
WHY PHYSICIANS SHOULD CONTROL CLINICAL RESOURCES

James C. Osborne, MD, FACP

The current health care environment is one of massive change, conflicting interests, and confusing options for providers, patients, and payers. In this roiling sea, payers often look to managed care organizations to control costs, take actuarial (financial) risk, and ensure quality of care. Such cost control efforts are at the heart of an intense current national debate about managed care organizations [1]. Resources for patient care are not unlimited, and the health care system as a whole must develop ways to ensure the best value—called health—with the least use of resources. This is the goal of clinical resource management.

Physicians are the best and perhaps only qualified health care providers to oversee clinical resource management. However, they are not educationally or organizationally positioned to fulfill that role. Furthermore, others, ill-equipped to understand the nuances of patient care, may usurp physicians' central role in medical decision making and clinical resource management. This commentary explores, in broad terms, the historical basis for clinical resource management as a cost containment strategy, the "macro-predictors" of resource utilization, and how physicians may best serve as "microproviders" of clinical resource management—now and in the future.

Roots of the Clinical Resource Management Movement

During World War II, wage costs were locked by federal legislation, and in response industry organizers sought ways to enhance productivity and lure better workers to their concerns. One approach was to offer health insurance, which was aided by federal legislation making it a tax-deductible fringe benefit. The standard health care financing mechanism in the post-war era became fee-for-service care paid for by private employers and administered by the insurance industry.

In the early 1960s, the federal government, concerned that catastrophic health care costs could bankrupt the retired and poor, developed the fee-for-service-based Medicare and Medicaid programs.

For at least three decades, everyone was fairly happy with the system. This was a time of enormous investment in the health care industry infrastructure, and an increasing array of health services and technologies developed. However, the fee-for-service payment system, in a free-enterprise economy, did an unusual thing: It unyoked the supply and demand of health services from payment responsibility. Patients and physicians demanded more services from hospitals and health systems, and physicians and hospitals provided more services, but the employer or the government paid the bills.

Eventually, health care spending grew to be a significant proportion of the gross domestic product (GDP) and for many years has been the most rapidly rising segment of the GDP (**Figure 1**) [2]. On a smaller but more important scale, employers of all sizes saw their health care costs rising at a rate higher than any other costs. At the same time, studies emerged describing wide variability in practice patterns between communities, which could not be explained by differences in the health status of individuals in those communities [3–5]. There was evidence that the single most important factor in the total cost of health care in a community was the number of physicians and health care facilities in that community [6,7]. The stage was set for the emergence of the managed care organization.

Managed care organizations recognized that total health care costs for a population are a function of the cost and the number of each service provided, whether it is a cognitive service or a procedure. Initial efforts were directed at cutting the per unit price of each service, which was successful and accepted by providers. Physicians perhaps accepted this curtailment because they knew some of the shortfall could be made up by increasing service volume. In fact, some providers became quite adept at increasing volume. (In calculating the effect of lowering a per unit price, the Health Care Financing Administration, the payer for

James C. Osborne, MD, FACP, Managing Physician, Tannenbaum Medical Associates (a division of Eagle Physicians and Associates, PA), Secretary-Treasurer, Eagle Physicians and Associates, PA, Greensboro, NC.

