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**MEDICAL STUDENTS' SELF-REPORTS OF REACTIONS
TO THE MALPRACTICE CRISIS**

3rd

by

Kevin J. Franke

**A Dissertation Submitted to the Faculty of the Graduate
School of Loyola University of Chicago in Partial
Fulfillment of the Requirements for the Degree of
DOCTOR OF PHILOSOPHY**

**APRIL
1987**

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VITA

The author, Kevin Joseph Franke, is the son of Hal Francis Franke and Mary (Binkley) Franke. He was born July 11, 1959, in Cincinnati, Ohio.

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CHAPTER I

INTRODUCTION

There is a large and growing body of literature that highlights the presence of stress-induced anxiety, unhappiness, and dissatisfaction in medical students (Huebner, Roger, & Moore, 1981). Increasing attention is being directed to examining the process of medical education and training as the student-physician experiences it to discover the sources of this stress and unhappiness. Efforts to identify and aid the "impaired physician" have also led researchers to wonder how process variables at the level of education and training, such as the quality of relationships students have with professors, family, and other students, are related to subsequent stress and dysfunction among physicians, (Clark, Salazar, Grabler, & Fawcet, 1984). In addition, the revolutionary social changes presently taking place in the field of medicine, including increasing competition among physicians, the appearance of new forms of service delivery such as health maintenance organizations (HMO's) and preferred provider organizations (PPO's), and increasing government regulation of provider services, have raised new questions about how these changes may be affecting medical students and medical education. Recently both medical educators and students have advocated the need for reexamination and reevaluation of the medical school curriculum and of the socialization and internalization processes by which

physicians develop enduring attitudes and a sense of professional identity.

Perhaps one of the most disruptive social changes that has taken place in the last decade in American medicine is what some writers have referred to as the malpractice crisis, (Richman, 1984; Dorschner, 1984). This crisis is reflected in the increasing incidence of malpractice suits against physicians, in the larger and larger dollar amounts awarded in malpractice settlements, in increased premium costs for liability insurance, and in the impact of these developments on the professional practice and personal lives of physicians. Recent studies have suggested that malpractice litigation is having a significant impact on the sociological reality of medical practice in this country through increasing medical costs to the public, undermining physicians' self-confidence and satisfaction, and eroding the quality of the physician-patient relationship. This malpractice crisis may also be a source of stress for medical students if in their minds it threatens or limits the opportunities and rewards they will receive as medical students and physicians.

This study investigates the impact of the malpractice crisis on medical students. Specifically, this investigation seeks to discover how medical students are reacting to the increase in malpractice litigation and to examine how their perceptions may influence their thinking and behavior in important areas of development and training, such as relationships with patients, commitment to medicine as a career, and specific career decisions. This study is largely descriptive and

exploratory in nature. At the present time, the data needed to formulate and test hypotheses regarding the impact of the malpractice crisis have not been collected, and this study is an attempt to begin gathering these data.

The results of this study may be useful in designing appropriate programmatic and curricular interventions. Najam and Arnold (1984) have emphasized the need to consider a wide range of factors, aside from those inherent in the process of medical education itself, in reevaluating the formal and informal socialization processes encountered in medical education, with the intention of developing interventions to modify students' perceptions in order to prevent impairment, reduce stress, and prevent adverse changes in the quality and availability of health care. This research is unique in its investigation of the influence of the malpractice crisis upon medical students, and it may be prudent to begin planning for interventions at an early stage.

The major problem with previous research has been the failure to assess directly medical students' perceptions of and reactions to the malpractice crisis. Investigators have usually assessed endemic stresses related to medical education and then hypothesized about intervening variables and the possible role of the malpractice crisis in this process (Edwards & Zimet, 1976). Aside from these speculations and scattered anecdotal accounts, there has been no effort to describe medical students' feelings and thoughts about the increasing occurrence and threat of malpractice litigation. While some researchers have attributed the recent malpractice crisis to inadequacies in the formal and

informal structure of medical education (Edwards & Zimet), others believe the crisis has its roots in broader social changes which are having an impact upon medical students and medical education. This investigation begins the process of acknowledging, expressing, and addressing the perceptions, concerns, and reactions of medical students to the increasing incidence of malpractice litigation.

CHAPTER II

REVIEW OF RELATED LITERATURE

The Malpractice Crisis

Several reports of dramatic increases in the incidence of malpractice litigation against physicians have recently appeared (Curran, 1983; Danzon, 1982; Eckman, 1982; Richman, 1984). Today, 10 percent of all civil jury trials nationwide concern allegations of medical malpractice. Nationally, the number of claims reported per 100 physicians increased from 10.5 in 1980 to 17.8 in 1985, an overall increase of about 70% (USGAO report). Dollar amounts of individual rewards have also risen during these years, with the national average increasing from \$28,059 in 1980 to \$70,170 in 1985, an overall increase of about 150% (USGAO report). The combination of more suits and higher awards has caused malpractice insurance premiums to multiply geometrically. The high cost of practicing medicine has been passed on to the consumer and costs for health care have also risen dramatically in recent years.

The number of lawsuits alleging malpractice against Northern Illinois physicians rose 355% between 1977 and 1985, from 696 cases in 1977 to 3,166 cases in 1985 (Cook County Jury Verdict Reporter, 1985). An estimated 80 percent of these cases turn out to be without merit, and involve no payment for damages, (Illinois State Medical Interinsurance Exchange Cumulative Data, 1977-1985). But even when physicians are not

at fault, they often must defend themselves at trial. Though physicians win almost 80% of all suits that do go to trial, these trials involve costs for defense. Consequently, settlement of non-meritorious cases is often more economical than going to trial. In the absence of actual negligence then, defense fees and settlement awards still drive up the cost of insurance premiums and health care.

Insurance premiums have increased significantly more in certain high-risk specialties, especially in urban areas. The specialties most affected by the malpractice crisis include neurosurgery, orthopedics, obstetrics/gynecology, and anesthesiology. Average premiums for these high-risk specialties are now in the \$40,000 to \$50,000 range, and if the present trend continues, will reach as much as \$150,000 by 1990, (ISMS, 1984).

Suggested Causal Factors In The Malpractice Crisis

The current malpractice crisis is a complex problem for which several causative factors have been suggested. One of the factors implicated in the crisis arises from public misconceptions about the standard of medical care in their own localities. Contemporary American society gives witness to important medical advances almost daily. The physicians and patients depicted in these news stories are not representative of the normal populations. These physicians are often the most experienced and well-trained experts in their field, and the patients are often treated at prestigious, well staffed and well equipped medical centers. Yet these media accounts of impressive medical interventions may lead to public expectations that this is the "standard of care" in

all areas throughout the nation. This skewed assumption has led to rising expectations about medicine's capacity to offer successful therapeutic interventions.

Some of the causative factors thought to be associated with the malpractice crisis concern the American legal system as it relates to malpractice law. These include the growing number of lawyers in the United States. The present figure of 600,000 lawyers represents a one-third increase over a five year period, (ISMS, 1984). It has been suggested that the increase in lawyers has led to increased competition in the legal profession. Professional practices in the legal profession also make it easier for plaintiffs to file suit. Because attorneys generally accept malpractice cases on a contingency fee basis, plaintiffs assume no risk in filing a claim whether it is meritorious or not. Changes in due process and equal protection laws in recent years have also contributed to the widespread perception that the legal system can equalize many of the imbalances or inequalities present in American society. Some analysts believe the legal system has become a means to protest fate, and that most often maloccurrence, rather than malpractice, an outcome that cannot be attributed to the quality of care received, is the reason for the filing of a malpractice suit (ISMS, 1984).

Edwards and Zimet (1976) were the first to theorize about the possible relation between the medical training process and the sharp increase in the number of malpractice suits brought against physicians. These investigators gave students at the University of Colorado School

of Medicine an inventory of problems and concerns relating to their personal and academic lives. These students identified a lack of personal freedom, excessive academic pressures, and feelings of dehumanization as primary problems with their current training. In discussing their data, the authors hypothesized that recent sharp increases in the incidence of malpractice suits against physicians could stem from a weakening of the doctor-patient relationship. This undermining of the doctor-patient relationship, according to the authors, was occurring because young physicians, having been "severely deprived" of warm caring during their training, were no longer able to offer personal warmth and genuine concern to their patients. These investigators however, collected no data which could either confirm or discount their theory about the relationship between medical training and the medical malpractice crisis. Medical students were not asked about their perceptions of what has led to the malpractice crisis, nor were they asked for their views about how the doctor-patient relationship is changing, or for what reasons.

The Impact Of The Crisis

Recent studies that have examined the impact of malpractice litigation on the professional activities of physicians suggest that a number of professional practice changes are occurring in response to increasing malpractice litigation. One common reaction is the practice of "defensive medicine" (Tancredi & Barondess, 1978), in which physicians make diagnostic and treatment decisions based more on what seems defensible in court than on clinical knowledge and experience. A recent

survey showed 60% of both sued and non-sued physicians admitted to ordering clinically unnecessary diagnostic tests for their own legal protection, (Charles, Wilbert, & Franke, 1985). To avoid malpractice litigation many physicians have started limiting their practices. In Florida, a recent survey showed that over 25% of obstetrician/gynecologists have discontinued the practice of obstetrics, and an additional 30% more were considering doing the same thing, (Davenport, 1983). Survey data also reveal both sued and non-sued physicians are refusing to perform certain high-risk procedures, and sued physicians significantly more than non-sued physicians are refusing to treat certain patients with whom the risk of litigation is judged to be greater (Charles, et al., 1985). The Charles et al. (1985) research also revealed that sued physicians are more likely to have thoughts of retiring early, and to discourage their children from pursuing medicine as a career.

The malpractice crisis has also been reported as a factor contributing to deterioration in the doctor-patient relationship, (Mawardi, 1979). Adopting a supportive and caring role with patients becomes more difficult when the physician begins to view each patient as a potential litigant in a malpractice claim, (Davenport, 1983). The added anxiety, self-doubt, and mistrust physicians experience in response to the threat of malpractice litigation works against the formation of benign and mutually rewarding relationships with patients.

Other professional practice changes reported by both sued and non-sued physicians in response to malpractice litigation include the keeping of more meticulous records, spending more time studying profes-

sional literature, and attending more continuing education courses, (Charles et al., 1985). It has been suggested that these changes, unlike those reported above, may ultimately lead to improvements in the quality of health care available to some patients.

Research has also investigated the impact of a malpractice crisis on the personal lives of practicing physicians. These studies show physicians experience undesirable psychological and somatic dysfunctions in response to being sued for malpractice. The emotional reactions most frequently reported by physicians have been grouped into two symptom clusters, a stress reaction cluster and a depressed cluster (Charles, Wilbert, & Kennedy, 1984; Charles, et al., 1985). The stress reaction cluster consists of anger accompanied most often by irritability, inner tension, and frustration. The depressed cluster consists of depressed mood plus at least four other symptoms from the DSM III affective disorder criteria. In the first survey of only sued physicians, 39% of the sample fit the depressed cluster, and an additional 20% of the sample, separate from those who fit the depressed cluster, reported the stress cluster (Charles et al., 1984). A second study of sued and non-sued physicians revealed sued physicians were significantly more likely to fit the stress criteria, while an equal percentage of sued and non-sued physicians fit the criteria for depressed mood.

The Charles et al. (1985) data also suggests that sued physicians feel more strongly than non-sued physicians that the plaintiff's case is usually unjustified, and that litigation is not an affront to their professional competence. These attitudinal differences suggest that physi-

cians who have not been directly involved in a lawsuit tend to believe that only physicians who are actually guilty of negligence get sued.

