

# Findings and Policy Options | 1

## SUMMARY OF FINDINGS

- . Defensive medicine occurs when doctors order tests, procedures, or visits, or avoid certain high-risk patients or procedures, primarily (but not necessarily solely) because of concern about malpractice liability.
- Most defensive medicine is not of zero benefit. Instead, fear of liability pushes physicians' tolerance for medical uncertainty to low levels, where the expected benefits are very small and the costs are high.
- Many physicians say they would order aggressive diagnostic procedures in cases where conservative management is considered medically acceptable by professional expert panels. Most physicians who practice in this manner would do so primarily because they believe such procedures are medically indicated, not primarily because of concerns about liability.
- It is impossible to accurately measure the overall level and national cost of defensive medicine. The best that can be done is to develop a rough estimate of the upper limits of the extent of certain components of defensive medicine.

Overall, a small percentage of *diagnostic* procedures—certainly less than 8 percent—is likely to be caused primarily by *conscious* concern about malpractice liability. This estimate is based on physicians' responses to hypothetical clinical scenarios that were designed to be malpractice-sensitive; hence, it overestimates the rate at which defensive medicine is consciously practiced in diagnostic situations.



- Defensive medicine has a substantial influence on physicians' behavior in certain isolated clinical situations; for example, Cesarean deliveries in childbirth and the management of head injuries in emergency rooms.
- Physicians are very conscious of the risk of being sued and tend to overestimate that risk. A large number of physicians believe that being sued will adversely affect their professional, financial, and emotional status.
- The role of the malpractice system as a deterrent against too little or poor-quality care—one of its intended purposes—has not been carefully studied.
- Traditional tort reforms—particularly caps on damages and amendments to the “collateral source” rule—reduce malpractice insurance premiums, but their effects on defensive medicine are largely unknown and are likely to be small. To the extent that these reforms *do* reduce defensive medicine, they do so without differentiating between defensive practices that are medically appropriate and those that are wasteful or very costly in relation to their benefits.
- One malpractice reform that directly targets wasteful and low-benefit defensive medicine is to enhance the evidentiary status in malpractice court cases of selected clinical practice guidelines that address situations in which defensive medicine is a major problem. The overall effects of this reform on health care costs would probably be small, however, because only a few clinical situations represent clear cases of wasteful or low-benefit defensive medicine.
- The fee-for-service system both empowers and encourages physicians to practice very low-risk medicine. Health care reform may change financial incentives toward doing fewer rather than more tests and procedures. If that happens, concerns about malpractice liability may act to check potential tendencies to provide too few services.

## INTRODUCTION

For more than two decades many physicians, researchers, and government officials have claimed that the most damaging and costly result of the medical malpractice system as it has evolved in the United States is the practice of defensive medicine: the ordering of tests, procedures, and visits, or avoidance of certain procedures or patients, due to concern about malpractice liability risk.

Calls for reform of the medical malpractice system have rested partly on arguments that such reforms would save health care costs by reducing doctors' incentives to practice defensively. Such an argument even found its way into the 1992 presidential debates, when President Bush contended that “the malpractice ...trial lawyers' lawsuits ...are running the costs of medical care up \$25 to \$50 billion.” (35)

Such claims notwithstanding, the extent of defensive medicine and its impact on health care costs remain a matter of controversy. Some critics claim that defensive medicine is nothing more than a convenient explanation for practices that physicians would engage in even if there were no malpractice law or malpractice lawyers.

This Office of Technology Assessment (OTA) study of defensive medicine grew out of congressional interest in understanding the extent to which defensive medicine does, indeed, influence medical practice and how various approaches to reforming the malpractice system might alter these behaviors.

The assessment was first requested by Congressman Bill Archer, Ranking Republican Member of the Committee on Ways and Means, and Senator Orrin Hatch, a member of OTA's Technology Assessment Board. Other members of OTA's Technology Assessment Board also requested that OTA examine these issues, including Senator Edward M. Kennedy, Chairman of the Committee on Labor and Human Resources; Congressman John D. Dingell, Chairman of the Committee on Energy and Commerce; and Senators Charles E. Grassley and Dave Durenberger.

OTA addressed the following questions:

- What is defensive medicine and how can it be measured?
- What are the causes of defensive medicine?
- How widespread is defensive medicine today?
- What effect will current proposals for malpractice reform have on the practice of defensive medicine?
- What are the implications of other aspects of health care reform for the practice of defensive medicine?

OTA also published a background paper in September 1993, *Impact of Legal Reforms on Medical Malpractice Costs*, which summarizes the current status of malpractice law reforms in the 50 states and evaluates the best available evidence on the effect of malpractice system reforms on physicians' malpractice insurance premiums.

## DEFINING DEFENSIVE MEDICINE

OTA defines defensive medicine as follows:

*Defensive medicine occurs when doctors order tests, procedures, or visits, or avoid high-risk patients or procedures, primarily (but not necessarily solely) to reduce their exposure to malpractice liability. When physicians do extra tests or procedures primarily to reduce malpractice liability, they are practicing positive defensive medicine. When they avoid certain patients or procedures, they are practicing negative defensive medicine.*

Under this definition, a medical practice is defensive even if it is done for other reasons (such as belief in a procedure effectiveness, desire to reduce medical uncertainty, or financial incentives), provided that the primary motive is to avoid malpractice risk. Also, the motive need not be conscious. Over time some medical practices may become so ingrained in customary practice that physicians are unaware that liability concerns originally motivated their use.

Most importantly, defensive medicine is not always bad for patients. Although political or media references to defensive medicine almost always imply unnecessary and costly procedures, OTA's definition does not exclude practices that may benefit patients. Rather, OTA concluded that a high percentage of defensive medical procedures are ordered to minimize the risk of being wrong when the medical consequences of being wrong are severe:

OTA asked panels of experts in three medical specialties—cardiology, obstetrics/gynecology (OB/GYN), and surgery—to identify clinical scenarios in which they would expect the threat of a malpractice suit to play a major role in their own or their colleagues' clinical decisions. The groups identified over 75 scenarios, all of which involved a patient presenting with a probable minor condition but with a small chance for a potentially very serious or fatal condition.

Thus, concern about malpractice liability pushes physicians' tolerance for uncertainty about medical outcomes to very low levels. Stated another way, concerns about liability drive doctors to order tests, procedures, and specialist consultations whose expected benefits are very low. Using such medical technologies and services to reduce risk to the lowest possible level is likely to be very costly even when the price of the procedure is low, because for every case where its performance makes the life-or-death difference, there will be many additional cases where its performance is clinically inconsequential.

