

THE A.M.A. AND THE SUPPLY OF PHYSICIANS*

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INTRODUCTION

This paper deals with two related topics: first, the role of the American Medical Association (AMA) in determining the rate of output of physicians and, as a consequence, the current stock of physicians, and, second, the role of organized medicine—that is, the AMA—in circumscribing the choice of contractual relationships between physicians and their patients. Because it is my thesis that the famous Flexner report of 1910 constituted the key to achieving control over the output of physicians by the AMA, a substantial portion of this paper is devoted to this report and its implications for understanding how our society produces physicians.

The history of public intervention in the market for medical services can be conveniently divided into two periods. The earlier begins with the publication of the Flexner report and ends with the conclusion of World War II. During this period, public intervention in the market for medical services had its principal effect on the supply of physicians' services. Organized medicine—again, the AMA—, using powers delegated by state governments, reduced the output of doctors by making the graduates of some medical schools ineligible to be examined for licensure and by reducing the output of schools that continued to produce eligible graduates. This led to the demise of the schools producing ineligible graduates, since training doctors was their *raison d'être*. For the surviving schools, their costs of producing doctors increased enormously.

The later period, which begins with the end of World War II and continues to the present moment, may be characterized as a period when governmental intervention, through programs such as Kerr-Mills, Medicaid, and Medicare, operated to increase the demand for the services of doctors.

I

THE FLEXNER REPORT

The Flexner report has been hailed, even by critics of the AMA, as an action of the AMA in the public interest. For example, Dr. John H. Knowles has said,

At the turn of the century, the AMA stood at the forefront of progressive thinking and socially responsible action. Its members had been leaders in forming

* Editor's Note: This article was prepared prior to the appearance of *CARNEGIE COMMISSION ON HIGHER EDUCATION, REPORT ON MEDICAL EDUCATION (1970)*, which deals with some of the same subject matter and reaches similar conclusions.

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much-needed public health departments in the States during the last half of the nineteenth century. It formed a Council on Medical Education in 1904 and immediately began an investigation of proprietary medical schools. Because of its success in exposing intolerable conditions in these schools, the Carnegie Foundation, at the AMA's request, commissioned Abraham Flexner to study the national scene. His report in 1910 drove proprietary interests out of medical education, established it as a full university function with standards for admission, curriculum development, and clinical teaching. Our present system of medical education, essentially unchanged since the Flexner (and AMA) revolution—and acknowledging its current defects—was accomplished through the work of the AMA. Surely this contribution was and is one of its finest in the public interest.¹

This interpretation of history is challenged here; an alternative interpretation is that the "success" of the Flexner-AMA revolution accounts for the current scarcity of physicians.

The decline in the number of medical schools and in the output of physicians as a consequence of the Flexner report has been amply documented. Shryock interprets the history of medical education during the period from 1870 to 1910 as a struggle between existing practitioners, represented by the AMA, and medical educators for control over the output of doctors and hence over the medical schools themselves.² The victor in this struggle was the AMA, and its most powerful weapon in the battle was the Flexner report on medical schools, which was undertaken and published under the aegis of the prestigious Carnegie Foundation.³ This report discredited many medical schools and was instrumental in establishing the AMA as the arbiter of which schools could have their graduates sit for state licensure examinations. Graduation from a class A medical school, with the ratings determined by a subdivision of the AMA, became a prerequisite for licensure.⁴ This victory completed the long campaign of the AMA against medical educators. The first triumph in this campaign was the elimination of the power of medical schools to license their own graduates.

It is the thesis of this essay that Flexner and the Carnegie Foundation were, to use the language of the Left of the 1930s, "dupes of the interests." In other words, they unwittingly served the highly parochial interests of organized medicine. Flexner's work consisted of a grand inspection tour of the medical schools of the time—some were evaluated in an afternoon—to determine how they produced their outputs. His model of how doctors should be produced was the medical school of Johns Hopkins University.⁵ There was no attempt to evaluate the outputs of medical

¹ Knowles, *Where Doctors Fail*, *SATURDAY REVIEW*, Aug. 22, 1970, at 21, 22.

² R. SHRYOCK, *MEDICAL LICENSING IN AMERICA: 1650-1965*, at 92-93, 108-09, 113 (1967).

³ A. FLEXNER, *MEDICAL EDUCATION IN THE UNITED STATES AND CANADA (1910)* [hereinafter cited as FLEXNER REPORT].

⁴ The power of the AMA over medical schools is described by H. MARGULIES & L. BLOCK, *FOREIGN MEDICAL GRADUATES IN THE UNITED STATES* 25-27, 44-45 (1969).

⁵ This is brought out in Flexner's autobiography. See A. FLEXNER, *AUTOBIOGRAPHY* 74 (rev. ed. 1960).

schools; there was no investigation of what their graduates could or could not do.⁶ Nor was there any discussion of what a graduate of a medical school *should* be able to do, or of the possibility of raising standards of medical education through stiff licensure examinations. The entire burden of improving standards was to be borne by changes in how doctors should be produced—that is, how students, facilities, and faculty ought to be combined to generate physicians. He implicitly ruled out all production functions other than the one he observed at Johns Hopkins.