Aside from these studies, little empirical data exist on the impact of malpractice litigation on physicians and on the medical profession. In summary, these studies suggest that malpractice litigation is experienced as a stressful event for most physicians who have been involved directly, and that their responses have clear psychological components. The data also suggest that many non-sued physicians may experience distress related to the threat of malpractice litigation. In addition, a number of changes in medical practice, some more prevalent among sued physicians, but many common among sued and non-sued physicians, have occurred in response to the increasing incidence of malpractice litigation.

Malpractice Crisis And Medical Education

The Charles research group concluded the impact of the malpractice crisis on the availability and delivery of medical care is worthy of further study. One way the malpractice crisis can affect the availability and delivery of medical care is through its impact on medical students and medical education. Assuming medical students, administrators, faculty, and physicians involved in the training and supervision of student-physicians have some awareness and experience with the increasing incidence and threat of malpractice litigation, one may hypothesize that the perceptions and reactions of these various groups to the malpractice crisis do have some impact upon the system of medical education, and on medical students themselves. The focus of the present study is on the

impact of the malpractice litigation problem on medical students and their perceptions of their education, their profession, and their career plans. An associated question concerns the ways in which the medical education system and the medical training process are being affected by the malpractice litigation crisis.

Malpractice Crisis And Stress Among Medical Students

Previous research has studied numerous factors in efforts to understand and explain dysfunctional stress among medical students. Included among the factors that have been studied are student personality styles (Burnstien, Loucks, Kobos, Johnson, & Talbert, 1981; Hobfall, 1982; Walters, 1982), cognitive, affective, and behavioral demands of the training curriculum, including evaluation procedures (Gaensbauer & Mizner, 1980), changes in education and society as a whole (Funkenstein, 1968), the medical school environment, including faculty-student relationships, competition among peers, and physical facilities and administrative processes, (Pfeiffer, 1983; Huebner, 1981), economic pressures, (Heins, et al., 1984; Ginzberg & Brann, 1980), sex role stereotypes, (Lloyd, 1983), and premedical training (Alexander & Holdane, 1980). Research is just beginning to explore the importance of these factors in identifying, remediating, and preventing stress among medical students.

Although the occurrence, and possibly the threat, of malpractice litigation have been shown to be stressors that precipitate identifiable emotional and somatic reactions among physicians, research has not investigated how the threat of malpractice litigation may be a source of stress that exacerbates or engenders similar reactions in medical stu-

dents. If the malpractice crisis is a source of stress for medical students, it may interact in complex ways with these other sources of stress in medical education.

A Pilot Study

One question that arises in an investigation of medical students' reactions to malpractice litigation is the extent to which students are aware of the problem and of its impact on physicians and the delivery of medical services. To assess medical students' general awareness of the malpractice crisis, and to generate initial hypotheses about the impact of the malpractice crisis on medical students, the investigator conducted a pilot study at Loyola University's Stritch School of Medicine in the fall of 1984. A "Medical Malpractice Survey" along with cover letters from the investigator and the Office of Student Affairs were placed in the campus mailbox of all students at Stritch. (See Appendix A for a copy of the "Medical Malpractice Survey" and the cover letters).

The pilot questionnaire was divided into several sections. First, students were asked to list the specialties that physicians advised them not to practice, and to state the reasons given. Secondly, students were asked to rate the relative probability of a physician's being sued in the major specialties and subspecialties. Next, students were asked to list and describe the major stresses they believed they would face as medical practitioners, to list and describe any recent major changes in the way medicine was practiced in the United States, and to comment on their understanding of the impact of malpractice litigation on the practice of medicine. Students were then asked to express their degree of

agreement or disagreement with 27 statements which: a) described the personal impact, the practice changes, and the attitudes revealed in the Charles et al. research (1984; 1985); and b) assessed students' awareness of the malpractice statistics reported by the Illinois State Medical Society. A few of these 27 statements were intended to provide initial ideas about the impact of students' awareness of the threat of malpractice litigation on their views of the medical profession and their own careers. Finally, students were asked to list all the sources from which they obtained information about malpractice litigation.

A total of 127 of approximately 450 surveys were completed and returned, yielding a response rate of about 35%. The majority of returned questionnaires came from first, second, and third year students, with response rates for these classes approximately equal, around 40%. The response rate for fourth year students, about 12%, was significantly lower than for any of the first three classes.

Students reported they were advised not to practice medicine in 10 of 11 specialties listed on the questionnaire. No student reported being advised by a physician not to practice ophthalmology. For eight of these 10 specialties less than 10% of the students reported being advised not to practice, and for 6 of these specialties the number was less than 5%. The two most frequently reported specialties students were advised not to practice were surgery and surgical subspecialties such as neurosurgery and orthopedic surgery (20%), and obstetrics/gynecology (17%). The most frequent reason for not practicing surgery and its subspecialties was "long hours," while the rate of malpractice and

the cost of malpractice insurance, oversupply of physicians in certain specialties, and the impersonal nature of this specialty (i.e. little long-term patient follow-up) were also mentioned. The most frequently reported reason for not practicing obstetrics/gynecology was the high rate of malpractice litigation and the high cost of malpractice insurance. About 10% of the students reported being advised not to practice obstetrics/gynecology because of the malpractice problem. Other specialties for which the rate of malpractice litigation or the cost of malpractice insurance were given as reasons not to practice included neurosurgery (5%), and orthopedics and pediatrics, (less than 3%).

Three of the 11 specialties received an average relative rating of "Very High Probability" for being sued for malpractice. These specialties were surgery, obstetrics/gynecology, and anesthesiology. Two other specialties, neurology and radiology, received an average relative rating of "High Probability" for being sued. The other six specialties received an average relative rating of "Low Probability" or "Very Low Probability."

Approximately 20% of the students listed malpractice litigation as a major stress they will face as medical practitioners. By an overwhelming margin, the most frequently reported major stress, listed by over 65% of the students, was balancing career and family interests.

The most frequently reported recent major changes in medical practice were Diagnostic Related Groups (DRG's) and Health Maintenance Organizations (HMO's), listed by over 70% and 40% of the students respectively. The next most frequently reported changes were liberal

malpractice decisions and a higher rate of malpractice litigation, and increased competition among physicians. These changes were reported by approximately 15% of the students. The practice of defensive medicine was listed as a recent major change by 5% of the students.

The students reported 15 different effects of malpractice litigation on the practice of medicine in the United States. The two most frequently reported effects were the practice of defensive medicine and higher costs of health care due to higher malpractice insurance rates. Both of these effects were reported by approximately 40% of the students. About 10% of the students reported the avoidance of difficult or ambiguous cases by physicians. Other effects mentioned by less than 5% of the students included an increase in the pessimism in the profession as a whole, students choosing secondary specialties, a decrease in the number of physicians practicing certain specialties, deterioration in the doctor-patient relationship, professional and personal damage done to a physician even if acquitted in a malpractice trial, a need to consider medical and legal interests together, and better and more thorough service provided by physicians.

The sources mentioned most often by medical students as providing them with information about medical malpractice were practicing physicians, medical faculty, and newspaper articles, while professional journals and television programs were also listed by many students.

Some preliminary conclusions can be drawn from this pilot study. First, the pilot study suggests medical students can differentiate the major specialties and subspecialties based on the probability of a phy-

sician being sued in these specialties. In addition, the pilot data suggest that some physicians are advising medical students not to practice in some specialties. The pilot study also suggests that many students in the first three years of medical school are aware of two significant practice changes related to increasing malpractice litigation, the practice of defensive medicine and higher malpractice insurance premiums.

These preliminary findings suggest that medical students are becoming aware of the threat of malpractice litigation, and some have accurate knowledge about which specialties are being most affected and what professional practice changes have occurred in response to the malpractice problem. Yet little is known about the extent of students' awareness of the problem and the impact of this knowledge. Specifically, what do medical students do with the knowledge they have and the advice they receive about malpractice litigation? How do their perceptions and reactions to the threat of malpractice affect their ability to benefit from their education and training? To answer these questions further study of the impact of the malpractice crisis on medical students and medical education is needed.

Developmental Considerations

Studies that have followed medical students over the course of their training (Becker, Geer, & Strauss, 1961), studies that have looked at a cross-section of medical students at various points in their training (Knight, 1973; Bloom, 1971; Edwards & Zimet, 1976), and studies that have examined recent medical school graduates (Mumford, 1970; Lyden,

Geiger, & Peterson, 1968), have all viewed the development of the student-physician as occurring in stages. More recently, Gaensbauer & Mizner (1980) have identified phase-appropriate stressors or tasks associated with each year of medical school in a traditional four year curriculum modelled after the Flexner Report. Stresses associated with the first year of medical school are the need to master a large quantity of material, to develop a sense of competency in doing so, to learn efficient time management, and to make the necessary personal and social adjustments that may be required. Tasks to be completed during the second year include making a firm commitment to medicine and learning to study disease with detachment. The third year or first clinical year requires the medical student to deal with the issues of intimacy, life, death, religion, and sexuality, to be able to relate effectively with medical staff, to learn detachment without dehumanization, to behave assertively, and to assume a care-taker role. The final year presents the student with the need to make decisions about a medical career and to learn to function independently.

Gaensbauer & Mizner (1980) suggest medical students in each year can be viewed as separate groups faced with distinct educational tasks that require unique personal and social adjustments and the development of specific kinds of response patterns and coping strategies. These developmental phases should be kept in mind when considering the impact of the threat of malpractice litigation on medical students and medical education. It is possible that the information the students receive about the threat of malpractice litigation will interact with their

developmental tasks to create a set of unique alternative perceptions and responses for students at various stages. Keeping in mind these phase-appropriate stressors may facilitate an understanding of the empirical data in this investigation.

Hypotheses

Beliefs About Relative Frequency Of Litigation

One area that will be investigated in this study is medical students' beliefs about the relative frequency of malpractice litigation in the most common medical specialties and subspecialties. If medical students do differentiate the various medical specialties based upon relative probability of being sued, then one can hypothesize that such information is used by the students in making their individual decisions about which specialty to choose.

The pilot data suggests that medical students can differentiate medical specialties based on relative probability of being sued for malpractice, and their perceptions correspond closely with the figures reported by the Illinois State Medical Society, (1984). Therefore, the first hypothesis to be tested in this study is:

1. Surgery and surgical subspecialties, obstetrics/gynecology, and anesthesiology will show a greater tendency to be rated as high probability for suit than other medical specialties.

Beliefs About Why Physicians Get Sued

A second area to be investigated is students' beliefs about which physicians get sued and why. One important issue in trying to understand how medical students are coping with the threat of malpractice litigation is the degree of control they believe they have in either preventing or avoiding this stressful event. Perceived locus of control, either internal or external, in the face of threatening events can lead to different coping strategies and emotional and psychological response patterns (Johnson, Dabbs, & Leventhal, 1970). Information concerning students' beliefs about which physicians get sued, and for what reasons, may contribute to an assessment of whether students perceive an internal or external locus of control with the threat of malpractice litigation.

Furthermore, Charles et al. (1985), suggested that non-sued doctors tend to believe, as many lay persons (non-physicians) do, that malpractice litigation directly affects only doctors who are guilty of negligence. If the attitudes of medical students resemble more closely those of non-sued physicians', this may suggest some different reactions to the threat of malpractice litigation than if the students' attitudes are more closely aligned with sued physicians. For example, students may believe there is a large number of negligent physicians practicing medicine (the belief implied by the attitude of non-sued physicians), or they may believe many physicians are accused unjustly of being negligent, as sued physicians believe. If the former is true, then students may suffer a decline in their readiness to identify with professional

colleagues. If the latter is true, then students may consider a number of alternatives in an effort to avoid being unjustly accused.

