GNP and make health insurance increasingly expensive for employers and employees. The number of uninsured could grow well beyond 50 million as employers, especially small firms, drop their plans.

These events, to the extent that they occur, could create a more favorable political environment for some form of national health insurance as costs mount, the number of uninsured approaches 60 million and out-of-pocket costs erode support for the current system among a majority of the population.

Or, increasing costs and declining coverage could drive the policy debate to the right and toward a presumably more market-oriented strategy for cost containment. According to Styring and Jonas (1999), the growth of the older population over the next 20 years and the concomitantly rapid (out of control) increase in costs will force radical changes in private and public healthcare finance. By 2020:

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Employment-based insurance essentially ends. Medicare is scaled back but does not disappear, and cost increases are held somewhat in check by introducing more competition in bidding and purchasing. Medical Savings Accounts become common among the general population. . . . Eligibility ages are raised and/or benefits are cut and/or taxes are raised to fund seniors' entitlements, including Medicare. Benefit cuts and/or retirement age increases are not so steep as to incur open rebellion among Boomers. Their Baby Buster children will eventually pay higher tax rates to support them, but not so much higher that intergenerational warfare breaks out.

Premium support would subsidize the elderly to enroll in a health plan and would be a radical departure from the current system, which pays medical bills directly. The hope is that competition might reduce the rate of increase in medical costs.

The tax exclusion for employment-based health insurance will be repealed as part of this deal. It will be replaced by a general tax credit for purchase of individual health insurance. . . . Boomers will support it as getting something in the way of retirement health insurance when Medicare no longer is so generous. Business will support the repeal and replacement as a means of taking the pressure off them to be the primary suppliers of retirement health insurance for their former employees. (p. 102-103)

With the elimination of the tax exclusion for employment-based health insurance:

Medical Savings Accounts will be an attractive option for many. MSAs combine a high-deductible health insurance policy (usually 2,000-$4,000) with a savings account (usually $1,000-$2,000). Annual, smaller, medical expenses are paid from the savings account. If unusually large medical expenses are incurred, the high-deductible policy kicks in and pays all expenses over the deductible amount. In any given year, the individual's maximum exposure to medical expenses is the difference between the savings account and the deductible amount. At the end of the year, any unspent amount in the savings account may be kept by the individual.

Individuals could use the health insurance credit to purchase a high-deductible insurance policy. Repeal of the health insurance tax exclusion for employment-based insurance would increase federal revenue by about $100 billion, enough to fund the purchase of a high-deductible health insurance policy for most Americans if passed back as a health insurance tax credit. If the law is changed to allow further tax-deductible contributions to an MSA, MSA will become the health care financing standard of the year 2020. (p. 103)

They go on to point out that:

. . . if (as we expect) the employment-based health insurance tax exclusion is repealed and replaced by a universal credit for health insurance purchases, every American, including the graying Boomers, will have access to a high-deductible health insurance policy. Second, Medicare may be less generous, but it is not going to fade away entirely. Medicare may well be transformed from what it is today into funding the savings account portion of MSAs for seniors. (p. 104)
They admit that there will be losers in their scenario, namely:

... the young who would otherwise be covered under an employment-based system. They trade their current tax exclusion for all employment-based health insurance for a high-deductible "catastrophic" policy. They are "worse off." They have lost their low- or no-deductible policies for something which requires them to pay for the first physician visit when Junior or Junioretta feels bad. (p. 104)

We think there would, in fact, be other losers as well, perhaps a majority of the population, as out-of-pocket costs climb and insurance pools shrink as health plans pursue favorable selection strategies and fierce competition leads to further fragmentation of the health care system and gaps in coverage grow. It is entirely feasible, however, that a scenario close to this one could emerge, especially in the wake of a premium support program for Medicare which could evolve quickly into a MSA-based program for all recipients. The Breaux Medicare Commission included a number of members who supported a premium support approach and Governor Bush has proposed something similar during his presidential campaign.

III. Emerging and future ethical issues in health care

The American healthcare system has historically suffered from society's inability to decide whether healthcare is: a) a right (like the right to a K-12 education); b) a good that each person is individually responsible for; or, c) a good that some people (elderly, poorest) have a right to and others don't (employees of a small firm without an insurance plan), although the latter must be treated if they show up at a hospital injured or sick—they just can't be paid for in any direct way.