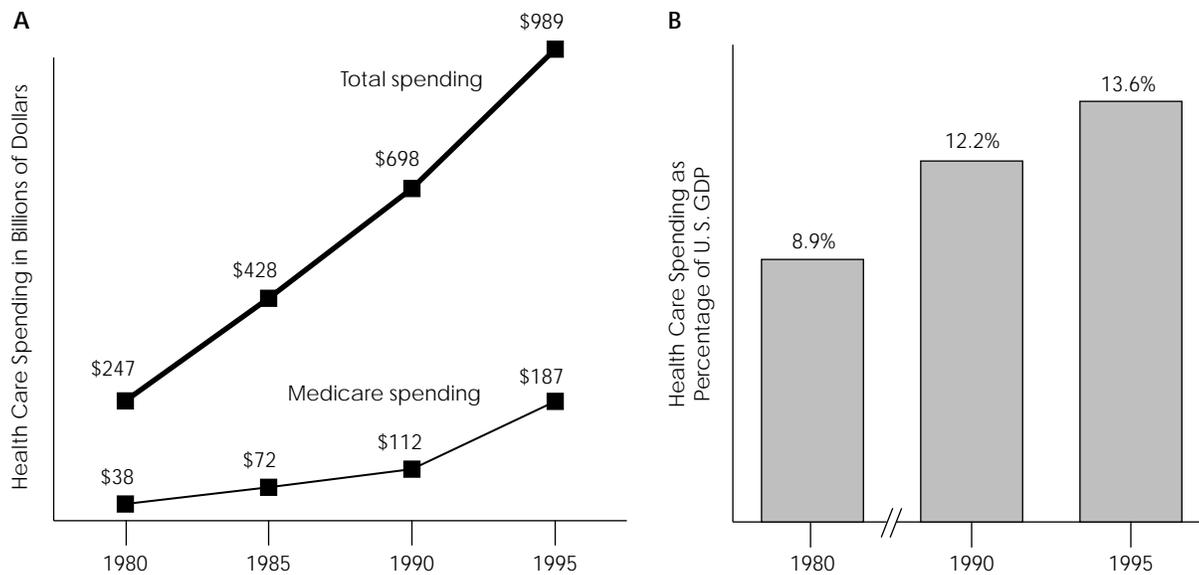


Figure 1. Federal health care spending nearly quadrupled from 1980 to 1995 (A), to the point that the United States was spending nearly 14% of its gross domestic product (GDP) for health care (B). (Adapted with permission from Cherner LL. The macroeconomic perspective. In: *The Universal Healthcare Almanac*. Phoenix (AZ): Silver & Cherner, Ltd; 1997: tables 5.8, 1.4.)

Medicare, includes in its actuarial determinations an overt prediction of increasing volume.) Cost containment strategies then shifted to decreasing the number of services provided, bringing into question significant quality and ethical issues.

Today, clinical resource management is at the heart of cost containment strategies. At its most basic, clinical resource management is an effort to understand and limit the number, or the variation in the number, of services provided to a population while trying to optimize the health of that population. When properly applied, clinical resource management allows a system to provide the best care for the best cost. In the future, the goal of clinical resource management will be to further decrease the number of expensive health care services while maintaining the health of a given population. The managed care industry will undoubtedly continue its efforts to control the number of services provided, whether in concert with or in opposition to physicians and other providers.

“Macropredictors” of Health Care Utilization

Some predictors of health care utilization are potentially outside of physician and patient control. As a physician becomes the focus of clinical resource management in one-on-one, day-to-day patient care,

he or she must understand which predictors of health care utilization are controllable.

Nature of the Population Served

The health status and demographics of the population served may be the most important factors in determining total health care utilization, although they do not explain the significant regional variation in health service utilization that exists. Advancing age is a major predictor of a population’s need for health care services. Risk factors, more difficult to measure than age, also affect utilization. Some risk factors are genetic and unchangeable. Others are self-inflicted and modifiable. While risk factor modification is certainly within the purview of the physician, many people resist risk factor modification (eg, smoking cessation) even when confronted with clear-cut evidence of its effectiveness [8]. Because age and risk factors are important predictors of utilization, the need for and application of clinical resource management will be different for each population.

Available Technology

Available technology also drives health care utilization to a large degree. Differences in available technology can be seen from region to region, from

institution to institution, and from physician office to physician office. For example, a patient with headache presenting to an emergency department of a hospital with imaging capabilities on an urgent basis is much more likely to undergo computed tomography or magnetic resonance imaging (MRI) of the brain. Thus, patient populations served by one or more emergency departments with such capabilities undergo more imaging procedures [7,8]. Institutions may even advertise their greater technical capability in order to draw more patients. Another example is a patient with atypical chest pain who sees a cardiologist with in-office echocardiography and stress test capabilities. That patient is more likely to undergo a procedure than if seen by an internist or family physician without these in-office capabilities.

Although additional procedural abilities may help in diagnosing select patients, in fact, the technology will tend to be overutilized. Ideally, patients presenting in any environment should receive the same evaluation for the same problem. Clinical resource management will seek to smooth out the variability that is driven by differences in immediately available technology.

Patient Expectations

Patient expectations also tend to drive health care utilization and costs. The U.S. patient population generally expects the health care system to provide fast, affordable, and cutting edge care. These expectations are fed by media coverage of new technology as well as advertising for health care services and products. As a practical matter, it is difficult for an orthopedist, for example, to explain why a sedentary 55-year-old man may not need an MRI of a painful knee or shoulder just because his favorite athlete had one. Inappropriate patient expectations can also place a physician at excess risk for malpractice complaints and lead him or her to practice "defensive medicine," thus increasing utilization. Clinical resource management can help a physician confront such expectations confidently and assure a patient that he or she is receiving excellent and appropriate care.