The pilot data suggest that many students in the first three years tend to believe as sued physicians do, that many allegations of malpractice do not involve negligence. Since medical students themselves are rarely named in allegations of malpractice, one might expect that their attitudes would more closely resemble those of non-sued physicians and non-physicians. It is possible that for defensive purposes non-sued but practicing physicians tend to believe that only negligent physicians get sued, while medical students, being less vulnerable to litigation themselves, may be less defensive in their attitudes. Defensive is used here in the general psychological sense of protecting one's self, and, by extension, those to whom one is emotionally attached, from added stress and anxiety that can lead to cognitive, affective, and behavioral dysfunction. The defensive operations of identification with the aggressor, denial, displacement, and projection may be active in this attitudinal posture.

If this defensive hypothesis accounts for some of the attitudinal variance between sued and non-sued physicians, then it may also explain some of the variance in medical students' beliefs about why physicians get sued. Students who are more directly threatened by the possibility of being sued for malpractice, but who have not yet been sued, would have more reason to be defensive (and to perceive an internal locus of control) in their attitudes about which physicians get sued and why. The threat of a malpractice suit might be more real to advanced students

because they are already performing clinical procedures, because they are more likely to have personal contact with sued physicians, and because they are closer to the time when they will be assuming full clinical responsibility for patients. The threat of malpractice litigation may also be greater for students who plan to enter high-risk-for-suit specialties. The second hypothesis to be tested in this study is:

2. Advanced students, that is, third and fourth year students, and students who plan to enter high-probability-for-suit specialties will be more likely to attribute recent increases in the frequency of malpractice litigation to lack of experience, lack of knowledge, and negligence of the sued physicians than beginning students and students who plan to enter low-probability-for-suit specialties.

Personal Responses To The Threat Of Litigation

A third area of investigation is medical students' personal reactions to the malpractice threat. Included in this part of the survey will be an assessment of the impact of the malpractice problem on students' choice of career, including their perceived ability to identify with traditional medical ideals (i.e. "helping others" and "being their brother's keeper"), and their perceived readiness to take on appropriate professional roles. Other items will assess the impact of the malpractice crisis on students' choice of specialty, including whether they choose secondary specialties, whether they choose to do research instead of practice medicine, and also where they choose to practice (urban vs. a suburban or rural area.).

Although students are rarely named in allegations of malpractice, this is happening more frequently in recent years, (Michael Rainey, Ph.D., personal communication). At the end of their second year student-physicians begin having extensive interactions with interns, residents, and other supervising physicians who have more direct exposure to the threat of malpractice litigation, and who are more likely than medical faculty to have direct experience with malpractice litigation. The pilot data suggest the most common source of information about malpractice litigation for medical students is practicing physicians. Therefore, it may be logically assumed that advanced students, since they interact more with practicing physicians, are more informed about the recent increases in the number of malpractice suits against practicing physicians. Therefore, the third hypothesis to be tested in this study is:

3. Advanced students, and students who plan to enter high-probability-for-suit specialties will show a greater tendency to have thought about and be concerned about the threat of malpractice litigation than beginning students and students who plan to enter low-probability-for-suit specialties.

Studies reveal that during the second and third years of medical school students are most concerned with weighing the advantages and disadvantages of continuing their training, (Gaensbauer & Mizner, 1980). During these years most students make a final commitment to pursue a career in medicine. One possible impact that the threat of malpractice

has had on medical students is to make them conflicted about committing themselves to the medical profession. If this is true, then second and third year students would be more likely to have increased difficulty in this area. The fourth hypothesis to be tested in this study is:

4. Second and third year students will be more likely than first or fourth year students to agree that they are having difficulty making a firm commitment to medicine because of the threat of malpractice litigation.

Impact Of Threat Of Litigation On Clinical Training

A fourth area to be investigated in this study concerns changes in practicum training opportunities available to student-physicians during their clinical rotations. One possible result of the malpractice litigation crisis is that supervising physicians are less willing to delegate responsibility and authority to student-physicians because they fear malpractice litigation, either because the student might make a mistake, or because the patient may initiate a suit in retaliation for what they perceive as less than optimal care.

Gaensbauer & Mizner (1980) have also shown one of the major skills third and fourth year medical students need to have or to learn is how to be assertive in seeking and assuming responsibility for patients' welfare on clinical rotations. Another possible impact of the malpractice crisis on students themselves is they are more conflicted about asking for clinical responsibility from supervising physicians. If either of these effects of the malpractice crisis has occurred, they may

be more apparent in specialties which are at high risk for suit. The fifth hypothesis to be tested in this study is:

5. Students who have completed rotations in high-probability-for-suit specialties will be more likely to agree that physicians are less willing to allow students to assume responsibility for patients, and more likely to agree that they are themselves less assertive in asking for clinical responsibility, than students who have not completed rotations in high-probability-for-suit specialties.

Beliefs About Professional Practice Changes

A further area of investigation involves students' beliefs about the impact of the malpractice problem on the practice of medicine and the delivery of medical services. There is a twofold purpose to this part of the survey. First, it will serve as an indication of how aware medical students are of the malpractice problem, and of its impact on the professional lives of practicing physicians. One could hypothesize that students who have had more opportunities to interact with practicing physicians and medical faculty, especially with physicians in high-probability-for-suit specialties who would be most concerned about malpractice litigation, would have greater awareness of the extent and the impact of the malpractice problem. This reasoning is based on the pilot data which revealed that practicing physicians, medical faculty, and professional journals were major sources of information for medical students about malpractice litigation. The sixth hypothesis to be tested in this study is:

6. Advanced students, students with one or more family members who are practicing medicine, and students who have completed clinical rotations in high-probability-for-suit specialties will be more likely to attribute recent changes in the cost, availability, and delivery of medical services to increasing malpractice litigation than beginning students, students without a family member who is practicing medicine, and students who have not completed rotations in high-probability-for-suit specialties.

A second purpose of this part of the survey is to give some indication of whether medical students are optimistic, pessimistic, or have mixed feelings about the occurrence and threat of malpractice litigation. For example, the students may view the current crisis more positively, as having a beneficial impact on doctor-patient relationships and increasing the availability of quality medical care, or they may have opposite views. Anecdotal accounts suggest medical faculty as a whole may be less concerned about the detrimental impact of malpractice litigation on the quality and availability of medical care than physicians directly involved in the delivery of these services. Students who have had more direct contact with service providers, such as students who have begun their clinical rotations and students who have immediate family members who practice medicine, may therefore have stronger opinions about the impact of malpractice litigation. Insufficient data is available for hypothesizing about specific differences in this area.

Perceptions Of High-Risk-For-Suit Patients

Finally, the survey will gather data about what kinds of patients medical students believe are more likely to sue physicians for malpractice. Preliminary data pertinent to this issue was gathered from the sample of students surveyed in the pilot study. The purpose of including a similar section in the present survey is to document the patient characteristics medical students consistently associate with the threat of malpractice litigation.

Differences Between Students At Different Schools

Because medical and legal resources are more concentrated in large urban areas, there is reason to believe that the increasing incidence of malpractice litigation is a greater problem for physicians in larger cities, compared with physicians in less populated urban and rural areas. The School of Medicine at Southern Illinois University was selected for this survey in part because it is located in a much smaller urban setting than the University of Illinois at Chicago. While differences in the nature or extent of the malpractice litigation problem in large cities compared with smaller urban and rural areas is not a focus in this study, the data collected will be analyzed to determine if there are significant differences in the attitudes and reactions of students at the different medical schools.

CHAPTER III

METHOD

Participants

The sampling procedure used in this survey is called two-stage sampling. First, a sample of two schools was chosen from the medical schools in Illinois. The schools chosen were the School of Medicine at the University of Illinois at Chicago, and Southern Illinois University School of Medicine. Next, medical students at each university were stratified into their respective class levels, one through four. This procedure was followed to examine the impact of the threat of malpractice litigation on medical students at different stages of training. The respondents' sex was also thought to be a potentially important variable in interpreting the results of the survey. An effort was made to include enough males and females from each class so that any effects of sex of respondent could be systematically examined. Every student (within a particular class at a selected medical school) had the same probability of being chosen for the final sample.

The final sample consisted of 30 males and 30 females from each class year at each medical school, except for the third and fourth year classes at the University of Illinois at Chicago School of Medicine, from which 35 males and 35 females were selected. A total of 500 questionnaires were distributed. A sample of 500 seemed reasonable from a

cost analyses perspective, and from a data analysis point of view. The current research design had 16 cells: that is, two schools, by four classes, by sex. Statistical convention suggests for the results to be accurate estimators each cell should contain absolutely no less than 12 cases, and preferably no less than 20. With a sample of 500, it seemed reasonable to expect that 20 cases (i.e. completed and returned questionnaires) could be obtained for each cell. An overall response rate of 66%, including follow-up mailings, was needed to collect the preferred 20 case per cell minimum.

An additional 5 questionnaires were distributed to both males and females in the third and fourth year classes at the University of Illinois because it was suggested that response rates at this university were typically lower than at the other university. The additional questionnaires were distributed to third and fourth year students because previous research indicates response rates are lower among advanced as compared with beginning medical students (Heubner et al., 1981, Bashhook & Weisman, 1981).

Assessment Instrument

The survey used in this study contained only questions that would allow students' attitudes and concerns regarding malpractice litigation to be expressed. One implication of using a project-specific self-report instrument is that the reliability and validity of the results is open to question.

The questionnaire totaled 16 pages in length. It was divided into 7 distinct sections. Sections I through VI (pages 3 through 10) meas-

ured the impact of the malpractice crisis on medical students' thinking and behavior using a 4 or 5-point Likert scale. High scores on this scale reflect a greater amount of disagreement, and low scores reflect a greater amount of agreement. (See Appendix A for a copy of the questionnaire).

Section I of the questionnaire assessed medical students' beliefs about the relative frequency with which physicians in different specialties and subspecialties are sued. Eleven specialty categories were included on the basis of being the most practiced specialties by the membership of the Chicago Medical Society. Students were asked to use a 4-point Likert scale ranging from "Very Low Probability" to "Very High Probability" to rate each specialty.

Section II of the questionnaire assessed students' beliefs about which physicians get sued and why. The attributes of physicians focused on in this section of the questionnaire were: amount of experience, amount of knowledge, and presence or absence of negligence in the practice of their specialty.

Section III of the questionnaire assessed the cognitive, affective, and behavioral responses of students to the threat of malpractice litigation. This section contained 12 statements designed to see how often students think about malpractice, how the threat of malpractice has influenced their thinking about continuing to study and train for a career in medicine, about which specialty to choose, and where to practice.

Section IV of the questionnaire was for advanced students who had

begun their clinical rotations and had had some direct patient contact. The three statements in section IV investigated what impact the malpractice crisis has had on the practicum training opportunities available to student-physicians. The critical issue focused on was clinical responsibility for the welfare of patients; the students' willingness to be assertive in asking for it, and supervising physicians' willingness to allow students to assume it.

In section V of the questionnaire students were asked to rate their agreement or disagreement with 19 statements that listed professional practice changes linked with the increasing rate of malpractice litigation. Three of the statements in section V were included as measures of internal consistency to assess the reliability of the students' responses to items.

In section VI of the questionnaire students expressed their agreement or disagreement with 10 patient characteristics students in the pilot study suggested are associated with patients who are more likely to sue for malpractice. Some of these patient attributes included unrealistic expectations for cure, belief in a right to perfect health, previously sued a physician for malpractice, psychological problems, and other health care providers.

The final section of the questionnaire collected demographic data: year in medical school, sex, number of immediate family members currently practicing medicine, number of physicians known personally who have been sued for malpractice, most preferred specialties, least preferred specialties, and clinical rotations already completed or pres-

ently training in.

