Preadmission Certification and Elective Surgery: August 1975 no. 2
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Herbert B. Hechtman
moderator

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Abbreviations in This Volume

BC: Blue Cross
CHAMP: Commonwealth Hospital Admissions Monitoring Program (Massachusetts)
CSR: Continued-stay review
ENT: Ear, nose and throat
LOS: Length of stay
PAS: Professional Activity Study
PSRO: Professional Standards Review Organization
UR: Utilization review
The Morning Session
Herbert B. Hechtman
Moderator
Herbert B. Hechtman: Our subject today is one of controversy, and I think that is probably the only statement I will make today that everyone will agree upon.

Preadmission certification is a component of the PSRO legislation (Public Law 92-603), but it has not been enforced, primarily because of the hue and cry of the medical community. The medical community has not been able to agree on certain principles that are required prior to the application of preadmission certification.

What does "preadmission certification" mean? And, why was it developed? Of course, the whole PSRO concept was designed to limit the use of the most expensive medical facility — the hospital. Preadmission certification limits input, or ingress, into that type of medical setting.

The problems with preadmission certification involve the definition of the requirements for certification. Professionals themselves cannot agree on the disposition of diagnostic categories — whether, for instance, ulcer disease should be treated in a hospital setting. Not every surgeon or internist will agree that a patient with a peptic ulcer of the stomach or duodenum should be treated surgically. On the other hand, let’s say that everyone can agree that a given diagnosis such as a lump on the arm, should be treated surgically; but you will find no uniformity of opinion as to the proper setting for that treatment. That lump on the arm may be the size of a pea or the size of a watermelon, and, depending upon the locale of the hospital and the professional involved, operation on that pea or watermelon will occur in an outpatient or an inpatient setting.

Our first speaker is Dr. John Wennberg, whose primary position is senior associate in the Center for Community Health and Medical Care,
Harvard University. Dr. Wennberg did his medical training at McGill University, received his Masters in Public Health at Johns Hopkins and finished his medical training there in internal medicine. Then he traveled around the Northeast as assistant professor of medicine at the University of Vermont, and then as clinical associate professor of medicine at Dartmouth Medical College. He has a number of publications, and he has testified extensively before local, regional and national medical groups and governmental regulatory agencies.

**John E. Wennberg:** Geographic variations in the use of surgery pose a central challenge to the PSRO mission. They demonstrate that surgery involves choice, and raises issues of "health needs" and the "medical necessity" of the procedure we, as a profession, select to use. Will implementation of PSRO lead to reduced expenditures and better health of the population because unnecessary and sometimes hazardous surgery is stopped? Will effective procedures for more pressing health problems be substituted for those that are unnecessary?

A great deal of empirical evidence exists on variation in the use of elective surgical procedures. Pioneering work by Lembcke\(^1\) demonstrated large differences in the rate of pelvic-organ removal through elective surgery in suburbs of Rochester, N.Y. More recently, Lewis\(^2\) reported two-and threefold differences for common elective procedures between neighboring parts of Kansas for those enrolled in Blue Cross insurance programs. I have been associated with the development of an ongoing health-data system that records information on virtually all hospital admissions of Vermont residents. By analyzing these data according to the residence of the patients (regardless of which hospital they use), we have observed even greater variation in the use of elective surgery.\(^3\) We have also studied characteristics of the residents of different areas and of the physicians who serve them. These studies shed some light on the nature of the market for personal health services and have direct relevance to the issues of health needs and medical necessity. I want to review briefly our findings and then discuss the relevance to PSRO. I am going to suggest that, because of uncertainty concerning the dimensions of both health need and the effects on health of elective surgery, quality-control mechanisms founded on institution-based statistics and on traditional process-oriented peer review cannot assure that patterns of surgical practices are (or are not) "medically necessary." Because of this uncertainty, PSRO should develop a strategy for investigating the natural variations in use of health care to determine answers concerning the relationship between health need, elective surgery and health status.
The Vermont Data

To look at the relationship between people and their physicians, and variations in rate of use of health services, we have divided Vermont into 13 areas, by residents’ use of hospital (Fig. 1). In each area, by far the majority of admissions are to local hospitals. Since 10 areas have only one hospital and the remaining three only two (but with overlapping physician staffs), the differences between areas must be considered to reflect local circumstances — either differences in the people or differences in the physicians. The differences in surgery are extensive. The overall rate varies twofold in the extreme, and individual procedures show much greater differences (Table 1). The largest difference we have observed is for tonsillectomy where the range between extremes in age-adjusted rate is over tenfold. The differences are striking for other procedures and are not limited to elective procedures as is demonstrated by the case of appendectomy. Nor are variations limited to surgical procedures. Reimbursements under Medicare for diagnostic X rays differed by 400 per cent over service areas; electrocardiograms by 600 per cent and laboratory services by 700 per cent.

Are there differences in the people living in the hospital service areas that might explain the observed variations in use of elective procedures? We recently had an opportunity to conduct a household survey to investigate the possibility that variations in procedure rates occurred because of differences in people’s rate of illness, personal income and insurance status. Information was obtained from about 300 households in each of five geographically contiguous areas selected for survey because of known variations in use of services. Comparing these five areas, we could find no differences in the characteristics of the populations to explain their different use of health care. Using standard morbidity indices employed by the National Center for Health Statistics, no differences in illness rates were detected between areas. The extent of insurance coverage was the same. While there were some differences in income, they did not relate to differences in consumption of health care. These findings support the belief that health care needs and ability to contact the health care system are not appreciably different between different areas of the state.

We, in fact, found that in each area, on an annual basis, the percentage of the population contacting physicians was nearly identical; about 75 per cent of all people see a doctor at least once a year. This suggests that patient decisions to seek care for their health needs are about the same between areas. We also obtained some direct evidence that once a physician contact has been made, the large majority of Vermonters expect that
Figure 1: Outline Map of 13 Vermont Hospital Service Areas, 1969-1971.
Table 1. Variation in number of surgical procedures performed per 10,000 persons for the 13 Vermont hospital service areas and comparison populations, Vermont, 1969. (Rates adjusted to Vermont age composition.)

<table>
<thead>
<tr>
<th>SURGICAL PROCEDURE</th>
<th>LOWEST TWO AREAS</th>
<th>ENTIRE STATE</th>
<th>HIGHEST TWO AREAS</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Surgery</td>
<td>360</td>
<td>550</td>
<td>610</td>
</tr>
<tr>
<td>Tonsillectomy</td>
<td>13</td>
<td>43</td>
<td>85</td>
</tr>
<tr>
<td>Appendectomy</td>
<td>10</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Hemorrhoidectomy</td>
<td>2</td>
<td>6</td>
<td>9</td>
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<tr>
<td>Males</td>
<td></td>
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<tr>
<td>Hernioplasty</td>
<td>29</td>
<td>41</td>
<td>47</td>
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<tr>
<td>Prostatectomy</td>
<td>11</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>Females</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cholecystectomy</td>
<td>17</td>
<td>27</td>
<td>46</td>
</tr>
<tr>
<td>Hysterectomy</td>
<td>20</td>
<td>30</td>
<td>34</td>
</tr>
<tr>
<td>Mastectomy</td>
<td>12</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>Dilation and curettage</td>
<td>30</td>
<td>55</td>
<td>108</td>
</tr>
<tr>
<td>Varicose veins</td>
<td>6</td>
<td>12</td>
<td>24</td>
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</tbody>
</table>

Table 1. Variation in number of surgical procedures performed per 10,000 persons for the 13 Vermont hospital service areas and comparison populations, Vermont, 1969. (Rates adjusted to Vermont age composition.)
the physician rather than themselves will decide the place where treatment occurs — and presumably the kind of treatment. In other words Vermonters expect their behavior in seeking care will correspond to the traditional patient role of reliance on professional judgment in assigning the amount of treatment and the place where it is received.

What about the role of the physician? Although people among the areas are about the same and they seek medical care in about the same proportion annually, they receive different kinds of care, at least partly because of differences in the physicians they contact or to whom they are referred. First, we found an overall (statistical) relationship between the characteristics of an area's physician manpower and rates of use of service. The more specialists, the greater was the expenditure for and use of hospitals (and, for general practitioners, vice versa); the more surgeons, the more surgery, and the more internists (and other physicians who do not do surgery), the more diagnostic tests. Second, we found that surgical procedures — in particular the elective procedures displayed in Table 1 — were allocated in a way which suggests that differences in judgment among individual surgeons play an important role in deciding which among the variety of elective procedures are in fact used. Although there is an overall relationship between the rate of surgery and the number of surgeons, two areas with identical age-adjusted surgery rates achieve that rate by treating considerably different kinds of problems. For example, the area highest in overall procedures in 1969 ranked among the highest areas in tonsillectomies, hernias and hemorrhoidectomies but among the lowest of the thirteen areas in appendectomies, cholecystectomies and hysterectomies. The area that ranked third in overall surgery was among the highest areas for appendectomies, cholecystectomies and hemorrhoidectomies but among the lowest for dilations and curettage and hysterectomies. Yet the evidence (albeit circumstantial) indicates that the distribution of problems is the same among areas.

This leads us to suggest that, at least in Vermont, surgeons do not allocate their professional workload across a range of health care problems, proportionate to population need and the relative numbers of surgeons. The preferences of individual surgeons rather than differences in patient illness or access to physicians, we believe, are a more likely explanation for the variations in procedure rates. Statistical correlations between certain diagnostic procedures and non-surgeons suggest this phenomenon is not limited to surgery. The bases for this behavior need to be further studied. They are, no doubt, complex, and may involve age, educational differences, or technical competence and skill in the performance of certain but not all procedures. But the important implication for
this discussion is that there is no consensus even among the specialists themselves on how to use the technologies of a particular medical specialty.

The impact of different levels of use of specific procedures on the residents of Vermont communities has been extensively documented. Based on three years data (1969-71), the area-specific accumulative probabilities of organ removal have been calculated for common surgical procedures. Figure 2 is reproduced from a recent report of the Cooperative Health Information Center of Vermont. It shows the probabilities for high and low rate areas for tonsillectomy, cholecystectomy and hysterectomy. If current rates continue, about eight per cent of resident children living in the low rate area lose their tonsils by age 20; in the high rate area, over 60 per cent of children will be tonsillectomized by the same age. The range in the probability of resident's loss of gall bladder by age 75 is 10 per cent to 30 per cent; for females, the corresponding figure for uteri is 23 per cent to 52 per cent. Because many, if not all, of the procedures which show marked variations have not been closely studied under controlled field trial conditions, there is little objective evidence about which judgments are "correct" in the sense of which leads to more "health" among survivors of the procedures. The costs, however, in terms of variations in expenditures and in terms of immediate case fatality rates are substantial.

PSRO and Medical Uncertainty

Will the processes of review initiated under PSRO reduce our uncertainty about the health value of elective surgical procedures? As we asked in the beginning, will they lead to effective use of medical care for more pressing health problems, or result in the reduction of expenditures and/or use of unnecessary and sometimes hazardous procedures?

