A Reply to the Comments on *The Condition of Surgery*

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In general, any system of allocation works more efficiently to provide the services people want, where people want them, and at the level people desire (given the costs of attaining the level) when there is more competition among the suppliers of the service. Although competition among sellers usually makes buyers better off, it also tends to reduce the incomes of sellers. Therefore, sellers have an income incentive to try to restrict entry of potential competitors. Economists have long recognized that money income is not the only factor relevant to seller choice. However, economists usually focus on money income because it gives adequate predictions of behavioral responses to *changes* in the environment, holding other conditions constant. Specifically, in the case of specialty choices of physicians, the non-income factors (for example, ability to choose geographic location) are also enhanced by the reduction in competition so that any behavioral predictions related to those factors are comparable to those related to income.

My arguments are not meant to imply that, if surgeons were to gain greater control over entry to their profession, they would be more likely than any other group to attempt to restrict competition in order to increase their opportunities, including income. Indeed, given the opportunity, many economists might like to restrict entry into their own ranks. Medical economists would probably welcome Dr. Moore's suggestion of "board certification," with the usual grandfather clause of course! Given this propensity of sellers to try to establish mechanisms that permit the sellers to restrict entry, it is important to examine carefully the arguments put forth for such restrictive actions. In this case, the essential argument advanced by SOSSUS seems to be that high quality levels must be maintained by

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board-controlled restrictions on the *numbers* of surgeons. Apparently, the maintenance of high quality is considered unlikely without such board-controlled, as opposed to market-controlled, restrictions.

Two parts of this argument merit elaboration. First, what determines the appropriate quality level that "should" be attained? If one believes, as I do, that the buyers of surgical services should be allowed to decide for themselves what quality level to purchase, then I would argue that the appropriate level of quality will more likely be attained by providing a *range* of qualities (as clearly identified as possible) and letting the patients choose the level they want (given the required information and the costs). If, however, one believes that patients are incompetent to select the "proper" quality (or to hire someone expert enough to make that choice on their behalf) then that position should be clearly stated and defended. SOSSUS has not done this. Moreover, the experience of economists has been that, in general, restricting choice to high quality causes many patients to choose substitutes of an even lower quality than what they would have obtained without restrictions. (For example, occupational licensing for barbers or plumbers may reduce average quality by forcing low-income consumers to do without the licensed service or to do the work themselves, perhaps with unfortunate consequences.) The second part of the argument concerns the method of providing high quality. As far as I know, there is no evidence that restrictions on the number of sellers is necessary (or efficient) as a way to guarantee the availability of high quality service in sufficient amounts.

Finally, I agree with Dr. Moore that I am ignorant of many of the important facts necessary to predict accurately the effects of the SOSSUS proposals. So are we all. As Dr. Colton notes, much relevant information has not been collected or evaluated. Since qualitative economic analysis suggests that the SOSSUS proposal is likely to have some undesirable effects, it is important to examine carefully the quantitative measures of the proposal's benefits and costs, and to investigate possible alternatives, not covered in the Report, before establishing additional entry barriers to the practice of surgery.

I shall now address some of the specific points raised by the commentators. Dr. Moore's commentary points up the sharp differences between us on the question of whether to rely upon market forces or regulation to allocate medical (and, in particular, surgical)

manpower. Dr. Moore agrees that market forces have not worked. However, the market for surgical services has been unlike markets for many other products and services; there has been no price and advertising competition, and patient services are often billed to third-party payers. If surgeons had been permitted to advertise, and if consumers had been more concerned about purchase prices, the market might well have encouraged the exit of surplus resources, that is, surgeons. This seems to occur in almost every other sector of the economy. An appropriate policy, accordingly, might be to remove such constraints on the operation of market forces. In addition, health insurance companies should be encouraged by competition in their own market to employ their considerable purchasing power to try to obtain lower prices from surgeons, who (in the absence of joint action) are presumably in a weak bargaining position because of their excess supply. None of this should lead to a lowering of the quality of surgical care.