It is a paradox that a group ostensibly so concerned as the AMA with the qualifications of doctors for the practice of medicine failed to be disturbed by Flexner's lack of qualifications for the task he undertook. Flexner was neither a physician nor a scientist, and had no qualifications as a medical educator. He had an undergraduate degree in arts from Johns Hopkins and had operated a small, private, and apparently profitable preparatory school in Louisville for fifteen years. It is unlikely, if not inconceivable, that he would have been accepted in a court of law as an expert witness in the field of medical education before he undertook his study.⁷

Virtually all the work Flexner undertook had already been done by the AMA, and N. P. Colwell, the secretary of the AMA's Council on Medical Education at the time, accompanied Flexner in some of his inspections and provided him with the results of the AMA's previous labors.⁸ Indeed Flexner spent many hours at the Chicago headquarters of the AMA. It was clearly recognized that Flexner, or more properly the Carnegie Foundation, had a comparative advantage over the AMA in publishing an attack on the medical schools of the time. The Carnegie Foundation was comparatively invulnerable to a self-interest charge. "[I]f we could obtain the publication and approval of our work by the Carnegie Foundation for the Advancement of Teaching, it would assist materially in securing the results we were attempting to bring about."⁹

As a result of the implementation of the Flexner report, medical education became considerably more expensive and exhibited relatively little variation from school to school. To this day, there probably is less variation in medical training than in almost any other field. The implementation of Flexner's recommendations made medical schools as alike as peas in a pod. In their first year, medical students almost invariably took anatomy, biochemistry, and physiology; in the second, microbiology, pathology, and pharmacology. The next two years consisted of supervised contacts with patients in the major clinical specialties of a teaching hospital. Often this training pattern was written into state laws.¹⁰

⁶ Significantly, Flexner's brother, who became a very distinguished physician, graduated from one of the schools put out of business.

⁷ See A. FLEXNER, *supra* note 5, at 78, 79.

⁸ The AMA's Council on Medical Education rated 82 schools class A in 1906. Flexner rated only 72 schools that high a few years later. See Dodds, *Adventures in Medical Education*, 32 J. MED. EDUC. 781, 787-88 (1957).

⁹ Bevan, *Cooperation in Medical Education and Medical Service*, 90 J.A.M.A. 1173, 1175 (1928).

¹⁰ The Crisis in Medical Services and Medical Education 7, report on an exploratory conference

The implementation of the Flexner report has, until relatively recently, sharply reduced experimentation in the training of physicians. As a result, there was a hiatus of over forty years in the search for better curricula and teaching methods, and in the utilization of the talents of scientists outside of medical schools for the training of physicians. It is only in recent years, in the decade of the 1960s, that the fetters imposed by the Flexner report have been loosened. As a consequence, medical education is currently in a state of flux, and the number of electives open to medical students has increased enormously. In addition, the economic cost of acquiring the MD degree has started to decrease, because some medical schools have relaxed their requirements for a bachelor's degree as a condition for admission. Moreover, as a result of student pressure, medical schools have increased their willingness to substitute undergraduate courses for preclinical courses.

A little recognized consequence of the Flexner report was its effect on the frequency of Negro doctors in the population and on the number of Negro medical schools. As a result of the AMA's and Flexner's endeavors, the number of medical schools declined from 162 in 1906 to sixty-nine in 1944, while the number of Negro medical schools went from seven to two. Moreover, the number of students admitted to the surviving schools decreased. Flexner's views on medical education for Negroes were patronizing: "A well-taught negro sanitarian will be immensely useful; an essentially untrained negro wearing an M.D. degree is dangerous"; "the practice of the negro doctor will be limited to his own race . . ."¹¹ According to census figures, the frequency of Negro physicians among all physicians increased sharply from 1900 to 1910 (from 1.3 per cent to 2.0 per cent) and leveled off afterwards. In the absence of Flexner's, or more properly the AMA's, repression of medical schools, one would have expected the frequency of Negro physicians to rise as their educational disadvantages were overcome. The problem of obtaining medical education for Negroes was intensified by the development of intern and residency programs, because many hospitals refused to hire Negroes for their house staffs for purely racial reasons. The usual argument was that white patients, particularly obstetrical patients, do not wish to be treated by Negro doctors.¹²

Not by chance, 1910 was also a high water mark for women physicians. "By 1940 the number of women physicians (including osteopaths) was 8,810, which was somewhat smaller than it had been at a high point in 1910."¹³

For those interested in the motive of the AMA in seeking control over medical schools, an unambiguous answer was provided by the former head of the AMA's Council on Medical Education:

sponsored by the Commonwealth Fund and the Carnegie Corporation of N.Y., Fort Lauderdale, Fla., Feb. 1966.

¹¹ FLEXNER REPORT, *supra* note 3, at 180.

¹² Often Negro medical students took their first two years of training in Northern medical schools and then went South for their clinical training.

¹³ Shryock, *Women in American Medicine*, 5 J. AM. MED. WOMEN'S ASS'N 371, 377 (1950).