I believe the success or failure of PSRO will depend on how closely it pays attention to the problem of end results. If the findings and interpretations of the Vermont study are accepted, we must recognize that there are important ideological and behavioral aspects to current patterns of choice of therapies and that, as a profession, we are uncertain about the health impact of many alternative choices. If PSRO review strategies lead the profession to substitute for individual physician judgments the "averaged" opinion of several physicians — either through "statistical averages" or through process-oriented standards and guidelines such as might be produced by the Delphi techniques, I am not at all sanguine about the prospect. Let me give two reasons why. First, the statistics that are usually available to PSRO tell almost nothing about the impact of
Figure 2: Probabilities of specific surgical procedures by given age, highest and lowest areas, and state average for 13 Vermont hospital service areas, 1969-1971.
clinical decision making on the population at risk. Statistical averages that derive from "numerator" data tell us something about an individual institution, but nothing about its effect and the effect of other institutions on the residents of a particular community. We can know the average length of stay for a cholecystectomy at a particular hospital, but not the probability of surgical removal of gall bladder in the community the hospital serves. We can learn something about the case fatality rate for surgery at a given hospital, but nothing about the possible effects on population longevity related to variation in the per capita use of surgery. Nor do these statistics substantially help with such elementary measurement problems as knowing how many dollars are being expended: variations in the per capita volume of services delivered are often more important in determining expenditures than are differences in the price of service or such efficiency indicators as length of stay in hospital or average occupancy of hospitals.*

Secondly, process standards and guidelines for care which are developed by group consensus techniques such as Delphi need to be understood for what they are: hypotheses rather than established truths concerning the relationship between health-care processes and end results. These hypotheses will often need careful field studies to see if, in fact, things are as some people think. In the long haul, the way out of our uncertainty about the relationship between many specific medical and surgical procedures and health status is not to "correct" individual behavior to correspond to the collective opinion of a review committee. On objective analysis, this opinion will often be as uncertain as the individual's con-

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* The level of correlation between institutional indices and per capita expenditures is surprisingly low among the 13 hospital service areas. The institutional indices, based on weighted average of local hospital experiences show the following:

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<tbody>
<tr>
<td>1. Per cent occupancy</td>
<td>.57</td>
<td>.00</td>
<td>.07</td>
</tr>
<tr>
<td>2. Average length of stay</td>
<td>.48</td>
<td>.46</td>
<td></td>
</tr>
<tr>
<td>3. Average day costs</td>
<td></td>
<td>.68</td>
<td></td>
</tr>
<tr>
<td>4. Per capita expenditures</td>
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</table>

On the other hand, the correlation between hospital employees per capita and expenditures was .91. The statistics suggest that cost lowering strategies should be directed at review of employment practices. Concentrating the review process on length of stay will not substantially reduce expenditures unless it simultaneously leads to overall reduction in volume of service and employment. See reference 3 for methodology used in estimated expenditure and employment rates.
cerning the implication of one versus an alternative course of action. The speciality composition and individual preferences of the cohort of physicians on which this opinion is based will greatly influence the nature of the consensus. Further, it will vary from place to place and we can expect from the process neither uniformity nor a reduction in our uncertainty concerning the relative value of the many approaches to the delivery of health care.

I believe the first step toward clarity is to agree that medical necessity be interpreted in terms of the relationship between health care and health rather than in terms of the correspondence between the individual and collective judgments.

A Strategy for Reducing Uncertainty

I suggest that the PSRO program should be directly involved in the social and technical problems of detecting what is the relationship between health care and health. When the value of specific procedures commonly used in medical practice is obscure or controversial — as must be assumed to be the case when procedure rates vary as widely as we now know they do — PSRO should serve as the structure for implementing studies to answer outstanding questions about their value. How an investigative strategy might be implemented through PSRO needs a great deal of thought and debate. As an opener, let me suggest an approach for identifying and pursuing a problem in end-result evaluation. It is based on successive steps for 1) identifying natural populations which exhibit puzzling variations in use of health care, 2) characterizing the limits of uncertainty concerning the health value of different levels of procedure use, 3) resolving remaining uncertainty through clinical trials.

1. By using population-based data, populations can be identified which appear to be similar in health related demographic variables but which are receiving varying amounts of a particular kind of care. The high and low tonsillectomy areas (Figure 2) are examples of the kind of natural experiments in use of health care that need to be evaluated. These communities are closely related ethnically and geographically, but differ markedly in exposure to tonsillectomy. Are people better off in the high or in the low areas? PSRO should find out.

2. Physicians participating in their PSROs should engage in analytic and observational studies to characterize the limits of uncertainty concerning the health value of different levels of procedure use. Using available data, the probable outcomes for populations subjected to sur-
gical therapy at the high and the low rates should be quantitatively es-
timated. The costs should be added up, including the dollars, the loss of
life associated with intensive risk of surgery and estimates of the non-
fatal morbid complications. The schedule of benefits, particularly those
based on projections from randomized clinical trials, should be es-
timated. Based on the contrasts provided between costs and benefits by
such an analytic review, a PSRO may conclude that substantial end-
result information is available about use of the procedure, and consen-
sus will emerge. Further observations on variations in procedure rate
should provide evidence of how this consensus has, in turn, influenced
behave. But data to support strong conclusions concerning the risk
and benefits of various levels of use of surgical procedures may only
rarely be available. PSROs should be prepared to undertake observ-
ational studies to further characterize health needs, risks and benefits.
Some observations on risks can be made by appropriate analyses of
hospital discharge abstracts. Others will require more direct obser-
vations on the population at risk to see if differences exist in the dis-
bution of morbidity or benefits imputed to the procedure. In the case
of tonsillectomy, do school children in high T&A rate areas have less
absenteeism? Less hearing loss, etc? From this investigation, a specific
hypothesis about the relationship between T&A and population health
status should emerge. If no differences are found between populations
in the distribution of benefits, then the level of uncertainty about the
value of the procedure is high at any observed rate. On the other hand,
if differences exist between areas which suggest unmet surgical need in
low-rate areas, then there is some presumptive evidence of end-result
differences.

3. It is important to know if detectable differences in need or end-result
indicators do or do not exist between apparently similar populations
with widely varying exposure to a procedure. This more closely
specifies the limits of uncertainty concerning the value of the
procedure. In some instances it may be sufficient for the problem at
hand, and professional consensus will emerge: it may be clear to all
after examination of the evidence that there is no therapeutic benefit
for T&A at the high level. Or, uncertainty may persist and call for ran-
dom trials to further clarify the situation. Random clinical trials can be
conducted under PSRO auspices and ought to exploit the fact that cer-
tain physicians have inclinations toward or away from specific
procedures. It is in this context that I would like to suggest that a
preadmission certification program might work. In instances where dis-
agreement persists about the value of procedures, both patient and physician may find protection in a strategy that pairs physicians with known opposite biases for deciding jointly to assign patients to study groups. For T & As a feasible study could employ a pediatrician and a surgeon. In instances where they disagree on treatment, patients would be randomly assigned and evaluated prospectively.

There are obviously numerous technical difficulties in this or in any approach to detecting end-result relationships. Without doubt, PSROs will need help from academic centers. There are also difficult problems involved in obtaining informed consent but I believe that when honest, open disagreement on the value of a procedure exists, patients can be adequately informed of this uncertainty and some will agree to randomization. There are perhaps even greater problems in convincing physicians that professional responsibility extends to assurance of end-result value. I do not wish to underestimate these problems. In my judgment, our pervasive uncertainty concerning health need and the effect of elective surgical procedures on health status makes it important for the professions to overcome these difficulties.

References
Problems of Hospital Certification and the Review Process: A Perspective of the Private Insurers of Health Care

Roger L. Griffith

Hechtman: The next speaker is Mr. Roger Griffith who is the director of group insurance claims for the John Hancock Company. He comes armed with a superb ability and some degrees in music, to soothe the seething surgical souls, perhaps. Mr. Griffith will talk to us today regarding problems of hospital certification in the review process, a perspective of the insurers of health care.

Roger L. Griffith: We speakers were referred to as, I think, "experts in our fields." I suppose that if I want to keep earning my salary I'd better admit to some degree of expertise in health insurance claims. But when it comes to talking about PSROs and hospitalization certification, particularly PSROs, I'm not so sure there are yet any experts. With all of the investigation and criticism of the delivery and financing of health care in the last few years perhaps all of us here this morning might share to some degree the feeling of being among the most misunderstood men and women of history. However, I believe a lot of the criticism, or at least some of it, on both sides, has some justification, and one of the reasons we're here this morning is to discuss ways and means by which we together can work on these problems. Pervading all discussions of the review and control of costs and quality of health care today is the subject of PSRO. I wonder, sometimes, if the activity in this area constitutes kind of a "crash program" psychology or theory; if so, it may have the same kind of defect that crash program theory does in general, with the same logical flaw—the premise that by getting nine women pregnant you can have a baby in a month. It just doesn't work that way, and we can't do all of these things at once.
The first point I would like to make is that, from the insurance industry perspective, the PSRO legislation (P.L. 92-603) is deficient in requiring the review of quality of health care only with respect to the care received by Medicaid and Medicare beneficiaries. We were pleased to see that the law does provide and allow for extending that review to all patients, and my company, John Hancock, does endorse the Health Insurance Association of America position on this subject, that PSROs should be the basic vehicle for review of health care delivered to all patients.

This might be a good time to mention that I have a set of this edition of a Health Insurance Association of America publication, the Health Insurance Council "Viewpoint". This one is entitled "Professional Standards Review Organizations: The Role of the Private Sector (The Insurance Industry's Perspective)," which certainly fits in with my assigned topic. If you're interested, it gives a pretty clear exposition of the subject, of how we see health insurance and insurers fitting in to PSRO.

About 20 years ago, when I started out in health insurance claims, things were certainly a lot different. For one thing, the first major medical policy had just been written by John Hancock not too long before I started working there, in 1954, and with the advent of major medical and with its provisions for paying a given percentage of a reasonable, customary, allowable or whatever charge, the insurance industry became concerned with how much doctors and other health care providers were charging for medical care. Health care insurers, by and large, zeroed in on surgical fees as an arena in which to try to determine what constituted "reasonableness." A good deal of grief was incurred along the way; considerable hostilities were generated at times, certainly during the last few years. I think, however, with the advent of Medicare, that consideration has simmered down to a kind of scientific process, or at least a mathematical one, with computers by formula cranking out, based on reasonably objective considerations, figures for various surgical, medical, diagnostic procedures by geographical locality, etc. to determine what is "reasonable". If we haven't solved this problem yet, at least we've achieved a complete and common mutual understanding because of the support of the medical profession through peer review activities. All the while, of course, I think we all knew that the real cost problem was in the hospital bill.

There are lots of ways to look at hospital expense problems and administration problems, but one way I thought I would refer to it is in terms of the two elements, unit cost and utilization. How much does each item cost: a day in a particular room, general nursing, food, service, various kinds of pills, diagnostic tests, etc? The product of these items is total cost.
A hospital operates pretty much on a fixed expense basis. Most of these expenses are for highly trained personnel, hardware and supplies involved in delivering patient care. Whether the overall costs are within reasonable limits is to some extent dependent on the quality of hospital management that is brought to bear on purchasing, personnel matters and general organization. Assuming, however, that you have, on balance, good administration, which is as safe an assumption in hospital administration as in any other field of administration including insurance, if a hospital's cost structure requires $100,000 per month to remain solvent and if it can count on 1,000 patient days of care being delivered, then it's very simple: The hospital must charge $100 per day for patient care in order to balance the books. And if the hospital's utilization rate drops to 800 patient days of care a month, it will have to charge $125 per day, or cut its expenses which is not very easy to do, or utilize some combination thereof. Because those expenses involve highly trained personnel, which can't be turned off and on very readily, overall operation expenses can be reduced only over a relatively long period of time. Thus, any approach to control of hospital utilization needs to be approached in a very cautious manner; it's really not an arena suited to precipitous action.

John Hancock and, I believe, most health care insurers have tried a variety of approaches to the problems of cost of hospital care, including limited admission certification programs and programs involving retrospective review of claims and retrospective denial of benefits. However, recognizing that the relatively fixed nature of hospitals' need for income, we realized quite a while ago that retrospective claim review and denial on a broad-scale, long-range basis simply cannot do the job. All we would end up doing is a poor job for the insured, leaving either the hospital or the individual patients stuck in some way financially. This type of review just won't work, in our view, so we'd reserve that kind of approach, namely, retrospective review and potential denial of benefits, only for extreme cases of unquestionable abuse — use of hospitals for babysitting services, something of this nature, or outright fraud, which does occasionally occur. Any real control of hospital utilization must involve concurrent review performed by appropriately qualified individuals on the hospital premises, certifying hospital admissions and reviewing length of stay while patient care is in the process of being delivered. This review is important, with decisions on those matters strictly in the hands of physicians. The objective should be to admit people to hospitals only when they really need to be, and to keep them there only as long as really is necessary, thus controlling the services rendered and not just how much gets paid for following discharge. Decisions on the utilization of health
care should be made by physicians, and the PSRO legislation wisely provides for that.

There have been widespread allegations that health insurers, having tremendous reserves of cash, should assume responsibility for the cost and quality of health care paid for under their policies. One of the reactions that I have had to this proposition, is to wonder if in the future, perhaps through "Naderism" or some movement of that nature, a similar mechanism would hold the bank where I finance my car responsible for its performance. I have, personally, some philosophical problems with this concept, and I'm sure others may as well. In any case, with respect to the concept of health insurer responsibility for controlling quality and cost of health care, I have these two unofficial observations:

First, the assets held by major life insurance companies who also do health insurance business are primarily related to their life insurance and pension responsibilities. Since a company's life insurance in force — its contract obligations — typically amounts to many times its assets (for John Hancock, $75 billion of life insurance in force versus assets of about $11.5 billion), and since, somewhere in the future, almost all of that volume of life insurance will have to be paid in one form or another, either living benefits or death benefits, the life insurance company must maintain its assets, invest them and manage them as effectively as possible for appreciation, so that they will be prepared to meet those contract liabilities later on.

