THE DEFENSIVE PRACTICE OF MEDICINE
Myth or Reality

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Serious concern about medical malpractice is evident and the interest in it is increasing. It is not only being discussed in the medical and legal journals, it has also made its way into the popular media. Among the titans of medicine upon whom millions of Americans focus their attention, even Dr. Marcus Welby has had to defend his performance in a malpractice action. Medical malpractice is good theater and none of the television series dealing with medical practice has failed to use it as a subject.

Practically every member of the public has been a recipient of medical service, at one time or another, and has been exposed to the risk of poor medical performance. However, to some, medical malpractice is of particular interest. Not only physicians and attorneys, but the insurance industry, hospital administrators, nurses and other health personnel who work closely with the physicians follow the subject, because in most malpractice actions the plaintiff sues his physician in addition to others concerned with his care.

The concern of the public and of those particularly involved with malpractice questions has stimulated governmental activity. In 1969 the Senate Subcommittee on Executive Reorganization, chaired by Senator Abraham Ribicoff, published a study report of more than one thousand pages.[1] It consists of

responses to questions, solicited by the Subcommittee from health-care provider associations, insurance companies, lawyers and the Department of Health, Education, and Welfare. Basically, the questions of the Senate Subcommittee were designed to discover whether the malpractice climate was an indication of the quality of medical care in general, and whether the malpractice situation could shed light on other health care problems. The report also contains an introductory statement by Senator Ribicoff wherein he draws some basic conclusions from the study.

The Secretary of the Department of Health, Education, and Welfare, pursuant to a Presidential directive, appointed a Commission on Medical Malpractice in mid-1971. Among the functions assigned to the Commission are identification and evaluation of the fundamental and contributing causes leading to malpractice claims. The Commission is also charged with making recommendations to ameliorate the problems that are identified.

Each issue of two popular publications often read by many physicians, *Medical Economics* and the *Journal of the American Medical Association,* contains a medical-legal section that warns physicians of the pitfalls in patient care that may bring them into the arena of malpractice litigation. The medical profession is also subject to an almost daily bombardment of what physicians term "throw-aways" from the drug and insurance companies. These items, such as *The Doctor And The Law,* published by The Medical Protective Company, and *The Physician's Legal Brief,* published by Schering Corporation, frequently give the physician hints and reminders on how to avoid a malpractice charge, and indicate how physicians have fared.

The experience of physicians with both the increased amounts they are paying in premiums for malpractice insurance and, in some instances, the difficulty they are encountering in procuring such insurance, brings the malpractice problem home to them. The premium rates for malpractice insurance reflect

the number of claims arising against physicians and the amounts being awarded to plaintiffs in settlements, and in judgments in actions that come to trial. Therefore, as the number of claims and the amounts of recoveries rise, so does the physician's insurance bill. A chart published in *Medical Economics* showed that the rates from 1965 to 1970 increased approximately 300 per cent in three metropolitan areas for most physicians.[2] Although the data show that physicians in some specialties are paying much higher rates than are other physicians, it indicates that physicians in all categories are facing larger malpractice insurance premium bills. As a result of the malpractice insurance problems of its members, the American Medical Association reportedly has entered into an agreement with a commercial insurance company whereby all member-physicians will be insured unless coverage is denied by a local review board; and once a physician has been accepted his coverage cannot be canceled without approval of his medical society.[3] This, of course, might solve the problem of finding an insurer for almost every physician; however, it probably will not solve the cost problem as long as the frequency of claims and the amount of recoveries continue to rise.

Within the context of the evident concern about malpractice, increasing reference is being made to the "defensive practice of medicine." The phrase "defensive practice of medicine," sometimes shortened to "defensive medicine" or "defensive practice," refers to an approach employed by physicians in their patient-care activities, because of their concern about possible liability for malpractice. It has been asserted that "protecting oneself against suits amounts to a major preoccupation among physicians."[4] In the Senate Subcommittee report the phenomenon is described as that of ". . . viewing each patient as a potential malpractice claimant."[5]

WHAT IS THE DEFENSIVE PRACTICE OF MEDICINE?

No single definition can be given for the defensive practice of medicine because it has been used in a variety of ways by

different writers and commentators. However, for the purposes of this report, defensive practice of medicine is defined as poor practice (a deviation from what the physician believes is sound practice and which is generally so regarded) induced by a threat of liability. It occurs in two ways: first, when a test or procedure is performed because the physician fears that if he does not perform it, and the patient has a bad result, some medical expert might testify that it was necessary, and that it would have resulted in the avoidance of the bad result had it been performed; and second, when a test or procedure is not performed because the physician believes that the risk of legal difficulty from a complication arising from the procedure is substantial, although the physician's view is that the patient would be better off if it were performed.

The most frequently-offered example of defensive practice is the skull X-ray of a child who has suffered a fall, with possible head injuries. It has been alleged that the films have little diagnostic value, in that the results of the film will not influence the physician's therapeutic approach in the absence of certain neurological findings; however, some physicians continue to order them, primarily to protect themselves from lawsuits.[6] This is an example of the first type of defensive practice, that of conducting a test or performing a procedure, when the sincere belief of the physician is that the patient's condition does not call for the test or procedure.

