THE JOURNAL OF LEGAL MEDICINE

Volume 15 Number 2 June 1994

THE JOURNAL OF LEGAL MEDICINE

Volume 15 Number 2 June 1994

CONTENTS

The Journal of Legal Medicine, 15:199–247

0194-7648/94 $10.00 + .00

THE SWEDISH PATIENT COMPENSATION SYSTEM

LESSONS FOR THE UNITED STATES

Patricia M. Danzon, Ph.D.*

INTRODUCTION

The Swedish approach to compensation of iatrogenic injury has been suggested as a possible model for medical malpractice reform in the United States and in other countries that are dissatisfied with traditional tort liability for medical malpractice, including the United Kingdom[1] and Canada.[2] Patient compensation in Sweden is provided through the voluntary, contractual Patient Compensation Insurance (PCI) that provides compensation without proof of provider fault through an administrative mechanism. The discipline of medical providers is handled by a separate Medical Responsibility Board (MRB).

The appeal of the Swedish system, at least superficially, is that it apparently provides compensation to proportionately more patients at much lower total cost and lower administrative cost than the malpractice system in the United States. The number of claims filed per physician is at least 50%

* Celia Moh Professor, Departments of Insurance and Health Care Systems, The Wharton School, University of Pennsylvania. Address correspondence to Professor Danzon at 204 Colonial Penn Center, 3641 Locust Walk, Philadelphia, PA 19104-6218.

This article is based, in part, on interviews with authorities at the Skandia Insurance Corporation, the Medical Responsibility Board, and leading hospital and academic personnel in Sweden. The author thanks Anders Anell, Sven-Erik Bergentz, David Bergquist, Stefan Bjork, Carl Espersson, Ake Isaesson, Bjorn Lindgren, Ingmar Nygren, Carl Martin Roos, Arnold Rosoff, and Goran Skogh for providing information and for very helpful discussions. This research was supported by the Swedish Institute for Health Economics at Lund and by the Robert Wood Johnson Foundation under Grant No. 18579. This support is gratefully acknowledged. All opinions and any errors herein are the author's. The exchange rate SEK 7 = $1 has been used throughout the article, which was roughly the rate prevailing until the end of 1992.

[1] *See* Fenn, *Compensation for Medical Injury: A Review of Policy Options,* in MEDICAL ACCIDENTS (C. Vincent, M. Ennis, & B. Audley, eds.) (Oxford University Press, forthcoming).

[2] A similar model exists in Finland, in Norway (for public providers only), and in Denmark (for severe injuries only).

higher than in the United States, but the system is widely accepted by the medical profession. It costs roughly $2.38 per capita, or 0.16% of health care costs in Sweden, whereas medical malpractice insurance premiums in the United States account for approximately 1% of (higher) health care expenditures—more than a ten-fold difference. The Swedish system is often cited as a system that achieves significant savings in administrative costs by providing compensation on a no-fault basis.[3] Overhead is 14-18% of total premiums, compared to roughly 60% in the United States. Although patients retain the right to sue in tort, the PCI has largely displaced tort claims.

The Swedish compensation system is often called no-fault and has been compared to the workers' compensation system in the United States;[4] but this is misleading. In fact, the PCI is very different from no-fault systems for work-related and automobile accidents in the United States and from proposed no-fault models for medical injuries.[5] Although the PCI has eliminated the terminology of fault, negligence, and liability, compensation is conditioned on some notion of inappropriate medical care or avoidable injury. Thus, an adverse outcome caused by medical care that was medically justified and conformed to customary standards is generally not compensable, even if the outcome was in some sense unexpected. Accordingly, from the patient's perspective, it is not a no-fault system. Medical causation is not a sufficient condition for compensation. By contrast, work-relatedness—an injury "arising out of or in the course of employment"—is a sufficient condition for compensation under the workers' compensation system.

Another significant difference between the PCI model and either workers' compensation or the proposed no-fault enterprise liability model for hospitals in the United States[6] is the link between patient compensation and incentives for injury prevention (deterrence). Workers' compensation in the United States imposes strict liability on an employer for injuries to its workers. To preserve deterrence incentives, workers' compensation insurance premiums are experience-rated at the level of the individual firm, to the extent feasible.[7] By contrast, from the provider's perspective, the Swedish PCI is truly no-fault, no blame, and no liability. The PCI eliminates all personal liability of individual medical providers—physicians or hospitals—for injuries to their patients. Although the PCI is financed by premiums paid primarily by the Swedish county councils that provide medical care, the levy is a flat per capita amount unrelated to the claims experience of hospitals and

---

[3] P. WEILER, MEDICAL MALPRACTICE ON TRIAL 132 (1991).

[4] Cooper, *Sweden's No-Fault Patient-Injury Insurance*, 294 NEW ENG. J. MED. 1268, 1268 (1976).

[5] *See, e.g.*, P. WEILER, *supra* note 3.

[6] *Id.*

[7] Large employers are fully self-rated, that is, they bear the full cost of injuries to their workers. Rates for smaller employers are based on firm-specific experience and class experience, with less weight to experience for very small firms because of statistical credibility.

physicians in each county. Thus, compensation for medical injuries is effectively financed by a tax on medical care, thereby internalizing costs to the medical care system (general deterrence); but there is no feedback from claims to specific institutions or individuals (specific deterrence).[8]

The PCI is totally decoupled from the MRB, which handles discipline of physicians, and the PCI information base on injuries is not systematically used to improve the quality of care. It is this elimination of provider liability that leads to reduction in litigation and overhead costs, not the use of a simple causation test for compensability. Thus, as argued further below, the PCI cannot be viewed as illustrating the potential savings in overhead costs from adopting a system of strict (enterprise) liability on hospitals or health plans in the United States, with a causation-only criterion for compensation.

A third difference between the PCI and workers' compensation in the United States is that patients in Sweden retain the right to sue providers for medical negligence.[9] Because the PCI is a voluntary alternative that operates in the shadow of the tort system, it must provide benefits at least equal to those available through the Swedish tort system to deflect tort claims. The PCI can nevertheless operate at much lower cost than the United States malpractice system because the Swedish tort system offers much more limited expected compensation to malpractice claimants than does its counterpart in this country. Thus, if a Swedish model were adopted in the United States, the costs would not be at Swedish levels unless very significant tort reform were simultaneously adopted.

The apparent success of the Swedish system is sometimes attributed to the less litigious Swedish character, rather than to differences in law.[10] While attitudes and expectations may certainly play a role, the law and institutional structure are critical in defining the incentives and constraints within which individuals operate. The purpose of this article is to lay out these links between structure, incentives, and constraints, in order to identify the key features that contribute to the apparent successes and the less obvious limitations of the Swedish system. In particular, because it retains a definition of compensation that, in many ways, resembles the definition used in the tort system, it is appropriate to examine the features that account

---

[8] The terms "general deterrence" and "specific deterrence," referring to the internalization of costs to the activity causing the injuries or to the specific individual, respectively, are due to G. CALABRESI, THE COST OF ACCIDENTS (1966).

[9] The PCI also differs in this regard from the Swedish Employers' No-Fault Liability insurance, which eliminates the employee's right to sue in tort by contractual agreement between union and employer representatives.

[10] For example, "[w]hat really makes the compensation system work in Sweden isn't the laws or rules of the system, it's an attitude shared by the entire population about individual responsibility, liability and social issues." Kelly, *MSMS to Participate in Seminar on Sweden's Medical Malpractice System*, MICH. MED. 14, 20 (May 1989) (quoting William Cheeseman, president of the Michigan Physician's Mutual Liability Company).

for the relatively prompt, non-litigious, and low cost disposition of claims. Could a similar system—or some of its features—be adopted with similar results in other countries? What are the advantages and disadvantages of this system, if the goal is efficiency in providing compensation to patients and deterrence of medical negligence?

In this article, part I provides essential background on the Swedish systems of health care and other social insurance. Part II describes the structure of the PCI, including criteria for determining compensability and damages, claim adjudication, and financing. The similar but separate Pharmaceutical Insurance is briefly described. Part III summarizes claims experience. Part IV describes the Medical Responsibility Board and other quality control systems. Part V evaluates the key features of the Swedish model and the feasibility of implementing a similar model in the United States. Appendices A and B provide more detail on the Swedish health care system, the Medical Responsibility Board, and other systems for quality control.

I. BACKGROUND

A. Social and Collective Insurance in Sweden

The Patient Compensation Insurance (PCI) and the Pharmaceutical Insurance (PI) are best understood as supplementary insurance that builds on the comprehensive network of other social and collective insurances in Sweden, including a tax-financed, publicly operated health care system. Most of these programs existed when the PCI and the PI were established in 1975 and 1978, respectively.

1. The National Insurance Act of 1962

The first level of social insurance, provided under the National Insurance Act, covers all citizens for basic medical expense and wage loss due to illness or injury, regardless of cause. It also provides a basic pension scheme for old age, dependents and survivors, and temporary and total disability pensions. The medical benefits provided under this Act include inpatient and outpatient care provided by public hospitals and clinics, and approved drugs (see Appendix A). There are limited co-payments subject to a stop-loss (upper limit) per patient, beyond which all care is free. Until recently, wage loss benefits were at 90% of pre-injury wages for temporary disabilities, 65% for permanent injuries, subject to a minimum and a maximum. For nonworkers with no prior contributions, the social insurance pays a fixed annual income (about $5,000 per year in 1991). Non-earners can also participate in a voluntary disability insurance. Payments are indexed to maintain real purchasing power.

2. Compulsory Insurance

The second tier includes a system of compulsory no-fault employer liability for work-related injuries and diseases, which includes the self-employed. This program established the principle that benefits payable under the first tier social insurance are primary; thus social insurance benefits are deducted from other, secondary insurances. Under this compulsory no-fault program for workers, employers' tort liability for negligence remained although the no-fault benefits were deducted from the tort damages.

3. Collective Insurance

A third tier (or second tier for those who are not covered by workers' compensation) of collective insurance programs was subsequently adopted for major categories of injury that would otherwise be subject to tort law. These quasi-contractual insurances supplement compensation available under the social and compulsory insurance, providing wage loss, medical costs, and noneconomic loss to bring compensation up to tort levels and thereby deflect tort claims. These collective insurances include the following: a supplemental employers' no-fault insurance that contractually binds employees not to sue;[11] mandatory no-fault first party coverage for automobile injuries;[12] mandatory pollution insurance to pay compensation if no liable party can be found; a sports injury insurance; and the PCI and PI

4. Tort Liability

Sweden retains a system of tort liability that has changed little during the last century,[13] including fault-based liability of medical providers and strict liability of pharmaceutical manufacturers. Tort benefits include full replacement of wage loss; pain and suffering is paid according to the schedule defined by the Traffic Injuries Board and approved by the courts. Compensation payable under social and other insurances is offset against the tort award, thereby reducing the function of the tort system to that of filling gaps in other insurances. Trial is by judge, not jury. Contingent fees are illegal; plaintiff attorneys charge an hourly fee that may be covered by the plaintiff's

---

[11] Also called Security Insurance, this was established by voluntary contract between the Swedish Employers' Confederation and the Trade Union Confederation and Salaried Employees. It provides no-fault compensation for all work-related injuries and diseases according to tort principles (excluding minor injuries and diseases lasting less than 90 days) and binds employees not to sue their employers. The right of these organizations to make decisions that bind their members (and in practice others as well) is hardly disputed in Sweden. Hellner, *The Swedish Alternative in an International Perspective*, in COMPENSATION FOR PERSONAL INJURY IN SWEDEN AND OTHER COUNTRIES 17. 30 (C. Oldertz & E. Tildefelt eds. 1988).

[12] Unlike the other collective insurances, the automobile insurance is compulsory and regulated by statute, but operated by private insurers. Hellner, *supra* note 11, at 18.

[13] *Id.* at 22

homeowner's insurance or by legal aid. The standard of care in medical malpractice cases is defined in terms of custom, which requires testimony by a medical expert that may, as a practical matter, be very difficult to obtain. The plaintiff must meet a high standard of proof (roughly a 75-85% threshold probability). Although a claim against a public health care provider is brought against the county council that is also financially liable, the individual physician must defend the claim.

B. Origins and Objectives of the Patient Compensation Insurance

Whereas interest in tort reform in the United States is driven by the high cost of the traditional negligence system, the underlying concern in Sweden in the early 1970s was lack of access to adequate compensation, because of the explicit and implicit obstacles faced by tort plaintiffs. Only about 10 patients per year received compensation for medical malpractice.[14] The impetus to develop the contractual, administrative insurance schemes for medical and pharmaceutical injuries came from legislative proposals that threatened to significantly expand tort liability of medical providers. Thus, although tort liability was not a significant burden on providers at the time, these voluntary insurance schemes were established to preempt a statutory expansion of tort liability that could have been more burdensome.[15] Similarly, the Pharmaceutical Insurance was adopted in 1978 by voluntary agreement between the pharmaceutical manufacturers and the insurance consortium, under threat of statutory expansion of tort liability, which was thereby preempted.

The PCI for medical injuries was established by voluntary contract between the county councils, which are responsible for the public health care system in Sweden, and a consortium of private insurers. Although coverage is voluntary for private physicians, dentists, and other health professionals, virtually all are covered through similar collective insurance contracts entered into by their professional associations.[16] Whereas the em-

---

[14] Oldertz, *Security Insurance, Patient Insurance and Pharmaceutical Insurance in Sweden*, 34 AM. J. COMP. LAW 635, 637 (1986); Cooper, *supra* note 4, at 1269 (estimates that there were typically two or three medical malpractice court awards per year before the PCI, and perhaps 100 minor settlements made privately).

