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*53 NO-FAULT FOR MEDICAL INJURY: THEORY AND EVIDENCE

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*55 I. Introduction

This article [FN1] reports on "no-fault" as a leading alternative to today's liability systems for resolving medically caused

injuries. [FN2] Some form of no-fault is often mentioned as an ultimate reform goal, sometimes with relatively little specification of administrative design and without detail-ed plans for implementation. [FN3] In the United States, no-fault for medical injuries is supported by precedent from no-fault automobile insurance [FN4] *56 and Workers' Compensation, [FN5] often by advocates with experience in these other areas. [FN6] Until recently, the only operating examples of no-fault existed in other countries, such as Australia, New Zealand, and Sweden. [FN7]

In the late 1980s, Virginia became the first state to introduce no-fault for medical injuries; Florida enacted similar legislation a year later. [FN8] These two Birth-Related Neurological Injury Compensation Acts created very targeted administrative systems primarily intended to remove severe neurological injuries to newborns from tort law. [FN9] Although small, these programs are significant because they are the only operating examples in the United States of no-fault for medical injuries [FN10] -adverse events caused by medical professionals' actions or inactions. [FN11]

In this article, we examine the experience of these programs and evaluate their performance based on the problems they addressed and *57 their stated objectives. [FN12] We also place them in the larger legal, medical, and insurance context of injury policy and reform. Based on the evidence of several interrelated analyses, we offer suggested improvements in the existing programs. Even more importantly, we derive key implications for broader approaches, such as those under development in Utah and Colorado, [FN13] or other approaches that might be used nationwide.

II. Context: Goals of Injury Resolution Systems

A. The Three Relevant Systems: Legal/Tort, Medicine, and Insurance

1. Tort Systems

The tort system of legal liability for personal injury caused by negligence has three primary goals: compensation, deterrence, and justice. [FN14] The system compensates meritorious claims of negligent injury in order to deter potential tortfeasors from causing such injuries and to provide justice by administering a socially sanctioned dispute resolution process meant to satisfy individual participants and create social accountability. However, the system is under nearly continuous attack from a number of quarters on a number of grounds. [FN15]

*58 Mainly from a defense perspective, the tort system is seen as too large and intrusive. Claims are said to be too frequent, jury awards and private settlements too erratic, and the entire system too costly, not only in the high costs of administration relative to payouts but also in encouragement of expensive and wasteful "defensive medicine." [FN16] On the other hand, very different complaints are heard that the system is too small, covering only a tiny fraction of injury, even clearly negligent injury, [FN17] and that it is not only costly, but also slow, unpleasant, and insufficiently protects those with serious and permanent injuries.

Our view of the evidence is that the system works much better than detractors allege, at least for the cases actually brought, but that it is narrow and unsystematic in its approach to compensation and deterrence. [FN18] An important insight is that one's view of the desirability of no- fault *59 or other liability reform is heavily influenced by how one views the current performance of the partially reformed tort system, a point to which we return in the conclusion below.

2. Medicine

Issues concerning the delivery of personal health services are a subset of health policy. The three main goals of such policy are providing adequate access to care, of acceptable quality, at a reasonable cost. [FN19] To satisfy these goals, society relies on a mixed system of financing and delivery with public and private oversight. To provide adequate access, society relies on a mix of private and public first-party insurance to compensate people in need of care. Quality is assured by market forces augmented by private and public oversight. High standards and generous health insurance coverage have helped cause a high growth in outlays for these services. Cost containment has been achieved by a combination of public payment policy and regulation and more recently by reliance on competitive forces, including managed care. [FN20]

3. Insurance

Social concern about insurance reflects a desire to facilitate and maintain availability of risk-bearing mechanisms, which facilitate entrepreneurialism and smooth conduct of commerce as well as of individual lives. The two main goals of public

policy are assuring the solvency of risk bearers and consumer protection for insureds. [FN21] Setting *60 the right level of premiums is important both to maintain solvency and to assure provision of coverage to insureds at actuarially appropriate rates. The level of public intervention varies by line of coverage and degree of perceived market failure. [FN22]

4. The Three Systems and Medical Injury

From the perspective of medical care, an injury caused by misdiagnosis or mistreatment raises quality of care issues. From the legal perspective, certain medical injuries constitute medical malpractice because they result from a substandard level of care. Many forms of insurance are involved in the context of medical injuries. In the first instance, many different compensatory coverages may pay for remedial care and income replacement; for example, public or private health insurance, disability insurance, even automobile insurance and Workers' Compensation if the medical injury occurred in the course of care for covered conditions. [FN23] At a second level, where legal liability is implicated, liability insurance covers the tortfeasor's obligation to compensate the victim. [FN24] Liability insurance determines eligibility for payment using tort standards, and insurance companies must stand ready to defend cases in court. The first-party coverages, in contrast, determine eligibility under statutory or contractual standards using administrative mechanisms. [FN25]

In practice, the vast majority of medical injuries are reimbursed by the first-party coverages, [FN26] just as are the underlying conditions that *61 caused patients to seek medical care initially. [FN27] Liability insurance covers far fewer cases because of its limited nature. It also carries a much higher "loading" of administrative cost because defense cost is bundled with indemnity payment and because tort law has far more demanding standards and elaborate decision-making processes than do first-party coverages, whether under private contracts or public programs. [FN28]

B. Prior Reforms

Substantial upsurges in medical malpractice claims in the 1970s and again in the 1980s made medical malpractice a major public policy issue. [FN29] The "crisis" of the 1970s involved a substantial rise in liability insurance premiums and actual or threatened withdrawal of liability insurers from the market. [FN30] The crisis a decade later reflected a large increase in premiums in an era in which health insurers were implementing policies that limited physicians' ability to shift higher liability premiums forward to buyers of care in the form of higher fees. [FN31] Availability of liability insurance was not an issue in the 1980s, unlike *62 the 1970s, because physician-sponsored malpractice insurers had grown up as a response to the earlier crisis. [FN32]

Another response was statutory change. Although generically called "tort reform," these statutes addressed all three systems, insurance, tort law, and medical care. [FN33] Insurance availability was promoted by allowing risk retention groups, by forming Joint Underwriting Associations, and by creating state patient compensation funds. [FN34] To make liability insurance more affordable, legal reforms cut back on plaintiffs' ability to recover in tort. Some legal reforms also sought to make the liability system operate more accurately and quickly. Medical quality-viewed as a less important issue and often enacted as a political trade-off for tort relief-was addressed through strengthening of public medical disciplinary authorities, encouraging private risk management and medical peer review, and shielding peer review from tort and other legal claims. [FN35]

The weight of empirical evidence suggests that the statutory insurance reforms and at least some of the legal reforms had the intended effect of stabilizing liability insurance markets and reducing the overall level of medical malpractice payments. [FN36] The largest reductions in payments and premiums were attributable to a few provisions, notably caps on awards and modifications of the collateral source rule, which substantially cut awards to winning plaintiffs. [FN37] These tort cut-backs thus score *63 high in terms of increasing affordability of liability insurance and reducing the non-pecuniary costs of claims to defendants, and they may also reduce defensive medicine. [FN38] On their face, however, they do little or nothing to improve deterrence, compensation, and fairness in the administration of justice. [FN39]

None of these "first-generation" reforms addressed the basic issues of the shortcomings of legal performance or the large number of uncovered medical injuries. A set of "second-generation" reforms, much discussed but seldom implemented, attempts to address fundamental issues of legal and medical performance not reached by caps and the like. [FN40] These reforms have included proposals for an administrative fault-based system, [FN41] scheduling of awards, [FN42] alternative dispute resolution, [FN43] enterprise liability, [FN44] and use of medical practice guidelines *64 to improve medical care and the defensibility of liability claims. [FN45] In the absence of a crisis or a constituency for change, such proposals for more fundamental change have seldom received even serious legislative consideration, much less been enacted. [FN46]

C. No-Fault as a Systems Reform

Perhaps the most thoroughgoing proposal is to replace all or part of the tort system with a wholly new no-fault system. This type of reform could change nearly every aspect of injury finding and resolution-the standard of care and coverage, the rules of damages, the forum and process of decision making, and the bearer of financial risk. No-fault comes in several varieties, considered below, but all emphasize covering more injuries, more quickly, and at lower cost of administration per injury. Oversimplified, the central concept has always been to make third-party insurance for medical injuries more like first- party health or disability insurance. [FN47]

1. General No-Fault Goals

All no-fault reforms share one essential goal: as legal reforms, they seek to improve upon the injury resolution of tort liability by replacing the existing fault remedy and liability insurance with a new no-fault alternative, in whole or in part. Improvements are sought both for compensation and for deterrence. Different reforms emphasize a *65 different mix of these two goals, reflecting reformers' perceptions of liability problems in the area addressed.

Most reforms emphasize improvement of compensation. Improvements are meant to come both from broadening eligibility for coverage and from increasing ease of access by lowering the difficulties for asserting a claim. Another compensatory goal is providing more efficient administration for whatever breadth of coverage is designed into a particular reform. This goal is meant to be achieved by replacing courthouse methodology and adversary proceedings with the simpler approaches of contract or ordinary, executive-branch public administration. [FN48] The goal of broad compensation suggests very general standards for no-fault eligibility, not limited to particular conditions or causes of injury. The lack of limitations makes such insurance inexpensive to administer as a percentage of benefits paid. [FN49] The sheer number of beneficiaries achieves a very broad spreading of risk, allows economies of scale in administration to be realized, facilitates experience rating, and results in a sufficient number of cases to allow the development of expertise in the management of particular conditions.

Some no-fault advocates also emphasize improved deterrence, or injury prevention, and prompt mitigation of injuries that do occur. [FN50] Deterrence is meant to be increased through more systematic case finding, more expert resolution of claims, enhanced monitoring and education, and better economic incentives. [FN51]

The broadest no-fault designs are social insurance schemes covering all accidents and injuries to persons from any cause, without regard to negligence, in lieu of tort recovery. Australia and New Zealand are the frequently mentioned examples of such systems. [FN52] These plans differ from first- party health and disability insurance in their mandatory character and social, rather than voluntary, private financing. Such no-fault social insurance is also broader than other first-party coverages in potentially providing a more comprehensive package of benefits, but is narrower in restricting eligibility for coverage to accidental injuries-not including other medical conditions, which are covered by the national *66 health insurance system. [FN53] No such broad coverage of injury has been proposed or enacted in the United States.

Other no-fault programs have a much narrower scope, covering only injuries tied to particular activities. The United States has two examples of such programs: Workers' Compensation and automobile no-fault. Workers' Compensation covers injury or illness "arising out of the course of employment," including even negligently self-inflicted injury on the job. [FN54] It has both compensatory and deterrent goals. Automobile no-fault similarly covers all injuries "arising out of the operation of a motor vehicle," even including negligent single-vehicle accidents, which are not covered under general liability policies because there is no other driver to sue. [FN55] More targeted still, automobile no-fault also includes coverage for specified accidents occurring under specified circumstances, similar to the neurologically impaired infants plans discussed in this article. These resemble somewhat first-party coverages for single diseases, such as cancer [FN56] or short-term exposures to one cause of injury, such as flight insurance [FN57] or school athletic injury coverage. [FN58]

For automobile no-fault, a primary goal is to reduce the very high administrative cost of the accident-resolution system of tort law and liability insurance. Because some injuries not compensated by other coverages are paid under no-fault, such as single-car accidents, expanding compensation is a secondary goal, achievable mainly because of savings on administration of previously covered accidents. Also, mandating coverage addresses the problem of the underinsured, judgment-proof tortfeasor. [FN59] However, this problem is addressed by the *67 requirement to have coverage, not by the no-fault nature of that coverage. [FN60] Mandating coverage also serves a compensatory goal. Expansions in the number of injuries covered are financed at least in part from the savings in administrative cost.

Automobile no-fault is not deterrence oriented. As enacted, it typically applies to less severe injuries, while the more serious

injuries are still kept in the tort system. There have been proposals, however, that call for the complete replacement of tort. One explanation for applying no-fault only below a severity "threshold" is that the potential saving in administrative expense per dollar of benefit is greater for less severe injuries. [FN61] Another explanation for the observed pattern of coverage is that the trial bar lobbied successfully for thresholds to keep the larger, more profitable cases in tort. [FN62]

2. Elements in the Design of No-Fault Programs

Many possible variants of no-fault exist. However, one design element is crucial; reform must involve the replacement of a fault remedy with a no-fault alternative to achieve the key goal of no-fault. That is, within whatever sphere to which it applies, no-fault must be the exclusive remedy. Otherwise, no-fault would not be a legal reform, but simply another form of insurance for injuries, readily purchased but with no beneficial effect upon the problems of tort meant to be addressed by no-fault.

Another design element common to all no-fault programs is a shift from tort's lump-sum payment of losses to coverage of allowable costs as they are incurred. [FN63] A lump sum creates consumer sovereignty that in turn creates incentives for efficient use of resources, assuming that injured consumers are sufficiently well-informed and capable of *68 exercising their sovereignty. [FN64] To the extent that this is not so, from a paternalistic or social point of view, one result may be improvident "frittering" away of resources, followed by "free-riding" on public programs of compensation, such as Medicaid and disability coverages or public providers of hospital or long- term care. [FN65] Under no-fault, payments are made only as needs arise and services are consumed. Such periodic payments also provide a measure of insurance protection against unanticipated changes in needs-protection that private insurers find difficult to provide to people who are already seriously injured because of the problems of adverse selection. However, periodic payments also create on-going moral hazard, [FN66] because consumer-patients do not bear the higher costs they incur, a different form of free riding on a communal source of funds. [FN67]

A number of other important elements of no-fault can vary according to program design.

- a) Administration, including decision making, dispute resolution, and risk- bearing, can be public, private, or a combination of the two.
- b) Procedures may be formal, informal, or a combination thereof.
- *69 c) Coverage may be mandatory or voluntary, third-party or first-party.
- d) Eligibility criteria may be broad or targeted.
- e) Benefits covered may be comprehensive or basic.
- f) Coordination of benefits may make no-fault the primary payer or secondary to other sources of payment.
- g) Funding may be open-ended or fixed, ample or minimum. Funds may be raised from rate-payers or premium-payers.
- h) Premium-setting may use community or experience rating and many or few risk classifications.
- i) Solvency may be assured, for example, through a public backstop or guaranty fund, by regulatory oversight, or by private reinsurance.
- j) Loss-prevention mechanisms may be built in or reserved for administrative determination.

The public/private issue is central in that all of the functions of a no- fault insurer can be performed by a public or private organization or a combination thereof. A statute may set basic features, for instance, leaving many or most decisions on precise mechanisms and implementation to public or private administrators. However, recall that the key attribute of no-fault as a legal reform is inherently public, that is, making no-fault an exclusive remedy, completely replacing common law tort recovery.

Some assert that private contract can supersede state tort law, [FN68] but that is a more of a controversial and less settled approach. [FN69] In contrast, *70 the constitutionality of replacing tort remedies with administrative or insurance mechanisms is far better established. On the other hand, with regard to making subsidiary administrative decisions and actually running a public program or managing private coverage, private organizations may be more efficient in distributing payments and more responsive to preferences of injury victims. [FN70]

- D. The Pros and Cons of No-Fault for Medical Injuries
 - 1. Theoretical Advantages of Medical No-Fault

In the case of medical injury, no-fault is said to be an improvement on the tort system. A number of no-fault proposals

advanced to deal with the problem of tort performance have suggested a few primary reasons for this improvement. [FN71] These include improvements in compensation, deterrence, and justice.

No-fault improves compensation in several ways. First, more people should collect benefits because (a) coverage extends to medical injuries caused by medical acts or omissions that are not demonstrably negligent, and (b) the cost of bringing a claim in time, dollars, and adversarial tension is reduced, which should encourage such claims. It should also be easier for potential claimants to recognize their eligibility when negligence is no longer an issue. Furthermore, claimants should be more willing to make a claim when it is unnecessary to stigmatize a doctor or other care-giver in order to collect compensation. For the same reason, medical providers should be more forthcoming about the nature of the injury. However, if injury rates are tracked and insurance *71 premiums experience-rated, medical providers may benefit from concealing losses, just as under tort.

Second, payment of benefits should occur at a faster rate through insurance claims as opposed to litigation. No-fault is meant to encourage prompt filing because the costs of filing are low, and the need for attorney representation and investigation of the injury's circumstances is greatly reduced. Once a claim is filed, insurance or administrative fact-finding and ordering of payment should also be faster than that inherent in the tort process.

Third, more benefits should be paid relative to premiums because the administrative share of spending will decline without a highly formalized and adversarial litigation process. As a result, claimants will not be forced to compromise on the amount paid in order to get a certain and rapid settlement.

Fourth, benefits should be better tailored to individual needs because payments are made as needs arise. Also, payments should be better managed because a unified, large-scale program can develop expertise in particular medical services, as well as negotiate for efficacious and cost-effective services from providers.

Finally, compensation should be improved through no-fault because periodic payment of benefits provides a form of insurance protection against unanticipated changes in needs.

Deterrence of injury and promotion of quality are thought to be improved through no-fault for five reasons. First, covering more cases internalizes a greater share of medical injury costs into premiums, which should motivate premium-payers to investigate the causes of injury and to take cost-effective precautions. Second, larger scale operations and greater expertise should allow an administering agency or insurer to develop epidemiological data about medical injuries and about what practices tend to reduce such injuries, thus providing a solid basis for encouraging change in medical practice or for referring a recalcitrant practitioner for discipline. In the case of no-fault through listed avoidable events, [FN72] some listed events themselves will constitute guidelines for care, while others will set clear standards of responsibility and thus engender more general remedial efforts. Third, greater medical credibility among affected medical practitioners who control the causative instrumentalities should result from administrative dispute resolution by an expert agency or use of pre-set lists of avoidable events in place of a trial by a lay jury or negotiation between trial attorneys. *72 Fourth, experience rating, and possibly enterprise liability, should heighten incentives for medical actors to make improvements on their own and to follow useful guidance from the expert agency. Fifth, early recognition of an injury and prompt claiming under no-fault should allow earlier remedial intervention, which may ameliorate injury after occurrence, even if it does not deter injury in advance. In contrast, the pendency of a tort claim undercuts the normal incentives to rehabilitate oneself, as the prospect of having to appear in court many years later encourages malingering by claimants, in some cases even bordering on fraud, such as unnecessary use of a wheelchair.

Another aspect of improving deterrence is reducing current incen-tives for over-deterrence, or defensive medicine. Providing low-value care for defensive reasons is likely to fall under no-fault for several reasons: (1) Consistent, predictable results, promptly delivered, provide a clearer deterrent "signal" to practitioners than the slow and inconsistent rulings of the liability system; (2) No-fault stigma should be less than that which occurs in tort; (3) Damages under no-fault should be more accurately measured and less variable than under fault, reducing fears of awards far beyond covered liability; (4) The fault system creates incentives to over-serve because ordering extra tests or extra documentation can help defend a tort claim or dissuade a claimant from suing. However such activities are of little use under no-fault, as "defending" a claim depends on avoiding avoidable bad outcomes, not on elaborate medical or medico-legal process.

Justice in dispute resolution is likewise advanced under no-fault because more patients should be served. Injured parties and families feel attended to, even though they do not get their proverbial "day in court," especially if the agency or insurer

process assures them that remedial information is being gathered and appropriate remedial steps are being taken. Justice is also advanced because consistency of resolution can be addressed administratively, given that a single entity handles more cases and can track results. This is an especially important issue for damage awards, which vary substantially across tort cases. Achieving equal results in similar cases and avoiding arbitrariness are major contributors to justice at both social and individual levels; such a system differs from the case-by-case, process-based justice of conventional adversary process, but is no less valid.

2. Potential Shortcomings of Medical No-Fault

The potential shortcomings of no-fault mainly consist of foregoing the benefits received from tort. With regard to compensation, no-fault by design normally omits a large tort benefit, namely payment for non-pecuniary *73 loss. [FN73] Moreover, it does not normally individuate wage losses to the same extent. No-fault may also provide for lower attorneys' fees than are customary in tort and hence may result in a lower quality or quantity of representation. It also reduces successful claimants' options for spending by converting tort's lump sum recoveries into periodic payments. [FN74] An opposite objection is also heard, that no-fault will succeed too well, by compensating more cases, and that this increased coverage will make it unaffordably more expensive than liability coverage. [FN75]

With regard to deterrence, no-fault intentionally eliminates fault-finding and the stigma associated with it. No-fault opponents suggest that this loss of fault-based oversight reduces incentives for potential tortfeasors to act with due care. [FN76] Also foregone are the non-compensatory aspects of tort- which are also elements of justice-namely, the information revealed by the fact-finding process of tort and the satisfaction of many claimants' desire for retribution. [FN77]

Uncertain feasibility, which is unique to medical no-fault, is another potential shortcoming. Medical no-fault is meant to cover only injuries caused by medical care, just as Workers' Compensation covers only workplace injuries and automobile no-fault covers only motor vehicle accidents. However, it is undeniably more difficult to determine when medical acts or omissions have caused a problem than to determine *74 when discrete trauma has a caused a traumatic injury. [FN78] Workplace and automobile no-fault normally cover injuries characterized by a sudden and clear change in health status. Even workers or drivers with pre-existing injuries are apt to suffer distinguishably different problems from an automobile or factory accident. [FN79] One simplifying aspect of traumatic causation is that there is not usually any visible causative agent other than the automobile or workplace accident to confuse application of no-fault's eligibility determination.

In contrast, medical patients, almost by definition, have an existing ailment-or they would not be seeking treatment. Thus it is difficult to distinguish medically-induced harm from the natural progression of the illness or injury which was under medical care. Sometimes, a medical injury involves a traumatic departure from the expected course, as in the case of falls from unsupervised operating tables or hospital beds, which clearly inflict new damage. It is no surprise that such traumatic cases were especially prevalent in the earliest malpractice cases. [FN80] Today, medical capabilities and expectations are far more advanced, [FN81] however, and an increasingly common liability claim is that a practitioner or institution failed to achieve a normally achievable improvement in condition because of substandard care. [FN82]

Within the generally accepted medical understanding of causation and responsibility, such deficiencies in care are indeed medical injuries, even when they are not so clearly against accepted medical standards as to constitute negligence. [FN83] However, significant medical expertise is needed to hold a practitioner liable in these instances, and physicians are often in disagreement over accepted standards of care in any given *75 case. [FN84] It has been argued that moving to more routinized, decision-making process, similar to that used for health insurance, is thus not possible under no-fault. Alternatively, any feasible administrative forum would have to recreate much of the elaborate fact-finding and credibility testing used in the normal tort process, thus vitiating much of the potential no-fault savings in time and administrative cost as well as re-creating potentially adverse physician reaction out of fear of inquisitory, courtroom-style processes. [FN85]

The approach of specifying compensable no-fault events in advance is one response to these difficulties. The "avoidable event" family of proposals has sought to use expert consensus on medical causation as part of the definition of compensable event, thus reducing the need for line-drawing through expert testimony and an elaborate decision-making process at the time of a claim. [FN86] The Virginia and Florida programs discussed in this article resemble a predefined "avoidable event" program in their focus on tightly denominated, adverse, birth-related neurological injury. "Boundary" disputes in cases near the line *76 between covered and non-covered events can never be eliminated, but they can be reduced. [FN87]

3. Empirical Evidence from Workers' Compensation and No-Fault Automobile

Coverage

Experience suggests that "real-world" implementation of public programs and private systems alike often show shortcomings that can be glossed over in a conceptual discussion of goals, designs, or pros and cons. [FN88] Accordingly, it is important to consider the actual experience of Workers' Compensation and no-fault automobile insurance. To date, these are the two main operating examples of no-fault that medical no-fault seeks to emulate. Workers' Compensation, in particular, serves as a model for medical malpractice liability reform, as in the Virginia and Florida medical injury reforms.

a. Workers' Compensation

At its origin a century ago, when today's forms of health insurance were not yet invented in this country, Workers' Compensation was essentially an insurance reform providing new coverage for injuries that then had little chance of recompense in tort. [FN89] It also constituted a tort reform in that it supplanted tort, although tort had not yet become the elaborate and expensive mechanism that it is today. It also provided the first form of generally available medical insurance in the United States, albeit limited to a small share of all medical conditions.