## THE EXTENT OF DEFENSIVE MEDICINE

### ■ Measuring Defensive Medicine

OTA searched for evidence of defensive medicine in the existing literature and also conducted and contracted for new analyses where feasibility and

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Physicians may stop performing certain tests or procedures if by doing so they can eliminate the need for costly or hard-to-find malpractice insurance to cover these activities. The most frequently cited examples of negative defensive medicine are decisions by family practitioners and even some obstetrician-gynecologists to stop providing obstetric services. These decisions may be a result of higher malpractice insurance premiums for physicians who deliver babies.

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costs permitted. One conclusion from these efforts is **that accurate measurement of the extent** of this phenomenon is virtually impossible.

There are only two possible approaches to estimating how often doctors do (or do not do) procedures for defensive reasons: ask them directly in surveys, or link differences in their actual procedure utilization rates to differences in their risk of liability. Both of these approaches have serious limitations.

If physicians are asked how often they practice defensive medicine in survey questionnaires, they may be inclined to respond with the answer most likely to elicit a favorable political response and thus exaggerate their true level of concern about malpractice. Even when physicians are asked in a more neutral instrument what they would do in certain clinical situations and why, they might be prompted if one of the potential listed reasons relates to concern about malpractice suits. On the other hand, without listed reasons from which to choose, physicians may respond as if the survey is a medical board examination and justify their choices on purely clinical grounds when other factors do in fact operate. In addition, surveys cannot uncover defensive practices performed unconsciously by physicians. In short, surveys can elicit responses that are biased in either direction.

These obvious problems suggest that it might be better to start with actual behavior as recorded in data on utilization of procedures and try to ascertain the percentage of use that arises from fear of malpractice suits. The only way to measure such a percentage is to relate variations in utilization across physicians to variations in the strength of the “malpractice signal” across physicians. For example, physicians practicing in hospitals or communities with high rates of malpractice claims or high malpractice premiums might be more sensitive to malpractice risks and alter their practices accordingly. Statistical analyses of such variations could pick up these differential effects.

To take this tack, data must be available to control for other factors that can account for differences among physicians in their utilization of ser-

vices, including the health status of the patient population. Often such data are unavailable.

Even more troublesome is the fact that this approach can pick up only the *incremental* effects of stronger versus weaker malpractice signals. It cannot accurately assess the generalized “baseline” level of defensive medicine that may exist in all physicians’ practices. Professional society newsletters and other national media often report on especially large or unusual jury verdicts. Physicians may react to these news items as vigorously as they would to their own or their colleagues experience with malpractice claims. Physicians may be almost as defensive if they face a small risk of being sued as they are if they face a higher risk. This is especially likely if they have the power, with no negative and sometimes positive financial consequences, to order tests and procedures that reduce medical risks to their lowest feasible level.

Despite these problems, OTA undertook new analyses that offered the best chance, within time and budgetary constraints, of adding to the current state of knowledge about the scope of defensive medical practice while acknowledging the methodological problems described above. OTA-initiated studies included the following:

- Four separate physician surveys (conducted jointly with three medical specialty societies) containing hypothetical clinical scenarios that asked respondents to indicate what clinical actions they would take and the reasons for them. The survey materials contained no references to suggest that OTA’s purpose was to study malpractice or defensive medicine, though malpractice concern was one of five reasons listed for each possible course of action.
- An analysis of the relationship between the use of prenatal care services in low-risk pregnancy and the level of malpractice risk facing doctors in Washington State.
- An analysis of the relationship between New Jersey physicians’ responses on a clinical scenario survey and their personal malpractice claim history.

- An analysis relating changes in New York State physicians' obstetric malpractice insurance premiums to decisions to abandon the practice of obstetrics.

These analyses join a small preexisting literature and discussions with experts in the area to form the basis for OTA's findings. The following studies were particularly important evidence because of their relatively strong research designs:

- A study by Localio and colleagues of the relationship between Caesarean delivery rates and malpractice risk in New York State hospitals (128).
- A survey of physicians responses to clinical scenarios conducted by a Duke Law Journal project on medical malpractice (58).

Other studies, including the ninety direct physician surveys conducted over the years by national, state, and specialty medical societies, are reviewed by OTA in this report. Their results are highly suspect, however, because they invariably prompt responding physicians to consider malpractice liability as a factor in their practice choices.

### ■ OTA's Clinical Scenario Surveys

OTA collaborated with three medical specialty societies to survey their member physicians using hypothetical clinical scenarios. The three medical specialty societies were the American College of Cardiology, the American College of Obstetricians and Gynecologists, and the American College of Surgeons. Each of these groups cooperated with OTA to convene a panel of experts, identify clinical scenarios, draw stratified national samples of their memberships, and generally assist in the development and implementation of the surveys.

The selected scenarios were clinical situations that the panel identified as likely to provoke the practice of defensive medicine. All but one of the nine clinical scenarios ultimately selected for in-

clusion in the four surveys involved clinical encounters requiring some diagnostic judgment or action.<sup>2</sup> Virtually all of the clinical scenarios involved patients whose presenting signs and symptoms would suggest only minor injury or a self-limiting problem, with a very small outside chance of a debilitating or life-threatening illness. Although the panelists were not asked to assess the appropriateness of different clinical actions or procedures, implicit in their creation of each scenario was the idea that conservative treatment was an acceptable course of action.

