Part IV: Reformers in medical education and practice: Effect of managed care organization in the United States

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BACKGROUND: Part I (*Can J Plast Surg* 2000;8:25-29) established that standards of professional practice shift constantly. When a standard falls short of professional expectation or when a physician becomes more concerned with financial gain rather than patient care, society needs the action of a reformer. Parts I, II (*Can J Plast Surg* 2001;9:59-68) and III (*Can J Plast Surg* 2002;10:103-108) covered 500 BC to 1970 AD and comprised 31 physicians who introduced innovations in medical knowledge or medical philosophy.

Part IV deals with a time in which new conditions have been imposed on medical practice. In the United States, medical education and practice felt the repercussions of financial institutions participating in health care management.

STUDY DESIGN: The reformers were scientists who conformed to our definition of 'reformer': a person whose action restored, reshaped or advanced the structure or ideology of medical practice.

RESULTS: This survey demonstrated that the reforms were accomplished by scientists possessing critical judgement and analytical qualities that enabled them to influence the direction of medical education and practice. In the last 20 years, financial institutions imposed different criteria that may require future reformers to re-establish lost objectives.

CONCLUSION: Reforms have been achieved through intuitive leaps, alterations of conventional practice, painstaking research or administrative restructuring. The present health management in the United States requires new solutions.

Key Words: *Historical perspective; Managed Care; Medical reformers*

The advancement of medical knowledge and technique is predicated on verifiable research information that is incorporated into practice soon after it has been proven applicable to a specific illness or condition. The subsequent standards of professional practice, shifting to keep pace with newly acquired knowledge, are generally maintained at a high level.

On occasion, standards would fall short of professional expectations, as when a practising physician would be more concerned with financial gain than with patient care. There has been little social or juridical constraint to such behaviour. In the past, a physician or a committee would evaluate and assess the problem and propose recommendations that would redirect the profession to better address its ethical and professional standards (1). In other cases, it would be the initiative of

Les réformateurs de l'enseignement et de la pratique de la médecine : 4^e partie ? Incidence de la gestion des soins aux États-Unis.

CONTEXTE : Dans la 1^{re} partie (*Can J Plast Surg* 2000;8:25-29), il a été établi que les normes en matière de pratique professionnelle évoluaient constamment. Lorsqu'une norme ne répond plus à une attente professionnelle ou qu'un médecin se préoccupe davantage de son profit financier que des soins aux patients, la société a besoin d'un réformateur. Les 1^{re} et 2^e parties (*Can J Plast Surg* 2001;9:59-68) ainsi que la 3^e (*Can J Plast Surg* 2002;10:103-108) couvraient la période de 500 av. J.-C. à 1970 et faisaient mention de 31 médecins qui avaient innové dans le domaine de la philosophie médicale ou des connaissances médicales. Quant à la 4^e partie, elle porte sur une période où la pratique de la médecine est soumise à de nouvelles conditions. Aux États-Unis, l'enseignement et la pratique de la médecine ont subi les répercussions de la participation des institutions financières à la gestion des soins de santé.

MODÈLE D'ÉTUDE : Les réformateurs étaient des scientifiques qui correspondaient à notre définition de « réformateur », c'est-à-dire une personne dont l'intervention a rétabli, réorganisé ou amélioré la structure ou l'idéologie de la pratique de la médecine.

RÉSULTATS : L'étude a montré que les réformes ont été apportées par des scientifiques qui possédaient le jugement critique et les capacités analytiques nécessaires pour influencer sur l'orientation de l'enseignement et de la pratique de la médecine. Au cours des vingt dernières années, les institutions financières ont imposé divers critères qui nécessiteront probablement l'intervention de futurs réformateurs pour rétablir les objectifs oubliés.

CONCLUSION : Les réformes se sont réalisées de différentes façons : par l'intuition, la modification des pratiques usuelles, les recherches laborieuses et les restructurations administratives. Aux États-Unis, la gestion actuelle des soins de santé a grand besoin de solutions nouvelles.

an individual physician that would alter the ideology or practice of medicine (2).