[15] Oldertz, *The Patient, Pharmaceutical and Security Insurances*, in COMPENSATION FOR PERSONAL INJURY IN SWEDEN AND OTHER COUNTRIES, *supra* note 11, at 51, 55. This article notes that a number of private members' bills were introduced in the Riksdag requiring an increased right of compensation. These bills, requiring compensation for "treatment injuries" or imposing strict liability on medical providers, were opposed because of "technical and principle difficulties" in defining the compensable event by statute, including specifying the circumstances when liability lies with the physician or hospital, or whether the injury was "an unavoidable consequence of the basic disease or a necessary treatment and therefore should not reasonably be the liability of the hospital or any of its employees." Tort liability, based on either negligence or strict liability also was opposed "because it presupposed some kind of malpractice by the medical staff."

[16] Hellner, *supra* note 11, at 32.

ployer no-fault collective insurance was established by contract between representatives of the employers and unions directly, patients are not party to the PCI or PI contracts. To the extent that they are represented, it is through the insurers and the implicit oversight of government.[17] Patients are therefore under no statutory or contractual obligation not to sue in tort. Accepting compensation from the PCI does not preempt the right to sue for negligently-caused injury; however, even if the patient succeeds in proving negligence in the tort suit, any recovery from the PCI (and other insurances) is offset against the tort award. The key to deflecting tort claims is that PCI benefits are comparable to tort benefits, such that the expected gain from filing a tort suit is unlikely to exceed the costs of filing.

The PCI may be viewed as a system of binding arbitration in which patients participate voluntarily, and for which potential defendants carry insurance. It is collective in that all providers and insurers agree to the same terms. It is called "patient insurance," but it is fundamentally a form of liability insurance that also covers providers' residual risk of tort liability. The contract is between the insurers and the medical providers who pay for it in the first instance. Ultimately, the costs are passed on to consumers through taxes levied to finance the public medical care system or fees of private providers.

The criteria for compensation under the PCI reflect the tensions and compromises that led to its creation. The first goal was to expand access to compensation for patients without undue cost increases for providers. A second goal was to define a clear threshold between those injuries that are compensable and those that are not, to minimize litigation within the PCI and forestall potential tort suits. The need to provide sufficient access to compensation to deflect tort claims and to preempt statutory expansion of tort liability sets a lower limit to the criteria for compensability and quantum of damages. However, basing compensability solely on the needs of the injured party, the rarity or seriousness of the complication, or failure to achieve a desired result, were explicitly rejected on grounds of ambiguity and cost.[18] A third principle is that "unavoidable" adverse outcomes should not reasonably be included in the general costs of medical care.[19] This is

---

[17] Indirect representation may be implied in that the insurer consortium is led by insurers that have strong ties to the trade union movement (Folksam) and to employers (Skandia).

[18] Oldertz, *supra* note 15, at 59. Whereas the PCI specifically rejected low probability as a criterion of compensation, this was a critical element in compensability under the New Zealand Accident Compensation scheme, *see* Danzon, *Radical Alternatives for Medical Malpractice: Lessons from Sweden and New Zealand* 10 (Mar. 1993) (working paper), and has been proposed for no-fault in the United States. P. WEILER, *supra* note 3.

[19] [I]t has been possible to reach a relatively effective demarcation between those complications that should reasonably be indemnified through an accident or liability insurance system and those which could be compared with conventional diseases and accidents, which should preferably be covered by other forms of generally applicable insurance systems. Such con-

consistent with the principle of cost internalization (general deterrence) and notions of equity. It also may be in the self-interest of providers to limit the costs assigned to the medical care system.

Two necessary conditions must be established for compensation under the PCI: (1) proof of medical causation; and (2) an injury that could have been avoided. The injury must "depend on a decision or an act for which a medical provider was responsible." But "injuries, complications or undesired results of treatment which were unavoidable consequences of the basic illness or its necessary treatment" are not compensable.[20] Thus, although the terminology of fault, negligence, or medical error is eliminated, the criteria for compensation explicitly exclude injuries that are within the normal risk of customary care.

The definition of compensability under the PI more closely resembles a strict liability standard,[21] again reflecting the tort standard that must be matched to forestall tort claims:

> The patient insurance (PCI)—with some significant exceptions—presumes that the injury was caused by some action or omission for which the medical or health care sector is responsible, assuming the injury could have been avoided if the treatment of the basic disease had been conducted in a different manner. On the other hand the right to compensation from the pharmaceutical insurance (PI) depends only on whether a pharmaceutical product has caused the injury and on whether it is reasonable to provide compensation after considering the nature of the disease being treated and how unexpected and serious the injury was.[22]

Written provisions outline in general terms the criteria for compensability under the PCI. Because these conditions are sufficiently general to apply to all medical injuries, they are quite different from the lists of "accelerated compensable events" that have been proposed for partial no-fault compensation schemes in the United States.[23] The PCI criteria of compensability are updated periodically, at the discretion of the insurer consortium, based on problems experienced by claims adjusters and concern either to control costs or to expand compensation to new categories of cases. The

---

sequences should not reasonably be included in the general costs for medical and health care and, of course, should not be paid for by consumers through their purchases of pharmaceuticals.

Oldertz, *supra* note 15, at 62.

[20] *Id.* at 59.

[21] *Id.* at 69-72.

[22] C. Espersson, *The Swedish Patient Insurance: A Descriptive Report* 3 (Feb. 1992) (Skandia Insurance Co., Stockholm).

[23] Havighurst & Tancredi, *Medical Adversity Insurance—A No-Fault Approach to Medical Malpractice and Quality Assurance*, 51 MILBANK MEM. FUND Q./HEALTH & SOC'Y 125, *reprinted in* 69 INS. L.J. 613 (1974); Tancredi & Bovbjerg, *Rethinking Responsibility for Patient Injury: Accelerated-Compensation Events, A Malpractice and Quality Reform Ripe for a Test*, 54 LAW & CONTEMP. PROBS. 147, 151 (1991).

flexibility in adjusting the terms is said to be one of the advantages of a contractual approach over a statutory scheme.[24]

II. STRUCTURE OF THE PCI

A. Definition of a Compensable Injury Under the PCI

The PCI provides for compensation of a "treatment injury" to a patient who is injured in "direct connection" with medical care, or the survivors of such a patient, or healthy persons who voluntarily participate in approved medical research activities, under specified conditions. A treatment injury is "an injury or complication of physical nature."[25]

The first requirement is that the injury "occurred with substantial probability as a direct consequence of" the medical intervention. The PCI rules go on to explicitly exclude compensation for an injury that "to a preponderant extent . . . has its connection in or was caused by a disease or other comparable condition in the patient."[26] Taken together, these two imply a 50% threshold probability that the injury was caused by medical care. This is similar to the United States standard of "the preponderance of the evidence," which is interpreted to mean more than a 50% probability that the injury was caused by medical care. However, the PCI standard is looser than the Swedish tort standard.

Five categories of injury are identified: real treatment injuries; unreasonably severe injuries for common illnesses; incorrect diagnosis; infections; and accidents.

1. Real Treatment Injuries

This category includes injuries that "with substantial probability occurred as a direct consequence of an examination, treatment or other similar measure, and constitutes the type of complication related to a medically justified measure that could have been avoided."[27] In applying this rule, examiners consider whether at least one of several conditions applies: (1) the treatment was not medically "justified" (or medically "motivated"); or (2) the treatment method, just as effectively, could have been applied another way. For example, nerve injuries during surgery are often considered avoidable and therefore compensable, except in cases where it is very difficult to avoid such injuries.

---

[24] Hellner, *supra* note 11, at 31.

[25] Description and quotations in this section are drawn from C. Espersson, *supra* note 22, which updates C. Oldertz, *Compensation for Personal Injuries: The Swedish Patient and Pharma Insurance* (Jan. 16, 1989) (Mimeo: Skandia Insurance Co., Stockholm).

[26] C. Espersson, *supra* note 22, at 26.

[27] *Id.* at 25.

The question as to whether the medical care was "medically justified" is to be answered "from a purely medical point of view." The standard is how an experienced physician within the field of specialization would have acted (not the treating physician's actual level of experience and competence), given the resources and level of knowledge that existed at the time of treatment.

Compensation is not payable for unavoidable complications of medically motivated treatment using an accepted method, even if, with the benefit of hindsight, the injury might have been avoided if an alternative method had been used. For example, if a baby is injured during normal delivery, provided that normal delivery was the optimal choice given the ex ante risk factors, then this is not compensable even though it might have been avoided by a cesarian section. Thus, ex post information is not used where the choice of intervention is at issue, unless there was a mistake in diagnosis or in performance. Injuries occurring after treatment are not normally compensable, for example, injuries caused by hematoma or thrombosis.

2. Unreasonably Severe Injuries for Common Illnesses

Compensation for this category of injury was introduced July 1, 1992 by an amendment of the insurance provisions, following several cases involving very severe injuries that were not compensated because they were deemed unavoidable. For example, a small boy was 50% paralyzed after an operation for a minor complaint. However, in general, even extremely rare complications are not compensable if they are unavoidable consequences of medically motivated treatment.[28]

3. Incorrect Diagnosis

For diagnostic injuries, the standard closely resembles traditional negligence. An injury is compensable only if an experienced physician, a specialist within the particular field, should have drawn the right conclusions from the recognizable symptoms. The PCI standard is somewhat broader than tort liability in Sweden, as circumstances that led to the mistake in the individual case are not relevant.[29]

Compensation in cases of diagnostic error is intended to cover additional loss that resulted from the error. In practice, determining the marginal

---

[28] Compensation was formerly extended to unavoidable injuries that resulted from diagnostic interventions, if the injury were severe relative to the patient's condition as determined ex post, even if the intervention was medically justified and appropriately performed, for example, a stroke following angiography that established that the patient did not suffer any serious condition ex ante. This category was eliminated in 1991.

[29] By using the standard of a highly qualified physician, the PCI definition of compensability is broader than the MRB's standard, which considers the experience of the individual physician. *See* Appendix B.

damage is difficult because the outcome of any disease or treatment is uncertain, even in the absence of error in diagnosis or treatment. For example, the marginal damages from failure to diagnose cancer may be minimal if the cancer was untreatable.

4. Accidents

Accidents are compensable if health care personnel are responsible or equipment is defective. However, injuries are not compensable if they arise from normal risk (for example, a competent, ambulatory patient falls out of bed in the hospital) or are caused by the basic illness and could not be prevented (in particular, injuries to the mentally ill, the elderly, and patients with epilepsy). Falls accounted for 23% of compensated injuries in the first three years of the program.[30] The criteria of compensability have since been tightened.[31]

5. Infection Injuries

Compensation is payable for unavoidable complications only if it seems likely that the infection was caused by bacteria transmitted through treatment rather than the patient's own bacteria. This depends on the body part and the nature of the illness. For example, compensation is not given for infections following surgery on the intestines, trachea, oral cavity, tissue of diminished vitality, or cancer; nor is it given for treatment involving increased risk of infection, such as prolonged catheterization or drainage. Infections were involved in 22% of compensated injuries in the first three years of the program.[32]

6. Exclusions

The criteria specify certain categories of injury as not compensable. To exclude minor injuries, compensability requires at least one of the following conditions: disability lasting more than 30 days; hospitalization for more than 10 days; death; or treatment costs and income loss in excess of SEK 1,000 ($143), recently reduced to SEK 700 ($100), after compensation from other social and contractual insurance. Also excluded are injuries that are a consequence of risk assumed to avoid a serious threat to life or seriously disabling injury, for example, some blood infections if large transfusions were necessary and the virus is hard to detect. A mental or psychological injury may be compensable only if it results from a physical injury. Injuries

---

[30] Cooper, *No-Fault Malpractice Insurance: Swedish Plan Shows Us the Way*, 52 HOSPS. 115, 116 (1978).

[31] *See infra* text accompanying note 62.

[32] Cooper, *supra* note 30, at 116.

that result from policy decisions to limit resources provided to the health care system are not compensable.

7. Statute of Limitations

The PCI statute of limitations was recently extended to permit filing within three years from the date that the patient became aware of the injury and its relation to medical care, but no more than 10 years from the time of the act that caused the injury.

8. Comparison of PCI Standards to Tort Standards in the United States[33]

The most obvious differences between the PCI and United States tort criteria for compensability are that the Swedish system makes no reference to fault, error, negligence, or culpability. The Swedish claimant need show only that the injury was avoidable, and is not required to identify one or more individuals who failed in their duty to take due care. But although the language and possibly the psychological impact of the inquiry are different, the factual circumstances under which a patient can receive compensation from the PCI appear to be quite similar to current tort standards in this country. In specific details, some dimensions are more restrictive in Sweden, while other dimensions are more expansive.[34] While comparison of the criteria officially used in each country is of interest, it must of course be recognized that the practical implementation may differ considerably. This is particularly true in the United States where juries may have considerable latitude and out-of-court settlements may discount expected awards to reflect uncertainty about whether a particular legal criterion would be met.

The PCI inquiry into whether the medical treatment was "medically justified" or "medically motivated," and whether it was conducted in accordance with current scientific knowledge and established practice, is similar to the United States standard of negligence as failure to take care that conforms to customary medical practice. Thus, the objective basis of the inquiry appears to be similar, although it may be less emotionally charged in Sweden because the terminology of fault, negligence, culpability, and liability have been eliminated along with the financial responsibility of individual providers.

In defining medically justified care, the Swedish system appeals to standards of a specialist in the field, and is thus similar to the American

---

[33] The author gratefully acknowledges Arnold Rosoff for very helpful comments and discussion on the comparability of PCI and United States tort standards.

[34] In practice, compensation may be easier to obtain in Sweden but this may reflect the lack of opposition of medical providers rather than differences in the definition of a compensable injury.

notion of a standard of care defined by a national standard, rather than a local standard. As in this country, the PCI in principle uses a state-of-the-art standard, based on knowledge at the time of treatment. The PCI takes into account resource constraints to the extent that rural areas are not expected to have the same technology as urban areas. But like the tort system, the PCI does not explicitly inquire whether additional precautions were cost-justified, given the resource constraints faced by the health care system.