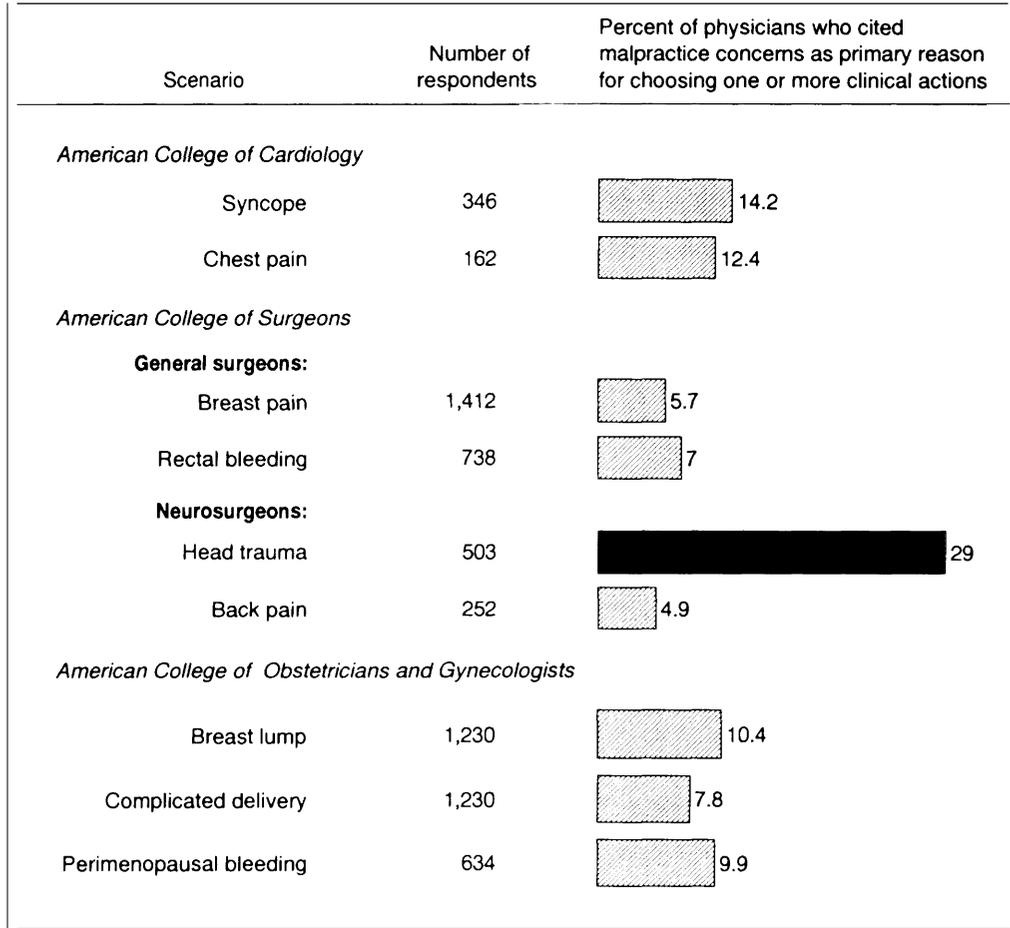
Across the scenarios, between 5 and 29 percent of all responding physicians cited malpractice concern as the primary reason for choosing at least one clinical action (figure 1-1). Yet, in six of the nine scenarios, defensive medicine was cited by less than 10 percent of all physicians as the primary reason for choosing at least one clinical action. The scenario with the greatest evidence of defensive medicine was a case of a 15-year-old boy with a minor head injury resulting from a skateboard accident. In that case, almost one-half of all respondents reported that they would order a computed tomography (CT) scan, and 45 percent of those who said they would order it would do so primarily out of concern for malpractice.

Figure 1-2 shows the specific clinical actions with the *highest* reported rates of defensive medicine. These procedures constitute only 23 out of the 54 "interventionist" actions in the nine scenarios (i.e., other than waiting or doing nothing). Physicians who reported they would order the procedure said they would do so primarily out of concern about malpractice between 11 and 53 percent of the time. Yet, the percentage of responses in which the procedure would be ordered out of concern for malpractice seldom exceeded 5 percent, because relatively few physicians reported that they would choose the procedure at all.

Across all possible actions in the nine scenarios, excluding waiting or doing nothing, a me-

<sup>2</sup> The only nondiagnostic scenario involved obstetrical management of a difficult labor, in which diagnostic uncertainty plays a role in determining the course of action.

**FIGURE 1-1: Extent of Defensive Medicine in the OTA Clinical Scenario Surveys**



NOTE Results are weighted to reflect the total population of professional society members on which the survey sample was based. Numbers reflect responses to "case" versions of the scenarios only (see ch 3). See table 3-2 for confidence intervals of these proportions.

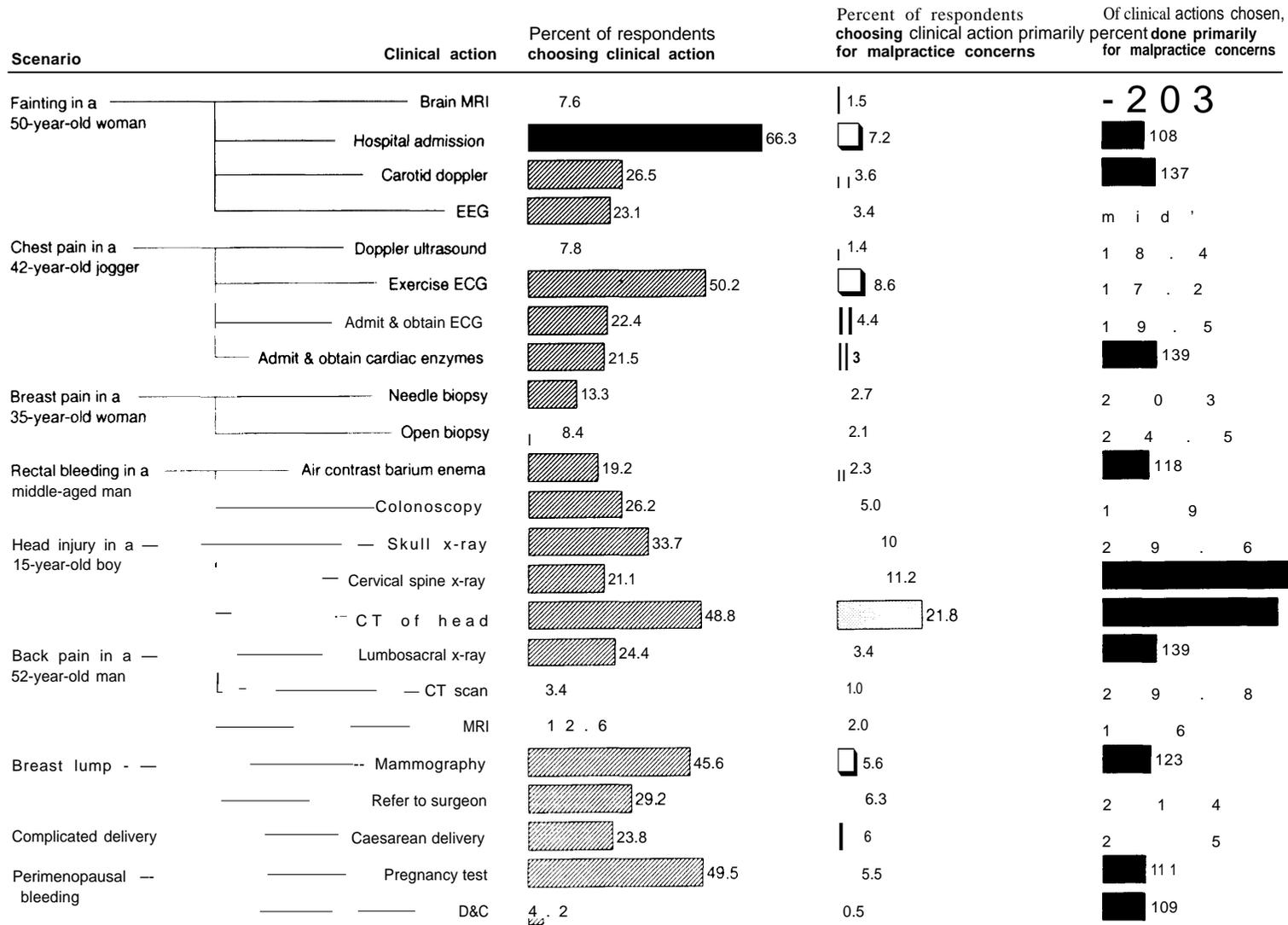
SOURCE Office of Technology Assessment, 1994

dian<sup>3</sup> of 8 percent of those who chose the procedure or hospital admission said they would do so primarily because of malpractice concerns (see table 3-3 in chapter 3).