In addition to the ethical dilemmas inherent in a healthcare system that recognizes the right to care for some and not others, based on some difficult to defend notion of relative worthiness, we now have the ethic concerns raised by the involvement of managed care organizations in the doctor-patient relationship and in decisions determining the utilization of resources. As noted earlier, some MCOs have begun to loosen control over utilization decisions, but this issue will remain salient for the next several years and may become even more pressing as the number of older people with more serious and more chronic conditions (requiring more extensive care) join the significance of the ethical issues surrounding the financing and delivery of health care in general and managed care in particular. The public policy response to these rapidly emerging ethical dilemmas may substantially shape the direction of health care over the next several years as efforts are increasingly made to create an ethically defensible relationship among such inherently conflicting objectives as the pursuit of profits, containment of costs and equitable access to effective care.

The potential of managed care to improve care, as well as contain its costs by providing appropriate services as needed, is threatened by ethical dilemmas inherent in for-profit managed care and in non-profit managed care organizations which are pushed by competition to limit access to specialty services and to lower their guard when it
comes to ensuring an adequate quality of care. The two main ethical dilemmas are described below.

1) *Disrupting the physician's fiduciary relationship with his/her patient*—this relationship is the principal "vehicle of care." The physician must know her patient very well and, over an extended period of time, the patient must be able to trust the physician and believe that her best interests are foremost in the physician's mind. If financial incentives, intrusive monitoring/approval procedures and frequent switching of physician and patient or other managed care procedures are allowed to disrupt this relationship, the essential trust between physician and patient may be eroded along with the quality of care that is substantially dependent upon its maintenance. Cassell (1998) has noted that:

2) All caregiver organizations . . . must be competitive in terms of what they offer. The conceptual problem of placing the term 'payer' between physician and patient is that it has come to represent the idea of manipulating the relationship because of a primary interest in money instead of enhancing the relationship with a primary interest in the patient's care. All healthcare organizations whose competitive edge is in the quality of care they provide will act to strengthen the relationship of physician and patient, the fundamental vehicle of care.

To align good business with good, ethical medicine, Morreim (1998) argues that managed care organizations must adopt structures that promote long-term membership, high quality clinical relationships, and trust. To achieve these goals, firms should pool their resources so they can offer their patients more choices, increasing the chances that patients can choose and stay with plans they like. Second, health plans should have risk- and longevity-related premiums so that they are not punished fiscally for taking in sick patients. Third, physicians ought to be offered bonuses for continuity of care. Finally, patients ought to be given more control over their choice of health plan and the economic consequences of their selection.

Morreim has noted that in the absence of a fundamental commitment to maintaining a close, trusting, long-term relationship between the physician and patient, managed care organizations are likely to adopt a "widget" approach to healthcare.

. . . featuring generic, interchangeable providers seeing generic, interchangeable patients for guideline-bound diagnoses and treatments, may work acceptably in manufacturing and other kinds of business, but it can be disastrously simplistic in medicine.

2) *Undermining accountability for access to care and quality of care*—financial incentives in management mechanisms designed to either directly or indirectly (spin-off effect) limit access to services, especially specialty care, or compromise a commitment to achieving an acceptable quality of care in order to protect profit margins (the interests of stockholders) are not morally defensible. Physicians and
the organizations that employ them must be accountable first to their patients and all other involved parties second. Rodwin (1998) has noted that:

...debates about healthcare accountability in the future are likely to turn on questions of corporate accountability. How are the claims of various stakeholders (consumers, labor, shareholders, the community, providers) to be reconciled? Will these groups be represented in firms internally or will they seek a voice in the policies of firms by lobbying for state or federal legislation that regulates managed care organizations? What role will business or corporate ethics play in governing the workings of managed care organizations? To what extent can market competition promote desired ends and to what extent do we need to rely on governmental regulation?

According to Dubler:

...managed care has not only exacerbated existing conflicts between patients and providers but has 'changed the shape and scope of the healthcare enterprise and introduced an entirely new set of disputes.' Indeed, managed care is by 'definition and design' a dispute model, having erected barriers to provider-patient communication, linked physician resource utilization with practitioner evaluation, and created approval prerequisites for diagnostic and therapeutic interventions. So serious are the conflicts and power imbalances that managed care has an 'ethical imperative' to create accessible dispute mediation systems.

