

No-Fault Compensation for Medical Injuries

The Prospect for Error Prevention

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THE RECENT INSTITUTE OF MEDICINE (IOM) REPORT on error in medicine introduced a wide audience to the alarming extent of morbidity and mortality due to preventable adverse events in US hospitals.¹ The publicity that surrounded the report,²⁻⁴ particularly the attention given to iatrogenic death rates, has stirred interest among policy makers at both the state and federal levels. Legislative action appears imminent.

Leading proposals⁵⁻⁹ promote 2 key strategies for enhancing patient safety: (1) design and implementation of “systems approaches” to reducing errors; and (2) improved tracking of incidents involving unintended harms. Scientific and regulatory goals are well-aligned here. Experts generally agree that both systems-oriented interventions and data gathering are vitally important to any significant advances in patient safety.^{10,11}

Unfortunately, because access to compensation for medical injury in our health care system hinges on blame and individual provider fault, the patient safety reforms spurred by the IOM report are on a collision course with the medical malpractice system. In the short term, that collision is likely to stymie much-needed attempts to make US hospitals safer. In the long term, it will substantially restrict the scope of public health gains that are achievable through error prevention efforts.

The challenge of addressing error in medicine demands a thorough reconsideration of the legal mechanisms currently used to deal with harms in health care. In this article we describe a “no-fault” alternative to litigation that does not predicate compensation on proof that practitioners’ conduct failed to meet the standard expected in their practice community (ie, negligence)¹² and argue that there is a pressing need to test its feasibility. We tackle traditional arguments against no-fault systems, specifically concerns about their cost and the presumption that eliminating liability will dilute incentives to deliver high-quality care. Recent empirical work suggests that a compensation model designed around avoidable or preventable injuries, as opposed to negligent ones, would not exceed the costs of current malpractice systems in the United States.¹³ Implementation of such a model promises to promote quality by harmonizing in-

Leading patient safety proposals promote the design and implementation of error prevention strategies that target systems used to deliver care and eschew individual blame. They also call for candor among practitioners about the causes and consequences of medical injury. Both goals collide with fundamental tenets of the medical malpractice system. Thus, the challenge of addressing error in medicine demands a thorough reconsideration of the legal mechanisms currently used to deal with harms in health care. In this article, we describe an alternative to litigation that does not predicate compensation on proof of practitioner fault, suggest how it might be operationalized, and argue that there is a pressing need to test its promise. We tackle traditional criticisms of “no-fault” compensation systems for medical injury—specifically, concerns about their cost and the presumption that eliminating liability will dilute incentives to deliver high-quality care. Our recent empirical work suggests that a model designed around avoidable or preventable injuries, as opposed to negligent ones, would not exceed the costs of current malpractice systems in the United States. Implementation of such a model promises to promote quality by harmonizing injury compensation with patient safety objectives, especially if it is linked to reforms that make institutions, rather than individuals, primarily answerable for injuries.

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SYSTEMS ORIENTATION AND DATA COLLECTION

Medicine is a relative latecomer to the science of human mistakes, but previous work in other fields has firmly estab-

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lished their multifactorial nature.^{14,15} Investigations of major disasters such as Three Mile Island, Chernobyl, and the Challenger space shuttle demonstrate that “latent” errors in the design of complex systems are an important predictor of accidents.^{14,16,17} “Active” errors made by front-line operators often play a role, but these are typically of secondary importance in the chain of causation.¹⁴

Over the last decade, work has begun in translating this seminal insight into the health care domain.^{1,18} Like industrial settings, harmful incidents in health systems frequently involve human error, but their causes and consequences cannot be meaningfully understood by examining provider behavior alone.^{19,20} Hence, the most promising patient safety initiatives seek to identify and correct latent errors,¹⁸ and to avoid what Reason has called the “blame trap.”²¹ For example, rather than emphasizing culpability, fault, or disciplinary action against physicians who read radiographs incorrectly, a sophisticated intervention might solicit candid input from staff and patients to isolate the source of problems and then re-engineer the reading process itself.²²

It is increasingly recognized that a focus on individual judgment may not only limit the effectiveness of error-prevention efforts but may actually exacerbate underlying causes of error.¹¹ One reason is that a punitive environment appears to chill providers’ willingness to generate information about errors.²³⁻²⁶ Rational redesign and evaluation of processes like radiographic reading procedures,²² drug ordering,^{27,28} and shift changeovers²⁹ depend on sound data on how, when, and where mistakes occur.³⁰ Data collection must be followed by careful epidemiological analysis and the dissemination of both anecdotal and statistical insights into prevention.