There is also the type of defensive practice exemplified by the physician who does not perform a procedure or conduct a test, although the patient is likely to benefit from its performance. Procedures cited in this context are plastic planing among dermatologists and the aortogram among surgeons. Furthermore, articles in the medical literature are warning physicians that they should be very hesitant about adopting any new procedures. One article recommends to the physician that, "[W]hile he should certainly give thought to innovations, he shouldn't go overboard in putting them into practice. In fact, he must approach with caution any course of treatment that

hasn't been documented and adopted successfully by reputable practitioners."[7]

An extreme example of the latter type of defensive practice is illustrated by those physicians who reportedly are "refusing to take the cases they believe will result in a malpractice suit."[8] Here the patient himself, rather than particular procedures, is avoided.

The problem in studying the phenomenon of the defensive practice of medicine is that not all of the practices motivated by liability considerations result in poor-quality medical care. It is, therefore, difficult to draw the line between where good medicine stops and defensive practice begins. The reason apparently is that the techniques employed by physicians who practice good medicine and those who practice defensive medicine often follow similar, if not identical, patterns in many contexts. Thus, it is difficult to distinguish between the steps that are taken in the practice of medicine to minimize legal risks and yet still constitute good medical practice, and those changes in the practice of individual physicians that lower the quality of medical care rendered the public, in the sense that the physician does not follow his best medical judgment.

EFFECTS ON COST AND QUALITY OF MEDICAL CARE

Many assertions are being made regarding the defensive practice of medicine, with considerable emphasis upon the idea that it increases the cost and decreases the quality of medical care.

In his statement to the Senate Subcommittee referred to above, Eli Bernzweig, then Special Assistant for Malpractice Research and Prevention in the Office of the Director of Community Health, United States Department of Health, Education, and Welfare, said that, "To our knowledge no study has yet been undertaken with respect to these matters, but we believe that the additional procedures being ordered are adding significantly to the overall costs of medical care."[9]

One newspaper recently reported, in a series of articles dealing with hospital costs, that "defensive medicine" or unnecessary treatment may be adding an additional ten per cent on hospital bills.[10] However, the author does not indicate the sources for this figure.

The contention of some physicians is that their practices have been adversely affected by the threat of malpractice litigation. On the other hand, it is incontrovertible that the concern about liability risks on the part of physicians produces benefits.[11] The attention given to the results of recent litigation has made some physicians aware of steps they might take to improve the quality of their medical performance. An awareness of the liability problem tends to induce conservatism, caution and care in the conduct of physicians.

EXPLANATION OF THE STUDY

In an attempt to obtain some understanding of the impact of liability considerations upon the practice of physicians, with special reference to the defensive practice of medicine, a small, admittedly unscientific study was undertaken with the cooperation of 17 physicians practicing in the Pittsburgh, Pennsylvania, area. The physicians who participated in the study practice in a variety of medical specialties. None of the physicians is in full-time or geographic full-time relationship with the University of Pittsburgh Medical School. Thus, the surveyed group, with the exception of one physician employed by the Veteran's Administration, consisted of physicians engaged in the private practice of medicine.

The physicians were selected for participation because the author believed, through prior professional and personal contact with them, that they would answer candidly questions concerning their practice and their observations of the performance of other physicians. In no sense is it claimed that they represent any valid sample of the physicians population in the Pittsburgh area or physicians throughout the country. The difficulty in

obtaining physician participation in studies going to the essence of medical practice—that stems from the sensitive nature of the subject, the very tight schedules that physicians with busy practices must maintain and their concern about the confidentiality of information they supply regarding their own practices—is well-known. It is hoped that the information that has been obtained may provide some assistance both in making some impressionistic judgments about the incidence of defensive practice and in constructing a further study of the defensive practice of medicine on a more systematic and scientifically-valid basis.

DATA COLLECTION

Each physician was sent a letter in which a brief description of the phenomenon of defensive practice was furnished, and his cooperation solicited. Interviews were then scheduled with the physicians by telephone. The interviews were conducted by a team consisting of a third-year medical student and a third-year law student. A structured but nonrigid format was employed in the interviews, and all but four interviews were recorded on tape. The interviewers took extensive notes and the tapes were played for review purposes to insure that the notes were accurate; then the tapes were cleared.

The data obtained have been grouped in terms of the following:

1. Influence of liability considerations;
2. Nature and extent of defensive practice;
3. Effect on quality and cost of medical care;
4. Effect on physician-patient relationships.

Influence of Liability Considerations

The responses of the physicians indicated certain inherent difficulties involved in attempting to ascertain the influence of liability considerations upon medical care. Many of the physicians interviewed did not restrict their use of the phrase "de-

fensive medicine" to poorer-quality medical care resulting from concern about liability. Because their use of the term does not always fall within our definition, it is necessary to discuss the influence of liability considerations separately from the influence of the more specific area of defensive medicine.

In an assessment of the influence of liability considerations, it is obvious that the responses of each physician reflect the influences of his specialty training, his own personality and his personal experiences with malpractice. Also, the decision to use or to abjure specific procedures in a particular case depends upon many factors, including prior acquaintance with the patient and expectations of the patient and his family.