Second, I do not feel that it is workable to assign to insurers any direct responsibility for quality control. We've already agreed that such control needs to be exercised by physicians, and that's a position that physicians as a group tend to guard quite jealously, and rightly so. The proper role of the insurer in quality control is that of providing financial and other support and assistance to the development and operation of the rather complex programs that are necessary to achieve control. It is certainly proper that a reasonable amount of health insurance funds be set aside and dedicated to that purpose. The control mechanisms that exist in a variety of experimental forms, ultimately, will develop as PSROs. John Hancock is one of a large number of insurers which has provided financial support to various foundations for medical care, perhaps one of the best known being The Foundation for Health Care Evaluation in Minnesota. Until the last several months, the activities of such foundations have tended to center on fee review and concepts to control the escalation or inflation of fees for services and physicians' services. However, with the advent of PSRO and its relative silence on fees as opposed to quality, and on doctors' services as opposed to hospital care, they've sort of redirected
their focus to hospital utilization review, with varying degrees of fee review and ambulatory care review planned as adjuncts to the central hospitalization review program.

Cash contributions as a means of insurer participation in PSRO represent a number of problems to insurance companies which go beyond the amount of cash involved. We have in group insurance, where the bulk of health insurance funds are involved, a necessity to allocate expenses to groups. For this reason, we have worked very hard, through the Health Insurance Association of America, with a number of foundations with growing success to have hospital utilization review programs funded by means of a charge on the hospital bill. In our view, it doesn’t matter whether that charge is buried in the room and board charge; this is another part of hospital expense. We recognize that the hospital itself is not necessarily the agency that incurs all the associated expenses, but we urge that ways be found to direct the funds to the foundation if that is what is involved. By and large, health insurance companies will recognize such charges, even if they are identified separately, as a valid part of the patient care, and will reimburse them within the limits provided for under the policy. The state of Maryland is an example of the kind of program where we’ve achieved that sort of an understanding, and we are very excited about it. With the publication of the 203 PSRO final designations, apparently PSRO is going to move from abstraction to reality. The DHEW has expressed its intent to start letting contracts to PSROs, and it would appear that in the next few years there will be 203 operational PSROs.

Some of the hot topics include preadmission certification, which has now been dropped as a required PSRO activity. We (John Hancock Co.) would like to see preadmission certification working and we would be willing, as an individual company, and to a great extent I can speak for the industry, to accept charges for outpatient diagnostic tests if they are incurred in connection with the preadmission certification program.

One parting thought: Eventually, to the extent that we who are involved in health care delivery and financing cannot, or do not, solve the problems of cost and quality, society is going increasingly to demand, through legislation, ever more onerous regulation. I do not think that that is in the best interests of society. Thank you for your attention.
Hechtman: It's obvious that third party carriers are taking new and refreshing approaches. Mr. David Frost, the executive vice president, of Massachusetts Blue Cross, Inc., will be our next speaker and will, perhaps, reflect another attitude of an extraordinarily large third-party carrier. Mr. Frost has had experience with the Massachusetts Blue Cross since 1961 and has assumed a leadership role in its function.

David Frost: I have the same difficulty that the prior two speakers had with the mantle of "expert". My background in Blue Cross includes some 16 years in the marketing division, and then two years as vice president of claims administration, following which, in February I assumed the role of executive vice president. That background does not qualify me as an expert, certainly, on these very controversial and very complex subjects of preadmission certification, PSRO, and all of the "touch words" which have gained the focus and the center of attention in the medical care community. Because I do recognize the fact that I personally am not an expert, I asked the members of my staff to develop their collective ideas based on our experience as a Medicare intermediary and our experience resulting from the administration of our new contract with hospitals.

Initial Certification — Preadmission vs. Concurrent

In order to put my remarks into the proper frame of reference, let me begin by outlining our experience in processing Medicare claims. Approximately four per cent of the claims we have processed in the past year were reviewed by nurses in our Central Medical Review Department. Of
these, about 10 per cent were rejected in part or fully. This means that less than one per cent of the Medicare claims are being rejected; or, positively stated, 99 per cent of the Medicare claims submitted by providers were for covered services in the eyes of the physicians, hospital and Medicare program.

The primary objective of any certification program must be to protect and improve, where possible, quality control. In addition, this certification program should enhance medical care cost containment. The elimination or reduction of inappropriate hospitalization, along with the appropriate utilization of subacute facilities when appropriate, should be considered the primary means of attaining this goal.

**Preadmission Certification**

By this time you are all aware of the fate of the preadmission certification program described in the January 9, 1974 Federal Register, which proposed that virtually all Medicare hospitalizations be subjected to preadmission certification. HEW has determined that it would not be prudent to enforce this requirement.

Prior to the deletion of this proposed rule, we at Blue Cross went on record that this type of program was inappropriate for the Medicare population. Our prime concern was the potential effects on the quality of care. In addition, we considered the proposal impractical from the viewpoints of both costs and effective administration.

Our position is substantially the same for those under 65, those whom Blue Cross insures. Although there may be some limited circumstances in which preadmission certification would be useful, we believe that each condition or diagnosis should be carefully selected and that it might be appropriate to exclude both Medicare and pediatric patients.

**Quality of Care**

The quality of medical care of the elderly could have deteriorated if the proposed rules had been implemented. Although admissions for elective surgery may be reviewed in depth prior to admission, many of the elderly use outpatient departments or emergency rooms in lieu of an office visit to a physician. The patient on the verge of an acute myocardial infarction or stroke may exhibit only vague or seemingly unimpressive symptoms in the 24 hours preceding the onset of the illness. An outpatient setting cannot accommodate the close observation which often is required in order to determine accurately the true condition of these and many other elderly patients. Compounding the difficulty in making medical judgments in
these settings is the fact that the elderly Medicare patient is a notoriously poor historian. Slower mental processes and a tendency to minimize symptoms during a hasty examination, out of a fear of hospitalization, make it necessary to involve a professional with special training in taking histories. Frequently, other family members are the only source of complete information about a patient's symptoms and conditions. Many of these same considerations apply to children.

The necessity for a quick analysis of a patient's medical condition and judgment of the medical necessity for hospitalization inherent in the proposed preadmission certification program could produce tragic medical results and serious malpractice consequences. Further, the manpower requirements of a total preadmission certification program could result in preliminary decision making by personnel other than physicians, which could compound such legal issues.

Administrative Considerations

The basis of an effective utilization review program is the professional medical review. The logistics involved in conducting such a review by an outside group decrease the likelihood that effective, timely review will be established. A physician-directed preadmission certification program would impose an enormous burden upon physicians in the time-consuming effort of reviewing admissions.

An alternative to a physician-directed program would be the use of paramedical or clerical personnel to review admissions in lieu of the physician. This is the approach presently taken by the Medicaid Review Program in Massachusetts. The Medicaid utilization review coordinators (usually clerical personnel) review all Medicaid admissions and can approve stays up to an average length of stay by diagnosis. The physician adviser becomes involved only when the question of medical necessity is raised or when the hospital stay becomes extended. A preadmission certification program, as was proposed by HEW, would require either a tremendous increase in physician time commitment or an increase in non-medical manpower at the expense of optimum quality review.

Cost Considerations

The Bureau of Health Insurance statistics applicable to the Medicare program for the year ending June 30, 1973 indicate total administrative costs averaged less than $5 per claim and were equal to 1.32 per cent of the benefits paid during that period. These administrative costs would be increased substantially if the estimated costs presently attributed to utiliza-
tion review activity within the Medicaid program in Massachusetts are reliable and can be used to infer the costs of a mandated preadmission screening program. We understand that the cost of utilization review to the Medicaid program is $10 to $15 per certification.

Implementation of a preadmission certification program would require additional medical, paramedical, and clerical personnel. In our opinion, the total amount of potential unnecessary elective admissions, resulting in denied admissions, would not justify such additional personnel. Therefore, the costs related to this administrative function probably would not be justified by corresponding savings in benefit payments.

In summary, we are not convinced that all diagnoses carry the same potential for abuse. It is our opinion that the cost of preadmission certification for all diagnoses would not result in corresponding improvements in the quality of care or in significant savings in benefit dollars.

Delegation of Utilization Review Responsibilities

Blue Cross of Massachusetts supports the concept of institutionally based utilization review. In our opinion, if a hospital's utilization review committee is effective, then the responsibility for review should remain there. This approach is consistent with the PSRO legislation of Public Law 92-603, which indicates that if the PSRO deems a hospital's utilization review committee effective, the review responsibility would be reserved to that facility's committee.

By contrast, the proposed rule appearing in the Federal Register indicated that if another group outside the facility representing that geographical area has been designated by the Medicaid state agency to perform utilization review functions, the Secretary has the right to designate to that group the authority to perform utilization review functions for both Medicaid and Medicare patients. Coordination problems and time constraints regarding reviews by external groups would limit the potential for educational exchange between the parties, much to the detriment of quality care.

Universal mandatory preadmission certification for nonemergency or elective admissions could create a tendency on the part of physicians to admit more patients as emergency or urgent cases, rather than risk denial under preadmission review.

Concurrent Review Within 48 Hours of Admission

A program of concurrent review appears to be a more realistic alternate program. Blue Cross of Massachusetts supports the concept of concurrent
utilization review within 48 hours after admission, with subsequent review based on profiles of length of stay by diagnosis. We feel that this review should be physician-directed and the responsibility of the hospital’s utilization review committee, wherever possible. However, review of all admissions within 48 hours of admission creates the problems of volume, professional manpower and costs inherent in a preadmission certification program. Our experience in medical review indicates that the potential for abuse of admissions is significantly greater within a few specific diagnostic categories. Examples of these include admissions for symptoms of undefined etiology, upper respiratory infections, and gastroenteritis. For instance, 16 per cent of all claims submitted with the previous diagnoses were rejected in full, meaning that admission and stay did not appear justified. Moreover an additional 23 per cent of the total claims were partially rejected, meaning that the admission might have been justified, but that the entire stay did not appear necessary.

More specifically, 14 per cent of all gastroenteritis admissions were rejected in full; 15 per cent of all otitis media were rejected in full; and 25 per cent of all upper respiratory infection cases were rejected in full.

Therefore, we propose that postadmission certification be required for selected conditions where the possibility of abuse promises significant returns on our attempts to maintain quality care and contain the costs of health care. This proposal would include, of course, subsequent review based on length of stay by diagnosis for all diagnoses.

Since the utilization review requirements of the Blue Cross contract with acute hospitals require review of Blue Cross patients in accordance with the hospitals’ written review plan, and since the contract states, “at all times the review plan shall at the least provide for such utilization review as shall then be required by the Federal Social Security Act,” it would follow that if concurrent review is required by the Federal Social Security Act for Medicare patients, it would also be required for Blue Cross patients.

This proposal would generate a manageable volume of certification and reduce the professional manpower required to administer the program. We feel the tendency to perform a "rubber stamp" review would be reduced in favor of a more effective, considered review. Medicare beneficiaries and children would receive the close medical observation which often is required to make an accurate evaluation of their conditions. Conversely, review within 48 hours of admission would insure that patients are moved to other facilities or discharged at the appropriate times. In general, a 48-hour certification program would be more palatable to physicians, patients, and providers.
The diagnoses to be reviewed should be selected by the local PSRO, based on its ongoing studies of patterns of care. These diagnoses would differ for children, the elderly and others. They may also vary from facility to facility, for teaching versus nonteaching hospitals, and perhaps from physician to physician. The diagnoses selected should be subject to change by the PSRO.

An effective utilization review committee or PSRO must educate the medical community and influence patterns of care in the interests of quality, over and above its responsibility for case-by-case review. To that end, utilization review committees are required through the conditions of participation to conduct medical care evaluation studies. If a utilization review committee or PSRO identified a trend toward unnecessary admission in a given diagnostic category within one hospital or in a region, that condition could be added to those for which concurrent admission certification is required.

Alternate Procedure

Perhaps a more realistic approach, aimed at eliminating unnecessary admissions, would be the expansion of the preadmission testing program.

Preadmission services make it possible for the patient who may require surgery to receive preoperative testing ordered by his physician on an outpatient basis. The availability of these services not only enables the physician to identify unnecessary surgery prior to admission, but also cuts down on the actual length of hospital stay and, subsequently, the cost of the illness. The patient can remain in the relaxed atmosphere of his or her home, or even on the job, until hospitalization is absolutely necessary.