An indication of the effectiveness of market forces in the health sector comes from two highly competitive fields closely related to the delivery of primary care: the provision of dentures and eyeglasses. The consumer price index for dentures (from whatever source purchased) in August 1977 was 172, a 72 percent increase over the base year, 1967 (U.S. Department of Labor, 1977: 13). Over the same period, all dental fees increased by 87 percent, and surgeons' fees for a tonsillectomy and adenoidectomy increased by 105 percent. Similarly, prices for the provision of eyeglasses (purchased from all sources) increased by about 70 percent, again substantially below increases in other less competitive areas of health care. Although the denture and eyeglass indices are composites of health services and related appliances, there is at least the suggestion that competition restrains price increases. In brief, we agree that the market for medical and surgical services has not worked. I infer that it has not been permitted to work.

The fundamental issue, in any case, is one of comparing the costs and benefits of directly reducing the number of surgeons. When one does that, it is not clear that such additional entry restriction is justified. To illustrate the essential cost-benefit issues involved, consider Dr. Moore's position that, to raise surgical quality, only board-certified surgeons should be allowed to operate. First, such a conclusion is not at all obvious, since the higher prices for such surgical care (because of both a longer training time and also an increase in surgeons' market power) may mean that fewer

consumers would obtain surgical care. Accordingly, it is quite possible that the average quality of treatment for patients who need surgical care would decline. Second, Dr. Moore's statement about high quality is tantamount to arguing that only Rolls-Royce automobiles should be allowed on our highways. Increases in quality normally involve higher costs. Furthermore, how high should quality be? Should only the two or three "best" thoracic surgeons be allowed to do open-heart operations? Dr. Moore evidently is unwilling to allow consumers to select the appropriate quality level since he wants a mandatory system of board-certification. Moreover, if raising quality is the objective, there are other ways than further restricting entry. For example, surgeons could be re-certified—perhaps every five years—on the basis of their work and successful completion of a test. Operative work could be more closely monitored. Surgical residents' hours not devoted to teaching and learning could be reduced, thereby improving the educational process.

What is wrong with a board determining the number of accredited or approved surgical residency positions? Suppose the demand for surgical care in the future were to increase. Would the board then increase the number of residency positions as a market system would? Evidence on excess demand for entry into medical school indicates that this is unlikely. Indeed, how is the appropriate number of surgeons to be determined in the absence of a market? In general, the producers of any product or service, including surgeons, should not be permitted unilaterally to determine how much will be sold. How would consumers or the government react if automobile producers jointly decided that the quality of automobiles was being jeopardized because too many automobiles were being produced, and, accordingly, created a board to regulate the production of automobiles. Such collusive production decisions, and the attendant price effects, would presumably raise antitrust issues. Instead, the government requires that minimum safety standards be met for all cars produced, and the quantity is determined by the interaction of buyers and sellers. Similarly, without quantity constraints, a purely voluntary system of board certification designed to inform consumers of the minimum competence of certified surgeons might well be appropriate. Finally, Dr. Moore indicates that uncertified surgeons already cannot do complicated procedures like open-heart surgery. For such operations, then, is not the effect the same as making board certification mandatory? It seems more reasonable to delineate types of service for which such levels of competence are re-

quired than to impose a blanket rule. As Dr. Colton suggests, the controversy arises with the more complex procedures.

Let me note, in responding to Dr. Moore, that I know of no economic analysis that would suggest "scattering poorly trained surgeons all over the countryside" or "putting an open-heart unit in every hamlet" as ways of improving the quality of care. That some patients can and will travel great distances for the best care does not mean that they want to travel nor does it compensate for the fact that many cannot. Surgeons and economists should be concerned about both groups as they consider the social implications of alternative policies. It is also partially on this basis that concern arises over the incomes of surgeons, since the cost of their services (a significant part of the total cost of surgical care) may act as a barrier to those who require the services. There is less concern for the income levels of others, such as salespersons or brokers, because the market offers better alternatives and because their services are of a different nature. In any case, those who make proposals that are likely to have self-serving effects must expect such proposals to be examined most critically.