The physicians interviewed could not describe precisely the range of good or acceptable practice, or the range of poor medical practice, with regard to the extent of use of particular diagnostic and therapeutic procedures. Furthermore, they indicated that whether particular procedures employed in specific cases are employed because of concern about liability, either conscious or unconscious, or for other reasons, is very difficult to determine.

It is even more difficult to classify medical decisions and practices apparently induced by liability concern as necessarily "good" or "bad" medical care in a given case. Some decisions with regard to diagnostic and therapeutic procedures, motivated by liability considerations, may be, in actuality, good medical practice, or at least so appear to an objective observer. An example of this difficulty was offered by one of the physicians. He was treating a patient for active tuberculosis, and he made arrangements for the patient's family to have periodic chest x-rays over three years. Although this practice was dictated by what he considered his best professional judgment, without concern about liability, the Blue Cross plan representative complained that he had too many normal chest films. He pointed out that an observer of his pattern of practice alone would be unable to evaluate his motives in this instance.

Practices stemming from liability considerations may be

"bad" in that the physician acts differently than his best clinical judgment would call for. However, concern about liability may also have the beneficial effect of inducing maximum conservatism and accuracy in medical performance. An example, although related to convenience rather than liability concern, is that of pediatricians who, in treating patients with sore throats, do not take throat cultures, but proceed as if the patients had streptococcal pharyngitis, and establish the full ten-day penicillin regimen. Optimum treatment would be to take a culture, and then decide the therapeutic course after the results were known. In lieu of this optimum, full penicillin treatment insures the greatest therapeutic accuracy. It would not be "defensive" in terms of this study, even if some might question whether it is, in fact, good practice, because the physicians who use this approach believe it to be good practice. It is obvious, then, that what one physician regards as liability-induced practice, another physician may look on as purely good medical practice without reference to motivation.

Even though the sample was chosen with the idea of guaranteeing maximum candor and honesty in the interviews, it is evident that human nature is such that most physicians would tend to be reluctant to admit that they deviate to any extent from their best professional judgment in their own practices. Typical of the responses is, "I practice good medicine, and that's it." This is not consistent with the idea of defensive medicine. However, most of the physicians interviewed thought that liability considerations have a relatively strong influence on medicine.

The responses of the physicians suggest strongly that many factors are involved in a physician's decision to order a test or procedure. Because such a decision is the cumulative result of many reasons, liability concern plays a supportive role rather than a directly causative one, and it may thus be difficult to assess the relative importance of liability considerations in the overall decision.

Most of the physicians interviewed agreed that there is no question that unnecessary tests and procedures are carried out

that may contribute to the high cost of medical care. However, they gave a number of reasons for this, assigning only a small part of the responsibility to liability concern.

The range of responses from the physicians as to how much their practices are influenced by liability considerations was broad. A few doctors stated unequivocally that liability considerations play no part in their practice; others stated that their presence is felt almost 100 per cent of the time, if not consciously then subconsciously. Seven physicians in the study reported that they do not generally practice defensively, but felt that there are some limited areas wherein they could be accused of not following their best medical judgments because of liability considerations.

It might be expected that each physician's perception of the influence of liability considerations would depend largely upon his prior experiences with malpractice claims and litigation, and the liability risks associated with his medical specialty. Thus, one might assume that a physician who had experienced one or more successful malpractice claims against him would exhibit a greater influence of liability concern in his practice than would a physician with no such experience. Likewise, it is commonly asserted that certain specialties, such as orthopedics and plastic surgery, by nature, have a particularly high risk of possible malpractice actions, whether from high incidence of complications, possibilities of disfigurement or disability or from frequent patient dissatisfaction; certain other medical fields, such as pediatrics, general practice and dermatology, involve a particularly low risk. These factors will be examined separately.

First, with respect to past experiences with malpractice, five of the seventeen physicians interviewed have had malpractice lawsuits brought against them—two obstetricians, a neurosurgeon, an internist and a pediatrician. However, none of these suits has given rise to actual litigation; the suits are either still pending or have been settled out of court. Two other physicians, a cardiologist and a general surgeon, indicated that they

have had at least one "close call," at which time there existed a serious threat of legal action or a substantial expectation that legal action would be brought.

Doctor 106, an obstetrician with 23 years of practice, has had two actions brought against him based on surgical complications from transvaginal tubal ligations. As a result of these experiences, he no longer performs tubal ligations, and he ordinarily turns down patients requesting sterilization procedures. He still believes that sterilization procedures are efficacious and advisable for most patients requesting them, and so his avoidance of these operations, he agrees, evidences defensive practice. He does not believe he routinely practices defensive medicine, however, saying "You can't practice medicine and do that."

These attitudes contrast sharply with those of Doctor 113, an obstetrician with ten years of practice. His group practice has also been involved in two malpractice actions, but he feels that these experiences have had no influence on his practice, although they were responsible for causing an increase in the cost of the group's malpractice insurance. Neither suit involved tubal ligation. He states that he has increased the number of tubal ligations he has performed during the past few years, although aware of the risks of vaginal and transvaginal procedures, and that fear of litigation plays no role in his practice.

Doctor 111, a neurosurgeon with approximately 17 years of practice, has also had two malpractice claims filed against him. He states that, as a result of his experiences, he makes greater use of diagnostic procedures, such as arteriograms, discloses more information to patients, maintains more detailed records and occasionally refuses to accept certain patients. Only the last of these practices may be termed definitely defensive.