In this rapid elevation of the standard of medical education . . . with the reduction of the number of medical schools from 160 to eighty, there occurred a marked reduction in the number of medical students and medical graduates. We had anticipated this and felt that this was a desirable thing. We had . . . a great oversupply of poor mediocre practitioners.¹⁴

According to Shryock,

Competing within a free economy they observed that the scientific motive for educational reform coincided with their own professional ambitions. They became increasingly aware that too many schools were turning out too many graduates to make practice profitable.¹⁵

The advent of licensure and the closure of the medical schools that failed to meet AMA standards was of course justified as a measure to protect the public from the ministrations of unqualified or incompetent physicians.¹⁶ But when higher standards were imposed, there was no immediate change in quality since the graduates of those medical schools that were put out of business continued to practice. As is commonplace whenever licensure is imposed upon a previously unlicensed activity or new standards are imposed, there were no substantial changes in the quality of the outstanding inventory of practitioners. Grandfather clauses protected the rights of existing physicians to continue to practice medicine regardless of the adequacy of their training. Hence the effects of the change in training standards for physicians could not have been realized for many years after Flexner's labors.

The restriction on opportunities to study medicine in this country were particularly oppressive for Jews and Negroes.¹⁷ There was a large decrease in demand for medical services caused by the great depression of the 1930s. As a result, there was a cutback in admissions to medical schools, with Negroes and Jews bearing a disproportionate share of the reduction.¹⁸ Probably females also bore a disproportionate share of the reduction in admissions.¹⁹

¹⁴ Bevan, *supra* note 9, at 1176.

¹⁵ R. SHRYOCK, *supra* note 2, at 57 (footnote omitted).

¹⁶ Lawrence Friedman, *Freedom of Contract and Occupational Licensing 1890-1910: A Legal and Social Study*, 53 CALIF. L. REV. 487, 493 *et seq.* (1965), explains the growth in licensure during this period as being largely economic, a function of the desire to restrict entry. He uses the same explanation for physicians and barbers. By contrast, Milton Friedman, Kuznets, and Rayack view the AMA's shutting down of medical schools as having the unintended effect of restricting entry as well as the desired effect of increasing standards. See M. FRIEDMAN & S. KUZNETS, *INCOME FROM INDEPENDENT PROFESSIONAL PRACTICE 11-12* (1954); E. RAYACK, *PROFESSIONAL POWER AND AMERICAN MEDICINE: THE ECONOMICS OF THE AMERICAN MEDICAL ASSOCIATION 70* (1967).

¹⁷ For an explanation of why this should occur, see Alchian & Kessel, *Competition, Monopoly, and the Pursuit of Money*, in *ASPECTS OF LABOR ECONOMICS 157* (National Bureau of Economic Research, 1962). It would be interesting to see if there was an increase in the frequency of children of physicians being admitted to medical school.

¹⁸ See Goldberg, *Jews in the Medical Profession—A National Survey*, 1 JEWISH SOC. STUDIES 332 (1939); J. BURROW, *AMA: VOICE OF AMERICAN MEDICINE 187* (1963). For slightly different periods both groups were cut back by about 30% while the over-all reduction in students admitted was about 17%. It also became considerably more difficult for graduates of foreign medical schools to win licensure in the United States during the 1930s.

¹⁹ If one allows for a secular trend upwards in the frequency of females among medical students, the

As a result of the Flexner report and the restrictions of opportunities for medical education in this country, foreign medical schools, particularly in the late 1930s, were deluged by American applicants. If one divides graduate training in United States institutions into the categories of business administration, agriculture, education, engineering, physical and natural sciences, economics, and medicine, then foreign enrollments in American institutions exceed American enrollments in foreign institutions by a wide margin for all fields but one—medicine. Americans studying abroad range from one-fourth to one-thirtieth of foreigners studying in the United States for six of the seven categories. But the ratio of Americans studying medicine abroad to foreigners studying medicine in the United States exceeded three to one for the year 1966.²⁰ Apparently the restriction of opportunities in this country continues to affect the number of Americans studying medicine abroad.

II

EDUCATIONAL COSTS AND PHYSICIANS' FEES

It is of course a well-known axiom that an increase in quality requires an increase in price. And an increase in price implies an increase in efforts to economize on a resource that has become more scarce.²¹ Hence, an increase in quality implies a greater effort to economize on physicians' services. What this means specifically is that people tend to substitute self-diagnosis and treatment for the services of a physician. This tendency manifests itself at the onset of an illness or suspected illness, and going to a physician is deferred until the symptoms become alarming. Consequently, increasing the quality of physicians does not necessarily imply that the quality of medical care that the public as a whole receives also increases, since the public receives a mixture of professional attention and self-treatment.

The foregoing argument about the effect of quality improvements on price has been countered with the argument that higher standards protect all of the public. Those too poor "to afford" good medical care, so the argument runs, would and do

1930s appear to be overrepresented among observations below the trend line. The relevant numbers appear in C. LOPATE, *WOMEN IN MEDICINE* app. I, at 193 (1968).

²⁰ See INSTITUTE ON INTERNATIONAL EDUCATION, *OPEN DOORS* (1967); AMERICAN COUNCIL ON HIGHER EDUCATION, *A FACT BOOK ON HIGHER EDUCATION* (1967). One source reports that in the late 1930s 90% of the Americans studying medicine abroad were Jewish. See Goldberg, *supra* note 18, at 332.

²¹ Flexner was aware of this argument and countered it with the proposition that the country was encumbered with too many doctors. He decided, aided by reasoning not apparent to this reader, what was the "right" ratio of physicians to population. Given this constant, he inferred that the output of physicians ought to be reduced and that medical schools were "frequently set up regardless of opportunity or need." He also believed that it was necessary to drive low quality doctors out of business if the market was to support high quality doctors. This position was buttressed by an erroneous interpretation of Gresham's law. See FLEXNER REPORT, *supra* note 3, at 6, 14. Chapter 1 of the report deals with the economics of the medical profession.

receive it free. Money is not a barrier to receiving medical services. Since these views have received wide acceptance by both the public and economists, they deserve attention.

