

New York University School of Law
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and their Implications on Medical Malpractice Reform
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Draft of December 2006

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The present article seeks to explore previously undiscussed differences between the negligence and strict liability rules and thereby examine the required medical liability reform, if such reform is indeed required. Our main thesis is that negligence as a basis for liability entails a unique mechanism, which is essentially different than the strict liability mechanism, and is more efficient for several reasons, related to the legal function of resolving partial information problems which cause partial failure in the healthcare market. Among other things, the negligence mechanism (1) motivates the parties to a potential damages claim to invest in information gathering; (2) motivates doctors and medical institutions to adjust the appropriate medical procedures through time; (3) uses the market players' professional reputation to resolve the market's partial information problems; (4) introduces the courts as an additional oversight level; and (5) assists the law in reducing costs resulting from lack of standardization. Furthermore, the negligence rule allows the law to ensure a more efficient risk distribution. One reason for that is that it allows the law to distribute risk resulting from negligent errors separately from the risk resulting from non-negligent errors.

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_____ for their helpful comments and the editorial board of
_____ for their helpful comments and accurate work. The author wishes to thank

This thesis leads to conclusions regarding various issues, such as the required medical liability reform. *Inter alia*, we argue that it is inappropriate to limit the negligence mechanism's application, such as shrinking the limitation period or by imposing damage caps. We also argue for the advisability of creating and refining mechanisms to assist in resolving the market's partial information problems. For example, general imposition of mandatory disclosure in the healthcare market, similar to that which is imposed on the securities market, including the establishment of a central authority such as the SEC and supportive mechanisms such as those applied to regulating the securities market.

Introduction

According to a study by the Institute of Medicine (IOM) of the National Academy of Science,¹ between 44,000 and 98,000 patients die in the United States each year and about a million others suffer various degrees of injuries as a result of medical errors. According to the Harvard Medical Practice Study,² which relies on hospital records,³ about 4% of hospitalized patients suffer injury following their medical care, and about a quarter of them (1% of all hospitalized patients) suffer injury as a consequence of negligent medical care. Is it possible and desirable to reduce the number of patients injured each year as a result of medical errors and medical negligence through medical liability reform?

In the United States, a bitter argument is currently engaged regarding the

¹ INSTITUTE OF MEDICINE, *TO ERR IS HUMAN: BUILDING A SAFER HEALTH SYSTEM* (National Academy Press, Linda T. Kohn, Janet M. Corrigan & Molla S. Donaldson eds., 2001).

² See: Troyen A. Brennan, Lucian L. Leape, Nan M. Laird, et al., *Incidence of Adverse Events and Negligence in Hospitalized Patients: Results of The Harvard Medical Practice Study I*, 324 N. ENGL. J. OF MED. 370 (1991); Troyen A. Brennan, Lucian L. Leape, Nan M. Laird, et al., *The Nature of Adverse Events in Hospitalized Patients: Results of The Harvard Medical Practice Study II*, 324 N. ENGL. J. OF MED. 377 (1991); PAUL C. WEILER, HOWARD H. HIATT, JOSEPH P. NEWHOUSE, ET AL., *A MEASURE OF MALPRACTICE: MEDICAL INJURY, MALPRACTICE LITIGATION, AND PATIENT COMPENSATION* (1993).

³ The Harvard Medical Practice Study reliance on hospitals' record might bias its outcomes to lower the rate of medical mistakes and of negligent medical mistakes. See: Jennifer Arlen & W. Bentley MacLeod, *Malpractice Liability for Physicians and Managed Care Organizations*, 78 N.Y.U. L. REV. 1929, 1938-1939 (2003). In other study, the researchers used actual observations in hospitals on medical staff treatment's consultants, and recorded all adverse events during patient care discussed at these meetings. They found that 17.7% of the patients in the study had at least one serious adverse event, and that the likelihood of experiencing an adverse event increased about 6% for each day of hospital stay. They have also found that 1.2% of the patients made claims for compensation. See: Lori B. Andrews, T. Krizek, C. Stocking, et al., *An Alternative Strategy for Studying Adverse Events in Medical Care*, 349 LACET 309 (1997).

regularization of the liability of healthcare service providers – including healthcare organizations (hereinafter: HMOs)⁴ and staff – for malpractice. The law which currently applies to medical liability sets a *negligence* standard and based on the principle of torts.⁵ However, some argue that the United States suffers from a general *medical malpractice crisis* which entails high socioeconomic costs. In response, several state and federal legislators have enacted or suggested various medical liability reforms since the 1970's and more recently, during Presidents Clinton's and G. W. Bush's terms.

What is the nature of this crisis? According to reform advocates, it is characterized by increasing numbers of medical negligence claims and extremely high damage awards to claimants. These lead, in turn, to higher medical malpractice insurance premiums which are translated to higher medical treatment costs; to a "brain drain" phenomenon in which practitioners shy from areas characterized by a higher incidence of claims and consequently, higher insurance premiums; to a suspension of certain medical services; to interstate "migration" of healthcare service provision between states based on legal differences; and to "defensive medicine" – medical decision-making which is not based on purely professional considerations but rather on the legal results of any decision made. The opponents of reform, on the other hand, claim that the costs described above, if exist, are not exaggerated but

⁴ The main medical institutions of the healthcare market are hospitals and Managed Care Organizations (hereinafter: MCOs). MCOs are suppliers of healthcare insurance. MCOs also provide medical care mainly by entering into contracts both with potential patients and doctors who will provide the patients with the necessary treatment. The contracts included granting of supervisor authority to MCOs over doctors medical activities. Furthermore, MCOs provide the healthcare market finance and medical advisory services. For more details about MCOs' operation see *infra* at section III.