I called such individual physicians 'reformers' – their action or example restored, reshaped or advanced medical knowledge and influenced the direction of medical education and practice. The reformers chosen for the earlier parts of this series extended from 500 BC to 1970 AD and comprised 31 physicians who effected significant innovation.

Part IV deals with a period of time in which new conditions have been imposed on medical practice. These conditions are due to socioeconomic changes, the demands of government in the participation in national health care and to rapid technical advances effecting medical practices. In the United States, medical education and practice bore the consequences of a

new order wherein financial institutions, encouraged by the federal government, participated in health care provision and management (3). We will consider the effect of recent approaches to health care on medical education and practice.

PATIENT PAYMENT FOR MEDICAL SERVICES

In the United States, new organizations were created that directly affected payment for national health services and ultimately influenced medical practice and the training of medical students and residents. Early fee-for-service medical practice began as a 'cottage industry' where the patient provided payment directly to the physician. In rural areas, during the 19th century, payment sometimes involved a simple barter of goods and services. The patient's bonding to the physician was such that little control was imposed on the physician, whose ethical standards generally prevented patient mistreatment.

During the mid twentieth century, the rapid advance in treatment techniques and methods caused an increase in health services costs. Physicians, recognizing the efficiency of these new techniques, tended to overprescribe them. This resulted in the escalation of costs to excessive levels (4). In addition to fee-for-service, patient use of hospital services, clinics and laboratories necessitated additional payments. The relative increase of health services costs during the 1930s turned public attention to the personal economic burden of sudden illness and how the subsequent introduction of health insurance, such as Blue Cross and Blue Shield, mitigated some of this burden. However, the relentless rise of service costs during the 1960s warranted the intercession of the federal government that provided payment for medical services to patients over 65 years old (Medicare) and to indigents (Medicaid) (5).

INTRODUCTION OF MANAGED CARE

Unable to control the unabated costs of health care, which continued into the 1970s and 1980s, the government permitted private insurance companies and other financial institutions to help contain the cost of health care. Private insurance companies introduced the concept of 'Managed Care', a contractual arrangement with physicians who agreed to provide health care at a lower cost. These lower rates were offered to patients who subscribed to these services and who agreed to be treated exclusively by the contracted physician. However, expensive services were controlled and referrals to specialists were restricted (6).

The involvement of these for-profit institutions in health care was essentially a business arrangement. Direct professional and compassionate contact with patients was undermined. Furthermore, these companies had no vested interest in the education or training of medical students. The medical economics of managed care eventually imposed restrictions on the length of stay in hospitals, emergency admissions and choice of critical referrals. Increased public protests and pressure to these and other restrictions resulted in appeals to state legislatures to amend these restrictions.

FREE MARKET ECONOMY

The free market economy of medical care and services in the United States could not stem the tide of health care costs. Expensive technological support in medical and physical diagnosis and the incremental cost of drugs inevitably led to the rise of medical and hospital fees to such a level that it became prohibitive to some members of the population, even if

Medicare and Medicaid did provide some protection (7).

Managed care, an alternative adopted by employers to reduce the cost of employee health benefits, was described as an "unexpected product of competition" between public and private purchases of health care (8). Managed care is now essentially a device used to bargain with individual health care providers for the provision of the least expensive health care service. Consequently, insurance companies market the purchase of health plans from a selected group of providers (8).

Managed care has stemmed the rise of health care costs through competitive price bidding, but at what benefit to the patient? Private insurers and other nonmedical organizations have formed contracts with doctors to provide low cost service and have sold that service to rosters of patients who are subsequently restricted to service by those physicians. Because the objective is to create as much profit for the insurers and their shareholders, it follows that this can only be effected through the provision of minimal, low cost services. The anticipation was that managed care companies would reduce costs, but this has not yet occurred. The companies profited, but none of this profit was recycled into extended services to the patient, who was still offered a restricted choice of treatment (9).

Before World War II, there was no fee-for-service competition among physicians, but now, competition between health care providers has compelled doctors to lower their fees for service. Before managed care, the increased cost for medical service was gradual: it rose from 4.4% of the gross domestic product in 1950 to 6.1% in 1965 (10). After the introduction of Medicare and Medicaid, the cost rose to 7.9% in 1970.