Both economists and noneconomists have inferred, incorrectly, that if care is provided by physicians at no out-of-pocket or pecuniary cost to the patient, an act of charity has occurred. They have forgotten that transactions at a zero price can be economically profitable for everyone involved.²² Most of the "free" care that was traditionally provided by the medical profession fell into three categories: (1) work done by neophytes, particularly in the surgical specialties, who want to develop their skills and therefore require practice; (2) services of experienced physicians in free clinics who wish to develop new skills or maintain existing skills so they can better serve their private, paying patients; and (3) services to maintain staff and medical appointments which are of great value financially. The advent of Medicare has reduced the availability of "charity" patients used as teaching material, and has led to readjustments in training procedures, particularly for residents.²³

To see that the free care argument can not be taken seriously, all one needs to do is examine the relationship of infant mortality to income. The infant mortality rate is highly sensitive to the absence or presence of medical care, particularly prenatal care. Clearly Negroes have lower incomes and higher infant mortality rates than whites, for they have not been provided with enough free care to offset the effects of income differences.²⁴ Moreover, infant mortality rates in the United States do not compare favorably with a number of European countries, including some that use midwives extensively. Charity, with or without quotation marks, can not be regarded as an important means for offsetting the effects of restriction on entry into the practice of medicine.

The argument that restriction on entry and licensure has raised standards of medical practice has great appeal and acceptance. Unfortunately there does not appear to be any empirical study available to support this view, and it is striking that organized medicine has not investigated the effects of licensure on the quality of care of the community. The usual statement one sees is that Americans have the best medical care in the world—if the contention were "the most expensive," it would probably be easier to buttress.

²² My article, Kessel, *Price Discrimination in Medicine*, 1 J. LAW & ECON. 20, 23 *et seq.* (1958), contains this error, and Arrow, *Uncertainty and the Welfare Economics of Medical Care*, 53 AM. ECON. REV. 941, 957 (1963), follows me in it.

²³ CITIZENS COMMISSION ON GRADUATE MEDICAL EDUCATION, *THE GRADUATE EDUCATION OF PHYSICIANS* 75, 77 (1966). This document is also known as the Millis Report.

²⁴ Evidence showing a relationship between medical care and health status, setting aside public health measures dealing with infectious diseases, is difficult to obtain even for infant mortality. Diet plays an important role in preventing infant mortality, and dietary information is typically provided by physicians as part of prenatal care. For those unwilling to accept the foregoing argument, it is relevant to point out that access to the medical establishment does vary with income. Therefore either the well-to-do "need" more medical care than the poor, or free care does not offset the effect of income differences.

III

RESTRICTION OF ENTRY AND QUALITY OF CARE

Many distinguished writers, some in the field of political economy, have argued for free entry into the practice of medicine—for giving the public freedom to choose anyone as a physician without constraints imposed by the state. This view appears in the famous letter of Adam Smith to Cullen²⁵ and in a letter of William James to his fellow physicians in Boston.²⁶ It is also Milton Friedman's position.²⁷ This view was expressed as well by Samuel Clemens as by anyone. When he found out that MDs were trying to put osteopaths out of business in his state, he said,

I don't know that I cared much about these osteopaths until I heard you were going to drive them out of the State; but since I heard that I haven't been able to sleep.

Now, what I contend is that my body is my own, at least I have always so regarded it. If I do harm through my experimenting with it, it is I who suffer, not the State.²⁸

By using licensure as a barrier to entry, our society has to a large extent abandoned freedom of choice of physicians. It is pertinent to turn to an examination of this professed policy of protecting the public from making poor choices of physicians. How consistent has organized medicine been in adhering to the implications of its arguments about protecting the public from incompetent doctors?

(1) There is a substantial body of evidence that there has been discrimination in terms of race, creed, and color in admission to medical schools.²⁹ This discrimination became especially severe when there was a cutback in the production of doctors in the mid-1930s as a result of the onset of the great depression. Negroes and Jews (and possibly women) seem to have borne a disproportionate share of the reduction in admissions to medical schools.³⁰ Clearly the cutback in output can not be justified as an effort to maintain quality of medical care, since discrimination in terms of race, creed, and color reduces the quality of student inputs into medical schools.

(2) When higher standards were instituted, they were not made applicable to existing practitioners. Hence, it was future and not current medical problems that would benefit from any improvement of standards. Yet, so far as the public is

²⁵ See Guttmacher, *The Views of Adam Smith on Medical Education*, 47 BULL. JOHNS HOPKINS HOSP. 164, 171 (1930).

²⁶ 2 H. JAMES, *THE LETTERS OF WILLIAM JAMES* 66 *et seq.* (1920).

²⁷ M. FRIEDMAN, *CAPITALISM AND FREEDOM* 149 (1962).

²⁸ Quoted in Andrews, *Medical Practice and the Law*, 31 FORUM 542, 547 (1901).

²⁹ 2 REPORT OF THE PRESIDENT'S COMMISSION ON HIGHER EDUCATION 38 *et seq.* (1947). The Commission concluded that a substantial part of the responsibility for the discriminatory practices of medical schools belongs to the professional associations.