The remaining physicians who have had claims brought against them all state that they have not modified their practices at all as a result of their experiences. The general surgeon has even reduced his malpractice insurance coverage in the last few years. His remark, "Good medical practice is your best de-

fense," typifies the statements received from those physicians who, although personally involved with actual or potential litigation, did not believe that their methods of practice have been affected.

The physicians who have had experience with malpractice action feel that they have been the subject of "nuisance claims," and that malpractice was not present. Their attitudes ranged from the philosophical, that a physician has to accept the possibility that he might be sued for a real or fancied poor performance, to bitterness toward the handling of malpractice suits. This latter view was manifested by a statement by one physician to the effect that a lay jury and a lay judge are not qualified to make decisions concerning medical matters, and that liability matters should not be left to laymen.

Most of the physicians who have had no personal experience with malpractice litigation claimed that defensive medicine plays only a small role, if any in their individual practices.

It would appear from the physicians' responses that little correlation can be drawn between their experiences with malpractice and the extent to which liability considerations affect their practices. An almost standard response from the physicians interviewed was essentially, "If the procedure is indicated you do it regardless of the risk." However, some of these same physicians also say that they worry about the patient who appears to fit any of the categories of what they consider a high-risk patient, described variously as paranoid, hysterical and exhibiting other psychoneurotic tendencies; a low socioeconomic background; a demanding or belligerent attitude; or, occasionally, even a new patient. Therefore it would seem that the number of these types of patients the physicians in this group see would have the greatest influence in determining the extent to which liability considerations play a role in their practice.

The majority of the physicians interviewed indicated that they take into account their assessment of a patient's likelihood to sue because of real or imagined wrongs. Several of these physicians, however, emphasized that, even though they may

consider a patient's potential of becoming a possible litigant, they do not vary their treatment accordingly. Several others emphasized that their concern over possible patient dissatisfaction is more concerned with maintaining a good relationship and a good reputation than with fear of litigation. A statement typical of physicians who talked of this process of assessing the patient as a potential plaintiff is, "Sometimes you can almost smell trouble in certain people." Another physician expresses this idea with the statement that, "Certain types of patients you can tell you don't have the proper rapport with [and these are the patients likely to sue]." A third physician states, "Certain patients I won't operate on—I won't touch them with a ten-foot pole—because if they don't get better, that could serve to jeopardize my relationship with them, and also lead to something like we're talking about [litigation]."

Many examples were given of types of patient personalities and interactions with patients that might alert the physician to a patient's increased likelihood to sue. One of the most frequently cited groups of patients inspiring liability concern is the group commonly termed "doctor-shoppers"—patients who go from physician to physician without ever being satisfied. These patients often have unrealistic expectations of their treatment, such as immediate and complete disappearance of all their symptoms. Some physicians pointed out that many of these patients are seeking something more than medical help; some patients are seeking to have a physician assume a certain role, such as that of a father-figure or friend and confidant, and some physicians acknowledge that they may conform to the roles expected of them within the physician-patient relationship. One obstetrician characterized this practice by colleagues in his specialty as a "fad." Several physicians relate that with each new patient they make a special effort to determine the reasons for the patient's leaving his old physician and coming to them.

A second group of patients commonly cited as arousing suspicion are the psychoneurotic patients, particularly those

with paranoid, hysterical or conversion-type tendencies. One physician describes patients with paranoid ideas as those having the idea that physicians (and everyone else around them) are trying to hurt them or do something to them. He describes hysterics as a group, predominantly female, who are preoccupied with their bodies and bodily symptoms. He points out that patients with hysterical tendencies often also invest the physician with unrealistic roles, sometimes godlike, such that he must, of necessity, fall short of their expectations. Another physician countered the idea of suspicion of psychoneurotic patients with the statement that the diagnosis of psychoneurosis is a very difficult one to make, that psychoneurotic patients may also develop organic diseases, and so these patients should receive the best medical care possible, with liability considerations not influencing their care.

A third group of patients arousing special concern of liability are those patients variably described as pushy, demanding, belligerent and antagonistic. One physician gives the example of patients who say things to him like, "I've been coming here a lot and spending a lot of money, and I'm not getting any better," or, "Why haven't you referred me to another specialist?"

Several physicians stated that they are more concerned with members of certain ethnic groups and social classes. A few stated that they are wary of certain patients from lower-class and minority groups. They are viewed as generally suspicious and seem to feel that advantage is being taken of them. One physician expressed concerned with some patients from the upper-middle class, whom he describes as being very conscious of lawsuits and having close connections with lawyers. Several physicians expressed special worry with the VIP-type of patient, exemplified by the orthopedist's treatment of well-known sports figures.

Generally, then, most of the physicians interviewed agree that there are certain aspects of a patient's personality or social background that may alert them to the patient's likelihood of

raising liability claims. The data collected would tend to indicate that a majority of these physicians, when presented with a patient whom they recognize as more inclined to bring litigation, will probably begin to practice at least to a limited extent with some liability consideration in mind. Some physicians may be more prone than others to label a patient neurotic, or high-risk for another behavioral reason, and then modify practice in the light of their view of the patient's mental state.