Following section VII there was a short thank you note, and a reminder about what students should do if they wished to receive a copy of the results. Finally, students were given an opportunity to write down any questions they may have about the survey on the remaining 4 blank pages of the questionnaire.

Total Design Method

Since its publication in 1978 the Total Design Method (TDM) has become the standard for conducting mail and telephone surveys, (Dillman, 1978). The extensive use of the TDM derives from its prescription of virtually every detail for constructing and implementing mail and telephone surveys. The TDM has consistently yielded response rates over 60%.

The TDM is based on the social exchange theory of mailed questionnaire behavior (Berkowitz & Walster, 1976). Social exchange theory suggests that the actions of individuals are motivated by the return these actions are expected to bring. All persons attempt to keep their costs below the rewards they expect to receive. According to social exchange theory, there are three things that can be done to maximize survey response: minimize the costs for responding, maximize the rewards for doing so, and establish trust that the rewards will be delivered.

At present no study has been reported in which the TDM was used to survey a population composed entirely of medical students. Furthermore, it is apparent that response rates of medical students to mailed questionnaires differ significantly across studies and across class levels,

with beginning classes having higher response rates than advanced classes. Response rates for first and second year students have been about 60% (Levin & Franklin, 1984; Edwards & Zimet, 1976). Response rates for third year students have generally been lower, (Huebner et al., 1981), and response rates for fourth year students have typically been significantly lower than any of the other classes, (Bashhook & Weisman, 1981).

Procedure

Construction Of The Survey

The selection of a mailed questionnaire as the method of survey research in this study was a function of both practical limitations in the realm of personnel and expense as well as the feasibility of obtaining meaningful and useful results in an exploratory investigation. Advantages that incur automatically with the use of mailed questionnaires are the increased likelihood that social desirability bias and interview distortion can be avoided, and the ease with which respondents can be located to obtain representative samples. The chief disadvantage of using mailed questionnaires is that obtaining an adequate response rate is more difficult using this method compared with face-to-face or telephone interviews. Other disadvantages include the problem of controlling contamination caused by respondents consulting with each other or other sources, and the problem of detecting unknown bias from nonrespondents.

Open-ended questions are generally viewed as very demanding and can contribute to a significantly lower response rate. The pilot study

was used in part to develop "categories" for these open-ended questions so all the information could be gathered using close-ended questions in the final survey. The content of the pilot questionnaire items was developed primarily from the investigator's previous research concerning malpractice litigation among practicing physicians, and from the literature on medical education and the medical training process. In addition, consultation with medical educators and medical administrators prior to the pilot study resulted in the addition of other items relevant to the impact of malpractice litigation on medical students.

Following an analysis of the results of the pilot study a first draft of the questionnaire was constructed using the TDM formula. Items the pilot study revealed to be confusing, irrelevant, biased, ambiguous, or threatening were eliminated or reworded. Next, this version of the questionnaire was evaluated by a group of volunteer medical students from each class at one of the participating universities. Students from each class gave the investigator feedback about the content and the format of the questionnaire, including information about the timing of the survey, about the advantages and disadvantages of completing and returning the survey, about ways to increase the salience of the survey topic, and about many of the important features of survey construction and implementation. One question was eliminated because it was viewed as confusing and redundant. Several of the instructions were clarified and shortened. Successive sections of the questionnaire were more clearly differentiated. A cover design suggested by one of the students was substituted for the original one. Finally, the ordering of the para-

graphs in the cover letter was changed to make this letter more readable. Next, a revised draft of the questionnaire was prepared and submitted to the investigator's committee members and to the deans of the participating medical schools for final review, and appropriate revisions were made.

Implementing The Survey

The Cover Letter

A personalized cover letter individually signed by the investigator was attached to each questionnaire. The primary purpose of the cover letter was to give a reasonable explanation of the survey topic and to increase the salience of this topic. The crucial importance of the completion and return of each questionnaire was also emphasized. To prevent one possible source of contamination, respondents were urged not to discuss the questions or their responses with anyone until after they had completed the survey. Confidentiality and anonymity were explained, as was the purpose of the identification number on each survey. An attempt was made to emphasize the simplicity and ease with which the questionnaire could be completed and returned, while at the same time emphasizing the usefulness of the study to the individual students. A copy of the results was also made available to all interested students. (See Appendix A for a copy of this cover letter).

The First Mailing

A first mailing containing the cover letter, the questionnaire,

and a preaddressed, postage-paid return envelope was sent to the home addresses of the entire sample on September 23, 1985. This date was convenient for all four classes at each medical school because any conflicts with classroom examinations, board examinations, and internship and residency site visitations were avoided. The mailing was sent directly to the students' homes instead of being placed in their mailboxes on campus because: (1) it reduced the ethical risks by eliminating a potentially coercive procedure, (2) the students thought that receiving the survey in a university setting would automatically lead students to associate the project with university administrators, and this association would have a negative impact on the overall response rate, and (3) fourth year medical students are very unlikely to respond to any questionnaire placed in their university mailboxes because they check their mailboxes very infrequently.

The First Follow-Up: A Reminder Postcard

Exactly one week after the first mailing a postcard was sent as a thank you for those who had already returned their questionnaire, and as a reminder to those who had not. The vital importance of each completed and returned survey to the success of the study was again emphasized. (See Appendix A for a copy of this postcard).

The Second Follow-Up: A Second Mailing

Exactly three weeks after the original mailing a second cover letter and a replacement questionnaire was sent to all nonrespondents. This cover letter was much shorter than the second one. It informed the

nonrespondents that their questionnaire had not been received, reiterated the usefulness of the study, and again emphasized the need for a high return rate. (See Appendix A for a copy of this second cover letter).

Deviations From The Total Design Method

The procedure followed in the present study differed from the recommended TDM in that no third follow-up was included. Previous research shows that this third follow-up has raised response rates an average of 13%.

CHAPTER IV

RESULTS

Description Of The Sample

Of the 348 respondents, yielding an overall response rate of 72.2%, 51.9% were from the University of Illinois, and 48.1% were from Southern Illinois University. The breakdown for first, second, third, and fourth year students was 22.1%, 29.9%, 24.1%, and 23.6% respectively. Males made up 55% of the respondents, while 45% were female. Both the median and the modal age was 24 years, with a range from 20 to 38 years, and the large majority (87%) falling between 21 and 28 years of age. A nearly equal number of students responded to each of the three mailings, (35.4%, 34.3%, and 30.3%).

The specialties the students said they were most likely to practice were internal medicine (23.9%), family practice (22.5%), and pediatrics (12.4%). The specialties the students said they were least likely to practice were surgery (28.2%), obstetrics/gynecology (14.7%), and psychiatry (14.1%). Among the respondents, 19.3% had at least one family member currently practicing medicine. Forty-eight percent of the respondents knew personally at least one physician who had been sued for malpractice.

Beliefs About The Relative Probability Of Suit
In Different Specialties

The students clearly believe that there are three specialties in which physicians are significantly more likely to be sued for malpractice: (1) obstetrics/gynecology, (2) surgery and its subspecialties, and (3) anesthesiology. About two-thirds of the students rated obstetrics/gynecology (71.6%) and surgery (64.7%) as "very high probability" for suit specialties, and about half of the students rated anesthesiology (49.6%) as a "very high probability" for suit specialty. None of these three specialties differed significantly from each other in terms of the students' beliefs about the relative frequency of suit in each, while all three of these specialties differed significantly from every other specialty ($p < .001$). The t values for these 24 pairwise comparisons ranged from a low of $t(348)=12.52$ for the comparison between anesthesiology and neurology to a high of $t(348)=37.51$ for the comparison between surgery and its subspecialties and dermatology. On the scale from very low probability of suit (1) to very high probability of suit (4), the mean ratings for these three specialties were OB/GYN ($\underline{M}=3.65$), surgery ($\underline{M}=3.61$), and anesthesiology ($\underline{M}=3.44$). The next highest rating was for neurology ($\underline{M}=2.68$). Students' ratings of the relative probability of suit in different specialties are reported in Table I.

TABLE I

Ratings For Relative Probability Of Suit (N=348)

| <u>Specialty</u> | <u>Mean</u> | <u>% rating high or very high probability</u> | <u>Category</u> |
|----------------------------|-------------|---|-----------------------|
| OB/GYN | 3.65 | 91.4 | Very High Probability |
| Surgery/ Subspecialties | 3.61 | 94.3 | Very High Probability |
| Anesthesiology | 3.44 | 88.8 | High Probability |
| Neurology | 2.68 | 53.5 | High Probability |
| Internal Medicine | 2.56 | 49.1 | High Probability |
| Pediatrics | 2.39 | 37.7 | Low Probability |
| Ophthalmology | 2.34 | 39.3 | Low Probability |
| Radiology | 1.98 | 18.9 | Low Probability |
| Family Practice | 1.98 | 17.6 | Low Probability |
| Psychiatry | 1.57 | 7.2 | Low Probability |
| Dermatology | 1.49 | 5.4 | Very Low Probability |

a = Scale values: (1) Very Low Probability, (2) Low Probability,
(3) High Probability, (4) Very High Probability

b = midpoints between scale values determine category intervals

The results support the first hypothesis that general surgery and surgical subspecialties such as neurosurgery and orthopedic surgery, OB/GYN, and anesthesiology would show a greater tendency to be rated as high-probability-for-suit specialties.

When compared with beginning students (first and second year) advanced students (third and fourth year) were significantly more likely to rate OB/GYN as a "very high probability" for suit specialty, $t(343)=5.78$, $p < .001$. T-tests revealed that there were no significant differences between male and female students, or between students at the two universities, in their ratings of the relative probability of suit in any of the 13 specialties.

The Role Of The Physician's Knowledge And Experience In Preventing Malpractice Suits

Over 90% of the students believe that the rate of malpractice suits in the medical profession does not accurately reflect the actual incidence of malpractice. Similarly, 74.6% of the students agreed that physicians not guilty of negligence in their practice are still likely to be sued for malpractice. A greater proportion of students (55.7%) agreed that less knowledgeable physicians were more likely to be sued than agreed that less experienced physicians were more likely to be sued (42.7%).

A summary variable called "attribution of physician responsibility" was constructed from some of the statements used in section II of the questionnaire which was concerned specifically with students' judgments about how much of the increasing incidence of malpractice litiga-

tion is attributable to lack of experience, lack of knowledge, and negligence of sued physicians. This variable was constructed by first selecting the statement "less experienced physicians are more likely than their more experienced colleagues to be sued for malpractice" on the logical basis that the students' responses to this statement would best measure attribution of responsibility to physicians. Next, a multiple regression analysis was performed, and two other statements in section II were selected to form the summary variable. The statements used to construct the summary variable were the items numbered 1, 2, and 3 in section II of the questionnaire. Cronbach's alpha, a measure of the internal consistency of these items, was .773.

The second hypothesis concerned differences in judgments of physician responsibility between beginning and advanced students, and between advanced students who planned to enter high-perceived-probability and low-perceived-probability-for-suit specialties, as they were identified in this study. Examining differences in the summary variable "attribution of physician responsibility" among these groups would presumably be one way of measuring both the impact of clinical training with physicians at high risk for suit, and the impact of knowing one's preferred specialty is a high-risk-for-suit specialty, on students' judgments about why physicians get sued.