Finally, Dr. Moore comments on the adequacy of the training and information available to economists dealing in medical matters, and suggests methods for controlling "the flow of economists into the medical field." His suggestions are made seriously and should be taken seriously, as seriously as should any suggestion to regulate the flow of physicians into the field of economics, even medical economics. I appreciate Dr. Moore's efforts toward redressing distortions in my paper, even some that I felt were not there. Economists do have a special interest and, presumably, competence in the analysis of proposals and processes to allocate scarce resources. Indeed, the commentary by Dr. Moore illustrates the need for economists. Well-intentioned policies designed to achieve admirable objectives frequently have unintentional and undesirable consequences. The role of the economist is to anticipate some of the consequences that others may not foresee and to make clear the costs and benefits of the proposed policies.

Dr. Colton makes a number of other important points. For example, I agree that the method of assessing hours of work is important. Dr. Colton, however, suggests that I am unduly critical in a number of areas, including the quality of care. Quality of surgical work is a subject intimately involved with the SOSSUS report. Since board certification requires the expenditure of addi-

tional resources, it is important to know to what degree board certification improves quality for patients receiving surgical care. The issue again is one of comparing costs and benefits. The matter of allegedly unnecessary surgery is important in part because, to the extent that substantial and avoidable amounts of unnecessary surgery exist, excess surgical capacity is understated. In addition, surgeons interested in quality should presumably be concerned about the hazards of unnecessary surgery and should take more stringent measures to combat it. While treatment of the subject in depth may have been beyond the appropriate scope of the Report, the direct relevance of the subject should be noted.

Dr. Colton also questions whether consumers can ever be adequately informed to make intelligent decisions about surgery. Consider the possibility of Sears Roebuck or Montgomery Ward establishing a medical-surgical group, offering their corporate brand-names as an assurance of quality. I am not sure that the market would evolve in that particular way, but I am confident that some mechanism to assure quality would evolve. In some cases even now, patients choose a clinic or group rather than a particular surgeon.

Dr. Colton suggests that certification of any profession, including surgery, is best performed by members of that profession. Again, a purely voluntary system, such as in accounting, where the "CPA" attests to the competence of its holders, might well be appropriate, providing consumers with useful information. Consumers could choose to use certified or uncertified surgeons, with the meaning of certification prominently advertised. If consumers desired the assurance provided by certification, surgeons would find it in their interest to obtain certification.

Let me now indicate how such an idealized market could work. Surgeons who wanted certification could obtain the appropriate training and pay for it directly. Schools (or hospitals) with an increased interest in profits could compete through lower tuition or higher quality for residency training. If the demand for certified surgeons increased, physicians would be willing to pay higher prices for their advanced education, and the number of residency positions would accordingly increase. There would be a strong connection between the demand for certified surgeons and the production of such surgeons, a system similar to most other sectors of the economy. Under the system envisioned by the SOSSUS report, however, a board would decide when and how many surgeons would be

produced. The major point is that insufficient reliance has been given to market forces in both the practice of surgery and the training of surgeons. Let me also add that professionalism does not require the absence of competitive forces. I do not, then, argue against purely voluntary certification, but even in that case, surgeons' authority should be limited to testing the competence or quality of individual candidates rather than judging the appropriateness of their numbers.

Dr. Colton raises the issue that tests may be an inadequate mechanism for evaluating surgical ability. Substantial reliance, however, is already given to written tests for board certification. In addition, operations might be made part of the certification examination. Dr. Moore notes clearly that board tests are never administered by those with whom the candidate has studied, and that some boards require time in practice prior to certification.

The thoughtful critique by Drs. Hughes, Lewit, and Pauly (hereafter H-L-P) raises a number of additional, substantial questions about the merits of the SOSSUS study and the resulting proposals. Particularly interesting and important is H-L-P's analysis of whether or not SOSSUS could in fact achieve its goal of increasing work loads by reducing the number of surgeons. Their criticisms of the study methods are valid. Nevertheless, it is appropriate to deal separately with SOSSUS' conclusions and recommendations because the organizational source gives them sufficient force that they may be seriously considered and even adopted despite the value of the underlying study.

The H-L-P analysis strengthens my argument, since the adoption of the SOSSUS proposal means that monopoly power would be enhanced, possibly without even increasing work loads. Moreover, even if work loads were increased, that effect would likely be concentrated among residents, whereas the objective of SOSSUS is to increase work loads and thereby the experience level of practicing surgeons.