Today, Workers' Compensation provides broadly applicable compensation. Statutes in forty-seven states require employers to purchase insurance or self- insure to provide specified amounts of wage-loss benefits, medical care, and in some cases rehabilitation services to workers who suffer a disabling injury or illness on the job. The laws vary substantially in their specific benefit and insurance provisions. [FN90] In *77 New Jersey, South Carolina, and Texas, provision of Workers' Compensation coverage is optional, but almost all employers opt for coverage. [FN91]

In general, wage-replacement benefits have always been designed to be less generous than medical benefits, perhaps in part because moral hazard is a more obvious problem when cash benefits are distributed; providing full wage replacement might encourage malingering. Under Workers' Compensation, wage replacement is typically limited to eighty percent, or less, of wages, up to a scheduled set of ceilings; benefits also begin only after a waiting period and cease after only one or two years. [FN92] In order to maintain affordable premiums for employers, states may keep benefits quite low, as was often said of the programs' income replacement during the high-inflation 1970s, when wages were rising rapidly but statutory allowances were not. In contrast, medical benefits were traditionally paid on an open-ended, fee-for-service basis, just as under traditional, "indemnity" health insurance. Uncontrolled medical coverage has proved quite expensive in both cases. [FN93] In response, to improve efficiency of compensation, managed care approaches first developed under health insurance have begun to be adopted for Workers' Compensation. [FN94] In practice, over half of all costs of work-place-related injury are paid through Workers' Compensation. [FN95] More-over, programs are generally thought to be quite efficient relative to tort claims resolution. Administrative costs take only twenty to thirty percent of the total, [FN96] compared with half or more for non-automobile liability cases. [FN97]

As a tort reform, despite its almost universal applicability, Workers' Compensation has not eliminated liability claims as a source of compensation for workplace injuries. [FN98] Workers cannot normally sue their employers, but they can, for example, file third-party product *78 liability suits against a manufacturer of a product that allegedly caused a job-related injury or illness. [FN99] Given the very limited cash from Workers' Compensation, compared with the potentially high awards for general and even punitive damages in tort cases, workers can readily perceive the exclusivity of Workers' Compensation as inequitable; and many have therefore attempted to circumvent the exclusivity rule. [FN100] Because of the difficulty of proving liability in the context of work-related injuries, and because the Workers' Compensation claim is gener-ally subrogated to the employer's tort claim up to the amount of the Workers' Compensation payment, product liability claims are mainly filed for injuries and illnesses involving substantial monetary loss. [FN101]

Further, in such large-stakes cases, Workers' Compensation benefits may not fully compensate for monetary and non-monetary losses that workers incur. Injuries requiring extensive medical expenditures, such as plastic surgeries for serious burns or specialized vocational rehabilitation for spinal cord injuries, are not well handled by Workers' Compensation. Moreover, because of scheduled benefits and other limits, expensive, high-quality medical care may not be fully covered. [FN102]

With regard to deterrence, a central goal of the original Workers' Compensation was to make workplaces safer by giving employers an economic incentive to take precautions: "The cost of the product should bear the blood of the workman" was a common reform slogan. [FN103] Indeed, there is no compensatory reason for limiting coverage to a particular activity, as under Workers' Compensation only a deterrent one. Although this limitation reduces the overall compensatory sweep of the

program, it thereby focuses deterrent incentives for injury reduction and mitigation, while also preserving some of the administrative economies of first-party insurance. Firms are often well-positioned to choose the most efficient mix of safety inputs; they exercise choice of equipment, control workplace conditions, hire and supervise workers, and select product mix. Moreover, firms are well motivated to make efficient choices, given the market incentives they face, both in the consumer market for the goods or services they produce and in the labor market for the workers they hire.

Today, casual empiricism suggests that the incentives of experience-rating, or self-insurance, and the risk-reduction programs of insurance *79 carriers or administrators have helped employers reduce injury rates. Moreover, enterprises are often sufficiently large to self-insure for Workers' Compensation, thus completely internalizing the gains from loss prevention. [FN104]

On the negative side of the ledger, there is evidence of three forms of moral hazard: (1) When premiums have not been fully experience-rated, employers have been less prone to provide a safe work environment; [FN105] (2) Even when employers do promote safety, employees may become more careless when compensated for injuries; [FN106] (3) When well insured, injured workers have a tendency to take longer to return to work; similarly, physicians may prescribe additional medical services or a longer recovery period or at least not object to patient malingering. Antidotes to such perverse incentives include patient cost-sharing and various forms of managed care. [FN107] "Twenty-four hour coverage," combining health insurance and Workers' Compensation coverage, is becoming common, partly to improve beneficiary and physician incentives. [FN108] Of course, at least in theory, managed care also has the potential to improve medical outcomes through evidence-based practice guidelines, reallocation of funds from low-value to higher-value services, and new, continuing oversight of previously unaccountable individual practitioners, who traditionally have faced only very rare lawsuits and even rarer state disciplinary actions.

b. No-Fault Automobile Insurance

Automobile no-fault was first enacted in the late 1960s and early 1970s. The tort system for automobile injuries, funded through widespread liability insurance, was perceived to be a slow and inefficient *80 source of compensation for accident victims. [FN109] In repsonse, some form of no- fault has been implemented in many U.S. states as well as in several other countries, including Australia, Quebec, Canada, Israel, New Zealand, and Sweden. [FN110] Among the states, very few have enacted broad and exclusive automobile no-fault so as to take all motor-vehicle-related injuries out of court. Many, like Delaware, simply created "add on," mandatory first-party coverage on top of tort [FN111]-truly only an insurance reform, not a tort reform.

The statutes in the United States cover any injury arising out of the operation of a motor vehicle. This broadens compensation-for example, allowing victims of single-vehicle accidents to collect, is itself a significant increase in coverage. [FN112] Improved efficiency of compensation has also been found, as in Florida, where personal injury administrative costs declined. [FN113] However, above the relatively low legislated "thresholds," no-fault reforms allow continued access to tort. In 1971, Massachusetts, the first U.S. state to act, initially allowed lawsuits for any injury resulting in medical bills over \$500 or involving a fracture, loss of a body member, permanent and serious disfigurement, loss of sight, or death. [FN114] Even so, as a tort reform, no-fault initially resulted in a "precipitous decline" of fifty-five percent in bodily injury cases in Massachusetts courts. [FN115] Benefits in Massachusetts were not high, a maximum of \$2000, but claimants were satisfied with the speed and amounts of payment. [FN116] Michigan, however, had unusually broad benefits, along with an unusually high tort threshold, and initially *81 achieved substantial reductions in premium growth relative to underlying inflation and the national average. [FN117] The general early experience was that tort-replacing no-fault, even with low tort thresholds, had lower rates of increase in premiums than liability coverage, but that tort-add- on no-fault had higher increases. [FN118]

With regard to deterrence, consistent with the no-fault goal of avoiding assessments of liability, premium surcharges for a record of accidents have been limited. Failure to experience-rate thus decreases drivers' financial incentives to be careful. [FN119] In the United States, some of the states that have implemented no-fault as a partial substitute for automobile liability have permitted surcharges on such coverage. [FN120] Results from empirical studies of no-fault automobile insurance laws are mixed, but on balance support the conclusion that no-fault slightly reduces road safety. [FN121]

*82 III. Design and Operation of Medical No-Fault in Virginia and Florida
A. Statutory Rationale and Basic Design

The first actual implementation of no-fault for medical liability, based largely on the Workers' Compensation model,

occurred for newborns with severe neurological impairments in Virginia and Florida in the late 1980s. [FN122] Virginia was the first state to enact such a program, motivated by the need to stabilize its liability insurance market for obstetricians. The market had been unsettled by the prospect of very large and unpredictable awards, especially for severely brain-damaged newborns, often termed "bad baby" cases. [FN123] At the time, a federal district court had just invalidated Virginia's prior absolute "cap" on tort awards, thus for a time extinguishing the cap's limit on very large awards, such as *83 those for lifetime injuries to newborn infants. [FN124] Insurers were withdrawing from obstetrical coverage and threatening access to care for childbirth, which was of special concern for legislators from rural areas and inner cities. [FN125] The solution was to "carve out" from tort the most costly obstetrical liability, the "bad babies." Accordingly, the remaining tort system became smaller and more predictable and therefore, insurable at a more affordable premium. In order to take such cases out of tort liability, the state created a new no-fault coverage system to take its place, but only for the most severe cases.

The method chosen to remove these cases from tort was to create a new no- fault program, the Virginia Birth-Related Compensation Pro-gram, also meant to efficiently target financial assistance to an identifiable class of families whose situation evoked great sympathy. [FN126] No-fault was to operate as an administrative mechanism, with opportunities for privatization, and with controlled benefits. In a lesser way, and by a separate process, the statute specifically addressed access to maternity care and medical discipline in cases of care found to be substandard.

One year after Virginia's enacted its program, Florida, facing more general problems in liability insurance, enacted a very similar, targeted obstetrical insurance reform, creating the Florida Birth-Related Neurological Injury Plan [FN127] along with many more general, purely tort-oriented reforms. [FN128] Both states had considered, but rejected, broader no-fault approaches. In sum, the statutes were precipitated by insurance problems and constituted a combination of insurance, tort, and medical reform.

*84 B. Central Features of Statutory Design and Administrative Implementation

1. Exclusivity

The states' enabling statutes make their new no-fault programs, the Birth Injury Fund in Virginia (BIF) and the Neurological Injury Compensation Association in Florida (NICA), the "exclusive remedy" for eligible injuries involving participating providers. [FN129] Liability claims are barred for any such injuries unless they were caused "intentionally or willfully" [FN130] or in "bad faith," with "malicious purpose" or in "willful and wanton disregard of human rights." [FN131] However, claimants are free to bring tort claims if rejected for no-fault, and the tort statute of limitations is tolled during the pendency of a no-fault claim. [FN132]

In practice, there appears to be no bar to a claimant's resorting first to tort, a very important practical reality for no-fault operations, especially in Florida. In any partial "carve out" from tort, some cases are intentionally left in tort, and lack of clarity over eligibility is bound to lead to some duplication of process in courts and administrative agencies. However, the extent to which this has occurred in Florida was quite evidently unintended. "Leakage" of potential cases to tort occurs as a result of claimant and attorneys' choices [FN133] and has been authorized by courts in two lines of decisions, over opposition from NICA.

First, courts hearing tort cases may determine for themselves whether a case before them meets the statutory criteria of eligibility for NICA or whether the case may instead proceed in court. There is no need for claimants to seek administrative redress before going to court. The Florida Supreme Court, as a matter of legislative interpretation, has found it within the constitutional province of the judiciary to resolve the factual issue of whether no-fault forecloses tort jurisdiction. [FN134] It does not appear that NICA has any direct way of discovering that such claims are pending. Thus, claimants can obtain a trial judge's ruling on NICA eligibility without ever involving NICA in any way; if the judge maintains judicial jurisdiction by a finding of ineligibility, the case can proceed in court.

*85 Second, a different line of Florida judicial decisions also allows direct access to tort. NICA-participating physicians are required by statute to notify patients in plain language about the availability of no-fault bene-fits and the non-availability of tort. [FN135] The consequences of any failure to give notice were not spelled out by the statute or the implementing regulation. Following a number of lower court opinions, the Supreme Court of Florida held that failure to receive effective and timely notice is a judicially triable issue of fact. [FN136] Claimants must be given effective notice in advance of delivery so that they may choose to be served by a non-participating physician. Just as for eligibility issues, courts need not defer to

administrative determinations on the adequacy of notice.

There is a distinct difference in perceptions among Florida physicians and patients regarding whether or not patients were informed about no-fault prior to labor and delivery, according to this study's survey of families. [FN137] Indeed, many no-fault claimants said that they first heard about no-fault from an attorney after the injury. Factual issues, such as notice, appear to be relatively simple to resolve. The no-fault programs provide clearly written brochures for participating providers to distribute, over-stamped with their name. Documenting actual delivery of such a document to prevent any "his word against mine" dispute is less straightforward than might appear, as has been illustrated by similar problems in the history of informed consent. [FN138] As of mid-1996, neither program had implemented rules on how providers are to effectuate or document use of program brochures for notice, although notice was clearly a problem in both states. [FN139]

2. Administration and Governance

The no-fault programs are administered by independent, legislatively- created entities that investigate claims and recommend resolutions. *86 They are popularly known as the Birth Injury Fund (BIF) in Virginia [FN140] and the Neurological Injury Compensation Association (NICA) in Florida. [FN141] These agencies are governed by independent boards representing affected interests and selected by the governor or insurance commissioner. [FN142] BIF and NICA assess and collect premiums, maintain the associated public funds that bear risk, make recommendations on eligibility and benefits, and otherwise operate the programs. [FN143]

By statute, however, claims are formally filed with the states' Workers' Compensation Commissions, which were given ultimate administrative authority. They make final no-fault determinations, use their existing structure to hear claims, and have authority to issue administrative rules. [FN144] Virginia explicitly allows for privatization or contracting out of claims administration. [FN145] BIF exercised this authority at the beginning of the program by negotiating an initially attractive fixed annual fee contract with a private liability insurer. However, very few claims were filed, yet the payment obligation was fixed, and administrators also became dissatisfied with the level of performance on those few claims. The contract was not renewed, and claims administration is now run "in house." [FN146] Both BIF and NICA operate out of a single privately rented office in their state capitals.

Thus, the programs are administered by a combination of public agencies. Assessments are collected and funds maintained by BIF and NICA, which operate under statutory principles, but outside of the framework of conventional administrative process, including civil service rules and administrative procedure acts in each state. [FN147] The operations of BIF and NICA, including board meetings and day-to-day administration are not governed by "sunshine" laws. This maintains privacy for *87 discussions about personal medical issues and allows consultation with contract physicians about pending cases in confidence. However, all proceedings before the commissions are public, as are the formal records thereof, including full medical records. [FN148]

The boards are publicly appointed, [FN149] but the executive directors and staff are not part of the "line" operations of state government, but instead act more independently. [FN150] BIF and NICA are publicly account-able through oversight of their plans of operation and fiscal solvency by their respective states' insurance regulators. [FN151] Claims administration works as already described; final legal authority is vested in Workers' Compensation, but great practical authority resides in BIF and NICA. [FN152]

In Florida, the initial statutory assignment of dispute resolution func-tions to the Workers' Compensation Commission was changed after three years because of dissatisfaction with performance. [FN153] Responsibility was shifted to the Division of Administrative Hearings (DOAH), which also hears other disputes involving state administration. [FN154]

3. Procedures

No-fault process is a mix of formal and informal decision-making, documentation, dispute resolution, and review. Claims are filed with the Workers' Compensation Commissions, but then are immediately *88 referred to BIF or NICA for investigation and recommendation. [FN155] Thereafter, the Commissions may hold hearings in case of disagreement between claimant and NICA or BIF about eligibility or benefits. [FN156] The claimant and BIF or NICA are the only parties to hearings; no physicians, hospitals, other medical personnel, or insurers are involved. [FN157] Hearings are held in the state capital or at a branch office near the claimant's location, and administrative determinations may be appealed to state courts. [FN158] The initial statute of limitations was very long in each state-ten years in Virginia and seven in Florida, [FN159] which was

subsequently reduced to five. [FN160]

Medical evidence is extremely important to the operation of a medical injury no-fault program. Both programs' boards, by statute, must represent physicians and hospital providers. [FN161] Both statutes provide for independent medical review of claims; independent physicians are selected by non-program authorities and their expertise made available to the Commissions at the time of the formal hearing. [FN162] For their reviews, BIF and NICA contract for medical expertise with private physicians who have shown themselves to be an expert and responsive to requests within the statutorily short time schedule.

In practice, this means that with a small number of claims, the programs are heavily reliant on only a few physicians. [FN163] In addition, through practical experience, both the administrators of the programs and the single hearing officer in each state who hears almost all cases have developed considerable medical expertise. Medical expertise is applied on a case by case basis. No written compendium of medical standards or even rules of thumb has been created to assist in training new employees or in helping a claimant without an attorney reach an independent judgment of whether it is worthwhile to file a claim. Thus, claimants routinely use attorneys, who obtain their own medical experts, *89 to decide on both no-fault and tort remedies. [FN164] In contested cases, just what constitutes a severe enough injury to qualify for no-fault coverage has to be determined based on individual testimony applying the statutory language to the particular case.

Both statutes provide for judicial review of Commission determinations as to matters of law; [FN165] but, as already noted, both provide that no-fault is to be an exclusive remedy. Nonetheless, there have been appeals in both states- not surprisingly, more often in Florida than in Virginia, given that Florida has a much higher rate of tort claiming. [FN166] In addition, Florida claimants often have gone directly to court without seeking a NICA determination as to whether no-fault replaces the tort remedy in a particular case. [FN167]

4. Applicability

The applicable scope of the programs is set partly by statute, through the nature of injury qualifying for eligibility, [FN168] but also, crucially, by vol-untary provider participation. Both states call for voluntary participation by obstetricians or other physicians delivering infants, and Virginia allows hospitals a choice of whether to participate as well. [FN169] Only patients of participating providers can receive no-fault benefits, and only *90 they are protected from tort claims for no-fault-eligible damages. In practice, almost all obstetricians participate. [FN170] The court rulings just mentioned, however, reduce the applicability of no-fault in Florida.

5. Eligibility

In both states, eligibility criteria are very specific and targeted. Virginia's statute covers only extremely serious, birth-related neurological injuries-cases where a live infant is permanently disabled and "in need of assistance in all activities of daily living" (ADLs). [FN171] Florida more restrictively excludes premature births through a minimum weight requirement (2500 grams), but less restrictively requires only that the infant be "permanently and substantially mentally and physically impaired," [FN172] not that the infant require assistance in all ADLs. In both states, causation by "genetic" or "congenital" abnormality is explicitly excluded, [FN173] as well as "maternal substance abuse" in Virginia. [FN174]

In practice, the statutory standards have proven relatively clear and easily interpreted as a general matter. Both BIF and NICA no-fault programs have chosen to operate under the statutory rules without further elaboration through administrative explication. However, application to particular cases can be disputed, and neither severity nor permanence is always immediately clear without tracking the infant's development over time. Such boundary disputes are inevitable in any program that is only a partial carve-out from tort. [FN175]

6. Covered Benefits

BIF and NICA medical benefits are relatively comprehensive, though subject to coordination with other payers. [FN176] Both statutes provide coverage for all reasonable and necessary medical expenses, including rehabilitation and special education, costs of custodial care, transportation *91 incident to care, and supplies and equipment needed to cope with the disabilities. [FN177]

Benefits in Virginia are limited to pecuniary loss-"medically necessary and reasonable expenses" of medical, residential and

custodial care-collateral sources are offset, lost earnings from ages 18-65 are scheduled at fifty percent of average wages, and payments are made as expenses are incurred rather than as lump sums. Reasonable attorneys' fees are also included. [FN178]

The Virginia statute provides for wage loss, should the infant survive to working age, but not for nonpecuniary loss. [FN179] The Florida statute does the reverse: it has no provision for wage loss, but creates a family "award" of up to \$100,000 per case, [FN180] which has been interpreted to mean nonpecuniary loss subject to tort-style considerations. [FN181]

Again here, there have been no clarifying written rules, and the programs have operated through the normal legal process of case-by-case decision making and precedents established by decisions of the Workers' Compensation agencies. Given their extreme need for care, families can want unusual benefits seldom seen in the administration of ordinary health insurance coverage. The Florida program, for example, has dealt with requests for coverage of a swimming pool in which to conduct hydrotherapy and a trip to Hungary for the infant, the family, and assistants to consult with an expert in an unusual form of therapy. [FN182]

With regard to the determination of an appropriate payment for nonpecuniary loss, NICA also lacks explicit standards by which to decide precisely how much to pay in each case; it should be noted, however, that the tort system lacks such standards as well. [FN183] It appears that the full \$100,000 is normally awarded unless the infant dies after only a short period of disability. In one case, the parents divorced and the administrative hearing officer issued an opinion apportioning the \$100,000 between the two parents. [FN184]

*92 Attorneys' fees are also considered a benefit in Florida and are paid on an as-incurred basis, with administrative review of the reasonableness of billing practice developed through general case-by-case administrative decisions. [FN185] As a matter of administrative practice, both BIF and NICA cover fees only for winning claimants' lawyers. [FN186] A number of protracted early disputes involved the amount of attorney fees and even the levels of interest to be allowed in the case of postponed payments. [FN187] Although permitted by statute to take account of contingencies as well as the amount and the difficulty of the work, in practice, the programs pay attorneys on an hourly basis, in contrast to the contingency fee arrangements used by the trial bar in tort. [FN188]

Neither statute specifically provides for alterations to living quarters or the purchase of a new house to accommodate wheelchair access and other special needs. [FN189] Over time, however, both programs have informally adopted the practice of covering such expenses. In Virginia, by decision of the Board, the program will buy a house for the impaired infant's family in appropriate cases; the program retains title, and the house will revert to it once no longer occupied by the covered child. Similarly, Florida will also alter a dwelling to make it appropriate for a NICA family's use. [FN190] This expenditure is funded out of the \$100,000 allowance, which, if given in cash, would generally make families ineligible for other, more valuable, public aid. [FN191]

*93 All no-fault benefits are paid on an ongoing basis for the lifetime of the covered child. [FN192] Over time, the programs will cover different types of expenses, as needs change. [FN193] Such flexible coverage offers a significant insurance protection against changing circumstances not offered by tort. On the other hand, it also raises the potential for disputes over continuing benefits that cannot occur under tort-style, lump-sum payments.

7. Coordination of Benefits

Both BIF and NICA operate as secondary payers to other programs, including private health insurance, disability insurance, and Medicaid. [FN194] One case in Florida dealt with whether the program could require maintenance of preexisting private coverage and pay the premiums on the family's behalf, even though such premiums are not a statutorily covered benefit. [FN195] An attorney general's opinion in Virginia authorized Medicaid's paying before no-fault; Medicaid, under federal law, normally pays after other private health insurance coverages, but before residual state or local assistance. [FN196]

This coordination of benefits saves the no-fault programs substantial amounts of money, as does modification of the collateral source rule under tort. Because BIF and NICA pay such a small amount in each case, the programs are unable to control utilization through negotiation with providers or by other means, though they do bargain for low prices.

8. Funding

Funding mechanisms preserve the third-party character of liability coverage under no-fault. It appears to have been politically

unacceptable to give medical providers the benefit of this cap-like limitation on tort remedies and at the same time to impose the funding burden of the programs directly upon patients or taxpayers at large, as some no-fault programs do. As enacted, the programs were funded mainly through assessments on voluntarily participating physicians (\$5,000 annually) [FN197] *94 and on all licensed physicians who do not elect to participate (\$250 per year). [FN198] Virginia hospitals can participate by paying \$50 per birth up to a limit of \$150,000 per year. [FN199] Florida hospitals are mandatorily assessed \$50 per birth. [FN200] It is said that some Florida hospitals pay their physicians' NICA assessments for competitive reasons.