Another influence on the extent of liability considerations in the physician's practice is often asserted to be the specialty in which he is involved.

Of the physicians interviewed, the two specialties involving the lowest risk of malpractice action are dermatology and pediatrics, according to generally accepted notions. However, two of the physicians who came closest to the extreme position of saying they practice defensive medicine continuously are both dermatologists (doctors 104 and 108). Neither of these physicians had had any direct personal experiences with malpractice. All three pediatricians interviewed, on the other hand, claimed they do not take liability into consideration in their practice, even though two of the three had been involved with some claim, or serious threat of claim, arising from their practice.

It is generally asserted that the surgical specialties involve the highest risk of malpractice involvement. However, the three surgeons interviewed covered a broad range of response in their perception of the extent of liability considerations. Doctor 111, the neurosurgeon, exhibited one extreme position in his statement that he is almost constantly influenced by liability considerations. Doctor 105, an orthopedic surgeon, represented the middle of the range of response, stating that he practices with liability considerations in mind only with certain patients, or in certain limited and specific areas of his practice. This statement is clearly at variance with the view expressed by almost all of the other physicians interviewed, that orthopedics is probably the highest-risk specialty in terms of malpractice, and

thus the area in which defensive medicine is most often practiced. Doctor 112, a general surgeon, indicated that he does not worry about liability and is not influenced by it.

Considering the responses of the three pediatricians, the dermatologists and the surgeons, it is clear that the responses of the physicians show no pattern relating the extent of liability considerations to specialty areas.

Another factor that appears to influence the extent of practices induced by liability considerations is the proportion of elective procedures, or at least those procedures the physician deems to be elective, in his total practice. The dermatologists' refusal to perform dermabrasion is an example of eschewing elective procedures, inasmuch as the procedure is basically cosmetic and does not affect the patient's general health.

Nature and Extent of Defensive Practice

Nine of the seventeen physicians interviewed stated that they practice defensively to some extent. The physicians' sets of responses, when later analyzed, showed that this is an overstatement. Although they are usually practicing with general liability considerations in mind, they are not actually practicing defensively as defined by this study. That is, in most cases, the steps they are taking that are induced by liability considerations do not result in what they consider poor practice. Many of these same physicians indicated that these considerations probably play a larger role than could be measured considering that they undoubtedly exert a subconscious influence on many decisions.

It is interesting to note that even though the definitions of defensive practice given to the physicians referred mostly to tests or procedures, either given when not necessary or avoided when indicated, the physicians' most frequent examples of what they do to defend themselves against liability did not deal with tests or procedures. The two most common replies to this line of questioning were, "I keep good records" and "I freely use referrals and consultations." However, although both of these

specified practices may well be influenced by liability considerations, they are not necessarily examples of the "defensive practice of medicine" as defined in this study, because in most instances, neither example is usually associated with or is ordinarily viewed as a cause of poor medical practice.

Although on the surface keeping good records appears to be an easy, harmless method for the physician to lessen the risk of liability, in some instances it may not be as harmless as it would appear. In most cases keeping good records does not merely involve the physician's sitting down and making good notes about everything he did and everything he told the patient. For example, doctor 104, a dermatologist, reported that he always submits biopsies for pathologic examination so that he can have a record of the fact that no malignancy was found. Thus, the effort to maintain complete records leads to the performance of tests of dubious value. He reported that he usually knows that no malignancy exists when he submits the biopsies, and admitted that the report is a waste of money in terms of the patient's care, but he continues this practice primarily to protect himself.

Likewise, doctor 102, a cardiologist, reported that many of the EKGs he gives are unnecessary, but that he continues to give them so that if anything happens to the patient he can show a normal EKG report in the patient's file.

Therefore, the statement that "I keep good records" can mean that unnecessary tests or procedures are conducted to maintain these "good records."

The most frequent example of a practice induced by liability considerations is the referral or consultation, wherein one physician obtains the opinion of another, both for reasons of good medical practice and also so that his original diagnostic evaluation influencing the therapeutic course will have some reputable support if the patient should happen to be unhappy with the result of the treatment. This protective device appears to be used most often in the situation where the physician feels that the patient, because of his attitude or psychological make-

up, presents a risk to him, rather than because the indicated procedure presents the risk.

This does not mean, and should not be construed to mean, that all referrals for consultations are liability-concern-induced, even for such patients; some have a valid medical purpose, and it is therefore difficult to distinguish for which reason the patient has been referred without the ability to read the physician's mind, and to assess his professional competence. It should also be emphasized that although the physicians interviewed considered this type of referral to be defensive practice, it is not so according to our definition, which emphasizes that defensive practice is physician-acknowledged poor medical practice. Although a referral might not be required for good medical care and might add to the patients' costs, it still does not constitute poor medicine.

Some specific examples given by the physicians do appear to be liability-motivated and defensive practices, in that the patient is not receiving optimum medical care as the physician views it. Doctors 104 and 108, dermatologists, indicated they avoid plastic planing, a procedure to remove or minimize scar tissue. Doctor 105, an obstetrician-gynecologist, stated that he avoids transvaginal surgical operations in general, and sterilization procedures in particular. Doctor 107, an ophthalmologist, avoids gonioscopy and the Tensilon test, which are procedures for the diagnosis and evaluation of glaucoma and myasthenia gravis respectively. These tests, he feels, have a high incidence of side-effects and are not worth the risk to him.