Physicians as "Microproviders" of Clinical Resource Management

So why are physicians best equipped to be at the center of clinical resource management? Health plans and managed care organizations can recommend guidelines, monitor physician behavior, and decide

whether or not to pay for services. Social workers, case managers, and nurses can bring extraordinary community resources to bear on patient problems. Home health workers can be important eyes, ears, and hands for evaluating patients and implementing physician orders. Physician extenders (physician assistants, nurse practitioners) can, under the supervision of a physician, diagnose and treat patients. However, of all components of the health care system, it is the physician who is empowered by society to make and ultimately be responsible for one-by-one, day-to-day decisions about which health care services should be provided to individual patients. By virtue of the patient-physician contract, a physician is at the center of these resource decisions and, thus, is the most appropriate "microprovider" of clinical resource management.

Physicians, especially newly trained ones, are poorly prepared at times to process information from a history and physical examination and to combine it with an appropriate use of available technology and care resources to obtain the best outcomes with the least resources. Furthermore, physicians often have no incentive to try to limit how resources are used and may, in fact, have an incentive to provide more services to obtain the best outcome. In the current cost-conscious health care environment, physicians must continuously strive to achieve the best possible outcomes with the least resources. They must place themselves, educationally and organizationally, in a position to improve their skills and involvement in clinical resource management. By meeting the following goals, physicians will be better prepared for this critical role.

Goal #1: Decrease Variability from Best Clinical Practice

Medical training, particularly in university centers, has emphasized utilization of generally expensive, highly sophisticated procedural services. This approach may serve to rule out diseases not likely to exist in the first place, but it is usually not the best practice from a clinical resource management point of view. Physicians versed in clinical resource management will strive to provide the right care in the right place at the right time.

Clinical guidelines and care pathways are designed to eliminate the unnecessary variability from physician to physician in the care of similar patients. Many have decried guidelines as "cook-book" medicine. However, every physician has diagnostic and therapeutic algorithms in his or her head

to guide in patient care; guidelines are simply algorithms that have been written down. If physicians are asked how to work up anemia, the response will vary somewhat from physician to physician. However, the same physician will tend to evaluate anemia patients with the same algorithm. This is that physician's anemia guideline.

All physicians should seek throughout their careers to improve their care algorithms and to bring them in line with nationally or locally accepted standards. This is the goal of continuing medical education; it is not "cookbook" medicine. Moreover, the art of medicine is knowing when to deviate from a personal or national guideline because it would not appropriately serve the patient. As variability from recognized care guidelines and standards diminishes, the physician becomes a better microprovider of clinical resource management.

Goal #2: Think "Outside the Box"

Physicians who question assumptions and foster innovation will be the best microproviders of clinical resource management. This is more challenging, clinically, than decreasing practice variability, because it carries responsibility for monitoring quality outcomes and can expose a physician to increased malpractice risk if he or she "pushes the envelope" too far.

Fifteen years ago, the standard of care for deep venous thrombosis (DVT) involved a hospitalization of at least 1 week. Much emphasis was given to the timing of intravenous heparin administration, with commencement of warfarin therapy after 2 to 3 days. Researchers questioned many of these assumptions, putting them to critical tests in a series of randomized, controlled trials [9,10]. The result, in combination with new heparinoids that are available, is that DVT now has a primarily outpatient diagnostic and treatment course.

Although most practicing physicians will not be involved in such well-designed studies, every physician will be in a position to make smaller, incremental discoveries in efficient care delivery in his or her own community. This will involve innovation and thinking "outside the box" as one sees patients on a one-by-one, day-to-day basis.

Goal #3: Accept a Team Position

Physicians must accept the fact that they are part of a team. Accepting a team position does not minimize a physician's role as the central player in clinical resource management. It simply recognizes that a physician cannot be an expert in everything. Great

strides in clinical resource management are possible when physicians work with others in the health care system.

Physicians of all types, generalists or specialists, depend on other physicians to provide specialized care to their patients. Similarly, physicians should involve other health care providers (ie, occupational, physical, or speech therapists; social workers; home health nurses; pharmacists; nutritionists; case managers) when appropriate to achieve optimal care with the least resources. At times, physicians may regard suggestions from such providers as an intrusion on their decisions or care plans. Indeed, when communication is poor, a patient may feel as if he or she is caught in the middle. However, when all providers' efforts come together under the oversight of the physician, better outcomes at lower costs prevail. Physicians may actually find themselves enjoying practice more as they are able to focus their energies on direct patient care while others provide different services.

Disease management programs depend on such a team approach. When properly designed and implemented, team-based disease management not only saves money and leads to better outcomes, it actually enhances patient satisfaction with physician care. For example, even modest disease management efforts with nurse case or care managers can result in stunning declines in hospital utilization and better quality of life for congestive heart failure (CHF) patients, for whom frequent readmissions generally are the rule. In a community care management program at Moses Cone Health System in Greensboro, NC, the use of nurses to call and, if necessary, visit CHF patients with a history of frequent readmissions resulted in a sharp decline in hospitalization rates.