No provision was made for raising provider premiums should funding prove inadequate. [FN201] There is no direct contribution from the state general fund, from patients, or from their health insurers-except to the extent that providers can shift the assessment forward in the form of higher fees. [FN202] Unlike a private insurer, BIF and NICA cannot increase premiums except by statutory amendment, although BIF has the power to lower them with regulatory approval. [FN203]

By statute, if necessary to maintain solvency, the programs may assess liability or casualty insurers in general up to one quarter of one percent of net premiums written in each state. [FN204] The latter provision was resisted unsuccessfully by the insurance lobby in both states, and appeal attempts at subsequent removal of this backstop funding mechanism have also failed. One can surmise that significant increases in no-fault claims that required tapping this backstop funding would result in an extremely serious political attack on the existence of the no-fault programs.

9. Premium-Setting

Assessments are fixed more like a tax than like an insurance premium. In insurance terms, there are almost no risk classifications. Hospitals in both states pay a fixed rate per birth, [FN205] non-participating physicians pay a small fixed rate, and participating doctors pay a single, higher rate. In recent years, the Virginia program has varied the assessment on participating physicians by longevity. Rates are reduced according to *95 a sliding scale; doctors and hospitals pay the full statutory amount in their first year of participation, and only ten percent of that amount by the seventh year. [FN206]

There is no attempt to relate assessments to actual experience or risk factors, even including volume of deliveries by individual physicians. [FN207] Detailed experience rating, would of course be impossible for a risk of such low frequency. [FN208]

10. Solvency

The primary responsibility for assuring solvency of the new no-fault funds lies with the no-fault entities, BIF and NICA, acting through their administrators and boards. There is no provision for any ongoing public backstop or guaranty fund, although Florida provided start-up "capital" in the form of a transfer from a surplus in an insurance department ac-count. [FN209] As just noted, a quasi-public backstop is created by the power to assess a surcharge on liability or casualty insurance premiums. [FN210]

Virginia requires that no-fault funds be maintained in a separate account. [FN211] Both statutes also allow their no-fault entities to purchase reinsurance to help protect their solvency against unanticipated fluctuations in loss. [FN212] Florida, but not Virginia, has elected to exercise this authority. Similarly, only Florida follows the conventional casualty insurance practice of establishing long-term loss reserves for every pending claim. [FN213] This is done on a claim-specific basis, taking into account probability of payment, life expectancy, and other factors.

*96 Public accountability for solvency is maintained through the ordinary business practice of audit by independent accounting firms, reported annually by BIF and NICA. [FN214] There is also provision for periodic review by state insurance regulatory officials; [FN215] in Virginia those officials must agree to any reduction in assessments. [FN216]

11. Loss-Prevention Mechanisms

The statutes create no loss-prevention mechanisms. Covered injuries are taken as exogenous, merely to be financed by no-fault. There is no provision for analysis of patterns of losses or other ways of assessing determinants of injury.

The statutes do create a new mechanism oriented toward medical quality. All claims reported are automatically referred to the Board of Medicine and the Department of Health, which are generally responsible for licensure and quality of care review. [FN217] In practice, all that seems to occur is that the Boards and Departments are sent copies of no-fault claims at

the time of filing and all quality investigation is left to them. According to the no-fault administrators, the Boards are not regularly notified of the results of program investigation of birth-related claims. [FN218]

Thus, the Florida experience falls well short of no-fault potential to improve injury detection and prevention. Given the very restricted scope of these no-fault programs, and the few claims filed, as discussed below, it would be extremely difficult to use any risk-management or other techniques of injury monitoring and prevention.

C. Central Aspects of Administrative Performance

Several qualitative findings about the performance of the programs as they have developed over time deserve mention as context for understanding the empirical results presented below. [FN219]

First, a form of no-fault is clearly feasible for at least some medical issues. Administration of BIF and NICA "works" in the most basic sense that premiums can be collected and claims received, investigated, and paid with reasonable results in an area that is very contentious in *97 tort. [FN220] Fiscal solvency, a very important operational concern, has also been maintained in both Florida and Virginia.

Second, administration is clearly streamlined relative to tort, in considerable part as a result of the non-legalistic, informal processes exercised by BIFand NICA. Also, the very small scope of the programs allows very few people to reach important decisions quite expeditiously. Although substantial disputes do occur, prompting considerable legal process at the administrative and even judicial levels, this is very atypical. Most cases are readily resolved, quite informally. The statutes clearly intended to create a new form of investigation and claims negotiation, and this performance is very positive in that light. It does raise issues of accountability, particularly in light of the slowness to issue written standards or other rules. Claimant attorneys, however, have a quite different, rather hostile, opinion. [FN221]

Third, implementing issues of many sorts resulted in significant administrative changes. Most notable administratively were the de-privatization of Virginia's claims process and the switch of administrative hearing authority in Florida from the Workers' Compensation agency to the Division of Administrative Hearings (DOAH). Overall, the continuation of tort remedies, especially in Florida, probably has the *98 most significance for the program's ability to meet its statutory goals. An implementing change that did not occur was to create a new "case finding" method that would bring more injuries directly into no-fault in the first instance. [FN222] In practice, almost all claimants go to trial attorneys, who decide how to proceed, [FN223] avoiding no-fault wherever possible. [FN224]

Fourth, to realize many of the expected benefits already discussed, no-fault programs need larger scale and scope than BIF and NICA enjoy. It seems unlikely, for a number of reasons, that bigger no-fault programs covering a broader variety of injuries, including small ones, could work in just the same way or with quite such low levels of administrative cost, although changes could affect efficiency in both directions. [FN225] A larger program would almost certainly draw more attacks from the trial bar and more judicial scrutiny, if only because it would be a larger threat to the status quo. NICA has not yet faced direct constitutional attack even in the litigious climate of Florida, in part because it seems relatively easy to continue to bring cases in tort, which provides a "safety valve" for dissatisfaction with no-fault. A more comprehensive no-fault program that took more cases out of tort could expect to face more challenges. [FN226]

*99 There has been only one reported constitutional challenge in each state. [FN227] In each case, the lawsuit was brought by non- participating physicians, who challenged funding assessments, not by potential tort claimants challenging lack of access to tort. The physicians objected to having to pay for a program that gave them no ostensible benefit. In each case, the state supreme courts upheld the legislation as a valid response to the perceived liability insurance crisis. There appear to be no reported cases of direct constitutional challenge on the merits of the basic statutory "trade" of tort remedy for a no-fault remedy, which trade is the foundation of many generations of Workers' Compensation law. [FN228]

IV. No-Fault Experience in Virginia and Florida

A. Empirical Evidence on No-Fault as an Insurance Reform

Both Virginia and Florida sought to achieve insurance goals, and both succeeded. The Virginia program's paramount goal was to keep liability insurance available to physicians delivering babies. Enactment accomplished this goal even before the program was actually implemented, as reassured insurers returned to offering coverage. Florida enacted not only no-fault but

also a number of pure tort reforms out ofmore general concerns about the cost of liability and effects on medical care. In both states, relative liability premium stability has been achieved in the wake of no-fault. [FN229]

Table 1 shows average obstetrical premiums in Florida and Virginia over 1979- 92, the initial no-fault years. Premiums in Florida and *100 Virginia decreased after no-fault, both absolutely and relative to the national average, which showed smaller declines in this quiescent period following the last medical malpractice crisis in the mid-1980s. The cut in annual liability premiums was substantially larger than the annual assessment for BIF or NICA. Table 1 [FN230]

By directly affecting a small number of cases of relatively high severity and high volatility, a much larger objective of insurance market stability was achieved. [FN231] Further, both programs operated successfully, collecting premiums and resolving claims with non-tort process. This achievement should not be minimized, in light of the assertions by no-fault detractors who doubted the technical feasibility of defining compensable events in advance then paying them without high levels of disputation. [FN232]

The vast majority of physicians delivering babies participate in the programs, over ninety percent. [FN233] Furthermore, rates of Medicaid *101 participation have risen. [FN234] Although it is not possible to link this increase to no-fault per se, [FN235] this rise suggests that physicians are willing to give reasonable access to care to disadvantaged populations whose payer is the least generous of the large health payer programs.

Maintaining insurer solvency is a paramount issue from the perspective of any risk-bearing entity and of government overseers of licensed insurers and other risk bearers. [FN236] Judging from the accumulation of cash on hand, both programs appear to have made solvency a high priority. [FN237] In Florida's case, a substantial effort has been devoted to loss reserving and to obtaining reinsurance. Actuarial reviews in both states have found no fiscal irregularities, and our independent comparison of no-fault benefits to estimated costs based on actual and projected medical needs shows a high degree of correspondence between the two. [FN238]

Even though a provision for covering overruns exists, that is, the ability to assess liability insurers, exercising such authority would carry with it considerable political risk, including pressures to abolish these programs. Partly as a consequence, fiscal administration of the plans has been very conservative. Unfortunately, there is a conflict between maintaining solvency and paying claims. The same conflict exists in other insurance contexts, both public and private, but probably not to the same extent because elsewhere premiums have greater upside flexibility, and a reputation for non- payment affects the marketability of private coverage.

*102 As a liability insurance reform, the reforms have created substantial tort protection and lowered premiums for almost all obstetricians in the two states. However, they have in the process delivered very little new compensatory no-fault coverage to patients because so few claims have been filed or compensated, far fewer than anticipated, although above comparable tort rates of earlier years. [FN239] Low no-fault claiming rates appear to result from poor information among patients and even law-yers, little outreach by programs, hostility among knowledgeable claim-ant attorneys, and the apparent ease of making tort claims in court, de-spite the statutes' intended exclusive no-fault administrative programs. [FN240]

B. Empirical Evidence on No-Fault as a Tort Reform: Deterrence, Compensation, and Justice

In the last two decades, tort reform has addressed a perceived growing imbalance between defendants' and plaintiffs' interests in light of broader costs imposed by tort liability claims. No-fault for medical injury is similar to tort reforms more generally in attempting to reduce the scope of tort proceedings. However, unlike many reforms, no-fault gives plaintiffs something in return, namely a new compensation program.

As a tort reform or, more appropriately, as a replacement, no-fault should be assessed on how well it achieves the goals tort seeks to achieve, deterrence, compensation, and justice.

1. Deterrence

With regard to deterrence, we note first that this version of no-fault was not designed to incorporate explicit incentives for physicians to take precautions. There has been no attempt to use experience rating; [FN241] *103 and, although physicians are notified of claims when filed, they are neither involved in proceedings nor told of findings. The programs make no

attempt to assess individual physician performance because they operate under no-fault standards. State boards of discipline receive copies of initial filings, but there is no integrated effort to discover patterns of problems, such as one might expect under Workers' Compensation with the larger number of accidents to analyze and very clear financial rewards to be derived from loss prevention.

Nor is the National Practitioner Data Bank notified of no-fault determinations. Furthermore, given the exceedingly small scope of the programs, especially in Virginia, it is not possible to conduct actuarially valid experience rating. [FN242] Nor is it possible without a much larger scale to implement other forms of risk management or loss prevention. Of course, both under tort and under no-fault, market mechanisms increasingly monitor provider performance. [FN243] Professional oversight occurs within the framework of hospital staff privileges [FN244] and the internal self- discipline of ever larger physician practice groups, criminal law sanctions exist to address truly egregious excesses, and medical disciplinary and licensure authorities conduct occasional investigations based on complaints from patients or practitioners or indications of unusually bad liability experience. [FN245]

Even after an injury, a no-fault or other insurance scheme can be expected to try to mitigate losses, unlike a tort system with long-running disputes. Even here, however, the programs are hindered by the fact that claims are not filed any faster under no-fault than under tort. Surprisingly, almost two years elapsed between median filings under both regimes in Florida, although no-fault resolved claims much faster, within about six months as against almost two years for tort. [FN246] The *104 rapidity of the no- fault process was quite remarkable, especially after the shakedown period of the program's first three years. Paid cases resolved especially fast, in a median time of only sixty days (not presented); they typically involved only NICA process, without a Commission hearing. [FN247] Table 2 [FN248]

One explanation for the unexpectedly slow filing is that neither claimants nor their medical providers notify the programs of problems in the immediate aftermath of birth, contrary to what some no-fault proponents expected to occur in the absence of a tort threat. [FN249] Of course, given the general continuance of tort, potential defendants can be expected to continue to be reluctant to encourage any form of claiming. And, in practice, potential claimants continue to go to attorneys for all injuries, and claims are investigated much like tort suits-which many of them turn out to be.

The general intent of no-fault is to reduce tort claims, replacing them with an equal or greater number of no-fault claims. In fact, the number of permanent injury and death birth-related tort claims in Florida did decline after no- fault was implemented, but a substantial number of such tort claims continued to be filed. [FN250] Presumably other types of tort *105 claims were unaffected by implementation of NICA. Thus, any deter-rent effect that tort might normally have should have been little affected. [FN251]

It is plausibly argued that some instances of over-deterrence accompany whatever appropriate levels of deterrence occur in the medical field. [FN252] In obstetrics, the specific concerns are too many tests, too many Cesarean sections, and withdrawal of services perceived to be unduly risky. There have been some reports of quitting obstetrical practice because of the threat of tort liability. [FN253] Reducing doctors' defensiveness is an ancillary goal of no-fault theory. [FN254] A limited examination of the effect of these programs on practice patterns suggests that no-fault had no significant impact. Physicians who quit obstetrics in the two states after 1987 often reported that they did so because of the threat of lia-bility claims, the same argument that was made before no-fault and made in other locations without no-fault. Conversely, the obstetricians who remained in practice tended to have higher obstetrical loads and higher numbers of high- risk patients. However, they did not attribute the willingness to increase their practice volume or change in composition to implementation of no-fault, either. [FN255] These findings are not sur-prising because (1) the replacement rate for tort was so low and (2) the programs tend to insulate physicians from no-fault claims by design. Also, physicians who were surveyed often indicated no knowledge of the operation of no-fault in their states. [FN256]

*106 2. Compensation

Compensation can be assessed in terms of the number of cases covered relative to the number of persons who might have been potentially eligible and relative to tort, the level of compensation per case in absolute terms and relative to tort, and the speed and cost of delivering compensation.

By any standard, these are small programs. In Virginia, there were about four cases per year, [FN257] in Florida about twenty-six; there were even fewer paid cases in both states. [FN258] In Florida, where comparable tort data exist, no-fault covered more cases than tort; however, this number was substantially fewer than expected by lawmakers in either state and

far fewer than the likely number of cerebral palsy cases. [FN259] Table 3 [FN260]

*107 Longer experience may yield higher rates of no-fault claiming, although this could be hindered if the number of cases that are allowed to remain in tort increases. It seems plausible that program changes would be necessary to increase claiming.

It should be noted that tort also falls far short of its potential number of claims. In fact, the vast majority of negligent adverse medical events do not result in tort claims. [FN261] The larger message is that, given the immense under-claiming in tort, no-fault as a tort replacement cannot accommodate a much larger number of claims without broader financing no matter what savings are realized by efficiencies in administration.

In terms of the compensation level per paid case in Florida, no-fault and comparable tort cases appear to pay similar amounts. Comparisons are complicated by no-fault's paying for needs as they arise, whereas tort pays in advance by lump sum. Most no-fault claimants live a considerable lifespan, so that reserves are held for future expenses. Counting reserves as benefits, two of our analyses found that no-fault was more generous than tort; a third, which counted only actual no-fault payments made in the first five years, found that these were smaller than five years' share of tort settlements (estimated as a pro rata share by life expectancy). [FN262] Neither tort nor no-fault pays the full cost of injury; both the Virginia and the Florida no-fault programs have modified the traditional tort collateral source offset rule, as have most states under tort reform. Most costs of injury in fact are thus left to be borne by first-party insurance policies or programs.

*108 No-fault performance is strongest in terms of efficiency of compensating families. Table 2 has already documented no-fault claims' speed advantage, deriving from its much faster administration of claims. Even more striking is how much lower administrative cost is under no-fault than tort. [FN263] The biggest savings occur in legal expense, which constitutes only two percent of a no-fault case's total spending, but fully thirty-three percent for tort. Thus, the no-fault payout, including reserves for future payouts, averages ninety percent of total cost, versus fifty-three percent for comparable tort cases. The savings differential of no-fault versus tort has widened over time because a few early cases had very large legal costs. [FN264] Table 4 [FN265]

3. Justice

The final major goal of tort is to achieve justice. Important elements of this include social accountability for causing injury and fairness toward both participants in a dispute-the injured party and family-as well as the medical providers thought to be implicated. In terms of accountability, tort provides a very public forum for airing, discovering, and publicizing perceived problems. Opinions differ greatly as to *109 whether medical malpractice fact finders accurately apply the applicable rules of law. [FN266] Regardless of the technical merits of tort findings, they are in fact used by decision-makers, as in risk management, and physicians fear that they might be used by patients.

Under no-fault, there is no claims review of performance as such, only of whether the case meets the conditions for coverage. Thus, there is little possibility that individual results could be used for assessment or improvement. Unlike Workers' Compensation and other larger systems, there neither is, nor can be, any attempt in these small no-fault programs to learn from accumulated experience and to implement remedial actions on the basis of statistical patterns in the incidence of bad outcomes and claims. [FN267]

Another major objective is fairness to individual participants, that is, to claimants and implicated medical providers. In tort, it is a stylized fact that defendants feel unjustly victimized by tort. [FN268] Somewhat surprisingly, tort claimants, even those who do not obtain compensation, have expressed satisfaction with the tort process. [FN269] Our recent survey evidence comparing no-fault with tort indicates that both claimants and obstetricians tended to be more satisfied with the process under no-fault, although obstetricians were dismayed that no-fault had not totally extinguished their tort liability and felt that it had not reduced their *110 premiums by the increased contributions to no-fault, contrary to the premium decline seen in Table 1 above. [FN270]

One finding of our surveys of no-fault and tort claimants was that the latter were far more likely to be motivated by a desire for retribution than were the former. [FN271] Tort lawsuits logically provide an outlet for anger and frustration that otherwise could be vented in a socially inappropriate way. [FN272] By removing negligence from consideration, no-fault does not provide a mechanism for venting, absent implementation of a specific system to deal with patients' complaints. Of course, cases involving willful or grossly negligent behavior can still be brought under tort in these states. However, such cases are a distinct minority.

Another issue about justice concerns horizontal equity-achieving similar results in similar cases both on eligibility and compensation. The comparison on eligibility in no-fault and liability in tort is very difficult to make. On compensation, assessments of relative accuracy are difficult to make given important differences in the two systems. For example, no-fault makes no attempt to compensate for non-monetary loss, which is a compensable element of damages under tort. For those who secure compensation, recovery tends to be fairly complete under both tort and no-fault. [FN273] On average, no-fault costs somewhat more than tort. The underlying intuition is that no-fault cuts payments by reducing non-monetary damages but increases them by cutting overhead and by eliminating the "discount" that claimants often accept in tort to achieve certain recovery and avoid the expense of trial.

C. Empirical Evidence on No-Fault as a Medical Reform

Access to health care in Virginia and Florida improved in the 1990s under no-fault, according to basic indicators. [FN274] However, there is no empirical evidence that no-fault caused these improvements. There is weak evidence that tort continues to influence physicians' decisions to quit obstetrics, but this survey response is not new; [FN275] it could even be viewed as a negative finding in that physicians continued to complain *111 about the threat of tort liability even after no-fault reduced liability from one expensive source of claims.

The cost of health care might be reduced by cutting defensive medicine; two national studies from the same researchers have found that major tort reforms reduced health care costs. [FN276] However, other studies, including one in Florida focusing on obstetrics, found no effect of tort claims frequency on defensive medicine. [FN277] In any event, these programs reduced tort claiming only slightly, so no effect on the cost of care can be anticipated from reductions in defensive medicine.

Costs might also fall because of a cut in professional liability premiums - a reversal of the past pattern of increases' being fully or more than fully shifted forward to patients and payers in the form of higher physicians' fees. [FN278] We have no direct evidence on fees in Florida, and any no-fault decrease would have been small, as liability premiums constitute only a fraction of physicians' practice costs and the drop after no-fault was partly offset by the new no-fault assessment. [FN279]

Quality impacts are also important. Medical evaluations of the quality of care performed by obstetricians and obstetrical nurses of both no-fault and comparable tort claims found that on average, quality was higher in the no-fault sample. However, compared to a sample of adverse birth outcomes in which no claim was filed, quality of care was higher in the latter sample. [FN280] These findings have two implications. First, there is room for quality improvement in the cases that come to no-fault, which makes it particularly unfortunate that systematic efforts at improvement are not undertaken. Second, that no-fault cases' quality is in between fault cases and ordinary, non-claim cases suggests that no-fault is reaching a mix of cases removed from tort as well as new injuries that would not have been compensated under tort, as expected.

Access, quality, and cost might all be improved by more efficient, continuing "hands-on" aid to injured infants under no-fault, relative to leaving families on their own to cover needs from lump-sum tort payments. Expensive, long term care for serious injuries is a logical *112 place to seek to improve efficiency by managing care. Managers could coordinate the right medical specialists as well as sources of chronic care, rehabilitation, and a spectrum of social needs normally poorly covered by health insurance and not available as a package within either the normal medical system of independent fee-for-service practitioners or organized health maintenance organizations.

As knowledgeable, expert buyers, managers could also negotiate for the best value in contracts for care, [FN281] just as, in the 1990s, Workers' Compensation programs are turning to managed care to provide better management of the care process as well as cost savings. [FN282] Such "twenty-four hour coverage" merges Workers' Compensation and managed health insurance to cover medical needs both on and off the job. [FN283] Virginia and Florida no-fault would be coordinating a lifetime of care for their permanently impaired newborns, which offers greater scope for management than the limited time period of medical coverage provided under Workers' Compensation.

In practice, as designed, the two no-fault programs do coordinate with other payers, but only for the purpose of assuring that the others pay first, much as the tort reform of collateral source offset relates to other payers. This type of purely fiscal coordination may seek to achieve greater fairness, but it has the unfortunate effects of fragmenting responsibilities for managing benefits and reducing both the ability and incentive of any individual payer to obtain the best financial deal. Moreover, the notion that offsetting one set of payments by another achieves fairness is mainly evident to those for whom the offset operates to shift costs elsewhere.

The Virginia and Florida programs appear to carefully manage their expenditures, asking and often getting providers to give them concessionary rates, and questioning the need for elaborate or unconventional therapies. However, as a marginal payer with very few cases, they have little leverage in managing and in influencing care practices more broadly, even in the shortrun, much less over individuals' lifetimes. A very small indication that the administrators have the capacity to manage expenditure streams is their policy on housing. In both states, they are the only payer. Both programs have begun to cover housing and renovations expenses in creative ways, for example, attempting to *113 influence design of a new structure inexpensively rather than to retrofit an existing structure at great cost. [FN284]

V. Implications for No-Fault and Injury Policy

A. Lessons for Broader Proposals

1. Goals and Potential Accomplishments of Broader No-Fault

In light of our findings and analysis, why should any jurisdiction implement no-fault for medical injury? The most compelling argument in our view deals with the far greater no-fault efficiency in distributing compensation, measured both in terms of speed and dollars. Another prime goal of compensation is broadening the reach of payment to a larger proportion of injured patients, only a small fraction of whom ever seek, much less receive, tort recoveries. Secondarily, as a matter of theory, a broader program, such as has been proposed by Weiler and colleagues [FN285] and previously by Abraham and others, [FN286] may achieve some desirable objectives not possible with a program of limited scope, notably injury reduction and mitigation. We would not add reducing injury-related premiums to the list of achievable objectives because more than a limited no-fault program will logically not come at a reduced cost in such premiums, especially as tort reforms have already achieved many of the easy savings and given the substantial under-claiming in tort. In a larger sense, injury reduction, and possibly reductions in defensive medicine, a concept not well measured or operationalized, might yield savings in the other compensatory programs and in medical care more generally. However, a broader no-fault injury program is likely to require a broader funding base than medical providers alone, which is not unreasonable, especially to the extent that it could achieve savings for other forms of compensation now funded more broadly by governments and private purchasers of compensatory first-party insurance.

