

ON REMUNERATING DOCTORS

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"A mortal like Socrates refused remuneration for his teaching, but Aesculapius demanded silver and gold for his services, at least so the priests claimed. Indeed on one occasion the god so far forgot himself as to say aloud to the patient "Thou art healed, now pay the fee." Those who recovered left money or other testimonials of their gratitude. Those who received no aid believed that their offerings were rejected because they were insufficient and redoubled their gifts. Thus both good and bad results added to the glory of the temple and the profit of the priests"⁽¹⁾.

Doctors' earnings have, since the earliest times, attracted a considerable degree of public cynicism. Not that the medical profession is the only one ever guilty of exorbitant charges; but somehow, avarice on the part of the noble profession seems more contemptible.

Perhaps it is because people find it hard to imagine that gratitude for service rendered in the name of welfare for the sick should have to be sealed in hard cash, as in commercial transactions. Was it not society which entrusted doctors with the priestly function of healing, and allowed them their privileged status in the first place?

At the same time, no one can deny that doctors, like everyone else, have a right to make a decent living. Doctors have therefore had to tread the fine line between being god and man.

Occasionally, however, the whole profession takes on a devilish complexion - as when one or two black sheep are exposed as having needlessly cut up patients or manufactured imaginary illnesses for profit. Despite provisions for internal disciplining, images of a guarded profession closing ranks are inevitably conjured up and calls for greater public accountability naturally follow.

The truth of the matter is, doctors - their moral integrity and higher purpose notwithstanding - are human after all, and no different from others in their capacity to act in self-interest. Although the medical code of conduct adjoins professional practice uninfluenced by motives of profit, doctors *can*, if they wish, act in such a way as to benefit their own purses more than their patients.

They can do this because of their unique, dual role as consumer agent and supplier: patients delegate to them decisions on what treatment is needed, whereupon they proceed to supply that treatment and receive payment for it.

Because of the great asymmetry in knowledge between doctor and patient, and the considerable latitude that exists in medical decision-making, the appropriateness or otherwise of the recommended course of treatment may be extremely difficult to verify. Indeed, attempts to do so may strike at the very heart of the doctor-patient relationship which must, necessarily, be founded on confidence and trust. But given the not unreasonable assumption that doctors are no different from oth-

ers in their desire to maximise income, can anyone be blamed for wondering if it is really true that pecuniary interests have no influence whatsoever on medical decision-making in a free market, fee-for-service environment?

Such thoughts did not escape the perspicacious mind of George Bernard Shaw who, with characteristic wit and humour, exclaimed: "That any sane nation, having observed that one could provide for the supply of bread by giving bakers a pecuniary interest in baking for you, should go on to give a surgeon a pecuniary interest in cutting off your leg, is enough to make one despair of political humanity."⁽²⁾

Some empirical evidence of the power of doctors to act in financial self-interest have come from studies of the relationship between the supply of doctors and doctors' fees in the United States:

* Fuchs⁽³⁾ showed that a 10% increase in the surgeon-to-population ratio led to a 3% increase in the number of operations per capita, as well as an increase in fees charged for those operations. In other words, despite a decrease in the average surgeon's workload, the surgeons apparently compensated for this by inducing more demand (shifting the demand curve) rather than providing more operations at a lower price (which would be expected if the demand curve remained the same).

* Rossiter and Wilensky⁽⁴⁾, using data from the National Medical Care Expenditure Survey, found that 39% of ambulatory visits and 43% of all visits in 1977 were initiated by doctors. They also showed that a higher doctor-to-population ratio was in fact associated with more visits and that these visits were doctor-initiated.