Goal #4: Align Incentives for All Involved

Physicians should seek opportunities in which their incentives are aligned with clinical resource management. In its purest form, this requires that physicians be capitated for their services. However, capitation raises important ethical and practical issues. There is concern that some physician reimbursement strategies provide too much incentive for reducing services to patients. It is obviously unethical to gain financially from withholding care that a patient truly needs. Of course, the opposite but rarely stated position is equally true: It is unethical for a physician to gain financially from providing care that the patient does not truly need. This sticky issue partly stems from the fact that most medical care is delivered in a

gray area. For example, whether an upper gastrointestinal series or an esophagogastroduodenoscopy (EGD) is performed may depend more on the specialty of the ordering physician than on the patient's need for the more expensive EGD.

On the practical side, pure capitation, if not properly set up, can lead to inappropriate referrals from one physician to another. For example, if a primary care physician is capitated but a specialty care physician is paid on a fee-for-service arrangement, and there is no incentive or bonus or gain sharing for the primary care physician to control referrals, he or she may try to refer patients to specialists without fully evaluating them or even seeing them (ie, the patients are "dumped" on the specialists and the primary care physician enjoys the capitation dollar). To prevent this, incentives should be aligned throughout the system and everyone should be at risk.

Similar to capitation but less pure, gain-sharing techniques exist to reward physicians for cost-efficient care in their use of good clinical resource management. Here the relationship between the care provided or arranged and the reimbursement of the physician are less tightly linked, and the likelihood of patient dumping is reduced. The greatest challenge in attempting proper alignment of incentives is convincing payers that some of the risk and gain from good clinical resource management should be shared with physicians. Payers do not easily or willingly give this up.

Goal #5: Build An Appropriate Infrastructure

Physicians must recognize the need for quality administrative support (ie, personnel as well as systems) while doing their best to limit unnecessary administrative costs. Physicians need access to other members of the patient care team, new guidelines and algorithms and instructions for how to analyze them, reliable data to analyze their own performance compared to their colleagues', and thoughtful discussions with all concerned on how to improve clinical resource management. It is not cheap to build an infrastructure of this magnitude, but the value cannot be minimized.

Unfortunately, a system may invest substantial resources in administrative tasks that add nothing to patient care. For example, a physician who can objectively show that he or she utilizes certain health care services (eg, MRI) in an appropriate manner should not be subject to arbitrary, precertification requirements. A managed care organization or other system that rids itself of unnecessary tasks and the people

who perform them saves unnecessary administrative costs that do not contribute to patient care.

The Optimal Organizational Position

How can a physician be best positioned to accomplish these goals? Perhaps the best or only way is to belong to a fairly sizable group, particularly an organized one such as a group practice or an independent practice association. Such a group will require that physicians be involved in leadership; guideline review, development, and implementation; clinical data analysis; care management development; and financial data analysis. These important tasks can be supported by nonmedical administrative personnel, but physicians will need to be heavily involved to effect change in all practicing physicians in the group.

Physicians who do not belong to or who do not want to belong to organized groups could be in a "virtual" group. This could be a local group of physicians who gather to discuss care issues and techniques. It could also be an Internet-based discussion group that fosters dissemination of guidelines and sharing of innovations and other "tricks of the trade" in clinical resource management. These physicians would have less commonality in other administrative tasks and financial relationships, but at least they could work together on critical clinical issues.

Future Concerns

It seems logical that, without fundamental change in the macropredictors of health care utilization, clinical resource management may only be a temporary brake on the escalation of health care costs. Recent increases in health insurance premiums would suggest that this may already be occurring [11]. The basic problem is that people will continue to get sick. After unnecessary variability in patient care is removed from the system and innovation slows, how can the health care system further decrease utilization and still maintain health?

These goals can only be met by a system that is efficient in caring for sick patients and that truly promotes health. To what extent a health care system can actually promote health remains an open question. Poor progress in risk factor modification—one of the changeable predictors of health care utilization—suggests that there is a long way to go. If health care costs begin the rapid escalation seen in previous years, the likelihood of government intervention and attempted overhaul of the system will increase. In the upcoming elections, physicians can

expect to see politicians using changes in the health care system to further their own agendas and careers.

The future of medicine is wide open and unpredictable. The future will be one of change, more change, and unending change. Physicians, who pride themselves in being able to cope with clinical uncertainty, will need to live with significant additional uncertainty about the direction of the medical profession in general. However, they must remain the key providers of clinical resource management for the good of their patients.

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