Greater breadth of coverage will yield benefits in terms of enabling no-fault to create specific programs to improve deterrence and quality of care, to manage overall patterns of care and spending for injury, including negotiating better deals with providers, reducing the volatility of claims, allowing greater specialization and not requiring the same *114 staff person to serve several conflicting policy goals, permitting more formal rule-making, and implementing a more systematic approach to achieving horizontal equity. Ultimately, but perhaps not immediately, a broader program will achieve greater political support. Support for the program will build among providers as greater numbers of their patients benefit without need for a highly adversarial process. No-fault claimants are satisfied with the system and they are net financial winners compared with a tort-only system; however, they are very few in number. [FN287] Moreover, in spite of the low no-fault claims frequency, physicians are potential advocates, even with the programs as limited as they are. However, because doctors are not involved in the claims resolution process, nor informed of results, they perceive little or no benefit, although they report general satisfaction with no-fault. [FN288] Entire elections have turned on automobile insurance premiums, whereas medical liability reform has always been the province of special interests, both pro and con. [FN289]

A more tenuous possible benefit could be creating the ability to do managed care for high-cost birth injuries and other such cases. It is a stylized fact that long-term injury is a significant burden on state Medicaid, disability, and other programs. [FN290] Achieving coordinated management is desirable, but it may be better to start the management with Medicaid or some other large program rather than an injury-specific program.

2. Implementation Issues

Despite no-fault's appeal in theory, major implementation issues arise that may frustrate the accomplishment of its promising goals of focusing deterrence through broader compensation. Implementation deserves considerably more attention than it normally receives from advocates of reform and from proud legislative sponsors who turn their attention to *115 other pressing statutory issues. [FN291] Based upon our Virginia and Florida observations, arguably the largest implementation issues were how to reach out to the full, intended population of eligible claimants and how to maintain the integrity of the no-fault "carve out" from tort. Other no-fault goals fell victim to the unexpectedly small number of cases actually attracted. At this size, neither program could credibly address quality or risk-management issues, for example. Small size probably also

makes them more vulnerable to future political and even courtroom attacks on their validity. [FN292]

In Florida, claimants and their attorneys soon learned to do an "end run" around NICA without directly challenging the statute's validity. [FN293] It is not clear exactly how implementation could have avoided this result in a litigious state. Clear regulations giving effect to the apparent legislative intent to create an exclusive process might have helped, [FN294] as might have making it known how fast and how well NICA pays claimants (although not attorneys). [FN295] In any event, it is notable that NICA started out behind in resisting this trend, because it typically *116 received notice of cases from attorneys, or in the case of end runs, only after litigation begins, if at all. NICA does not often hear directly from patients, doctors, or hospitals who know about adverse birth outcomes. [FN296] Future no-fault systems need to address how claims can be more easily identified. [FN297]

Another special concern for medical no-fault is that line-drawing between injury caused by medical care versus medical condition and necessary versus unnecessary therapies can be more difficult to resolve in practice than on researchers' or advocates' drawing boards. In particular, substantial disputation can be expected in practice, when substantial sums of money are at stake. [FN298] The Virginia and Florida limited no-fault systems appear not to have had unusual trouble in this regard; they experienced disputes, but not many of them, and overall monetary costs and delays were small. These programs started with the advantage of a very targeted population with rather narrowly defined terms of eligibility; broader systems may not.

There remains one major reservation about the implementation of broader no- fault designs, namely their political feasibility. It may be more than coincidental that the injured-newborn programs in these states are so narrow and that no other state has followed their lead in implementing any kind of no- fault for medical injuries. [FN299] Of course, the liability insurance crisis has disappeared and with it the spark for change, but conventional tort reforms continue to pass in a few states. The country's major no-fault program remains Worker's Compensation, *117 which was implemented a century ago, long before tort claim frequency had grown to its modern rates. The only other sizable example is no-fault automobile insurance from the 1970s, which with a few important exceptions has only been implemented on a limited basis.

An analogy to no-fault automobile insurance also speaks to the issue of political feasibility. In many states, political lobbying from trial attorneys, who presumably had much to lose from comprehensive no-fault initiatives, generally succeeded in reducing the scope of no-fault laws enacted, sometimes to the point where tort remained essentially intact. [FN300]

Plausibly, several factors underline the emergence of such narrow programs in Florida and Virginia, two rather different states, especially in their propensity toward litigation and legal process. First and foremost is budget: it was politically infeasible to argue for a larger budget, especially when a primary justification for the program was to reduce the high cost of medical malpractice. Full no-fault programs were much discussed in both states, but rejected, mainly out of budgetary concern, though also for being untried. [FN301] Second, the chief advocates for this reform-physicians-are not likely to have had patient compensation as an important policy objective, except to the extent that it could be achieved as a byproduct of medical malpractice insurance premium reduction. Indeed, non-obstetricians in both states sued to invalidate their \$250 annual assessments. [FN302] Thus, whereas conventional tort reform legislative battles have physicians on one side and trial attorneys on the other, both groups may resist no-fault, for different reasons.

Third, physicians and other providers could not support an increased premium if this were necessary to fund a more comprehensive program. They would most likely argue that this burden should be shared by other members of society. Broader programs almost certainly require a broader funding base. Yet politicians are reluctant to raise taxes, especially to support politically unorganized and not particularly numerous injury victims. Fourth, given the method of funding, the only statutory criterion of success or failure for the administrators of the program was maintenance of solvency. Even without those strictures, a central fiduciary duty of insurance administrators is to maintain the integrity of their funds and hence the capability of meeting obligations *118 to covered insureds. This goal is hardly abetted by interpretations that expand the scope of coverage without expanding funding.

For a more comprehensive type of reform to be enacted, it will be necessary to build a constituency for change. Physicians can put the issue on the public agenda, but without active participation of other stakeholders, comprehensive reform is unlikely to occur.

There are also several lesser reservations. First, a larger program will almost inevitably face more constitutional challenges in the short run. Second, expansion will require coverage of smaller cases, possibly with less clear causation than the severe birth-related neurological injuries. [FN303] Third, in the longer run, larger size will require a more formal internal legal

process, to some extent eroding the extraordinary saving in administrative expense and time that we observed in these two small programs.

Fourth, affecting more patients will highlight the troublesome issues of patient privacy. Because the official public record contains the medical records of mother and infant, the privacy issues already exist in no-fault, but have yet not risen to public consciousness. Even under a much more private system of managed care, concerns about how better to protect patient privacy have risen to the level of a Presidential Commission. [FN304] Issues of privacy are not a one-sided concern. Records are made public to assure accountability, also an important public concern. More privatized no-fault administration, as under Workers' Compensation or automobile insurance sold by competing private insurers, would tend to de-emphasize the privacy issue by substituting private market accountability and competition on reasonable claims administration for the public accountability needed under fully public administration. The ultimate dispute resolution authority, however, will likely have to remain public.

Finally, another lesson that would be even more salient for a large program is that failure to truly replace tort process with no-fault administration undercuts many of the potential benefits of no-fault. In Florida, forty percent of no-fault claimants are also tort claimants, which *119 reduces overall administrative savings to an unmeasured extent. One factor helping to keep the Florida program small is the ease of access to tort in its place, contrary to the no-fault rationale. A larger program would create even stronger incentive across the trial bar to maintain access to tort and its much more generous rewards for legal effort. In this sense, no-fault savings on payments to lawyers may have offsetting costs not directly perceived by no-fault administrators.

B. The Specific Programs in Virginia and Florida

This study was directed at drawing broad lessons for public policy on no-fault, tort liability, and injury policy generally. It was not our intent to conduct a detailed cost-benefit assessment of the specific programs now operating in Virginia and Florida. To do so would require much more detailed information on the idiosyncratic choices embodied in their legislative design, administrative implementation, and judicial modification. It would also require more detailed knowledge of the preferences of state citizens and their public representatives.

The broader perspective nonetheless highlights some state-specific issues that are of great importance and that legislators in Virginia, for one, will soon be considering in the context of a self-assessment to decide whether to continue or expand their very narrow program. [FN305] Arguably the largest problem is that observed in Florida, the more litigious jurisdiction, namely the importance of avoiding duplicative systems of tort and no-fault. [FN306] Another pressing issue is how to reach more of the likely eligible claimants who need to be reached. Having such small programs is harmful in many of the ways just discussed. Changes might include alteration in the balance of administrative incentives, formal programs of outreach to families of injured infants, coordination with Medicaid and other state programs on finding cases, new forms of advertising or other notice to expectant families, and some diminution of the currently vast differences in lawyers' fees between tort and no-fault as well as the risk no-fault claimants' lawyers take that they will receive no payment for their own time or expert witness fees.

It also seems appropriate to consider how best to balance competing interests of privacy and public visibility and accountability. Both programs toward the end of this study's observation period seemed to be *120 moving toward development of more formal guidelines for their operations, including standards of eligibility and benefits. This possible trend seems to merit encouragement, though it has costs of administrative complexity in addition to benefits of clearer communication, both with new agency employees and new potential claimants.

VI. Conclusion

The perceived need for no-fault reform greatly depends on one's view of the fault system and the salience of each of its three major rationales. If the legal system is primarily viewed as a mechanism for achieving justice in dispute resolution or as a "safety valve" for injured people who seek retribution in tort, then compensation is appropriately delivered through various forms of private and public first-party insurance. The fact that few persons receive compensation via the legal system is comparatively unimportant; it is up to themto come forward if they are dissatisfied. Reform then logically centers on making the operation of the legal process more efficient by various means, such as alternative dispute resolution, and possibly also more accurate and credible so as to improve deterrence, another rationale for tort. Secondary goals include keeping liability insurance available and thereby assuring availability of medical care are also relevant.

Conversely, if the legal system's rationale of providing compensation is taken seriously, then its low claims rate, the high share of funds going to lawyers, and the inefficiency of claims resolution loom large. In theory, no- fault emphasizes this rationale by expanding coverage and reducing administrative overhead. Still, no-fault never addresses all injuries, only those thought related to a particular activity, and many no-fault proponents emphasize deterrence as well as compensation.

The two medical no-fault programs examined in this article have achieved their primary and very focused legislative objective. That is, they have maintained the availability of affordable obstetrical liability coverage for physicians. Indeed, obstetrical liability premiums in Virginia and Florida declined much more rapidly after no-fault than in the rest of the nation. This success was achieved by taking many of the most expensive obstetrical cases out of tort litigation, those of severely neurologically impaired infants with birth-related injuries. These cases have been resolved mainly out of court through a very informal process, at quite affordable cost in new assessments on medical providers. The programs demonstrate the technical feasibility of running a medical injury program, which has often been challenged, although their tightly defined focus probably makes eligibility determinations somewhat easier than for other injuries.

*121 The programs have also clearly maintained the solvency necessary to finance benefits as they become due. This is the first duty of any risk-bearing entity and the primary rationale for state insurance regulation. Neither program has ever come close to invoking its statutory back-stop authority to assess liability or casualty insurers to meet operating losses. Moreover, provider assessments have substantially decreased over time in Virginia and have not increased in Florida.

The no-fault programs are very small, but benefits are measurable. A number of families receive compensation who could not recover in tort. Compared with tort, no-fault compensation in paid cases is more generous in where reserves for future losses are included, less in actual benefits paid in the first five years of life. No fault by design constrains the measure of damages, notably either excluding intangible losses (Virginia) or strictly limiting them (Florida). However, tort in practice constrains actual payouts, as most severely injured claimants accept a "discounted" settlement to avoid the costs, delays, and uncertainties of trial. The overhead cost of delivering no-fault compensation is very low, especially for attorneys' fees on both sides. No- fault administration costs less even though it must make numerous small payments, often negotiating payment rates in each case-unlike tort's one-time determinations. Moreover, no-fault's speed of resolving cases, once filed, is very high. Finally, both no-fault claimants and physicians with no-fault experience express satisfaction with the programs.

However, especially in Florida, the programs have not fully succeeded in keeping cases out of tort. Moreover, an unfortunate reason for the programs' solvency is that they compensate only a handful of families per year-well below expectations and below estimated eligibility, but as many or more of these cases as tort has ever paid. One reason is that a surprisingly low share of potential claimants actually pursue a claim either in tort or in no-fault. The laws designed a new set of payment rules but no new method of case finding or intake. Indeed, statutory design discourages active searching for cases by emphasizing the importance of solvency and by making no provision for premium increases to fund more cases. The no-fault systems in practice continue to rely on plaintiffs' lawyers to screen and bring cases, which may help explain why claims are not brought to no-fault any faster than to tort. According to claimants, but disputed by physicians, most claimants first hear about no-fault from their lawyers, and almost all claimants still begin their search for redress with lawyers. Attorneys' fees are much larger in tort than in no-fault, and a significant minority of no-fault claimants first bring a tort suit.

As implemented, no-fault is so limited in both scope and scale that the programs cannot achieve many of the broader goals often plausibly *122 ascribed to no-fault. They thus function less as no-fault programs emphasizing broader access to compensation and new mechanisms of injury or loss prevention than as insurance-oriented legal reforms. Indeed, these targeted, "high-end" no-fault programs closely resemble conventional tort-reform caps on awards in addressing the small number of very large injuries that cause insurance problems, but are superior in that they provide replacement benefits at low overhead cost. Larger programs are needed to achieve larger goals, but would also require larger funding.

Given the benefits achieved, together with the significant theoretical promise of broader no-fault to improve both compensation and deterrence, demonstrations of more thoroughgoing no-fault seem warranted in these or other jurisdictions. The programs' experience raises some cautions, however, notably the importance of developing better outreach to potentially eligible injured claimants, maintaining the exclusivity of the no-fault remedy as against tort, avoiding arbitrariness in the course of a very informal process, and of building broad political constituencies for no-fault.

The existing programs do not support the expectation that broader no-fault would be less expensive to operate than a liability system alone. These liability-replacement systems were so affordable in part because of low levels of claiming. Achieving broader goals seems very likely to cost more than tort alone, as liability systems reach only a very small fraction of

potentially meritorious cases, and tort reform in most states has already reduced liability premiums since the era in which no-fault was first proposed. Most of the cost of current injuries is not captured by either tort or these no-fault programs, but is instead left with the complex of other coverages that pay for illness, disability, and death. Accordingly, the ultimate value of no-fault versus fault systems depends more on their impact on overall rates of injury, on effectiveness of rehabilitation, and on whatever level of defensive medicine medical providers undertake in response to the injury-resolution system.

Although the Virginia and Florida programs are in many ways unique, they have two important parallels to many states' experience with Workers' Compensation and automobile no-fault. First, just as medical no-fault in Virginia and Florida covered a very limited type of injury, neither of the broader programs has completely eliminated tort, either. Automobile no-fault reform fell short mainly because legislators did not enact reformers' suggestions for a total replacement of tort, for reasons of pressure from various political constituencies. Sometimes legislators intentionally left tort untouched, enacting automobile no-fault only as an add-on form of mandatory insurance. More often, they created thresholds allowing lawsuits for more severe injury, unlike the *123 medical programs, which covered only very severe injuries. Workers' Compensation, on the other hand, experienced increasing leakage to tort over time, as exceptions were found, notably to allow claims against equipment manufacturers. Second, no-fault coverage can diminish incentives for accident prevention and efficient provision of restorative care after an accident occurs. Under Workers' Compensation, but not under automobile no-fault or the two medical injury no-fault programs, a combination of experience-rating and use of managed care, imple-mented in varying degrees, at least provides the possibility for preserving efficiency while accomplishing the distributional goal of providing coverage for injuries.

Ultimately, the key to success or failure of the no-fault concept lies in implementation; the devil truly is in the details. Better understanding of implementing details should enable policy makers to refine and restructure no- fault programs to satisfy their proponents' objectives.

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[FN2]. This article draws upon the five previous empirical papers produced by its project, supra note 1: See Randall R. Bovbjerg et al., Administrative Performance of "No-Fault" Compensation for Medical Injury, 60 Law & Contemp. Probs., Spring 1997, at 71; Frank A. Sloan et al., The Road from Medical Injury to Claims Resolution: How No-Fault and Tort Differ, 60 Law & Contemp. Probs., Spring 1997, at 35 [hereinafter Sloan et al., Claims Resolution]; Frank A. Sloan et al., The No-Fault System of Compensation for Obstetric Injury: Winners and Losers, 91 Obstet. & Gynecol. 437 (1998) [hereinafter Sloan et al., No- Fault Winners and Losers]; Frank A. Sloan et al., The Influence of Obstetric No-Fault Compensation on Obstetricians' Practice Patterns, 179 Am. J. Obstet. & Gynecol. 671 (1998) [hereinafter Sloan et al., Practice Patterns]; Kathryn Whetten-Goldstein et al., Compensation for Birth Related Injury: No-Fault Compared to Tort Systems, (Archives of Pediatric and Adolescent Med. forthcoming Feb. 1999).

[FN3]. See Paul C. Weiler, Medical Malpractice on Trial (1991); Clark C. Havighurst & Laurence R. Tancredi, Medical Adversity Insurance-A No-Fault Approach to Medical Malpractice and Quality Assurance, 51 Milbank Mem. Fund. Q. 125 (1973), reprinted in 1974 Ins. L.J. 69; Walter Wadlington, Editorial, Medical Injury Compensation: A Time for Testing New Approaches, 265 JAMA 2861 (1991); U.S. Physician Payment Review Comm'n, Medical Malpractice Reform in Annual Report 1992, at 183-209 [hereinafter PPRC Report]; Michael J. Werner, Beyond MICRA: New Ideas For Liability Reform, A Position Paper of the American College of Physicians, 122 Annals of Internal Med. 466 (1995); 2 Institute of Medicine, Medical Professional Liability and the Delivery of Obstetrical Care (Victoria P. Rostow & Roger J. Bulger eds., 1989);

Laurence R. Tancredi, Designing a No-Fault Alternative, 49 Law & Contemp. Probs. 277 (Spring 1986); Jeffrey O'Connell, Ending Insult to Injury: No-Fault Insurance for Products and Services (1975) [hereinafter O'Connell, Ending Insult]; Jeffrey O'Connell, Neo-No-Fault Remedies for Medical Injuries: Coordinated Statutory and Contractual Alternatives, 49 Law & Contemp. Probs., Spring 1986, at 125 [[[hereinafter O'Connell, Neo-No-Fault]; Barry M. Manuel, Professional Liability-A No-Fault Solution, 322 New Eng. J. Med. 627, 628 (1990) (calling for boards of physician-specialists to create "list of approved compensable medical injuries"); Larry M. Pollack, Medical Maloccurrence Insurance (MMI): A No-Fault Insurance Proposal for Resolving the Medical Malpractice Controversy, 23 Tort & Ins. L.J. 552 (1988).

[FN4]. See Robert Keeton & Jeffrey O'Connell, Basic Protection for the Traffic Victim: A Blueprint for Reforming Automobile Insurance (1965); Alan I. Widiss et al., No-Fault Automobile Insurance in Action: The Experiences in Massachusetts, Florida (1997); R.H. Joost, Automobile Insurance and No-Fault Law, ch. 7 (1992); Frank A. Sloan, Automobile Accidents, Insurance, and Tort Liability, 140-44 in 1 The New Palgrave Dictionary of Economics and the Law (Peter Newman ed., 1998).

[FN5]. See Arthur Larson, The Law of Workmen's Compensation (desk ed. 1988); Mark S. Rhodes & Gordon Ohlsson, Workers' Compensation Answer Book (1997).

[FN6]. Compare Albert Ehrenzweig, "Full Aid" Insurance for the Traffic Victim (1954) with Albert Ehrenzweig, Compulsory "Hospital-Accident" Insurance: A Needed First Step Toward the Displacement of Liability for "Medical Malpractice," 31 U. Chi. L. Rev. 279 (1964); compare Keeton & O'Connell, supra note 4, with O'Connell, Ending Insult and O'Connell, Neo-No-Fault, supra note 3; compare Paul C. Weiler, Legal Policy for Workplace Injuries with Weiler, supra note 3; see also Paul C. Weiler et al., Proposal for Medical Liability Reform, 267 JAMA 2355 (1992); Paul C. Weiler, The Case for No-Fault Medical Liability, 52 Md. L. Rev. 101 (1993).

[FN7]. See Marilynn M. Rosenthal, Dealing with Medical Malpractice: The British and Swedish Experience 174-86 (1988); Walter Gellhorn, Medical Malpractice Litigation (U.S.)-Medical Mishap Compensation (N.Z.), 73 Cornell L. Rev. 170 (1988); Geoffrey Palmer, Compensation for Incapacity: A Study of Law and Social Change in New Zealand and Australia (1979); Eva D. Cohen & Samuel P. Korper, The Swedish No-Fault Patient Compensation Program: Provisions and Preliminary Findings, 1976 Ins. L.J. 70; Geoffrey Palmer, New Zealand's Accident Compensation Scheme: Twenty Years On, 44 U. Toronto L.J. Rev. 223 (1994).

[FN8]. The Virginia Birth-Related Neurological Injury Compensation Act of 1987 governs births on and after January 1, 1988. See Va. Code Ann. §§ 38.2-5000-21 (Michie 1994). The Florida Birth-Related Neurological Injury Compensation Act of 1988 applies to births on or after January 1, 1989. See Fla. Stat. Ann. §§ 766.301-.316 (West 1997).

[FN9]. See Peter H. White, Note, Innovative No-Fault Tort Reform for an Endangered Specialty, 74 Va. L. Rev. 1487 (1988) and Thomas R. Tedcastle & Marvin A. Dewar, Medical Malpractice: A New Treatment for an Old Illness, 16 Fla. St. U. L. Rev. 535 (1988) (the two best contemporaneous legislative histories). See also Bovbjerg et al., Administrative Performance, supra note 2, especially section II.A, 74-76 & nn.10-26 (citing no-fault's legislative history).

[FN10]. See generally Office of Technology Assessment, United States Congress, Impact of Legal Reforms on Medical Malpractice Costs (1993).

[FN11]. For an excellent discussion of the nature of adverse events, see Harvard Medical Practice Study, Patients, Doctors, and Lawyers: Medical Injury, Malpractice Litigation, and Patient Compensation in New York (1990). For a more accessible summary, see Troyen A. Brennan, An Empirical Analysis of Accidents and Accident Law: The Case of Medical Malpractice Law, 36 St. Louis U. L.J. 823 (1992). The New York study built upon a similar, but less thorough, study done earlier in California. See California Medical Ass'n and California Hosp. Ass'n, Report on the Medical Insurance Feasibility Study (Don H. Mills ed., 1977) [hereinafter Feasibility Study].

[FN12]. See generally Bovbjerg et al., Administrative Performance, supra note 2.