Following on Dubler's call for mediation in managed care, Fins (1998) proposes the establishment of a medical trust fund that would allow care to continue while benefits disputes are adjudicated. Fins suggests that managed care organizations contribute a small percentage of operating costs to this trust fund.

Efforts to implement remedies, such as Dubler's mediation strategy, to managed care's ethical dilemmas would be greatly aided by a more comprehensive ethical framework than anyone seems to have offered so far. An expansive framework will probably emerge over the next several years as other ethical issues, such as the plight of the uninsured, are linked with the ethical dilemma of managed care in a more comprehensive critique of the ethics of American healthcare. Managed care has the capacity to improve the quality and availability of care for the frail elderly through the integration of services, reduced out-of-pocket costs and increased training in geriatrics. These benefits will probably not be achieved without a full-scale debate over the ethics of managed care, which are at least as important as the economics of managed care.

Medical ethicists, health policy analysts and health services researchers have long been aware of the ethical conflicts endemic to proprietary managed care. Until quite recently, however, these ethical issues have been overshadowed by corporate and public policy concerns about healthcare costs and the need to contain them. The media drumbeat about escalating medical costs and the approaching, though now more remote, bankruptcy of the Medicare Trust Fund with the aging of the baby boomers has obscured
the clinical consequences of subordinating the needs of the patients to the requirements of cost-containment and profit maximization in proprietary managed care. It has also become difficult to raise ethical questions about the effects of pursuing profits on medical decision-making in a culture dominated by a market ideology and the drive to privatize (marketize) public programs. In fact, the market seems to have been granted a prescription of moral neutrality and has been essentially removed from moral discourse. This will change with the aging of the baby boomers and the rapid increase in the saliency of healthcare issues over the next ten-to-twenty years.

Ethics-based critiques of privatization policies and efforts to expand market strategies throughout the healthcare system tend to be dismissed as statistic-oriented perspectives that have been discredited by recent history as inefficient, bureaucratic and inimical to personal choice. This quick dismissal of substantive ethical concerns leaves profit maximization (i.e., returns to shareholders) and cost-containment as the only criteria for assessing the performance of healthcare providers who are increasingly large managed care corporations.

As described above, a substantial effort is now being made to develop a comprehensive array of scientifically sound clinical outcome measures that can be used to hold providers accountable in terms of patient-oriented criteria. It will take many years, however, to complete the development of outcome measures for most medical conditions, especially chronic conditions like cancer, diabetes, anthites and strokes. We simply do not know enough about how best to treat many of these conditions to establish scientifically sound outcome measures. Even if such measures were available, providers and policy makers would still confront ethical issues that cannot be avoided by further efforts to instrumentalize the medical decision-making process.

Providers and payers would have to decide what threshold levels a procedure must achieve in terms of measured outcome effectiveness before its cost-effectiveness was assured and it could be used in a particular case. More information about the relative effectiveness and cost of interventions is likely as not to make the decision-making process more complicated than the current state of relative ignorance about the effectiveness of many medical procedures. In short, more knowledge will not allow providers, payers and society at large to escape the ethical burdens inherent in healthcare delivery and financing decisions. Neither science nor procedural processes (ethics committees) will lift this burden from our collective shoulders. Fundamental, substantive ethical issues are at stake and we cannot avoid them indefinitely by resorting to market ideology or purely technical procedures.

These unavoidable ethical issues are more acute in an increasingly proprietary healthcare system characterized by a conflict between the interests of profit seeking shareholders and corporate executives, providers and their patients and the leakage of resources away from care into profits. How do we justify treating the patient as a means to the end of maximizing profits?
Dubler and Fins' models of mediation are not fully adequate vehicles for addressing the most fundamental ethical issues in the current healthcare system. How can these models serve as effective, ethically defensible substitutes for direct, undistorted, sincere communication between the physician and her patient, undistorted by cost-containment or profit maximizing imperatives? These may simply increase the bureaucratic interference between the physician and the patient and help subordinate this relationship, however indirectly, to corporate interests. Responses to these and other related ethical issues will substantially shape the direction of managed care and the overall health care system and the next two decades.

Scientific advances and technological innovations will add to the agenda of emerging bioethical issues and make issues of access to the quality and costs of health care less of a technical, economic issue and increasingly more of an ethical, political issue.