The preceding examples given by these four physicians are the most clear examples of strictly defensive practices received in the survey. If liability considerations were absent, these physicians would employ these procedures in cases where they now do not.

Doctor 111, who indicated that liability considerations played a large role in his practice as a neurosurgeon, gave several examples. He indicated that in a few instances he has refused to accept for treatment patients who appear to be psychoneurotic.

In other instances, he performs extra diagnostic tests and procedures to be certain not to miss a diagnosis, although he has made a clinical determination that the test or procedure is not really necessary. The arteriogram is an example of this type of diagnostic procedure that is performed more often than his best clinical judgment would indicate that it should be. Doctor 111 also indicated that in some instances the speed with which he performed a procedure was liability-induced. In other words, he felt that at times it would be better if a patient with a vague complaint went home for several months before a particular test was performed, to see whether any clinical symptoms developed. However, because of liability considerations, he may now order the test immediately so that an expert witness will not be able to assert that a bad result could have been avoided had the problem been detected and treated earlier.

When the physicians interviewed were asked whether it could be determined by looking at a patient's chart whether the physician had been practicing defensively, the majority of physicians indicated that it could not be so determined, the reason for this being that the chart does not show the physician's mental process or judgment.

Some of the physicians who initially responded that a determination of defensive practice could be made from the chart, later stated that they agreed that one would definitely have to know and understand the attending physician's judgment before an ultimate determination could be made. However, these physicians usually clung to the idea that at least an initial determination could be made. They indicated that this is happening presently to some extent through peer review, utilization committees and Medicare reviews.

Physicians taking regular x-rays of a family in which active tuberculosis is present is a good example of a practice that might seem from the charts to be liability-induced or financially-motivated, and yet, when the physician's reasons are seen, would be viewed as an illustration of good medical care.

As previously stated with regard to general liability-induced

practice, the study data would seem to indicate that defensive practice depends more on the patient's personality than on any other factor. Therefore, probably the best method of identifying liability-induced practice or defensive practice would be to first identify the patient who induces a feeling of insecurity in the physician. Once these patients can be identified, one might make comparisons between the type of medical care they are receiving and the medical care these same physicians provide the patients they assess as "normal."

Based upon the responses in this survey, one would expect to find in the charts of these problem-patients, contrary to what most of the articles on defensive practice suggest, a discernible absence of procedures, rather than an overabundance of procedures. One might also find, in some cases, a shortening of the time period between the tests in a normal series, attributable to the physician's fear of missing a diagnosis of a disease-process in its early stages. The impression derived from this survey is that defensive practice may be indicated by the performance of fewer, rather than more, procedures.

In addition to being asked to comment on the nature and extent of defensive medicine in their own practices, the physicians were asked to describe their perception of defensive medicine among other physicians in their own specialty and in other fields of medicine.

A wide range of responses was received. The spectrum of views is seen in the contrast between the reply of doctor 119, a pediatrician, who asked in a surprised tone, "Do people worry about litigation?" and that of doctor 104, a dermatologist: "There isn't a doctor I know who doesn't practice defensive medicine." Most of the physicians gave responses between these extremes, but more respond in a manner closer to the response of the pediatrician than of the dermatologist.

Most of the physicians indicated that they see approximately the same amount of defensive practice in all fields of medicine as they see in their own specialty areas. All three pediatricians

perceive very little influence of defensive medicine on their specialty, as seen in doctor 117's statement: "I don't think anybody in pediatrics practices defensive medicine;" they likewise see at most a very slight influence of liability concern in other fields of medicine. The dermatologists, on the other hand, believe defensive medicine is practiced commonly in their field, giving the examples of widspread avoidance of dermabrasion and submission of biopsied lesions for analysis by a pathologist. The dermatologists also see a wide influence of defensive practice in all fields of medicine; as doctor 104 said, "I think everybody practices defensively." Doctor 111, a neurosurgeon, likewise said he observes a large amount of defensive medicine in both his own and other specialties, saying, "If the doctor did not have hanging over him this threat [of malpractice] . . . there's no question that his decisions may at times be more radical, at times more conservative." Most physicians, however, indicated perception of only a slight influence of liability considerations in both their own specialties and other fields.

When asked to cite specific specialties in which defensive medicine is practiced most widely, most physicians pointed to surgical fields in general, most commonly orthopedic and plastic surgery, followed by neurosurgery and radiotherapy. It is often stated in this regard that the high risk of bad or imperfect results in a specialty, particularly bad cosmetic results, correlates directly with the extent to which the specialist practices defensively. It is interesting that the general surgeon and the neurosurgeon are influenced to a large extent by liability considerations, but the orthopedic surgeon interviewed (doctor 105) disagreed, saying, "I don't see it in other orthopedists." When informed that many other physicians had singled out orthopedists as the group most influenced by defensive practice, he said, "These guys don't know what they're talking about." He focused on internists as particularly unreliable sources of information on such practices, saying, "Internists have no concept of orthopedics—none whatsoever."