³⁰ One of the ironies surrounding Flexner's study is the fact that, because of his work in 1910, in the 1930s Jews from family circumstances similar to his own—immigrant parents, poverty, high education aspirations—were unable to get into medical schools.

concerned, there are no grounds for distinguishing between mistreatment by recent as distinguished from less recent graduates of medical schools.

(3) There is no re-examination procedure for doctors. Once a doctor wins a license to practice, it is almost never revoked unless he is convicted of law-breaking. It is pertinent to ask why holders of automobile drivers' licenses are subject to re-examination and holders of licenses to practice medicine are not. Is medicine less important? Why are commercial airline pilots subject to re-examination but not physicians? Clearly, to be consistent in one's concern about maintaining high quality, there should be periodic re-examination of physicians with recertification to insure that physicians keep current on what constitutes good practice.⁸¹

(4) Politics has been intertwined with decisions that should be based on quality considerations alone. An important instance has been the requirement that a doctor be a member of his county medical society in order to qualify for membership in a specialty board. Obviously membership in the AMA has nothing to do with a doctor's qualifications for membership on a specialty board.⁸²

(5) Doctors run most hospitals, in the sense that they have de facto control over staff appointments. For most medical specialists, being on the staff of a hospital is an imperative for successful practice. Yet appointment decisions are not based solely on considerations of skill and talent, but are similar to admissions procedures to a country club—race, religion, family, type of practice, and so forth are often important.⁸³

(6) Within the medical profession there exists great internal solidarity and cohesion. This is much stronger in medicine than in a field characterized by free entry such as the profession of economics. As a consequence, there tends to be a closed loop of referrals of patients from one doctor to another, and patients are unable to form effective coalitions with doctors in buying the services of other doctors. It is very difficult to obtain the judgment of the profession about the relative ranking of doctors in particular fields and parts of the country. The difficulty of obtaining doctors to testify as expert witnesses for plaintiffs in malpractice suits is so widespread that lawyers assert that a "conspiracy of silence" exists. For these reasons, the incentive to produce quality work and to develop an outstanding reputation is not as strong as it would be in a world in which such information could be more easily obtained.

For all these reasons, it is difficult to take very seriously the protestations of the medical profession that its concern in establishing control over medical schools was quality. Improvements in the quality of the output of medical schools probably

⁸¹ Driving proprietary interests out of medical education is alleged to be one of Flexner's great achievements. See Knowles, *supra* note 1, at 22. This is factually incorrect. They have been driven out of pre-MD training, but in fact they play an important role in the training of the practicing physician. The detail men of pharmaceutical companies provide the continuing education of many practicing physicians. See *The Crisis in Medical Services and Medical Education*, *supra* note 10, at 12.

⁸² Comment, *The American Medical Association: Power, Purpose, and Politics in Organized Medicine*, 63 *YALE L.J.* 938, 952 (1954).

⁸³ *Id.*

did occur. Yet, if the experience of law schools is relevant, improvements undoubtedly would have occurred without the efforts of organized medicine. It was this promised improvement in the quality of the output that "sold" the public and/or legislators on giving powers to regulate output to organized medicine. Economic gains to the medical profession resulting from restriction on output constitutes an explanation of the shutting down of medical schools with fewer loose ends than the "desire to raise standards" explanation.

However, even if one prefers to reject the foregoing explanation and to accept the view that those responsible for restricting the output of physicians were not economically motivated, one can hardly deny that the output of doctors has in fact been unresponsive to market forces. The increases in demand for medical services, particularly those brought about by Medicare and Medicaid, have had relatively little impact upon the output of doctors by American medical schools. As a consequence, the prices of physicians' services have risen dramatically, and there has been a shift of medical resources away from the population at large and towards the beneficiaries of Medicare and Medicaid.³⁴ This analysis suggests that the proposed measures to increase the demand for medical care, such as the extension of Medicare to the under-sixty-five population, would not increase the availability of physicians to the population generally and, if anything, would be more likely to reduce than increase availability.

IV

INNOVATIONS IN MEDICAL EDUCATION

The current problem of the relative unavailability of physicians had its origin in the victory of organized medicine over educators in their battle for control of medical education. Educators have a much stronger interest in producing doctors than has organized medicine and, if given the opportunity, would act to make the output of physicians responsive to consumer desires. Unfortunately, the options open to medical educators have been narrower than is true in most academic disciplines.

To see what can be done to increase output, it is useful to contrast post- with pre-MD training. There seems to be a plethora of facilities in the United States for post-MD training. Approved spaces in hospitals for post-MD training, that is, training more advanced than medical schools' training, exceed the output of American medical schools by quite a wide margin. As a result, one finds large numbers of non-American graduates of foreign medical schools taking intern and residency training in this country.³⁵ Despite these imports, many unfilled vacancies exist. Intern

³⁴ Some writers believe that the output of physician services has declined and leisure has replaced work as real income increased—that is, that the supply of physician services is backward bending. This view has been seriously considered by Professor Martin Feldstein of Harvard, who has circulated it in a working paper.

³⁵ About 20% of all approved internships and residencies in the United States are unfilled despite the use of foreign-trained physicians in one-third of these positions. See PUBLIC HEALTH SERVICE, HEALTH MANPOWER SOURCEBOOK table 28, § 20 (1968).

and residency programs have never been regarded as difficult to expand. Approved residencies in hospitals increased six hundred per cent between 1940 and 1960, while the output of medical graduates rose only thirty-five per cent.³⁶ These advanced programs are under the aegis of hospitals rather than medical schools, although university-affiliated hospitals are overrepresented in post-MD training. It is an anomaly educationally that, the more advanced the training, the greater is the availability of facilities and that the more specialized and advanced training often takes place outside medical schools.