⁵ For a review of the law's principles in the field of medical liability, see, for example, STEVEN E. PEGALIS, *AMERICAN LAW OF MEDICAL MALPRACTICE* (3rd ed., 2005); FRANK M. MCCLELLAN, *MEDICAL MALPRACTICE – LAW, TACTICS, AND ETHICS* (1994); DAVID M. HARNEY, *MEDICAL MALPRACTICE* (3rd ed., 1993).

rather justified. Thus, because there is a severe problem of patients injured as a result of medical malpractice, constituting severe damage to social welfare and patient rights, while the great majority of medical malpractice victims never sue their doctors. On balance, in social welfare terms, all costs resulting from holding HMOs and staff liable for malpractice are lower in comparison to the added welfare in terms of improved medical services.⁶ For example, in *The Medical Malpractice Myth*,⁷ Baker claimed that the annual public expenditure of 11 billion dollars on medical liability insurance policies in 2003 is reasonable when compared both to automobile insurance premiums totaling 115.5 billion dollars or the total public expense on healthcare insurance of more than 1,500 billion dollars (more than one-hundred times the expenditure on medical liability insurance), and to the number of doctors in the US – almost 900,000 – so that even without taking hospitals and other HMOs into account, the average annual expense per doctor is 12,000 dollars. Baker believes this cost is reasonable in view of the high ratios of negligent errors in what he terms "the medical malpractice epidemic".⁸

State legislators have responded to this claimed crisis with various reforms, all based on the principle of limiting medical negligence liability, such as *damage caps* (which cap the damages awarded, mainly for pain and suffering), limits on legal fees, shrinking the

⁶ For a review of the claims for the existence of a medical malpractice crisis justifying the imposition of limitations on the medical liability regime and interference in the structure of the market for medical liability insurance and a review of the counter claims, see, for example, TOM BAKER, *THE MEDICAL MALPRACTICE MYTH* (2005); Michelle M. Mello, David M. Studdert & Troyen A. Brennan, *The New Medical Malpractice Crisis*, 348 *NEW ENGLAND J. OF MED.* 1010 (2003); *MEDICAL MALPRACTICE AND THE U.S. HEALTH CARE SYSTEM* (William M. Sage & Rogan Kersh eds., 2006); Alex Stein, *Fixing Medical Torts by Repositioning Inalienability and Contract* (Working Paper, 2006) available at ssrn.com/abstract=889474.

⁷ BAKER, *ibid*, at pp. 6-10.

⁸ *Ibid*, at pp. 24-42.

limitation period in medical negligence claims, interventions in the areas of information about and oversight on the quality of medical care, and intervention in the structure of the medical liability insurance market, such as establishing funds to cover medical negligence damages. During 2003-2006, President G.W. Bush's administration has been trying, hitherto without success, to impose federal legislation on medical malpractice suits. This intervention includes a *damage cap* of 250,000 dollars, limits on legal fees, shrinking the limitation period to three years following the negligent event or one year following its discovery, and limits on punitive damages.⁹

The medical liability and medical liability insurance market structure dispute hinges on both theoretical and empirical aspects of issues related to the appropriate legal arrangement of medical liability, and a rich literature exists on the subject.¹⁰

⁹ For federal and state reforms performed in the fields of torts for medical liability, information about and oversight of medical treatment's quality and the structure of the market for medical liability insurance, see, for example, BAKER, *ibid*, at pp. 24-42, 157-180; Peter P. Budetti & Teresa M. Waters, *Medical Malpractice Law in the United States* (Working Paper, 2005) available at www.kff.org/insurance/7328.cfm; Fred J. Hellinger & William E. Encinosa, *The Impact of State Laws Limiting Malpractice Awards on the Geographic Distribution of Physicians* (Working Paper, 2005) available at www.ahrq.gov/research/tortcaps/tortcaps.pdf; 2006 NATIONAL CONFERENCE OF STATE LEGISLATURES: MEDICAL MALPRACTICE TORT REFORM, www.ncsl.org/standcomm/sclaw/medmaloverview.htm; Eric Nordman, Davin Cermak & Kenneth Mcdaniel, *Medical Malpractice Insurance Report: A Study of Market Conditions and Potential Solutions to the Recent Crisis* (National Association of Insurance Commissioners, 2004) available at http://www.naic.org/documents/topics_Med_Mal_Rpt_Final.pdf; SAGE & KERSH, *ibid*; Nancy L. Zisk, *The Limitations of Legislatively Imposed Damages Caps: Proposing a Better Way to Control the Costs of Medical Malpractice* (Working Paper, 2006) available at law.bepress.com/expresso/eps/1272/; United States General Accounting Office, *Medical Malpractice Insurance: Multiple Factors Have Contributed to Increased Premium Rates*, GAO-03-702 (2003) available at <http://www.gao.gov/new.items/d03702.pdf>.

¹⁰ See, for instance, Jennifer Arlen, *Private Contractual Alternatives to Malpractice Liability*, in Sage &