Both Medicare beneficiaries and Blue Cross Master Medical members are covered for preadmission services as part of their total outpatient benefits. Regular Blue Cross members who do not have Master Medical certificates also receive benefits for preadmission services, provided that the related inpatient benefit is for scheduled surgery and the hospital admission occurs within four days of testing. Moreover, benefits will be paid for cancelled surgery providing it was indicated on the outpatient admission form that surgery was definitely planned and scheduled prior to testing.

Preadmission testing combined with selective concurrent review requirements would achieve the goals of protecting and improving quality control and enhancing medical care cost containment, while retaining the professional judgment of the attending physician in determining the necessity of admission.
Hechtman: Our last speaker of the morning will be Robert Murphy. Mr. Murphy is the director of the Tri-State Regional Medical Program. He had last year served as the temporary executive director of the CHAMP program in Massachusetts (the Commonwealth Hospital Admissions Monitoring Program).

Robert W. Murphy: I do know something of the CHAMP program. I was involved in negotiating the contract and I was initially involved as the acting executive vice president of the Commonwealth Institute of Medicine. I think that when one talks of preadmission certification in the CHAMP program, the question is, "Why is it in there?" What were we trying to do when we had it put in there?

It is in there because of two factors. One is purely external, and many of the speakers today have already addressed themselves to this. Lots of facts and figures have been bandied about that patients are admitted inappropriately to hospitals, and it costs money. I'd like to quote from just one study of many that tends to substantiate this theory. This is a study that was done by Dr. Eugene McCarthy, Department of Public Health, Cornell University Medical School. What they did was take two groups of union people who had a prepaid group health program and said that on all elective surgery there will be a second consult. In Group A the second consult was mandatory; in Group B the second consult was at the choice of the patient. I will read five or six sentences that tell the results and tell why people are asking for some form of preadmission certification.

For the store workers, 23 months experience is presented; District
37, 18 months experience. Table 1 shows the experience of elected surgical consultation program. One-third of the District Council 37 members and one-fifth of the store workers did not require hospitalization for surgery even though it was originally recommended. The obvious difference in hospitalizations that are not required between District 37 and the store workers may relate to the fact that in the 37 program the consultations were entirely voluntary.

And Dr. McCarthy continues to explain how that can skew the sample. The fact is that, in this study, when a surgeon said it was necessary to have a hospital admission, a second consult in at least one-fifth of the cases said "No." There is a question of quality of care and there is a question of cost savings. This study is an example of one of the many external factors that led the CHAMP program to have a clause on preadmission certification.

What are the internal factors? The internal factors we were dealing with when we were negotiating this contract with the state Medicaid office are in terms of the outcomes of the CHAMP program. We want to know more about the process and outcome of patient care, and we want to develop better management information. One of the other factors we want to learn about, one of the elements the state wants to learn about, is the validity of a mechanism for preadmission criteria, and whether it can work. As a result, in the contract the CHAMP program is required to develop preadmission criteria 270 days after the start including criteria based on symptoms and criteria based on required medical services. We are to implement these criteria for a test period of approximately 270 days. The test period will allow us to examine the validity of utilizing such a preadmission screening mechanism and, hopefully, to learn about some of the cost factors incurred in its operation.

In doing this, there are two key elements that become relevant to the outcome and they both involve the "criteria". The two elements are: (1) Is this being done for improvement of the quality of care? (2) Is this being done for cost containment? Some say it is being done for both. If it is being done for quality assessment, the criteria which develop are undoubtedly going to be different in degree from criteria being set for cost containment. An example: In terms of the cost element, one may establish criteria for elective surgery which requires that a whole series of tests be done prior to admission, to further define the necessity of admission. From the quality point of view, the question is, "Are there certain medical procedures that should or must be done in order to promptly validate a diagnosis?"
One of the problems is that we don't know the correct answer. At least, I don't think we know. I think we make assumptions that in the "other hospital", never in our own, the probability is that they are not doing it the right way. But in "our hospital", we feel quite confident that everything is being done correctly and that the admissions there are necessary. Any time there is a questionable admission it is because of the fact that there is uncertainty, and that there is still a certain art to medicine despite the fact that the computers can't recognize it.

The CHAMP program has been well enough described by the previous speaker, who obviously endorses it wholeheartedly. But I think the major factor in the CHAMP program is that it is operated under the aegis of the state medical society's nonprofit corporation (the Commonwealth Institute of Medicine). I think that this fact has enhanced the potential of physician participation. It will, I believe, give stronger validity to the outcome of what we do and don't do, and to the information we gather. The practicing physician is more apt to wish to participate with confidence when it is his professional organization that is running the program.

In the end, why do we even do any of it? What are going to be the results? If you're the director of Medicaid, I think that you are hoping among other things that it is going to cost the state less. But, more important, you want to know what you're buying. Programs to date — the present hospital and third-party-utilization-review mechanisms while serving a purpose hopefully around quality and to some extent around cost — have not developed a management information system which permits judgments as to what we're purchasing, why we're purchasing it, where we're purchasing it, and whether it is worth purchasing at all. I think that by attempting to develop the concurrent monitoring program with some selective attempts in preadmission certification criteria, the Commonwealth Institute of Medicine will begin to develop a management information system that allows us to address ourselves to these questions. When, tomorrow, the Social Security Administration promotes new regulations, we will have facts, information, and a system enabling us to cope with them.
Hechtman: We have numerous questions directed to several members of the panel. First, Dr. Wennberg, perhaps you might comment upon the activity of surgeons in Vermont. Does the number of surgeons vary directly with the surgeon man-years in the different areas?

Wennberg: I presume that you are questioning the measures of input that we used. Are they identical with the actual physical number of surgeons in an area? The answer is "No," although it is very nearly the same. What we have done is that we've allocated physicians back to populations according to where their patients come from, so the input is an actual measure of labor input to a population. It would be the same if you took the number of surgeons employed by Kaiser and divided it by the number of people enrolled in Kaiser, rather than by the number of people living in Los Angeles. Therefore, the input is corrected for migration, and the most interesting thing about this statistic is that it allows us to look at work load, which is to say, what gets done in relation to variations in input — different kinds of physicians, different ages of physicians, and so forth.

Hechtman: Let's ask Dr. Wennberg one more question before we move to another panelist. Is there any data indicating the tissue correlates of the varying rates of operative procedures; that is, the appropriateness of the procedure, for example, in tonsillectomies, hysterectomies, or appendectomies? It is my understanding that as a surgeon you are allowed to make perhaps a seven per cent to eight per cent error in diagnosis in males, and perhaps a fifteen per cent error in diagnosis in females, in order not to have a mortality with appendectomies. Is there any data in the Vermont study?
Wennberg: No, unfortunately there isn't. We do have a small amount of data from PAS which does tell us something about tissues. We looked at it, and it varied proportionately with the number of procedures done; in other words, there were no differences in the opinions of pathologists as defined by PAS. However, we chose not to believe that data for some technical reasons, so I am going to say now that we do not know the answer to that question. It is obviously a very important question and one which relates directly to the cost-benefit questions that are raised by these variations. That would be among the list of things that ought to be definitely studied. I would think that PSROs might be an appropriate mechanism for these studies.

Hechtman: I guess we're all agreed that such outcome information is of critical importance.

The next question is directed to Mr. Frost. "Why can't Blue Cross or Blue Shield deal directly with the medical profession to make simpler and less expensive methods available for removing doctors or other providers whose practice is nonconforming to preset standards?"

Frost: The review process that Blue Cross has undertaken is concerned primarily with cost. We have always felt that the answers to questions pertaining to quality performance belong within the medical profession. We have never perceived the Blue Cross role as one of disciplinarian regarding physicians who are revealed to be aberrant in their practices according to length-of-stay information. We will make judgments on individual cases and deny benefits where there is cause for denial. We will report excessive lengths of stay to the utilization review committee. However, beyond denying payments, it is not our responsibility to discipline.

Hechtman: Disciplining physicians, I understand, is quite difficult. Only some 80 per cent or 90 per cent of physicians in the state belong to Mass. Medical, and even if they were removed from that society, it does not mean much to them. The state licensure board is not taking very active measures to remove incompetent physicians; one physician, who, I understand, is in jail on a narcotics charge, still has his license.

Wennberg: I'd like to say just one thing, and that is in regard to the "bad guy" theory. I think that, if I am interpreting the data that I've seen in Vermont correctly, while there obviously are "bad guys" around, the real problem is in terms of utilization and costs: it is essentially a problem of the profession, and not a peripheral problem. It is the fact that we are now
being asked to look at cost benefits from the point of view of a total allocation of workload in the profession. It is no longer a question of the individual patient and the individual physician without reference to how many societal resources are being used or what other things could be done. And those problems — how to handle and what to do — become really very difficult to understand. One of the fears I have is that if we should choose the wrong model, we could end up in a particularly worsened situation. I don't think that disciplining "bad guys" is going to solve the problems that we are dealing with in terms of how health care fits in. Health care is one of the major subsets of the economy, and that's the basic issue. We are making demands now on other resources that people might want to spend on other things. On the real cost-benefits question, we don't have the answers because we don't often know what the effectiveness is of our individual procedures; we can't defend them publicly anyway.

Hechtman: So the vast majority of cost savings would be in terms of routine services, not the extreme fraud for professional activities that is manifest by some, and very difficult to deal with, indeed, but not common.

Wennberg: Take the tonsillectomy variations that represented over $1 million difference in terms of the distribution of dollars throughout those areas. And the variation of per capita expenditures between different Vermont markets just in terms of Medicare reimbursements is threefold, so three times as much is being spent on one area than on another. If we choose to deliver care at the rate of the expensive area, we will increase significantly the amount of money spent on health care. If we choose to do it at the rate of the lower area, we will decrease the amount of money spent on health care. I don't know which way to go or which way to recommend because I am sure we are not going to be able to make those decisions ourselves. The high cost area, for example, implies that about 14 per cent of the Gross National Product is spent in health care. I suspect that if we looked at Boston's per capita expenditures, a rate of 10 per cent or more of the Gross National Product could be shown. Across the country, highly variable rates could be calculated, I am sure.

Hechtman: How will the information that today's symposium gathers affect or potentially affect the delivery of medical care? This question relates to the quality of care, but I'd like to include in that the quantity of medical care. Are we dealing with quality or quantity regulatory activities?

Murphy: That's a very simple question to answer. I think that we are
talking and planning for health care at this moment to a great degree in a
vacuum. We are doing this without the kinds of information and data that
allow us to make judgments, and I think that we are dealing probably first
with the quantity issue. It will point out some quality questions to be ad­
dressed, but I think that it is quantity at this juncture, with some quality
indicators for future effort.

Hechtman: Mr. Griffith, is the John Hancock Company willing to accept
PSRO review in totality for payment of claims? If so, would they enter
into contractual arrangements with a PSRO, and what would they stress in
a contract? How does John Hancock provide quality assurance to its sub­
scribers?

Griffith: It is difficult, of course, to answer any question without some
exceptions or qualifications. By and large, we certainly expect to pay
claims on the basis of certification of qualified PSROs or other review
agencies. To the prior question, "Are we dealing with quantity or
quality?" I guess my answer would be, "Yes," meaning both. We are
engaged, in several parts of the country, in contractual arrangements or
noncontractual commitments to financially support review organizations.
We have had to adopt as a policy that we will accept the certification of
these agencies to qualify medical care as having been "medically
necessary," which is one of the restrictions in our policies; we cannot
agree contractually or even in principle to deny benefits for confinements
that are not certified. This is a legal point which, as our counsel has ad­
vised, will leave us vulnerable to attack from both the physician and the
patient involved. But we expect those to be infrequent.

Hechtman: Dr. Wennberg, in your Vermont experience, did you notice
any changing rates of service performance based on a physician's prior
training? I am told by Dr. Francis Moore of Harvard Medical School that
33 per cent of the physicians in this country perform surgery, although 18
per cent of the total physician population of this country is board-certified
in surgery. Is there a difference in performance rates between regions as
defined by prior speciality training?

Wennberg: I can answer that in part. For technical reasons I cannot say
whether or not board certification leads to a reduced quantity of a par­
ticular procedure, in terms of population, because the populations vary
and the supply of doctors in an area varies. But there was no indication that
the overall rates of surgery were lower where there were proportionately
more general surgeons who were board-certified; however, more difficult surgical procedures tended to be done in those areas. That makes sense because the general practitioners and the noncertified general surgeons tended to be responsible for tonsillectomies, except in one case where it was done by an ENT physician. But the highest rates that were seen were not done by board-certified surgeons. We can tell you the case load by certified and noncertified physicians, in other words, the number of procedures an individual did; but the rate in terms of the population is difficult to interpret because of the fact that general surgeons, board-certified and noncertified, are both serving the same areas. We can’t tell where their population was taken from.