A pressing policy question in the wake of the IOM report is precisely how such data should be obtained from the field.³¹ The various options for reporting systems are best classified by reference to 2 defining features: the degree of obligation placed on prospective reporters, with the ends of this spectrum being voluntary and mandatory reporting, respectively; and the subsequent availability of reported data to third parties, ranging from strictly confidential to public information. Proposals considered in Congress to date mix combinations of these features.⁵⁻⁹

THE LITIGATION OBSTACLE

System-oriented approaches to reform are fundamentally at odds with the medical malpractice system. At its core, malpractice law involves a set of adversarial proceedings, beginning with a patient’s allegation of negligence against an individual provider. Processes of care are relevant only insofar as they may prove or disprove the defendant’s negligence. Malpractice litigation induces silence and bitterness. Physicians do not believe it contributes to the quality of care^{32,33} except perhaps when targeted at institutions such as managed care organizations.³⁴ Hospital executives appear to share providers’ skepticism, an outlook exemplified by the fact that many hospitals continue to conceive of

risk management and quality improvement as substantively different enterprises.³⁵

The tension between error reporting and the malpractice system is more complicated and different models raise different questions. Organized medicine opposes mandatory reporting initiatives, arguing that a loss of confidentiality and an increase in the volume of malpractice litigation would follow.³⁶ A mandatory reporting system that made its contents available to patients or other interested parties would be likely to engender the distrust of those practitioners closest to errors and best positioned to report details of their occurrence. Physician and hospital leaders instead support a confidential, voluntary reporting system, an approach also recommended by the IOM.¹

There are doubts about whether confidentiality could really be guaranteed in voluntary or mandatory systems,³⁷⁻³⁹ but more importantly, confidentiality and voluntary reporting, whether invoked jointly or separately, raise concerns of their own. Patient advocates fiercely oppose both.⁴⁰ Patients desire access to information about injuries they experience, especially serious and preventable ones.⁴¹⁻⁴³ As well as facilitating consumer choice,⁴³ data on medical mistakes may alert patients to opportunities to seek compensation for their injuries.⁴⁴

Each of the above arguments has merit. Patients have compelling interests in knowing the facts and extent of injury they sustain, but the desired transparency will prove illusory if forced disclosure or publicity drives knowledge about errors underground.²³⁻²⁵ Peer review statutes arguably prevent legal discovery of reported data,³⁷ but these laws vary widely across states and existing case law does not resolve their applicability to reported data.^{45,46} To the extent that such information is accessible, plaintiffs’ attorneys can be expected to take advantage of it to find new cases and to decrease their costs of discovery in existing cases. (Indeed, conscientious attorneys in pursuit of their clients’ best interests should do no less.) Although some of the resulting suits may be perfectly appropriate, the taint of malpractice would immediately mark the reporting system that fueled them, prompting providers to avoid reports wherever possible.

In short, reporting systems are vital, yet no mix of mandatory/voluntary and public/confidential features can avoid trading off important interests of patients against those of providers. It is essential to recognize that this dilemma arises largely because reports must be made in the shadow of malpractice law. Thus, the need to collect error data in an environment where medical injury compensation calls for scrutiny of provider fault constitutes a troubling deadlock for the patient safety movement.

In addition, the fact that physicians, through their professionalization and training, conflate negligence with moral turpitude, cleaves malpractice litigation from the professional drive to provide better quality care. When mistakes are (or may be) the subject of litigation, physicians and institutions strive to cloak them in confidentiality, forgoing opportunities to learn

from the problems that lawsuits can sometimes help to illuminate. These behavioral responses to malpractice law are so ingrained in medical practice that efforts to retrain physicians to better understand the opportunities that a negligence-based system provides for quality improvement are unlikely to provide the necessary breakthrough. Although some commentators continue to hold out hopes that the existing system may adapt,⁴⁷ it is increasingly clear that alternative approaches to patient compensation must be seriously considered.

DEFINING THE OPTIMAL SYSTEM

An optimal system must address the need to prevent medical errors and efficiently compensate medical injuries once they occur. To achieve these broad goals, several system characteristics are essential. First, the program should encourage physicians and other health care providers to report errors, especially those that cause medical injury. These data would then be studied to understand key structural determinants of common errors, as well as the risky, persistent behavioral patterns that cause them.