Oneway analysis of variance tests revealed that there were significant differences between the four class levels in their willingness to believe that the increasing incidence of malpractice litigation is a result of negligence among physicians, $F(3)=4.067$, $p<.001$. Planned com-

parison t-tests revealed that first and second year students when compared with third and fourth year students were significantly more likely to judge that the lack of knowledge, lack of experience, and negligence of sued physicians are significant reasons for the increasing incidence of malpractice litigation, $t(343)=3.07$, $p < .002$. These results clash with the hypothesis that advanced students, because the threat of a malpractice suit is somewhat more imminent to them, would show a greater tendency to believe a malpractice suit could not happen to them as long as they were not negligent in their practice. These results suggest that some students over the course of their training go through a change in attitude from equating a malpractice suit with negligence to believing that physicians often get sued even when they have not been negligent in their practice.

Advanced students who plan to enter a high-perceived-risk-for-suit specialty ($N=30$, 17.4%) are significantly less likely to attribute the increasing incidence of malpractice litigation to the lack of experience, lack of knowledge, or negligence of of sued physicians, than are advanced students who plan to enter low-perceived-risk-for-suit specialties, $t(164)=2.56$, $p < .011$. Southern Illinois students were significantly more likely to agree that less knowledgeable, less experienced, and negligent physicians are at higher risk for being sued, than were students at UIC, $t(344)=3.05$, $p < .002$. Older students, age 27 or older, were significantly more likely than younger students to believe that physicians who are not negligent in their practice often get sued for malpractice, $t(345)=2.24$, $p < .026$. There was no difference between the

sexes in beliefs about whether less experienced, less knowledgeable, and negligent physicians are more likely to be sued for malpractice.

Awareness Of The Impact Of The Malpractice
Litigation Problem

The overwhelming majority of the medical students studied are aware that increasing rates of malpractice insurance premiums have led to high costs for health insurance and health care (97.1%), and that a greater number of physicians are practicing defensive medicine (88.8%). A clear majority of students also believe the personal and professional lives of physicians are damaged even if they are acquitted of a malpractice charge (82.5%), and over 73% of the students agreed there is more unhappiness and pessimism in the medical profession, and that fewer physicians are entering private practice, as a result of increasing malpractice litigation.

About half of the students surveyed believed some physicians have stopped performing certain high-risk procedures, and over 42% of the students believed physicians have stopped treating certain patients who are identified as high-risk patients for malpractice litigation. Also, over 33% are aware that physicians are retiring earlier. A related question shows that 51% of the students believe that overall, for some specialties in some geographical areas, there is less competent medical care available to the consumer as a result of the increasing threat and occurrence of malpractice litigation. Table II summarizes students' knowledge and awareness of the impact of increasing malpractice litigation.

It is interesting to note that, although many more students believe that the malpractice problem has contributed to a deterioration in the doctor-patient relationship (51.5%) rather than to an improvement in that relationship (12.4%), many more students believe that overall, the malpractice crisis has resulted in a higher quality of medical care available (49.7%), rather than a lesser quality (8.9%).

TABLE II

Awareness Of The Impact Of Malpractice Litigation (N=348)

| <u>Item</u> | <u>% Agreeing</u> | <u>% Disagreeing</u> |
|---|-------------------|----------------------|
| Higher costs for insurance and health care. | 97.1 | 2.3 |
| Physicians practicing defensive medicine. | 88.8 | 4.3 |
| Damage to physician even if acquitted. | 82.5 | 6.9 |
| Deterioration of the doctor- patient relationship. | 51.5 | 23.5 |
| Physicians stopped high-risk procedures. | 50.9 | 17.5 |
| Less competence available in some specialties. | 50.9 | 29.6 |
| Higher quality of medical care available. | 49.7 | 28.2 |
| Physicians refusing to treat patients. | 42.8 | 18.1 |
| Physicians retiring earlier. | 33.3 | 11.2 |

A summary variable was constructed from the statements numbered 1, 2, 3, 6, and 10, in section V of the questionnaire as a measure of the extent of students' awareness of the impact of the malpractice litigation problem. Cronbach's alpha for the set of items selected for this summary variable was .748. A third hypothesis of this study was that (1) advanced students, (2) students with one or more family members who are practicing medicine, and (3) students who have completed clinical rotations in specialties with a high perceived probability for suit, will be more likely to believe that increasing incidence of malpractice litigation is having an impact on the cost, availability, and delivery of medical services.

Oneway analysis of variance tests revealed that there were significant differences among the four class levels in their awareness of the impact of the malpractice litigation problem, $F(3)=7.302$, $p < .001$. Planned comparison t-tests revealed that third and fourth year students were significantly more likely than first and second year students to be aware of these changes, and to attribute them to the increasing incidence of malpractice litigation, $t(343)=3.83$, $p < .001$. Medical students' knowledge of the impact of malpractice litigation on the personal and professional lives of physicians, and on the structure of medical services, increases throughout medical school, so that students gain a greater awareness of malpractice-related issues.

Students who had spoken with at least one sued physician ($N=170$) about malpractice-related issues were more knowledgeable about changes in professional practice related to the increasing incidence of malpractice

litigation than were students who had not spoken with a sued physician. This difference was very nearly significant, $t(346)=1.90$, $p < .058$. A t-test showed there was no significant difference between advanced students who had and those who had not completed at least one rotation in a high-perceived-probability- for-suit specialty. It appears that by the time students reach their third and fourth year in medical school their knowledge and awareness about the impact of malpractice litigation is uniformly great enough to overshadow any differences that might arise from variability in rotations completed.

There were no differences in knowledge of the impact of increasing malpractice litigation for males and females, for students at different universities, or for students at different universities when each class was looked at separately.

Personal Reactions To The Malpractice Litigation Problem

Over 37% of the students said they had been advised by a physician to reconsider their choice of medicine as a career because of the increasing incidence of malpractice litigation. Many students (54.6%) said that their choice of specialty was influenced by their judgment of the relative probability of suit in different specialties, and an even greater number of students (61.2%) said that their choice of specialty was influenced by their awareness of malpractice insurance costs in various specialties. In a related question, 52% of the students said that they believed some students were choosing alternative specialties in response to the growing malpractice litigation problem. About 20% of the students said that they have had thoughts of having chosen the wrong

profession because of their awareness of the malpractice problem. Fifty-five students (16.7%) said they were more hesitant to go into practice, and 10.9% of the students said it was more difficult for them to commit themselves to medicine as a career.

About 19% of the students said they had not thought very much about the malpractice problem. One-third of the students said they had given more thought to practicing in a non-urban area. While 61% of the fourth year students said they had been taught how to reduce the risk of a malpractice suit, only 9% of them said they had been taught how to cope with the stress of a malpractice suit. Table III summarizes students' personal reactions to the current malpractice crisis.

TABLE III

Personal Reactions To The Malpractice Problem (N=348)

| <u>Item</u> | <u>% Agreeing</u> | <u>% Disagreeing</u> |
|--|-------------------|----------------------|
| Considered insurance costs in choosing specialty. | 61.2 | 28.5 |
| Considered probabilities of suit in choosing specialty. | 54.6 | 31.3 |
| Students are choosing alternative specialties. | 52.0 | 8.1 |
| More thoughts about non-urban practice. | 32.5 | 38.8 |
| Not thought much about malpractice. | 19.8 | 69.5 |
| More thoughts about having chosen the wrong profession. | 19.0 | 71.1 |
| More hesitant to practice medicine. | 16.7 | 75.6 |
| More difficult to commit medicine as a career. | 10.9 | 78.8 |

A summary variable was constructed from the statements numbered 1, 3, 4, 6, 7, 8, and 9 in section III of the questionnaire. Concern about malpractice, as it is operationally defined in this study, is a measure of the degree and extent of the students' personal reactions to the malpractice problem. It is a measure of how much the students are reacting to and being affected by the problem. Cronbach's alpha for the items in this summary variable was .790. A fourth hypothesis in this study was that advanced students, students who plan to enter high-perceived-risk-for-suit specialties, and students who have completed at least one rotation in a high-risk-for-suit specialty will show a greater tendency to have thought about and be "concerned" about the threat of malpractice litigation.

Oneway analysis of variance tests revealed that there were significant differences between the four class levels in their expressed concern about the increasing incidence of malpractice litigation, $F(3)=4.612$, $p<.004$. Planned comparison t-tests revealed that advanced students were not, when compared with first and second year students, significantly more concerned about the malpractice litigation problem. Subsequently, the class means were examined, and post-hoc comparisons were computed to identify the differences in concern about malpractice litigation among the classes. As expected, first year students were the least concerned ($\underline{M}=3.79$). Second year students were significantly more concerned than first year students ($\underline{M}=3.35$), $t(179)=2.55$, $p < .011$. Third year students, although their mean level of concern was greater than that of second year students ($\underline{M}=3.25$), did not differ significantly

from second year students. Fourth year students however ($\underline{M}=3.60$), were significantly less concerned about the malpractice problem than third year students, $\underline{t}(176)=2.571$, $\underline{p}<.010$. Concern about malpractice seemed to peak during the third year, and diminish thereafter, to a level not significantly different from the amount of concern experienced by first year students.

Because this was an unexpected pattern, analyses of variance tests were used to further examine the pattern of "concern about malpractice litigation" across the four classes at each medical school. These results showed that at SIU there were not significant differences in concern among the four classes, $\underline{F}(3)=1.544$, $\underline{p}<.205$; however, at UI there were significant differences in concern among the four classes, $\underline{F}(3)=3.376$, $\underline{p}<.019$. Post-hoc comparisons were computed to clarify the pattern of concern about the increasing incidence of malpractice litigation across the four classes at each university. Concern about the malpractice problem increased with a trend toward significance from year 1 to year 2 at both universities, $\underline{t}(69)=1.925$, $\underline{p}<.056$ at Southern Illinois University, and $\underline{t}(108)=1.72$, $\underline{p}<.086$ at the University of Illinois. A similar trend toward a significant increase in concern about the threat of malpractice occurred between second and third year students at the University of Illinois, $\underline{t}(110)=1.699$, $\underline{p}<.094$. At Southern Illinois, concern about the threat of malpractice litigation remained constant from year 2 to year 3. Fourth year students at the University of Illinois, compared with third year students, showed a significant decrease in measured concern about the threat of malpractice litigation,

$t(173)=2.266$, $p < .025$. A similar trend toward a significant decrease in concern occurred between third and fourth year students at Southern Illinois University, $t(57)=1.962$, $p < .081$.

Overall, Southern Illinois students were significantly more concerned than University of Illinois students, $t(344)=2.89$, $p < .004$. While measured concern about the increasing incidence of malpractice litigation is essentially equal for third year students at the two universities, there are significant differences in concern about the increasing incidence of malpractice litigation between U of I and SIU students during the first and second year, $t(74)=2.010$, $p < .048$, and $t(102)=2.548$, $p < .012$. In addition, fourth year students at SIU, with a trend toward significance, tended to be more concerned about the increasing incidence of malpractice litigation than were fourth year students at the University of Illinois, $t(79)=1.829$, $p < .062$.

Additional t-tests revealed there were no significant differences in measured concern about malpractice litigation between younger (26 years or less) and older students, between advanced students who planned to enter high-perceived-risk-for-suit specialties and those who planned to practice other specialties, nor was there any significant difference between advanced students who had completed a rotation in a high-perceived-risk-for-suit specialty and those who had not. Students' general alarm about malpractice seems to resemble their knowledge or awareness about the problem, at least for advanced students, in that neither of these attitudinal dimensions is significantly influenced by the students' particular preferred specialty, or by having completed a rotation

in a high-perceived-risk- for-suit specialty.

Male students showed significantly more concern about the malpractice problem than female students, $t(344)=1.99$, $p < .048$. Additionally, students who had personal contact with at least one sued physician were significantly more concerned, $t(346)=2.11$, $p < .035$.