The earlier causality standard that required simply that an injury be a "direct consequence," without reference to probabilities, could be interpreted as more restrictive than the "preponderance of the evidence" standard commonly used in the United States tort system. The current standard of "substantial probability" seems close to the "preponderance of the evidence" standard, although it could be interpreted more loosely.[35]

The PCI does not explicitly have an analogue of res ipsa loquitur, which in some states in this country can be used to shift the burden of proof to the defendant or to establish a rebuttable presumption of negligence.[36] However, in practice, the burden facing the Swedish claimant may be less, because he or she need only show that the injury was avoidable, without identifying the individuals who failed to take due care.

The PCI requirement that there be a physical injury bars compensation for injuries involving only pain and suffering, and noneconomic losses to dependents and other third parties that would be compensable in the United States. The PCI does not officially provide compensation for injuries related to lack of informed consent if the treatment were considered medically appropriate and the injury was unavoidable. However, claims alleging lack of informed consent are receiving increasing attention, and the PCI may pay if it concludes there was negligent failure to obtain consent and the injury would have been compensable in tort.[37]

The recently added category of compensation for unreasonably severe injuries for common illnesses appears to be more generous than United States tort standards, which at least in principle would not provide compensation for unlucky outcomes of treatment that conformed to the standard of care. For injuries arising out of care that was medically justified but not necessary (doing nothing would have been equally justified), compensation

---

[35] Espersson's interpretation of the PCI standard is essentially the same as the United States tort standard. C. Espersson, *supra* note 22, at 8-9. Although Espersson notes that the question of causal relation is in general comparatively easy to answer, the wording "direct consequence" may provide more specific guidance than a pure no-fault standard defined as injuries "arising out of or in the course of medical care." *Id.* at 11.

[36] However, three cases recently taken to arbitration did shift to the PCI the burden of proving that the injury was unavoidable. Personal communication with Carl Espersson, LL.M., Secretary, the Swedish Patient Claims Panel (Nov. 1992).

[37] *Id.*

is payable only if the injury is "disproportionate" relative to the underlying disease.[38] This could be more restrictive than the United States standard, which would permit compensation for injuries arising out of unnecessary care, regardless of the severity of the injury.

For cases of incorrect diagnosis, the PCI and the American tort standards appear very similar. The PCI criteria for infections compensate for infections in "clean" areas, but in other cases appear more restrictive than the United States system in concept, but perhaps not in application. The PCI simply may codify certain factual assumptions that are applied on an ad hoc basis in United States tort cases, particularly in out-of-court settlements.

The PCI standard for accidents may go beyond American law by compensating for harms caused by any accident occurring in the course of medical treatment or transportation, whether or not caused by negligence. However, by excluding accidents arising out of normal risks or related to the patient's illness, the difference may not be so great in practice.

Whereas the American system requires proof that the provider owed a duty of care to the patient, there is no such requirement in the PCI, in part because the focus of the PCI inquiry is whether the injury was avoidable, not with identifying one or more individuals who committed errors. Thus, claims against multiple providers, some possibly only tangentially related, would not occur under the PCI. In both countries, compensation is payable in theory only for the marginal loss caused by the medical care. In practice, both may sometimes compensate for the total loss rather than marginal damage, particularly in cases of failure to diagnose.

Turning from simple comparison to the normative question of which definition of compensability could potentially create incentives for taking an efficient or cost-justified level of precautions, the answer appears ambiguous. In principle, the PCI inquiry, into whether the treatment was medically justified, could be interpreted as providing compensation for failure to take cost-justified precautions, given the budget allocated to medical care. By contrast, the United States tort inquiry into whether the physician adhered to medical custom, regardless of the efficiency of medical custom, and with no notion of overall budget constraint, can at most assure reasonable conformity to customary medical practice; it cannot correct inefficiencies in that practice.[39]

Espersson concludes that roughly 50% of claims are relatively easy to adjudicate, 15% very difficult, and the remaining 35% are somewhat diffi-

---

[38] C. Espersson, *supra* note 22, at 25.

[39] The PCI departs from a potentially efficient standard on occasion—for example, awarding compensation where ex post information reveals that an injury could have been avoided by performing the treatment differently. However, this is not a general principle and where such cases occur, they may simply reflect the difficulty of determining what information should have been available ex ante.

cult.[40] Unfortunately, analogous percentages cannot be inferred from settlement practices in the United States because settlement may be delayed due to tactical incentives as well as disagreement about the likely outcome at verdict. Disagreement about the quantum of damages is almost certainly less in Sweden because of the rule of collateral source offset, greater homogeneity in the amount of collateral coverage, and the use of schedules for determining pain and suffering awards.

B. Compensable Damages

The structure of compensation under the PCI is similar to that of the United States tort system, but the PCI results in payments that are lower but more consistent and predictable.

Compensation follows tort principles of full compensation for income loss, medical expense, and noneconomic damages. In case of death, compensation is paid for burial costs and loss of support. Like the Swedish tort system, but in contrast to the traditional United States tort system, collateral coverage from social insurance, compulsory employer liability, and other collective insurances are deducted.[41] Coordination of collateral sources is time consuming but not litigious.[42] It is also likely to be more complete than under collateral source offset rules that have been adopted in this country, because the Swedish social and collective insurances are relatively uniform across individuals and hence predictable given employment status. By contrast, collateral source offset in the United States is problematic: future private coverage often depends on future employment status; eligibility for social insurance programs such as SSDI, SSI, Medicaid, and Medicare is contingent on continued proof of disability status; and, in the case of SSI and Medicaid, is means tested on income and assets, which in turn depend on the tort recovery.

Compensation for pain, suffering, and loss of amenities is payable only to a patient who has suffered a physical injury, not to family members or other third parties. Payments are determined by a schedule based on the severity of the injury and the age of the plaintiff. The PCI schedule is slightly more generous for severe injuries than the schedule established by the Traffic Insurance Board, which is typically followed by the courts and by the other collective insurance programs. For example, the maximum payment under the PCI is currently SEK 819,500 ($117,071) compared to the maximum tort payment of SEK 555,000 (just under $100,000) for a permanent totally disabling injury. These maximum payment levels are far

---

[40] Personal communication with Carl Espersson, *supra* note 36.

[41] Individually purchased insurance is not deducted.

[42] Personal communication with Carl Espersson, *supra* note 36.

below maximum United States levels. Their shortfall relative to most other European countries has led to the creation of a government commission to study appropriate levels, and some increase in payments for pain and suffering for severe injuries is expected.[43]

Payment for future damages may be disbursed through annuity payments, but the amount is usually determined at the time of claim disposition.[44] Specifically, income replacement for permanent disabilities is paid as an annuity if the award is a significant fraction of the injured person's support. A lump sum is paid if the award is less than 10% of the patient's income. For other cases, the patient may request either an annuity or a lump sum. Compensation for permanent noneconomic damages is paid either as a lump sum or as an annuity with the amount determined at claim disposition. Annuity payments may be raised if the patient can show that the loss was more severe than was anticipated at the time of the decision, or reduced if the patient returns to work. Annuities are indexed to the general price index, to maintain real purchasing power, under the Act on Modification of Damages Annuities. This structure of fixed real annuities that can be adjusted in extreme circumstances represents a reasonable compromise between providing adequate compensation for the patient, whose future loss may be uncertain, and preserving incentives for rehabilitation.

Compensation is limited to a maximum of SEK 5 million ($714,000) per person, SEK 25 million ($3.57 million) per loss event, but these limits have not been reached so far.[45] Compensation is not reduced for contributory negligence, but is not payable if the victim intentionally caused the injury.

Interest is payable for delays in compensation that exceed 60 days from the time when the insurer had the information required to reasonably determine that a treatment injury exists. This no doubt contributes to the relatively prompt disposition of claims.

C. Adjudication of Claims

As with all collective insurance programs, the disposition of PCI claims has been removed from the courts and is largely handled by the

---

[43] Roos, *Ersattnin for Ideell Skada—Ett Internationellt Perspektiv*, 74 SVENSK JURIST TIDNING 356, 362 (1989). This article reports maximum payments for non-pecuniary loss in the most severe bodily injury cases, as of 1983, denominated in Swiss Francs: Great Britain—255,000; Germany—205,000; France—153,000; Norway—94,000; Sweden—79,000; Netherlands—78,000; Denmark—12,000. The figure for Sweden is slightly downward biased because other compensation categories contain elements of non-pecuniary damages.

[44] The wage loss annuities may not be determined until the patient's condition has stabilized, which may be four to five years after the injury.

[45] If a current group of tort claims for neurologically impaired infants is successful, then the limits will be exceeded. In that case, the expectation is that the limits either will be revised or the rules of compensability or damages changed.

insurer consortium, with appeal to a specially constituted Patient Claims Panel. Procedure is greatly simplified relative to either the United States or Swedish tort systems, but inevitably at some cost in terms of rights of representation.

An injured patient completes a simple form that is available in all clinics and hospitals, typically with the help of hospital personnel.[46] This form is filed with the insurance consortium. The insurers' claims adjuster reaches a decision without expert medical advice in about half the cases, depending on the adjuster's experience.[47] The adjuster may consult with a member of a panel of medical experts on issues of avoidability and extent of marginal damage.[48]

The patient may appeal to the Patient Claims Panel for up to one year from the insurer's decision. Appeals relate both to compensability and, increasingly, to the amount of compensation. The Panel, which meets monthly, consists of six members—a chairman, two patient representatives, one medical expert appointed by the government, and two members appointed by the health care authorities. A representative of the insurers serves as an advisor on the settlement principles and insurance issues, but does not participate in the decision. Evidence is usually in writing; the patient may present his or her case orally with the consent of the Panel, but this occurs in only 10% of Panel hearings.[49] The decisions of the PCI Panel are purely advisory, in contrast to the advisory panel of the Security Insurance for work-related injuries, which can make binding amendments and interpretations of the insurance conditions.[50] The Panel has agreed with the insurer consortium in roughly 90% of cases. In the remaining cases the consortium has so far followed the Panel's advice.

The patient may further appeal to binding arbitration on matters of process only, not substance. Each party appoints one arbitrator, and a third (usually a Supreme Court Justice) is appointed by the government to serve as chairman. The process is expedited by relying on written evidence unless special grounds for an oral hearing can be shown. Medical experts are called only if requested by the arbitrators. Plaintiffs typically do not have an attorney unless the case goes to arbitration. In that case, their attorney's fees may be covered by legal aid or by their homeowners' insurance. The costs

---

[46] One observer estimated that hospital personnel help patients complete the form in 60-80% of cases.

[47] Personal communication with Carl Espersson, *supra* note 36.

[48] For cases in the more common fields of general surgery, orthopedics, and obstetrics and gynecology, an expert from the relevant specialty visits the consortium every one or two weeks to discuss claims that have raised questions. For less common types of cases, a written description of the claim together with specific questions, is sent to a specialist in the relevant field.

[49] A similar panel for the Pharmaceutical Insurance includes two representatives of the pharmaceutical manufacturers—one domestic and one foreign.

[50] Oldertz, *supra* note 14, at 643.

of the arbitrators (roughly SEK 100,000 ($14,286)) are paid by the PCI, if the plaintiff had reasonable grounds for the appeal. So far, costs have always been paid.

The deliberations and decisions of the insurance consortium, the Advisory Panel, and the arbitration process are not open to the public or the press. However, since 1992, decisions of the Panel that establish important precedent (estimated at 10-15% of the 400 cases decided annually by the Panel) and all arbitration decisions (about 15 per year) are published once per year.[51] This change may in part reflect concern that lack of public scrutiny may leave the patient at a significant disadvantage, relative to the monopoly insurer consortium.[52]

The low rate of appeal does not necessarily indicate high patient satisfaction with the insurers' decisions, because the low probability of success on appeal may deter all but the most dissatisfied patients from appealing.

D. Financing

The cost of PCI claims arising out of public hospitals or clinics is financed by premiums paid by the county councils. These premiums are assessed at a flat rate per capita population for all councils, regardless of county-specific claims experience, despite a three-fold variation in the number of claims filed and paid per capita.[53] The extent to which these regional differences are accounted for by differences in quality of care versus demographic factors, mix of medical services, awareness of the PCI or propensity to file has not been investigated. As discussed below, this use of community rating rather than experience rating reduces administration but at the cost of foregoing feedback in the form of financial incentives for loss reduction. Each county council and, a fortiori, each hospital or individual provider, faces a classic free rider problem. If it expends resources to attempt to reduce injury rates, then it would bear all the cost but reap a minimal fraction of any savings that would be spread over all other providers through

---

[51] Personal communication with Carl Espersson, *supra* note 36.

[52] Roos, *Analysis and Evaluation of Compensation Systems: The Example of Pollution Damage*, 1990 SCANDINAVIAN STUDIES IN LAW 213, 226.

[53] The mean frequency of claims filed in 1987 was .55 per 1,000 population, with almost a threefold range from .37 per 1,000 in Alvsborg to 1.10 per 1,000 in Norrbotten. For claims paid, the mean was .18 per 1,000 ranging from .12 in Alvsborg to .40 in Norrbotten. These differences are not fully explained by differences in utilization of medical care, at least by simple measures. The mean number of claims filed is 2.8 per 1,000 "treatments," ranging from 1.9 per 1,000 in Kalmar and Blekinge to 4.7 per 1,000 in Norrbotten. For claims paid, the mean is .9 per 1,000 treatments, ranging from .6 per 1,000 in Jonkoping, Blekinge, and Vasterbotten, to 1.7 per 1,000 in Norrbotten. Rosen & Jonsson, *Patientforsakringens skandematerial som underlag for skadeforebyggande verksamhet* (1992 Projektnr 11113, Sjukvardens och socialvardens planerings-och rationaliseringsinstitut, Box 70487, 10726 Stockholm. Hornsgatan 20). It is unclear whether "treatment" refers to hospital admissions, or whether it includes outpatient hospital services.

the community rate. County councils pass on the premium assessments through the income taxes that are used to finance the public health system.

Private physicians, dentists, and other professionals pay annual premiums that are also community-rated across all participants in the professional association. Because their fees are also regulated by the county councils, fees can be adjusted to pass through premiums.