Hechtman: Has there been any thought among third-party carriers, Mr. Frost and Mr. Griffith, regarding differential rates of reimbursement or nonreimbursement depending upon a physician’s prior qualifications?

Griffith: We have not given it serious consideration.

Frost: Nor have we.
The Afternoon Session
Paul M. Gertman: Since the mid-1960s when the first debates on the structure of the Medicare laws took place, a principal concern of the federal government and state governments who were responsible for paying for hospital care under Titles 18 and 19 of the Social Security Act has been to prevent and/or to limit the number of "unnecessary" admissions to hospitals. Everyone was conscious of the fact that under most previous health insurance plans, with their limited ambulatory coverage, a substantial percentage of hospital admissions were not medically necessary but took place because diagnostic or therapeutic services which might have been performed on an outpatient basis were not reimbursable unless the patient was admitted to the hospital. Additionally, there were many reported anecdotes of patients being admitted for "psychotherapeutic" reasons such as a rest away from their spouses, which also may have represented inappropriate expenditure of public health insurance monies.

Underlying this concern for unnecessary health insurance expenditures was and is still today the great political-emotional concern of preventing "fraud" in the expenditure of public tax monies, particularly in social welfare areas. Even when the cost of fraud control exceeds the actual cost of the fraud, the American public has insisted that the price is worth paying. It is almost untenable for any political figure to argue that it is not worth spending (for fraud control) more money than the cost of the fraud. Although most physicians think of themselves as honorable men who act ethically and honestly in most instances, there is a substantial minority of the public and many policy makers who do not agree. There is an even larger percentage, particularly among policy makers, who believe that physicians are to a large extent contemptuous of or disinterested in ap-
propriate stewardship and utilization of public health insurance monies. To a certain degree this is due to the fact that many physicians regard their clients as the patients even if the federal government is footing the bill, and feel that their responsibility is to the patients' needs — rather than to public authorities. The government, however, holds the view that the physician is responsible to them since they are paying the bill. It is these sets of concerns which led to the original provisions for utilization review under Medicare and Medicaid and which are present today in the new program of Professional Standards Review Organizations.

Under the basic utilization review regulations at the inception of the Medicare program, hospital utilization review committees were responsible for reviewing the appropriateness, quality and necessity of medical care for all cases of extended stay — at the 12th, 18th, 48th, 78th, etc. day of hospitalization — and for reviewing a sample of all admissions as to the necessity for admission and the necessity of the care received during the course of the hospitalization regardless of their length of stay. The number of hospitals which did not perform adequate extended stay durations was very great, and the percentage which did not perform admission reviews was even greater. In Massachusetts, hospital licensure regulations have required a review procedure for the necessity of admissions, but, at least on an anecdotal basis, this has rarely been performed in the past. The newly promulgated regulations still require review of admissions.

The new PSRO guidelines will require that the PSRO or its delegated agent, the hospital review committee, will be responsible for three types of review of inpatient, shortstay hospital care. These three are: first, admission certification; second, continued-stay review; and third, medical evaluation studies. Continued-stay review, or CSR — a term you shall hear more frequently in the future, is basically similar to past requirements for extended stay review. And medical care evaluation studies are exactly what the name implies; that is, retrospective analyses of the process and quality of medical care. Each of these are important topics in their own right, but I will not discuss them today; rather, I will attempt to present further the admission certification requirements and priority problems that may be encountered in that area of review. The new PSRO guidelines define admission certification as "a form of medical care review in which an assessment is made of the medical necessity of a patient's admission to a hospital," and state that the objectives of this certification are:

A. to assure that the patients requiring a hospital level of care are admitted to a hospital;

B. to assure that diagnostic or therapeutic care which could be provided at a nonhospital level of care is not provided on a hospital inpatient basis
without appropriate justification. (e.g., lack of trained personnel, geographic constraints, etc.);

C. to assure that hospital admissions are not being inappropriately delayed, and when an admission is certified, assignment of a diagnosis or problems, a specific length of stay, and to check on initiation of predischarge planning.

These guidelines further state that admission certification could be performed prior to admission or during the initial part of the hospital stay. All PSROs will initially perform admission certification during the early phases of the admission. Specifically, review shall occur within two days following admission. If review indicates that admission is not medically necessary, the attending physician will be notified within two days of admission in order to afford him an opportunity to present his view prior to the point when a final determination is made. If the final determination is that the medical necessity for admission has not been shown, the review committee shall notify the hospital, the individual, the attending physician, and, in the case of the Medicaid patient, the state agency, within three days following admission.

Initially, the PSRO or its delegated review committee will be responsible for certifying all elective admissions and a sample of all emergency admissions. Each PSRO will be responsible for developing criteria which specify indications for admission, the appropriate nature of a pre-admission workup and/or the types of services which should be provided at a hospital level of care, to screen admissions in order to select those requiring further review.

Realizing the vast amount of work that this admission certification process will involve, the federal guidelines foresee a procedure by which the PSRO will drop admission certification requirements. The guidelines state:

Over time, as the PSRO performs admission certification, it will identify physicians, diagnoses, (or problems), and/or institutions which no longer require admission certification. Such would be indicated by (a) absence of admission denials, (b) absence of inappropriate lengths of stay, and (c) absence of the delivery of diagnostic or therapeutic services inappropriate to the hospital level of care. When this occurs, such physicians, diagnoses or problems, or institutions would not be subjected to admission certification. Conversely, when data and experience indicated that admission certification was necessary for a particular physician, diagnosis or problem, or institution, it would be instituted. The objective here is to assure the efficient and effective operation of
the admission certification process by focusing attention on defined problem areas.

However, these guidelines also leave open the controversial area of preadmission certification. The guidelines indicate two reasons for a PSRO requiring preadmission certification: first, where a hospital or PSRO felt that for certain situations (by diagnosis, physician, institution, or procedure) preadmission certification would be more effective from the beginning than concurring admission certification; and second, in those situations, again by diagnosis, physician, institution or procedure, where concurring admission certification has failed to prove medically unnecessary admissions. Additionally, in the latter instance where the admission certification process has been unsuccessful the guidelines state that preadmission certification in most instances would require that the patient be seen by a physician other than the attending physician to obtain an independent assessment of the patient’s need for admission.

I would now like to turn to the problems that physicians, hospital review committees and PSROs will have in carrying out both the letter and the spirit of these regulations, and then, later, to comment on some of their implications. The framers of these regulations and the original PSRO amendments foresee the development of specific sets of criteria listing the indications for admission for each major diagnosis, procedure, or problem. Around the country in the last several years, several foundation organizations have worked to develop indications for admission criteria. However, there are several real problems with the actual development of a successful criteria system for review of admissions. The first of these is the sheer number of different diagnoses, procedures and problems of patients covered under Titles, 5, 18 and 19 of the Social Security Act. Even after three or four years, no foundation has developed much more than 50 sets of criteria, while there are literally hundreds of diagnoses which must be dealt with. Additionally, most of the criteria sets developed by different groups are duplicative; that is, they deal with the same diagnostic or procedure categories. Thus, even if one wished to copy or utilize the criteria developed by other organizations, these are far from adequate. As a case in point, here at the University Hospital, for example, the most common surgical procedures deal with hand surgery not appendectomies or T&As, and, to the best of my knowledge, no group in the United States has even begun to develop criteria for hand surgery. Thus, one clear problem that hospital review groups and the PSROs will face is how admissions for which criteria do not exist are to be reviewed. I shall return to this a little later.

The second technical problem in developing criteria of indications for
admission is how to set them. Many foundations or other review groups around the country have invested literally hundreds of physician hours and committee meetings trying to draw up simple lists, and the basic problem they have faced is whether to make the criteria very specific and narrow or to make them very global and vague. If they are global in nature or attempt to be all inclusive, then there is little probability that any person with the diagnosis who legitimately needs to be in a hospital will ever have his admission certification questioned. However, under this approach, many cases where admissions may be questionable or unnecessary will slip through the criteria screen. On the other hand, if the indications are very narrow, there will be a substantial number of cases of the given diagnosis or for the given procedure which may legitimately necessitate hospital admission but do not fit the criteria. In this circumstance, there may be a substantial number of appeals and meetings generated in order to approve admissions of cases that do not meet the criteria. Many groups, as I am sure will also happen in this state, will find great difficulty in reaching agreement over what represents an appropriate compromise between these two extremes. Although, at first glance, the global approach appeals to many physicians as the simplest way to deal with the problem, if this leads to subsequent denials, they will still be faced with the need for doing admissions certification on all elective admissions and a sample of emergency admissions.

If their criteria can be refined to the point where they represent a sensitive yet specific screen of the necessity for admission, there are reasonable grounds to hope that at some point in the not too distant future, the hospital and physicians would be relieved of the burden of certifying all admissions.

A third problem is defining what constitutes an elective admission, always requiring certification, and what represents an emergency admission, where only sample reviews will be done. Many hospitals like this one have levels of urgency in between purely elective and a complete emergency admission, and these definitions at all levels are highly variable, not only between institutions but from time to time within an institution. I am sure all the practicing physicians are aware of the practice of labeling patients as emergency cases or more urgent than they actually are in order to get a bed when occupancy levels are very high. Unless the admitting physicians become more rigorous and honest in their use of the labels, substantial problems will be created not only for the review committee and the PSRO, but ultimately, for themselves.

The next problem that many physicians and hospitals will face is who is to review question cases, or cases that do not meet the criteria. Many
utilization review committees have asked specialists in one field to review extended-stay cases in the same field — that is, an orthopedist would review orthopedic cases, a neurologist neurologic cases, etc. I am sure that if an extended-stay review committee felt the need for specialists to review work in a particular speciality area, this will be felt as an even greater need when it comes to indications for admission in the many cases where necessity is not automatically clearcut. However, at this hospital, and I am sure at many others, there may be significant conflict-of-interest questions. It is particularly true at university medical centers. This conflict of interest is brought on by the fact that at many institutions, all of the specialists, or many of them, are jointly in practice together, often as a professional corporation where there is certain degree of sharing of the income generated by each of the physicians. Thus, it may be highly questionable for a specialist to review the need for admission or of continued stay in the hospital on a case where a partner, professional associate or group practice associate is involved. To deal with this problem, many review committees may be forced to find competent specialist reviewers not associated with their institution or with one of their speciality groups.

Another problem for admission certification is dealing with areas where necessity of admission may never be reducible to a written set of criteria that are satisfactory to all concerned, as for example, the criteria for non-psychotic psychiatric admission, rehabilitation cases, terminal cancer cases, etc. In these areas, the necessity for admission depends not so much on the particular signs or symptoms of the individual case, but rather on the physician's assessment of the patient's total need for care and the type of setting which is most conducive to appropriate care. These are but few of the types of problems which PSROs and delegated hospital review committees will be faced with in attempting to make the admission certification process work.

I would like to briefly return to the first problem that I raised; that is, how will we be able to certify admissions where criteria do not exist? In reviewing hospital records with an eye to this issue, one is repeatedly struck by the fact that it is often quite difficult to determine from the admitting history and physical exam specifically why the physician felt that the case required hospitalization. Until agreed-upon criteria sets are developed, which may be several years down the line, alternative procedures to make determinations for admission certification will need to be developed. Probably the most effective way for review committees and PSROs to deal with this issue would be to ask the physician to add to his admitting note a specific section listing what are, in his opinion, the specific indications for admission and the necessity of the admission. Even
when criteria lists are developed, it is to be expected that in many cases they will never be inclusive enough to accurately reflect all circumstances, signs, or symptoms which the physicians might feel necessitated hospital admission. Thus, the addition of a section on indication for admission to the standard admitting note, which includes the present illness, past history, physical exam, lab findings and diagnoses, may become an important standard part of the admitting medical record documentation.