[FN13]. See, e.g., David M. Studdert et al., Can the United States Afford a "No-Fault" System of Compensation for Medical Injury?, 60 Law & Contemp. Probs., Spring 1997, at 1; S. Keith Petersen, No-Fault and Enterprise Liability: The View from Utah, 122 Annals of Internal Med. 462-63 (1995).

[FN14]. See W. Page Keeton et al., Prosser and Keeton on the Law of Torts 20-26 (5th ed. 1984); Randall R. Bovbjerg, Medical Malpractice on Trial: Quality of Care Is the Important Standard, 49 Law & Contemp. Probs., Spring 1986, at 321-22.

[FN15]. Complaints have been heard in every decade since health policy became a major social concern with the expansions of insurance coverage in the 1960s. Of course, physicians and other potential defendants are among the leading complainants, see, e.g., American Med. Ass'n, Tort Reform Codification: Model Medical Liability and Practices Reform Act, Chicago, AMA/Specialty Society Medical Liability Project, May 23, 1989. For a defense perspective which actively and continuously promotes reform, see The American Tort Reform Association (visited January 1998) http://aaabiz.com/atra. Conservative theorists also urge reform, see, e.g., Peter W. Huber, Liability: The Legal Revolution and its Consequences (1988), as have Republican administrations. See, e.g., U.S. Department of Justice, Report of the Tort Policy Working Group on the Causes, Extent and Policy Implications of the Current Crisis in Insurance: Availability and Affordability (Feb. 1986); Philip J. Hilts, Bush Enters Malpractice Debate With Plan to Limit Court Awards: States That Do Not Comply Would Be Penalized, N. Y. Times, May 13, 1991, at A1. Less predictably, noted legal academics have emphasized problems and urged reform, see, e.g., Weiler, supra note 3; Jeffrey O'Connell & C. Brian Kelly, The Blame Game: Injuries, Insurance, and Injustice (1987); Institute of Medicine, supra note 3. The legal system is not without articulate defenders, nor are problems documented to be nearly as severe as detractors suggest. See generally Patricia M. Danzon, Medical Malpractice: Theory, Evidence, and Public Policy (1985); Frank A. Sloan et al., Suing for Medical Malpractice (1993); Neil Vidmar, Medical Malpractice and the American Jury: Confronting the Myths about Jury Incompetence, Deep Pockets, and Outrageous Damage Awards (1995); Stephen Daniels, Tracing the Shadow of the Law: Jury VerdictsAnecdote, 55 Md. L. Rev. 1093 (1996); Michael J. Saks, Do We Really Know Anything About the Behavior of the Tort Litigation System-And Why Not?, 140 U. Pa. L. Rev. 1147, 1287-89 (1992).

[FN16]. See generally Randall R. Bovbjerg, Medical Malpractice: Problems & Reforms-A Policy-Maker's Guide to Issues and Information (1995) (summary of arguments, empirical evidence, and lack thereof). One important new study has found support for defensive medicine in the relatively slower growth of Medicare costs for two procedures in states with significant tort reforms. See David P. Kessler & Mark McClellan, Do Doctors Practice Defensive Medicine?, 61 Q. J. Econ. 353 (1996).

[FN17]. See Feasibility Study, supra note 11; Russell Localio et al., Relation Between Malpractice Claims and Adverse Events Due to Negligence, 325 New Eng. J. Med. 245 (1991).

[FN18]. Consider three important measures of performance: (i) accuracy of liability determinations, (ii) accuracy of damage awards, and (iii) participant satisfaction. There is empirical evidence on all three: (1) Comparing independent evaluations of medical liability with actual outcomes of medical malpractice cases, a number of studies of insurance claims find some correspondence. The study conducted by Sloan, see Sloan et al., supra note 15, at 166-68, was unusual in that it considered more than final legal determination; it took the extra step of comparing independent physicians' ratings of liability with legal outcomes based on different levels of data, similar to the increasing levels of information found by discovery in litigation, and found that agreement between the experts and final legal outcome increased as the experts were given more information. See also note 266 infra. (2) Similarly, despite a wide range of outlier cases, malpractice damage awards on average rise in step with increasing severity and duration of injury. See, e.g., Randall R. Bovbjerg et al., Juries and Justice: Are Malpractice and Other Personal Injuries Created Equal?, 54 Law & Contemp. Probs., Winter 1991, at 5, [hereinafter Bovbjerg et al., Juries and Justice]. The same is true even for the most variable element of awards-general damages like "pain and suffering." See, e.g., Randall R. Bovbjerg et al., Valuing Life and Limb in Tort: Scheduling "Pain and Suffering," 83 Nw. U. L. Rev. 908 (1989) [[[hereinafter Bovbjerg et al., Pain and Suffering]. Moreover, compensation in the most serious injuries is not too high but in fact falls short of economic loss on average. See Sloan et al., supra note 15, at 187-210. However, overall awards in medical malpractice cases substantially exceed those for similar automobile injuries, holding many characteristics of the case and claimant constant, for poorly understood reasons possibly including deep pockets, emotional reaction against failings of personal health care providers, or unobserved selection of more serious cases by trial lawyers who screen out most complaints before filing. See Bovbjerg et al., Juries and Justice, supra. (3) Physicians are well known to dislike the tort system, but a detailed study found that the vast majority of obstetrical and emergency room tort claimants were satisfied with the process; even most of the losing plaintiffs said they would bring suit again. See Sloan et al., supra note 15, at 87 tbl.5.6. For further citations and short overviews of the evidence on legal performance, see Randall R. Bovbjerg, Problems and Solutions in Medical Malpractice, in The Liability Maze: The Impact of Liability Law on Safety and Innovation, 274-90 (Peter W. Huber & Robert E. Litan eds., 1991); Bovbjerg, supra note 16; Sloan et al., supra note 15, at 160-64 (referring to liability) & 187-90 (referring to compensation).

[FN19]. See Victor R. Fuchs, Who Shall Live? Health, Economics, and Social Choice, 9-17 (1974).

[FN20]. See Randall R. Bovbjerg et al., U.S. Health Care Coverage and Costs: Historical Development and Choices for the 1990s, 21 J.L. Med. Ethics 141 (1993). See generally Competition in the Health Care Sector: Ten Years Later (Warren Greenberg ed., 1988); H.E. Frech III, Competition and Monopoly in Medical Care (1996); Regina Herzlinger, Market Driven Health Care: Who Wins, Who Loses in the Transformation of America's Largest Service Industry (1997).

[FN21]. See, e.g., Patricia Munch [now Danzon] & Dennis E. Smallwood, Solvency Regulation in the Property-Liability Insurance Industry: Empirical Evidence, 11 Bell J. Econ. 261-79 (1980); Mark V. Pauly et al., Regulation and Quality Competition in the U.S. Insurance Industry, 65-112 in The Economics of Insurance Regulation: A Cross National Study (Jorg Finsinger & Mark V. Pauly eds., 1986); Gary T. Schwartz, The Ethics and Economics of Tort Liability Insurance, 75 Cornell L. Rev. 313 (1990); Kenneth S. Abraham, Distributing Risk: Insurance, Legal Theory, and Public Policy (1986); Emmett J. Vaughn & Therese M. Vaughan, Fundamentals of Risk and Insurance (7th ed. 1996); Frank A. Sloan et al., Insuring Medical Malpractice (1991).

[FN22]. See Robert W. Klein, Insurance Regulation in Transition: Structural Change and Regulatory Response in the Insurance Industry (visited June 19, 1995) http://www.naic.org/geninfo/about/regutra3.htm; Pauly et al., supra note 21, at 65-107.

[FN23]. See Deborah R. Hensler et al., Compensation for Accidental Injuries in the United States (1991).

[FN24]. See Danzon, supra note 15, at 118-36 (discussing the design of medical liability coverage); Schwartz, supra note 21, at 315-21, 362-65. Also, some lines of coverage, including medical malpractice, have a long "tail" of liability, namely, ultimate liabilities are not clear for many years, due to how slowly cases are filed and then resolved. This long tail substantially raises underwriting risk and hence premiums for coverage. See Sloan et al., supra note 21, at 31-33. For example, consider Florida tort cases comparable to those brought under the no-fault system described in this article; the median tort case took over three and one half years to resolve (1322 days from incident to ultimate resolution). See Bovbjerg et al., Administrative Performance, supra note 2, at 90-92.

[FN25]. See, e.g., James L. Athearn et al., Risk and Insurance, 317-34 & 469-93 (6th ed. 1989). We use "first party" to include all compensatory coverages which directly pay for the cost of injury and illness incurred by the patient or victim, regardless of who pays the premium; the first parties themselves (as commonly for life or disability insurance), a second party (as for employment-based private health coverage), social insurance (like social security disability or national health insurance in most countries), or public programs (like Medicaid). In contrast, we use "third-party" to describe liability coverages that defend and indemnify a third party which may have caused the illness or injury. See also infra note 53.

[FN26]. See Hensler et al., supra note 23.

[FN27]. Most medical care is paid for by health insurance, public or private. See, e.g., U.S. Dep't of Health & Human Services, Health Care Financing Review, Statistical Supplement 15 (1995). A substantial fraction of the U.S. population under age 65 lacks health insurance. In such cases, payment is made by a combination of out-of-pocket payment and discounts by providers of care. For a general discussion of this issue, see Joel S. Weissman & Arnold M. Epstein, Falling through the Safety Net: Insurance Status and Access to Care (1994) (especially discussion at 17-48).

[FN28]. See, e.g., Mark A. Hall, American Enterprise Institute, Reforming Private Health Insurance 1-31 (1994). Occasionally a first-party coverage also has higher expenses for other reasons, like the sales-related costs of individual health coverage (agents' commissions, bad debt) or the moral hazard of automobile collision coverage ("gold plating" of repairs or even arson for vehicles worth less than their book value). See, e.g., Randall R. Bovbjerg, Insuring the Uninsured through Private Action: Ideas and Initiatives, 23 Inquiry 403 (Winter 1986) (factors in cost of health coverage); Pauly et al., supra note 22, at 73 (for collision coverage, loss ratios, i.e., benefits paid out as a percentage of premium paid in, are lower than those of liability coverage, and loss ratios for independent agency firms are lower than for direct writers).

[FN29]. See Scott Harrington & Robert E. Litan, Causes of the Liability Insurance Crisis, 239 Science 737 (1988); George L. Priest, The Current Insurance Crisis and Modern Tort Law, 96 Yale L.J. 1521 (1987); Glen O. Robinson, The Medical Malpractice Crisis of the 1970's: A Retrospective, 49 Law & Contemp. Probs., Spring 1986, at 5.

[FN30]. See Kenneth S. Abraham, Medical Malpractice Reform: A Preliminary Analysis, 36 Md. L. Rev. 489 (1977). See Danzon, supra note 15, (relying upon Patricia Munch Danzon, The Frequency and Severity of Medical Malpractice Claims (1982)). We put "crisis" in quotation marks to indicate that the level of "crisis" is substantially in the eye of the beholder. See, e.g., Frank A. Sloan & Randall R. Bovbjerg, Medical Malpractice: Crises, Response and Effects, Res. Bull., Health Insurance Ass'n of Am., (May 1989).

[FN31]. See AMA Special Task Force on Professional Liability and Insurance, Professional Liability in the '80s (1985) (terms 1980s "crisis of affordability" as against 1970s "crisis of availability"). On cost shifting of liability fees to health payers, see Sloan & Bovbjerg, supra note 30, at 29-32.

[FN32]. See Randall R. Bovbjerg, Legislation on Medical Malpractice: Further Developments and a Preliminary Report Card, 22 U.C. Davis L. Rev. 499 (1989), reprinted in 3 Nat'l Ins. L. Rev. 217 (1989).

[FN33]. See generally Bovbjerg, supra note 32; Eleanor D. Kinney, Malpractice Reform in the 1990s: Past Disappointments, Future Success?, 20 J. Health Pol. Pol'y & L. 99 (1995); Kenneth S. Abraham, Medical Liability Reform: A Conceptual Framework, 260 JAMA 68 (1988).

[FN34]. See Sloan et al., supra note 21, at 26-27, 40-42 & 57.

[FN35]. See Bovbjerg, supra note 32, at 513 (referring to each of these types of reform, especially Table 1 which categorizes each of 33 reforms reviewed). The major peer review protection was the Health Care Quality Improvement Act of 1986, 42 U.S.C. §§ 11101-152 (1994), which contained a provision that conferred limited immunity on physicians engaging in certain types of peer review. See also James F. Blumstein & Frank A. Sloan, Antitrust and Hospital Peer Review, 51 Law & Contemp. Probs., Spring 1988, at 7, 32-37.

[FN36]. See Stephen Zuckerman et al., Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums, 27 Inquiry 167 (Summer 1990); Sloan et al., supra note 21. See Bovbjerg, supra note 32 (early impact of mid-1980s laws). This intended effect of conventional tort reform has become conventional wisdom.

[FN37]. Caps set limits on the amounts recoverable as damages, most commonly for non-monetary losses, but in some states for all losses. See, e.g., Robinson, supra note 29, at 25-26 nn.108-10; Bovbjerg, supra note 32, at 525-26 nn.114-18. Collateral source reforms either allow or require that liability awards offset recoveries from health insurance and other collateral sources. See, e.g., Robinson, supra note 29, at 26 nn.111-13; Bovbjerg, supra note 32, at 526 nn.119-20. For empirical evidence on the impact of reforms, see Patricia Danzon, The Frequency and Severity of Medical Malpractice Claims, 27 J.L. & Econ. 115 (1984); Hamilton, Rabinowitz, and Alschuler, Inc., Claim Evaluation Project (1987); Patricia M. Danzon, The Frequency and Severity of Medical Malpractice Claims: New Evidence, 49 Law & Contemp. Probs., Spring 1986, at 57-84; Frank A. Sloan et al., Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis, 14 J. Health Pol. Pol'y & L. 663 (1989). It has been asserted, but not empirically verified, that part of the improvement in premiums is due to the enactment of packages of tort reforms rather than caps, collateral source offset, or reductions in the statute of limitations.

[FN38]. To date, only two studies have found this effect. See Kessler & McClellan, supra note 16; David Kessler & Mark McClellan, The Effects of Malpractice Pressure and Liability Reform on Physicians' Perceptions of Medical Care, 60 Law & Contemp. Probs., Winter 1997, at 81. Other empirical studies to date have attempted to find evidence of defensive practice in response to legal variables (claims, premiums, hypothetical concern), typically finding small or no impact. For reviews of evidence, see Sloan & Bovbjerg, supra note 30, at 28- 32; Randall R. Bovbjerg et al., Defensive Medicine and Tort Reform: New Evidence in an Old Bottle, 21 J. Health Pol., Pol'y & L. 267 (1996).

[FN39]. See Bovbjerg, supra note 32; Galanter, supra note 15.

[FN40]. See Kinney, supra note 33.

[FN41]. The full proposal was AMA, supra note 15; see also Kirk B. Johnson et al., A Fault-Based Administrative Alternative for Resolving Medical Malpractice Claims, 42 Vand. L. Rev. 1365 (1989); Symposium, Taking Medical Malpractice Out of the Courts, 1 Cts., Health Sci. & L. 3 (1990) (stating various evidence and perspectives on proposal).

[FN42]. See Bovbjerg et al., Pain and Suffering, supra note 18; Patricia M. Danzon, Medical Liability, in Liability: Perspectives and Policy 101, 122-23 (Robert E. Litan & Clifford Winston eds., 1988) (arguing that tort rules of damages are economically inefficient because they result in greater compensation than other compensation systems, and suggesting that malpractice damages be scheduled by age and severity of injury); Physician Insurers Association of America, A Comprehensive Review of Alternatives to the Present System of Resolving Medical Liability Claims (1989); James F. Blumstein et al., Beyond Tort Reform: Developing Better Tools for Assessing Damages for Personal Injuries, 8 Yale J. on Reg. 171, 177-78 (1991); Frederick S. Levin, Pain and Suffering Guidelines: A Cure for Damages Measurement "Anomie," 22 J.L. Reform 303 (1989); Peter H. Schuck, Scheduled Damages and Insurance Contracts for Future Services: A Comment on Blumstein, Bovbjerg, and Sloan, 8 Yale J. on Reg. 213, 215-19 (1991).

[FN43]. See Jethro K. Lieberman, & James F. Henry, Lessons from the Alternative Dispute Resolution Movement, 53 U. Chi. L. Rev. 424 (1986); Thomas B. Metzloff, Resolving Malpractice Disputes: Imaging the Jury's Shadow, 54 Law & Contemp. Probs., Winter 1991, at 43. Thomas B. Metzloff, Comment, Alternative Dispute Resolution Strategies in Medical Malpractice, 9 Alaska L. Rev. 429 (1992).

[FN44]. See Myron F. Steves, Jr., A Proposal to Improve the Cost to Benefit Relationships in the Medical Professional Liability Insurance System, 1975 Duke L.J. 1305; William M. Sage et al., Enterprise Liability for Medical Malpractice and Health Care Quality Improvement, 20 Am. J.L. & Med. 1 (1994); Kenneth S. Abraham & Paul C. Weiler, Enterprise Medical Liability and the Evolution of the American Health Care System, 108 Harv. L. Rev. 381 (1994); 1 & 2 American Law Institute, Enterprise Responsibility For Personal Injury, Reporters' Study (1991).

[FN45]. See John Eichorn et. al., Standards for Patient Monitoring During Anesthesia at Harvard Medical School, 256 JAMA 1017 (1986); Elanor D. Kinney & Marilyn M. Wilder, Medical Standard Setting in the Current Malpractice Environment: Problems and Possibilities 22 U.C. Davis L. Rev. 421 (1989); Clark C. Havighurst, Practice Guidelines as Legal Standards Governing Physician Liability, 54 Law & Contemp. Probs., Spring 1991, at 87; David Eddy, Clinical Policies and the Quality of Clinical Practice, 307 New Eng. J. Med. 343 (1992); Andrew L. Hyams et al., Practice Guidelines and Malpractice Litigation: A Two-Way Street, 122 Annals Internal Med. 450, 450-455 (1995).

[FN46]. Through the 1980s, tort reform occurred almost entirely in the midst of insurance crisis. See supra notes 29 & 32. In the early 1990s, proposals for tort reform accompanied every major federal health reform bill. See Kinney, supra note 33. See also Randall R. Bovbjerg, Promoting Quality and Preventing Malpractice: Assessing the Health Security Act, 19 J. Health Pol. Pol'y & L. 207 (1994). State enactments of "first generation" tort reform, notably caps on awards, have continued, especially where conservatives have won elections. See Thomas J. Campbell et al., The Causes and Effects of Liability Reform: Some Empirical Evidence 29 (National Bureau of Econ. Research Working Paper No. 4989 (1995)). In addition to the Virginia and Florida laws discussed here, no-fault is being considered in Colorado and Utah. See Studdert et al., supra note 13; Petersen, supra note 13.

[FN47]. See Weiler, supra note 3; Havighurst & Tancredi, supra note 3; Tancredi, supra note 3; Laurence R. Tancredi & Randall R. Bovbjerg, Rethinking Responsibility for Patient Injury: Accelerated Compensation Events, A Malpractice and Quality Reform Ripe for a Test, 54 Law & Contemp. Probs., Spring 1991, at 147.

[FN48]. See Weiler, supra note 3, at 139-44.

[FN49]. Any limitations or conditions on a coverage can lead to added administrative expense to investigate claims before making payment. Presumably one added expense of collision coverage is having to enforce contract exclusions, including self-inflicted damage. See sources cited supra note 28.

[FN50]. See Paul C. Weiler et al., A Measure of Malpractice: Medical Injury, Malpractice Litigation, and Patient Compensation 144-49 (1993); Tancredi & Bovbjerg, supra note 47, at 154-55; Weiler et al., supra note 6.

[FN51]. See infra notes 71-121 and accompanying text.

[FN52]. See sources cited supra note 7.

[FN53]. Almost all developed countries other than the United States have some form of national health insurance, so the issue of how to cover medical services does not arise. See generally An International Assessment of Health Care Financing:

Lessons for Developing Countries (David W. Dunlop & Jo M. Martins, eds., 1995); 1 & 2 Financing Health Care (Ulrich K. Hoffmeyer & Thomas R. McCarthy eds., 1994).

[FN54]. See sources cited supra note 5.

[FN55]. See sources cited supra note 4.

[FN56]. See Randall R. Bovbjerg & Judith Feder, A Cure for Cancer Insurance, 1 J. Pol'y Anal. & Mgmt. 135 (1981).

[FN57]. An early proposal called for such a medical coverage. See Ehrenzweig, supra note 6.

[FN58]. See generally O'Connell, supra note 6. Professor O'Connell designed a "neo-no-fault" alternative to personal injury claims against schools for such injuries based upon claimants' voluntary waiver of tort remedies in exchange for non-fault-based payments from such an accident policy.

[FN59]. Insolvency truncates penalties that potential tortfeasors face, as judgment-proof defendants are unlikely to have to pay awards and hence potential claimants are unlikely to sue, thus reducing the liability incentive for prevention. Moreover, potential tortfeasors facing insolvency may also be unable to afford normal precautions. See Steven Shavell, The Judgment-Proof Problem, 6 Int'l Rev. L. & Econ. 45, 45-58 (1986); T. Randolph Beard, Bankruptcy and Care Choices, 21 Rand J. Econ. 626, 626-658 (1990); James Bryd & Daniel E. Ingberman, Non-Compensatory Damages and Potential Insolvency, 23 J. Legal Stud. 895, 895-910 (1994). Mandates may be hard to enforce in practice, especially where the number of affected individuals or enterprises is large. Despite mandates for third-party automobile liability insurance, uninsured motorists persist, so prudent insureds buy first-party "uninsured motorist" coverage. See infra note 60; see also Alan I. Widiss, Uninsured and Underinsured Motorist Insurance (3d ed. 1990).

[FN60]. Mandatory automobile liability insurance was first imposed in the 1920s and is now commonplace. See Prosser & Keeton, supra note 14, at 602-03. Mandates not only improve the prospects of compensation for non-negligent third parties, but also have been found to have one socially beneficial deterrent effect-reducing binge drinking by drivers-especially in states combining compulsory insurance with a surcharge for driving under the influence. See Frank A. Sloan et al., Effects of Tort Liability and Insurance on Heavy Drinking and Drinking and Driving, 38 J.L. & Econ. 49 (April 1995).

[FN61]. Conventional insurance theory, however, suggests dealing with such high costs of "dollar trading" at the low end of risk by having higher deductibles.

[FN62]. See Patricia Munch Danzon, Contingent Fees for Personal Injury Litigation, 14 Bell J. Econ. 213, 223-24 (1983). Cases with very high awards will be more profitable to attorneys, given the prevalence of the contingency fee system for tort cases involving personal injury. See id. (assuming that legal costs do not rise proportionately with award size; unfortunately, there is no direct empirical evidence on the point).

[FN63]. See Bovbjerg et al., supra note 42; Keeton & O'Connell, supra note 4.

[FN64]. Economic theory and much empirical evidence suggest that sovereign consumers, controlling their own resources, allocate them efficiently according to their own calculus of self interest; insurance and re-allocative payment programs all "distort" these incentives and accordingly need to create different mechanisms to encourage efficient allocation decisions. See infra note 66 and accompanying text.