Evidence also comes from studies of "natural experiments" in which doctors' fees were, for one reason or another, reduced. These studies demonstrated that doctors may resort to:

changing the volume of services they provide:

* In California, when prices were frozen during the Economic Stabilization Program in 1971, doctors increased the number of services provided to Medicare recipients and altered their mix so that higher billings resulted. When the price controls were lifted in 1975, they raised their prices by 23% and the quantity of services declined (by 9% for general practitioners)^(5,6);

* In Colorado, when Medicare payment schedules were revised, changes in the volume and type of services occurred in a manner which maintained doctors' incomes. Lowered reimbursement rates resulted in the provision of more intensive services, but in those specialties where Medicare reimbursement rates were increased, the intensity of services provided decreased⁽⁷⁾;

or altering the mix of services:

* In Massachusetts, a 30% reduction in fees for surgery by Medicaid led to a decrease in the number of doctors participating in Medicaid and an increase in the number of operations per participating doctor⁽⁸⁾;

or changing the way in which the services are labeled:

* In Quebec, in the five years after universal health insurance was introduced in 1970, the fees paid for doctors' services were not increased. In response, Quebec doctors increased the reported complexity of the

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services they provided: "ordinary examinations" decreased from 88% in 1971 to 60% in 1975, of all examinations provided by doctors; conversely, "comprehensive examinations" increased from 1% to 5% of the total. Over the five-year period, general practitioners actually provided 19% fewer office visits but revenue per visit increased by 19%⁽⁹⁾.

Analysis of data on practice costs and doctors' incomes from the well-known ten-year RAND Health Insurance Experiment⁽¹⁰⁾ suggests that doctors will substitute laboratory tests for time spent with patients if third-party reimbursement for office visits are reduced, but fees for laboratory tests remain unconstrained. The researchers concluded that doctors will vary test prices to achieve optimal total price for the visit⁽¹¹⁾.

Other literature on payment of doctors also suggest that fee-for-service payment provides strong incentives for overprovision of services^(12,13). Studies have found, for instance, that length of stay, consultation rates, and the use of ancillary services are higher when doctors are paid fee for service and lower when they are compensated on a salaried basis⁽¹⁴⁾. Not only is there incentive for overservicing, but also for tilting treatment modalities towards more profitable procedures⁽¹⁵⁾.

From an economic perspective, doctors should conscientiously strive to recommend procedures to their patients at the point where marginal benefits equal marginal costs. The observation, however, is that doctors exhibit entrepreneurial, profit-maximising behaviour in a fee-for-service environment. This has led to a search for more efficient ways of paying doctors.

The problem is, *any* system - whether it is fee-for-service or fixed salaries or capitation and the variants thereof - can be abused. The same doctors who overtreat or overbill on fee-for-service can undertreat or underprovide on fixed salary. Inefficiencies can be found at either end of the spectrum. A monitoring system that would guard against abuse would be difficult to develop and implement. But it does not mean nothing can be done to improve matters.

In the United States, where a capitation system coexists alongside fee-for-service, an innovative reform was recently legislated. Replacing the long-standing but somewhat arbitrary "customary, prevailing and reasonable fee" is the Resource-Based Relative-Value Scale (RBRVS)⁽¹⁶⁾ developed by a team of health economists at the Harvard University. Many believe it offers the most sensible method yet of determining how doctors should be paid.

The underlying concept of the RBRVS is that in a truly competitive market, the price of a service will, in the long run, reflect the cost of producing that service. By taking into account the "cost of production" of services and procedures a more "fair and equitable" fee structure would be arrived at. What the Harvard team did was to factor into the RBRVS formula, four cost components: the doctor's time; the complexity of the service rendered; the opportunity cost incurred in training to that skill level; and the practice costs including such factors as malpractice insurance and equipment costs which vary considerably between specialties. A consensus was established among doctors (using a combination of large scale interviews and a modified Delphi technique for moderating differences in opinion) as to the appropriate relative values or weights to assign to every procedure according to specialty. A multiplier was then applied to these relative values, translating them into dollar values.

This new fee schedule which the US Congress passed into legislation as the "Medicare Fee Schedule" in November 1989, and is being implemented gradually from January 1992 with a five-year transition period, promises to reduce the incentive for performing unnecessary procedures⁽¹⁷⁾. By making payment more sensitive to actual work performed, it is likely to result in

a more equitable distribution of income between cognitive service-oriented physicians and procedure-oriented surgeons. And, because the multiplier can be manipulated by policy-makers, it can also be used to motivate doctors to perform more of those services that maximize society's benefit, or to practise in areas that are underserved⁽¹⁸⁾.