Additionally, for the continued-stay review process, it might be worthwhile to include a second additional section which details the physician's opinion of what would represent the indications for discharge of the patient. This may be particularly important for the highly judgmental therapeutic admissions, such as those often occurring in psychiatry and rehabilitation medicine, where without clear prospective statements about what would represent appropriate end points of hospital care, there will continue to be many battles over the need for approval of extension of stay in the hospital. If PSROs are here to stay with requirements such as admission certification, continued stay review, and medical care evaluation studies, then significant changes will be required during the next decade or two in the record keeping procedures and in the type of information included in the medical record. Medical educators may have to dust off and revise their manuals for students and house officers on what constitutes an appropriate admission write-up and appropriate set of progress notes, so that this type of record keeping to meet third-party regulatory requirements will become second nature to future physicians.
The Role of the Surgical Nurse Practitioner in Early Discharge
Chester Rosoff

Chester Rosoff: The period spent in the hospital by a patient prior to an operation is influenced by a variety of factors, most of which are not controlled by the surgeon. In contrast, the length of stay after surgery is almost entirely his responsibility. It reflects his estimate of the rate of recovery of the patient and is influenced by his experience, local custom, and by the attitudes and needs of the patient and his family. The duration of hospitalization is an arbitrary decision which is supported by physiological data and objective observations only in part. With the growing awareness of the sharply rising costs of illness, the public and the profession appear to be more receptive to the development of new patterns of care which promise greater efficiencies while remaining sensitive to the needs of the patient. We have, therefore, designed a study to evaluate the feasibility of discharging surgical patients earlier than is customary to continue convalescence in the home environment under the supervision of a nurse with special surgical skills.

Our goals were to improve patient care and the quality of the postoperative recovery, and to speed the patient’s return to his usual activities. The expectation was that costs would be reduced and the utilization of hospital services made more efficient. Further, a new role was designed for the nurse; she was expected to assume many of the responsibilities for patient care which in the past required the presence of the surgeon.

The patients included in the study lived within a 20-minute-drive of the hospital. Initially, only those with nonanastomotic surgery were selected, but as experience developed, the spectrum of diagnoses and operations considered suitable for the study was broadened. In all instances, the pur-
PERSPECTIVES ON HEALTH POLICY

pose and mechanics of the study were explained to the patient, and consent obtained. In order to provide the supervision necessary, an experienced nurse was instructed in the skills of history-taking and physical diagnosis, and taught to recognize the elements of both normal and abnormal recovery following operation. She made daily rounds with the surgeons and became familiar with the problems of the patient both before and after operation. When surgeon, nurse, and patient were satisfied that the convalescence was progressing uneventfully, the patient was sent home. The nurse then made daily home visits during the interval between the early and the usual discharge dates. At the time of these visits, she evaluated the patient’s emotional and physical status, answered questions, and offered suggestions regarding medication, diet and activity. She reported her observations to the responsible surgeon so that any changes in the original plan for care could be made if necessary.

Data for the control group were derived from matched but not randomized patients. The first patient with the same diagnosis and operation whose name preceded the studied patient’s entry in the operating room register was chosen provided that the postoperative course of that patient was entirely uncomplicated.

In order to make this program work, education of all those involved is essential: the patient, the hospital staff as a whole, the physicians participating, and, at a different level, the third-party payors.

The age distributions of the control and early discharge groups were essentially the same, with no significant difference between groups.

<table>
<thead>
<tr>
<th>OPERATION</th>
<th>PAS</th>
<th>B.C.</th>
<th>CONTROL</th>
<th>STUDY</th>
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</thead>
<tbody>
<tr>
<td>Cholecystectomy</td>
<td>12.6</td>
<td>7.3</td>
<td>4.5</td>
<td></td>
</tr>
<tr>
<td>Appendectomy</td>
<td>7.6</td>
<td>6.6</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Thyroidectomy</td>
<td>8.3</td>
<td>4.4</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Vein strip</td>
<td>8.2</td>
<td>3.7</td>
<td>2.0</td>
<td></td>
</tr>
<tr>
<td>Herniorrhaphy</td>
<td>7.3</td>
<td>4.1</td>
<td>2.2</td>
<td></td>
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</table>

Table 1: Hospital stay, in days

Duration of stay for some of the more frequently performed operations is listed in Table 1. In the first column are the PAS and Blue Cross duration-of-stay figures. The average usual stay for cholecystectomy was 12.6 days; our control group stayed 7.3 days, and our study group 4.5 days. The same trend is apparent for each of the other listed operations.
Some interesting changes appeared during the study. Blue Cross reported that there was a continuing small but definite decrease in hospital stay for surgical patients. Within our own hospital, there has been a sizeable decrease in the stay of the control group. Despite this, hospitalization for the study group remains considerably shorter. We believe that, due to the observations of the staff that study patients do go home early and progress well, our study has had an overall influence on length of stay in the hospital. They realize that there is no need for patients to stay as long as they traditionally have in the hospital following an operation. We must not minimize the influence of the resident staff in this change. After they have repeatedly seen cholecystectomies go home after four days in hospital and then come across a nonstudy patient who has been in hospital seven or eight days, they question the need for this routine. As a result of the study, we are motivated to discharge patients early, while the average surgeon is not so concerned. It is difficult to persuade surgeons to change their routines and to make clear to them why practices which have been satisfactory in the past may now be deserving of revision. In our hospital, the occupancy rate is above 94 per cent, higher than the 89 per cent the administration feels is optimal. In such a situation, the effects of a short-stay program should be welcome.

In the first 300 patients, 151 were short-stay patients. Hospitalization for this group was 495 days; in contrast, the stay for the control group was 843 days.

<table>
<thead>
<tr>
<th>TOTAL STAY, IN DAYS</th>
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<tbody>
<tr>
<td>Study</td>
</tr>
<tr>
<td>Controls</td>
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</table>

\[ t = 6.23; \ p < 0.001 \]

Table 2: Results at one year, Surgical Early Discharge Program

A reduction in postoperative stay of 348 days, or 41 per cent, was accomplished. This represents a savings of 2.3 days per patient. There were eight complications, of which three required readmission. One patient had
chest pain on the contralateral side following a thoracotomy. The patient was thought to have had a pulmonary embolus, but diagnostic studies in hospital did not confirm that diagnosis, and the patient was discharged. One patient developed cholangitis after a secondary repair of a common duct. A third patient was admitted for fever after herniorrhaphy, but the cause of the fever was never explained. Five of the complications were mild urinary tract infections or wound infections.

Patients' acceptance of the program has been excellent. Initially we sent questionnaires to all of the patients, and I am reporting here on the first 116 questionnaires. They were sent out after one month, and returned by the patients to a third party in hopes that they would be frank in their responses. There was no answer from seven; ten patients were unenthusiastic; nine responded that they would have liked to stay one more day; and ninety felt that early discharge was a really good idea.

Patients who had had operations in the past required lengthy explanations and encouragement to secure their cooperation in the study. This was in contrast to those for whom an operation was a new experience. It was not unusual for an experienced patient to question the surgeon carefully, seeking reassurance that the operation had in fact been carried out as promised. We've referred to this as the "hairdresser syndrome." Often, after operation and a short stay, one of the first things women want to do is have their hair done. The hairdresser then tells the patient that when he had his operation, hospitalization was longer; this raises doubts in the patient's mind. The patient then returns to her physician, and the physician to the surgeon, seeking reassurance that the operation had really been performed as promised. How do we educate the public so that they accept such a change in practices?

The emotional responses of the patient and his family to early discharge followed a recurring pattern. There was initial skepticism on the part of the patient, which gradually changed to acceptance as the postoperative stay followed a predicted course. The day of discharge and the first day thereafter were often marked by some degree of anxiety. But as the nurse assumed an active supervisory role during her visits, confidence and satisfaction rapidly developed. The importance of the patient's identification with the nurse practitioner cannot be overemphasized. She had become a familiar and reassuring figure to the patient while in the hospital, and she quickly assumed the role of the principal professional figure once the patient was at home. It was from her that the patient received the guidance and support necessary to relieve concerns.
In the first year of the program, during which time we had to educate the nurse in this type of care, the reduction in hospital stay represented a savings of $43,500. The cost of the program was $20,000, but the potential savings as a result of the efforts of a fully utilized nurse practitioner would be three to four times as great. "Fully utilized" in our terms means that she would make five home visits a day in addition to her rounds in the hospital. In spite of the study nature of the program, we were "in the black" from the very beginning.

These experiences have persuaded us that the duration of hospitalization after operation can indeed be safely shortened, that patients are not at risk when encouraged to convalesce in their own homes, and that a program such as this one can be well received by patient and family. It requires the skills of a nurse educated in the care of surgical patients and offers her uncommon responsibilities and professional rewards when she takes on duties ordinarily reserved for the surgeon and which have traditionally called for his presence.

What we have learned in this study need not be limited to the postoperative surgical patient. Many of the clinical units in the hospital could benefit by developing a similar approach to care, modified as necessary to meet their own special needs. As a consequence, hospital beds would become available to those who need them, and the emphasis placed on acquiring new beds would shift to better employment of those we now have. The savings in capital costs and in expenses incurred by the patient would be great. When our institutions and practices are able to respond effectively to new approaches to providing acute hospital care, real economies will result. What with day rates now well above $100 per day almost everywhere, shortening the stay of the 15 million or more surgical admissions that take place each year in U.S. hospitals should have a major impact on the cost of providing care. As we identify the areas where we can cut costs, a restructuring of the number, type, and size of hospitals will eventually result and the patterns for providing for the ill will certainly change for the better. And so, an early discharge program, which initially concerned itself with shortening the hospital stay for postoperative patients, not only has shown that such an approach is valid, but it has also defined a new area of responsibility for the nurse and helped to stimulate a re-assessment

### Table 3: Savings, Surgical Early Discharge Program

<table>
<thead>
<tr>
<th>SAVINGS</th>
<th>$ 43,500</th>
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<tbody>
<tr>
<td>COSTS</td>
<td>$ 20,000</td>
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<tr>
<td>POTENTIAL SAVINGS PER NURSE</td>
<td>$135,000</td>
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</tbody>
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...
of the manner in which institutions and their staffs take care of those who require hospitalization.
Preadmission Certification for Hysterectomy

George M. Ryan Jr.

Hechtman: The problem that we have to face with preadmission certification is basically one of definition of need. The next two speakers will bring this to bear.

Dr. George Ryan, who is an obstetrician and gynecologist at Harvard, will address the problem of criteria for hysterectomy.

George M. Ryan Jr.: Hysterectomy is one of the most common operations performed in the United States today. It was estimated that in 1971, 678,000 hysterectomies were performed. Of the major operations, only appendectomy is performed more frequently. By comparison, though, the mortality per 10,000 patients shows hysterectomy (16.4) to be less than half the mortality of appendectomy (37.9) and less than one-eighth the mortality of cholecystectomy (141.7) (Table 1).1

It seems logical to assume that the low mortality rate allows the physician to consider the operation as an appropriate method of management for less than life-or-death situations. An example would be in the use of hysterectomy for the purpose of sterilization. This type of use of hysterectomy is encouraged, too, by the policies of some third parties that require much documentation of the reasons for any sterilization, but accept without question a hysterectomy done for a wide variety of reasons.

California Blue Shield reported that in the first six months of 1970, hysterectomies increased 79 per cent over the same period in 1969. This was only one element in "an explosive increase in the utilization of services".2
The increased numbers of hysterectomies still leave unanswered the question of the quality of that care. The "Trussell Report" in 1962 was an analysis of the quality of care received by members of the Teamsters’ Union in New York State. One physician reviewed 60 hysterectomies and concluded that the surgery performed on 20 of these patients was either questionable or unnecessary. Obviously, the small number of cases and the possibility of personal bias casts doubt upon the validity of such a study. A second study of hysterectomy in New York in 1963 utilized five independent physicians to review 504 cases and 89.7 per cent were found to be satisfactory, 7.1 per cent questionable, and 3.2 per cent unacceptable. These studies point up the difficulties of retrospective review in determining the quality of care given as well as influencing the quality of care in the future. Clearly, a systems approach is needed and establishment of criteria for pre-admission certification is only one element in such an approach. Table 2 outlines such a suggested system.

Now, how does this system work in the case of hysterectomy?

First, the broad goal could be established of assuring that only those patients needing hysterectomy as the appropriate treatment for their problem undergo the operation. The specific objectives of preadmission certification for any elective surgery are to reduce the incidence of that surgery to those cases in which it is indicated, and to ascertain that the decision as to surgery has been reached as the result of proper analysis of an adequate data base.

Once these objectives have been specifically defined, then performance criteria can be established. These criteria would include the usual indications for hospital admission, the diagnostic and therapeutic procedures usually performed or provided, supplementary procedures consistent with the diagnosis, and may define the duration of hospitalization and the in-

<table>
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<tr>
<th>HYSTERECTOMY</th>
<th>APPENDECTOMY</th>
<th>CHOLECYSTECTOMY</th>
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<tbody>
<tr>
<td>Mortality per 10,000 patients</td>
<td>16.4</td>
<td>37.9</td>
</tr>
<tr>
<td>Average length of stay</td>
<td>10.3 days</td>
<td>6.9 days</td>
</tr>
<tr>
<td>Percent given transfusions</td>
<td>15%</td>
<td>1%</td>
</tr>
<tr>
<td>Percent given antibiotics</td>
<td>48%</td>
<td>45%</td>
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Table 1: Other Operations (Significant differences, $P < 0.001$)
Table 2: A systems approach


Establishment of criteria must be followed by development of a process for the measurement of performance and outcome, implementation of this process, analysis of the data, and finally the matching of objectives to outcomes. On the basis of this matching, a feedback loop should be established to continually update the goals, objectives and criteria.