Kersh, *ibid*; Arlen & MacLeod, *supra* note 3; Ronen Avraham, *An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Payments* (Working Paper, 2006) available at <http://ssrn.com/abstract=382120>; BAKER, *ibid*; Tom Baker, *Reconsidering the Harvard Medical Practice Study Conclusions About The Validity of Medical Malpractice Claims*, 33 J. OF L., MED. & ETHICS 501 (2005); Tom Baker, *Medical Malpractice and the Insurance Underwriting Cycle*, 54 DEPAUL L. REV. 393 (2005); Randall R. Bovbjerg & Laurence R. Tancredi, *Liability Reform should make Patients Safer: "Avoidable Classes of Events" are a Key Improvement*, 33 J. OF L., MED. & ETHICS 478 (2005); Bernard S. Black, Charles M. Silver, David A. Hyman & William M. Sage, *Stability, Not Crisis: Medical Malpractice Claim Outcomes in Texas, 1988-2002*, 2 J. OF EMPIRICAL LEG. STUD. 207 (2005); Mark Geistfeld, *Malpractice Insurance and the (Il)legitimate Interests of the Medical Profession in Tort Reform*, 54 DEPAUL L. REV. 439 (2005); Mark Geistfeld, *The Analytics of Duty: Medical Monitoring and Related Forms of Economic Loss*, 88 VA L. REV. 1921 (2002); Michelle M. Mello & Troyen A. Brennan, *Deterrence of Medical Errors: Theory and Evidence for Malpractice Reform*, 80 TEXAS L. REV. 1595 (2002); Mello, Studdert & Brennan, *supra* note 6, *ibid*; Daniel Miller, *Liability for Medical Malpractice: Issues and Evidence* (Working Paper, 2003) available at <http://ssrn.com/abstract=659102>; Ralph A. Peeples & Catherine T. Harris, *Learning to Crawl: The Use of Voluntary Caps on Damages in Medical Malpractice Litigation* (Working Paper, 2004) available at <http://ssrn.com/abstract=631243>; Philip G. Peters, Jr., *What we Know about Malpractice Settlements* (Working Paper, 2006) available at <http://ssrn.com/abstract=891120>; William M. Sage, *Medical Malpractice Insurance and the Emperor's Clothes*, 54 DEPAUL L. REV. 463 (2005); William M. Sage, *Reputation, Malpractice Liability, and Medical Error*, in ACCOUNTABILITY: PATIENT SAFETY AND POLICY REFORM 159 (Virginia A. Sharpe ed., 2004); William M. Sage, *The Forgotten Third: Liability Insurance and the Medical Malpractice Crisis*, 23 HEALTH AFFAIRS 10 (2004); William M. Sage, *Managed Care's Crimea: Medical Necessity, Therapeutic Benefit, and the Goals of Administrative Process in Health Insurance*, 53 DUKE L. J. 593 (2003); William M. Sage, *Understanding the First Malpractice Crisis of the 21st Century*, in HEALTH LAW HANDBOOK (Alice G. Gosfield, ed., 2003); William M. Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, 99 COLUM. L. REV. 1701 (1999); Catherine M. Sharkey, *Unintended Consequences of Medical Malpractice Damages Caps*, 80 N.Y.U. L. REV. 391 (2005); Stein, *supra* note 6, *ibid*; W. Kip Viscusi & Patricia H. Born, *Damages Caps, Insurability, and the Performance of Medical Malpractice Insurance*, 72 J. OF RISK & INSURANCE 23 (2005); Albert Yoon, *Mandatory Arbitration and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the West*, 5 AM. L. & ECON. REV. 95 (2003); Albert Yoon, *Damage Caps and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the South*, 3 AM. L. & ECON. REV. 199 (2001); Zisk, *ibid*.

In the present article, we would like to present a model for analyzing the impact of negligence on medical liability. Methodically, the present discussion is based on the approach of economic analysis of torts and accordingly, the article explores the various considerations stemming from the main objectives of torts – directing behavior and damage distribution – while distinguishing between efficiency and welfare distribution considerations. Finally, we will discuss the combination of objectives and considerations.

The article's *main thesis* is that as a basis for medical liability, the negligence standard constitutes a unique mechanism, which operates differently than the strict liability standard. This crucial difference in turn shows why it is better to select the negligence standard in the area of medical liability. The reason for that is that it better deals with the cost structure in the healthcare provision market.¹¹ Our objective is to expose the structure of costs in this market and the different ways in which the negligence and strict liability mechanisms operate therein.

In our model, the healthcare services market suffers from informational problems

¹¹ The assumption in the article is that imposition of liability on medical staff and institutions is being justified. Still, the justifications in the article for the appropriateness of imposing a negligence rather than a strict liability rule on medical staff and institutions, might also justify the imposition of liability. For other approach, according to which medical liability should be determined by the contracts between patient, doctors and MSOs, see, for example, RICHARD A. EPSTEIN, *MORAL PERIL: OUR INALIENABLE RIGHT TO HEALTH CARE* (1997); Patricia M. Danzon, *Liability for Medical Malpractice*, in *HANDBOOK OF HEALTH ECONOMICS* 1339, 1370 (Anthony J. Culyer & Joseph P. Newhouse eds., 2000); Clark C. Havighurst, *Vicarious Liability: Relocating Responsibility for the Quality of Medical Care*, 26 *AM. J. OF L. & MED.* 7 (2000); Kenneth S. Abraham & Paul C. Weiler, *Enterprise Medical Liability and the Evolution of the American Health Care System*, 108 *HARV. L. REV.* 381 (1994). In many articles dealing with medical liability, the basic assumption or claim is that the contract approach can not solve healthcare market's failures. See, for example, the references at *supra* note 10. For a comprehensive research presented the reasons why contracts can not solve those failures, see, Arlen, *supra* note 10, *ibid.*

leading to its partial collapse. One of the central problems in the market is a *moral hazard* problem resulting from the fact that the doctor's actions are hidden and the patient is unable to tell, even after the fact, whether the doctor has acted optimally or provided substandard treatment. The fact that the doctor has professional reputation which might suffer as a consequence of inappropriate medical actions is insufficient to resolve the problem, since if the doctor's selection of a certain level of investment in the treatment constitutes a *hidden action* in game-theoretic parlance, the doctor's reputation would not suffer as a result of malpractice. Another partial information problem is that of *adverse selection* in that the patient is unable to assess his practitioner's level of professional skills. Having no objective means of assessing their doctors, the patient's ability to choose among doctors cannot take into account all relevant data. This causes a partial collapse of the doctors' incentive to keep optimally up-to-date, as they pay the full cost of professional up-to-datedness while gaining only part of the return on this investment, since the market cannot appreciate its full value.

One of the advantages of organizations in the healthcare market, including hospitals and MCOs, is that, compared to the general public, they have better tools for overseeing the doctors. The problem is that even their level of oversight suffers from partial information problems. The patient cannot assess the degree of oversight applied by the medical organization. In addition, the organizations' activity in the healthcare market creates severe informational problems as well, since they also take many decisions affecting the patients' welfare, while they are unable to assess their actions. For example, the patient cannot tell whether the medical organization has invested optimally in medical gear, and whether it made the optimal decision – from his point of view – in approving or disapproving the practitioner's medical treatment recommendations. The HMOs' reputation is an insufficient solution of the market's partial information problems, because they are barely exposed to the risk of *ex post facto* investigation by the patient – hence the imposition of legal liability on

the doctors and HMOs. The law poses a threat to the doctors' and HMOs' reputation, and the law and the courts supply the market with the lacking information, thus resolving its inherent partial information problems. Thanks to legislation, the doctor is rewarded for an optimal level of investment in treatment and professional skills, while the organizations are able to charge the full price for optimal healthcare, including optimal oversight on the doctors.