[FN65]. See, e.g., Charles F. Krause, Structured Settlements for Tort Victims, 66 A.B.A. J. 1527, 1527-28 (1980) (speculating improvident behavior, but little documented). Only one direct investigation of winning claimants' actual experiences appears to exist. See Sloan et al., supra note 15 (suggesting that any problem is not large). This study surveyed families with large obstetrical and emergency-room claims in Florida during the late 1980s, a population popularly believed to receive large awards, in a high-risk state, in a high-claims period. See id. at 17-30. Half of winners responding to the survey reported making major purchases, such as a motor vehicle, home, or tuition; but under a quarter said their awards were exhausted (the survey date was two to three years after the typical award). Getting more definitive information would require studying a much broader population, with on-site audits of spending rather than conducting telephone interviews about self- reported behavior. See id. at 205-6.

[FN66]. Moral hazard is the ordinary human tendancy to behave differently when someone else is paying the bill, as under insurance; such conduct is not necessarily immoral, though it may sometimes be (as in padding an insurance claim rather than just seeking higher-cost repairs). See supra note 28 and infra notes 93, 106-07 & 113. It should be noted that the tort system also creates moral hazard; because someone else is paying, claimants want very high levels of care built into the lump-sum payments they seek from the beginning. Indeed, theoretical insurance analysts argue that even tort should not compensate for economic losses above the levels that individuals of average means would buy for themselves as private insurance coverage. See, e.g., Danzon, supra note 15, at 152-58 (noting that disability and other coverages do not provide complete income replacement); see also supra note 28.

[FN67]. There are ways to manage such care rather than simply reimbursing for care provided by a covered provider. Workers' Compensation plans are beginning to do just this. See Rhodes & Ohlsson, supra note 5, at 11-43 through 11-67. For one proposal for long term management, see Blumstein et al., supra note 42. See also infra notes 108, 277-80 and accompanying text.

[FN68]. See Richard A. Epstein, Medical Malpractice: The Case for Contract, 1976 Am. B. Found. Res. J. 87; Clark C. Havighurst, Health Care Choices: Private Contracts as Instruments of Health Reform (1996).

[FN69]. See Epstein, supra note 68 (maintaining that contractual change would have been better than the Virginia approach). See also Richard A. Epstein, Market and Regulatory Approaches to Medical Malpractice: The Virginia Obstetrical No-Fault Statute, 74 Va. L. Rev. 1451 (1988). In light of the "end run" made by the Florida bar and judiciary around the intended exclusivity of the administrative alternative to tort, perhaps contractual change might in fact prove more binding than administrative implementation. See id. By end run, we refer to the many no-fault-like obstetrical cases filed under tort even after Florida's no-fault system for such injuries. See Sloan et al., Claims Resolution, supra note 2. Florida claimants, by decision of the state supreme court, are entitled to go straight to court, where a judge will decide whether the case qualifies for NICA coverage See Bovbjerg et al., Administrative Performance, supra note 2, at 100-01. By arguing to the court that a case does not qualify for NICA, the claimant's attorney presumably risks being barred from presenting evidence of permanent and serious mental and physical neurological injury incurred as a result of birth, which may reduce tort recoveries, a point made by Kenneth V. Heland of the American College of Obstetrics and Gynecology at the "IMPACS/Duke Medical Malpractice Conference," held at Duke Law School, Durham, NC, September 12-13, 1997. Conference papers were published in Medical Malpractice: External Influences and Controls, 60 Law & Contemp. Probs. 1 (Thomas B. Metzloff and Frank A. Sloan eds., Winter & Spring 1997).

[FN70]. There is voluminous policy literature on "privatization." Privatization elsewhere in the world mainly means sales of public assets, notably companies (British Air, Deutsche Telecom) that in the United States have always been private (but see Tennessee Valley Authority). In the United States context, privatization of potentially public authority can range from simple "contracting out" of non-discretionary functions (e.g., provision and maintenance of office space) to wholesale delegation of areas once thought wholly public (e.g., operations of public schools or prisons). For example, Arizona's ACCHS program (in lieu of Medicaid) is administered privately; Medicaid and Medicare contract with private Health Maintenance Organizations for comprehensive coverage to defined populations for one global contractual fee. Today, there is even serious discussion of private administration of a state's entire Welfare program (formerly Aid to Families with Dependent Children (AFDC)) from eligibility determinations to writing of benefit checks. See generally Harry P. Hatry, A Review of Private Approaches for Delivery of Public Services (1983); Randall R. Bovbjerg et al., Privatization and Bidding in the Health Care Sector, 6 J. Pol'y Anal. & Mgmt. 648 (1987), reprinted in 9 Policy Issues for the 1990s: Policy Studies Review Annual (Ray C. Rist ed., 1989); Beyond Privatization: The Tools of Government Action (Lester M. Salamon ed., 1989). For a very recent example of the sweep of this practice, see Jeff Kunerth, Lockheed Takes on Welfare, Orlando Sentinel, Sept. 7, 1997, at H1.

[FN71]. See, e.g., supra notes 3, 13, & 47.

[FN72]. See Havighurst & Tancredi, supra note 3; Tancredi, supra note 3; Tancredi & Bovbjerg, supra note 47. See infra notes 86 & 87 and accompanying text.

[FN73]. One might argue, speculatively, that no-fault may reduce both monetary and non-pecuniary losses if no-fault claims come in quickly and no- fault administrators act promptly to mitigate injuries. However, the incidence of non-pecuniary loss is highly dependent on the specific nature of an injury. Permanent injuries like the severe newborn neurological deficits addressed by Virginia and Florida no-fault seem certain to impose long-term burdens on families, both monetary and psychological.

[FN74]. See supra notes 64 & 66 and accompanying text.

[FN75]. The joint study by the California Medical Association and California Hospital Association was undertaken to consider the feasibility of a no-fault alternative to tort, paying for all medical injuries, not just negligent ones. See Feasibility Study, supra note 11. The conclusion was that there were five times as many injuries overall as from negligence alone and that no-fault was unaffordable. Also an issue is potentially high cost for claims, particularly in "bad baby" cases like those addressed in Virginia and Florida. Although cerebral palsy cases vary substantially in severity, the average is high. See Thomas H. Maugh II, Lifetime Costs for Birth Defects Called Staggering, L.A. Times, July 20, 1994 (CP incidence in California in 1988 was 657, or 1.23 cases per 1000 births, with projected lifetime costs of \$445 thousand per case).

[FN76]. On moral hazard from no-fault coverage of losses, see infra notes 106 & 107 and accompanying text; from the tort system itself, see supra note 66.

[FN77]. See Marilyn L. May & Daniel B. Stengel, Who Sues Their Doctors? How Patients Handle Medical Grievances, 24 Law & Soc'y Rev. 105 (1990). Retribution is often a motive for suing in a medical context. See Sloan et al., supra note 15, at 153-86. A study of patient satisfaction with their physicians showed that patients of physicians with adverse claims experience tended to be less satisfied with their physicians than were patients of physicians with no claims. None of the patients actually filed a medical malpractice claim against their physicians. See Gerald B. Hickson et al., Obstetricians' Prior Malpractice Experience and Patients' Satisfaction with Care, 272 JAMA 1583 (1994).

[FN78]. Historically, the difficulties of medical causation was the first objection raised to the idea of implementing no-fault coverage for medical injuries. See Robert E. Keeton, Compensation for Medical Accidents, 121 U. Pa. L. Rev. 590, 594 (1973); David S. Rubsamen, No-Fault Liability for Adverse Medical Events, 117 Cal. Med. 78, 78 (1972).

[FN79]. For occupational diseases, however, causation can be harder to disentangle, as where both smoking, a personal choice, and exposure to toxic agents, a workplace hazard, may cause lung conditions.

[FN80]. See, e.g., David W. Louisell & Harold Williams, Medical Malpractice (1990). Such cases are also relatively easy to find and win, and there is less justification for saying that because the tort system cannot deal with them, no-fault reform is needed. See id.

[FN81]. Medical expectations and what is medically achievable at reasonable cost enter into the definition of "negligence." Accordingly, standards rise over time along with capabilities, and failures to act become negligent that were not before, when action was inefficacious or infeasible, a phenomenon explored at length in Mark Grady, Why Are People Negligent? Technology, Non- durable Precautions, and the Medical Malpractice Explosion, 52 Nw. U. L. Rev. 293 (1988).

[FN82]. See St. Paul Companies, Physicians & Surgeons Update, The St. Paul's Annual Report to Policyholders (1994) (a failure to diagnose was an allegation in 37.4% of physician claims in 1994) and periodic reports on the data maintained by the Physician Insurers Association of America, summarized in Mark Holoweiko, What Are Your Greatest Malpractice Risks?, Medical Economics, Aug. 3, 1992, at 141-59.

[FN83]. See supra note 11.

[FN84]. See Hans Weill, Medical Perspectives on Causation, 1 Cts., Health Sci. & L. 371 (1991) (differences exist over general scientific understanding of causes of disease as well as about specific diagnostic facts). The large study of medical injuries in New York hospital records frequently found that two initial reviewers disagreed about causation or negligence, see A. Russell Localio et al., Identifying Adverse Events Caused by Medical Care: Degree of Physician Agreement in a Retrospective Chart Review, 125 Annals of Internal Med. 457 (1996) (most reviews had agreement that no adverse event had occurred, but where at least one reviewer found adverse event, other more often in disagreement than agreement); see also Harvard Medical Practice Study, supra note 11, at 5-7, 5-28, tbl.5.4 and Technical Appendix 5.IV.1. Where there is medical difference of opinion, clearly legal disputation is more common, at least where it is allowed, as in tort. Alternatively, reliance on a single medical opinion can avoid differences of opinion, but having only a single medical reviewer can lead to administrative arbitrariness without the accountability created by disputation.

[FN85]. See Danzon, supra note 15; Keeton, supra note 78, at 614-15.

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[FN86]. See, e.g., Havighurst & Tancredi, supra note 3 (illustrating such "DCE" or "ACE" proposals); Commission on Med. Prof. Liab., Amer. Bar Ass'n, Designated Compensable Event System: A Feasibility Study (1979); Feasibility Study supra note 11; Tancredi, supra note 3; Tancredi & Bovbjerg, supra note 47. Some no-fault opponents objected that no listing was feasible. See sources cited supra note 85. Research in fact developed such listings. John R. Boyden, Jr., & Laurence R. Tancredi, Identification of Designated Compensable Events (DCEs), 11-51 in Feasibility Study, supra. Alternatively, it was argued that any feasible listing would be very difficult to effectuate in practice. See Guido Calabresi, The Problem of Malpractice: Trying to Round Out the Circle, in The Economics of Medical Malpractice 233, 239 (Simon Rottenberg ed., 1978). Richard A. Epstein, Medical Malpractic: Its Cause and Cure, in The Economics of Medical Malpractice 245, 260-62 (Simon Rottenberg ed., 1978); William B. Schwartz & Neil K. Komesar, Doctors, Damages, and Deterrence: An Economic View of Medical Malpractice, 298 New Eng. J. Med. 1282, 1288-89 (1978). Event lists have been shown to be applicable in research. See, e.g., Randall R. Bovbjerg et al., Obstetrics and Malpractice: Evidence on the Performance of a Selective No-Fault System, 265 JAMA 2835 (1991). The experience in Virginia and Florida shows that targeted event-like specification of covered cases can in fact be implemented in practice. See generally Bovbjerg et al., Administrative Performance, supra note 2; accord Jill Horwitz & Troyen A. Brennan, No-Fault Compensation for Medical Injury: A Case Study, 164 Health Aff. 176-77 (Winter 1995).

[FN87]. See James A. Henderson, The Boundary Problems of Enterprise Liability, 41 Md. L. Rev. 659, 671 (1982) (describing avoidable-event approach). Claimants can be expected to seek to qualify for no-fault if their fault case is weak, and for tort if it is strong. See id. at 685-89.

[FN88]. For example, "unintended consequences" of public programs in operation are a common focus of policy literature. See, e.g., Jeffrey Pressman and Aaron Wildavsky, Implementation (3d ed. 1984).

[FN89]. See Prosser and Keeton, supra note 14, at 568-74 (describing this history). For a brief history of health coverage, see Bovbjerg et al., supra note 20.

[FN90]. See Alan B. Krueger, Incentive Effects of Workers' Compensation Insurance, 41 J. Pol. Econ. 70 (1990) (describing Workers' Compensation programs).

[FN91]. See Krueger, supra note 90, at 75.

[FN92]. See, e.g., Rhodes and Ohlsson, supra note 5; Larson, supra note 5.

[FN93]. In Workers' Compensation, as in personal injury litigation, an additional source of moral hazard for medical usage is that higher medical utilization may be sought in order to justify higher cash recoveries as well.

[FN94]. See Rhodes and Ohlsson, supra note 5, at 11-43 through 11-67.

[FN95]. See Hensler et al., supra note 23.

[FN96]. The Workers' Compensation loss ratio ranged from 70% to 79% during 1988-93 (defined as benefits paid as share of total cost). See Jack Schmulowitz, Workers' Compensation: Coverage Benefits and Costs, 1992-93, 58 Social Security Bulletin 56 (1995). See also Brennan, supra note 11 (estimated 20% administrative cost).

[FN97]. See James S. Kakalik & Nicholas M. Pace, Costs and Compensation Paid in Tort Litigation (1986).

[FN98]. A national survey of accidental injuries in the United States conducted in 1988-89 revealed that tort was a source of compensation in 7.5% of work-related accidents in which some compensation was received. Workers' Compensation was received in 59.7% of such cases. Tort liability payments were far more prevalent following motor vehicle accidents. Among those receiving any compensation for motor vehicle-related injury, 31.4% received some amount of tort payment. See Hensler et al., supra note 23.

[FN99]. See Michael J. Moore & W. Kip Viscusi, Compensation Mechanisms for Job Risks 136-61 (1990).

[FN100]. See Athearn et al., supra note 25, at 543.

[FN101]. See supra note 86 at 137.

[FN102]. See W. Kip Viscusi, Liability for Occupational Accidents and Illnesses, in Liability: Perspectives and Policy 155, 171-74 (Robert E. Litan & Clifford Winston eds., 1988).

[FN103]. See Prosser and Keeton on Torts, supra note 14, at 573 n.49.

[FN104]. Self-insurance is increasingly common in Workers' Compensation for large companies. See Rhodes & Ohlsson, supra note 5, at 1-28.

[FN105]. See Richard B. Victor, Experience-rating and Workplace Safety, in Workers' Compensation Benefits: Adequacy, Equity, and Efficiency 71 (John D. Worrall & David Appel eds., 1985).

[FN106]. There is voluminous empirical literature on this issue, all finding that coverage causes employee moral hazard, including not just effects on safety but also the effect that workers file more Workers' Compensation claims when there is better prospect for a higher benefit. See, e.g., James R. Chelius, The Influence of Workers' Compensation on Safety Incentives, 35 Indus. & Lab. Rel. Rev. 235 (1982); Ann Bartel & Lacy G. Thomas, Direct and Indirect Effects of Regulation: A New Look at OSHA's Impact, 28 J.L. & Econ. 1 (1985); James R. Chelius & Karen Kavanaugh, Workers' Compensation and the Level of Occupational Injuries, 55 J. Risk & Ins. 315 (1988); Krueger, supra note 90. Moral hazard has also been found from automobile no-fault, see infra notes 119-21.

[FN107]. See Georges Dionne & Pierre St.-Michel, Workers' Compensation and Moral Hazard, 73 Rev. Econ. & Stat. 236 (1991).

[FN108]. See Rhodes & Ohlsson, supra note 5, at 11-43 through 11-67.

[FN109]. See Keeton & O'Connell, supra note 4; Robert L. Bombaugh, The Department of Transportation's Auto Insurance Study and Auto Accident Compensation Reform, 71 Colum. L. Rev. 207, 209-33 (1971).

[FN110]. See Joost, supra note 4, at ch. 7.

[FN111]. See Widiss et al., supra note 4, part III, ch. 8, at 333. On the need for no-fault to supplant tort, see supra notes 62-63 and accompanying text.

[FN112]. In Michigan in the early years of no-fault, 32% of catastrophic loss cases under no-fault were single-vehicle cases. See Widiss et al., supra note 4, at 382.

[FN113]. In Florida, this effect was found for personal injury no-fault, and to a lesser extent for property damage. See Widiss et al., supra note 4, at 313, 325; plausibly, property damage claims under tort are more readily resolved and moral hazard more easily controlled at low expense than tort claims for personal injury.

[FN114]. See Mass. Gen. Laws ch. 231, § 6D (1986); see Widiss et al., supra note 4, at 19. In 1988 the threshold was raised to its current level of \$2,000, Mass. Gen. Laws ch. 231, § 6D (1986 & Supp. 1988), which is equivalent to \$497.24 in 1971 dollars, deflated by the general Consumer Price Index, see Federal Reserve Bank of Minneapolis, "What is a Dollar Worth," < http://woodrow.mpls.frb.fed.us/economy/ calc/cpihome.html>.

[FN115]. See Randall Bovbjerg, The Impact of No-Fault Auto Insurance on Massachusetts Courts, 11 New Eng. L. Rev. 325, 369 (1976).

[FN116]. See Widiss et al., supra note 4, at 78. Part II on Florida found cuts in tort suits, no speeding of claims resolution, closer correspondence of payments to documented medical bills than under tort, and premiums dropped while the ratio of benefits paid to premiums increased. See id. Part IV on Michigan reported a slight decline in automobile negligence court cases. See id. at 385.

[FN117]. See Widiss et al., supra note 4, at 388-89. Michigan covers unlimited medical and rehabilitation benefits, wage loss, and replacement services. See Jeff O'Donnell, Insurance Smart: How to Buy the Right Insurance at the Right Price 38 (1991). According to an early 1980s review of automobile no-fault's effect on premiums published by an attorneys' association,

Michigan's law continued to lower premiums, whereas in some other states with no-fault, premiums continued to rise, especially where no-fault was just an "add-on" to the tort system without barring suit. The source does not examine all states or compare concurrent rises in liability premiums. See Special Comm'n on the Tort Liability System, Towards a Jurisprudence of Injury: The Continuing Creation of a System of Substantive Justice in American Tort Law 11- 14 & 11-15 (1984).

[FN118]. Thus, during 1970-75 premiums rose 23.4% for add-on no-fault states, 12.6% for tort liability, and 3.2% for the no-fault states, according to a State Farm study, see Roger C. Henderson, No-Fault Insurance for Automobile Accidents: Status and Effect in the United States, 56 Or. Law Rev. 287 (1977).

[FN119]. Massachusetts, however, substituted surcharges for traffic violations for chargeable insurance claims. See Widiss et al., supra note 4, at 258; see also infra note 120.

[FN120]. See Frank A. Sloan & Penny B. Githens, Drinking, Driving, and the Price of Automobile Insurance, 61 J. Risk & Ins. 33, 34-36 (1994); see also supra note 119.

[FN121]. Landes found that implementation of no-fault increased the rate of motor vehicle fatalities, but Kochanowski and Young and Zador and Lund found no effect with the same dependent variable. See Elizabeth M. Landes, A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents, 55 J.L. & Econ. 49 (1982). P.S. Kochanowski & M.V. Young, Deterrent Aspects of No-Fault Automobile Insurance: Some Empirical Findings, 52 J. Risk & Ins. 269 (1985). In an analysis of New Zealand's experience, Brown found neither an increase in the amount of driving nor in the accident rate following adoption of no-fault in that country in 1974. However, his analysis did not control for the influence of other determinants of motoring and accidents. See C. Brown, Deterrence in Tort and No-Fault: The New Zealand Experience, 73 Cal. L. Rev. 976 (1985). Gaudry analyzed the influence of no-fault in Quebec. See M. Gaudry, The Effects of Road Safety of the Compulsory Insurance, Flat Premium Rating and No-Fault Features of the 1978 Quebec Automobile Act, in Report of the Inquiry into Motor Vehicle Accident Compensation in Ontario, app. (1987). The total number of accidents and accident victims increased substantially after implementation of no-fault.

These results were confirmed by Devlin's regression analysis. See R.A. Devlin, Some Welfare Implications of No-Fault Automobile Insurance, 10 Int'l Rev. L. & Econ. 193 (Sept. 1990). Her analysis showed that the number of drivers also increased, for two reasons. First, premiums decreased overall, thus increasing the affordability of insurance. Second, premiums decreased relatively more for high-risk drivers. All drivers were compelled to purchase insurance at premiums which did not reflect the driver's record at the same time that the victims' option of filing a tort claim was eliminated. See id. Frank Sloan and co-authors, using data from the United States, found that raising the fraction of claims barred by no-fault from tort liability from zero to 0.25 increased the motor vehicle fatality rate by 18%. See Frank A. Sloan et al., Effects of Prices, Civil and Criminal Sanctions, and Law Enforcement on Alcohol-Related Mortality, 55 J. Stud. Alcohol 454 (1994). In Sloan's analysis of binge drinking, no-fault had a small but statistically significant effect on the number of persons who binge drank (i.e., consumed five or more alcoholic beverages in close succession). See Sloan et al., supra note 60.

[FN122]. Both Virginia and Florida, at least initially, placed medical no- fault within their Workers' Compensation agencies, which are to receive claims and hold hearings. See infra notes 144, 152 &154. Moreover, medical no-fault relies in part on Workers' Compensation precedent for its constitutionality, as a trade of reduced tort rights for increased no-fault benefits. See, e.g., Jane R. Ward, Comment, Virginia's Birth-Related Neurological Injury Compensation Act: Constitutional and Policy Challenges, 22 U. Rich. L. Rev. 431, 438-41 (1988). The reform's debt to the Worker's Compensation model is recognized both by supporters, e.g., White, supra note 9, at 1506, and detractors, e.g., Maxwell J. Mehlman, Bad "Bad Baby" Bills, 20 Am. J.L. & Med. 129 (1994). Information in this section comes from the reform statutes, other cited literature, and from primary and secondary data obtained from state sources, including executive interviews with program administrators and other informed observers. The authors and other researchers conducted interviews there during numerous site visits from February 1995-April 1997, and by telephone before and since. No-fault administrators contributed the most information, but we also spoke with other public officials, members of interest groups, and outside observers. To obtain full cooperation, we promised confidentiality and that we would not quote interviewees by name without their prior approval. See generally Bovbjerg et al., supra note 2; see also Don Dewees et al., Exploring the Domain of Accident Law 387-96 (1996) (describing the Workers' Compensation Model).

[FN123]. The term included severe forms of cerebral palsy and other neurological impairments, often believed to result from childbirth. See, e.g., Marvin Cornblath & Russell L. Clark, Neonatal "Brain Damage": An Analysis of 250 Claims, 140 W.J. Med. 298 (1984) (study of such cases from insurance claims records). See also infra note 125. In the mid-1980s there was

great concern over the proliferation of such cases. Since then, additional scientific evidence has suggested that fewer neurolgical impairments result from birth injury and more from other factors, including genetics and condictions during pregnancy. See generally John Witredge Williams, Williams Obstetrics 991 (20th ed. 1997); Karen B. Nelson & J.H. Ellenberg, Antecedents of Cerebral Palsy: The Multivariate Analysis of Risk, 315 New Eng. J. Med. 81 (1986).

[FN124]. See Boyd v. Bulala, 647 F. Supp. 781 (W.D. Va. 1986), discussed in Ward, supra note 122, at 431-33 (discussing cap decision as motivation for no-fault). This decision was subsequently overturned by the United States Court of Appeals for the Fourth Circuit, see Boyd v. Bulala, 877 F.2d 1191 (1989) (holding that the statutory cap on recovery of damages in medical malpractice did not violate the Constitution); however, by this time the no-fault reform was in place.