A fifth hypothesis was that second and third year students would be more likely to agree that they are having difficulty than first and fourth year students making a firm commitment to medicine because of the threat of malpractice litigation. A t-test confirmed this hypothesis, $t(343)=2.11$, $p < .036$. Third year students were most likely to agree they were having difficulty making a firm commitment to medicine ($M=3.92$), and second year students were the next most likely to agree ($M=4.04$).

A final hypothesis was that students who have completed rotations in high-perceived-risk-for-suit specialties will be more likely than students who have not completed a rotation in a high-risk-for-suit specialty to agree that physicians are less willing to allow students to assume clinical responsibility for patients because of the threat of malpractice litigation. Over 42% of students who had begun their clinical training believed some physicians were more hesitant to allow them to assume clinical responsibility because of the malpractice threat. Contrary to prediction however, advanced students who had completed a rotation in a high-perceived- risk-for-suit specialty ($N=130$) did not differ from advanced students who had not in their beliefs about physicians' hesitancy to allow students to perform clinically relevant proce-

dures during practicum training.

Beliefs About Patients At High Risk For Suit

The overwhelming majority of students believed patients with unrealistic expectations for cure (88.2%) and patients who had previously sued a physician for malpractice (83.9%) were more likely to sue for malpractice than were other types of patients. Many students, 60.9%, believed patients who are lawyers or are closely related to lawyers are higher risks for malpractice litigation relative to other types of patients. An equally large number of students believed urban patients were more likely to sue. About the same number of students who believe that patients with fewer resources (i.e. money, education) are more likely to sue (35.3%), believe patients with relatively more resources are more likely to sue (36.8%).

CHAPTER V

DISCUSSION

Impact On Choice Of Specialty

These results strongly suggest that students may be deciding not to practice medicine in high-risk-for-suit specialties such as obstetrics/gynecology and surgery and its subspecialties. An important potential consequence of this process is that if students are deciding not to practice these high-perceived-risk-for-suit specialties now, there could be a shortage in the availability of care in these specialties in the future. Medical students' decisions not to practice high-risk-for-suit specialties may already be compounding the problem of shortages of available care in these specialties in some geographical regions, as a result of physicians having limited or stopped their practices.

The results suggest that advanced students who plan to enter a high-perceived-risk-for-suit specialty are significantly less likely to attribute the increasing incidence of malpractice litigation to the negligence of sued physicians. From the standpoint of being prepared to deal with the stress of a potential malpractice suit, this attitudinal difference may have adaptive value. The students who think they are likely to be sued most frequently in the future are the students who, as they are nearing the completion of medical school, are least likely to believe that being sued is an affront to their clinical competence.

This attitudinal posture, if it holds up through internship and residency training, may serve a protective function for students who enter high-perceived-probability-for-suit specialties by making them less vulnerable to the anxiety, depression, and self-criticism that occurs when physicians believe they have failed at their professional pursuits.

Further investigation of the impact of the malpractice litigation problem on medical students' choice of specialty is needed. Although some students in this survey stated directly in the section of the questionnaire reserved for comments that they had chosen an alternative to a high-risk-for-suit specialty because of the malpractice litigation problem in that specialty, more information is needed to learn how many students are choosing not to enter these specialties and subspecialties. This information, and information about the characteristics of the students who are avoiding these high-risk-for-suit specialties is needed before any conclusions about potential shortages in availability of quality care can be made.

As follow-ups to this study, the possibility that these high-perceived-risk-for-suit specialties are becoming undesirable or unwanted specialties can be examined in two ways. First, in April of 1987 the specialty choices declared by the graduating classes at these two universities can be compared with the choices of other graduating classes in recent years. Second, the specialty choices indicated by the respondents in the first, second, and third year classes can be compared with the choices these students actually declare in their graduating year.

If a significant number of medical students are deciding not to practice in these high-perceived-risk-for-suit specialties, then there should be a trend that shows a lesser percentage of students in successive graduating classes are applying for residencies in these specialties. The second follow-up study can determine if a significant number of students changed their decision about which specialty to practice during medical school, and if so, in which specialties did these changes occur.

Differences In Beliefs Among Urban And Rural Students

Medical students at Southern Illinois University felt they would have more control over preventing malpractice suits against them through acquisition of clinical knowledge and experience, and they had stronger reactions to the information they were hearing and reading about the increasing incidence of malpractice litigation than did students at UIC medical school. It makes sense that if students at SIU feel more responsible for any litigation that might be brought against them, they would also be more reactive to and disturbed by news of the growing incidence of malpractice litigation. One implication of these findings may be that students at SIU will be more vulnerable to the stress of being sued and, therefore, that they may be more likely to experience the somatic and psychiatric symptoms physicians commonly experience in response to being sued.

These differences between SIU and UIC students in "attribution of responsibility" for malpractice litigation and in "concern about increasing incidence of litigation" cannot be accounted for by differ-

ences in their knowledge about which specialties are being most affected, or by differences in their knowledge of the impact of the malpractice problem on the personal lives and professional practice of physicians. Furthermore, an equal percentage of students from each university said they had spoken with sued physicians about malpractice litigation. One of the questionnaire items that made up the summary variable "concern about increasing incidence of malpractice litigation" was a statement asking students if they are likely to choose to practice medicine in a non-urban setting to reduce the risk of being sued. There was a larger difference between students at SIU and students at UIC in their responses to this item of the summary variable than in response to any of the other items that were a part of the summary variable. It may be that SIU students have greater opportunity to practice in non-urban settings since they receive more of their training in these settings. Therefore, part of the difference in "concern about litigation" between SIU and UIC students may have been a result of the different geographical locations of the two universities. Including this item in the summary variable may have introduced some bias in the variable.

Although the difference between SIU and UIC students on the summary variable "concern about increasing incidence of litigation" is still significant when the item about choosing to practice in a non-urban setting is removed from the equation, the idea of possible biases in some of the measures used in this survey is one important limitation of the study. It may be that UIC students are having equally strong cognitive, emotional, and behavioral reactions as are SIU students to infor-

mation they receive about the increasing incidence of malpractice litigation, and that questions or statements other than those included in the present survey would more accurately measure their reactions. Interviewing students from these and other urban and rural medical schools would be a useful way of gathering more detailed information about the psychological and behavioral reactions of medical students to the malpractice litigation crisis, and of increasing the validity of the data collected in this study. It was not possible to tell from examination of the questionnaire statements making up the variable "attribution of responsibility" what factors account for the tendency for students from SIU to hold physicians more personally responsible for increasing incidence of malpractice litigation. One possibility is that the students at SIU receive different information about malpractice litigation in their classrooms and seminars than do the students at the U of I. An interview study could also help generate some hypotheses about this apparent tendency for students from rural medical schools to believe they can rely more upon their clinical knowledge and experience to protect them against malpractice litigation.

Impact On Sense Of Responsibility For Regulating
Standards Of Care

The students have mixed feelings about the overall impact of the increasing incidence of malpractice litigation. Most students feel that in most specialties and in most geographical regions the increasing incidence of malpractice litigation has contributed to a higher quality of medical care available to consumers than was available before malp-

ractice litigation began to increase consistently. It would be interesting to question students directly about how they have concluded increased incidence of malpractice litigation has led to a higher quality of medical care. It may be that students believe the threat of malpractice litigation impels physicians to read more literature and attend more continuing education conferences in their efforts to further reduce the risk of suit being brought against them, and that as a result physicians provide better services to consumers. If this hypothesis is true for a significant number of students, then some questions arise concerning the extent to which medical students learn to value self-regulation of their profession. The most reasonable and most reliable safeguard of the quality of care given to patients has always been the gradual process students go through over the course of their training and development of identifying themselves with the moral, ethical, and professional values of their mentors. It seems possible that students are beginning to develop the belief that a major reason to be accountable for one's actions is coming from outside the profession, from the threat of malpractice litigation. The practice of defensive medicine by physicians, and the teaching of defensive medicine by medical educators (Siden, Ticho, & Kopnick, 1986), both have potential for undermining the students' sense of personal responsibility for determining and promoting high standards of care. On the other hand, representatives of both national and state medical associations, as part of their response to the malpractice litigation problem, have increased their efforts toward self-regulation of the profession by calling for physicians in all

localities to become active in establishing and disseminating clear standards for quality care (Board of Trustees Report, 1986). Further investigation is needed to determine whether this "higher quality of care" students associate with the increasing incidence of malpractice litigation is something students feel good about, and is something that enhances the esteem they receive from their professional identity, or whether it is something that sets up an adversarial relationship with patients and diverts attention from the need for internal quality control.

Impact On Attitudes Towards Patients

Although most students feel the increasing incidence of malpractice litigation has led, overall, to a higher quality of care available, an equal number of students also believe it has resulted in a decrease in the competent care available in some specialties and geographical regions, and that it has significantly strained the doctor-patient relationship. The students' belief that one consequence of the malpractice litigation problem has been a reduction in the services available in some specialties and locations agrees with both (1) physicians' self-reports and (2) reports recently released by the United States General Accounting Office (USGAO report, 1985).

The perception of a strained doctor-patient relationship may mean that students are going to be beginning their practices with less positive attitudes toward their patients. The results of this study suggest that the enthusiasm, idealism, and benevolence that young physicians typically feel in their approach to patients (Becker et al., 1961), may

increasingly be qualified by reluctance, disillusionment, and anxiety because of the fear of malpractice litigation. That it has caused significant tension in the doctor-patient relationship was one of the perceived consequences of the malpractice litigation problem most commented upon by the respondents of this survey. Several of the students expressed similar thoughts in saying that it was good that one consequence of the increasing incidence of malpractice litigation was that patients and the public no longer looked to physicians as "omnipotent healers." These students believed that patients' unrealistic expectations of physicians is a major reason patients sue even when there has been no practice of "bad medicine." Their comments implied they believe that as patients learn to view the abilities of physicians more realistically, the number of non-meritorious suits will decline. Some of these same students, and other students, commented that the malpractice litigation problem has reduced patients' confidence in physicians to such an extent, and that it has created such feelings of anger and fear in physicians, that both patients and physicians feel they are in an adversarial role with each other. These students believe the adversarial role patients and physicians now have with each other has had an adverse impact on the quality of care available, and has led to a "vicious circle" of increasing disappointment and more suits among patients.

The increase in the ambivalence the patient feels toward the doctor, and that the doctor feels toward the patient, may significantly reduce the opportunities both have for developing trusting relation-

ships. Of all the high-risk-for-suit specialties, it seems that ob/gyn is the one the students feel is most adversely affected by the eroding of positive affect in the physician patient relationship. OB/GYN, to a greater extent than surgery and anesthesiology, offers physicians the opportunity to develop relationships with patients. Some students who are looking for a specialty that will offer them the opportunity to use their personality strengths and interpersonal skills in relating to patients indicated that they were more attracted to specialties other than ob/gyn, such as family practice and pediatrics, where the positive affect needed to develop and sustain mutually rewarding relationships is less threatened by the increasing risk of malpractice litigation.

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APPENDIX



LOYOLA UNIVERSITY STRITCH SCHOOL OF MEDICINE

2160 South First Avenue, Maywood, Illinois 60153

312 881-2000

STUDENT AFFAIRS OFFICES

November 5, 1984

STRITCH STUDENTS:

Attached is a questionnaire designed to find out what medical students are thinking about malpractice litigation. It is part of a doctoral research project being undertaken by Mr. Kevin J. Franke, a Doctoral Candidate in the Department of Psychology at Loyola University of Chicago.

This project has been approved by the Medical Center Institutional Review Board and by my office. I strongly encourage you to take the time to fill out this questionnaire and return it within two weeks to the box on the Bursar's Office counter. Please be assured that your responses will remain confidential and anonymous.

Thank you for your assistance in this important project.