What, then, is the *difference between negligence and strict liability*? We suggest that the liability rule supports the liability mechanism more efficiently than the strict liability rule, for the following reasons. *First*, it motivates the parties to any potential damages claim to invest in searching for and assessing the information they require in order to file the claim, and conversely, to defend themselves against it. Moreover, the information they require privately is also the information required by the healthcare market to resolve its partial information problems. In addition, a negligence rule requires the court to look into issues also relevant to conveying the information needed by the market: Has the doctor acted optimally, including appropriate professional up-to-datedness? Has the HMO acted optimally, for example, in purchasing the appropriate medical gear? The negligence mechanism thus ensures that the courts provide the market invaluable information focused on exposing the hidden actions and qualities of the doctor and her HMO. On the other hand, a strict liability rule dispenses with such investigations, thus conveying much less information to the market. *Second*, it motivates the doctors and their HMOs to adjust the appropriate medical procedures through time, since it allows the patients to ensure such adjustment is indeed taking place. *Third*, it uses the market players' reputation to resolve its partial information. This effect may be described as a positive externality. *Fourth*, it introduces the courts as an additional oversight level, where the overseeing agency is both reputable and impartial. *Fifth*, it motivates the HMOs to invest in oversight even in cases where the risk of exposure of malpractices is negligible or where the risk that they by exposed would be attributed to lack

of professionalism by the doctor or the organization is negligible. *Sixth*, it has a mutual positive externality on the efficiency of the criminal and quasi-criminal claims mechanisms, because of the high correlation between the types of information required in those systems. A strict liability rule is hardly suitable for this purpose since the information collected by the individual is almost irrelevant to procedures undertaken by authorities. *Seventh*, it helps the law in reducing costs resulting from lack of standardization, since it encourages both doctors and organizations to undertake identical or similar medical procedures. *Eighth*, it provides HMOs and liability insurance providers with strong incentives to develop a risk management mechanism.

The article also claims that the negligence rule also allows the law to achieve a more efficient risk distribution, for the following reasons. *First*, the partial information problems also impede the market's damage distribution mechanism. *Second*, it makes it possible to distribute the risk owing to negligent errors separately from the risk owing to non-negligent errors. *Third*, HMOs act as *the most efficient insurer*, mainly in distributing negligent error risks.

Finally, we argue that the negligent rule offers efficiency and welfare-distribution advantages compared to the strict liability rule, both in terms of the legal objective of directing the healthcare market players' behavior and in terms of insuring and distributing the risk.

The model presented here will be used to shed light on the question of medical liability reform and to suggest which policy tools promote social welfare and which do not. *Inter alia*, we would argue that the thesis presented here suggests that it is inappropriate to limit the application of the negligence mechanism by shrinking the limitation period, limiting legal fees or capping damages awarded for pain and suffering. We will also argue that our thesis suggests the need for creating and refining mechanisms to assist in resolving the

healthcare market's incomplete information problems. For example, we believe legislators should consider the legislation of general mandatory disclosure, similar to that which exists in the securities market, including the establishment of a central authority such as the Securities and Exchange Commission (SEC), regulating the mandatory disclosure duties by legislating differential report requirements and enforcing them by criminal, quasi-criminal and administrative tools and by special causes of action and civil litigation. We also suggest a national listing to include all the information relevant to ensuring disclosure in the healthcare market, including information about all medical negligence claims and decisions. The present thesis also suggests that the functioning of private, commercial liability insurers as additional gatekeepers is expected to be efficient, and that there is no justification for the regulators' intervention in the medical liability insurance markets, through the establishment of statutory funds, for example. This is, of course, subject to the regulators' normal oversight on the activities of insurers, including anti-trust oversight.

The present thesis also points to the legal rules which should be applied by the courts to questions of medical liability. It suggests that the courts can play a pivotal role in refining the medical liability mechanism by using decisions to convey the relevant information to the market. We also believe that existing "escape routes" should be blocked, so as to prevent both doctors and HMOs from shirking liability. Thus, we believe legislators should consider prohibiting contractual indemnity and contribution between healthcare service providers and doctors.

Our thesis is not limited to the area of medical liability. In our opinion, the differences described herein between the negligence and strict liability mechanisms are also relevant to other areas. The advantage of the negligence mechanism over the strict liability mechanism is expected to be particularly significant in markets suffering from severe partial information problems which also include reputation-based market mechanisms which are

designed to resolve them. This is particularly true for the liability of various professionals, such as construction engineers, lawyers and corporate directors, and for the liability of various players in markets overseen by gatekeepers, such as the securities market.¹²

The present article explores an issue which has received ample attention in the legal literature – the distinction between strict liability and negligence – and offers new insights focused on the fact that each liability rule gives rise to a different mechanism of resolving partial information problems existing in the markets. As discussed below, the question of medical liability has been comprehensively studied from the informational problems¹³ perspective and the present article aims both at studying the healthcare market cost structure and at adding to the literature by discussing the distinction between the various types of liability mechanisms and its implications.

Chapter I presents previous studies on the differences between the imposition of liability at the negligence and strict liability levels. It also discusses the literature on medical liability in general. *Chapter II* presents relevant reforms suggested and implemented in the United States. *Chapter III* models the healthcare market cost structure and the *modus*

¹² Elsewhere, we have presented the information problems in the securities market as those that justify holding the market's participants liable. See, Noam Sher, *Underwriters' Civil Liability for IPO's: An Economic Analysis*, 27 U. PA. J. INT'L ECON. L. 389 (2006). In further article, we described the differences between the mechanism of negligence and the mechanism of strict liability in the securities market. See, Noam Sher, *Negligence Versus Strict Liability: The Case of Underwriter Liability in IPO's*, 4 DEPAUL BUS. & COM. L.J. 451 (2006).