IV. The future of the healthcare labor force

The future of the healthcare labor force can be summarized in the following fashion.

- A probable surplus of physicians
- A moderate shortfall among nurses
- A large shortfall of hands-on workers in long-term care programs where demand for care will increase dramatically over the next 30 years.

If we subtract the number of physicians who will retire over the next ten years and the number who will pursue administrative or research careers, from the number of trained physicians who enter practice each year, the number of physicians is expected to grow from 450,000 to about 600,000 by 2010, which will generate 219 physicians per 100,000 population. The Council of Graduate Medication Education estimates that the U.S. will need 160-190 physicians per 100,000 in 2010. The gap will be greatest for specialists, of whom there will be 150 per 100,000 in 2010 and a need for only 100. The number of primary care physicians (generalist practitioners) will approximate the need for them by 2010—about 70 per 100,000.

Some percentage of the excess among specialists may decide to pursue careers in medical research or to focus on chronic disease management care which will become a growth area with the aging of the population. Others may decide to become generalist practitioners, possibly even in inner city and rural areas where the number of physicians does not come close to the number needs.

Without a major change in training policies and incentives, the number of minority physicians will remain far below their percentage in the general population, even as the growth of minority groups increases for the next 50 years. If these patterns of under representation are not reversed over the next several years, access to care in minority communities is likely to become even more restricted than it is currently.

Personnel shortages in the health care industry, particularly with respect to the nursing profession, have created an aging healthcare labor force. Recent calculations
demonstrate that the average age of working RNs increased by more than four years between 1983 and 1998 (Buerhaus, Staiger, and Auerbach, 2000). Like population aging occurring in the United States and around much of the world, shrinking birth cohorts (resulting from sustained low fertility) provide much of the driving force behind the aging of a population. For the health care labor force, shrinking cohorts of entry-level health care professionals is analogous to the small birth cohorts that spur population aging.

Recent projections suggest that the aging of the nurse labor force will continue for some time into the future.

- By 2005, 1.2 million nurses with BSN degrees will be needed, but only 650,000 will be available. The shortage will continue through 2015.
- The average age of the U.S. nurse is 44 and the average age when nurses retire is 49.
- Enrollment in entry-level baccalaureate nursing programs decreased by 4.6% in fall 1999.
- Master's degrees issued by U.S. nursing schools last year declined by 1.9%. Bachelor's degrees issued by U.S. nursing schools last year declined by 4.67%.
- By 2010, 40% of the RN population is projected to be age 50 or older (Buerhaus, Staiger, & Auerbach, 2000).
- Forecasts for the year 2020 suggest the shortage of nurses will be around 20% (Buerhaus, Staiger, & Auerbach, 2000).

A. Causes of an aging nurse labor force

Several underlying factors have contributed to the aging of the health care labor force. One of the largest contributing causes is decline in cohort size of graduating nurses recently. Fewer people, particularly women, enroll in nursing programs than in the past, in part because birth cohorts that are reaching college-age years are smaller. This means that the pool from which to enroll nursing students is shrinking—in particular when compared to the size of baby boom cohorts when they were college-age. But also, cohorts of graduating nurses are also older than in the past. We have witnessed a changing profile of new RN cohorts related to shifts in popularity away from bachelor's degree (BSN) programs to associate's degree (AD) programs. In general, BSN enrollments have declined and AD enrollments have increased. A total of 876 AD programs nationwide existed in 1997 and accounted for 59 percent of new entry-level graduates (Bednash, 2000). AD graduates tend to be older than BSN graduates, which may contribute to the aging of the nurse labor force. Recent estimates show that in 1996, graduates of AD programs were 33.5 years of age compared to 28 years of age for graduates of basic baccalaureate programs (Moses, 1996).

Today, fewer women choose to enter the nursing profession than in the past. At one time, women’s labor market opportunities were more restricted to select occupations that were predominantly female, such as nursing, teaching, and clerical work. Women’s work roles have experienced tremendous change and growth over the second half of the twentieth century with more women entering the labor force, more women working at the same time as they raised their families, and more women returning to work after childbearing responsibilities diminished. Women have gained entry into predominantly
male occupations and have expanded labor market opportunities from which to select their career. At the same time, women have experienced rising wages, relative to men. Comparatively, over the same time period, nurses have encountered declining wages relative to the level rising wages in the labor market overall.