Why should the facilities for post-MD training be disproportionately large relative to pre-MD training? An explanation of this phenomenon rests on the hypothesis that there exist economic benefits to the medical profession for post-MD training that are virtually nonexistent for pre-MD training. The interns and residents of a hospital, the so-called house staff, are hospital employees, and a large part of their duties consists of aiding the attending staff in the care of their patients. Despite the time costs involved in instruction, the attending staff can on balance gain time by delegating duties to the house staff that they would otherwise have to perform for themselves. Hence, doctors that are members of the attending staff of a hospital with a large intern and residency training program have an important competitive advantage stemming from their lower costs of producing patient care. Needless to say, the prized positions for attending staffs are in hospitals with extensive intern and residency training programs. Consequently the staffs of hospitals without educational programs push hard to obtain such programs. No economic benefit of a comparable magnitude exists for pre-MD programs. It is true that third- and fourth-year medical students have some value around a hospital, but they are not worth as much as post-MD students. First and second year medical students are a dead weight with respect to instructional costs and, in the past, have provided no useful output in a hospital. Indeed, costs of instruction are relatively high for the first two years of medical school because of small classes and expensive facilities.

The foregoing suggests that the bottleneck in medical education is the first two years of medical school when, under the Flexner curricula, medical students take their so-called basic science courses. Serious questions can be raised as to whether or not these courses ought to be taught in a medical school at all. They are relatively elementary and are often taught by faculties that are undistinguished when compared with the faculties of biological and physical sciences in many universities. Indeed many medical students have already completed some of these courses in their premedical studies and find "ordinary medical school teaching inferior to the teaching of science in the better undergraduate institutions"³⁷ in addition to being duplicative and hence a waste of time. It is difficult to understand why medical schools could not divest themselves of this elementary instruction and con-

³⁶ R. SHRYOCK, *supra* note 2, at 91.

³⁷ The Crisis in Medical Services and Medical Education, *supra* note 10, at 9.

centrate in their field of comparative advantage—clinical teaching, both pre- and post-MD.

If medical schools were to divest themselves of responsibility for preclinical teaching of basic sciences, then (a) the resources of institutions which do not have medical schools but do have outstanding science departments could play a role in physician training; (b) the science departments of schools with medical schools could play a more active role in training doctors; (c) the preclinical years of training could become part of undergraduate training, thereby shortening the period of production of doctors by two years and effecting an enormous reduction in the costs of producing MDs; and (d) the resources liberated from training in basic sciences could be employed to expand the numbers trained by medical schools and to increase the quality of post-MD training which is now largely outside the province of existing medical schools and almost wholly didactic.

The important social problem currently is how to make medical schools responsive to the demands of the market for physicians. One solution is to enlist the aid of the nonmedical sector of the educational establishment in providing basic science training and to utilize the resources liberated in medical schools for expansion of enrollments of third- and fourth-year medical students. However, this is but one suggestion in a field of education that has been relatively stagnant for many years. Consequently, one does not have the natural experimentation in educational techniques that otherwise would have been available. An unfortunate heritage of Flexner's work is the overspecification of how doctors are to be produced. If Flexner had specified what knowledge and capabilities a physician should have and had given medical educators the freedom to search for efficient techniques for producing the desired output, we would currently know a great deal more about how to produce physicians efficiently. Undoubtedly we would also have many more physicians, because the costs of their production would be considerably lower and because production would not have been cut back in the 1930s. Medical education has been made artificially expensive because of the overspecification of how it was to be produced, particularly (but not exclusively) during the first two years of medical school.³⁸ As a result, many writers on the subject explicitly or implicitly accept the view that medical education is extremely costly, just as if this were a natural constant like the speed of light.

Search for efficiency in medical education could be stimulated by opening state licensure examinations and/or national boards to all applicants without concern over how they received their medical education or the rating, if any, of the schools attended. To insure that this examination is not used by the medical profession as a barrier to entry, it should bear a reasonable resemblance to the examination that existing practitioners are asked, from time to time, to pass. Such a move could

³⁸ The report on graduate medical education suggests that the internship no longer performs any educative function. *THE GRADUATE EDUCATION OF PHYSICIANS*, *supra* note 23, at 58. It also suggests that the length of residencies is related to the desires for house staff and is not determined solely by educational considerations. *Id.* at 70.

increase both the output of physicians and their quality. It could enable the community to move closer to economic efficiency in the production of physicians, since both quality and quantity could be increased without any change in aggregate expenditures for the production of physicians.

V

THE AMA AND HEALTH CARE DELIVERY

Rigidity in medical education has been matched, if not surpassed, by rigidity in the marketing of medical services. The AMA long ago discovered that fee-for-service is the ideal way of marketing medical care. Moreover, its confidence in the correctness of this view was so great that any other method of marketing medical care was opposed actively in order to prevent less intelligent brethren from falling into error. This opposition took two forms: (a) working for legislation to prohibit alternative methods of marketing medical care, and (b) refusing hospital staff appointments to physicians associated with such unapproved methods.