The RBRVS is not a panacea, though. It still does not prevent doctors from increasing their revenues by increasing the volume of unnecessary services provided (since revenue = price x quantity); but at least the price factor is now constrained, leaving the doctor to decide how much he is willing to trade off work for leisure. It removes distortions present in the previous reimbursement system and approximates the relative fees that one would expect to find in a *functioning* free market. It shifts the incentive structure from one that encourages taking advantage of patients or insurance companies to a more neutral incentive structure for clinical decision making.

The lesson that the US experience holds is that in moving away from one inefficient payment system (eg fixed salaries in which rewards are linked to seniority, not individual performance), it should not be assumed that the opposite system (eg unbridled free market in which the more one does, the more one gets) would be necessarily more efficient.

Health policy makers would do well to pay close attention to the actual incentives at work in any system of reimbursement - because incentives drive behaviour, and behaviour drives cost. Doctors, because they make the key decisions about hospitalization, surgery, referrals, diagnostic tests, and the prescribing of drugs and procedures, are important determinants of health care cost. Therefore, finding the right incentives for them to deliver health care services cost-effectively is an important key to controlling cost escalation in health care.

In the search for an efficient system for paying doctors it must not be forgotten that the divine origins of the medical profession notwithstanding, doctors are of this world.

REFERENCES

1. Renouard PV. History of medicine tr. by Comegys. Cincinnati, 1856:63.
2. Shaw GB. The doctors' dilemma. In: Shaw GB. Collected Plays with their prefaces, 1911, 1971:226.
3. Fuchs VR. The supply of surgeons and the demand for operations. *J Hum Res* 1978;13:35-56.
4. Rossiter LF, Wilensky GR. A reexamination of the use of physician-induced demand for medical care. *Milbank Mem Fund Q* 1983;61:252-77.
5. Hadley J. Physician participation in Medicaid: Evidence from California. *Health Services Res. J Health Polit Policy Law* 1979;14:266-80.
6. Gabel JR, Rice TH. Reducing public expenditures for physician services: the price of paying less. *J Health Polit Policy Law* 1985;9:595-609.
7. Rice TH. The impact of changing Medicare reimbursement rates on physician-induced demand. *Medical Care* 1983;21:803-15.
8. Schwartz M, Martin SG, Cooper DD, Ljung GM, Whalen BJ, Blackburn J. The effect of a thirty percent reduction in physician fees on Medicaid surgery rates in Massachusetts. *Am J Public Health* 1981;71:370-5.
9. Berry C, Held PJ, Kehr B, Marheim L, Reinhardt U. Canadian physicians' supply response to Universal Health Insurance: the first years in Quebec (preliminary results). In: Gabel JR, Taylor J, Greenspan NT, Blaxall M. eds. *Physicians and financial incentives*. Washington D.C.: US Government Printing Office, 1980;57-9.
10. Newhouse JP, Manning WG, Morris CN et al. Some interim results from a controlled trial of cost-sharing in health insurance. *N Engl J Med* 1981;305:1501-7.
11. Danzon PM. Economic factors in the use of laboratory tests by office-based physicians. Santa Monica, California: RAND Corporation Pub. R-2525-HCFA, August 1982.
12. Fieldstein PJ. *Health care economics*. 3rd Ed. New York: John Wiley and Sons, 1988:92.
13. Abel-Smith B. Who is the odd man out? The experience of Western Europe in containing the costs of health care. *Milbank Memorial Fund Quarterly*, 1982;63(1):14.
14. Becker ER, Sloan FA. Utilization of hospital services: the roles of teaching, case-mix, and reimbursement. *Inquiry* 1983;20:248-57.
15. Rheinart UE. Hard choices in health care: a matter of ethics. In: *Health Care: how to improve it and pay for it*. Washington D. C.: Center for National Policy, April 1985:19.
16. Hsiao WC, Braun P, Becker E et al. A national study of resource-based relative value scales for physician services: final report. Boston, Mass: Harvard School of Public Health, September 1988.
17. Bloor K, Maynard A, Street A. How much is a doctor worth? Discussion paper 98, Centre for Health Economics, University of York, June 1992:41.
18. Hsiao WC, Braun P, Becker ER, Thomas SR. The resource-based relative value scale - toward the development of an alternative physician payment system. *JAMA* 1987;258:799-802.