Another factor that has detracted from the overall draw of nursing is the changing quality of the occupation itself. Several studies have cited poorer job quality that discourages women and men from entering the profession, as well as higher turnover among nurses and greater propensity for nurses to leave the field in pursuit of other careers. Increased physical demands is one aspect of job quality of nurses that may have had this effect (Helming, 1997). Also, both declining work satisfaction and employee morale among nurses have suffered in recent years.

One the main reasons that job quality is cited to have diminished is the changing nature of the healthcare industry and its labor market. For example, fewer job opportunities for nurses in acute care settings exist today than previously. Hospital downsizing, consolidation, and improving efficiency have changed employment opportunities for nurses with the end result being displacement of some registered nurses and insecurity and frustration for the rest (Gilliland, 1997). Some of the largest labor costs in hospitals are the nursing budget—making nurses prime candidates for cutbacks.

"Labor-market conditions for nursing personnel, and RNs in particular, have worsened over the past few years. Our findings suggest that this trend is attributable to growth in managed care, which has adversely affected the employment and earnings of nurses nationwide. In particular, it appears that managed care has reduced the demand for RNs, first in hospitals and more recently in home health and as a result has led to a decline in RN earnings." (Bauerhaus, & Staiger, 1999)

"As the number of positions decreases, the workload becomes more stressful for nurses left to pick up the slack. Mistakes are made, patient complaints increase as tensions rise, and the quality of nursing care decreases." (Gilliland, 1997)

Aiken, Sochalski, and Anderson (1996) report that between the period of 1981 and 1993, hospital employment grew by 11.3%. Nursing, however, declined by 7.3% over the same period. Increases in hospital employment can be attributed to growth in the number of technicians, non-professionals, administration, and other professionals; decreases in the nurse employment came primarily from declines in employment of non-RN nurses. As a result, fewer nurse caregivers—per patient—are available today than a decade ago.

B. Consequences of an aging nurse labor force

The aging of the nurse labor force is significant to those outside the health care industry for several reasons. Mainly, the underlying causes of this phenomenon may have initiated changes in the delivery and quality of health care. For instance, staffing patterns have changed with greater reliance on unlicensed assistive personnel to replace
RNs (Begany, 1994), even though a parallel trend suggests that patients in hospitals suffer from more acute illnesses requiring a higher level of care than previously.

The stability of complex systems of health care in the United States depends on an available supply of well-educated nursing personnel with clearly defined roles that are sanctioned through a system of licensure and certification. Reforming the education and credentialing mechanisms for nursing, restructuring work environments, and developing systems of care that empower RNs to use their professional skills are essential. (Bednash, 2000)

As a result of these trends, there has been growing interest in documenting concomitant changes in the quality of patient care. Although the results are mixed, some evidence suggests that the quality of patient care has declined. Because there is a high correlation between educational level of nurses and quality of care, the shift to relatively greater numbers of AD graduates and widespread hiring of unlicensed assistive personnel may adversely affect quality of patient care. One study finds that when there are higher percentages of RNs on staff there is a positive impact on patient outcomes and mortality (Hurley, 1994). Though given less attention, older nurses may not be able to meet the physical demands of their jobs as younger nurses. An Institute of Medicine report suggests that older RNs have reduced capacity to perform certain physical tasks (Wunderlich, Sloan, & Davis, 1996).

C. Solutions and challenges to changing the trend

The extent to which drastic solutions are required in order to reverse the trend of aging in the nurse labor force is unclear. Already, there are signs that the nurse labor force has stopped shrinking. “The trends since 1994 in high HMO states show little growth in the hospital employment of hospital RNs, but there is also no evidence of the drastic employment reductions that some have forecasted for the hospital sector” (Bauerhaus and Staiger, 1999). While there are not abundant numbers of nurses, there is some evidence that industry-wide corrections may be taking place.

Regardless of the uncertainty of current trends, general consensus is emerging which suggests that there are many areas in which the employment situation of nurses could be improved. Given the multiple contributing factors to the aging nurse labor force, several types of solutions are suggested that would alleviate the potential strain that would result from additional shortages of skilled nursing staff. The basic goals of most of these solutions center on 1) enhancing the attractiveness of the job, thereby improving recruitment and retention of nurses and/or 2) successfully training more nurses.