Sincerely,

Michael L. Rainey, Ph.D.
Associate Dean, Student Affairs

MLR:st

Attachment

LOYOLA UNIVERSITY OF CHICAGO



6525 North Sheridan Road, Chicago, Illinois 60626 • (312) 274-3000

November 7, 1984

DEAR MEDICAL STUDENT:

I am asking for your cooperation in a special study to help us learn something about what medical students are thinking about malpractice litigation. I would like you to respond to the following questionnaire based upon your current thoughts and attitudes about medical malpractice litigation.

Your participation in this study is voluntary. You may choose not to respond to any or all of the questions on the survey. Your decision about whether to respond will in no way be evaluated or associated with any consequences for you as a medical student. Your responses to this survey are completely independent of your evaluation as a medical student at this university. Please do not sign your name anywhere on the questionnaire. All information will remain anonymous. Individual responses will not be made available to any person connected with your learning institution. Cumulative results will be made available to you upon completion of this project.

The completion of these questions may take 25 minutes of your time. The answers, comments or suggestions you provide may prove most helpful to your educators, and to all involved in the teaching or practice of medicine, especially those currently training for a career in medicine.

Please complete the questionnaire according to the directions given and then drop it off at the designated spot. Thank you for your time and your interest.

Sincerely,

A handwritten signature in cursive script that reads "Kevin J. Franke".

Kevin J. Franke

Medical Malpractice Survey

Please complete the following questions by placing either an "x" or the appropriate answer in the space provided.

1. Current year in medical school: first ___ second ___ third ___ fourth ___
2. Age _____ 3. Sex: Female ___ Male ___
4. Number of immediate family members, close relatives, and close friends currently practicing medicine. _____
5. Give your top three choices for the specialty (or subspecialty) areas you are most likely to practice in order of preference.
 1. _____
 2. _____
 3. _____
6. List in order from least likely (1) to third least likely (3) the specialty (or subspecialty) areas you are least likely to choose.
 1. _____
 2. _____
 3. _____
7. If any physician has advised you not to practice in any specialty (or subspecialty), list the specialty, and briefly indicate what they have told you.
 1. _____
 2. _____
 3. _____
8. For each of the following specialties (or subspecialties) indicate your belief as to the probability of a physician being sued for malpractice.

PLACE A NUMBER IN THE BLANK PROVIDED

1 = very low probability
2 = low probability
3 = high probability
4 = very high probability

 - A. ___ Psychiatry
 - B. ___ Surgery and subspecialties
 - C. ___ Obstetrics/Gynecology
 - D. ___ Anesthesiology
 - E. ___ Radiology
 - F. ___ Internal Medicine and subspecialties
 - G. ___ Pediatrics
 - H. ___ Neurology
 - I. ___ Dermatology
 - J. ___ Family Practice

K. ___ Ophthalmology

L. ___ Other (write in the specialty or subspecialty) _____

9. Number of physicians you know personally who have been sued for malpractice.

none ___ one ___ two ___ three or more ___

10. Estimate to the nearest dollar what you anticipate will be your annual cost for malpractice insurance as a practicing physician in the first specialty area you listed under question #5.

\$ _____

Use the space provided to respond to each of the following statements as accurately as you can.

1. List and describe the major stresses you believe you will face as a medical practitioner.
 - 1.
 - 2.
 - 3.
2. List and briefly explain any recent major changes in medical practice of which you are aware.
 - 1.
 - 2.
 - 3.
3. What is your current understanding of the effects of malpractice litigation on the practice of medicine in the United States?
4. In your opinion, is any type of patient more likely to sue a physician for malpractice? Yes or No? If you answered yes, what might be the distinguishing characteristics of such a patient?

Indicate the extent of your agreement or disagreement with the following statements by placing the appropriate number in the space provided at the beginning of each statement.

- 1 = agree strongly
- 2 = agree mildly
- 3 = neutral
- 4 = disagree mildly
- 5 = disagree strongly

1. ___ Medicine is a full-time business and one needs business skills in order to practice medicine.
2. ___ Many physicians are now practicing "defensive medicine" because they fear malpractice litigation.
3. ___ Less experienced physicians are more likely than their more experienced colleagues to be sued for malpractice.
4. ___ Less knowledgeable physicians are more likely than their more knowledgeable colleagues to be sued for malpractice.
5. ___ Some physicians have stopped seeing or are refusing to treat patients they judge as likely candidates to initiate malpractice litigation.
6. ___ Some physicians have stopped performing certain medical procedures because they fear malpractice litigation, even if they judge that such a procedure might be the most advisable course for the patient to pursue.
7. ___ Physicians not guilty of negligence in the practice of their specialty rarely get sued.
8. ___ Medical students rarely get sued for malpractice.
9. ___ At least one physician has advised me to reconsider my choice of a career in medicine.
10. ___ The quality of the doctor-patient relationship is being affected by the threat of malpractice litigation.
11. ___ The threat of malpractice litigation is a major stress in medical practice.
12. ___ The number of malpractice suits filed against physicians is an accurate reflection of the incidence of malpractice.
13. ___ When compared to malpractice, all other issues affecting physicians are of secondary importance.
14. ___ The effects of a malpractice suit upon the personal and professional life of a physician are actually quite minimal.
15. ___ It does not matter how well a physician is trained, being sued for malpractice is part of the business.
16. ___ There is a malpractice crisis in American medicine today.
17. ___ The current focus on malpractice protects patients and the public in general.
18. ___ Every doctor knows in their heart they must someday make a mistake.
19. ___ Today, when people die or become ill the first person everybody blames is the doctor.

1 = agree strongly 2 = agree mildly 3 = neutral 4 = disagree mildly
 5 = disagree strongly

20. ____ The probability of being sued for malpractice has been a factor in my choice of specialty or subspecialty.
21. ____ The cost of malpractice premiums has been a factor in my choice of specialty or subspecialty.
22. ____ I have been taught in my courses at medical school how to reduce the risk of being sued for malpractice.
23. ____ I expect to be sued at least once in my lifetime of medical practice.
24. ____ A malpractice suit would be a significant affront to my professional competence.
25. ____ As a medical student, I seldom worry about being sued for malpractice.
26. ____ I seldom worry about being sued for malpractice in the future.
27. ____ How I practice medicine, good or bad, is the single most important factor in determining whether I get sued or not.

Use the space provided to respond to each of the following statements as accurately as you can.

1. List the sources from which you personally have gotten your information about malpractice litigation as it pertains to the medical profession (i.e. newspaper articles, TV documentaries, professional journals, practicing physicians, medical faculty, etc.).

2. From which of these sources have you gotten your most recent information about malpractice litigation.

3. If a symposium was to be held to discuss the results of this study, and to provide medical students with information about malpractice litigation in the medical profession, would you be interested in attending? Yes or No. If you answered yes, what questions would you like answered and what issues would you like discussed?

If there is any aspect of malpractice litigation or professional liability that you think should be commented upon, please do so in the space below.

THANK YOU VERY MUCH FOR YOUR COOPERATION.

LOYOLA UNIVERSITY OF CHICAGO



6525 North Sheridan Road, Chicago, Illinois 60626 * (312) 274-3000

Dear:

As a medical student currently training in the state of Illinois we seek your assistance in a very important matter. Some physicians in Illinois are alarmed about the problem of malpractice litigation in the medical profession. Some physicians feel it is a serious problem about which something must be done. Others feel it is not a serious problem. Unfortunately, nobody knows how medical students in Illinois are reacting to the increasing occurrence and threat of malpractice litigation. Without such information, and without a clear idea of what your current beliefs and reactions are, it is difficult for your professional colleagues to help you understand and cope with this growing problem.

You have been selected from a very small group of medical students at your university to be given an opportunity to express your opinions and beliefs about medical malpractice. Your personal response to the current "malpractice crisis" is vitally important to the success of this study. It is crucial that our results truly represent the thinking and behavior of medical students throughout the state. Since it is possible for us to sample only a small number of the total population of medical students in Illinois, it is extremely important that each questionnaire be completed and returned.

A great deal of work has gone into preparing this survey. A number Illinois medical students have already offered several hours of their time to make this study a success. Illinois medical students have worked closely with Mr. Franke, the Project Director, at every step during the construction of this survey. It is a very short and a very simple survey to fill out. You will not have to do any writing. The questions do not require any elaborate thinking. If you have a pen or pencil at hand you could easily complete the survey in less than 15 minutes. An addressed and stamped return envelope is already provided for you so that returning the completed questionnaire will simply mean walking by a mailbox. If you do not have the time right now, please hold on to the survey and complete and return it at your earliest convenience. Please help us to make this project useful to medical students throughout the state of Illinois.

Because we need to receive a completed questionnaire from each student contacted, there is an identification number in the upper right hand corner of the cover page of the questionnaire. This code number is for mailing purposes only, so that we may check your name off the mailing list when your questionnaire is returned. You may be assured of complete confidentiality and anonymity regarding your responses to the survey.

If you wish, I will see that the written results of this project are sent to you personally. In order that you may receive a copy of the results, simply write "copy of results requested" on the back of the return envelope and print your name below it. Please do not put this information on the questionnaire itself.

Please do not ask your friends and family to help you fill out the survey. If after completing the survey you feel the need or desire to discuss either your responses or the questions you are encouraged to do so. Right now however we are interested in your personal responses. Please remember, there are no right or wrong answers to any of the questions contained in the survey.

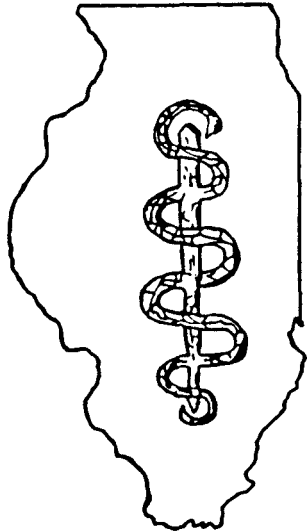
I will be most happy to answer any questions you might want to ask me about the questionnaire or the overall survey. Please do not hesitate to write or call me if you do have any questions. The telephone number is (312-761-5657). The best times to call are evenings after 9:00 and anytime on weekends.

Your participation in this survey is voluntary. Please know we understand that time is the most precious commodity a medical student has. Your help in making this survey a success will be greatly appreciated.

Sincerely,

Kevin J. Franke
Project Director

**MEDICAL MALPRACTICE:
A SURVEY OF THE BELIEFS AND
BEHAVIORS OF MEDICAL STUDENTS
IN ILLINOIS**



I. Below is a list of medical specialties and subspecialties. Please use the rating scale below to indicate your belief as to the probability of a physician being sued for malpractice in each specialty. Rate the specialties and subspecialties relative to each other. The probability of any one patient suing a physician is probably very low for all the specialties. Also, the probability of any one physician getting sued sometime during their medical career is probably very high for all of the specialties. In this question however, we are interested in your belief about the relative frequency with which physicians in different specialties and subspecialties get sued. (Please circle the appropriate number after each specialty.)

1 - VERY LOW PROBABILITY
 2 - LOW PROBABILITY
 3 - HIGH PROBABILITY
 4 - VERY HIGH PROBABILITY

| | | | | |
|--|---|---|---|---|
| 1. Psychiatry | 1 | 2 | 3 | 4 |
| 2. Surgery and Subspecialties | 1 | 2 | 3 | 4 |
| 3. Obstetrics/ Gynecology | 1 | 2 | 3 | 4 |
| 4. Anesthesiology | 1 | 2 | 3 | 4 |
| 5. Radiology | 1 | 2 | 3 | 4 |
| 6. Internal Medicine and Subspecialties | 1 | 2 | 3 | 4 |
| 7. Pediatrics | 1 | 2 | 3 | 4 |
| 8. Neurology | 1 | 2 | 3 | 4 |
| 9. Dermatology | 1 | 2 | 3 | 4 |
| 10. Family Practice | 1 | 2 | 3 | 4 |
| 11. Ophthalmology | 1 | 2 | 3 | 4 |

II. One question that has arisen because of recent increases in the frequency of malpractice suits against physicians is which physicians get sued and why. Please use the rating scale below to indicate the extent of your agreement or disagreement with the following statements. (Please circle the appropriate number after each statement.)