Second, the program should strive to send strong quality improvement signals. Although most health care providers are committed to high-quality care as a matter of medical ethics, an effective program would buttress those impulses with financial incentives to reduce the number of errors and injuries. Third, in rare cases, patients are harmed by physicians who are incompetent, dangerous, or malevolent. Even a system of compensation that is not focused on fault must have mechanisms in place to deal with such practitioners, either directly or by triaging them to appropriate disciplinary bodies.⁴⁸

Fourth, the compensation program should reinforce rather than undermine the honesty and openness of the patient-physician relationship. Ideally, physicians would be able to inform their patients that an injury has occurred due to medical management and that there is a possibility that the injury may have been preventable. Fifth, wherever appropriate, patients should be compensated in a manner that is speedy, equitable, affordable, and predictable. A no-fault system of compensation based on enterprise liability would be well positioned to accomplish each of these 5 key goals.

THE NO-FAULT APPROACH

Compensation programs that do not rely on negligence determinations are popularly referred to as “no-fault” systems.⁴⁹ In fault-based models, such as tort or the administrative system proposed by the American Medical Association in the late 1980s,⁵⁰ the claimant must prove 4 elements: duty, injury, causation, and negligence. No-fault systems eliminate the requirement of proving negligence. The workers’ compensation schemes in operation in all states are a prominent example of the no-fault model. A number of states also have no-fault components embedded in their schemes for compensating automobile injury. Although claimants in these schemes must prove that they have sustained an *injury* that was *caused* by an accident in the workplace or on the road

(where it is generally assumed that a third party has a *duty* of care to them), it is not necessary to show that the third party acted in a negligent fashion.

No-fault compensation systems are not completely unknown to medicine—several are in operation internationally.¹³ Collectively, Denmark, Sweden, Finland, and New Zealand have accumulated nearly 80 years of experience in operating administrative schemes that replace medical malpractice litigation.⁵¹⁻⁵³ Aspects of the design of these systems can help inform the kind of no-fault compensation model that might be implemented in the United States.

The health care systems in these countries differ significantly from that in the United States, with a heavier reliance on public payment and provision of services. Mechanisms for funding their compensation systems also differ from the physician premium that is characteristic of malpractice systems. For example, New Zealand’s scheme draws from general taxation revenue while Sweden’s draws on premiums charged to regional councils and physicians. Nonetheless, core design features of these administrative schemes, such as compensation criteria, could be grafted onto existing arrangements among physicians, hospitals, and insurers in the United States. The simplest no-fault model would modify the “distribution” rules for compensation funds, without disrupting existing financing structures. However, elimination of negligence criteria would almost certainly signal a diminished role for attorneys in claims and pose a significant political obstacle to implementation.

Among the international models, the Swedish approach is perhaps the most attractive. Patients who believe they have been injured as a result of medical care in Sweden are encouraged to apply for compensation using forms available in all clinics and hospitals.¹³ Physicians and other health care personnel are actively involved in approximately 60% to 80% of claims, alerting patients to the possibility that a medical injury has occurred, referring the patient to a social worker for assistance, even helping patients to lodge claims⁵⁴—the sort of assistance US physicians often provide to their workers’ compensation patients. Physicians in Sweden appear to regard the facilitation of medical injury claims as a natural extension of their therapeutic responsibility to safeguard patients’ best interests.¹³

Once a claim is made, the treating physician prepares and files a written report about the injury. An adjuster makes an initial determination of eligibility and then forwards the case for final determination to 1 or more specialists who are retained by the scheme to help judge compensability. The process is relatively fast, with the average claim taking 6 months from initiation to final determination.¹³ Approximately 40% of claims receive compensation.⁵⁴ Patients who are dissatisfied with the outcome may pursue a 2-step appeals process consisting of review of the determination by a claims panel followed by an arbitration procedure.

The key element of the compensation criteria in the Swedish model is the concept of avoidability. System designers

recognized that compensating all injuries arising from medical care would be prohibitively expensive.¹³ Thus, only a subset of medical injuries are eligible for compensation. We have described the test in detail elsewhere.¹³ In essence, adjudicators ask whether (1) an injury resulted from treatment, (2) the treatment in question was medically justified, and (3) the outcome was unavoidable. If the answer to the first query is “yes,” and the answer to either the second or third queries is “no,” the claimant receives compensation.