Two other physicians focused some attention on internists as practitioners of defensive medicine, whereas the six internists interviewed generally saw little influence of liability concern in their specialty. Doctor 108, a dermatologist, stated, "Internal medicine is entirely defensive." Doctor 106, an obstetrician, points to internists as the most inclined to perform unnecessary tests, but he sees this more as a result of their specialty training than of liability considerations.

Doctor 110, an internist, thinks general practice is the area of widest influence of liability considerations, because of lack of training and confidence on the part of the practitioner.

Overall, then, a wide range of views is found on the extent of defensive practice in the various specialties, and on the specific areas of its greatest influence. Most physicians point out specialties other than their own as examples of those most influenced by liability considerations. These same physicians also seem to imply that others within their own specialty are generally practicing with more concern about liability than themselves.

Effect on Quality and Cost of Medical Care

To the extent that liability considerations, affect medical care, and defensive practices exist, what are their effects on the quality and cost of medical care?

It has been asserted that, to the extent that liability concern causes the physician to act contrary to his best clinical judgment, these considerations exert a deleterious effect on the quality of medical care. This is probably indisputable in the specific areas of refusal to treat certain patients and avoidance of certain advisable procedures, out of malpractice considerations. Most of the physicians seemed to believe that medical care automatically suffers when physicians are afraid to accept patients or employ a procedure when they see a risk of being sued. (Even here, of course, the physician's concern may reflect a lack of comparative skill with a particular type of patient or

procedure, and it may also have positive advantages to the patient if the physician avoids that which he is not confident about.)

Many of the physicians expressed the view that the possibility of restricting their freedom to act as they see fit has a detrimental effect on medical care. As one physician said, "I think the whole question of limitation of freedom to behave as our natural abilities would allow impairs our ability to contribute to medicine." On the other hand, a good number of the physicians point out certain beneficial effects of liability concern on medical care, indicating that malpractice considerations result in increased conservatism and caution in medical practice. They also mentioned malpractice concern as motivating them to keep up with the latest developments influencing standards of the medical practice generally and of their specialties particularly.

Liability considerations may add diagnostic accuracy and completeness. Several physicians claim to use a fairly free diagnostic approach, largely from liability considerations, in that they order additional tests and procedures just to insure that they do not miss a diagnosis. This generalized diagnostic approach does not fit into the definition of defensive medicine as used in the study because it results in more complete care, not in poorer care, as judged by the physicians. Several physicians observed, relative to this approach, that the results are mixed. Although some latent disease processes are uncovered early, the yield is very low, and there is the added risk of iatrogenic disease. The examples of myelography and coronary angiography were given as diagnostic procedures associated with a particularly high risk of complications and iatrogenic disease.

In light of the increasing degree of specialization of medicine, and the general depersonalization of medical care and treatment, liability considerations may have forced physicians to devote more time and thought to their dealings with the patient as a person, rather than as a disease-process or an organ-

system. They must tell the patient a good deal, and they are encouraged to get to know their patients. One physician explains this idea as follows:

> It makes doctors talk to the patient, which they never really did before. Now you sit down and explain to them what you're going to do and what the possible consequences are. Everybody has become more aware of the patient's right to know what's going on. And this is why you do it, not because there's a lawyer breathing down your neck.

Therefore, in the view of physicians, liability considerations do not result in "bad medicine" exclusively; they clearly have certain beneficial, as well as detrimental, effects upon the quality of medical care.

When the concept of the defensive practice of medicine is discussed, one of the assertions almost always made is that it is partly responsible for the skyrocketing cost of medical care. However, this study seems to indicate that as a generalization this is not necessarily so, and that if costs increase at all as a result of liability considerations, it would appear to be minimal in proportion to the overall costs of medical care.

As discussed previously, the practice most frequently induced by liability considerations is the consultation. According to one physician interviewed, the cost of a consultation in the Pittsburgh area can run the patient anywhere from zero to fifty dollars. In the usual case, where the consulting physician gives the patient a comprehensive physical on the initial visit, it will cost from 30 to 50 dollars. Each subsequent visit will range in cost from seven to ten dollars.

Some examples of the tests that are often asserted to be liability-motivated, and their approximate costs, include: skull films, $35; brain scan, $100; EEG, $35 to $50; EKG, $15 to $25; arteriogram, $50 to $150. However, it should be remembered that in most cases, with the possible exception of the skull film, these tests are not primarily liability-motivated. Most of the time these tests are employed the motivation is to provide good-

quality medical care with the best interests of the patient in mind.

The principal reason that liability-induced practice probably does not greatly increase the cost of medical care, as far as the physicians surveyed are concerned, is that the practice appears to manifest itself more frequently in the avoidance of procedures than in the performance of additional procedures. Assuming that the physicians interviewed were being candid in their answers, there does not appear to be a great number of extra tests being administered. In some instances the physicians indicated that liability considerations induced them to take an x-ray or arteriogram a bit sooner than they thought best medical judgment called for. But many of these tests would still have to be performed eventually; therefore, the total cost to the patient does not increase substantially.

Probably the clearest example of increased costs resulting from liability considerations came from the dermatologists, who confessed to submitting biopsies for pathologic examination as a regular procedure for "self-defense." One of the two dermatologists interviewed stated that these practices added 25 per cent to 30 per cent to the patient's bill. However, these figures seemed to be the exception rather than the rule for the physicians surveyed.