The surveys covered only three medical specialties, at least two of which have relatively high exposure to malpractice liability. Also, the level of defensive medicine recorded in these scenarios is

<sup>3</sup>That is, one-half of the procedures had a percentage score higher than the median percentage; one-half had a percentage score that was lower than the median.

**FIGURE 1-2: Frequent Occurrences of Defensive Medicine Reported in the OTA Clinical Scenario Surveys**



KEY MRI – magnetic resonance image EEG - electroencephalogram ECG = electrocardiogram CT computed tomography D&C dilation and curettage

NOTES A frequent occurrence was defined as when at least 10 percent of physicians who would take the clinical action would do so primarily because of malpractice concerns. Twenty-three out of a total of 54 clinical options (excluding waiting or doing nothing) in the OTA scenarios met this criterion (case scenarios only). See table 3-3 for complete results.

SOURCE Office of Technology Assessment 1994 Data analyzed in collaboration with Dr Russell Lofalo of Pennsylvania State University

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likely to be above average for diagnostic encounters, since the scenarios were explicitly designed to evoke concern about liability. Thus, a relatively small proportion of diagnostic procedures overall—certainly less than 8 percent—is likely to be caused by conscious concern about malpractice liability.

In virtually all of the scenarios, many physicians chose aggressive patient management styles even though conservative management was considered medically acceptable by the expert panels. In most cases, however, it was medical indications, not malpractice concern, that motivated the interventions:

For example, almost two-thirds of all cardiologists reported that they would hospitalize a 50-year-old woman who had fainted in a hot church with no other serious problems, but only 10.8 percent of those would do so primarily out of concern for malpractice risk. Instead, the vast majority of those who would hospitalize a patient of this kind reported that they would do so primarily because it was medically indicated.

Thus, if malpractice risk is a **major** factor influencing physicians' actions in general, it is not conscious, but works indirectly over time through changes in physicians' assessments of appropriate care.

It is impossible to use these very specific clinical scenarios to estimate overall health care costs that are due to defensive medicine. First, the scenarios were selected to heighten the probability of finding defensive practices. Second, they involve very specific presenting signs and symptoms. Slight changes in the scenarios might yield large changes in the kinds of procedures chosen and their consequent costs. OTA did estimate the national cost of defensive medicine for selected procedures in two scenarios: Caesarean delivery in a difficult labor, and diagnostic radiology in a young emergency room patient with minor head injury.

- The annual national cost of “defensive” Caesarean deliveries in cases of prolonged or dysfunctional labor in women between 30 and 39 years of age is approximately \$8.7 million.
- The annual national cost of defensive radiologic procedures (CT scans, skull x-rays, and cervical spine x-rays) in children between 5 and 24 years of age arriving in emergency rooms with apparently minor head injuries is roughly \$45 million.

Although these estimates in and of themselves represent a miniscule percentage of total health care costs, they cover only a few procedures performed in very specific clinical situations, and they reflect only that portion of defensive medicine that physicians practice consciously. The numbers suggest, however, that if conscious defensive medicine is costly in the aggregate, it would have to operate in a very large number of clinical situations, each contributing a relatively small amount to total costs.

### Procedure Utilization Studies

OTA's review of the evidence relating actual use of services to measures of malpractice risk, including the OTA-sponsored studies using this approach, found only limited evidence that defensive medicine exists. The strongest evidence was produced in a study by Localio and colleagues of Caesarean deliveries in New York State (128):

New York State obstetricians who practice in hospitals with high malpractice claim frequency and premiums do more Caesarean deliveries than do obstetricians practicing in areas with low malpractice claim frequency and premiums. The odds of a Caesarean delivery in a hospital with the highest frequency of obstetric malpractice claims were 32 percent higher than the odds of a Caesarean delivery in a hospital with the lowest frequency of obstetric malpractice claims (128).

Two OTA-sponsored research contracts that attempted to relate physicians' utilization rates to

their actual or perceived malpractice risks failed to find significant relationships between the risk of malpractice and physician behavior:

A study of 1,963 low-risk pregnancies managed by 209 physicians in Washington State failed to find a significant relationship between physicians' personal malpractice suit history or the malpractice claims rate in the county and the use of selected services, such as diagnostic ultrasound early in pregnancy, referrals to specialists, and Caesarean delivery (10).

A study of 835 New Jersey surgeons, cardiologists, obstetrician/gynecologists, and internal medicine specialists failed to find a significant relationship between physicians' personal malpractice suit history and their use of services as reported in their responses to hypothetical clinical scenarios (73)

Both of these studies were based on a small number of cases; consequently, failure to find a significant relationship could mean either that no relationship exists or that the studies lacked the statistical power to identify a significant relationship. Also, the New Jersey study did not examine the malpractice signal that physicians may receive because they practice in a high-risk locality. Nevertheless, if doctors do react to the strength of the 'malpractice signals' measured in these studies, the changes are not large enough to be detectable in studies of the size reported here.

OTA commissioned one study of "negative" defensive medicine—the decision not to provide a service because of concern about the risk of malpractice liability or the availability or cost of malpractice insurance. That study also failed to find significant effects:

Doctors active in obstetrics in New York State in 1980 who experienced rapid increases in malpractice insurance premiums between 1980 and 1989 *were* NOT found to be more likely than physicians with lower premium increases to withdraw from obstetrics practice during the same period (81).

## RECENT FACTORS AFFECTING THE AMOUNT OF DEFENSIVE MEDICINE

OTA staff talked with over 100 physicians and health care professionals about their beliefs regarding the existence and frequency of defensive medicine. These conversations reinforced the findings of opinion surveys that many physicians *believe* defensive medicine is an important and growing phenomenon that distorts their medical judgment in ways they find very troubling.

### ■ New Technology

Perceptions of increasing risk may arise from the continual development of new diagnostic techniques and improved therapies for serious conditions. Both of these technological trends could make the consequences of not testing more serious. The availability of more accurate or early tests or new therapies changes a natural risk—for example, the risk of death from disease—into a preventable risk, and places a new burden on the physician to correctly interpret the results of the test. When a medical technology is new, physicians may have greater uncertainty about the appropriate indications for its use and therefore more conscious concern about the potential for liability:

A urologist interviewed by OTA described his practice of ordering a prostate specific antigen (PSA) test, a screening test for prostate cancer first available in 1990, on all men over age 50 who come to his office, regardless of their complaint, and despite his belief that the test may, in the end, do more harm than good

A cardiology fellow who makes daily decisions about the choice of clot-dissolving drugs in heart attack patients described the difficulty she and her colleagues are having evaluating the evidence on the relative effectiveness of newer versus older drugs under specific conditions of use and in different kinds of patients. She and her colleagues openly discuss the potential for a malpractice suit if a patient dies when the less costly thrombolytic agent is used

The fear of malpractice does not operate alone to stimulate the diffusion of new technologies, however. As with all medical practices, a complex array of factors influences physicians' decisions to adopt new technologies:

In an OTA-sponsored study of low osmolality contrast agents (LOCAs), a new kind of contrast media injected in patients undergoing certain diagnostic x-ray examinations, Jacobson and Rosenquist found that legal concerns ranked seventh out of 11 possible factors in decisions on whether or not to use this expensive new technology. Clinical factors, such as patient safety and comfort, were ranked as the most important determinants by the responding physicians (105).