During the evolution and progression of managed care in the 1980s and 1990s, the managed care enterprise mushroomed, impacting on the finances of many medical school faculties. Their loss of revenue was not only the result of increased expenditures, but also the result of spending less time in research and more time attending to managed care patients. In a brave attempt to maintain their standards of service, the Barnes and the Jewish Hospital in St Louis, Missouri merged, but the union was shortlived (11). Managed care cases became so time-consuming that there was little time for sufficient diagnosis, treatment and the counselling of patients, and physician-teachers had little time to pursue the scholarship that medical education demands.

The managed care system was ostensibly designed to provide coordinated health care, yet insurers downplayed the guaranteed coverage of emergency room services and devised clauses that prevented doctors from informing patients of treatment options and easier access to specialists. To make health plan providers more accountable and offer more safeguards to patients, 188 new laws had to be formulated and passed by the state legislatures of Connecticut, Missouri, New Jersey, New York and Texas (12). Sir William Osler had stated, at the turn of the century, that the philosophy of one age would become the absurdities of the next and that the foolishness of yesterday would become the wisdom of tomorrow.

When the Clinton health plan failed in 1993, the managed care alternative became the nation's primary health care system. Supporters of the system claimed that it would eliminate unnecessary treatments and reduce medical costs. The assumption was that since the managed care premiums were lower, the cost to the consumer would not be prohibitive. However, the services provided were less than satisfactory. For example, the one-day hospital stay for birthing or mastectomy aroused suffi-

cient protest that Congress intervened to allow for an extension to two days.

Furthermore, in a survey of 6000 hospitals, Woolhandlers and Himmelstein (13) concluded that administrative costs in public hospitals increased from 31.8% to 34% within four years; lower than the costs of managed care facilities. Should Medicare be privatized, the anticipated cost of medical services would increase 2% to 4%. This would result in the transfer of US\$30 to US\$40 billion a year to the executives and shareholders of health maintenance organizations (HMOs).

EFFECT ON THE PATIENT-PHYSICIAN BOND

The bond of trust that should exist between doctor and patient was formulated by Hippocrates some 2400 years ago. The Hippocratic Oath (14), enunciating the form of relationship between patient and doctor, consolidated over the centuries into a mutual secular bond. The strength of this mutual bond is implicit in the faith and confidence that patients show in their physician and the deep dedication physicians have to their profession. This is symbolically reinforced in the Hippocratic Oath that is still taken by many graduating students of the nation's medical schools (15). This bond has survived political and social upheavals throughout the history of our civilization, but it is now weakened by mistrust and uncertainty.

EFFECT ON MEDICAL TRAINING

The traditional, and generally accurate, image of the physician is that of the compassionate healer. Western tradition has encouraged this perception in prospective members of the profession. Membership in the medical profession was bound by a code of behaviour that prescribed respect for patients and teachers. Managed care would compromise this fundamental relationship between doctor and patient; it would focus interest on cost cutting services to patients. Decisions consciously contingent on cost cannot but affect treatment, by choosing less expensive tests and restricting referrals to specialist. Physicians who signed contracts with managed care providers were encouraged not to inform patients about the possibility of more expensive treatment, and to withhold or restrict referrals to specialists. Withholding or restricting medical services could result in reduced cost but it has not been demonstrated whether it also provides sufficient and satisfactory health care (16).

Medical education carries the enormous responsibility of training and preparing physicians to respond skillfully and knowledgeably to the needs of their patients. The traditional curriculum of many prestigious medical schools has at its core the classical approaches of patient care, history taking, physical examination, problem identification, diagnosis and treatment. Progressive curricula shift emphasis to the different requirements of the functions systems of the organism (17). The focus here is on uncertainty and the uniqueness and idiosyncrasy of each patient (18). This training is subverted by managed care whereby the lowest cost for service impacts on physician expertise, analysis and treatment. Physicians are compelled to conform to established health care procedures that control patients' access to diagnosis and treatment (19).

Managed care undermines traditional medical practice in two ways: it alters the long-established doctor-patient bond and its concomitant commitment to appropriate, prescribed service, and it interferes with the autonomy of the physician's practice.