The first set of solutions address employment issues that would make the job that nurses do more rewarding. Extrinsic job rewards tend to come in the form of higher entry-level salaries, better benefits, and bonuses. Greater attention to recruitment efforts (pay and benefits) and greater attention to retention efforts (pay, benefits, promotion and training) is already beginning to occur in the industry. Intrinsic rewards result from shifting duties and responsibilities and improving the overall level of job satisfaction.
Changes can include easing physical and time demands, greater autonomy, and on-the-job recognition.

Several innovative employment/training programs—many of which are still in the evaluation phase—have begun to emerge in recent years. An example of one such program is a training program in California where a healthcare workers’ union has partnered with Kaiser Permanente. To address nursing shortages in California, which are relatively large, a training program has been designed that aims to upgrade the skills of existing health care employees (namely Certified Nursing Assistants [CNAs] and Licensed Vocational Nurses [LVNs]) and train unskilled health care workers to fill the lower tier of nursing positions vacated by those who upgrade to RN or other specialized nursing positions (e.g. acute care nurses).

Training programs such as that proposed above highlight yet another dilemma—that is, determining where to recruit new nurses from and how best to train them. Innovative nurse training programs (such as magnet hospital programs) and targeted recruitment of less traditional individuals into nursing programs have been offered as solutions to address these areas. These two sets of solutions are described next.

*Magnet hospital programs.* A number of years ago the American Nurses Credentialing Center—a certification organization—established magnet hospital programs as a mechanism to recognize excellence in nursing care. Hospitals seeking this designation must meet 14 standards through a process of written documentation and on-site evaluation review (Bednash, 2000).

The original series of magnet hospitals were selected in the 1980s and recognized for their ability to attract and retain RNs in a time of shortage. Magnet hospitals have a higher proportion of nursing staff prepared at the BSN level (average 59% versus 34% for all hospitals). Despite the common perception that RNs with a BSN or more advanced degree leave the patient care setting, 64% of all BSN-prepared RNs are employed in hospitals in direct patient care (64% of RNs with ADs and 47% of RNs with master’s degrees are employed in hospitals) (Bednash, 2000).

Aiken et al. (2000; 1997a; 1999, 1997b; 1994) found higher levels of BSN-educated nursing staff, nurse-to-patient ratios, and nurse satisfaction in magnet hospitals. In a 1994 study, Aiken et al investigated whether 1988 mortality rates for Medicare patients differed significantly between 39 institutions designated as magnet hospitals and 195 matched control facilities that did not hold that designation. After controlling for a number of factors known to influence mortality, such as number of beds, average daily census, organizational structure, facilities and services, medical staff characteristics, Medicare discharges, annual budget, and RN-staff mix, the researchers found that Medicare patients in magnet hospitals had significantly lower mortality rates (approximately 5% less excess mortality) than matched control hospitals. Aiken [and colleagues] suggested that “the mortality effect derives from the greater status, autonomy, and control afforded nurses in magnet hospitals, and the resulting impact of nurses’ behaviors on behalf of patients (Benash, 2000).
Magnet hospital programs show very clearly the link between the quality of nurse training and the quality of the work environment and concrete patient outcomes. Training and job quality approaches, therefore, have the potential to affect both nursing staff and patient outcomes. It is also likely that other health professional and health care workers that interact with nurses would benefit as well.

**Including more men in nursing.** Although more than 90% of the RN workforce is made up of women, the proportion of men going into nursing has been increasing (Buerhaus, Staiger, and Auerbach, 2000). Continued growth of the male segment of the nursing profession could generate an added supply of nurses.

**Expanding racial/ethnic representation in nursing.** Another solution is to facilitate entry of African Americans, Latinos, and other racial/ethnic minority groups into the field of nursing. This solution has considerable appeal for several reasons. First, the age structure of the nonwhite population is much younger than the white population. As a result, the pool of potential nurses is growing increasingly large in terms of both relative and absolute numbers. Also, the older adult population, which has the greatest need for medical care, is becoming increasingly racially and ethnically diverse and the presence of a more diverse nursing work force might alleviate some of the current cultural barriers in health care.