### ■ Changing Consequences of Malpractice Suits

Another reason for growing concern about the malpractice system is that the negative consequences to physicians of being sued appear to be on the rise. For the majority of physicians, a single malpractice suit does not have a significant impact on personal finances or professional status. Recent federal and state laws requiring reporting of malpractice claims to a central repository, however, may increase the professional and financial significance of even a single lawsuit in the minds of physicians.

Since 1990, federal law has required malpractice insurers to report all payments on behalf of a physician to a National Practitioner Data Bank (NPDB). The NPDB maintains a short narrative on the incident, and this information must be accessed by hospitals when hiring new staff and every two years for review of current staff (45 C.F.R. Sec. 60.10). It can also be accessed by other potential employers. Some states also have malpractice reporting requirements tied to licensing or disciplinary processes.

None of the federal or state databanks currently in place is open to the general public. Yet the ongoing debate as to whether to allow public access to the federal NPDB (165) may have already increased physicians' anxiety about being sued.

### THE IMPACT OF MALPRACTICE REFORM ON DEFENSIVE MEDICINE

OTA assessed the impact of malpractice reforms on the practice of defensive medicine. Other impacts of malpractice reform may be as or even more important than defensive medicine, including impacts on:

- the quality of care,
- the physician-patient relationship,
- access to the legal system,
- the adequacy of compensation for medical injuries.

These other impacts of malpractice reform have been reviewed extensively elsewhere (12,21,37, 102,122,191,208a,243) and are not discussed at length in this report.

Predicting the impact of any malpractice reform on defensive medicine is very difficult, because there is little understanding of which specific aspects of the malpractice system actually drive physicians to practice defensively. Is it simply distaste for having one's clinical actions called into question? Is it distaste for having one's actions judged by lay juries? Is it a desire to avoid court trials? Is it a fear, however unfounded, of being financially ruined? Or is it the belief that the legal standard of care is so capricious that the system offers no clear guidelines for how to avoid liability?

The relative importance of each of these factors in explaining motivations for defensive medicine will determine the effect of specific malpractice reforms on defensive medicine. For example, if physicians are afraid only of the extremely low chance of financial ruin, then reforms that eliminate the possibility of such an event might reduce defensive medicine even with no major changes in the system. But if physicians abhor the prospect of having to defend their judgment in any forum, then malpractice reformers would have to find ways to substantially reduce the frequency with which claims are brought, regardless of the process for resolving those claims.

OTA assessed how different kinds of tort reforms would address the various aspects of the malpractice system that might motivate physi-

cians to practice defensively. We also analyzed the extent to which different proposals address the fundamental problem of how to discourage defensive practices that are clearly wasteful or very costly in relation to their benefits without discouraging “good” defensive practices.

### ■ Traditional Tort Reforms

Over the past 20 years, almost every state has passed some type of medical malpractice tort reform. Most of the legislative activity occurred during the mid-1970s and mid-1980s, in response to two malpractice “crises” marked by rapid increases in medical malpractice insurance premiums (22).

The “traditional” tort reforms enacted by many states have, for the most part, tinkered with the details of the existing system, leaving malpractice cases in the tort system. The goal of most of these state-level reforms has been to reduce malpractice insurance premiums by limiting the number of claims, the costs of resolving a claim, or the damages that can be paid. The reforms adopted most widely in the states include:<sup>4</sup>

- shortening the statute of limitations (the time period in which a suit can be brought),
- limiting plaintiffs’ attorney fees,
- requiring or allowing pretrial screening of claims,
- placing caps on damages,
- amending the collateral source rule (requiring or letting the jury reduce the award by the amount received from health or disability insurance), and
- periodic payment of damages (instead of upfront lump-sum payment).

Although some of these reforms effectively limit the direct costs of malpractice (i.e., malpractice insurance premiums) (236), evidence of their effect on defensive medicine is weak.

The best evidence that physicians’ behavior can be altered by reducing the frequency with which plaintiffs sue, or the amounts that can be recovered when they do, comes from a study of the impact of malpractice risk on Caesarean delivery rates in New York State ( 128, 129). That study, which found a systematic relationship between the strength of various malpractice risk measures (i.e., claim frequency and insurance premiums) and Caesarean delivery rates, is consistent with the hypothesis that tort reforms that reduce claim frequency or malpractice premiums will reduce defensive behavior. Yet, it is unknown how far Localio’s findings for obstetricians and Caesarean rates can be generalized to other states, specialties, clinical situations, or procedures—especially in light of the failure of other studies funded by OTA to find a correlation between malpractice risk and clinical behavior.

To the extent that physicians respond not to the absolute risk of suit but to their inability to predict what kinds of behavior will lead to a suit, they may behave defensively even in the face of very low malpractice risks. Malpractice reforms that limit damages or reduce claim frequency without making the system more predictable may not have much effect on defensive behavior. In the early 1970s, when malpractice claim frequency and premiums were quite low compared with today’s levels, there was still considerable concern about defensive medicine ( 13, 14,20,58,243).

Some experts have suggested that states (or the federal government) develop compensation guidelines to help juries determine a “fair” award for noneconomic damages (i.e., “pain and suffering”) (23a). The guidelines would be keyed to characteristics of the plaintiff and his or her injuries, including age and type or level of disability. This approach would be less punishing to seriously injured plaintiffs than a single cap on damages applicable to all cases, and it would also promote consistency in amounts awarded across juries and jurisdictions.

<sup>4</sup> For a detailed compendium of the current implementation of these reforms in the 50 states, see OTA’s background paper on the subject (236).

The effect of such compensation guidelines on claim frequency is unpredictable, because they would probably raise some awards while lowering others. If the mean award declined, claim frequency would decline as plaintiffs' attorneys weighed the lower potential payouts from success against the cost of pursuing a case. Such marginal reduction in claim frequency would probably not do much to induce physicians to reduce defensive medicine.

One problem with the traditional tort reforms enacted by the states is that their effect on defensive medicine is not very well targeted. While they may reduce physicians' general anxieties about being sued, these reforms do not send specific signals about which defensive practices are more or less appropriate.<sup>5</sup> Thus, even when limits on access to the courts or on amounts that can be recovered do reduce defensive medicine, they may do so indiscriminately, reducing appropriate as well as inappropriate practices.