Successful claims are paid in a uniform manner using a fixed benefits schedule and include compensation for both economic and noneconomic (pain and suffering) losses. But before patients are eligible for compensation, they must have spent at least 10 days in the hospital or endured more than 30 sick days.¹³ This “disability threshold” eliminates the minor claims that would not require significant compensation, but would, if processed, add considerably to administrative expenses.

Were such a scheme to be tested in the United States, its operation could be linked to vigorous efforts to analyze the claims data. Errors uncovered in the compensation inquiry—the number of which would likely dwarf those obtained under current fledgling reporting systems—could be subjected to root cause analysis, with primary responsibility for such analysis falling on the institution where the error occurred. Results would then be transmitted to a central agency, likely state based, that would monitor the analytical work, categorize errors and causative factors, and disseminate a redacted form of the data. Subject to strict confidentiality rules, a more detailed version of the database on avoidable errors and their causes would be available for both institution- and state-run prevention initiatives. Thus, the end point of the no-fault approach to data gathering, analysis, and publication closely resembles the one envisioned by the IOM report under mandatory and voluntary reporting.¹

THE FRESH CASE FOR NO-FAULT

In comparisons with medical malpractice, the capacity of no-fault systems to compensate injured patients is usually touted as their major strength.⁵⁵ Expectations about this capacity are not purely speculative: recent studies of the 2 small schemes for no-fault compensation of birth-related neurological injuries currently in operation in the United States indicate fairly solid performance on compensation, as well as reductions in administrative costs.⁵⁶⁻⁵⁸ The 2 chief criticisms traditionally leveled against no-fault are that (1) the costs of achieving effective compensation are prohibitive,^{50,59} and (2) removal of fault-based determinations will have a deleterious impact on deterrence goals.⁴⁹ Recent empirical findings and new patient safety imperatives debunk the rationale for both criticisms.

Affordability Through Flexibility

By combining data on the incidence and types of adverse events in Colorado and Utah in 1992 with estimates of the losses stemming from those adverse events, we have previously calculated the costs of 3 different compensation mod-

els: one that would compensate all medical injuries; one extending payment only to medical injuries attributable to negligence; and one that compensated injury according to Swedish avoidability criteria.^{13,60} The calculations use a compensation package with standard components for each injury, including lost income, household production, health care costs, and compensation for pain and suffering associated with the medical injury. Our estimation methods are described in detail elsewhere.^{13,60}

The TABLE summarizes our results. The upper half of the Table shows that relative to programs that would compensate all adverse events or negligent events respectively, a program that applied Swedish avoidability criteria to all claims (regardless of severity) and awarded a generous compensation package would be expected to occupy intermediate ground both in terms of the number of compensable injuries and system costs. Such a program would make 67% more injuries eligible for compensation in Utah than the tort system, and 95% more in Colorado. However, the expenditures required to compensate this larger set of injuries would also increase costs by approximately 50% in both states.

Whatever promises an alternative compensation scheme makes in terms of equity advances and error prevention, planners must be sensitive to the political reality of a cash-strapped health care system in its design. States cannot reasonably be expected to pilot no-fault schemes, much less adopt them, if their costs will significantly exceed those of the current malpractice system. The lower half of the Table addresses the question of affordability by comparing the cost of practical versions of a Swedish-style scheme in each state with the current malpractice systems. The versions of no-fault tested here are the ones that were actively considered by stakeholders in each state during the course of the Utah-Colorado Medical Practice Study (1994-1998).¹³ Our estimates show that many more injured patients may be compensated under no-fault than tort within budgets that are similar to or less than the costs of the current system.

Deterrence Reconsidered

The prevailing enthusiasm for error prevention may wane over time, and even the best regulatory oversight may fail to motivate providers everywhere to pursue error reduction strategies. Hence, external stimuli for improving quality generally, and preventing errors specifically, are valuable. But how can a system that jettisons individual blame for errors effectively provide such a stimulus?

Critics of no-fault have generally equated a shift to no-fault with abandonment of opportunities to use the compensation system to leverage positive influences on provider behavior. Setting aside the questionable role of deterrence in malpractice law,^{49,61,62} there is ample evidence that no-fault systems can be structured to promote safety.^{63,64} Indeed, new insights into the causes of medical injury suggest that they are actually far better placed to do so than negligence-based litigation.