There are admittedly problems in determining the appropriate supply of surgical manpower, the optimal work load of surgeons, and the behavioral responses of surgeons to increases in surgical prices (the supply curve may be linear or backward bending in relevant portions). Yet it does seem clear that there is substantial and persistent excess surgical capacity. If one accepts the conclusion that excess surgical capacity exists, no analysis based on a competitive model is likely to be convincing. Evidence for the lack of

effective competition comes from the facts that excess capacity has persisted, that surgical prices have not declined very much relative to other medical fees, and that surgical incomes have remained at high levels. Given the absence of effective competition and the presence of excess capacity, it is highly probable that surgical prices would rise as a result of adopting the SOSSUS proposal.

H-L-P introduce appropriate questions regarding the uncertainty of the effects of changing prices if surgeons are on the backward-bending portion of a supply curve for surgical services. In that case, price increases (induced by reductions in surgical manpower) may not lead to increased surgical work loads and, indeed, may reduce them. On the other hand, if a backward-bending curve exists, *lower* fees for surgery (through heightened competition) might increase the availability of services. The backward-bending supply curve for labor is well established in economic literature, and H-L-P are correct in calling for data concerning the curve's relevance to the market for surgical services, whether or not that market is a competitive one.

Regarding the restoration of equilibrium in the case where a surplus exists, H-L-P argue that there is no "presumption" as to whether it is preferable to reduce the supply or to cause price to fall. Although H-L-P are correct, a substantial difference in the amount of income devoted to surgery might exist. If, for example, the demand for surgery were unresponsive to price, or relatively inelastic, then causing prices to fall would result in much lower surgical prices and incomes. With an inelastic demand, a reduction in supply would tend to sustain prices and surgical incomes, with little change in the amount of services rendered. In view of medical care inflation and the diminished patient incomes available for other uses, society might well prefer the policy of lowering prices to correct the surplus problem.

H-L-P also question, quite correctly, whether it is even desirable to try to eliminate the surplus. As with other commodities, the appropriate number of surgeons is determined by the interaction of supply and demand. If consumers want and are willing to pay for enough surgeons so that they avoid substantial travel and waiting time, then a freely operating market would provide that number. A rational policy would reduce the impediments to competition in surgery and thereby permit consumers to choose the appropriate number of surgeons. In addition, as I have argued, increasing competitive pressure on surgeons would reduce their discretion and

would probably improve the geographic as well as the specialty distribution of physicians. Moreover, H-L-P suggest that, on occasion, attaining economies of scale results in monopoly power. If, however, there were significant economies of scale in the provision of surgical care, unrestricted competition without erection of entry barriers should result in their attainment.

H-L-P state that I did not address the causes of the surplus. In this paper, and more extensively in an earlier effort, I argued that relatively high surgical prices led to excessive surgical specialization and that insufficient competition prevented that surplus from being eliminated and that instead a kind of "spread the work" phenomenon has occurred (Blackstone, 1974). High surgical prices in the past were caused by such factors as the greater prevalence of price discrimination in surgery than in the other fields of medicine and in more extensive insurance coverage for surgical than for non-surgical work. H-L-P make an interesting point that insurance fee schedules, by favoring surgery, may have perpetuated such a price incentive for surgical specialization. In any case, the lack of effective competition permits the surplus to continue. Therefore, I have stressed the importance of removing the impediments to competition, including in that emphasis substantial changes in the insurance provisions that are impediments.

Surgery is now at an extremely important point in its professional life. It can become more responsive to free market factors and forces (i.e. more under the control of consumers) or the existing market can be replaced by further regulation and all of its attendant problems. Careful consideration should be given before adoption of any proposal that would make entry more difficult and prevent the operation of competitive forces.

References

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ZOE

. . . Have you a swaggerroot?

BLOOM

. . . Rarely smoke, dear. Cigar now and then. Childish device. . . The mouth can be better engaged than with a cylinder of rank weed. . . . Mankind is incorrigible. Sir Walter Raleigh brought from the new world that potato and that weed, the one a killer of pestilence by absorption, the other a poisoner of the ear, eye, heart, memory, will, understanding, all. That is to say, he brought the poison a hundred years before another person whose name I forget brought the food. Suicide. Lies. All our habits. Why, look at our public life!

Ulysses, James Joyce