### ■ Recent Malpractice Reform Proposals

Recent proposals for malpractice system reform go beyond the traditional approaches of the 1970s and 1980s. They involve substantive changes in the relationships among the parties to malpractice suits or in the process or criteria used to determine negligence and compensation. They include the following:

- greater use of clinical practice guidelines as the standard of care,
- enterprise liability,
- alternative dispute resolution (ADR), and
- selective no-fault malpractice systems.

### Clinical Practice Guidelines

A larger role for clinical practice guidelines in medical malpractice litigation is being tested in a small number of states. The State of Maine's ongoing experimental program has become a model

for such efforts. In Maine, selected guidelines can be used as an affirmative defense (i.e., a complete defense if it can be shown that the defendant adhered to the guidelines). The state has recently adopted guidelines in areas of practice thought to involve substantial defensive medicine (e.g., Caesarean deliveries, cervical spine x-rays for head injury, preoperative testing).

The Maine guidelines were written in part to reduce defensive medical practice. For example, Maine's guideline for cervical spine x-rays provides physicians with explicit criteria for when it is *not* necessary to obtain such an examination. If these guidelines are upheld in court, physicians may be able to rely on them for legal protection when they decline to perform such a test.

There is some evidence that the Maine initiative has reduced defensive medicine in some Select procedures (e.g., cervical spine x-rays in emergency rooms). Because the number of clinical situations in which such guidelines can be applied is limited, however, these approaches may not have much of an impact overall on medical practice or health care costs.

Even under the current legal system, where guidelines carry no greater legal weight than other expert testimony, the continued development of clinical practice guidelines by professional groups and governments might reduce defensive medicine in certain areas if they help clarify the legal standard of care.

The greatest potential benefit for increasing the use of guidelines in the tort system is that they offer a method for *selectively* addressing problems of defensive medicine by differentiating procedures that are appropriate from those that are not worth their medical risks and costs. They can also address instances in which defensive medicine is practiced unconsciously by alerting physicians to the new standard of care as reflected in the guidelines.

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<sup>5</sup> Indeed, there is virtually no information on whether reductions in malpractice risk lead to improvements or a decrease in the quality of medical care. Localio's study of Caesarean deliveries in New York State did not address the effect on patient outcomes of lower Caesarean delivery rates in areas with lower malpractice risk.

It is worth noting, however, that guidelines are generally developed by panels of experts (usually dominated by physicians) who, for a variety of reasons, may recommend aggressive use of diagnostic and therapeutic interventions without consideration of the implications for health care costs. For example, prior to the 1992 reauthorization of the federal government new guideline development program, the expert groups developing the guidelines were advised to consider only medical effectiveness and risks, and *not* the cost, of interventions (241). Moreover, when there is a great deal of uncertainty about the relative effectiveness of alternative courses of action, the developers of guidelines often demur from taking a stand and instead provide an array of diagnostic and treatment options, leaving it to the physician to make the choice. Thus, the net impact of the general trend toward more development of practice guidelines on defensive medicine is unclear.

### Enterprise Liability

The main feature of enterprise liability is that the physician would no longer be personally liable for his or her malpractice. Instead, the institution in which the physician practices, or the health plan responsible for paying for the services, would assume the physician's liability.

Enterprise liability promises certain efficiencies; for example, eliminating the costs of suits involving multiple defendants and thereby facilitating settlement. It could also promote better quality control within institutions and health plans while relieving physicians of some of the psychological burdens of a malpractice suit.

Although the physician would not be named in the suit and may not have as great a role in the pre-trial discovery process, if the case does go to trial, the physician would probably be the primary witness. (Presently, only 10 to 20 percent of malpractice cases go to trial.) Thus, although there may be some psychological benefit to physicians of not being held personally liable, they may still feel

burdened by the prospect of having to defend their actions in court.

The number of claims against health plans or institutions could go up under enterprise liability if patients feel more comfortable suing institutions than suing their own doctors. If doctors find themselves being witnesses in a larger number of suits, and subject to greater oversight and possibly disciplinary action by the institution in which they practice, they could become even more fearful of malpractice and, hence, practice more defensive medicine.

The enterprise that assumes the liability would have incentives to limit potential suits and improve the quality of care. Enterprise liability may not, however, lead to a reduction in the kinds of defensive medicine whose costs are high in relation to their potential benefits unless the organization also has incentives to limit health care costs. If the organization that assumes liability has no financial incentive to control health care costs, it may target its quality control efforts to eliminate all adverse events and charge patients or their insurers for defensive procedures with low benefits and high costs.

### Alternative Dispute Resolution

ADR can take many forms, but a common attribute of most such programs is that the dispute is heard or decided by one or more arbitrators or mediators rather than by a jury. The ADR proceeding is often less formal, less costly, and less public than a judicial trial.

ADR can be nonbinding or binding. For nonbinding ADR, the case can still proceed to trial. Therefore, if physicians practice defensively out of anxiety about court trials, binding ADR may be the better approach to reduce defensive medicine.

The most feasible approach to binding ADR is voluntary pretreatment contracts between patients and providers (or between patients and health plans) in which the parties agree prior to treatment to arbitrate any malpractice suit that might arise from that treatment. This approach has not been

tried very often because of present uncertainty about the enforceability of such contracts.<sup>6</sup>

To the extent that physicians believe an ADR system is more fair than the judicial system, they might practice less defensively. Also, cases would not go to public trial under binding ADR, so if physicians abhor the publicity of a trial, they would be relieved of that concern.

On the other hand, arbitrators may be more likely to reach compromise decisions rather than completely exonerate the physician. Physicians might find they are held liable more often in arbitration than in trial. An increase in liability findings could make physicians more defensive.

Finally, ADR may increase the frequency of suits, because the cost of bringing a claim should be lower and plaintiffs may find arbitration less intimidating than civil litigation. To the extent that physicians react to increasing claim frequency by becoming more defensive, this feature of ADR could increase the practice of defensive medicine.

Like the traditional malpractice reforms, any effect of ADR on defensive medicine would be general; ADR could not provide specific guidance about which defensive medical practices are, and which are not, worth their costs.

### **The American Medical Association/ Specialty Society Medical Liability Project**

Another ADR model has been proposed by the American Medical Association and 31 national medical specialty societies (AMA/S SMLP). Each state's medical licensing board would have exclusive authority to hear and decide malpractice claims. The newly expanded medical licensing boards would consist of seven members, with no more than three coming from the health professions,

The AMA/SSMLP proposal outlines in detail the process for claim resolution and proposes certain revisions in the legal rules to be used, including a cap on damages and a change in the legal standard of care to more explicitly recognize re-

source limitations. For plaintiffs, the plan offers easier filing of claims and free legal services once a claim is judged to have merit. Most cases would probably be decided by a claims investigator, a single physician, or a hearing examiner, depending on the stage at which they are resolved.