EXPERIENCE RATING AND ENTERPRISE LIABILITY

In theory, a shift from tort to no-fault reduces incentives to take care. Empirical studies of the introduction of no-fault automobile programs have detected modest increases in collision rates,⁶⁵⁻⁶⁷ although some of these results are contested.^{68,69} In any event, no-fault programs can be designed to guard against this outcome. The best example of deterrence in no-fault programs comes from the field of workers' compensation where a variety of "experience rating" methods are used to create financial pressure on employers to pursue safety in the workplace.⁷⁰ Experience rating means that firms or individuals with higher rates of injury pay higher premiums. The capacity for this kind of incentive structure to deter injuries has been demonstrated.^{63,67}

A number of academic hospital systems across the country, including the Harvard Medical Institutions in Boston and the Federation of Jewish Philanthropies in New York, already have "channeling" arrangements in place that mimic experience rating by covering the malpractice insurance costs of their physicians through a self-insurance mechanism. However, wide-scale application of experience rating in health care has not proven feasible because the typical form of malpractice coverage involves individualized commercial policies, and claims against any one physician are far too infrequent to allow calculation of premiums from year to year that accurately reflect risk.^{71,72}

Linking a shift to no-fault with the adoption of "enterprise liability" would provide an opportunity to train the safety in-

centives of experience rating on the problem of medical injury. In its sharpest form, enterprise liability means that individuals do not directly bear the costs associated with an injury. Instead, the enterprise—whether it be a large group practice, a hospital with an integrated medical staff, or a health plan—would be "strictly liable" in both a legal and economic sense by meeting the costs of liability premiums for all affiliated staff.^{73,74} Premium levels could then be experience rated. For instance, a hospital would pay more in a given year if there was a rash of avoidable injuries and less if quality improvement initiatives curtailed the incidence of such events.

In addition to its deterrence promise, enterprise liability is thoroughly consistent with system-oriented quality improvement efforts.^{1,74} If the aberrant behavior of individual providers is a relatively infrequent explanation for harm, as a growing body of empirical literature suggests,¹ then the greatest potential for patient safety advances must lie in institutional, not individual, accountability. Holding an individual pharmacist, physician, or nurse liable for an adverse drug event stemming from confusingly similar mixtures of potassium, for example, is unlikely to provide the institutional impetus necessary to bring about change in the packaging of the various potassium concentrations. Enterprise liability can effectively target financial incentives at institutions, even specific processes within institutions.⁷⁵ Those institutions with channeling programs in place report productive collaborations among physicians, hospitals, and the insurance entity around clini-

Table. Number and Cost of Compensable Events Under Alternative Compensation Models, Utah and Colorado, 1992

	Compensable Injuries, No.	Cost, \$ (in millions)	Compensation Package
Types of Events			
Utah			
All adverse events	5614	227	
Swedish compensable events	2940	91	
Negligent events	1759	57	
Colorado			
All adverse events	11 578	418	
Swedish compensable events	5919	129	
Negligent events	3032	84	
Alternative Model Comparison			
Utah			
No-fault model based on Swedish compensable events	1465	55	4-Week disability threshold 66% Wage replacement No household production Health care costs Pain and suffering up to \$100 000
Medical malpractice system	~126*	55-60†	Actual tort award
Colorado			
No-fault model based on Swedish compensable events	973	82	8-Week disability threshold Full wage replacement No household production Health care costs Pain and suffering
Medical malpractice system	~268*	100-110†	Actual tort award

*We calculated the number of medical malpractice plaintiffs compensated annually by dividing the estimated number of claims statewide (361 in Utah and 476 in Colorado for injuries in 1992) by the number of paid claims. In Utah, we estimated the paid claim proportion (35%) using data gathered by the legislative auditor (Legislative Auditor General, State of Utah. *A Performance Audit of the Medical Malpractice Prelitigation Panels*. January 1994. Report No. 93-07.) In Colorado, we used the proportion of injury year 1992 claims paid at the state's largest insurer (56%).

†Malpractice system costs were calculated by aggregating estimates of total premium dollars paid by physicians and hospitals to insurers in each state.

cal guideline development and patient safety,⁷⁶ although the unique nature of these institutions makes it difficult to measure the extent to which such initiatives are actually spurred by the economic incentives at work.