The defenders of an independent program of medical education point to the adversarial nature of a situation where the provision of medical services by large profit-motivated companies conflicts with the established doctor-patient relationship and the inherent qualities and commitments of that relationship. The resolution of this contradiction rests largely on the shoulders of our medical schools, medical associations and the federal government. Managed care transformed the traditional function of hospitals, dedicated to the treatment of the sick and ailing, into centres of financial interest. It is a profit-making, share-holding industry. Talented people, hired at executive salaries, ensured that the managed care model was marketed aggressively and sold successfully. So successful were they in their lobbying and marketing efforts that intimidated care-givers were soon parroting the new health-care jargon and the managed care ethic was insinuating itself into physician behaviour (20).

The new medical economics now affects the quality of medical practice – doctors no longer act as advocates for patients. The traditional covenant where the patient trusted the physician to do what is best, has been transformed into a 'contractual relationship'. The new priorities are dictated by a competitive market, risk-taking profit and a market-derived concept of quality.

Physicians had been providing a contracted service at the lowest negotiable price, now that doctor-patient exchange no longer prevails (21). In a challenging article, GV Rodkey (22), Harvard professor of surgery, pointed out that the historically durable doctor-patient bond was eroding and the medical profession was losing its respect and influence. Rodkey proposed that several measures must be implemented in order for the profession to regain that bond:

1. Patients' welfare must be put ahead of our own;
2. Doctors must carefully respond to patients' questions and suggestions;
3. Doctors must participate in social interaction with the patients; and
4. Doctors must make a lifetime commitment to learning (22).

The deans of medical schools have noticed the deleterious effect of managed care on the fundamentals of medical education. Some smaller universities, lacking substantial endowments to sustain them over difficult times, were threatened with financial difficulties. Several large American universities attempted to introduce "defensive measures by founding their own HMOs covering their employees, their relatives and the population in their sphere of influence" (23). In addition, others partnered with large insurance companies who helped them cover the administrative costs of HMO. This arrangement permitted the universities to split the insurance premium with the insurance company and the income helped fund the medical school and the residency program.

A number of universities purchased the practices of primary care physicians to assure themselves an adequate number of patients. The physicians were rewarded through affiliation with the staff of the medical school. Some medical schools invited members of the subspecialties, such as cardiologists, cardiovascular surgeons and orthopaedic surgeons practising in adjacent counties to become part of the university faculty.

They were given equal benefits with other members of the faculty and received assistance in their billing and finances.

THE HMO EFFECT

The managed care model that allows private companies to compete in the provision of health care services in effect imposes a restriction on physician income. To attract a large number of subscribers (patients), insurance companies had to sign contracts with the doctors at the lowest premium. What would be lost in competitive service cost, must be recuperated in a greater volume: the hospitals were forced to process a larger number of patients in a given period of time in order to get a greater amount of income. In spite of all that, some hospitals were not able to receive sufficient amounts of income and were forced to file for bankruptcy.

A number of aggressive HMOs were able to make successful financial arrangements that required special skill and perseverance. One of the HMO companies that eventually developed into a gigantic organization was started by Dr Malick Hassan, who established medical practice in Denver, Colorado. Dissatisfied with the financial limitations of his medical practice, Hassan organized a large HMO company with a group of physician partners in 1986. This company grew to eventually enroll 10 million patients. Hassan was very skilful in contracting a broad spectrum of practitioners at a very low rate. Furthermore, he devised a rigid supervision system that monitored health service requisitions submitted by contracted physicians. Many requests had to be preapproved by assigned nurses and middle management supervisors. He was thereby able to terminate contracts with doctors who prescribed expensive tests (24).

Through the careful selection of participants, he was able to reject patients whose treatments were excessive to his predetermined cost standards. He was an expert in computer output analysis and was able to cut down waste, eliminate expensive tests, get rid of recalcitrant doctors and reduce a number of demanding patients by delaying treatment.

Hassan prided himself that 'the bottom line' of his costs was lower than any other HMO in the country. He received a number of awards and accolades for his successful control of treatment.

Medicare remained the only large federally operated health insurance program providing affordable health care. However, market pressure in the health care industry in the 1990s prompted a reassessment of the government's role in health coverage. It appears that future emphasis will not be on competitive pricing, but on finding means to deliver greater value to the consumer. Unless the corporate participants in the national health coverage share the accrued profits of reduced health costs with consumers, they will most likely bear the pressure of market fluctuations and the subsequent wrath of public protests forcing change through political measures (25).