E. Role of the Insurer Consortium

The full pass-through of indemnity and administrative costs reduces the role of the insurer consortium to that of administering claims, including defining limits of compensability, rather than risk-bearing. Providers make premium payments at the beginning of the year, and retroactive adjustments are made in subsequent years to cover claims and administrative expenses as they emerge.[54] The retroactive adjustment of premiums eliminates risk-bearing for the insurers, while the use of community rating eliminates actuarial and underwriting functions typically performed by competitive liability insurers.

III. CLAIMS EXPERIENCE

A. Number of Claims

The annual number of claims increased steadily from 682 in 1975 to 4,799 in 1985,[55] then dropped to roughly 3,317 per year for the period 1986 to 1991 (see Table 1), partly reflecting stricter rules for compensation for emergencies.[56] Espersson estimates that about 5,500 claims were filed in 1992.[57] This is a huge increase relative to 10 paid claims a year under the tort system, and much more than the 1,000-1,500 annual rate of filings initially projected.[58] The proportion receiving payment has declined from 71% in 1975[59] to an average of 18% for claims filed from 1986 to 1991, but is estimated at 40% for 1992.[60] The combination of lower number of claims and lower percent compensated suggests that standards of compensability

---

[54] The insurance contract also covers legal defense of tort suits, with costs also fully passed through.

[55] C. Oldertz, *supra* note 25, at 65.

[56] Rosen & Jonsson, *supra* note 53, at 3, App. 3.

[57] C. Espersson, *supra* note 22, at 23. As of January 1992, approximately 63,000 claims had been filed with the PCI. *Id.* at 22. These figures include dentistry and other professionals. Rosen & Jonsson estimate roughly 4,300 claims filed and 1,700 claims paid per year 1988-1990. Rosen & Jonsson, *supra* note 53, at 3, App. 3. For purposes of comparison, as of July 1986, about 70,000 claims were reported yearly under the employees' Security Insurance, of which about 45,000 receive compensation. Oldertz, *supra* note 14, at 654.

[58] Cooper, *supra* note 4, at 1270.

[59] *Id.*

[60] C. Espersson, *supra* note 22, at 23 (estimates 5,500 claims filed and approximately 2,200 paid for 1992).

TABLE 1. Number and Cost of Claims Under the Swedish Patient Compensation Insurance

	Jan. 1975-July 1986	Jan. 1975-Dec. 1991	Change 1986-1991
Total claims	44,647	62,890	18,243
Resolved	40,306	58,972	18,666
Number compensated	22,252	25,606	3,354
(% of resolved)	(55.2)	(43.4)	(18.0)
Denied compensation	18,054	33,366	1,531
(% of resolved)	(44.8)	(56.6)	(82.0)
Unresolved	4,341	3,918	--423
(% of total)	(9.7)	(6.2)	
Total cost of payout* (SEK)	478m	858m	380m
Cost per paid claim (SEK)	21,226	33,508	113,298

Sources: Oldertz, *Security Insurance, Patient Insurance and Pharmaceutical Insurance in Sweden*, 34 AM. J. COMP. LAW 635, 655-56 (1986); C. Espersson, *The Swedish Patient Insurance: A Descriptive Report* 23-24 (Feb. 1992) (Skandia Insurance Co., Stockholm).

*Total cost and total cost per paid claim are summations of current SEK. Without conversion to constant SEK, they understate the current value of total payout since 1974. The exchange rate in 1992 was roughly SEK 7 = $1.

were significantly tightened, but may now have been relaxed.[61] These numbers also may be affected by the lag in filing claims, which averages 1.5 years from the date of injury, and a lag in claim disposition, which averages three years for cases involving disability.[62]

The number of claims per physician appears to be roughly 50% higher than in the United States. This estimate is approximate because the Swedish system does not allocate claims to specific personnel. In 1988, there were 24,000 physicians in Sweden and roughly 5,000 patient claims per year against physicians.[63] If all claims involve one physician, this would imply roughly 21 claims per 100 physicians per year. If some claims involve only hospital or non-physician personnel, then this number would be upward biased; but it could be downward biased if the figure for total physicians includes some who are not active in patient care or if some claims involve multiple physicians. By comparison, for the United States, claim frequency peaked at 16 claims per 100 physicians insured in 1988,[64] and declined to 13 per 100 physicians in 1992. This 1992 estimate, that claim frequency per 100 physicians is roughly 50% higher in Sweden than in the United States,

[61] For example, falls from beds would not be compensated now.

[62] Rosen & Jonsson, *supra* note 53, at 3-10, App. 3.

[63] Figures in Rosen & Jonsson imply that roughly 10% of claims in 1989-90 were against dentists. Rosen & Jonsson, *supra* note 53, at App. 3. This implies that 5,000 of the 5,500 total claims filed would be against physicians.

[64] F. SLOAN & R. BOVBJERG, MEDICAL MALPRACTICE: CRISES, RESPONSES AND EFFECTS (1989).

TABLE 2. Percentage Distribution of Cumulative Payout Under Patient Compensation Insurance and Pharmaceutical Insurance, by Category of Loss

	Jan. 1975-July 1986	Jan. 1975-Dec. 1991
Pain and suffering	68	74
Income loss	15	13
Medical costs	15	11
Death	2	2
Total	100	100

Sources: Oldertz, *Security Insurance, Patient Insurance and Pharmaceutical Insurance in Sweden*, 34 AM. J. COMP. LAW 635, 655-56 (1986); C. Espersson, *The Swedish Patient Insurance: A Descriptive Report* 23-24 (Feb. 1992) (Skandia Insurance Co., Stockholm).

is somewhat below Cooper's 1976 estimate of 57-134% higher claim frequency in Sweden.[65]

The average payment per paid claim (claim severity) and its rate of growth cannot be calculated consistently from the available data.[66] However, reports for specific years indicate much lower payment levels than in the United States. The average payment per paid claim was SEK 22,000 ($3,143) in 1986.[67] For 1987, it was reported that the average cost per paid claim was SEK 38,000 ($5,429) and SEK 680,000 ($97,143) for the most severe disability category (over 30% disability).[68]

B. Categories of Compensation

Pain and suffering accounts for 74% of total payments made by the PCI and the PI (see Table 2). This reflects the comprehensive coverage of economic loss through other social insurance, and the fact that the great majority of claims are minor. Only 4% of paid claims involved either permanent disability of more than 30% or death.[69] However, these cases accounted for 41.6% of compensation paid for injuries that occurred in 1987.[70] This concentration of payments on a very small percentage of severe injury cases

[65] These estimates were derived from Cooper, *supra* note 4, at 1269.

[66] The PCI report cumulative payout data, but payments made in prior years are not converted to constant dollars. Moreover, paid claim data apparently do not include reserves for future payments on claims already closed.

[67] Oldertz, *supra* note 14, at 655.

[68] Rosen & Jonsson, *supra* note 53, at 8, App. 3.

[69] Cooper, *supra* note 32, at 116 (reports 9.5% of paid claims involved either permanent disability greater than 30% or death; this suggests that the percent of minor claims has increased).

[70] This may be an underestimate because some of the people with these injuries will continue to receive annuity payments.

is comparable to the United States, where 5% of paid claims receive 49% of dollars paid.[71]

C. Premiums

PCI premiums were roughly SEK 16.7 ($2.38) per capita, or 0.16% of health care spending, which was SEK 11,000 ($1,571) per capita in 1989.[72] Annual premiums for private physicians were SEK 550 ($79).[73] By contrast, medical malpractice insurance premiums in the United States are 1-2% of total health care spending, or a ten-fold difference as a proportion of health expenditures which are larger in the United States. These figures are not fully comparable because the PCI premiums reflect compensation paid in that year, excluding annuity payments for future damages, whereas United States malpractice premiums roughly reflect the expected present value of all injuries incurred in that year.[74] Nevertheless, any reasonable adjustment for these differences would still leave United States premiums several-fold larger than Swedish premiums as a percent of total health care spending.

D. Overhead Costs

The administrative cost of the PCI was about 14% of premiums in 1986, increasing to 18% in 1992. Thus, over 80% of the Swedish premium dollar reaches the patient as compensation. By contrast, roughly 40% of the tort malpractice insurance premium in the United States reaches the patient as compensation.[75]

These overhead figures are not strictly comparable because the Swedish system does not perform the same investigation, feedback, and risk management functions as the tort system. A more comparable figure would require adding the costs of operating the separate Medical Responsibility Board to the costs of the PCI, and the costs of compensating injured patients

---

[71] P. DANZON, MEDICAL MALPRACTICE: THEORY, EVIDENCE AND PUBLIC POLICY 71 (1985).

[72] This calculation assumes that for 1991, the total PCI premium was SEK 145m ($20.7m). C. Espersson, *supra* note 22, at 23. The population was 8.7 million. SWEDISH INSTITUTE, FACT SHEETS ON SWEDEN (1989) (The Swedish Institute, Box 7434, S-103 91 Stockholm). Rosen & Jonsson, *supra* note 53, at 8, App. 3 (report premium payments for damages incurred in 1990 of SEK 97m, but this may exclude future payments for permanent injuries). As of 1986, total annual premium for hospitals was SEK 82m (or $1.43 per capita population); annual premiums for private physicians, physical therapists, and dentists were SEK 355 ($51), SEK 240 ($34), and SEK 800 ($114), respectively. Oldertz, *supra* note 15, at 655.

[73] Because most private physicians in Sweden are general practitioners and many work only part-time in private practice, this figure should not be compared with average premiums for full-time physicians in the United States, including all specialties.

[74] Strictly, premiums for an occurrence policy in this country reflect the expected present value of claims arising out of that year of practice, whereas claims made policies reflect the present value of claims filed in that year.

[75] P. DANZON, *supra* note 71, at 31.

TABLE 3. Appeals, Arbitration, and Tort Claims Cumulative

	Jan. 1975-July 1986	Jan. 1975-Dec. 1991
Appeals to Panel	990	2,440
(% of resolved claims)	(2.5)	(4.1)
Arbitration	5	33
Patient win	1	6
Tort claims	5	35

Sources: Oldertz, *Security Insurance, Patient Insurance and Pharmaceutical Insurance in Sweden*, 34 AM. J. COMP. LAW 635, 655-56 (1986); C. Espersson, *The Swedish Patient Insurance: A Descriptive Report* 23-24 (Feb. 1992) (Skandia Insurance Co., Stockholm).

through the other social insurance programs that are primary to the PCI.[76] Even then, however, the information generated and deterrence signals sent by the PCI and MRB combined are less than under the tort system. Of course, whether the tort system yields additional deterrence benefits that outweigh its higher costs of investigation and litigation is a critical but unanswered question.

E. Appeals and Tort Claims

The percent of claims appealed to the Advisory Panel more than doubled from 2.5% of claims resolved prior to 1986, to 4.1% of claims resolved through 1991 (see Table 3). Over the same period, the number appealed to arbitration increased six-fold but is still very low in absolute terms (33 of the 58,972 resolved claims). Of the 990 appeals to the Advisory Panel, the Panel disagreed with the consortium's decision in only 10% of cases. This percentage has remained stable over time. The plaintiff's chances of winning at arbitration are slightly higher and have remained roughly 20%.

The number of tort claims has also increased, from 5 through 1986 to 35 through 1992.[77] The plaintiff has won in three cases, lost in seven, and the remainder are still undecided. Several claims brought by the same attorney have recently challenged the adequacy of compensation under the PCI. These cases involving neonatal injuries have already been compensated by the PCI, and negligence has been conceded. The tort claims seek additional compensation to cover the costs of private in-home care, rather than institutional care. So far there is no Supreme Court ruling on these cases.[78] If the Court accepts the claims, it is expected that legislation will be enacted

[76] On the other hand, because claims administration entails some fixed costs, regardless of the size of the benefit payments, the lower benefit payments under the PCI would imply higher overhead as a percent of total premiums, other things equal.

[77] There have been no tort claims for pharmaceutical injuries since 1978.

[78] In one case, the district court decided for the plaintiff, but the child died before the appeal reached the Supreme Court. The other local courts have ruled against the plaintiffs. Personal communication with Carl Espersson, *supra* note 36.

to establish that county councils are not required to provide in-home care for infants with brain damage.

IV. DETERRENCE AND QUALITY CONTROL

The PCI was designed for purposes of compensation, not deterrence. The comprehensive database on causes and costs of iatrogenic injuries could conceivably be used for purposes of quality control; however, to date, this potential has been frequently discussed but not fully exploited.[79] The PCI reports decisions to the hospital or clinic involved, identifying the patient and whether payment was made; but the physician involved and sometimes the nature of the incident are not reported. Similarly, orthopedic and general surgery clinics now receive an annual list of claims and their causes, but the physicians involved are not identified. Any further investigation is at the discretion of the clinic. In practice, some clinics undertake follow-up but others do not;[80] this presumably reflects professional commitment rather than financial incentives, because premiums are not experience-rated by county council, let alone clinic or hospital. Findings of the PCI are not reported to the Medical Review Board, which operates totally independently of the PCI. The information obtained by the PCI is confidential and is, in principle, not released to the authorities or to private persons. This separation is said to be necessary to obtain the cooperation of physicians in resolving claims.

In addition to lack of incentives, the potential for use of the PCI database for risk management purposes is undermined by lack of detailed information on the cause of the injury. Some changes have recently been made, including dissemination of data to clinics, with their own claims and statistics for comparable clinics, and publication of case histories.[81] But a significant impact on injury prevention seems unlikely.

Professional discipline is the function of the Medical Responsibility Board (MRB) which is totally separate from the PCI. The structure of the MRB and of the other systems for quality control in Sweden is discussed in detail in Appendix B and summarized here.

The MRB is similar in some respects to professional disciplinary boards in the United States. Patients can file claims and, following investigation, providers may be sanctioned by a reprimand, a warning, or, in very rare cases, loss of license. There is no financial gain to patients and no

---

[79] Cooper, *supra* note 4, at 1270 (reports that discussions were underway to use the PCI database to improve quality of care). Similarly, discussion but no action is reported in Cooper, *supra* note 32, at 118. The PCI database has been used for several medical research projects.