An enterprise liability/no-fault system will not fit easily with every physician's practice. For example, for the solo practitioner who admits patients to several hospitals the choice of a suitable enterprise to provide coverage may not be straightforward. More fundamentally, the workers' compensation experience indicates that it is not feasible for smaller firms to bear the full costs of injuries through self-insurance.⁷⁰ Year-to-year fluctuations in injury levels at small firms lead most of them to partially or fully pool their risks. The inability of some organizations to tolerate experience-rated premiums reignites concerns about reduced safety incentives in a shift from tort to no-fault.^{64,77} However, 2 countervailing considerations—the general absence of experience rating in the malpractice system, and the paucity of evidence about its capacity to deter poor care—go some way toward mitigating these concerns; they also bolster our volume and cost estimates for a no-fault alternative (Table).

With so little data available about the rates of avoidable medical injuries,¹ it is difficult to estimate the critical mass necessary for a health care institution to comfortably take on full experience rating in an enterprise liability model. However, the profile of self-insured organizations in workers' compensation suggests that reasonable candidates could emerge from among integrated delivery systems, hospitals, and even some medical groups.^{74,78} Moreover, with ongoing consolidation in the health care industry and movement toward tighter integration of health care practitioners with institutions, the base for enterprise liability grows larger all the time.

AN INCREMENTAL APPROACH TO REFORM

Most hospitals and physicians are not prepared for a rapid shift to a no-fault model, much less enterprise liability. There are likely to be many unanticipated outcomes of such a major transition, and these should be studied. In addition, a number of important design issues must be worked through, including the status of the compensation authority (private or public), the role of existing malpractice insurers, institutional oversight to guard against cover-ups of injuries, informed consent for patients cared for in a no-fault framework, the extent of attorney involvement (if any), rights of appeal, and the tensions that will inevitably emerge between no-fault and the coexisting tort regime.^{57,58}

Rather than wholesale replacement of the tort systems with no-fault, we advocate enabling legislation at the state level that would allow selected organizations to experiment with no-fault/enterprise liability models. Such laws would no doubt face the sort of legal challenges that originally confronted workers' compensation schemes, no-fault auto insurance, and the mandatory arbitration processes that some health plans impose on their enrollees.^{79,80} However, analysis of legal precedent in these areas suggests that, if it were carefully de-

signed, a no-fault compensation system for medical injury would likely survive such challenges.⁸¹ Thus, demonstration projects could proceed and allow the performance of no-fault models to be evaluated in 3 main areas: compensation, collection of data on errors, and advances in patient safety.

The political feasibility of demonstration projects may depend on permitting consumer choice. Patients should be permitted to opt into a no-fault model at the point of receiving care by choosing a participating physician or hospital. Patients who actively elected to receive care from such a provider would be committed to no-fault compensation avenues in the event of an injury; otherwise, patients would retain their usual rights to seek remedies in the malpractice system. Of course, special care would need to be taken to ensure that consumers were informed, had realistic choices at the opt-in point, and were not coerced into waiving rights to sue.

The benefits of a consumer choice model must be weighed against several efficiencies possible with a more encompassing, statewide scheme. The latter may eliminate conflict and administrative burden associated with gaining patients' informed consent to opt-in at the point of care. It may also circumvent a "first mover" problem if institutions (initially) feared that transparency about iatrogenic injury would place them at a competitive disadvantage. However, issues such as due process and the appropriate firm size for enterprise liability would require much more careful scrutiny before such an expansive scheme could be launched.

The other advantage of the choice model is its potential to catalyze market-driven reform if the experiment is successful. We believe that institutions participating in a no-fault/enterprise liability program would quickly outstrip their competitors both in terms of their attractiveness to patients and their ability to bring about safety interventions. The no-fault option would offer patients the prospect of obtaining compensation for a substantially wider class of injuries, rapid and fair redress, and some rights of appeal. We also believe that physicians would be more satisfied with the process and outcomes. Perhaps most importantly, the combination of no-fault and enterprise liability would provide institutions with "carrots" to pursue error prevention efforts, in the form of a less punitive environment and instructive data, and "sticks," in the form of experience-rated premiums. Our view is certainly optimistic. But it is a social experiment worth undertaking if we are to decrease significantly the number of injuries caused by medical errors.

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