CHANGES IN ACADEMIC MEDICINE

The rapid changes in health care and the attendant increased cost of services greatly affected the processes and procedures of academic medical centres. In a comprehensive article, Gordon and Kipnis (26) have identified several innovative responses. The most pressing need they suggest, is the creation of cooperative research groups dedicated to solving the challenges posed by virulent diseases.

Edward Harris (27), the editor of *Pharos*, reviewed the problems facing academic centres and found that the most creative approach was effected by those organizations who succeeded in liberating groups of instructors and researchers by removing bureaucratic impediments, thereby facilitating cooperative interaction in the solution of problems. It has long been known that the greatest creative efforts in collaborative medicine resulted when basic scientists and basic clinicians create an atmosphere of synergistic cooperation. When McGill University lost its academic leadership at the turn of the century, academic excellence was re-established within ten years after McGill obtained a research laboratory through a Rockefeller grant, where the symbiosis between scientists and clinicians had free play (28).

Gordon and Kipnis (29) noted that the revolution in molecular medicine of the 1980s and 1990s allowed for the current advances in preventive medicine, and in diagnosing treatment and disease. They also called attention to the fact that the academic medical centres were impacted not only by economic cycles but also by the organizational changes in both clinical medicine and health services. They also observed that within the disarray that accompanied the institution of managed care, academic health care systems did not always pursue an expansion of academic development but were simply content to accept profit as an end in itself.

Ludmerer (30), who had been observing the development of events in the United States for several decades, attributed the success of American medical education during the 20th century to four factors:

- a. Talented and dedicated medical scientists;
- b. Billions spent by medical research;
- c. Benefits of new medical knowledge; and
- d. High quality of students and house officers

Ludmerer suggested that public assistance would be needed to realign the interests of academic health centres with those of the public. Above all, he felt that academic health centres must maintain the public trust and keep their function accountable to that society (30).

In their comprehensive study, Salamon et al (31) revealed that beginning in 1970, when data were first collected in computerized form, the federal government and private organizations began providing statistics on the mushrooming cost of health services. Concomitantly, data began to accumulate regarding diagnosing procedures, clinical decision analysis and patient outcomes. The study showed significant geographical variations in hospital admission and in surgical procedures. From the analysis of the data it was also apparent that there were variations in the quality of care provided by the physicians.

Three areas effected by managed care were singled out: first, the doctor-patient relationship would be restricted by a third party insurance; second, ethical dilemmas would be created when decisions regarding patient needs conflict with what is covered by the insurance plan; and third, readily available data analysis will prompt demands by management for greater standardization and the enforcement of restrictions (31).

These consequences reinforce the necessity for medical schools to ensure that prospective physicians are fully qualified

and dedicated so that they can respond to the needs of their patients with appropriate professional attitude, compassion and skill.

REFORM NEEDED

During the past decade, managed care practice in the United States has engendered a number of breaches of ethical conduct among its physicians. This included ignoring the code of honour, withholding essential information from the patient and disrupting the doctor-patient bond for financial gain (32).

Neither public law organizations nor medical organizations have designated boards to monitor ethical conduct. Unethical behaviour does not constitute a legal infraction remediable through government judiciaries. In the past, irregularities of behaviour were often permitted with a *laissez faire* attitude. Our previous articles in this series demonstrated that the correction of these infractions was left to the vigilance of reformers, who voluntarily assumed responsibility and attempted to rectify these aberrations through appropriate action (33,34).

In 1909 to 1910, the Carnegie Foundation sponsored an investigation of the quality of medical schools and colleges in the United States. The resulting Flexner Report (35) established strict criteria and standards for medical education that prevailed for that generation. The report was a classic example of 'Reformer's Action'. The report's authority and clout was such that delinquent medical colleges ceased operation without much protest because of the incontestable evidence Flexner had accumulated.

The current breaches of contract committed by managed care enterprises are of a commercial nature, and not subject to the same ethical standards implicit in the doctor-patient relationship.

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