More specifically the AMA, or organized medicine, opposed bitterly comprehensive prepaid group medical plans such as Kaiser, Ross-Loos, Group Health, and HIP. Plans of this type are illegal in seventeen, or about one-third, of the states.³⁹ Where they were legal, they were opposed nevertheless, and the chief weapon used to fight these plans was to deny access to hospitals for patients of physicians in such plans. As a consequence the AMA was prosecuted under the Sherman Act in Washington, D.C., and under state antitrust laws elsewhere.⁴⁰ Physicians without a taste for martyrdom were deterred from joining such programs, and there is little doubt that the commitment of organized medicine to fee-for-service has inhibited search for and experimentation with alternatives to this method of marketing medical care. Hence, as with medical education, there is less experimental knowledge about the marketing of medical services than would have been available if organized medicine were less powerful and there were more freedom to innovate.⁴¹

Nevertheless, not all prepaid group plans have been aborted, and much can be learned from those that have been born, and especially from the ones that have survived. One of the most interesting aspects of these plans is the lower frequency of surgeons (and surgery) than exists in the usual fee-for-service practice.⁴²

The lower frequency of surgery for prepaid group plan members has been explained as a consequence of differences in economic incentives. In comprehensive pre-

³⁹ Faltermayer, *Better Care at Less Cost Without Miracles*, FORTUNE, Jan. 1970, at 80, 127.

⁴⁰ See Kessel, *supra* note 22, at 36. See also Phelan, Erickson & Fleming, *Group Practice Prepayment: An Approach to Delivering Organized Health Services*, in this symposium, pt. 2 (forthcoming).

⁴¹ See Forgotson & Cook, *Innovations and Experiments in Use of Health Manpower—The Effect of Licensure Laws*, 32 LAW & CONTEMP. PROB. 731 (1967), for a discussion of legal restrictions on the use of paramedical personnel in the delivery of health care.

⁴² See Donabedian, *An Evaluation of Prepaid Group Practice*, INQUIRY, Sept. 1969, at 14; Roemer, *On Paying the Doctor and the Implications of Different Methods*, J. HEALTH & SOC. BEHAV., Spring 1962, at 4.

paid plans, the cost of a marginal unit of surgery (hospitalization and surgical service) are borne by the plan, with the marginal revenue from this surgery being zero. By contrast, under fee-for-service the marginal revenue of an additional unit of surgery to the surgeon is positive, since he receives a surgical fee; hospital costs are borne by the patient or his insurer. Consequently, it has been argued that some surgery is performed under fee-for-service that would not have occurred under prepaid medical care. An alternative interpretation of these same findings is that members of prepaid plans go outside their plans to buy surgery, foregoing rights to surgery at zero marginal costs in order to shop at positive marginal costs in the fee-for-service medical market.⁴³

Another aspect of this problem, which has not been explored in the literature is that surgeons in comprehensive prepaid plans undertake relatively more surgery per month or per year than surgeons in fee-for-service. The number of surgical procedures per surgeon, aggregated by using Blue Cross or Medicare fee schedules as index numbers, seems to be greater under prepaid medical plans than it is under fee-for-service. To understand why this should be the case, it is helpful to examine the anomalous characteristics of the surgical market.

There are virtually no contracts the consumer enters into involving expenditures as large as those involved in surgical fees in which the price is not carefully specified and well known to the consumer before the purchase. Yet surgeons' fees are almost never discussed by patients with their surgeons before operations; one in twenty would probably be a high estimate of the frequency of patients who know their surgeon's fee before they commit themselves to surgery.⁴⁴ This alone suggests that surgery is not characterized by a high degree of price competition; price wars are undoubtedly more common in gasoline.

The argument that price competition is absent in surgery does not depend upon consumer ignorance. The presence of systematic price discrimination in the provision of surgical services is evidence of the absence of price competition,⁴⁵ made possible by organized medicine's control over access to hospital beds. Comparable control over fees for office visits does not exist, and consumer knowledge of the prices for office visits is considerably greater. Consequently the rate of exchange of surgical for nonsurgical services in the market fails to reflect the rate of exchange in production. Therefore, too many physicians are attracted into surgery, and they are apt to be underemployed relative to physicians in the nonsurgical specialties.⁴⁶ This misallocation has been aggravated by the onset of Medicare and Medicaid, which

⁴³ See Klarman, *Effect of Prepaid Group Practice on Hospital Use*, 78 PUB. HEALTH REP. 955 (1963). "Zero costs" may make this an overstatement of the point, since time costs are neglected.

⁴⁴ If there is a case for state intervention to require a window-sticker for consumers in buying cars, then a fortiori there is a case for providing comparable knowledge for the purchasers of surgical services.

⁴⁵ Kessel, *supra* note 22, at 29-42.

⁴⁶ This misallocation is not new. See Bunker, *Surgical Manpower in the United States and in England and Wales*, 282 N. ENG. J. MED. 135, 143 (1970).

typically have more generous surgical fee schedules than Blue Cross. It is not unknown for patients to be charged surgical fees as much as fifty per cent greater than the Medicare rate, which is supposed to reflect the prevailing rate in the community. Medicare has increased the ability of some members of the community to pay for surgery and consequently increased the price of surgery.⁴⁷

A great virtue of prepaid group medical plans is that the marginal costs of the time of surgeons to such plans is lower than it is to the public. The price per surgical procedure under fee-for-service is regulated; the price of a surgeon's time to a plan that will convert this time into surgical procedures is not. Hence, prepaid plans represent a means of cutting prices for surgical services. Alternatively, prepaid plans constitute means for buying surgical and nonsurgical services at prices that reflect their relative costs of production.