[FN125]. See generally White, supra note 9; Epstein, supra note 69; Jeffrey O'Connell, Pragmatic Restraints on Market Approaches: A Response to Professor Epstein, 74 Va. L. Rev. 1475 (1988); James A. Henderson, The Virginia Birth-Related Injury Compensation Act: Limited No-Fault Statutes as Solutions to the "Medical Malpractice Crisis," in 2 Institute of Medicine, supra note 3, at 194-212. The reforms are often referred to as "bad baby bills," not only by detractors, see Mehlman, supra note 122, but also by supportive legislators, see Letter from William E. Fears, Virginia State Senator, to Hon. E.M. Miller, Director, Division of Legislative Services (Dec. 14, 1989) (on file with the author) (proposing amendments).

[FN126]. See Va. Code Ann. § 38.2-5002 (Michie 1994).

[FN127]. See Fla. Stat. Ann. § 766.303 (West 1997). The Florida legislation copies the name and many provisions from Virginia. See Fla. Stat. Ann. §§ 766.301-316 (West 1997). Significant amendments were enacted in May 1998, see infra note 290

[FN128]. See Tedcastle & Dewar, supra note 9, at 582-96; see generally Boybjerg et al., supra note 2.

[FN129]. See Va. Code Ann. § 38.2-5002(c); Fla. Stat. Ann. § 766.303(2).

[FN130]. See Va. Code Ann. § 38.2-5002(c).

[FN131]. See Fla. Stat. Ann. § 766.303(2).

[FN132]. See Fla. Stat. Ann. § 766.306; Va. Code Ann. § 38.2-5005.

[FN133]. See Sloan et al., Claims Resolution, supra note 2, at 46-47 & 63-64.

[FN134]. See Florida Birth-Related Neur. Inj. Comp. Ass'n v. McKaughan, 668 So. 2d 974 (Fla. 1996); see discussion in Bovbjerg et al., supra note 2, at 75-76. See also infra note 167 and accompanying text. Readers please note: After this article was accepted for publication, the Florida legislature re- asserted the exclusiveness of administrative jurisdiction. See infra note 294.

[FN135]. See Fla. Stat. Ann. § 766.316.

[FN136]. See, e.g., Braniff v. Galen of Fla., Inc., 669 So. 2d 1051, 1053 (Fla. Dist. Ct. App. 1995) (certifying notice question), approved sub nom Galen v. Braniff, 22 Fla. L. Wkly. S227 (1997).

[FN137]. See Sloan et al., Claims Resolution, supra note 2, at 48-53.

[FN138]. See President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research, Making Health Care Decisions: A Report on the Ethical and Legal Implications of Informed Consent in the Patient-Practitioner Relationship (1982).

[FN139]. In Florida, the issue of effective notice received prominence from court action. In Virginia, the no-fault statute was amended in 1994 to require BIF to create a procedure to give "clear and concise" notice to patients. See Va. Code Ann. § 38.2-5016(F). In response, BIF revised its brochure and further encouraged its distribution. Readers please note: After this article was written, Florida changed its notice provisions and Virginia began considering changes as well. See infra notes 294 & 297.

[FN140]. The name comes from Virginia Code Annotated § 38.2-5015, but is also used to refer to the staff who operate under the program board of directors.

[FN141]. The name comes from Florida Statute Annotated § 766.315, and, as in Virginia, is also used to refer to the staff who operate under the program board of directors.

[FN142]. See Fla. Code Ann. § 766.315(1)(c); Va. Code Ann. § 38.2-5016.

[FN143]. See Fla. Stat. Ann. § 766.314; Va. Code Ann. § 38.2-5016(F).

[FN144]. See Fla. Stat. Ann. § 766.305. In 1995 jurisdiction was moved to the Division of Administrative Hearings (DOAH), see Fla. Stat. Ann. § 766.302 note.

[FN145]. See Va. Code Ann. § 38.2-5016(F)(iii).

[FN146]. As also explained by BIF's Executive Director, the key to successful review is having readily available responsive medical experts to review claims, which the program's short list of contract experts provides.

[FN147]. Both the program administrators and others close to the process emphasize the informality of their operations, and through the time of our last on-site data collection in June 1996, neither had develoed written guidelines for claimants other than the statutory provisions, nor specific procedures for claims in-vestigators or decision-making rules. People involved in the process find this a positive attribute, and it is plausibly related to the speed of claims resolution discussed at tbl. 2, infra. Detractors do not view this as a positive attribute, including a few trial lawyers interviewed, see infra note 221.

[FN148]. The study reported on by this article relied upon these records in Florida and was able to conduct detailed medical reviews and to examine administrative performance because full medical records with all names, dates, diagnoses, and other information are public records. All NICA records, other than those on pending claims, are public under the Florida Statute Annotated § 766.316(5)(b), except that medical records "may remain confidential." In practice, DOAH files contain full medical records that were used by this study's researchers. This study's researchers also reviewed medical records in Virginia, with permission of program administration.

[FN149]. See supra note 142.

[FN150]. See Bovbjerg et al., supra note 2, at 78 (stating that the "style of operations resembles that of an advisory commission").

[FN151]. See Va. Code Ann. §§ 38.2-5017 (plan of operation reviewed by state Corporation Commis-sion), 38.2-5021 (solvency review by same); Fla. Stat. Ann. §§ 766.314(1)(b) (plan review by Department of Insurance), 766.314(7) (solvency review). In addition, the Florida Department of Insurance or Joint Legislative Auditing Committee may at any time conduct an audit. See Fla. Stat. Ann. § 766.315(5)(d).

[FN152]. BIF and NICA are authorized to make payment without hearing, if the hearing officer agrees. See Fla. Stat. Ann. § 766.305(6).

[FN153]. See Bovbjerg et al., supra note 2, at 76-77. Under chapter 93-251, 1993 Laws of Florida, DOAH took over effective May 15, 1993. See Fla. Stat. Ann. § 766.302 note. According to NICA and DOAH sources, some thought that pending cases would remain at Workers' Compensation, but DOAH dockets and other records reviewed by the authors show that many pending cases were transferred by June. See, e.g., Acebo v. NICA, Div. of Admin. Hearings, No. 93-3000N (1993).

[FN154]. See supra note 144. For convenience, however, this article continues to refer to Workers' Compensation for both states.

[FN155]. See Va. Code Ann. § 38.2-5004(D) (programing response within 30 days of claim), § 38.2-5006(A) (hearing to be held 45-120 days after filing); Fla. Stat. Ann. § 766.305(3) (NICA responding to claim within 45 days), § 766.307(i) (hearing within 60-120 days).

[FN156]. See Fla. Stat. Ann. § 766.307; Va. Code Ann. §. 38.2-5004-14.

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[FN157]. See Fla. Stat. Ann. § 766.307; Va. Code Ann. § 38.2-5006.
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[FN158]. See Fla. Stat. Ann. § 766.311; Va. Code Ann. § 38.2-5011.

[FN159]. See Fla. Stat. Ann. § 766.313; Va. Code Ann. § 38.2-5013.

[FN160]. See Fla. Stat. Ann. § 766.313 note.

[FN161]. See Fla. Stat. Ann. § 766.315(1)(c); Va. Code Ann. § 38.2-5016(C)(1).

[FN162]. See Va. Code Ann. § 38.2-5008(B). In Virginia, the deans of the state medical schools are to arrange for panels, whose composition is statutorily defined, see id.; in Florida, the Insurance Commissioner is responsible, see Fla. Stat. Ann. § 766 308

[FN163]. In Florida, one pediatric neurologist appears to have been relied upon in nearly every case. See Bovbjerg et al., supra note 2, at 105.

[FN164]. See Sloan et al., Claims Resolution, supra note 2, at 54, 65.

[FN165]. See Fla. Stat. Ann. § 766.311; Va. Code Ann. § 38.2-5011.

[FN166]. Higher frequency is suggested by data on professional liability premiums in the two states, presented in Table 1 infra and text accompanying note 229. There is also a much higher rate of federal tort claims in Florida, see generally Richard Posner, Explaining the Variance in the Number of Tort Suits across U.S. States and between the United States and England, 26 J. Legal Stud. 477 (1997).

[FN167]. See, e.g., Turner v. Hubrich, 656 So. 2d 970 (Fla. Dist. Ct. App. 1995), which held that a doctor's failure to give pre-delivery notice of participation in NICA before providing medical services entitled the patient to proceed with a medical malpractice action. See id. In this case, the court found that lack of notice deprived patients of an opportunity to seek services of health care providers, who did not participate in NICA and who were free of its limitations and administrative remedies. See also Siravo v. Florida Birth-Related Neur. Inj. Comp. Ass'n, 667 So. 2d 971 (Fla. Dist. Ct. App. 1996); Bradford v. Florida Birth-Related Neur. Inj. Comp. Ass'n, 667 So. 2d 401 (Fla. Dist. Ct. App. 1995); Braniff v. Galen of Fla., Inc., 669 So. 2d 1051, 1052 (Fla. Dist. Ct. App. 1995); Behan v. Florida Birth-Related Neur. Inj. Comp. Ass'n, 664 So. 2d 1173 (Fla. Dist. Ct. App. 1995).

A recent decision by the Florida Supreme Court has further eroded any barrier to tort that may have existed previously. See Florida Birth-Related Neur. Inj. Comp. Ass'n v. McKaughan, 668 So. 2d 974, 975 (Fla. 1996). According to this decision, the Florida Birth-Related Neurological Injury Compensation Plan does not vest exclusive jurisdiction in an administrative hearing officer to determine if an injury suffered by a newborn infant is covered by the Plan when the Plan's provisions are raised as an affirmative defense to a medical malpractice action; rather, a judge may decide that NICA does not apply and hear the case in tort without any administrative determination as to the exact nature of the infant's injury. See id.; see generally Sloan et al., Claims Resolution, supra note 2, at 38; see also discussion of exclusivity, supra notes 134-36 and accompanying text.

[FN168]. See discussion of eligibility, infra notes 171-75 and accompanying text.

[FN169]. See discussion of funding, infra notes 197-204 and accompanying text.

[FN170]. See Sloan et al., Practice Patterns, supra note 2.

[FN171]. See Va. Code Ann. § 38.2-5001. Until a 1990 amendment, the definition even more restrictively required eligible infants to be "permanently non-ambulatory, aphasic, [and] incontinent" as well as in need of assistance in all activites of daily living (ADLs). See Va. Code Ann. § 38.2-5001 (1989).

[FN172]. See Fla. Stat. Ann. § 766.302(2); Va. Code Ann. § 38.2-5001.

[FN173]. See Fla. Stat. Ann. § 766.302(2); Va. Code Ann. § 38.2-5001.

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[FN174]. See Va. Code Ann. § 38.2-5001.

[FN175]. Similar issues arise, for example, with regard to eligibility determinations in disability insurance and Medicaid. See also Henderson, supra note 87, at 671.

[FN176]. See discussion of coordination of benefits, infra notes 194-96 and accompanying text.

[FN177]. See Fla. Stat. Ann. § 766.31; Va. Code Ann. § 38.2-5009.

[FN178]. See Va. Code Ann. § 38.2-5009(1)(c).

[FN179]. See Va. Code Ann. § 38.2-5009(3).

[FN180]. See Fla. Stat. Ann. § 766.31(1)(b).

[FN181]. See id. characterizing the \$100,000 as "an award to the parents or legal guardians of the infant;" neither its purpose nor its method of calculation is given. It is, however, distinguished from the "[a]ctual expenses for medically necessary" and other services provided for by subsection (a). Id. However, § 766.314(9)(a) subsequently provides with regard to NICA reserves, that they should include the maximum possible for "noneconomic damages." Fla. Stat. Ann. § 766.314(9)(a).

[FN182]. See Carreras v. NICA, Fla. Div. of Admin. Hearings, No. 93- 3015N, Final Order (Oct. 28, 1994), rev'd, 665 So. 2d 1082 (Fla. Dist. Ct. App. 1995). NICA had recommended a consult in Baltimore.

[FN183]. See Boybjerg et al., Pain and Suffering, supra note 18.

[FN184]. See Wojtowicz v. NICA, Fla. Div. of Admin. Hearings, No. 93-4268N, Final Order (July 22, 1994).

[FN185]. See Fla. Stat. Ann. § 766.31(1)(c).

[FN186]. Both BIF and NICA say they pay attorney's fees only in cases found eligible, so as not to stimulate invalid claims. Administrators report that they have sometimes made payments in losing disputes, notably where an eligible claimant is denied a particular desired benefit. Empirical examination of NICA claims expenses has found a small number of payments to claimants' attorneys in cases found ineligible.

[FN187]. See Bovbjerg et al., supra note 2, at 101-02, 114-15 (especially appendix describing cases with large administrative expenses).

[FN188]. On attorneys' fees in Florida NICA cases, see generally Florida Birth-Related Neur. Inj. Comp. Ass'n v. Carreras, 633 So. 2d 1103 (1994).

[FN189]. See Va. Code Ann. § 38.2-5009(1); Fla. Stat Ann. § 766.31(1)(a). Both states' benefits do include actual expenses for medically necessary facilities.

[FN190]. Program administration prefers to alter a new residence while under construction, as this is much more cost-effective than retrofitting an existing structure.

[FN191]. Different ceilings as to the allowable amount of cash or other assets a beneficiary can have, and different exclusions of particular types of property, for example homes, apply for different programs. Two major compensatory programs are Medicaid and SSI disability. See generally Staff of House Comm. On Ways and Means, 102d Cong., 1st Sess., 1991 Green Book: Overview of Entitlement Programs: Background Material and Data on Programs Within the Jurisdiction of the Committee on Ways and Means (Comm. Print 1991) [hereinafter 1991 Green Book]. Typical ceilings range from about one thousand to several thousand dollars, nationally. Having too much money is quite costly in foregone benefits. For example, an average blind or disabled Florida recipient of Medicaid received medical benefits of \$4282 in 1990 and \$5767 in 1995; NICA recipients can expect to receive much more, as they typically have greater disabilities. See Debra J. Lipson et al., Health Policy in Florida: Issues and Challenges 14 (1997).

[FN192]. See Fla. Stat Ann. § 766.31; Va. Code Ann. § 38.2-5009(1).

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[FN193]. A convenient, if prosaic, example provided by the Florida administrator is that NICA will cover the cost of baby food or diapers needed indefinitely by impaired children, but only after the point in development after which such items are not used by normal children.

[FN194]. See Fla. Stat. Ann. § 766.31(1)(a) 1-4; Va. Code Ann. § 38.2-5009(1) a-d.

[FN195]. See generally Boybjerg et al., supra note 2.

[FN196]. See 1991 Green Book, supra note 191.

[FN197]. See Fla. Stat Ann. § 766.31(4)(c); Va. Code Ann. § 38.2-5020(A).

[FN198]. See Fla. Stat Ann. § 766.31(4)(b); Va. Code Ann. § 38.2- 5020(d). Small exceptions are made, notably for government physicians.

[FN199]. See Va. Code Ann. § 38.2-5020(C).

[FN200]. See Fla. Stat Ann. § 766.31(4)(a).

[FN201]. There is the ability to surcharge liability insurers, see infra note 204. The Virginia statute also provides that if the insurance regulatory authorities find maximum allowable assessments insufficient, they must notify the state legislature, the Workers' Compensation Commission, and BIF's Board. See Va. Code Ann. § 38.2-5021(B).

[FN202]. See Sloan & Bovbjerg, supra note 30.

[FN203]. See Va. Code Ann. § 38.2-5016 (F).

[FN204]. See Va. Code Ann. § 38.2-5020(E) (liability insurers); Fla. Stat Ann. § 766.314(5)(c) (casualty insurers).

[FN205]. In Virginia, large hospitals get a discount because of the new sliding fee schedule, infra note 206, as well as because of the original statutory annual cap of \$150,000. See supra text accompanying note 199.

[FN206]. For 1996, new physicians or hospitals were assessed \$5,000 annually or \$50 per live birth; rates declined to a low of \$500 for physicians in their seventh or eighth year of participation and \$5 per live birth for hospitals. See Assessments Remain Reduced in 1996, A. Newsl. For Hosp. & Physicians, (Virginia Birth-Related Neurological Injury Compensation Program), Autumn 1995 at 1. See also discussion infra subsection 10; see supra note 200 and accompanying text.

[FN207]. See Laura-Mae Baldwin et al., Characteristics of Physicians with Obstetric Malpractice Claims Experience, 78 Obstet. & Gynecol. 1050 (1991) (concerning the relation of claims to service volume). See also Blaine F. Nye & Alfred E. Hofflander, Experience-rating in Medical Professional Liability Insurance, 55 J. Risk & Ins. 150, 151 (1988) (concerning the relation to claims experience).

[FN208]. See generally Frank A. Sloan, Experience-Rating: Does It Make Sense for Medical Malpractice Insurance?, 80 Am. Econ. Rev. 128 (1990), on experience-rating for medical injury.

[FN209]. See Fla. Stat. Ann. § 766.314(5)(b).

[FN210]. See supra note 204.

[FN211]. In Virginia, funds collected must be held in a restricted cash account by an independent fund manager, see Va. Code Ann. § 38.2-5018; in Florida, funds are held by NICA, but must be invested in interest bearing accounts, see Fla. Stat. Ann. § 766.315(4)(d), (5)(e).

[FN212]. See Fla. Stat. Ann. § 766.315(4)(e); Va. Code Ann. § 38.2-5016 (F)(v).

[FN213]. Florida statute requires "estimation" of pending losses and forbids NICA from accepting new claims if the cumulative total estimate exceeds 80% of cash on hand. See Fla. Stat. Ann. § 766.314(9)(a)-(d).

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[FN214]. Audited annual financial reports are required in Florida. See Fla. Stat. Ann. § 766.316(5)(d); Va. Code Ann. § 38.2-5021.

[FN215]. See supra note 151.

[FN216]. See supra note 203.

[FN217]. See Fla. Stat. Ann. § 766.305(2), (4) & (5); Va. Code Ann. § 38.2-5004(A)(2), (B), (C).

[FN218]. Although these statutory provisions theoretically constitute a medical system reform, disciplinary authorities often fall short of potential. See infra note 245.

[FN219]. See infra Part IV.

[FN220]. There was a high degree of correspondence between our own independent assessments of who should be paid and actual decisions made by the no-fault agencies on payment.

[FN221]. Forty Florida plaintiff lawyers judgmentally selected from Yellow Pages listings were interviewed by this project; instructively, the listings highlight many personal injury specialties, but not medical no-fault. Results of this survey of lawyers have not been reported in any of the other articles from this project listed in supra note 2. The following concerns were voiced by the very few of them who had filed NICA claims. Though anecdotal, these opinions were strongly held, for example:

The NICA plan is a far-cry from compensation. If you win, they will give an attorney a reasonable amount for fees. However, things such as experts used prior to filing are tremendously hard to get reimbursed. Since [the experts] will not be reimbursed if you lose (nor will fees), it is never economically feasible to pursue a contested claim.

Unpublished Survey of Lawyers (on file with authors).

These lawyers say that they only file claims that will be accepted outright. However, most NICA claims are in fact unpaid, many withdrawing voluntarily after a little investigation, see Bovbjerg et al., Administrative Performance, supra note 2, at 90. Based on their NICA claims experience, respondents asserted that the NICA fund is run like a benevolent dictatorship: "NICA wants to run parents' lives and dole out money with this in mind." See Unpublished Survey of Lawyers. Note that the shift to incurred-cost payment on a supervised basis from tort's lump-sum approach greatly curtails attorneys' accustomed ability to "sell" a projected treatment plan to judicial factfinders based on plaintiffs' experts' testimony.

Attorneys in smaller counties expressed reluctance to take a either a medical malpractice case, especially a "small" one (i.e., less than \$500,000) or a no- fault case (where fees are very limited). They consider these cases not worth the damage to the attorneys' reputation among medical professionals in the area who supply much more of these lawyers' business. Interviews with the organized trial bar association in Tallahassee suggested that some plaintiffs' attorneys favored no-fault as a way of helping clients who could not win in tort, others vehemently opposed it as a threat to traditional tort prerogatives, including of course, contingent lawyers' fees. As of June 1996, the association had taken no formal position on the continued existence of no-fault as one remedy.

[FN222]. One can imagine a no-fault system that creates a duty on medical providers to notify the program of injuries, not just to notify uninjured patients in advance that a program exists. One can also imagine an injury compensation program with active outreach activities, such as liaison with medical clinics known to treat injuries or with health insurers including Medicaid that might detect unusual patterns of medical utilization. These are not such program.

[FN223]. Election to proceed with a tort claim rather than a NICA claim has been held to be the "sole province" of the infant's attorney. See White v. Florida Birth-Related Neur. Inj. Comp. Ass'n, 655 So. 2d 1292, 1297 (Fla. Dist. Ct. App. 1995).

[FN224]. The survey of lawyers found that the plaintiffs' lawyers interviewed did everything possible to keep clients out of no-fault, especially if they thought that they could win a lawsuit. See supra note 221. Two lawyers stated that they were attempting to use a loophole in the NICA statute to escape having to put cases through NICA. The loophole was that if the patient was either uninformed that the physician was participating in NICA or the patient was informed too late, i.e., during labor, the case does not have to go through NICA. See supra notes 134 & 136 (discussing judicial decisions allowing direct recourse to court); see also infra note 294 (discussing subsequent, 1998 statutory reform to require NICA proceedings first).

[FN225]. For example, a larger program could expect to benefit from some economies of scale in administrative costs (e.g., for information systems) or benefits administration (e.g., in managing care). On the other hand, a larger scale would require some bureaucratization merely to allow operations with multiple decision makers rather than a single Executive Director making most day-to-day decisions.

[FN226]. Practicing claimant lawyers are certainly hostile to NICA. See supra notes 221 & 224. Of the 40 lawyers surveyed, three had never heard of NICA, nine did not handle medical injury cases, two had filed with NICA in the past, one had a case which was suitable for NICA but the attorney was in the process of trying to prove that the case did not have to go through NICA, two stated that they would not file a case with NICA because of the low fee scale, 13 handled birth injury cases but had not had an appropriate case for NICA, and one attorney refused to answer questions after the study and survey process were explained. The survey of lawyers revealed that there are very few NICA appropriate cases that arise. The appropriate cases that did occur seemed to be handled by only a few attorneys throughout Florida. In addition, the lawyers tried hard to avoid no-fault, especially if they thought that they could win a lawsuit. The two lawyers attempting to use a loophole to escape NICA jurisdiction, see supra note 224, thought that this loophole may be used more and more in the future. Lacking such ready access to tort seems likely to provoke more direct challenges. According to a recent news report, one pending circuit court case filed in 1997 challenges NICA's constitutionality on the ground that its benefits are too small, see Chad Terhune, Crisis May Be Looming for Birth-Injury Program, Wall St. J., Fla. ed., May 6, 1998, at F1, F3. Note that "crisis" refers not to constitutional challenge but to increase in cases expected as a result of statutory amendment, see infra note 294.

[FN227]. See King v. Virginia Birth-Related Neur. Inj. Comp. Program, 410 S.E.2d 656, 686 (Va. 1991); McGibony v. Florida Birth Related Neur. Inj. Comp. Plan, 564 So. 2d 177, 178 (Fla. Dist. Ct. App. 1990), aff'd sub nom. Coy v. Florida Birth Related Neur. Inj. Comp. Plan, 595 So. 2d 943 (Fla. 1992), cert. denied, 506 U.S. 867 (1992).