¹³ See *infra* at footnotes 29-37 and the accompanying text. The basic model in this article is consistent with: Noam Sher, *Underwriters' Civil Liability for IPO's: An Economic Analysis*, *ibid* - dealt with the securities market and with: Jennifer Arlen & W. Bentley MacLeod, *Torts, Expertise and Authority: Malpractice Liability of Physicians and Managed Care Organizations*, 36 RAND J. OF ECO. 494 (2005); Arlen, *supra* note 10; Arlen & MacLeod, *supra* note 3 – dealt with the healthcare market.

operandi of the negligence versus the strict liability mechanisms. *Chapter IV* presents the conclusions of our thesis in terms of the reform required in the area of medical liability, if at all, and the policy tools which should be adopted. It also suggests some legal principles which should be adopted by the courts when deciding medical liability claims. Finally, a concluding discussion is presented in *Chapter V*.

Chapter I: Literature Review

1. The Differences between Negligence and Strict Liability

This question has been thoroughly discussed in the literature.¹⁴ According to the conventional analysis, one central difference between the negligence and strict liability rules in terms of behavior directing is their differential effects on the potential injurer and victim's levels of activity and care. In order to assess the overall effect of each rule on social welfare, the assumption is that a higher level of activity increases utility but also the degree of damage due to accidents, while a higher degree of care entails higher direct costs but also reduced damage. Another assumption is that damages awarded for the victim, if any, should be fully correlated with the degree of harm caused by any accident.

¹⁴ See, for instance, RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 179 - 235 (5th ed., 1998); WILLIAM M. LANDES & RICHARD A. POSNER, *THE ECONOMIC STRUCTURE OF TORT LAW* (Harvard Univ. Press, 1987); Richard A. Posner, *A Theory of Negligence*, 1 J. OF LEGAL STUD. 29 (1972); Richard A. Posner, *Strict Liability: A Comment*, 2 J. OF LEG. STUD. 205 (1973); STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* 5-45 (Harvard Univ. Press, 1987); Steven Shavell, *Strict Liability versus Negligence*, 9 J. OF LEGAL STUD. 1 (1980); ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 287-371 (3d ed., 2000). For a discussion of the various approaches to the differences between negligence and strict liability rule and for a list of many articles on this issue, based on economic analysis of law, see Hans-Bernd Schäfer & Andreas Schönenberger, *Strict Liability Versus Negligence*, in *ENCYCLOPEDIA OF LAW AND ECONOMICS (Boudewijn Bouckaert & Gerrit De-Geest eds., 1999)* available at <http://allserv.rug.ac.be/~gdegeest/3100book.pdf>.

The conventional analysis focuses on two basic situations.¹⁵ In a *unilateral accident*, only the injurer may reduce the risk for accident by taking precautions. In this situation, when the applicable rule is strict liability, the injurer pays the damage in each case of accident. Therefore, the injurer, guided by her private considerations, takes all relevant social costs into account, internalizes the risk for damage and conducts herself professionally at socially optimal care and activity levels. When the applicable rule is negligence, however, if the court determines a negligence standard based on social optimum, the potential injurer should adopt precisely this level of care. She will not adopt a higher standard of care since exemption from liability has already been granted at an optimal level of investment, while any higher level of investment in precautions will necessarily entail higher costs. Conversely, the potential injurer will not adopt a lower level of care since she will be made to compensate any potential victim for any damage caused while the benefit of saving in precautions will be lower. On the other hand, since the courts do not intervene by determining the injurer's optimal activity level, she will be active at a level higher than the social optimum. The reason for that is that she benefits from a higher activity level, but because she adopts an optimal level of care, she does not bear the cost resulting from the effect of her additional activity on the incidence of further damages.

In the second situation – *bilateral accident* – both injurer and victim may reduce the risk for accident by taking precautions. In this situation, when the applicable rule is strict liability, the injurer will pay the damages in each case an accident occurs. Therefore, it is not worth the victim's while to invest in precautions. In order to compensate for the expected deviation from the social optimum, the strict liability mechanism can be reinforced by a

¹⁵ See: Steven Shavell, *Liability for Accidents*, in 1 HANDBOOK OF LAW AND ECONOMICS 2-6 (A. Mitchell Polinsky & Steven Shavell eds., Forthcoming 2006); COOTER & ULEN, *ibid*, at pp. 300-313; POSNER, *ibid*, at pp. 185-197; LANDES & POSNER, *ibid*; Schäfer & Schönenberger, *ibid*, at pp. 599-614.

contributory negligence rule. Now it is worth the victim's while to adopt an optimal level of care in order to shift all the risk to the injurer. Thus, a *Nash Equilibrium* is created in which both parties act at a socially optimal level of care. Nevertheless, when the applicable rule is negligence with contributory negligence, the injurer will adopt an activity level higher than the social optimum. This is because all the additional risk will be borne by the injurer. When the applicable rule is negligence, however, if the court sets a negligence standard based on social optimum, the potential injurer should adopt precisely this level of care. Therefore, the remaining risk will be borne by the victim, who will also undertake optimal precautions in order to reduce it. But now, the injurer will adopt an activity level higher than the social optimum, as she naturally profits from a higher level of activity without having to bear its additional costs, as explained in the case of unilateral accident. Due to similar considerations, introducing a contributory negligence rule will not change the above result.

According to Hilton,¹⁶ “[t]he choice between strict liability and negligence depends on the degree to which there is a reciprocal exchange of risk among actors, and the extent to which benefits, in addition to risks, are externalized”. In his model, strict liability is preferable to negligence only when the risk assignment between the parties to an accident is either not mutual or asymmetric, *i.e.*, when one party assigns a greater share of the risk to the other.

Another key difference between the effects of the negligence versus the strict liability rules has to do with risk bearing and insurance:¹⁷ risk aversion by the relevant parties may affect their behavior. When the injurer is risk averse (or more so than the victim), strict

¹⁶ Keith N. Hylton, *A Positive Theory of Strict Liability* (Working Paper, 2006) available at <http://ssrn.com/abstract=932600>.