The physicians interviewed seemed to indicate that their defensive practices were mostly negative ones, in that in some instances they now will not do some of the procedures they had done previously; or at least not with the former frequency. The orthopedic surgeon interviewed stated that one could tell defensive medicine was being practiced in California, not by the extra tests on the patients' charts, but by seeing a lack of any indication that certain tests or procedures were being performed. Therefore, one may hypothesize in situations where these procedures are now not being performed that the patient is paying less because of liability considerations than he otherwise would pay.

Effect on Physician-Patient Relationships

Each physician interviewed was asked to rate, on a scale of one to ten, his own physician-patient relationships. One was defined as representing an adversary or mutually suspicious relationship, and ten as a very close, mutually friendly association. The physicians universally chose a figure high on the scale. The responses ranged from levels of 7.5 to 10, with two physicians refusing to respond, claiming that such an estimate was either impossible or inapplicable to their particular practices. Eleven of the fifteen physicians responding to this question assessed their own relations with their patients at a level between 9 and 10. It is noteworthy that, with the exception of one physician who did not respond, the physicians who had had malpractice claims or suits brought against them gave responses of 9.5 to 10. It is also interesting to note that the physicians who expressed the greatest concern over malpractice liability, and admitted a large influence of liability-concern upon their practices, also indicated their belief that they have excellent relationships with their patients.

When asked to estimate the proportion of their practices consisting of patients with whom they do not have good rapport, several physicians emphasized that this idea was not applicable to their practices and they could not really estimate the proportion. Their reasons were that those patients with whom they have a poor relation do not return, or that their practices (such as neurosurgery) consist exclusively of short-term referral patients with whom no ongoing relationship is established.

Of the physicians who answered this question, all but one estimated the proportion of their practice consisting of patients with whom they have a poor relationship at some figure less than five per cent. This included all those physicians who had indicated the greatest general concern for malpractice liability, and was surprising in that one would think that those most worried about malpractice considerations would indicate less than optimum relations with a substantial number of their

patients. On the other hand the orthopedic surgeon, who had indicated negligible influence of malpractice considerations on his practice, gave 20 per cent as his estimate of patients with whom he does not have good rapport.

The physicians were also asked to rate the prevailing national physician-patient relationship, using the same scale of one to ten. Of the thirteen physicians responding to this question, all but one estimated the general physician-patient relationship distinctly lower than their own. (The one exception estimated both to be 10 on the scale.) The responses ranged from 4 to 10, with an average of about 6, contrasted with the average response concerning the individual physician-patient relationship of about 9. Four physicians did not respond to this question, claiming that it would be impossible for them to even guess at the national physician-patient relationship, but they all agreed that the level would be lower than that in their own practices. A remarkable similarity of responses was seen to both questions concerning relationships with patients by the physicians interviewed, in spite of marked differences in individual specialty practice, in the types of patients dealt with, in past experiences with malpractice, and in their assessments of the extent to which liability considerations influence their practices.

Within the context of the interview most of the physicians stated either that they knew for a fact or had heard that the problem with malpractice suits is much worse in California than in the Pittsburgh area. A number of physicians stated a belief that the physician-patient relationships in California border on open hostility, and force the physician into giving considerable weight to liability considerations to protect himself from suit and to limit the rising costs of insurance. Their assessments of the California problem appear to be derived mostly from the medical literature; however, some did have limited personal experiences in California.

CONCLUSIONS

The two purposes of the study—to permit making some impressionistic judgments concerning the defensive practice of medicine and to lay the basis for constructing a more formal study—were achieved, at least in part. The responses of the physicians clearly indicate that the phenomenon of defensive practice of medicine is one that is far too glibly discussed without supporting factual data. Based on the study survey, the burden of establishing the extent and the effect on medical care of the defensive practice of medicine rests upon those who assert its significance. Drawing the line between liability-induced medical-care practices that would generally be deemed an improvement over what otherwise would take place, and medical care rendered contrary to the physician's best judgment and at least in that sense poor care, is evidently very difficult to do.

It would appear that the personal characteristics of physicians, and those of the patients that they see, have great weight in determining the extent to which the defensive practice of medicine takes place, and that the physicians who discuss it and express their belief that it is quite widespread may represent only a small, vocal portion of the medical community. Furthermore, there would appear to be differences in regard to the effect of liability upon medical practice and the extent of the defensive practice of medicine between diffrent areas in the country. Further study of the defensive practice of medicine would have to be conducted in a number of locations to provide any meaningful estimate of its amount and its effect upon medical performance.

A major study of the defensive practice of medicine appears to require a strong influence in its planning and construction from both physicians and social scientists. This is particularly true because of the difficulty in distinguishing what appears to be good medical practice from the defensive practice of medicine, and the need to assess subconscious as well as conscious influences created by concern about liability. Many prob-

lems can be anticipated in constructing such a study and in securing the kind of whole-hearted and candid participation that the physicians who participated in this study exhibited. The success of any future study of the defensive practice of medicine will depend in large measure upon the extent to which the underlying notion of maintaining, indeed improving, the quality of medical care is made clear, and upon demonstrating to the prospective participants that the purpose is not to provide ammunition to the critics of the medical profession.

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