- 1 = AGREE STRONGLY
 2 = AGREE
 3 = NEITHER AGREE NOR DISAGREE
 4 = DISAGREE
 5 = DISAGREE STRONGLY

- | | | | | | |
|--|---|---|---|---|---|
| 1. <u>Less experienced</u> physicians are more likely than their more experienced colleagues to be sued for malpractice. | 1 | 2 | 3 | 4 | 5 |
| 2. <u>Less knowledgeable</u> physicians are more likely than their more knowledgeable colleagues to be sued for malpractice. | 1 | 2 | 3 | 4 | 5 |
| 3. Physicians not guilty of negligence in the practice of their specialty rarely get sued for malpractice. | 1 | 2 | 3 | 4 | 5 |
| 4. The number of malpractice suits is an accurate reflection of the incidence of malpractice. | 1 | 2 | 3 | 4 | 5 |

III. Next, I would like to know about your own reactions to the current malpractice situation. Please use the rating scale below to indicate the extent of your agreement or disagreement with the following statements. (Please circle the appropriate number after each statement.)

- 1 = AGREE STRONGLY
 2 = AGREE
 3 = NEITHER AGREE NOR DISAGREE
 4 = DISAGREE
 5 = DISAGREE STRONGLY

- | | | | | | |
|---|---|---|---|---|---|
| 1. I have had increased thoughts about practicing medicine in a rural or suburban area, where malpractice rates and fees are lower. | 1 | 2 | 3 | 4 | 5 |
| 2. I believe that as a physician I will have the greatest possible scope for independent action in my work compared to other professions, despite increasing government regulation of the medical profession and the increasing threat of malpractice litigation. | 1 | 2 | 3 | 4 | 5 |
| 3. I am more hesitant to actually practice medicine because of the occurrence and the threat of malpractice suits, while I have had increased thoughts of teaching or doing research. | 1 | 2 | 3 | 4 | 5 |
| 4. It has become more difficult for me to make a firm commitment to medicine because of the current malpractice problem. | 1 | 2 | 3 | 4 | 5 |
| 5. At least one physician has advised me to reconsider my choice of a career in medicine because of malpractice related issues in the profession. | 1 | 2 | 3 | 4 | 5 |
| 6. I sometimes have thoughts of having chosen the wrong profession because of the current state of medical malpractice. | 1 | 2 | 3 | 4 | 5 |

- 1 = STRONGLY AGREE
 2 = AGREE
 3 = NEITHER AGREE NOR DISAGREE
 4 = DISAGREE
 5 = DISAGREE STRONGLY

7. It is becoming more difficult for me to uphold the medical ideals of helping others and being my brother's keeper because of the malpractice problem and its effects upon the medical profession. 1 2 3 4 5
8. The costs of malpractice premiums sometime enter into my thoughts about which specialty or subspecialty to choose. 1 2 3 4 5
9. The probability of being sued for malpractice sometimes enters into my thoughts about which specialty or subspecialty to choose. 1 2 3 4 5
10. I have been taught in my training at medical school how to cope with the stress of being sued for malpractice. 1 2 3 4 5
11. I have been taught in my training at medical school how to reduce the risk of being sued for malpractice. 1 2 3 4 5
12. I have not given the possibility of a malpractice suit much thought. 1 2 3 4 5

IV. The statements on this page are only meaningful for students who have already begun their clinical rotations. That is, for students who have already had patient contact. If you have not begun to see patients, simply turn to the top of the next page and continue with the survey. If you have begun to see patients please use the rating scale listed below to indicate the extent of your agreement or disagreement with the following three statements. (Please circle the appropriate number after each statement.)

- 1 = AGREE STRONGLY
- 2 = AGREE
- 3 = NEITHER AGREE NOR DISAGREE
- 4 = DISAGREE
- 5 = DISAGREE STRONGLY

1. I am more hesitant to assert myself in assuming responsibility for patients in my clinical rotations because of the threat of a malpractice suit. 1 2 3 4 5

2. Physicians seem less willing to allow students to assume responsibility for patients because of the threat of malpractice litigation. 1 2 3 4 5

3. It is becoming more difficult to assume a care-taker role as a student with patients because of the recent state of malpractice in the medical profession. 1 2 3 4 5

V. Much current discussion is concerned with how malpractice litigation may be effecting the practice of medicine in the United States. Please use the rating scale below to indicate the extent of your agreement or disagreement about whether each of the following statements accurately reflects an effect or a result of increasing malpractice litigation in the medical profession. (Please circle the appropriate number after each statement.)

- 1 - STRONGLY AGREE
 2 - AGREE
 3 - NEITHER AGREE NOR DISAGREE
 4 - DISAGREE
 5 - STRONGLY DISAGREE

- | | | | | | |
|--|---|---|---|---|---|
| 1. The costs of health care and malpractice insurance have risen. | 1 | 2 | 3 | 4 | 5 |
| 2. Many physicians are practicing defensive medicine, such as ordering superfluous diagnostic tests. | 1 | 2 | 3 | 4 | 5 |
| 3. Some physicians are refusing to treat patients who have difficult or ambiguous health problems. | 1 | 2 | 3 | 4 | 5 |
| 4. Some physicians have stopped performing certain high-risk procedures, even if they judge clinically that such a procedure would be the most advisable course for the patient to pursue. | 1 | 2 | 3 | 4 | 5 |
| 5. There has been a deterioration in the quality of the doctor-patient relationship. | 1 | 2 | 3 | 4 | 5 |
| 6. The professional careers and personal lives of physicians are damaged even if they are acquitted in a malpractice trial. | 1 | 2 | 3 | 4 | 5 |
| 7. A higher quality of medical care is now available to the patient population. | 1 | 2 | 3 | 4 | 5 |
| 8. Certain specialties are less likely to attract highly competent physicians. | 1 | 2 | 3 | 4 | 5 |
| 9. Practicing medicine is becoming less satisfying and enjoyable. | 1 | 2 | 3 | 4 | 5 |
| 10. Physicians are retiring at an earlier age. | 1 | 2 | 3 | 4 | 5 |

VI. Recently, there has been speculation about what kinds of patients are more likely to sue a physician for malpractice. Below is a list of patient characteristics that other medical students have suggested are associated with patients who are more likely to sue for malpractice. Please use the rating scale below to indicate the extent of your agreement or disagreement about whether a patient with each of these characteristics is more likely to sue a physician for malpractice. (Please circle the appropriate number after each statement.)

1 = AGREE STRONGLY
 2 = AGREE
 3 = NEITHER AGREE NOR DISAGREE
 4 = DISAGREE
 5 = DISAGREE STRONGLY

- | | | | | | |
|--|---|---|---|---|---|
| 1. Patients with unrealistic expectations for cure. | 1 | 2 | 3 | 4 | 5 |
| 2. Patients who feel they have a right to perfect health. | 1 | 2 | 3 | 4 | 5 |
| 3. Patients who have unrealistic expectations of physicians. | 1 | 2 | 3 | 4 | 5 |
| 4. Patients who have sued for malpractice previously. | 1 | 2 | 3 | 4 | 5 |
| 5. Patients who are themselves, who are related to, or who know lawyers. | 1 | 2 | 3 | 4 | 5 |
| 6. Patients with greater amounts of important resources, such as education and money. | 1 | 2 | 3 | 4 | 5 |
| 7. Patients with lesser amounts of important resources, such as education and money. | 1 | 2 | 3 | 4 | 5 |
| 8. Patients with psychological problems, such as emotional or personality difficulties. | 1 | 2 | 3 | 4 | 5 |
| 9. Other health providers, including physicians, nurses, dentists, social workers, psychologists, and medical technicians. | 1 | 2 | 3 | 4 | 5 |
| 10. Patients in urban areas. | 1 | 2 | 3 | 4 | 5 |

- 1 = AGREE STRONGLY
 2 = AGREE
 3 = NEITHER AGREE NOR DISAGREE
 4 = DISAGREE
 5 = DISAGREE STRONGLY

- | | | | | | |
|---|---|---|---|---|---|
| 11. A lesser number of physicians are going into private practice (solo or group practice), and instead are choosing agency and salaried positions. | 1 | 2 | 3 | 4 | 5 |
| 12. Students are choosing alternative specialties. | 1 | 2 | 3 | 4 | 5 |
| 13. Physicians are taking more careful notes. | 1 | 2 | 3 | 4 | 5 |
| 14. A lesser quality of medical care is now available to the patient population. | 1 | 2 | 3 | 4 | 5 |
| 15. The quality of the doctor-patient relationship has improved. | 1 | 2 | 3 | 4 | 5 |
| 16. There has been an increase in the amount of unhappiness and pessimism present in the profession as a whole. | 1 | 2 | 3 | 4 | 5 |
| 17. There has been a decrease in the number of physicians who carry malpractice insurance. | 1 | 2 | 3 | 4 | 5 |
| 18. The public has a lesser view of the status of physicians. | 1 | 2 | 3 | 4 | 5 |

VII. Finally, we would like to ask some questions about yourself to help us interpret the results. (Please complete the following items by circling or filling in the appropriate answer.)

1. Your current year in medical school. 1 2 3 4
2. Have you had to repeat a year in medical school? NO YES
3. Your sex. FEMALE MALE
4. Your age. _____
5. The number of your immediate family members who are currently practicing medicine. _____
6. The number of your relatives and close friends who are currently practicing medicine. _____
7. Number of physicians you know personally who have been sued for malpractice. _____
8. Give your top two choices for the specialty (or subspecialty) you are most likely to practice in order of preference.
 1. _____
 2. _____
9. List in order from least likely to second least likely the specialty (or subspecialty) you are least likely to choose.
 1. _____
 2. _____
10. Please list in chronological order all clinical rotations that you have completed.
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____

11. If you are presently training in a clinical rotation, please list it in the space provided.
-

THANK YOU. Your participation in this survey is greatly appreciated. Please return the questionnaire in the stamped, addressed envelope provided. If there is any aspect of malpractice litigation or professional liability that you would like to comment on, or if you have any comments about the survey, please make them on the remaining pages of this booklet. Your feedback would be most welcome. Remember, if you would like a copy of the results simply write "copy of results requested" on the back of the return envelope and print your name below it.

Last week a questionnaire asking for your reactions to the problem of malpractice litigation in the medical profession was mailed to you. Your name was drawn in a random sample.

If you have completed and returned it to us please accept our thanks. If not, please do so today. Because it was sent to a small, but representative, sample it is crucial that yours also be included in the results for them to be accurate.

If by chance you did not receive a questionnaire, or it got misplaced, please call me at (312-761-5657) and I will get another one to you immediately.

Sincerely,

Kevin J. Franke
Project Director

APPROVAL SHEET

The dissertation submitted by Kevin Franke
has been read and approved by the following committee:

Dr. Eugene Kennedy, Director
Professor, Psychology, Loyola

Dr. Patricia Rupert
Associate Professor, Psychology, Loyola

Dr. Fred Bryant
Associate Professor, Psychology, Loyola


Dr. Sara Charles
Professor, Psychiatry, University of Illinois

The final copies have been examined by the director of the
dissertation and the signature which appears below verifies
the fact that any necessary changes have been incorporated
and that the dissertation is now given final approval by the
Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy.

Date

3/30/87


Director's Signature