¹⁷ See: Shavell, *supra* note 14, at pp. 6-9; COOTER & ULEN, *supra* note 14, at p. 323, 333-335; POSNER, *supra* note 14, at pp. 220-224; Schäfer & Schönenberger, *supra* note 14, at pp. 616-617.

liability generates over-deterrence (since the injurer bears the risk), so that a negligence rule would be more efficient. However, when the victim is risk averse (or more so than the injurer), negligence generates under-deterrence (since the victim bears the risk), so that a strict liability rule would be more efficient. The option of purchasing a liability insurance policy would correct the deviation from the social optimum if the insurer would be able to effectively oversee both parties' activities, so that no moral hazard problem would be created where the insured party's actions are hidden.¹⁸ The more efficient this insurance in overseeing the level of care of the actor whose risk averseness effects a deviation from the social optimum, the closer we are to achieving an optimal level of care and the smaller the difference between the two liability rules. In any case, liability insurance is efficient as it distributes the players' risks optimally.

Administrative costs, that is, the various litigation costs, are also affected by the applicable liability regime.¹⁹ While a strict liability regime increases the number of claims compared to a negligence regime, the latter entails higher costs per each claim, since it requires an investigation of the liability issue in addition to the issues of causality and assessment of damages.

Another aspect explored in the literature is the effects of judicial errors on the efficiency of the applicable liability regime.²⁰ The negligence regime is relatively sensitive to judicial errors concerning the level of care adopted by the injurer and the appropriate level of care. The strict liability regime, on the other hand, does not suffer from such errors. It is,

¹⁸ For a presentation and a definition of the *Moral Hazard* and of the *Adverse Selection* problem both generally and in the context of healthcare market, see *infra* notes 67-70 and the accompanying text.

¹⁹ See: Shavell, *supra* note 15, at pp. 17-23; COOTER & ULEN, *supra* note 14, at pp. 319-320.

²⁰ See: Shavell, *ibid*, at pp. 9-13; COOTER & ULEN, *ibid*, at pp. 320-323; POSNER, *supra* note 14, at p. 196; Schäfer & Schönenberger, *supra* note 14, at pp. 617-618.

however, more sensitive to judicial errors concerning causality and damage assessment. These costs are reflected in a deviation from the optimal level of care and an increase in uncertainty. Geistfeld argued,²¹ that wherever it is particularly important to prevent risks, such as risk to human life, negligence is to be preferred over strict liability. When the applicable rule is negligence, risk may be reduced by pushing the standard of care above the optimal level determined according to financial cost-benefit considerations. Conversely, strict liability is preferable when the injurer is unable to prove which precaution would have been necessary in order to ensure an optimal level of care.

2. The Appropriate Medical Liability Regime

Many authors have examined the desirable medical liability regime.²² Some of them²³

²¹ See: Mark A. Geistfeld, *Necessity and the Logic of Strict Liability*, ISSUES IN LEGAL SCHOLARSHIP 4-13 (2005), www.bepress.com/ils; Mark A. Geistfeld, *Negligence, Compensation, and the Coherence of Tort Law*, 91 GEO L. J. 585 (2003); Mark A. Geistfeld, *Reconciling Cost-Benefit Analysis with the Principal that Safety Matters More Than Money*, 76 N.Y.U. L. REV. 114, 146-149 (2001).

²² See the references at *supra* note 10. For a list of sources on the issue of medical liability, see: Sheryl Summers Kramer, *A Research Guide to Medical Malpractice and the Law: Revisited* (Working Paper, 2000) available at <http://ssrn.com/abstract=300548>. The discussion in the question of medical accidents is obviously not limited to the field of law. As mentioned above, in 1999, The Institute of Medicine (IOM) released a report stated that medical errors cause over one million injuries every year in American hospitals among them between 44000 and 98000 deaths. INSTITUTE OF MEDICINE, *supra* note 1, *ibid*. Stelfox, Palmisani, Scurlock, et al., found that a total of 5514 articles on patient safety and medical errors were published during their 10 year study period between November 1994 and November 2004 and that the rate of articles on patient safety and medical errors increased from 59 to 164 articles per 100000 MEDLINE publications following the release of the IOM report. H. T. Stelfox, S. Palmisani, C. Scurlock, et al., *The "To Err is Human" Report and the Patient Safety Literature*, 15 QUALITY & SAFETY IN HEALTH CARE 174 (2006).

²³ See, for example, BAKER, *supra* note 6, at pp. 172-174.

support the existing negligence regime while others²⁴ suggest the adoption of a strict liability regime, especially as a solution for the crisis they believe exists in this area. Empirical studies investigating various aspects of this issue have yet to yield unambiguous conclusions.²⁵

The present article focuses on the *theoretical* differences between the ways both mechanisms in question operate in the area of medical liability and their implications, and some of the studies examining the appropriate medical liability regime have indeed discussed this question. Simon,²⁶ for example, examined the difference between the effects of the negligence versus strict liability rules on the relevant parties' incentives in a model based on the conventional economic analysis of torts, conventional, that is, apart for a unique starting point. In her view, the doctor is not always able to reduce the risk for accident by undertaking more precautions. Accordingly, negligence is superior to strict liability. This advantage is reflected in the fact that the result of adopting an optimal level of care is achieved through the

²⁴ See, for example, David M. Studdert, Troyen A. Brennan & Eric J. Thomas, *Beyond Dead Reckoning: Measures of Medical Injury Burden, Malpractice Litigation, and Alternative Compensation Models from Utah and Colorado*, 33 IND. L. REV. 1643 (1999-2000); David M. Studdert, Eric J. Thomas, Brett I. W. Zbar, et al., *Can the United States Afford a No-Fault System of Compensation for Medical Injury*, 60 L. & CONTEMP. PROBS. 1 (1997); Paul C. Weiler, *The Case for No-Fault Medical Liability*, 52 MED. L. REV. 908 (1993); PAUL C. WEILER, *MEDICAL MALPRACTICE ON TRIAL* (Harvard Univ. Press, 1991); Brennan, Leape, Laird, et al., *Incidence of Adverse Events and Negligence in Hospitalized Patients: Results of The Harvard Medical Practice Study I*, *supra* note 2, *ibid*; Brennan, Leape, Laird, et al., *The Nature of Adverse Events in Hospitalized Patients: Results of The Harvard Medical Practice Study II*, *supra* note 2, *ibid*; Bruce Chapman, *Controlling the Costs of Medical Malpractice: An Argument for Strict Hospital Liability*, 28 OSGOODE HALL L. J. 523 (1990).