We must not overlook the fact that such guidelines constitute a broad outline of what may be considered normal or usual services and that their greatest use is to assist in the overall review and classification of a larger number of cases. They are not standards for care, since standards change and herein lies the importance of the feedback loop. In addition, they may not be applicable to a given case since special circumstances may warrant additions to, or omissions from, the performance criteria. If a review of the reasons for such deviations is deemed necessary, “it should be conducted by physicians qualified by training and experience to evaluate the need for such services”.

Only in this way can we continually emphasize the “quality of care” in such a review process and avoid placement of the sole emphasis on the economics of that care.
A. Tumors, of 12 to 15 cm or more in diameter (size of three months pregnancy or larger), even though asymptomatic.
B. The tumor, or tumors, causing pain or discomfort to the extent that it interferes with the usual activities of the patient.
C. Abnormal uterine bleeding causally related to the tumors.
D. Rapid increase in the size of the tumors.
E. Difficulty in differentiating a solid pelvic tumor as uterine or as adnexal in origin.
F. Pedunculated leiomyoma, especially submucous (for myomectomy).
G. Habitual abortion associated with a leiomyoma of the uterus (for myomectomy).
H. Intraligamentous leiomyoma.

Table 3: Usual indications for admission

<table>
<thead>
<tr>
<th>A. Diagnostic:</th>
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<tbody>
<tr>
<td>1. Pertinent history with specific reference to menstrual, obstetric, gastrointestinal, genitourinary and pelvic symptoms.</td>
</tr>
<tr>
<td>2. Physical examination with specific description of pelvic findings including the size and the location of the leiomyomas.</td>
</tr>
<tr>
<td>3. Laboratory studies:</td>
</tr>
<tr>
<td>a. CBC (or Hgb. or Hct., WBC and differential).</td>
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<tr>
<td>b. Urinalysis.</td>
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<tr>
<td>c. Pap smear within the previous six months.</td>
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<table>
<thead>
<tr>
<th>B. Therapeutic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Operating room.</td>
</tr>
<tr>
<td>2. Anesthesia.</td>
</tr>
</tbody>
</table>

Table 4: Procedures usually performed or provided
A. Diagnostic:
1. Pregnancy test.
2. Blood grouping and Rh typing.
5. Follow-up hematology studies.
7. Electrocardiogram.
10. Intravenous pyelogram.
11. Cystoscopy with, or without, retrograde pyelograms.

B. Therapeutic:
1. I.V. fluids.
2. Blood transfusions.
3. Antibacterials.
4. Examination under anesthesia.
5. Dilation and curettage of uterus.
6. Biopsies and frozen sections as indicated.
7. Myomectomy, if preservation of childbearing function is desired.
8. Hysterectomy.
9. Incidental appendectomy.

Table 5: Supplemental procedures consistent with the diagnosis may be used
A. Usually Expected Stay:
1. D and C as a separate procedure: up to two days postoperative.
2. If D and C associated with hysterectomy and performed at the same operation: up to nine days postoperative.
3. If Myomectomy (abdominal operation): up to nine days postoperative.
4. If hysterectomy: up to nine days postoperative.

B. Contingencies which may extend the hospitalization:
1. Age (60 or over).
2. Debility.
3. Other diagnoses.
4. Operative injury of adjacent viscera.
5. Hemorrhage.
6. Infection.
7. Dehiscence.
8. If patient's residence is outside the hospital community, satisfactory patient care may require additional hospitalization for two to three days.

Table 6: Duration of hospitalization

A. Absence of contingencies.
B. Satisfactory healing of incision.
C. Availability of care at home or convalescent nursing facility.

Table 7: Indications for Discharge

References
Timing of Operation in Acute Cholecystitis: A View from the Perspective of PSRO

Grant V. Rodkey

Hechtman: Dr. Rodkey, our final speaker of the afternoon, is a Harvard Medical School graduate, did his residency at Massachusetts General Hospital, and subsequently has a distinguished record for professional surgical service in this city. I've known Dr. Rodkey since the time I was a student, and I certainly admire his abilities and expertise. He is currently the chairman of the board of directors of Blue Shield and, therefore, encompasses a wide spectrum of responsibilities.

Grant V. Rodkey: In the context of PSRO or management systems or monitoring of professional performance, we assume often a degree of scientific settlement of problems which does not in fact exist, and we also perhaps overlook something of the biologic variation that is inherent in the patient's behavior, to say nothing of psychologic variation. It is quite evident that the planners of this afternoon's discussion had in mind choosing some of the procedures which account for major fractions of costs for hospitalization. Hysterectomy is a common procedure, as you've been told. Cholecystectomy ranks close behind. The total economic impact of those illnesses on our population is significant. I was somewhat at a loss to know how to approach this subject since I think that there is little argument about the admission certification or preadmission certification or postadmission certification of a patient who has demonstrated gallstones and who wholeheartedly consents to his doctor's recommendation that he ought to go into the hospital sometime to have them removed. Short of out-and-out rationing of health care resources, I see no way where an admission certification of someone who has demonstrated gallstones can really be quarreled with by a physician of that institution or another in-
stitution; it’s quite objective. That particular part of the problem I want to assume as a given. The question then is, “What about acute cholecystitis?” How should that be managed in terms of economic responsibility? In order to illustrate the difficulties of the problem, I have made something of a scientific analysis of the history of this problem and the thinking that has brought us to the point where we now are in dealing with acute cholecystitis.

The safety and effectiveness of early or delayed operation in cases with acute cholecystitis have been subjects of intensive study and debate during the last four decades. Prior to that period severe limitations were imposed upon surgeons by their inability to restore fluid and electrolyte balance, to control infection, to provide safe and effective anesthesia, and even to procure adequate operating room lighting. These conditions resulted in the general acceptance of the principle that the patient with acute cholecystitis could be more safely managed by allowing the acute inflammatory response to subside spontaneously with later elective cholecystectomy.1 This plan of management has been generally accepted in Great Britain where it remains the standard program. Advantages cited by its proponents include the assurance of full and accurate preoperative diagnosis, optimum preparation of the patient for operation, and minimum increase in technical hazards secondary to tissue changes induced by inflammation. It is recognized that approximately 15 per cent of the acute cases will have progressive changes leading to perforation, and will require operation during the initial attack. One of the most recent and lucid expositions of this concept was published by duPlessis and Jersky in 1973.2

In the United States a somewhat more impatient view of the problem began to be proposed as early as 1930. Dr. Richard Miller of the Massachusetts General Hospital, troubled by three cases of death or severe complications secondary to delay in operation, did a retrospective analysis of 200 consecutive cases of acute cholecystitis. Among those who died (13.5 per cent), he found that the average period from onset to operation was 15.0 days, while the survivors were operated upon within 8.3 days. These results led him to postulate the question: “Given a case of acute cholecystitis, why should I not operate now?”3 Additional support for this concept was provided by Graham who studied 198 consecutive cases at Methodist Hospital in Brooklyn. Among the 20 cases operated upon within 48 hours of onset, he found the following advantages:

1. Lower mortality
2. Operations were simple
3. Fewer postoperative complications
4. Shorter hospital stay (average 19.5 days vs. 26.4 days)
5. Required few dressings
6. No wound dehiscences (vs. five among delayed group)
7. Cost to the patient was low

From a study of 415 patients with acute cholecystitis treated at the Massachusetts General Hospital during the period 1930-1940, Wallace and Allen found the mortality rate to be 6.06 per cent as compared to a rate of 1.74 per cent for cases of chronic cholecystitis operated during the same decade. Among the cases with acute cholecystitis 29.4 per cent had gangrene and half of these had perforation at the time of operation. However, in cases operated within four days from onset of illness, gangrene was rare (10 cases only) and perforation nonexistent. Only three cases of perforation occurred within six days of onset of illness in this series. The mortality rate among cases of acute cholecystitis operated within four days of onset was only 2.5 per cent. They proposed a plan of management which included expeditious preparation of the patient and operation within four days of onset of the illness.

Subsequently, many other investigators, chiefly American and Swedish, have emphasized the advantages of early versus delayed operation in cases of acute cholecystitis. Of special interest are the careful studies by Edlund and Olsson which correlate the physiological and histological changes in the gallbladder during acute cholecystitis with their effects upon the timing of cholecystectomy. These are characterized by acute inflammation, hemorrhage, necrosis, and massive edema during the first week. Subacute inflammation with necrosis, abscess formation, and inflammatory vascular response mark the second week of illness. During the third and fourth weeks lymphocytes and plasma cells predominate with progressive granulomatous changes and some eosinophilic infiltrate. The fourth week demonstrates the terminal stages of the inflammatory process with thickening and fibrosis which are active until at least the sixth week from onset.

Among all series of operations for acute cholecystitis is a small group of cases in whom cholecystectomy is technically not appropriate, and in whom cholecystostomy must be done as the primary step. This group of patients is among the most seriously ill, and are often aged and debilitated as well. Mortality rates, morbidity and duration of hospital stay are all increased in this group of cases.

In addition to the purely physiological and technical considerations, economic pressures have contributed an added dimension to the study of
early *versus* delayed operation in acute cholecystitis. Thus, van der Linden and Sunzel in a controlled clinical trial using 70 patients in each group found a net savings of eight hospital days per patient when cholecystectomy was done within four days from onset of illness. In addition, loss of time from work was 50 per cent greater in the group in which operation was done at an interval greater than four days from onset. 

Confirmatory results were reported by Edlund, Eldh and Kock, who found that 25 per cent of cases in whom operation was delayed had interval symptoms which were disabling, and that cases with early cholecystectomy had much less total time lost from work. They frankly recognized that social and economic pressures tilt toward early operation.

Grafted upon these clinical studies as a root, the requirements for standardization of practice inherent in the requirement of P. L. 92-603 have caused intense activity among the various professional specialties concerned with the problem of cholecystitis. The American Medical Association’s Task Force on Guidelines of Care has received detailed suggestions from the New York State Medical Society (Surgical Quality Criteria Predictors of Hospital Care), The American Society of Internal Medicine, The American Gastroenterological Association’s *ad hoc* Committee on Patient Care, The American Society for Internal Medicine, and the American College of Surgeons — the last of which are in published form. These collective efforts represent thousands of man-hours and considerable expense devoted in large degree to cost containment with the hope that the resulting criteria may also have some fallout benefit toward improving quality of care. It remains to be seen whether it is possible to fit the care of all patients within any set of guidelines without sacrifice of certain elements of quality in the care of some individuals. Beyond this, the actual impact of the program on cost containment, or the “cost-benefit ratio,” are at this point simply conjectural.

As physician-citizens we have the legal obligation to do our best to implement the requirements of PSRO in an effective and constructive fashion — a position clearly accepted by the majority of physicians in Massachusetts. On the other hand, there are elements in P. L. 92-603 which seem inimical to the public interest. It is our obligation as citizens to identify such areas and to work for legislative amendment.

For 20 centuries physicians have observed the wisdom of Celsus — and their patients have been the enormous beneficiaries — when he advised “Primum non Nocere” (“First, Do No Harm”). Let us hope that our government will join us in accepting that guideline as the first maxim in administration of PSRO regulation.
References


15. Celsus, A. C.: "Primum non Nocere", *De Medicina.*
Hechtman: There are some questions that have been raised as a result of the discussions this afternoon, and the first is directed to Dr. Gertman. "With the lack of managerial information systems for medicine and with the complexities of PSRO, do you envision the success of PSRO or some other governmental system of review?"

Gertman: I think the most important thing is not that the procedure is complex, but whether people will cooperate. Quite frankly, if it's done with good will, no matter how difficult the management problems are, I think it will succeed to a certain degree. No matter how effective a management system, if doctors, patients and insurers won't cooperate, the management system will not do any good. I think that cooperation is the basic issue and whether people really want to see this thing succeed or not.

Hechtman: Do you believe that we're being forced to cooperate, or encouraged to cooperate?

Gertman: I think we're being forced. But we should have done it long ago within the profession before it became necessary to have the government come along to push us to do it. Now any type of change that we would want to make for the better is always looked on as a "cop-out" or as shirking our responsibilities.