Many writers have found fault with our medical care delivery system on the grounds that it is a "cottage industry," characterized by a large number of small firms that, in their judgment, are operating at less than optimal size. One of the striking pieces of evidence obtained from our experience with comprehensive prepaid group medical plans, which are relatively large-scale enterprises, is that advertising is crucial for getting started and generating sufficient volume to justify attempts to achieve scale economies. Many of the successful and unsuccessful prepaid plans ran into trouble with organized medicine because they advertised. Why advertising should not be permitted has never been made clear, though it is usually roundly condemned by the AMA as being unethical. It appears that freedom to advertise is important if we want to encourage innovation in the marketing of medical care.⁴⁸

CONCLUSION

In summary, both the production (education) of physicians and the delivery of health care have suffered from common problems—inability of institutions and individuals to innovate because of the restraints imposed by organized medicine.⁴⁹ In the production of physicians, it was a mistake to specify how physicians were to be produced instead of specifying what the product should be and allowing schools to compete in efficiently producing that product. State licensure examinations or

⁴⁷ It is not a complete surprise to find that unfilled vacancies in the surgical residencies are generally smaller than they are in the nonsurgical specialties. See AMA, *DIRECTORY OF APPROVED INTERNSHIPS AND RESIDENCIES*, 1968-69, at 8, 9. The over-all percentage filled is 81%. For thoracic surgery, it is 91%; surgery, 89%; plastic surgery, 87%; colon and rectal surgery, 92%; neurologic surgery, 91%. By contrast, general practice is 48% filled, pathology 56%, and psychiatry 76%.

⁴⁸ Kessel, *supra* note 22, at 36.

⁴⁹ There exist many parallels between medicine and AFL building trade unions—discrimination in admissions, training techniques that are over-specified and excessively protracted, and archaic work rules. There has been great public dissatisfaction with the performance of both. In the case of the building trades, this dissatisfaction has led to measures that increase the demand for housing (FHA and VA loans); for medicine, it has been instrumental in bringing about Medicare and Medicaid. Public intervention has thus far served the interests of these monopolists. In neither field has a frontal attack been made on the basic problem—restriction on the supply of crucial agents of production.

the national board examinations constitute an appropriate vehicle for specifying what physicians can be expected to do. Medical schools should be free to decide how to produce whatever it is that constitutes a physician without intervention by the state or the AMA.

Similarly, in the case of medical care delivery, individuals and groups should be free to innovate alternative delivery systems. There is no case for sanctifying fee-for-service and making prepaid plans illegal. Nor is there any good reason for prohibiting advertising by physicians.

In the decade of the 1960s, and particularly in the last five years, the AMA began openly to admit that a "doctor shortage" exists. Many new medical schools have been started, restrictions on the use of paramedical personnel have been relaxed, and some innovations in the medical curricula have occurred that have reduced the time it takes to produce an MD. This behavior is subject to two interpretations—either the AMA has changed its spots or the times are embarrassingly good financially for the medical profession and hence a more relaxed attitude is appropriate. This history of the AMA suggests that the latter interpretation is more correct. During the prosperity of the late 1920s, the AMA was less restrictive than it was during the great depression.⁵⁰ It is important to remember that, whatever the times, the AMA has an inevitable conflict of interests. It has presumed simultaneously to represent (1) the public, in maintaining standards for the production of physicians and in determining the quantity to be produced, and (2) the medical profession, the purveyors of medical services. In other words, the AMA represents both the buyers and the sellers of physician services in determining the output of physicians. Given this anomalous position, it is difficult to believe that the AMA will ever permit the number of physicians to be produced that the public is willing to support with its patronage.⁵¹ Consequently its power to determine output via the rating of medical schools should be withdrawn and graduation from an AMA-approved medical school should not be a condition for admission to licensure examinations.⁵²

It is important to remember that physicians, not Congressmen, produce medical care. An extension of Medicare to include everyone would increase the demand for medical care and probably reduce the availability of physicians. The problem that exists in medicine is largely a consequence of the severe restriction in the output of

⁵⁰ In the 1930s there was a "little" Flexner report on medical education known as the Weiskotten Survey, which found that some schools had become lax in their standards and admitted too many students. See Dodds, *supra* note 8, at 790.

⁵¹ "It must be recognized, however, that it is not likely that America will ever be able to produce all the physicians the nation would like to have." L. COGGESHALL, *PLANNING FOR MEDICAL PROGRESS THROUGH EDUCATION* 26, 98 (1965). Coggeshall goes on to argue that it is uneconomic to have the public's desire satisfied.

⁵² In part this has already occurred with respect to graduates of schools other than the Canadian and American institutions—the graduates of the so-called foreign medical schools. The AMA did rate these schools at one time. See MARGULIES & BLOCK, *supra* note 4, at 46.

physicians that was caused by the AMA and abetted, probably unwittingly, by Flexner and the Carnegie Foundation. Hence, the solution to our medical problems lies in increasing the output of physicians, in making the number of physicians in the community responsive to the desires of the community. To accomplish this goal, the AMA should be stripped of its power to control the output of physicians.