[80] Personal communication with Carl Espersson, *supra* note 36.

[81] Rosen & Jonsson, *supra* note 53 (included recommendations for changes in the data collection and increased use for prevention purposes).

financial loss to providers, unless a license is restricted or revoked, which has rarely if ever occurred for negligent practice.

The number of complaints filed with the MRB—roughly 1,400 per year[82]—is about one-fourth of the annual rate of filings with the PCI (roughly 5,500 per year) or 6 MRB filings per 100 physicians per year, compared to 21 claims per 100 physicians filed with the PCI. Of these MRB claims, roughly 60% are deemed to have sufficient substance to be taken up by the Board and 10-15% receive some sanction. This implies 175 MRB claims with sanction, which is under 1 per 100 physicians per year.

The gap between claims filed with the PCI and patient-initiated claims with the MRB is a very rough measure of the importance of monetary compensation in motivating patients to initiate disciplinary actions. Specifically, assuming that all cases compensated by the PCI involved some medical error, and noting that 25% of MRB claims would not be compensable by the PCI, because the only allegation was impolite treatment, there is a large gap between the roughly 2,200 claims that receive compensation through the PCI, the 600 cases reviewed by the MRB (with allegations beyond impolite treatment), and the 80-120 that result in a reprimand or warning. This discrepancy—roughly 1 sanctioned MRB claim per 20 compensated PCI cases—provides some measure of the loss in potential deterrence that results from separating discipline and compensation in Sweden.

A rough comparison may be made between the number of sanctioned MRB claims in Sweden and the number of paid malpractice claims in the United States. Assume 16 malpractice claims per 100 physicians in the United States, of which 50% result in some payment to the plaintiff. This implies that the frequency of MRB claims per 100 physicians in Sweden is about 37% of the frequency of malpractice claims per 100 physicians in the United States. The number of sanctioned MRB claims is about 11% of the number of paid malpractice claims per physician in the United States. This contrasts with a rate of claims for compensation that is 50% higher in Sweden than in the United States.

Such comparisons give a sense of the relative rate of claims for compensation and sanctions on physicians under the two systems. Unfortunately, they do not provide a solid basis for drawing inferences about the success of a system in sanctioning true negligence, because the number of negligent injuries is not known and cannot be inferred directly from the number of claims because some claims may be invalid and some potentially valid claims may not be filed.[83] MRB filings are probably an underestimate

---

[82] Kriisa, *Swedish Malpractice Reports and Convictions*, 2 QUALITY ASSURANCE IN HEALTH CARE 329, 331 (1990).

[83] For evidence on gaps between injuries and claims, see P. WEILER, H. HIATT, J. NEWHOUSE, W. JOHNSON, T. BRENNAN, & L. LEAPE, A MEASURE OF MALPRACTICE: MEDICAL INJURY, MALPRACTICE LITIGATION, AND PATIENT COMPENSATION (1993).

of patient dissatisfaction, because patients incur time costs (and nonreimbursable money costs if they hire an attorney or a medical expert), and have no expectation of gain other than satisfaction of airing their grievance.[84]

V. DISCUSSION

The Swedish system appears to have achieved at least some of the objectives sought by its founders and shared by some proponents of tort reform in the United States. It has extended compensation to more patients while controlling total costs and litigation overhead. The 50% higher number of claims filed per physician per year in Sweden than in the United States would imply that roughly 50% more patients receive compensation, assuming similar numbers of patient treatments per physician. The system is widely accepted by the medical profession and by patients. The PCI premium cost is less than one-tenth of malpractice insurance costs in the United States as a percent of health spending; this understates the difference in cost per capita because health spending per capita is higher in the United States. Overhead costs of the PCI are 14-18% of premium payments, whereas litigation and administrative costs absorb roughly 60% of malpractice premiums in the United States. Attorney involvement is minimal in Sweden and most claims are adjudicated relatively promptly.

The relatively low and stable premium cost of the Swedish system and, in particular, its low rate of litigation and overhead cost are often attributed to a no-fault (causation only) rule of compensation.[85] However, this conclusion misinterprets the Swedish system. Medical causation is necessary but not a sufficient condition for compensation under the PCI. More important, a causation-only test for compensability is neither necessary nor sufficient for the relatively low overhead costs of the Swedish system. Similarly, attributing its success to the apparently non-litigious character of the Swedes[86] misses the critical role of the rules and incentives set up by the structure of the PCI and of the Swedish tort system.

Moreover, broad reach of compensation while retaining modest overall cost and low administrative cost are not the sole criteria by which to judge an accident compensation system. The Swedish model provides less information and weaker incentives for quality control; it also severely limits patient rights, when compared to the tort system in the United States. Without concluding which system is better, this section identifies the key

---

[84] In rare circumstances, a successful MRB claim may be used to support a PCI claim.

[85] For example, P. WEILER, *supra* note 3, at 144, states: "[I]n Sweden and New Zealand, the two countries that have provided no-fault compensation for medical injuries over a decade . . . it has been possible to draw a causal dividing line without any pronounced administrative burden for the no-fault programs as a whole."

[86] Kelly, *supra* note 10, at 20 (quoting William Cheeseman).

features of the PCI that permit it to compensate a larger percentage of patients at much lower total cost and with lower overhead cost. It concludes that even if these structural rules were adopted in the United States, the results would be very different from Sweden because of other differences in the Swedish context. In particular, a voluntary contractual alternative would achieve significant malpractice premium savings in the United States only if accompanied by significant tort reform.

A. Low Claims Cost

The low total cost of the PCI compared to the malpractice system in the United States is due primarily to the low cost per paid claim, which more than offsets the higher frequency of claims per physician in Sweden. Several factors contribute to the low cost per paid claim.

1. Collateral Source Offset

The low cost per claim under the PCI greatly understates the real social cost of compensation for iatrogenic injury in Sweden, because the collateral source offset rule shifts most of the wage loss and medical cost to other social insurance programs that are sufficiently comprehensive to cover most wage loss and medical expense.[87] Even if the United States were to adopt full collateral source offset, the costs remaining in tort or in any supplementary medical injury compensation scheme would be a larger fraction of the total loss because collateral coverages in the United States are less comprehensive and less certain. In particular, public insurance (SSDI, Medicare disability, SSI, and Medicaid) has complex and condition-dependent criteria, and private insurances are often contingent on employment status.[88] Courts may be reluctant to offset such uncertain future coverages.

2. Awards for Nonpecuniary Loss

The average PCI award for nonpecuniary loss in Sweden was roughly $3,800 in 1987.[89] The average payment for pain and suffering on medical malpractice claims in the United States is at least 10 times larger than the PCI figure, although the United States figure cannot be determined precisely, because few verdicts and even fewer out-of-court settlements itemize

---

[87] Assuming that 90% of wage loss and medical cost is shifted to other insurances in Sweden, then this omitted cost plus the premium cost of the PCI would approximate the United States percent for malpractice premiums (as a percent of health care spending).

[88] The extent to which courts in states that have adopted collateral source offset rules in fact offset uncertain future coverages is an important empirical question. Empirical estimates suggest that collateral source offset has reduced claim severity by 18% and claim frequency by 14% in states that adopted such rules. Danzon, *New Evidence on the Frequency and Severity of Medical Malpractice Claims* 28 (No. R-3410-ICJ, The RAND Corporation 1986).

[89] This estimate assumes average total payment per paid claim under the PCI was SEK 38,000 ($5,429) in 1987, of which pain and suffering accounted on average for 70%. *See* Table 2.

payments for specific categories of loss.[90] A critical factor controlling pain and suffering awards in Sweden is the PCI schedule, which has a maximum value of $117,070 (1992) and lower limits based on severity of the injury and age of the plaintiff. By contrast those states in the United States that limit pain and suffering awards generally set a single cap of at least $250,000. A schedule of payments related to age and injury is more equitable than a single cap, and prevents all awards drifting up to the maximum. Note that although very few plaintiffs in the United States would receive awards that exceed such caps, caps do significantly reduce the average cost per claim because these few cases account for a very large fraction of total dollars paid.[91]

In practice, higher awards in the United States may not imply higher net patient compensation for nonpecuniary loss, because the plaintiff attorney's contingent fee usually takes one-third of the total award. Thus, this apparent difference in gross awards largely reflects the higher litigation costs in the United States.

3. Less Generous Tort Regime

Underlying the difference in size of awards between the Swedish PCI and the United States malpractice system is the difference in tort regimes. In Sweden, compensation paid by the PCI must match potential plaintiff recoveries in tort, to deter patients from exercising their right to sue. Similarly, out-of-court settlements in the United States reflect expectations regarding anticipated recoveries at verdict.[92] The Swedish tort system is less generous to plaintiffs because of a schedule for pain and suffering that is lower than that used by the PCI, lack of contingent fees, and probably much greater difficulty obtaining a medical expert to testify on behalf of the plaintiff.

B. Low Overhead Costs

The PCI's low overhead percentage—14-18% of premium—is often misinterpreted as evidence that a no-fault (causation-only) liability rule is simple to administer.[93] In fact, this view ignores the complex criteria of compensability and other critical factors.

---

[90] This assumes that the mean total payment was $120,000 in 1986, of which one-third, or $40,000, is for pain and suffering. Even using the median rather than the mean (which is heavily skewed by the few very large awards), the figures for the United States are larger than those for Sweden.

[91] Danzon, *supra* note 88, at 26 (estimates that caps on awards reduced the average amount per paid claim by 23%).

[92] Danzon & Lillard, *Settlement Out of Court: The Disposition of Medical Malpractice Claims*, 12 J. LEGAL STUDIES 2 (1983).

[93] P. WEILER, *supra* note 3.

1. Criteria of Compensability

From the patient's perspective, the PCI standard is quite similar to a negligence standard, although the language of fault has been eliminated. Compensability requires proof that the care was unjustified or that the injury was avoidable, in addition to medical causation. The inquiry is less complex than if negligence of a specific provider must be demonstrated, but proof of medical causation alone was specifically rejected by the founders as a criterion for compensability and is only the first step in the current list of conditions that must be established.

The fact that roughly 60% of the claims filed are denied payment suggests that the standard is far from clear to patients. The insurers may consider the rules of compensability relatively easy to interpret, with adjusters deciding half the claims without advice from a medical expert. However, insurance claims adjusters in the United States might similarly find their decision-making simplified if they had the discretion enjoyed by PCI claims adjusters.

2. Written Rules

The use of written criteria of compensability and scheduled damages may reduce the parties' uncertainty and expectation of being able to influence the outcome, thereby reducing expenditure on litigation. Simple models of rational expenditure on litigation indicate that the incentives for the plaintiff and the defense to devote resources to litigation depend upon the expected gain—increase in expected recovery for the plaintiff, decrease in expected penalty for the defendant—relative to the marginal cost.[94] The contractual basis of the PCI probably permits it to be more specific about standards of compensability at any point in time and more flexible in adapting those standards to technological and other changes than would a scheme that depends on statutory or common law.[95] Statutory compensation schemes typically specify the criteria in broad terms, leaving the administrative agencies to fill in the details, because it is impractical for a legislature to agree on details.

3. Elimination of Provider-Specific Liability

Elimination of provider-specific liability, including financial responsibility and possibly the terminology of fault, are probably the most critical features leading to prompt and non-litigious claim resolution. Under the PCI, providers have no incentive to oppose compensation; indeed by sup-

---

[94] More specifically, expenditure on litigation relative to claim payments (averaged over cases won and lost) is a measure of the elasticity of expected pay-off with respect to litigation effort. Danzon, *Contingent Fees for Personal Injury Litigation*, 14 BELL J. ECON. 213 (1983).

[95] Oldertz, *supra* note 15, at 56.

porting rather than opposing the patient's case they may actually reduce the likelihood that the patient files a charge against them with the disciplinary board (MRB). Espersson notes that medical personnel "have become much more open to providing information concerning what, in reality, caused the injury, than when malpractice alone justified compensation."[96] He attributes this to the fact that the PCI does not make such a detailed inquiry and "does not look for scapegoats . . . [or] make more detailed enquiries regarding the motives for the treatment decisions of the doctors . . . ."[97]

A second necessary condition for provider cooperation is that the premiums that finance the system are not experience-rated. It is unlikely that the elimination of the terminology of fault and negligence would induce provider cooperation if the costs of patient compensation were borne by providers through experience-rated premiums, particularly if these costs were borne in full through the PCI, rather than shifted to other insurance through collateral source offset. A further necessary condition may be the elimination of any direct feedback about care provided by individual physicians to either their employers or to the MRB. Indeed it appears that maintaining physician cooperation and hence low administrative costs has been the major reason for the lack of feedback for purposes of quality control and the lack of experience-rating of premiums. Lack of public access to decisions or deliberations of the Panel or arbitration also reduces the risk of adverse publicity for providers, making them more willing to cooperate. Because individual providers have no stake in the outcome, they not surprisingly spend nothing and put less pressure on insurers to oppose patient compensation than in a system of provider-specific liability.

4. Simplified Procedures/Limited Patient Rights

The reduced factual inquiry to determine compensability, the simple administrative procedures, and reliance on written rather than oral evidence greatly reduce the costs of claims filing and adjudication relative to formal tort proceedings.

However, these simple rules reduce litigation expense by providing patients very little opportunity for redress against the insurers' decisions. Patients can, in principle, appeal to the Advisory Panel and to arbitration, or file a tort claim. But, in fact, they probably would have difficulty obtaining a medical expert. Moreover, they would bear their own legal costs, unless covered by homeowners' insurance or legal aid. The lack of public access to the decisions by the insurers, the Advisory Panel, and the arbitration process limits patients' information about and ability to influence the system, as does the fact that oral representation is generally not permitted.

---

[96] C. Espersson, *supra* note 22, at 22.