Although the proposal would eliminate physicians' anxiety about court trials, linking malpractice claim resolution with medical licensing could make physicians apprehensive in another way. In addition, if the AMA is correct in its prediction that many more injured patients would file claims under such a system, physicians could find themselves named in more claims. Both of these factors—higher claims frequency and the increased link between malpractice claims and formal disciplinary bodies—could increase incentives to practice defensive medicine.

On the other hand, if the determinations of the medical boards improve the consistency of findings of negligence, physicians may get clearer signals about which kinds of defensive medicine will protect them from disciplinary actions. Thus, the system may differentiate better than the present system between “good” and “bad” defensive medicine.

### **Selective No-Fault**

Under a selective no-fault system, medical experts would identify categories of medical injuries that would be compensable without a determination of fault on the part of the physician. When these injuries occur, patients would be compensated through some kind of administrative system. Claims not involving these injuries would still be compensated through either a judicial system or an ADR system, retaining negligence as the liability standard.

Virginia and Florida have implemented no-fault systems for a selected set of severe birth-related injuries. These injuries were chosen because the issue of causality is very muddled in these cases (i.e., it is difficult to prove that an injury did not result from the birth process). Although the

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<sup>6</sup> The courts often scrutinize the fairness of such contracts, because the health care provider usually has superior bargaining power.

two programs have been operational for close to five years, no studies have documented whether these programs have increased the availability of obstetric care or changed the use of any obstetric procedures.

A selective no-fault system with broader application across a wide array of clinical situations has been proposed by researchers since the early 1970s (2, 19, 22 1). The developers of this proposal have identified about 150 “accelerated compensation events” (ACES), defined by adverse outcomes resulting from certain clinical actions or omissions. These adverse outcomes should be avoidable with good medical care. Under their proposal, injuries falling into an ACE category would be compensated quickly and with no inquiry into negligence.

Selective no-fault goes further than enterprise liability in relieving the physician of personal liability; it should therefore reduce some pressures to practice defensively. Yet compensation under an ACE may still carry a personal stigma for the physician.

ACES can and probably would be used to monitor the quality of care as well as to determine compensation, and physicians might be disciplined if they are implicated in a large number of ACES. Some ACES involve failure to diagnose a fatal condition, such as breast cancer. If, as OTA contends, a substantial proportion of defensive medicine involves extra tests and procedures to avoid very unlikely but serious consequences, physicians may feel as compelled to practice defensively to avoid an ACE as they do to avoid a malpractice suit.

## DEFENSIVE MEDICINE IN AN ERA OF HEALTH CARE REFORM

Positive defensive medicine as it is practiced today evolved in the context of a fee-for-service

health care system in which physicians for the most part faced little or no financial penalty and sometimes were financially rewarded when they ordered or performed extra tests and procedures. Even the growth of health maintenance organizations (HMOs), which put plans at risk of exceeding their capitated budgets, has not changed this reality for most of the health care system.<sup>7</sup>

As noted above, OTA concluded that most defensive medicine practices are not completely wasteful but instead reflect the tendency of liability concerns to push physicians’ tolerance for medical risks of a bad outcome to extremely low levels. The fee-for-service system of third-party payment both empowers and encourages physicians to practice very low-risk medicine.

A new health care delivery system may evolve in the coming years as a consequence of health care reform. Whether the new system actually changes the financial incentives to order or perform tests and procedures remains to be seen, but some proposals clearly do envision a new set of incentives. In particular, proposals that embody managed competition as a governing framework for the organization of the health care system would create incentives for health plans to reduce the number of procedures used by their members.

Just as the malpractice system may push doctors’ tolerance for medical risks to low levels, managed competition may provide a countervailing force to raise it back up. Indeed, a critical question regarding managed competition is how quality of care will be monitored and enforced in plans where incentives to cut costs are strong.

For all its problems, the medical malpractice system is designed to hold the medical profession to an acceptable level of quality by deterring negligence. Whether the current malpractice system is effective in achieving this objective is a matter

<sup>7</sup> Today, only about 17 percent of Americans are enrolled in HMOs (141).

<sup>8</sup> *Managed competition* in this report refers to a system in which each consumer chooses among competing health plans that offer a standard set of benefits at different prices (i.e., premiums). Competition among plans for patients on the basis of price as well as quality would presumably force plans to look for opportunities to eliminate wasteful or only marginally useful services. In addition, the Administration’s proposal imposes caps on increases in health insurance premiums. It is expected that plans will exert greater influence on their participating doctors and hospitals to be more cost conscious in making clinical decisions.

of debate. OTA found only one study that tested the deterrent effect of the malpractices system, and that study failed to show an effect:

In an attempt to estimate the deterrent effect of the malpractice system, researchers at Harvard University recently analyzed the relationship between the number of malpractice claims per negligent injury and the rate of negligent injury in New York State hospitals in 1984. They failed to demonstrate a statistically significant relationship between malpractice claim activity and the rate of negligent injury in a hospital (254).<sup>9</sup>

Nevertheless, given new incentives to do less rather than more in a “reformed” health care system, major reforms of the medical malpractice system that reduce or remove incentives to practice defensively could reduce or remove a deterrent to providing too little care at the very time that such mechanisms are most needed.

Ultimately two questions must be answered as the United States moves to a new health care system:

- what level of medical risk are the American people willing to bear for the sake of cost containment?
- what quality assurance mechanisms should be used to decide on and enforce adherence to that level?

Under the malpractice system as it is currently configured, juries help decide the acceptable level of medical risk in at least some cases. Better methods may exist, but until such alternatives are tried and tested, the advisability of major changes in the malpractice system is a policy issue that deserves careful consideration.

## POLICY OPTIONS

OTA’s assessment of the extent of defensive medicine will not close the debate on how often such

practices are performed, how costly they are, or how much they affect the quality of care. Although physicians do not appear to *consciously* practice defensive medicine as often as they say they do, the malpractice system may have a subtle and cumulative effect over time on what physicians believe is the appropriate level of care. This *unconscious* component of defensive medicine may comprise a large part of the defensive medicine “problem.” Yet, an unknown proportion of both conscious and unconscious defensive medicine improves the outcomes of patient care.

A reasonable goal of federal policy would ~be to reduce physicians’ ability or incentives to engage (either consciously or unconsciously) in defensive practices whose benefits to patients are not worth their costs. Finding specific policies that move the health care system toward that goal is not so easy, however.

Below are four specific options for addressing the problem of defensive medicine. Each is imperfect, some more so than others. OTA has provided a rationale for suggesting that certain of these options provide a sharper scalpel than others for excising the “bad” practices while retaining the “good.” Finally, each policy option has different implications for fairness and equity to patients. These implications are laid out in the discussion following each option.