²⁵ For a survey of the empirical studies of the field of medical accidents and evaluation of their outcomes, see, for example, BAKER, *supra* note 6, *ibid*; COOTER & ULEN, *supra* note 14, at pp. 362-371; Studdert, Brennan & Thomas, *ibid*; Studdert, Thomas, Zbar, et al., *ibid*.

²⁶ Marilyn J. Simon, *Diagnoses and Medical Malpractice: A Comparison of Negligence and Strict Liability Systems*, 13 BELL J. OF ECO. 170 (1982).

application of both rule, but under a negligence rule, it is achieved by imposing a lower level of risk on the doctor. Hence, the negligence rule ensures more a efficient liability insurance policy for the risk-averse doctor.

Chapman argued,²⁷ that the costs of so-called defensive medicine will be easier to control if tortious liability for medical accidents would be assigned to the MCO, and if the MCOs' liability standard would be strict liability. Holding the MCOs liable is justified, he argued, since they are able to reduce the probability for the occurrence of medical accidents, and, in some cases, also the activity level (as in the case of voluntary procedures), and also have the information necessary for that purpose. The advantage of moving to a strict liability regime, he argued, is in that negligence is sensitive to judicial errors in determining the optimal level of care. It is this risk for error which causes defensive medicine, a risk which is removed when the abiding rule is strict liability. Accordingly, Chapman suggested that in cases of gross medical negligence, MCOs would be allowed to be indemnified by the negligent doctor.

As for administrative costs, many argued that unlike other areas, adopting a strict liability regime in the medical area would not reduce, but rather increase these costs.²⁸ Due to the difficulty in distinguishing between a medical accident, *i.e.*, a medical error which caused the patient damage, and damage caused by his illness and risks inherent in medical care even at its best, many authors fear that complex judicial procedures would be required even under a strict liability regime. Moreover, this difficulty might lead to a significant increase in the amount of suits filed. Thus, the total costs of compensation, as well as the

²⁷ Chapman, *supra* note 24, *ibid.*

²⁸ See, for example, Note, *Comparative Approaches to Liability to Medical Maloccurrences*, 84 YALE L. J. 1141 (1975); COOTER & ULEN, *supra* note 14, at p. 370; BAKER, *supra* note 6, at pp. 172-174; Simon, *supra* note 26, at p. 171, footnote 5.

total costs of litigation, might increase following the adoption of a strict liability rule.

Various studies which analyzed the structure of the healthcare market and the effect of judicial rules on its *modus operandi* have suggested that the market's major operative cost is due to *incomplete information* problems. Arlen and MacLeod analyzed²⁹ the structure and operation of the market in a model where the players are doctors, MCOs and patients. In their model, *patients* contract with MCOs for the provision of healthcare insurance services for payment while *doctors* contract with MCOs for the provision of medical services for their insured for payment. The insured authorize the doctors to select the appropriate treatment, while the latter are interested in maximizing their patients' welfare out of normative (the Hippocratic Oath) or reputational considerations. The doctor also takes financial incentives into consideration. Any investment in medical expertise on her part (reading articles, taking part in conferences, etc.) reduces the risk for medical error. Thus, she adopts an appropriate level of investment in medical expertise and treating her patients based on these incentives. MCOs do not only provide medical insurance for payment, but may also affect the quality of medical treatment by overseeing the doctors. This oversight is of two types. First, before contracting with doctors, MCOs assess their level of investment in acquiring expertise; second, the contracts between the parties authorize MCOs not to approve the type of treatment decided on by the doctors, so as to prevent the latter from choosing a prohibitively expensive type of treatment (the *expertise* and *authority* concepts, respectively). Nevertheless, wielding this authority effectively requires costly investment in information. In this particular model, MCOs are unable to contractually oversee neither the doctor's level of investment in acquiring expertise nor the type of treatment she may choose.

In Arlen and MacLeod's model, the transaction between the MCOs and the doctors

²⁹ See: Arlen & MacLeod, *supra* note 13; Arlen, *supra* note 10; Arlen & MacLeod, *supra* note 3.

suffers from a *moral hazard* problem.³⁰ The problem is due to the fact that the latter seek to maximize the insured's benefit without considering the costs borne by the MCOs. Moreover, the MCO and the doctor cannot assess each other's activities, even *ex post facto*. The transaction between the MCOs and the insured also suffers from a moral hazard problem. This is because the former cannot reliably contract for an optimal level of wielding their authority not to approve the type of treatment chosen by the doctor, while the latter are unable to assess the MCO's activity, either before or after the fact. Consequently, without applying a law holding the MCOs tortuously liable, in equilibrium, the MCOs make an excessive use of their authority not to approve the type of treatment chosen by the doctors while approving less-costly treatments, since they bear the full cost of treatment without enjoying the full benefit gained by the patient. Moreover, they do not choose to refer their patients to doctors with an optimal level of expertise, but rather assess the cost expectancy of such a doctor's activity. In equilibrium, therefore, the doctors underinvest in acquiring expertise, causing medical errors at a higher-than-optimal rate, and select treatments which are too costly in social optimal terms.

In Arlen and MacLeod's model, a negligence rule³¹ applied both to the doctors and the MCOs means that in equilibrium, optimal levels of authority wielded by the MCOs, on

³⁰ For a presentation and a definition of the *Moral Hazard* and of the *Adverse Selection* problem both generally and in the context of healthcare market, see *infra* notes 67-70 and the accompanying text.