[97] *Id.*

Thus, the relatively low litigation expense incurred by or on behalf of patients in part reflects the fact that the structure offers them little prospect of successful appeal against the insurer's decisions.

5. Monopoly Provision of Insurance

Operation of the PCI by a monopoly insurer consortium rather than a competitive insurance market facilitates the low rate of litigation and lack of experience-rating. In competitive insurance markets, insurers compete by controlling premiums. Competition therefore creates stronger incentives for insurers to control indemnity payments to claimants, to provide risk management services and to experience rate premiums. Experience-rating would increase defendants' incentives to oppose claims. Moreover, patients might be more willing to challenge a competitive insurer's decisions and autonomy in defining the rules of compensation.[98] In any case, given antitrust laws, it seems likely that if the United States were to adopt a contractual, PCI-style compensation scheme, it would have to operate with a competitive liability insurance market, which would almost certainly entail more litigation than the Swedish monopoly insurance arrangements.[99] Although competitive insurance might increase total overhead costs of the PCI, total social costs might be lower if the increased spending reduced the rate of injuries and invalid claim payments.

6. Lack of Competition in Health Care Markets

An important factor contributing to providers' willingness to accept flat-rated premiums in Sweden is the lack of competition in the health care market that has traditionally prevailed in Sweden, in contrast to the United States. However, the 1992 health care reforms in Sweden may change this. These reforms introduce greater freedom of patient choice of providers, prospective payment to hospitals, and capitation of primary care physicians, all of which increase provider incentives to compete for patients and control costs. This may lead providers with low PCI claim rates to demand experience-rated premiums and increase provider resistance to the payment of claims that they deem unwarranted, thereby increasing litigation in the PCI.

C. Increase in Number of Patients Compensated

The dramatic increase in the number of patients compensated, from 10 per year under the Swedish tort system to roughly 2200 per year under the

---

[98] If Sweden enters the European Community, then the monopoly insurance arrangements will probably have to be changed. An investigation of the implications of the European Community rules for the PCI insurance arrangements is underway. Personal communication with Carl Espersson, *supra* note 36. The sports injury insurance is competitively provided and premiums are experience-rated.

[99] Some of the efficiency gains from competition might be realized, while retaining consistency across all patients and providers, if a single insurer were selected by competitive bid to handle all claims system-wide (or all claims in a particular locality). The potential for inconsistency over time might remain if competition led to frequent changeover of the insurer.

PCI, is primarily due to reduced provider resistance to patient compensation, resulting from the elimination of all provider-specific liability or implicit responsibility. Other contributing factors include a somewhat broader definition of a compensable injury under the PCI than under the Swedish tort system, a lower threshold for proof of medical causation, and lower costs due to simpler procedures. Some increase in claims since 1974 might also have occurred even within the tort system, due to medical and demographic factors that have contributed to rising malpractice claims in several countries.[100]

A rough estimate of the suppressing effect of provider opposition under the Swedish tort system and the resulting cost of litigation, may be obtained by assuming that it accounts for all of the difference between less than 10 compensated claims per year under tort law and the 2,200 compensated claims under the PCI, and that all the compensated PCI claims are in principle due to negligence and hence, in theory, would be compensable under the tort system.[101] Even if half of the increase in compensated claims reflects broadening of the definition of compensability and increased exposure to iatrogenic injury due to demographic and medical factors, that would imply that almost half of the potentially valid claims were barred from compensation by provider opposition and litigation costs under the Swedish tort system.

CONCLUSION

Because the Swedish patient compensation system is usually cited for its low overhead rate, a preliminary point to establish is that low overhead as a percentage of premiums is not an accurate indicator of the efficiency of an insurance system or insurance company, *except* under the unrealistic assumptions of perfect information and no moral hazard (that is, that the frequency and size of losses are completely beyond the control of defendants, plaintiffs, and insurers). A more realistic assumption is that the frequency of medical injuries can be influenced by providers and the number and size of payments can be influenced by patients and insurers.

In competitive insurance markets, insurers have incentives to undertake loss prevention and claims control activities if a dollar spent on overhead saves at least a dollar of loss payments that is not cost-justified.[102] For

---

[100] The aging of the population and the increase in number and complexity of surgical procedures have increased exposure to potentially serious and visible iatrogenic injury and contributed to the increase in malpractice claims in the United States. Danzon, *supra* note 88, at 25-26. Total health care spending increased at 15-20% a year from 1974-1989. SWEDISH INSTITUTE, *supra* note 72.

[101] This assumes that 5,500 claims are filed annually and roughly half receive compensation. C. Espersson, *supra* note 22, at 23.

[102] Danzon, *Administrative Costs: A New Look at an Old Issue* 5-6 (Dec. 4, 1992) (paper prepared for the Conference on Economic Issues in Worker's Compensation, sponsored by the National Council on Compensation Insurance).

example, if a liability insurer simply pays every claim that is filed for the amount requested by the plaintiff, then overhead expense is minimal, benefit payments are high, and the overhead percentage is very low. Conversely, if an insurer provides loss prevention and risk management services to the insured and investigates claims thoroughly to eliminate frivolous claims, then overhead expenses will be higher, loss payments will be lower, and the overhead percentage will be higher. Overall social cost may be lower because there are fewer injuries and fewer invalid claims. Thus, the true social overhead cost includes not only the reported insurer overhead but also the excess burden (excess of costs over benefits) due to non-optimal rates of injuries and claims. Of course some overhead results from behavior that may give one party to the litigation a tactical advantage, but with no net social benefit. Increasing efficiency in claim disposition requires eliminating these zero sum costs that have no equity or efficiency payoff.

While some of the features of the PCI may be efficiency-enhancing in this sense, this analysis concludes that the key feature in reducing overhead costs in Sweden is elimination of provider liability, not adoption of a causation-only test of compensability of patients. The Swedish definition of compensability retains a threshold standard, defined in terms of whether the care was justified and the injury avoidable under customary care, which is very similar to the tort law standard. Thus, eliminating all inquiry into the appropriateness of the medical care that led to the injury is neither necessary nor sufficient for low litigation costs. The necessary conditions appear to be elimination of provider and patient incentives for litigation. In Sweden, providers have no financial, moral, or reputation stake in the outcome of a claim, and patients are deterred from litigation by high costs and low expected payoff.

Elimination of all provider-specific financial responsibility and informational feedback to individual physicians reduces any potential deterrent function of the system to one of general deterrence. The costs of iatrogenic injuries are internalized to the medical care sector in Sweden but not to specific counties or providers. Even this limited potential has so far not been exploited for injury prevention, in part because meaningful risk management would require more detailed investigation and follow-up with responsible providers, which would entail greater administrative expense and probably opposition by providers.

Thus, Sweden has achieved low total cost and low overhead cost in its compensation system largely by foregoing any deterrent potential. Low overall costs of the PCI are achieved by shifting wage loss and medical expense to other insurance programs through collateral source offset. Low overhead costs are achieved by foregoing meaningful inquiry into causation

and feedback for risk management and quality control. Although the MRB in theory constitutes an alternative mechanism for sanctioning medical negligence and Lex Maria requires incident reporting, in practice, both appear to have little impact on quality of care.[103] Of course, whether the gain in injury prevention outweighs the additional costs that result in systems that attempt to link deterrence to their compensation mechanism remains an unanswered question. However, this is fundamentally what is at issue in the decision to adopt a system such as those in Sweden and New Zealand.[104]

One feature of the Swedish system that could be adopted in the United States with minimal if any loss in foregone deterrence is use of schedules based on age of plaintiff and severity of injury for determining compensation for pain and suffering. Both theory and empirical evidence suggest that unlimited awards for pain and suffering are a form of compensation that is not worth its costs to patients. But a detailed schedule is more equitable to young, severely injured plaintiffs than a single cap, which is more common in the United States.[105] Note that the uncertainty-reducing advantages of written rules are largely independent of the substantive content of the rules and the forum of adjudication. Thus, scheduled damages could be used to reduce litigation within the tort system or in conjunction with switch to a fault-based administrative system as proposed by the American Medical Association.[106]

A remaining question is whether there would be potential gains in the United States from greater use of voluntary contractual alternatives like the PCI, which could make greater use of written rules and simplified procedures that generate real efficiency savings. The options for patients and providers to contract voluntarily to handle disputes by rules other than the traditional tort system already exists in the United States. But, in practice, contracting out for medical malpractice is largely limited to agreements to use arbitration rather than tort proceedings. Such contracts are more likely to be upheld and offer greater savings if entered into as part of the health insurance plan rather than adopted at the point of service. They resemble in some ways the PCI, which can be viewed as a system of voluntary binding

---

[103] *See* Appendix B.

[104] *See* Danzon, *The New Zealand Accident Compensation System: Lessons for the United States* 3 (Mar. 1993) (working paper); Danzon, *supra* note 18, at 1.

[105] Danzon, *Tort Reform and the Role of Government in Private Insurance Markets*, 13 J. LEGAL STUDIES 517 (1984).

[105] AMERICAN MEDICAL ASSOCIATION, SPECIALTY SOCIETY MEDICAL LIABILITY PROJECT, A PROPOSED ALTERNATIVE TO THE CIVIL JUSTICE SYSTEM FOR RESOLVING MEDICAL LIABILITY DISPUTE: A FAULT-BASED ADMINISTRATIVE SYSTEM (1988).

arbitration that patients can elect, on a case-by-case basis, after receiving medical treatment.

However, whereas the PCI has largely displaced tort claims, voluntary contracting out of tort into arbitration remains relatively rare in the United States. This reflects the fact that an individual patient has very little incentive to contract away tort rights, even if the alternative offers net social savings, because the individual would realize only a negligible fraction of the savings unless the same contractual terms applied to everyone in the insurance plan, and so could be passed on as a lower premium for the health insurance plan. On the provider's side, the savings would be minimal if they also had to carry conventional liability insurance, which would be the case unless all the providers' patients were covered by the same contract. Consistent with this thinking, contractual adoption of arbitration exists only in staff model HMOs, such as Kaiser Permanente, where the physicians exclusively treat the HMO enrollees, who in turn are required to obtain medical care from the HMO providers. Such contracts do not exist in IPA or point-of-service HMO plans or conventional indemnity insurance plans. Furthermore, the potential savings from arbitration are limited, because the standard of care, rules of damages, and financial responsibility of physicians are the same as under the tort system. Although the rules of procedure are somewhat simpler under arbitration, any reduction in time and litigation costs per case may be offset by increase in the number of cases filed.[107]

Any voluntary contractual alternative in the United States would have to provide more generous compensation levels than the Swedish PCI because it would have to roughly match current tort benefits in the United States, except to the extent that there are savings in litigation costs. To illustrate, assume that a patient's decision to file with the PCI rather than under the tort system is based solely on the expected financial pay-off, net of litigation costs. Thus a patient would file with the PCI rather than tort if:

$$EB_p - C_p \geq EB_t - C_t \quad \text{or} \quad EB_p \geq EB_t - (C_t - C_p) \qquad (1)$$

where EB denotes expected gross payoff (probability of winning times expected payment), C denotes litigation costs, and subscripts p and t denote PCI and tort, respectively [Eq. (1)]. Thus, a voluntary alternative can attract patients and provide savings for providers only to the extent that the voluntary mechanism has lower litigation costs.[108]

In fact, out-of-court settlements already achieve much of any potential savings that might be realized by adding a voluntary Swedish-style PCI

[107] For evidence that arbitration may increase claim frequency, see Danzon, *supra* note 88, at 21.

[108] There also may be some gain from reducing uncertainty, if patients are risk averse.

scheme in the United States. Pursuing the model of rational litigation, the plaintiff's minimum ask A (the minimum the plaintiff would require in out-of-court settlement) is equal to the expected verdict (probability of winning times award if successful) net of the savings in litigation costs:

$$A = S - C_s \geq EV - C_v \quad \text{or} \quad S \geq EV - (C_v - C_s) \qquad (2)$$

where S denotes settlement amount, EV denotes expected award at verdict, and subscripts v and s denote settlement and verdict, respectively [Eq. (2)]. Comparing equations 1 and 2, it is clear that the condition for the plaintiff's minimum ask in settlement [Eq. (2)] is identical to the formula for the minimum expected PCI benefits necessary to induce filing with the PCI rather than pursuing a tort claim [Eq. (1)]. Thus, the settlement alternative already offers most of the gains that might be obtained from a voluntary compensation system in the United States.

There are several caveats to this conclusion. First, if the voluntary alternative reduces the use of attorneys by plaintiffs and if plaintiff attorneys in the tort system often pursue their own rather than their client's best interest, then the above analogy between a PCI alternative and the settlement process would apply less precisely. Second, if the voluntary alternative is a formal institution like the PCI that covers all providers countrywide and operates under government oversight, then patients might be better informed about the non-tort alternative and be more willing to use it without legal advice. The other major factor contributing to use of the PCI rather than tort in Sweden—that providers assist patients in filing PCI claims whereas they oppose tort claims—could not be assumed in any PCI-like alternative in the United States if provider liability remained the same under the administrative and the tort alternatives.

Thus, at least two options already exist in the United States for voluntarily contracting out of tort—out-of-court settlements and contractual agreements to use binding arbitration. However, these options do not yield prompt and low cost dispute resolution comparable to the Swedish model. Arbitration is rarely used. And, although over 90% of malpractice claims are settled out of court, average litigation costs remain high, fundamentally because the underlying tort system entails significant opportunity for loss to providers and gain to patients. Accordingly, both have incentives to litigate in an effort to influence the outcome.

Because any voluntary contractual alternative to the tort system operates in its shadow, the alternative must offer patients an expected payoff comparable to their expected benefits from the tort system, and providers must be no worse off. Therefore tort reform and meaningful new voluntary contractual alternatives must be viewed as complements, not substitutes, in the United States.