**OPTION 1:** *Reduce the strength of the malpractice signal by mandating traditional tort reforms that limit plaintiffs’ access to the courts or potential compensation.*

Some traditional tort reforms, particularly caps on noneconomic damages and elimination of the collateral source rule, have been shown to reduce malpractice premiums consistently in a number of studies. Any tort reform that makes it more difficult to prove liability or less potentially remunerative for a plaintiff to file and pursue a malpractice case should reduce claim frequency or payouts.

<sup>9</sup>Lack of statistically significant findings in this case may result from the small sample of hospitals in the study. The estimated effect of the malpractice system on negligent injuries was negative, though not statistically significant.

That malpractice premiums are lower in the presence of these reforms is therefore not surprising.

The evidence linking frequency of claims and malpractice premiums to the frequency with which physicians practice defensive medicine is sparse, consisting of one study showing that lower claims frequency and lower premiums are associated with lower rates of Caesarean deliveries (128). (Smaller studies of other procedures commissioned by OTA failed to find an effect.) That study did not address the effect of differences in Caesarean delivery rates on patient outcomes. Thus, while the very limited existing evidence supports the notion that defensive medicine might be sensitive to the general strength of the malpractice signal, the existence of the effect across different procedures and the impact on the quality of care are unknown.

The main problem with using the traditional reforms to reduce defensive medicine is that they do not target the practices that are likely to be least medically beneficial. In reducing physicians' general anxiety about being sued or having unlimited financial exposure, they may also weaken whatever "deterrence" value the current malpractice system provides, with no quality assurance system offered in its place to otherwise hold physicians accountable for the care they render.

Some traditional tort reforms, particularly those that limit potential compensation (e.g., caps on damages or mandatory periodic payment of damages), affect the very small minority of plaintiffs who receive high damage awards. These are disproportionately those with the most severe injuries. Not only does this raise the issue of fairness to victims of negligence, but it also sends a signal to physicians that the most serious results of malpractice will have more limited financial consequences.

**OPTION 2:** *Consider permanent changes in malpractice law only after the structure of the health care system under federal health care reform has been settled.*

A "go-slow" approach to malpractice reform would permit state and federal policy makers to

assess the incentives and quality assurance mechanisms inherent in health care reform before changing the basic structure of the malpractice system.

While this approach would avoid the potential for removing whatever "deterrence" value the current malpractice system offers before alternative quality assurance mechanisms are in place, it could also put the malpractice system in direct conflict with the incentives inherent in health care reform. In particular, under health care reform, physicians may feel pressure to make cost-benefit tradeoffs in their clinical choices. Yet the current legal standard of care does not explicitly recognize cost concerns as a legitimate input into clinical decisionmaking.

Over time, cost-benefit tradeoffs may become integrated into the customary standard of care and the courts will defer to this new standard of care. However, there is likely to be a transition period in which the physician will be pushed to conserve resources but will not be provided legal protection for those decisions. This could lead to new tensions among physicians, patients, and patients' health plans.

**OPTION 3:** *Promote predictability in the legal standard of care for defensive clinical situations using practice guidelines.*

One kind of malpractice reform that will be useful regardless of the shape of health care reform is the development and enhanced use as evidence in the courts of "clinical practice guidelines covering situations in which defensive medicine plays a substantial role.

OTA found that Caesarean deliveries and head injuries in emergency rooms are two clinical situations in which defensive medicine is a major problem. Other possible subjects for guideline development include procedures for followup of routine mammography (see chapter 2) and routine preoperative testing (125).

The federal government already has the administrative mechanisms in place to sponsor guideline development efforts in areas identified as high potential sources of inappropriate defensive prac-

tices. The Agency for Health Care Policy and Research's Office of the Forum for Quality and Effectiveness in Health Care could sponsor the development of such guidelines and dissemination to the states. It could also act as a clearinghouse for similar defensive-medicine targeted guidelines developed at the state level.

The development and dissemination of guidelines linked to specific problems of defensive medicine may be enough to encourage states to adopt legislation that would give them greater weight in court and thus help clarify the standard of care. Alternatively, the federal government could mandate changes in state civil procedure to make it easy to introduce such guidelines as evidence or to enhance their evidentiary weight. Constitutional issues would have to be considered in designing any such federal legislation.

The impact of this approach on defensive medicine is more predictable than other reforms, because guidelines would be targeted to specific areas where defensive medical practice is prevalent and widely agreed to promote medical practices with low expected benefits and high costs.

The overall impact on health care practices and costs is likely to be small, however. There are probably a very limited number of clinical situations in which such guidelines could be developed with sufficient specificity to provide clear-cut clinical guidance and legal protection. In addition, even if clinical practice guidelines do indicate when a procedure need not be ordered, there is no guarantee that physicians will substantially change their behavior to conform to such guidelines.

It must also be recognized that such guidelines, when legislatively mandated for use in malpractice cases, are implicitly setting upper limits on the cost that society is willing to bear for small improvements in health outcomes. Who makes these decisions (e.g., physician groups, broadly representative public commissions) may affect the acceptability of guidelines to practicing physicians,

their legal status, and the degree to which they reflect society's true preferences.

*Establish demonstration projects of malpractice reforms that either remove or limit the physician's involvement in the litigation process.*

Physicians express dissatisfaction with many aspects of the legal system, for example, large noneconomic damages, the jury's ability to determine the standard of care, and the quality of expert witnesses.

Although traditional tort reforms may reduce physicians' anxieties about being sued or financially ruined, they do not eliminate the threat of being sued and do nothing to clarify the standard of care. Reforms that relieve the physician of personal liability may be more likely to reduce defensive medicine. The two most promising reforms from this perspective are:

- selective no-fault compensation systems using ACES, and
- enterprise liability.

If personal liability is retained, then reforms that significantly alter the nature of the physician's interaction with the legal system to provide greater consistency in outcomes and payouts may have some impact on defensive medicine. Such reforms include:

- programs to encourage the use of binding arbitration, and
- the AMA/SSMLP administrative proposal.

The impact of these reforms on defensive medicine is unknown. However, any reform that relieves the physician of personal liability could also have an adverse impact on the quality of care. To counter this effect, quality control systems would need to be in place. If these systems used sanctions to ensure quality, they could also prompt defensive medical practice. Much would depend on whether physicians perceive new quali-

ty control systems as rational and fair—two adjectives rarely used by physicians to describe the tort system.

Because of the many uncertainties about the impact of these reforms on defensive medicine and the quality of care, state-level demonstrations may be warranted to evaluate these more innovative alternatives before full-scale commitment to any particular model.

Finally, the savings generated through reductions in defensive medicine, which are likely to be modest overall, are unlikely to offset the additional costs of some of these reforms. In particular, a selective no-fault system and the AMA/SSMLP administrative proposal will probably substantially increase net expenditures for medical injury compensation.