[FN228]. For a discussion of Workers' Compensation precedent in the Virginia no-fault context, see Ward, supra note 122. For a mention of a pending challenge, see Terhune, supra note 226.

[FN229]. See Table 1 infra at n.230; premium data from Urban Institute Survey described in Stephen A. Norton, The Medical Malpractice Premium Costs of Obstetrics, 34 Inquiry 62 (1996). Other major changes in the states' legal systems did not occur during this period, although part of the Virginia decline might be attributable to delayed impact from the \$1 million cap on awards enacted in 1986 but held constitutional only in 1989. See supra note 124.

[FN230]. Data in this table came from the premium surveys described in Norton, supra note 229.

[FN231]. Between 1986 and 1990, almost one-third of obstetrical medical malpractice claims were for neurological injuries. Of course, given the statutory definitions of no-fault in the two states, not all would have been eligible for no-fault coverage. See Opinion Research Corporation, Professional Liability and its Effects: Report of a 1992 Survey of the American College of Obstetricians and Gynecologists' Membership (1992); Opinion Research Corporation, Professional Liability and its Effects: Report of a 1990 Survey of the American College of Obstetricians and Gynecologists' Membership (1990); Opinion Research Corporation, Professional Liability and its Effects: Report of a 1987 Survey of the American College of Obstetricians and Gynecologists' Membership (1988). The same argument applies to limitations on awards. Awards in medical malpractice cases vary considerably. Caps that have been implemented only directly affect a minority of such claims. See Frank A. Sloan & Chee Ruey Hsieh, Variability in Medical Malpractice Payments: Is the Compensation Fair?, 24 L. & Soc'y Rev. 601 (1990). Damage caps have been effective in reducing medical malpractice claims' frequency and premiums. See Patricia M. Danzon, The Frequency and Severity of Medical Malpractice Claims: New Evidence, 49 Law & Contemp. Probs., Spring 1986, at 57. Stephen Zuckerman et al., Effects of Tort Reforms and Other Factors on Medical Malpractice Insurance Premiums, 27 Inquiry 167 (1990).

[FN232]. See supra notes 87-88.

[FN233]. A survey of obstetricians in Virginia and in Florida that we conducted in 1996 revealed over 90% of obstetricians were enrolled in the states' no-fault programs. However only 13% of those interviewed reported that one of their patients had been compensated by this program. Only 14% of respondents knew of other physicians who had a patient who received compensation from these no-fault programs. See generally Frank A. Sloan et al., Practice Patterns, supra note 2.

[FN234]. According to the survey of obstetricians in Virginia and Florida, 77% accepted Medicaid patients as of the 1996 survey date. By contrast, only 52% of these same physicians said that they participated in Medicaid in 1987. See id.

[FN235]. Only 11% of physicians we surveyed in Virginia and Florida attributed an increase in their Medicaid participation to implementation of no-fault. See id.

[FN236]. See Sloan et al., supra note 21, at 123-44.

[FN237]. At the end of its fiscal 1995, NICA had \$148 million in investments and a total of \$151 million in assets, as against \$149 million in claims reserves, leaving a \$2 million surplus. See Florida Birth-Related Neurological Injury Compensation Plan, Tallahassee, Florida, Financial Statements, June 30, 1995, Exhibit A. BIF had investments with market value of \$64 million as of March 31, 1996. See Virginia Birth-Related Neurological Injury Compensation Fund, Statement of Account, Mar. 31, 1996.

[FN238]. Our comparison of cost of injury with amounts received in compensation revealed that those families receiving compensation from no-fault recovered their monetary loss on average. Claimants who received compensation from tort received more than this. Those families with neurologically impaired infants who received no compensation from either no-fault or tort incurred a monetary loss of about \$100,000 in the five years following the birth. These data came from a survey of families that had a child with a neurological birth- related injury in Virginia and Florida. See Whetten-Goldstein et al., supra note 2 (including a description of the survey and findings on cost of injury versus compensation under tort versus no-fault).

[FN239]. Relatively low rates of claims are to be expected in the initial years of an unfamiliar new program, but even after eight years of operations through 1995, the programs had received only just over 200 cases between them. See Bovbjerg et al., supra note 2; see also tbl.3, infra text accompanying note 260 (presenting annualized comparisons).

[FN240]. See Bovbjerg et al., supra note 2; see also supra notes 134-39 and infra note 294.

[FN241]. In any event, there is little experience-rating in the medical malpractice field, even when there are more claims. See Danzon, supra note 15, at 85-96; Sloan, supra note 208; Frank A. Sloan & Mahmud Hassen, Equity and Accuracy in Medical Malpractice Insurance Pricing, 9 J. Health Econ. 289 (1990).

A few physicians with adverse medical malpractice claims experience do lose coverage or must obtain it through a surplus lines carrier. See William B. Schwartz & Daniel N. Mendelson, The Role of Physician-Owned Insurance Companies in the Detection and Deterrence of Negligence, 262 JAMA 1342 (1989); William B. Schwartz & Daniel N. Mendelson, Physicians Who Have Lost Their Malpractice Insurance, 262 JAMA 1335 (1989).

[FN242]. See supra notes 239-41 and accompanying text.

[FN243]. To a considerable extent, the notion that the market will guarantee quality remains an article of faith rather than a reality that has been demonstrated empirically. For some recent case study evidence, see Stephen M. Shortell et al., Remaking Health Care in America: Building Organized Delivery Systems 57-93 (1996).

[FN244]. Although granting hospital staff privileges is potentially a quality safeguard, it is not at all clear that staff have operated historically as effectively as they might to safeguard patients' interests. See, e.g., Blumstein & Sloan, supra note 35, at 15-18 for analysis of this issue.

[FN245]. In Florida, which should be a typical state in this regard, physicians with adverse medical malpractice claims were not any more likely than physicians without adverse claims to have been the subject of an investigation by the state licensure board. This was even true of the claims outliers. See Frank A. Sloan et al., Medical Malpractice Experience of Physicians: Predictable or Haphazard?, 262 JAMA 3291 (1989). The level of activity of licensing boards is seldom high and varies markedly across states. See Weiler, supra note 3, at 108 n.35 (discipline "notoriously underused").

[FN246]. See tbl.2, infra text accompanying note 248. Virginia data on tort are not available. See also Bovbjerg et al., Administrative Performance, supra note 2, 91-92, tbls 3 & 4.

[FN247]. See id.

[FN248]. Adapted from Bovbjerg et al., supra note 2.

[FN249]. See, e.g., Tancredi & Bovbjerg, supra note 47. It may be argued that a more thoroughgoing departure from tort is needed to encourage a change in provider behavior, but it is just as plausible that the behavior is deep seated and unlikely to change easily.

[FN250]. There was a 45% drop in the number of permanent injury, birth- related claims per year in Florida, comparing a 1984-88 pre-period with a 1989- 91 post-period. When we refer to years, we refer to the year in which the injury occurred that led to a claim. Although claims fell, it is noteworthy that many obstetric tort claims continued to be filed. See Sloan et al., No- Fault Winners and Losers, supra note 2. A similar comparison was not possible for Virginia because, unlike Florida, closed medical malpractice claims are not made available to the public.

[FN251]. In fact, although claims for permanent injuries other than those birth-related declined in numbers during the 1980s in general, there was no pronounced decline between 1988 and 1989, coinciding with implementation of no- fault in Florida. See Sloan et al., No-Fault Winners and Losers, supra note 2.

[FN252]. See Department of Health, Education & Welfare, Report of the Secretary's Commission on Medical Malpractice (1973); Laurence R. Tancredi & Jeremiah A. Barondess, The Problem of Defensive Medicine, 200 Science 879 (1978). See also supra notes 16 & 38 and accompanying text.

[FN253]. See, e.g.,1 Institute of Medicine, supra note 3, at 6. Even after no-fault, in this study's survey of Virginia and Florida obstetricians, of the 21% of obstetrician-gynecologists who quit obstetrics between 1987 and 1996, 39% mentioned medical malpractice claims as a contributing factor. Only 8% said they quit because the medical malpractice premiums were too high. By contrast, 15% said they quit because obstetrics was too time-consuming. Using another measure, medical malpractice premiums and claims were the major factors in quitting. See Sloan et al., Practice Patterns, supra note 2.

[FN254]. See, e.g., Andrew D. Freeman & John M. Freeman, No-Fault Cerebral Palsy Insurance: An Alternative to the Obstetrical Malpractice Lottery, 14 J. Health Pol. Pol'y & L. 707 (1989). See also supra notes 72-73 and accompanying text.

[FN255]. See generally Sloan et al., Practice Patterns, supra note 2.

[FN256]. See id.

[FN257]. During 1988-1995, 29 claims were filed, and 24 were accepted for payment, but claims have increased over time in erratic fashion; most filings (16) occurred in calendar 1995, see Bovbjerg et al., supra note 2, at 87 n.100; 112 tbl. B.

[FN258]. See tbl.3, infra text accompanying note 260.

[FN259]. Our review of the literature about cerebral palsy concluded that about one quarter of one percent of cases are caused by medical care as against other causative factors. We thus estimate, based on 1990 Florida births, that nearly 500 children were born in Florida with cerebral palsy, about half that in Virginia. The definitions in Florida and Virginia include birth-related injuries other than cerebral palsy, but the vast majority of no-fault claims accepted for payment in our careful Florida review were for children with a diagnosis of cerebral palsy. Not all cerebral palsy cases would be eligible for payment. Nevertheless, the average of 13 claims a year accepted by no-fault for payment (Table 3) seems low relative to the number of births with cerebral palsy, or for that matter to the 49 permanent injury obstetric tort cases filed in that year. See generally Sloan et al., No-Fault Winners and Losers, supra note 2.

[FN260]. This table has several sources. See Bovbjerg et al., supra note 2 (data on NICA, BIF cases); Sloan et al., Claims Resolution, supra note 2 (CP); Tedcastle & Dewar, supra note 9 (NICA estimate); White, supra note 9 (BIF estimate).

[FN261]. The most definitive studies of this issue are the California and New York analyses of medical injuries shown in hospital records from 1974 and 1984, respectively, see sources cited supra notes 11 & 17. For an overview, see Randall R. Bovbjerg, Medical Malpractice: Research and Reform, 79 Va. L. Rev. 2155 (1993) (reviewing Weiler et al., supra note 50).

[FN262]. Sloan et al., No-Fault Winners and Losers, supra note 2, examined total system performance of no-fault plus residual labor-and-delivery-related tort claims, concluding that net compensation to patients, including no-fault reserves, rose from 4 to 44 percent after no-fault, depending on the method used to estimate what tort would have paid in the absence of no fault. Id. at 441. Bovbjerg et al., supra note 2, at 94 tbl.5, compared net benefits per paid case for no-fault and for comparable

tort cases, finding an average of \$486,000 for no-fault versus \$399,000 for tort, but most of the no-fault amount was held as reserves for future losses. On the other hand, actual payouts on behalf of claimants in the first five years under no-fault are less than for a linearly prorated share of tort's lump sum payment, both net of lawyer's fees. Specifically, the analysis found that medical expenses were adequately covered under no-fault, but income loss was not; tort recipients realized a net gain of compensation over loss of \$134,000 while Florida NICA recipients lost \$6,000 net on average. See generally Whetten-Goldstein et al., supra note 2. Linear prorating may not be accurate if beneficiaries' needs rise over time, as no-fault administrators expect they will, for example, a need for specialized vans as infants grow too large for a conventional car. All analysis was based on Florida data.

[FN263]. See tbl.4, infra text accompanying note 265.

[FN264]. This finding is not presented in Table 4; for documentation, see Bovbjerg et al., supra note 2, at 96, 114-15; see generally Sloan et al., No- Fault Winners and Losers, supra note 2.

[FN265]. This table is adapted from Bovbjerg, supra note 2.

[FN266]. Two fundamental issues are whether liability determinations are accurate and whether damage assessments are accurate, see supra note 18. Concerning liability determinations, the picture is a mixed one. Troyen Brennan and colleagues found little correspondence between independent medical evaluations of New York hospital medical records and actual liability determinations in matching malpractice claims. See Troyen A. Brennan et al., Relation Between Negligent Adverse Events and the Outcomes of Medical- Malpractice Litigation, 335 New Eng. J. Med. 1963 (1996). In contrast, Frank Sloan and colleagues found substantial correspondence. See Sloan et al., supra note 15, at 164-171. One difficulty, and the possible source of this ambiguity, may be in the way the independent evaluations are conducted. For example, if an evaluator has a hospital chart, but the court has access to many charts on the patient as well as to depositions and testimony, some discrepancies should be expected as a result. Moreover, doctors often disagree among themselves about medical injury causation and negligence. See supra note 84. On damages, the fact that multimillion dollar awards in medical malpractice have become frequent is not in itself evidence of a malfunctioning litigation system. There is some correspondence between cost of injury and compensation, but the correlation is far below 1.0. See Sloan et al., supra note 15, at 118-201. The consequence of variability in awards is to weaken any signal tort might ordinarily provide for potential tortfeasors to exercise due care. See also supra note 18.

[FN267]. This argument has also been made by Weiler. See Weiler, supra note 3, at 145-46.

[FN268]. Statements from the physicians on this score are commonplace. Understandably, the experience of being a defendant in tort litigation is not a pleasant one. See, e.g., Medical Malpractice: Based on the Eleventh Private Sector Conference 1-4 (Duncan Yaggy & Patricia Hodgen eds., 1987) (statement of Thomas R. Ferguson concerning the liability system).

[FN269]. See, e.g., Marilynn L. May & Daniel B. Stengel, Who Sues Their Doctors? How Patients Handle Medical Grievances, 24 L. & Soc'y Rev. 105 (1990); Sloan et al., supra note 15, at 86-87 (prior survey including obstetrical claimants in Florida). Sloan and co-authors reported that 93% of medical malpractice claimants responded affirmatively to the key summary question, "If you had to do it over again, would you pursue the [tort] claim?" Id.

[FN270]. See tbl.1, supra text accompanying note 230; see also supra note 231.

[FN271]. Our survey of tort and no-fault claimants in Virginia and in Florida showed some important differences in goals, with retribution being the most distinct difference. See Sloan et al., Claims Resolution, supra note 2, at 52-54.

[FN272]. See generally Feasibility Study, supra note 86.

[FN273]. See Whetten-Goldstein et al., supra note 2; Sloan et al., Practice Patterns, supra note 2.

[FN274]. This is an inference based on fragmentary incidence based on this study's 1996 surveys of obstetricians in Virginia and in Florida. See Sloan et al., Practice Patterns, supra note 2.

[FN275]. The obstetrician respondents did not credit no-fault for any important effect on their willingness to participate in

Medicaid or to continue practicing obstetrics. See id.

[FN276]. See Kessler & McClellan, supra notes 16 & 38. Some other studies have also reported "defensive" changes in practice patterns, that is, ones attributed to the threat of tort suits. See, e.g., Sara C. Charles et al., Physicians on Trial-Self Reported Reactions to Malpractice Trials, 148 W.J. Med. 358 (1988); R.A. Reynolds et al., The Cost of Medical Professional Liability, 257 JAMA 2776 (1987). Most analyses have found little or no effect, however, see supra note 38 and accompanying text.

[FN277]. See Frank A. Sloan et al., Tort Liability and Obstetricians' Care Levels, 17 Int'l Rev. L. & Econ. 245 (June 1997). For reviews of the literature, mainly finding only small or no visible empirical effects of defensiveness. See sources cited supra note 38.

[FN278]. See Bruce C.N. Greenwald & Marnie W. Mueller, Medical Malpractice and Medical Costs, in The Economics of Medical Malpractice (Simon Rottenberg ed., 1978).

[FN279]. On the size of premium savings, see tbl. 1, supra text accompanying note 230.

[FN280]. See Sloan et al., Claims Resolution, supra note 2, at 52-54.

[FN281]. Such an ongoing system of prepaid coverage has been proposed for very serious long-term medical injuries generally, for which loss projection under tort is typically difficult. See Blumstein et al., supra note 42, at 188-211; see also supra note 67 and accompanying text.

[FN282]. See Rhodes and Ohlsson, supra note 5, at 11-43 through 11-67.

[FN283]. See id. at 1-18 and 5-32 through 5-34.

[FN284]. See supra notes 189-90 and accompanying text.

[FN285]. See generally Weiler, supra note 3; Weiler et al., supra note 50.

[FN286]. See supra note 44 and sources cited therein.

[FN287]. See Sloan et al., supra note 15.

[FN288]. See Sloan et al., Practice Patterns, supra note 2; see supra notes 270 and 275 and accompanying text.

[FN289]. For example, Christie Todd Whitman narrowly won re-election in New Jersey against a previously little known democrat who made the state's high automobile rates a centerpiece of his campaign. See, e.g., Campaign Archives: 1997, New Jersey Governor, National Journal's Cloakroom (visited Dec. 15, 1997) http://www.cloakroom.com/members/campaign/1997/njgovernor. In the California election of November 1988, the key statewide issue was Proposition 103, an initiative to roll back automobile insurance rates. See, e.g., Richard W. Stevenson, California Insurers In Turmoil, N.Y. Times, Nov. 11, 1988, at A1; Insurance: Voters' Revenge, The Economist, Nov. 19, 1988, at 33.

[FN290]. See John M. McNeil, Americans with Disabilities: 1994-95, U.S. Census Bureau, Current Population Reports 70-61, Aug. 1997 http://www.blue.census.gov>.

[FN291]. See Pressman & Wildavsky, supra note 88 (emphasizing the point in general); Tancredi & Bovbjerg, supra note 47 (in the context of medical no- fault).

[FN292]. Consider the tort reform of pretrial screening panels, also meant to keep cases out of tort. Florida courts found that reform constitutional on its face, then unconstitutional as applied because the reform caused unintended delays. See Aldana v. Holub, 381 So. 2d 231, 237 (Fla. 1980). Perhaps ominously, an appellate court in Florida has already referred to NICA-DOAH review as "pretrial screening," Humana of Fla., Inc. v. McKaughan, 652 So. 2d 852 (Fla. Dist. Ct. App. 1995). It is not implausible that NICA could be attacked for reaching far fewer beneficiaries than intended in the trade of fault for no-fault remedies.

[FN293]. See supra notes 133-136, 167 and accompanying text.

[FN294]. The Florida legislature amended the NICA statute in April 1998, after this Article was written, to re-assert even more clearly the exclusivity of administrative decision making as to NICA's applicability (amendments became law May 22, 1998, without the governor's signature). See Medical Malpractice- Torts Amendments, 1998 Fla. Sess. Law. Serv. ch. 98-113, C.S.S.B. No. 1070 (West 1998). Section 2 of the amendments adds to Fla. Stat. Ann. § 766.304, "The administrative law judge has exclusive jurisdiction to determine whether a claim filed under this act is compensable. No civil action may be brought until the determinations under § 766.309 have been made by the administrative law judge." Id. § 2 (amending Fla. Stat. Ann. § 766.304). The amendment also addresses the practice of going directly to court with an allegation of inadequate notice of NICA remedies, supra notes 135, 136 & 167. Referring to a patient's signing an acknowledgment of receipt of the official NICA brochure, the amendment reads "[s]ignature of the patient acknowledging receipt of the notice form raises a rebuttable presumption that the notice requirements of this section have been met." Notice need not be given to a patient when the patient has an emergency medical condition . . . or when notice is not practicable." Id. § 4 (amending Fla. Stat. Ann. § 766.316). It is expected that the new law will bring tort cases back into NICA, significantly raising future NICA payouts. See Terhune, supra note 226.

[FN295]. An intriguing question is whether attorneys recommending tort suits in preference to no-fault might be found to have an ethical obligation to inform their clients, in advance of going to tort, of evidence about no-fault's favorable performance on compensation, such as that presented in this article. Going to no-fault first does not preclude going to tort later (only if NICA finds the claim eligible for coverage), but going to tort first may result in foreclosure of NICA remedies, as the no-fault statute of limitations continues to run during tort litigation.

[FN296]. The biggest implementing decision may have been how generously to interpret statutory terms. This was even clearer for the case of damages than for basic eligibility to benefits, as over time the programs even began covering housing not offered at first.

[FN297]. After the time period of this study, Virginia began serious consideration of how to broaden BIF, notably including outreach to patients. The legislature requested a study, whose report made several recommendations. See Commonwealth of Va., Report of the Board of Directors for the Virginia Birth-Related Neurological Injury Compensation Program, Study to Increase the Scope and Magnitude of the Virginia Birth-Related Neruological Injury Compensation Program, H.R. Doc. No. 59, at 101-04 (Va. 1998) (recommendations for patient outreach but not definitional expansion). In May 1998, the Florida legislature called for a study to estimate the costs of expanding NICA coverage to lower-birthweight infants. See 1998 Fla. Sess. Law Serv. ch. 98-113, C.S.S.B. No. 1070, § 5 (West 1998).

[FN298]. Another relevant point is that research projects can rely on well known and well paid academic physicians to make judgments, motivating them in part by the professional advancement of a study, whereas a practicing program may be constrained in funding and unable to offer professionally attractive terms.

[FN299]. Some other states in the early 1990s seriously considered similar legislation, including North Carolina for cerebral palsy and New York for birth-related neurological impairment. See Mehlman, supra note 122. See also Kenneth V. Heland, Birth-Related Neurological Injury Compensation Funds: Solution or Stopgap?, 77 American College of Surgeons Bulletin, Apr. 1992, at 27-31; Julian D. Bobbitt, Jr. et al., North Carolina's Proposed Birth-Related Neurological Impairment Act: A Provocative Alternative, 26 Wake Forest L. Rev. 837 (1991) (unsuccessful North Carolina proposal). Interest in New York came from the Cuomo administration in its last year, see Heland supra, and has not recurred since its electoral demise.

[FN300]. See O'Donnell, supra note 117, at 37-38. Michigan's broad statute is an exception. See supra note 117.

[FN301]. See generally Tedcastle & Dewar, supra note 9; see also White, supra note 9.

[FN302]. See King v. Virginia Birth-Related Neur. Inj. Comp. Program, 410 S.E.2d 656, 659 (Va. 1991); McGibony v. Florida Birth-Related Neur. Inj. Comp. Plan, 564 So. 2d 177, 178 (Fla. Dist. Ct. App. 1990), aff'd sub nom. Coy v. Florida Birth Related Neur. Inj. Comp. Plan, 595 So. 2d 943 (Fla. 1992), cert. denied, 506 U.S. 867 (1992).

[FN303]. It is known that other discrete classes of avoidable events can be specified, but it is not yet demonstrated that they can be readily implemented when substantial dollars are riding on determinations.

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[FN304]. Privacy is a major issue in medicine and insurance. Medical confidentiality has long been recognized through the common law physician-patient privilege. Most recently, concerns over abuses of medical data have prompted a presidential advisory commission to make "Confidentiality of Health Information" part of its "bill of rights" as the sixth of only eight chapters. See Advisory Commission on Consumer Protection and Quality and Quality in the Health Care Industry, Consumer Bill of Rights and Responsibilities, November 1997 (visited Jan. 12, 1998) http://www.hcqualitycommission.gov/cborr/chap67.htm#head1. "Patient Protection" bills proposed but not enacted in the 105th Congress had similar provisions.

[FN305]. See Bovbjerg et al., supra note 2. The evaluation was conducted by researchers at the College of William and Mary, under a BIF Request for Proposals issued May 20, 1997, pursuant to legislative directive, and led to a report to the legislature in January 1998. See supra note 297.

[FN306]. Florida's statutory amendment of May 1998 again sought to create exclusive administrative jurisdiction. See supra note 294.

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