APPENDIX A

THE SWEDISH HEALTH CARE SYSTEM[109]

The Swedish public health care system, which includes medical, psychiatric, dental, nursing home, and home care services is the responsibility of the 26 county councils. The national government imposes a degree of uniformity through the National Health and Medical Services Act of 1982, revised in 1985, and the reforms of 1992. Prior to the 1992 reforms, medical care was financed 60% by county councils (primarily through a flat proportional income tax), 23% from social insurance and the national government, 10% from patient co-payments, and 7% from municipalities.[110] Health care accounts for roughly 80% of most counties' operating budgets. Medical care costs have risen from 3% of GNP in 1960 to 8.8% of GNP in 1989, or SEK 11,100 per capita. The most rapid increase occurred in the late 1970s. Since 1980, the rate of growth was stabilized in real terms, partly by controlling medical care salaries below the general rate of inflation.

The counties own and operate the network of hospitals and clinics. Each county has at least one general hospital, often with over 1,000 beds, and several district hospitals. Tertiary care is provided through six regional hospitals, with medical school affiliations and research and teaching functions. Hospital outpatient departments provide about 40% of all physician visits. Counties are subdivided into primary care districts, each of which operates one or more primary care centers.

Until 1992, each hospital was assigned an annual budget. All physicians and other public sector personnel were salaried employees.[111] Each patient was assigned to a primary care district and a local hospital, and must accept treatment by the available physician. There was no choice of provider, and providers had no incentive to compete for patients. Hospitals had little incentive to increase productivity or quality, because serving additional patients resulted in more work but no more revenue. Long waits existed for elective surgeries, as in other countries that have used global budget reim-

---

[109] This Appendix draws on Lindgren, *Comments on Enthoven, What Can Europeans Learn from Americans*, in HEALTH CARE SYSTEMS IN TRANSITION (OECD Social Policy Studies No. 7. 74-79 (1990)); SWEDISH INSTITUTE, *supra* note 72; Personal communication with Anders Anell, Managing Director, The Swedish Institute for Health Economics (Feb. 1991). It focuses on the health care system prior to the 1992 reforms, because this period is relevant to the PCI and MRB claims data discussed elsewhere in this article.

[110] Since the 1992 reforms, municipalities are responsible for care of the elderly.

[111] Hospital-based inpatient and outpatient care accounts for over 70% of total health care costs. Lindgren, *supra* note 109, at 75. This includes some long-term care that would be provided in nursing homes in the United States. One reason for the large fraction of physician visits in hospital emergency departments is that physicians get double credit toward their required time input for drawing a public sector salary for working evenings and weekends.

bursement for hospitals with no reward for productivity, including Canada, the United Kingdom prior to the 1989 reforms, and New Zealand.

Under the 1992 reforms, patients are permitted once a year to select a family physician, who is paid a capitation for primary care services, excluding drugs and referrals. County councils are required to provide treatment for a specified list of services within three months or pay for it elsewhere. Global budgets were replaced with a quasi-DRG reimbursement per admission, subject to certain limits. These reforms have led to an increase in admissions and the elimination of queues for hospital services. They should also increase incentives for providers to compete on quality.

I. THE PRIVATE SECTOR

Roughly 2,300 of the 20,000 practicing physicians are in private practice (one-third of these in occupational health); 50% of dentists work full-time in private practice.[112] A small number of private institutional providers chiefly provide long-term care.

The county councils have considerable control over the private sector. County councils must approve the establishment of a new private practice and the maximum number of patients that a private physician can see per year, as a condition of reimbursement by the social insurance. Fees charged by private physicians are regulated.

Patients pay a fixed co-payment per visit of about SEK 100 in 1992, for public or private physicians. For both private and public care, the fee covers the consultation, X-ray, and lab tests, the first consultation if referred to a specialist, and a physician's certificate to qualify for sickness benefits. Out-of-pocket costs are limited to SEK 1,600 a year for drugs and SEK 1,500 a year (1992) for other services, after which all care is free for 12 months.

II. PATIENT SATISFACTION

There are some indicators of lack of patient satisfaction with the rigidity of the pre-1992 system. In the words of Saltman and von Otter, "non-medical characteristics of service delivery often respond more to the internal interests of the provider organizations rather than valid concerns of the patient."[113] They also refer to "inability to accommodate fundamental differences in treatment preferences . . . long waiting room times, incon-

---

[112] SWEDISH INSTITUTE, *supra* note 72 (reported that only 5% of physicians were in private practice, but they accounted for 17% of physician visits).

[113] Enthoven, *What Can Europeans Learn from Americans*, in HEALTH CARE SYSTEMS IN TRANSITION, *supra* note 109, at 62.

venient appointment hours . . . poorly coordinated services.''[114] There were relatively long waiting lists for elective surgery, especially for cataracts, coronary artery, and hip-joint procedures.[115] These lists have practically disappeared since the recent requirement that county councils provide care within three months or pay for it elsewhere, and the introduction of output-based payment systems in place of global budgets.

Lindgren cites survey evidence of widespread consumer dissatisfaction with their ''silent powerlessness,'' as well as lack of freedom of choice of primary health care provider or hospital.

> County councils are by law the main providers of health care, while at the same time, they have constitutional rights to tax their citizens . . . . Potential and actual conflicts between consumer and provider interests are innumerable, and there is a tendency for provider interests to dominate. The county council is the sponsor, insurance organization, and provider—all in one.[116]

This too may change because, under the 1992 reforms, most county councils have granted patients freedom of choice of primary care provider and hospital, sometimes including providers in nearby county councils.

APPENDIX B

QUALITY CONTROL AND THE DISCIPLINE OF MEDICAL PROVIDERS IN SWEDEN

There are several institutions designed to promote quality control and discipline of medical personnel in Sweden. All operate totally separate from the Patient Compensation Insurance (PCI) and Pharmaceutical Insurance (PI), which provide compensation to patients.

I. THE NATIONAL BOARD OF HEALTH AND SOCIAL WELFARE (SOS)

The SOS is responsible for regulation and supervision of the health care system. Until 1980, the SOS also was responsible for disciplinary actions against medical personnel, including physicians, nurses, dentists, and others. Public pressure to strengthen patients rights led to the enactment of the New Health Care Act in 1980. This Act emphasized principles of democratization and providers' duty to inform patients about the treatment

---

[114] *Id.*

[115] The problem does not seem to be caused by ''bedblockers''; average length of stay in medical and surgical wards in 1987 was roughly eight days.

[116] Lindgren, *supra* note 109, at 78.

options available. The Act also established the Medical Review Board (MRB), which became responsible for medical discipline, independent of the SOS.

II. THE MEDICAL REVIEW BOARD

The MRB handles claims against medical providers that may be filed by either the public or the SOS. It also considers the revocation of licenses, the reissue of licenses after revocation, and restrictions on the authorization to prescribe drugs.

A. Structure

The MRB has nine members, each of whom has three personal deputies. The chairman is a qualified lawyer, often a former judge. Four members are chosen by the political parties and are usually members of parliament; they are intended to represent consumer interests. The other four members are nominated by associations that represent the major health care provider interests; one each for the county councils, physicians and dentists, nurses and other medical professionals, and one for other hospital staff and mental health staff. The MRB members are appointed by the government. Each serves a three-year term.

The MRB meets once a week for two to four hours, excluding two months in the summer, thus, about 40 times per year. It considers 15-25 agenda items/cases at each meeting. This implies that the MRB spends, on average, 12 minutes per case, which suggests that the MRB functions primarily as a review body, largely endorsing the recommendations of the staff, which performs the investigation and analysis, and drafts the recommendations. The MRB has a full time staff of about 21, including 10 lawyers and one half-time medical expert. It also employs a panel of about 50 external medical advisors with expertise in different areas, one of whom serves as "rapporteur" for each case.

B. Claim Disposition

The great majority of complaints are initiated by patients or their families; a small percentage are brought by the SOS on the basis of incident reports filed under Lex Maria (see below) or repeated incidents by an individual provider. Complaints also can be filed by the Parliamentary Ombudsman. Tillinger states: "The procedure laid down for the MRB resembles that of a court of law and includes corresponding provision for legal safeguards."[117] However, compared to a lawsuit in the United States, the

[117] Tillinger, *The Medical Responsibility Board in Sweden* 7 (1985) (paper presented to the World Congress on Medical Law, Ghent, MRB, Stockholm).

procedures are greatly streamlined. The gathering of information for presentation to the MRB is handled by MRB staff, sometimes with the advice of an outside expert. Investigations are usually based on written submissions by the parties. Medical records and other pertinent documents are requested from hospitals, clinics, and other health care providers identified in the complaint. Both sides are entitled to inspect all documents. Statements are obtained from the person(s) named in the complaint, and the complainant is given the opportunity to present additional facts or arguments. This process continues until no new information is being added.

One week before the meeting, members of the MRB are supplied with a draft decision drawn up by the handling officer and previously inspected by the outside advisor and the Chairman. At the meeting, a member of the MRB staff or the panel of advisors serves as rapporteur to present the case and answer any questions from members of the MRB. Meetings are not open to the public.

Either party may, by law, request oral hearings, which may be authorized by the Chairman if this may benefit the inquiry. In practice, oral hearings are held at most five times a year, when required to resolve conflicting testimony of the parties. Oral hearings typically last about an hour and a half, which is considered too time consuming for the MRB. In rare cases, when the SOS seeks removal of a license, physicians typically request an oral hearing.

The use of medical and legal experts is much more limited than in a tort suit. Patients typically file without the aid of an attorney or outside medical advice (which may be hard to obtain, as well as costly). The MRB may consult a medical or legal expert for advice in reaching a decision. Prior to 1990, claim reviewers were usually employees of the SOS. Because this decreases the autonomy of the MRB and may create a conflict of interest in those claims brought by the SOS, the MRB now relies on its own staff and a panel of 50 external advisors, who are paid an hourly fee.

In particularly difficult cases, the MRB may consult a member of a panel of more senior "scientific advisors" that includes two prominent members of each medical specialty. Roughly two-thirds of cases are decided without advice from a member of the scientific panel. In cases where expert advice is obtained, it is accepted in 85-90% of cases.[118] The Board decides what sanction to impose.

Patients typically do not have legal representation even for appeals. Physicians more frequently have legal representation, sometimes from the medical association, but still in less than 50% of cases. The investigations leading up to case disposition may take one to two years.

---

[118] Personal communication with Dr. Ake Isacsson, Director, Administration, Lund University Health Sciences Centre (Aug. 1991).

C. Standard of Care

The basis for disciplinary action is stated in the Supervision Act as follows: "If a person belonging to health and medical personnel intentionally or negligently fails in the discharge of his professional duty and the fault is of more than a minor nature, disciplinary sanctions shall be imposed on him. Disciplinary sanctions comprise admonitions and warnings."[119] The standard of care is further defined in detailed regulations[120] and statutory enactments that are updated periodically, based on experience of the MRB, the SOS, and practitioners in the field. The level of detail differs across contexts. For example, the regulations are quite specific on maintaining medical records, treating newborns, anesthesiology, providing testimony, or certification. For other circumstances, the regulations simply provide recommended treatment or basic information. According to these regulations, minor faults—for example "performing surgery not very elegantly"—are tolerated. The consequences or severity of the injury are not relevant. Although standards of care in Sweden are codified to a greater extent than in the United States, judgmental issues necessarily remain, and interpretation depends largely on the MRB and its body of precedent.

The required standard is either that of the "average" physician or the "lowest acceptable level of care" based on medical science and experience at the time of treatment, taking into account the circumstances of the individual and the budget constraints of the local area. Occasional human error is considered acceptable. For cases alleging lack of informed consent, the standard is a practitioner-based rather than a patient-based standard of the minimum information required for the particular type of patient.

D. Sanctions

Failure in medical duty that is "more than trivial" may lead to a reprimand or, for more serious errors, a warning. For example, failure to follow regulations of the SOS or operation on the wrong tissue might lead to a reprimand. Operation on the wrong limb or patient would lead to a warning. Roughly 80% of MRB complaints result in no action against the defendant, 10% each in reprimand and warning. Of the more serious cases submitted to a senior advisor, 40% may have some error.[121]

The SOS may revoke a license to practice, but such revocations are extremely rare—roughly five cases per year—and are generally for alcohol or drug abuse, or excessive validation of sick leave applications, not for negligent care. There are no intermediate sanctions, except that in rare cases

---

[119] Tillinger, *supra* note 117, at 3.

[120] THE FORFATTNUNGS HANDBOK FOR PERSONEL INNO HALSO (1990).

[121] Personal communication with Dr. Sven-Erik Bergentz, Member of the Panel of Senior Advisors of the MRB (Aug. 1991).

of overprescribing, a limit has been imposed on a physician's rights to prescribe drugs.

Receiving a reprimand or a warning has no direct financial or other consequences for the individual. Any deterrent effect relies on uncertain and indirect repercussions. Reprimands and warnings are reported to the SOS. After multiple transgressions, the SOS may, at its discretion, investigate the provider's standard of practice and, in rare cases, the SOS may at its discretion file a charge with the MRB to revoke the provider's license.

Sanctions also are reported to the county council in the county where the offending individual practices. The chief medical officer of the relevant hospital or clinic is not directly informed but reports are public information and the process of investigation may be known to co-workers. This adverse reputation effect, together with the time costs and embarrassment of the investigation, are the only potential source of deterrence under the system, other than any personal remorse felt by the defendant.[122]

E. Appeals

Either side may appeal the decision of the MRB to the Administrative Court of Appeal, which is a court of general jurisdiction (not constituted specifically for medical expertise), and ultimately to the Supreme Administrative Court. Thus, medical discipline in Sweden is an administrative matter, not a matter for the civil courts. Over 20% of cases are appealed, but the decision of the MRB has been reversed in only about 6% of the cases brought on appeal,[123] including cases where the sanction is changed. The court tends to adhere even more conservatively to accepted medical opinion than does the MRB.[124]

F. Claims Experience Under the MRB

Rosenthal reports total experience from 1973-1983 under the MRB and the SOS disciplinary board that preceded it.[125] The number of cases reviewed increased from 390 in 1970 to 492 in 1976 and then declined again to 372

---

[122] Physicians are said to be increasingly insensitive to MRB investigations, in part because the great majority of complaints are dismissed, on grounds that the provider was not at fault and, by implication, the patient had unrealistic expectations. Personal communication with Dr. Ake Isacsson, *supra* note 118.