Hechtman: Dr. Rosoff, perhaps you might comment upon what the attitudes are of other professionals at the Beth Israel regarding early discharge, and what some of your motivations were to do this study.
Rosoff: Well, to be quite honest about it, our initial motivation was economic. As I think you mentioned, I do work with the Harvard Community Health Plan, and we're trying to control costs as well as develop new patterns of care. Once we were into the program, it quickly became obvious that it was better for the patient. We have some built-in incentives at the Beth Israel to get the patients home early, or at least to make them accept the program with good grace — we serve lukewarm coffee and not very good food, there is a constant din from the new construction — and these things together make rest in the hospital rather difficult. When you then tell patients, "We think you're doing nicely, and wouldn't you like to go home?" They say, "You bet!" And they go.

There have been a number of interesting reactions, if I may mention them. First, other nurses are interested in the program and would like to participate because they view this as an extension of their skills. I think many nurses do not feel that their professional capabilities are being fully utilized, and this is one possible area where they can do more and take more responsibility than they have traditionally been given. The second, and perhaps more critical area, is physician acceptance. We have not been exactly overwhelmed by other surgeons wanting to put patients on the early discharge program. By and large, they're very satisfied with their standard methods of handling patients. Some of the younger surgeons, however, have cooperated, and some of the other younger surgeons who have not referred us patients have at least taken the point of view that "if you can do it, we can do it." That, of course, is a hidden benefit. I think that there are problems and there are many issues which could be discussed at length.

Hechtman: Dr. Ryan, what in your opinion is the reason for the rapid increase in the number of hysterectomies? Do you think that the increased time available now to obstetricians and gynecologists as a result of the declining birth rate might lead to increased utilization of the service of hysterectomy? Or, indeed, has the incidence of gynecologic disease risen?

Ryan: I guess you're asking, "Do we have all of this excess energy because we're not up as much at night now and we have to fill up the days with things to do?" I think that there are, as I implied earlier, perhaps a lot of reasons why there is an increase in the number of hysterectomies being done. There is now, as you know, a much more liberalized attitude toward some of the indications for hysterectomy. I alluded earlier to the fact that hysterectomy has been proposed by many individuals as a perfectly acceptable mode of sterilization. Hysterectomy has also been considered as
preventive medicine in the truest sense since carcinoma of the uterus is the second most common site of carcinoma in women, and I think there is some logic to that philosophy. We are seeing much more demand for these types of services from women who, in years gone past, would probably have sat quietly and waited for the menopause with no demands that something be done to eliminate their current problem and difficulties. And finally, I'm not sure that there is such a huge increase. I reported the California experience, which indicates an explosive increase in California, but after talking to the people at Blue Cross here in Massachusetts and reviewing the last three years' figures, I find that there is no increase here in Massachusetts.

Hechtman: Was that change due to a true increase or were they relabelling sterilizations as hysterectomies?

Ryan: That's a good question and one to which I don't know the answer in terms of the California experience. Hysterectomy was just one item included in the whole spectrum of services that went up tremendously in California between 1969 and 1970 with the advent of certain programs.

Hechtman: Let me just make one comment on that. The statisticians interested in incidence rates and death rates from uterine carcinoma have been puzzled for years by the falling curves. It is now estimated that 25 per cent of women who reach the age of 50 in the United States have had a hysterectomy; this could account for those falling death rates from uterine carcinoma. So when you start economizing by controlling medical or surgical services, you ought also to be aware of the fact that there may be certain hidden benefits that are not immediately apparent.

Ryan: Pertaining to Dr. Rodkey's topic, the removal of a gall bladder for silent gallstones, I think everyone would agree, is acceptable, and that in my estimation is preventive medicine. What we're trying to do is to prevent the disaster from occurring later. I think hysterectomy may well fall into that category, also. In my outline of the process involved in developing a system, I would greatly emphasize the importance of that feedback curve. What we think is quality care today certainly may change, and that feedback curve, matching outcomes with goals, is extremely important in any continuing process of preadmission certification or setting up of criteria.

Hechtman: Dr. Rodkey, here is a question that pertains to the incidence
of cholecystectomies. Perhaps you could comment upon whether all patients with silent gallstones should have cholecystectomies. Why are there fewer cholecystectomies in England than in the United States, as reported by Dr. Bunker in the *New England Journal of Medicine*? And, do you think that stricter criteria enforced by PSROs will drop the U.S. rate?

Rodkey: Well, that's a very complex question, and I'm sure I can't answer it satisfactorily. In any group of patients who have come down with acute cholecystitis and who have been hospitalized and allowed to recover spontaneously and then to go home, there is an irreducible minimum group who is going to feel very reluctant about going back in hospital on an interim or elective basis to be operated upon. And a certain number of those patients, and it turns out to be perhaps at least a third, will eventually have to be operated on by reason of acute severe attacks. Another fraction will have intermittent attacks that are to a degree disabling and take them away from their work at least temporarily. But a certain fraction of them will escape and never return to the surgeon's knife. That's one reason why cholecystectomies may be fewer. I'm really not aware of the exact incidence of gallstones in England as compared to the United States, and that is another. There is certainly a rationing effect in England, and we don't have that really in this country. If a man wants his operation in this country and can find the money or third party payment, he can almost always find a surgeon who is willing and a hospital that will accept him. That isn't so in England; it's a much more difficult and complicated affair.

Another factor has to do with the attitudes of physicians. I believe that medical men in this country believe by and large that gallstones are a significant hazard to people, and if the patient does not have severe systemic disease that contraindicates an operation, then they're apt to refer that patient to a surgeon. In England, I think the reverse is the case: They say if it is not bothering the patient, forget it.

Gertman: I think there is an important point to consider about some of the recent studies comparing differences and also mortality rates. By only looking at operative mortality rates and rates of surgery in different populations, particularly in England, they fail to follow up the population and pick up morbidity and also mortality, which may be related to gall bladder disease but is not diagnosed; i.e., if a patient has a ruptured gall bladder and goes into septic shock a year later, it may be put down as a cardiorespiratory arrest on the death certificate and never be counted as a death due to gall bladder disease. There are other problems, such as
development of pancreatitis. If you only count deaths in those people immediately not operated on versus those operated on, you're not giving a fair shake to the operative class because you're not picking up subsequent problems in the nonoperated cases.

Hechtman: The difficulty is with gathering statistics regarding outcome. Another question is, "Does the Harvard Community Health Plan have any information regarding cholecystectomies and utilization of the cholecystectomy as a form of treatment of asymptomatic or silent gallstones?"

Rosoff: We do not have long-term statistics. In general, the policy there is that people with symptomatic gallstones should have their gall bladders removed. People with totally asymptomatic stones — patients who have gallstones that are picked up incidentally and who are free of symptoms — are not encouraged to have operations.

Hechtman: Let me ask Dr. Rosoff another question: "What were the major physician attitudinal barriers to the extension of your program, if any? Will you train another surgical nurse practitioner when this present one leaves? And finally, will third-party payors support the services of this nurse practitioner?"

Rosoff: I think I touched on the attitudes of other surgeons in the hospital. Unless there is a good reason for surgeons to want more beds to be available more quickly, there is no great rush on the part of surgeons to join in programs that will get patients out of the hospital earlier. But I have to qualify that at once and say that the experience in Massachusetts and other areas of the United States has shown that there has been a shortening of postoperative stay all across the board. That is, surgeons are keeping their patients in hospital for shorter periods of time, and from the physiological point of view there is good reason to do that. Wounds don't get stronger in hospital, and if the patient is doing well he may as well be at home as in the hospital.

The matter of support is something else. Blue Cross and the Tri-State Regional Medical Program were good enough to support my activities as a study project initially. They have now accepted our conclusions as valid; their auditors have gone over our figures innumerable times; and they believe that programs of this sort should indeed be replicated but that they should be paid for by including the costs in the ambulatory care programs of hospitals. This, again, is difficult because if that nurse is not fully utilized, the cost per visit will skyrocket and they will not pay these costs.
Similarly, if the nurse were fully utilized, the savings would be self-evident. The problem, then boils down to how to persuade the patient to go home earlier and the surgeon to send the patient home earlier. And I really don’t know the answer to that; I think that’s probably the most difficult aspect of the whole effort. And, yes, we would love to train more nurses if we had the money.

Hechtman: What qualifications did the nurse practitioner have?

Rosoff: The nurse that we trained was a general medical nurse who had worked in cardiac intensive care units and did not know a great deal about surgery except what she had learned in the course of her student days. What we did was bring her into the surgical service activities and give her additional skills. Within about two months she was comfortable seeing patients, and I would say that within about three months she was able to do pretty much what we hoped she would accomplish. I don’t think a nurse need be a “surgical nurse,” or an operating room nurse, or any other such thing in order to pick up these skills. I think what she really needs to be is intelligent, well-educated in general nursing, and well-motivated.

Hechtman: Will the nurse practitioner require a special degree?

Rosoff: Nurse practitioners will soon be licensed if not already licensed. I think that answers the question in the sense that outside influences are really governing here. However, I think that she can be any good nurse within a hospital who is willing to take on additional responsibilities and is suitably prepared for them.

Rodkey: I would like to support Dr. Rosoff’s thrust that hospital stay — postsurgical — can be significantly diminished in many cases, and I have had some experience with this over the course of quite a good many years. In fact, my own postsurgical stays are very close to the figures that Dr. Rosoff has shown. But I have done this without a nurse practitioner, and I would urge him to run a study to see what happens without the nurse practitioner. It requires preparation of the patient and the family, a little educational support beforehand, and the physician should be available for telephone conferences afterwards. If you’re dealing with people who are not able to be cooperative or instructed in their own care, no doubt it can be extended with the use of a nurse practitioner. But I’d like to support the concept; I’m sure it’s valid.
Ryan: I have a question I'd also like to ask Dr. Rosoff about third party coverage for this kind of service. He implied that the answer was that ambulatory services should have this built into their budgets. To a director of ambulatory services, the first question which immediately comes to mind is, "What sort of control are we going to have on the utilization of personnel of this type and in this fashion?" What is to keep the physician from keeping his patients the same number of days as he usually keeps them and then utilizing the nurse for a little extra therapy after she goes home, or keeping them perhaps longer and still utilizing the nurse when she goes home? What sort of peer review mechanism can be established to make sure that the utilization of these services is appropriate? Has your program addressed itself to this, or are we too early in the program really?

Rosoff: We have not addressed ourselves to this, and I cannot give you a really satisfactory answer. I was merely passing along the suggestion that Blue Cross had made, which was that since they are willing to pay for service given by ambulatory care units, home care, and now early discharge, that would be the appropriate mechanism by which they could continue to support efforts to shorten hospital stay. As to how to prevent people from taking advantage of it, this becomes very complex.

Ryan: Let's say I've just put on my hat as the administrator and director of an ambulatory service, and you've just said that I'm going to have to pay for things. Just like the federal government, when you tell me I'm going to have to pay for something, I want to know what I'm buying and what sort of control I have over its utilization.

Rosoff: You're not going to have to pay for it. If Blue Cross follows through on their suggestion, they will reimburse you just as they would reimburse your unit for other services.

Ryan: My budget has to be justified to the hospital administrators. I have to have some idea of what it is going to cost me.

Gertman: I think one potential way to go, a variant of the HMOs, would be to set for common surgical procedures a fixed total price for the patient's care which would combine the hospital bill, physician, and whatever resources the hospital and physicians wanted to work out. For example, let's say $2500 is set for cholecystectomy (I picked that figure out of the air), and you can use surgeons, extra lab tests, home care, etc.; we're going to pay you $2500 for the pre-op, post-op, and operative care
of this patient. And if you train a high school girl and you’ve got an outside quality review system to look at this patient’s care and what you did, you can use any combination of resources that you wish. Possibly it can be done for $1500, and the hospital and the doctors split the remaining $1000. This, of course, is similar to the HMO concept, but HMOs require taking a total actuarial risk for all care. With certain surgical procedures, however, particularly common surgical ones, I think you can define an average experience — there are those done frequently enough that they shouldn’t have to go to total health care reimbursement systems. Instead, we could start taking a look at those pieces where one can clearly define and measure what needs to be done and what are the average cost experiences, to try to get some cost control in that area. It’s basically been all or nothing — all fee-for-service with the different units being paid separately or all through one plan. We may be able to develop variance in between.

Hechtman: So, it seems we’re going to have financial encouragement to move along in the cost and quantity control direction. No one yet has told us about how we’re going to get quality control; maybe that will be another day’s symposium.