**Foreign-born nurses.** One solution that has received attention again recently is to fill nurse shortages with skilled foreign-born workers. The ‘Nursing Relief for Disadvantaged Areas Act of 1999’ is a legislative act aimed at addressing severe shortages of skilled nurses in select areas by granting temporary visas allowing foreign-born registered nurses to work in hospitals serving health professional shortage areas (HPSAs). Currently, HPSAs are determined by the number of primary care physician-to-patient ratio, not RN-to-patient ratio. Also, eligible hospitals must have at least 190 acute care beds (eliminating small and medium sized hospitals) and meet minimum proportions of patients covered by Medicare (35%) and Medicaid (28%). Currently, this program is very small with few hospitals qualifying and only 500 petitions granted nationwide. Expanding this program to include small- and medium-sized hospitals, more petitions granted annually, and to target nurse shortage areas (rather than just primary care physician) directly could have a large impact on nurse shortages nationwide.

**Continuing challenges.** As already described, the growth of managed care in the United States has contributed to reductions and other changes in the supply of health care workers. Perhaps one of the greatest challenges to the reform of employment policies is the resistance of managed care organizations to implement changes. An overarching goal of managed care is to improve efficiency in the delivery of health care and reduce the costs of delivering care. Cost-cutting initiatives that have taken place across healthcare settings are somewhat inconsistent with improving wages and conditions of healthcare workers. However, downsizing and job restructuring may slowdown in the near future, thereby alleviating some of the current problems with lower job satisfaction.

...Very recent evidence suggests that hospital employment of RNs may be growing once more in high HMO states. Between 1996 and 1997 RN employment...
grew 8.2 percent in states with high enrollment with much of this growth coming from hospital employment. At the same time, in 1998 there have been a number of reports of RN shortages throughout the country, suggesting that hospitals may be beginning to increase the size and elevate the skill of their nursing staffs. (Bauerhaus and Staiger, 1999)

Already, innovation and adaptation are taking hold within the healthcare labor force. In order to maintain a high level of patient care and satisfaction and a high level of employee satisfaction, additional employment policy reforms, new legislative initiatives, and broad-based solutions remain essential.

The rapid aging of the population will have a major impact on the healthcare and labor market. Already the U.S. has 13,000 fewer doctors trained to treat older patients than needed, and the gap will continue to grow over the next 20-to-30 years without a shift in medical school priorities and a three-to-four-fold increase in the number of faculty members in geriatrics. This gap exists in sharp contrast to projections showing an oversupply of physicians in non-rural parts of the country over the next ten years. The saliency of this issue is demonstrated by the creation of a medical school this year at Florida State University to train primary care physicians and geriatricians.

The need for nurses and paraprofessional workers in long-term care programs (community-based programs and nursing homes) has already reached a crisis level in several states. These programs are finding it increasingly difficult to attract and retain workers at a time when political pressure is growing to increase the ratio of workers to care recipients (patients) in order to improve the quality of care provided. In some parts of the country the turnover rate among workers in long-term care programs exceeds 100% annually and is likely to increase as long as unemployment rates remain low. This long-term care workforce crisis will become even more severe over the next 20 years as the number of women available to provide care in the informal sector declines and dependency on the formal (paid) sector increases.

Stone (1999) has noted that:

... the trends that warrant the most serious attention include the increased educational status of women, particularly minority women, in the new century and the tightening of federal policies to limit immigrants coming to the United States for family unification. These combined trends could significantly reduce the pool of potential workers interested in being employed by nursing homes, home care agencies, or individuals and their families. While there is no way to predict the future health of local economies across the country, when unemployment is low, the competition for low-wage workers will also affect the pool of potential caregivers. (p. 48)

Any initiative with a chance of successfully resolving the long-term care workforce crisis must include:

... incentives for recruitment and retention of paraprofessional workers—monetary incentives like wages and benefits and intrinsic incentives like opportunities for
career advancement. In addition, we must begin to explore the development of alternative labor pools, including older women and men who may want to continue working following formal retirement, former welfare recipients who see this opportunity as a prudent career move, and employees of temporary agencies. We must also develop continuing training programs that periodically update paraprofessionals about new advances and technologies that will improve the efficiency and quality of their work. A special emphasis on culturally sensitive caring techniques will be required as intra- and intergenerational relationships become more racially and ethnically diverse. (p. 49)
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