[123] Personal communication with Dr. Ingmar Nygren, Member of the MRB (Aug. 1991).

[124] In the *Kontrast-U* case, which is the only case involving probabilistic cause to reach the Supreme Court, the Court did not accept conventional medical opinion on whether the patients' injuries were caused by the substance (a dye used in a diagnostic procedure). This may reflect the Court's reluctance to establish a precedent of imposing liability for injuries that are probabilistically related to drugs and other toxic substances. Personal communication with Dr. Stephan Bork (Aug. 1991).

[125] Rosenthal, *Disciplining Doctors: Public Power and Hidden Structure—Research from Britain and Sweden* Table 5 (1984) (Center for Research on Social Organization, U. of Mich.). *See also* M. ROSENTHAL, DEALING WITH MEDICAL MALPRACTICE: THE BRITISH AND SWEDISH EXPERIENCE (1988).

in 1980.[126] However, because the number of physicians increased steadily over the period, this represents a decrease in cases per physician from roughly three per 100 physicians per year in 1973 to 2 per 100 physicians by 1980.[127] This decline in cases filed with the MRB contrasts with the increase in claims filed with the PCI (see Table 1).

Rosenthal argues that the volume of cases reviewed is constrained by the resources available to handle them. If the decline in cases per physician reflected the constraints of constant resources while number of cases filed increased, then the number of cases waiting and the delay to disposition should have increased. No information on this point is reported in this study.

Kriisa reports that about 1,400 cases are reported to the MRB annually, of which about 800 are considered.[128] Of these, 10-15% (80-120) result in some disciplinary action. This is less than 5% of the roughly 2,200 cases that involve compensation through the PCI for an "avoidable" injury.

The number of cases filed and reviewed more than doubled in the 1980s. It has declined recently, but this simply reflects the shifting of claims to local committees that have been established in each county council as a forum for patients to air their grievances and deflect minor claims from the MRB. These committees act as mediation boards to establish communication and reconciliation between the parties. They have no power to sanction providers, and their findings are not reportable to the MRB. The MRB may refer to these committees claims that are very unlikely to result in any disciplinary action. The MRB also has been authorized to dismiss complaints it views as highly unlikely to lead to any sanction, without formal investigation.

Kriisa reports that about 100 cases a year (15% of the total) involve the public primary care sector. Of the 184 primary care cases examined in this study, about 60% alleged error or delay in diagnosis. This high percentage of diagnostic error probably reflects the nature of primary care, where the risk of error in performing procedures is much lower than in hospital care. Cases involving non-physician personnel are more likely to result in sanctions than cases involving physicians.[129] Whether this reflects real differences in quality of care, in standards of care, or bias in the MRB cannot be determined with the data available.

Interpersonal conflict is an issue in a growing number of claims. By

[126] In addition to issuing reprimands and warnings, the disciplinary board could revoke the license to practice or restrict rights to prescribe medicines.

[127] It is unclear whether the claim data reported exclude claims against non-physician personnel. Even if they do not, the bias is likely to be small because over 80% of claims are against physicians, and it is likely that the number of non-physician personnel increased over the period.

[128] Kriisa, *supra* note 82, at 331.

[129] This is consistent with the evidence from the sample of cases studied by Rosenthal, *Disciplining Doctors*, *supra* note 125, at Table 6.

law, providers are required to show respect for patients and inform them of treatment options, including risks and benefits. The standards of what risks should be revealed remain under debate. By one estimate, 20-25% of cases include an allegation of lack of informed consent.[130] In one study, impolite treatment was the first allegation in one-third of claims and was the only allegation in 25% of claims.[131] This large number of cases involving interpersonal conflict is probably an inevitable consequence of the lack of patient choice of providers and may decline under recent reforms that increase patient choice and provider incentives for concern about quality.

III. INCIDENT REPORTING UNDER LEX MARIA

This law, which was enacted following a series of incidents in the Maria hospital, requires hospitals and/or county councils to report all incidents of patient injury or exposure to significant risk to the SOS. Technically, the chief medical officer of the hospital is responsible for Lex Maria reporting. But this individual must rely on reports by physicians and other medical personnel, because hospitals in Sweden do not have automated systems for incident detection and reporting.

The definition of a reportable incident is imprecise, and thus little inference can be drawn from the considerable variation across hospitals in the rate of incidents reported.[132] Hospitals rely on individual physicians to report incidents. Because such reports may become the basis of cases brought by the SOS to the MRB, there are strong incentives to underreport. The only sanction for failing to report is that if a claim is filed with the MRB and the error was extremely serious, a reprimand for non-reporting may be given in addition to a warning for the error itself. However, there is no sanction for non-reporting if either no claim is filed with the MRB, or a claim is filed and the error is not considered serious.[133]

The frequency of reports is very low, and most are risks, not errors, consistent with the hypothesis of serious underreporting. It seems likely that, at most, this law acts as a deterrent to repeated, egregious carelessness, which itself is unlikely to be common even in the absence of such a law, given licensure requirements and high professional norms. Reports filed under Lex Maria may form the basis of subsequent regulations defining duties and standards of care, as do case reports filed by the MRB.

---

[130] Personal communication with Dr. Ingmar Nygren, *supra* note 123. Current informal standards would not require informing a patient about a 1% risk of a serious adverse outcome but a 10% risk should probably be communicated.

[131] Personal communication with Dr. Ake Isacsson, *supra* note 118.

[132] Personal communication with Dr. Sven-Erik Bergentz, *supra* note 121.

[133] Personal communication with Dr. Ingmar Nygren, *supra* note 123.

IV. MARKET-BASED INCENTIVES FOR QUALITY

Until the 1992 reforms, there was very little market-based incentive for providers to compete on quality, at least for public sector care, because patients could not choose their primary care physician or hospital. They were assigned to a primary care center and could be assigned to a different physician on each visit. For inpatient and specialist care, patients had no choice of hospital or physician. Typically, they were assigned a physician by the hospital. Patients had to seek care within their county of residence, even if wait lists were shorter in another area. Providers received no additional revenue for being in demand—they simply had a higher work load. Thus, there were no incentives within the public sector for providers to compete on quality.

V. HOSPITAL QUALITY ASSURANCE (QA)

Swedish physicians are not reviewed for hospital privileges in the same manner as in the United States. The number of budgeted positions is determined by the local county council. When a position becomes vacant, any formally qualified physician can apply and formal qualifications are the dominant factor influencing selection, together with personal contacts and professional connections. Reputation for good quality of care may be a factor, but there is no requirement that the number of MRB complaints or sanctions be checked. This is in contrast to the United States requirement that the malpractice claims experience of all physicians be reported to the National Practitioner Data Bank and that this information be checked by a hospital before making any appointment.

Individual hospitals have no formal systems of quality control or peer review. To the extent that any public hospital has any formal QA system beyond the personal or professional commitment of the individual physicians, it is department-specific efforts at the discretion of the department chief. One reason cited for lack of incident reporting systems is that reports inevitably would be public information in public hospitals. Hospitals and medical staffs in Sweden have not acquired confidentiality for peer review that has been granted to these processes in the United States.

VI. SURGICAL REGISTRIES

The recently established registries for hip and knee replacements and for vascular surgeries offer some potential for QA on a limited scale in the future. A significant fraction of hospitals participate in these registries, although participation is voluntary. For each surgery of the designated type, a survey instrument is completed at the time of the initial surgery, 30 days

later, and one year later. The vascular survey instrument reports the identity of the individual physician who performed the surgery, the hospital where it was performed, details of the patient's age, medical conditions, and other risk factors prior to surgery, any repeat surgery, and outcome measures at each follow-up. This permits estimates of physician-specific outcome measures that adjust for the procedures performed and patient characteristics.

These registries already have provided some evidence of higher complication rates at hospitals with low volume of complex surgeries. If applied to a more comprehensive set of procedures and to all hospitals, then such registries clearly would provide a statistically superior database for purposes of quality assurance, compared to the selective and non-representative complaints that come before the MRB. So far, these data have not been used for disciplinary actions against physicians. Such use seems unlikely, because it probably would reduce voluntary participation and/or accuracy of reporting.

VII. DISCUSSION

The annual frequency of MRB reprimands or warnings is less than 1 in 20 claims compensated by the PCI. Although the PCI criteria for compensability are somewhat broader than the MRB criteria for negligence, this gap suggests that a very large proportion of injuries that could have been avoided with customary care do not lead to a filing with the MRB.

Limited evidence from one large hospital in Uppsala confirms anecdotal reports that the Lex Maria incident reporting requirement is ineffectual. During the reporting period, patients filed 227 claims with the PCI, of which 58 were compensated. Only 18 incidents were reported under Lex Maria. The number of MRB claims is not reported.

Any deterrent power of the MRB system is further undermined by lack of follow-up, such as more careful monitoring of physicians who are sanctioned. The lack of follow-up appears to reflect lack of incentive, because information is available about complaints filed with, and sanctions delivered by, the MRB against members of the hospital staff. Incentives to use this information for risk reduction are weak because the hospital incurs no adverse financial consequences as a result of injuries caused by its medical staff or employees and cannot itself be sanctioned. The enabling legislation for the MRB requires it to look for negligent behavior by a particular individual. The hospital, as employer, cannot be found negligent for the actions of its staff. Nonmedical employees of hospitals are subject to the oversight of the MRB. However, a supervisor can be held in error only if named by the plaintiff. Because medical care increasingly involves multiple individuals, in some cases the MRB may be unable to make a finding of negligence because no individual is sufficiently negligent to be singled out. However, even if the MRB system issued reprimands and warnings to

institutions or managers, incentives for risk reduction probably would remain weak in the absence of more tangible sanctions.

Although there is no system for reporting claims accepted by the MRB to the PCI or vice versa, patients may simultaneously submit a filing prepared for the PCI to the MRB. But the patient may face conflicting incentives: if he or she does not file with the MRB, then the physician may be more likely to cooperate with the patient's efforts to obtain compensation through the PCI. Because the statute of limitations for filing with the MRB is two years from the alleged negligent act, whereas it is three years from the date of discovery for the PCI, the decision to file with the MRB may have to precede a resolution of any claim filed with the PCI. Thus, if a patient first seeks compensation, for which the patient may need the physician's cooperation, then he or she may forego the opportunity to file with the MRB.[134]

There is some concern that, because the MRB applies standards quite similar to common-law negligence, the MRB's findings may be used as the basis for bringing tort claims. This could become more common if tort awards rise significantly above PCI compensation levels.

One proposal for change is to establish regional boards with powers similar to the current national MRB. The national board would be constituted as a final board of appeal, replacing the present appeals process to a general administrative court and ultimately to the Supreme Administrative Court. The rationale for this proposal is that the current appeals system has no specialized medical knowledge, whereas the MRB, although composed of lay personnel, presumably acquires some expertise from experience and has a permanent staff. However, if most of the cases were disposed of by the regional boards, then the experience and presumably the staff of the central board would become much more limited. Regional boards also may be at greater risk of "capture" by the local medical establishment.

VIII. LESSONS FOR THE UNITED STATES

Compared to the tort system, the Swedish system of medical discipline entails less litigation expense, including time costs of attorneys, patients, and physicians, as well as psychological stress of the disputants. This reflects several related factors.

First, procedures for filing and adjudication of claims with the MRB

---

[134] Tillinger, *supra* note 117, at 11 (notes that complaints are sometimes filed with the MRB to obtain a ruling of error or negligence, by patients who have been denied compensation because the PCI concluded that the injury was unavoidable). If this were common, then the systems together would resemble a bifurcated tort system in which the finding of liability is separate from, but a necessary and sufficient condition for, an award of compensation.

are much simpler, which permits claim disposition without attorneys. To the extent that medical expert testimony is used, the medical expert is employed as an advisor to the MRB, rather than each side employing their own experts to prove their case. Some alternative dispute resolution systems in the United States, such as screening panels, have tried using an independent medical advisor. However, this is less decisive than in Sweden because the option of appeal to the traditional tort system, with adversarial experts, remains relatively more attractive in the United States than the option of appeal to the Administrative Court of Appeal in Sweden. In particular, plaintiffs in this country have a reasonable chance of receiving an award that will cover the costs of hiring legal and medical experts, which is not the case in Sweden.

Second, defining the standard of medical care owed by providers relies more on written regulations and protocols in Sweden. This may imply less potential for disagreement and less need for expert medical testimony, although some case-by-case judgment about the appropriate standard of medical care remains. Use of experienced lay personnel, with advice from a non-partisan medical "expert," may permit greater consistency in decisions, but with greater potential for systematic bias.

Third, the fact that the financial stakes for both sides are lower reduces their incentives to incur legal expense. Patients receive no financial compensation or recovery of costs for successful pursuit of an MRB claim. The stakes for the provider are low but nevertheless probably higher than for the patient, because professional reputation may be affected even if there is no direct financial consequence. This imbalance between the stakes for patient and provider probably contributes to the very low patient success rate, which in turn presumably undermines patients' incentives to file. As in the case of the PCI, the deterrence value would be higher if there were more significant financial or professional consequences for providers, but this also would tend to increase their expenditure on litigation.

On balance, it seems likely that the Swedish system makes fewer Type 1 errors--sanctioning a provider when negligence did not in fact occur—but makes more (and possibly many more) Type 2 errors—failing to provide any sanction when negligence did occur. Type 1 errors entail potential social costs, because they may create incentives for practicing "defensive" medicine, if providers believe that, by ordering extra tests, they may reduce the probability of erroneously being found negligent. Type 2 errors also entail potential social costs, because providers have less incentive to avoid negligent care. Thus, a full evaluation of the alternative systems requires data on the costs of defensive medicine and on the savings in injuries averted under a system that provides stronger incentives to providers to avoid negligence.