³¹ Arlen & MacLeod explained that: "Only negligence liability is considered because this rule currently governs medical malpractice cases, and it is the basis of the leading proposals in Congress for MCO liability. We consider a regime of individual liability for negligence under which the physician and the MCO are governed by a negligence liability rule as to their treatment decisions, but neither is liable for negligent treatment provided by the other. Thus the physician is potentially liable for treatments she selects and provides. The MCO, in contrast with existing law, is potentially liable for treatments that it selects." Arlen & MacLeod, *Torts, Expertise and Authority: Malpractice Liability of Physicians and Managed Care Organizations*, *supra* note 13, at p. 507.

the one hand, and investment in expertise and choice of optimal treatment by the doctors, on the other, may be ensured. Another important consequence of this judicial rule³² is that MCOs would find it worthwhile to contract with doctors whose cost in terms of damages payments would be low, so that MCOs would use information about the results of doctors' medical treatments to select the best for their system.

Stein suggested³³ the *informational public-good framework*. The healthcare insurance market suffers from a double asymmetric information problem. First, the medical negligence system lacks information to enable it to distinguish between honest patients, who do not file groundless suits, and opportunistic patients, who do. Second, the system lacks information which will allow it to distinguish between good doctors, who provide proper care, and bad ones, who do not. Without applying a law which imposes tortious liability on MCOs, these pooling problems could not be solved, since MCOs do not have the incentive required to invest in seeking the information required to distinguish between doctors and patients. According to Stein,³⁴ “[t]he MCO is only interested in maximizing its total amount of access fees. For that reason, it is only interested in increasing the number of users on the platform’s both sides. . . . This indiscriminate matchmaking brings to the platform bad doctors and opportunistic patients. The level of medical care consequently goes down, to the detriment of honest patients and society at large”.

Stein argued³⁵ that holding MCOs liable for negligence by their doctors would create the incentives required to solve the pooling problems described. He also suggested

³² See: Arlen & MacLeod, *ibid*, at pp. 511-515; Arlen & MacLeod, *supra* note 3, at pp. 1985-1986.

³³ Stein, *supra* note 6, *ibid*.

³⁴ Stein, *ibid*, at p. 10.

³⁵ Stein, *ibid*, at pp. 35-43.

that, “[a]ny doctor working through an MCO’s platform and the MCO itself would have to offer the patient an agreement under which the MCO assumes full liability for the doctor’s malpractice. In addition to this baseline agreement — to which the patient should have an inalienable right — both the MCO and the doctor should be allowed to offer the patient any limited-liability agreement, as well as an agreement that removes the malpractice liability completely (except for intentional torts)”. Pricing the various levels of liability suggested by MCOs would then convey the information required by the market about the quality of their oversight on the doctors, and selecting the level preferred by the patient would convey reliable information on the patient’s characteristics.

Below, we present the high operational costs of the healthcare insurance market as incomplete information problems, similarly to Arlen and Macleod’s and Stein’s analyses. The doctor’s and the MCO’s reputation play a key role in our analysis, as they have a considerable effect on the market’s structure and *modus operandi*.³⁶ Accordingly, we also look into legal arrangements which seek to deal with such problems, such as the disclosure solution.³⁷

³⁶ For a comprehensive research of the connections between physicians and medical institutions’ reputation and the healthcare markets see: Sage, *Reputation, Malpractice Liability, and Medical Error*, *supra* note 10, *ibid*.

³⁷ For research presenting the concept of disclosure as a basis for an adequate legal arrangement for the healthcare markets, see: Sage, *Regulating Through Information: Disclosure Laws and American Health Care*, *supra* note 10, *ibid* (argued that regulators are rapidly increased their reliance on disclosure to solve failures in healthcare’s markets, explored some distinct rationales for disclosure regulation and discussed there advantages and disadvantages); Kathryn Zeiler, *Turning from Damage Caps to Information Disclosure: An Alternative to Tort Reform*, 1 *YALE J. OF HEALTH POLICY L. & ETHICS* 385 (2005) (argued that imposing statutory caps on medical malpractice damages is not an affective method of remedying the medical malpractice insurance crisis, and that alternatives to damage caps should be considered, one of them can be mandating disclosure of MCO-physician contract terms).

Chapter II: Medical Liability Reforms Implemented and Suggested in the United States

1. American Law and the Structure of the Medical Liability Insurance Market

The American law arranging the area of medical liability is based on tort law principles and imposes a negligence standard of liability both on members of medical staffs, including doctors and nurses, and on HMOs.³⁸ On the other hand, MCOs are usually not held tortuously liable. MCOs are the dominant players in the healthcare insurance market: they provide the insured with policies and required medical services through contractual transactions with doctors. MCOs do not usually sign work agreements with doctors, but rather hire their services as independent contractors. Such contracts include a mechanism called utilization review, according to which, the MCO is authorized not to approve the type of treatment selected by the doctor if it is deemed “experimental” or not “medically necessary and appropriate”.³⁹

Since the 1970's, *state* legislators have been dealing with the purported medical liability crisis through various reforms, including interventions in the tort laws applicable in the respective states, reforms related to the information on the quality of medical care and its

³⁸ See *supra* note 5.

³⁹ For more details about MCOs market structure, operation and regulation, see: Arlen & MacLeod, *supra* note 3, at pp. 1940-1961; Arlen & MacLeod, *supra* note 13, at pp. 497-503; Arlen, *supra* note 10, *ibid*; Sage, *Managed Care's Crimea: Medical Necessity, Therapeutic Benefit, and the Goals of Administrative Process in Health Insurance*, *supra* note 10, *ibid*; David M. Studdert, William M. Sage, Carole R. Gresenz & Deborah R. Hensler, *Expanding Managed Care Liability: What Impact on Employment-based Health Coverage?*, 18 HEALTH AFFAIRS (1999); Chapman, *supra* note 24, *ibid*.

oversight and interventions in the structure of the medical liability insurance market.⁴⁰ Reforms of the first type usually focus on limiting medical negligence arrangements – such as medical malpractice damage caps (mainly on compensation due to pain and suffering) – which are very common in American state laws;⁴¹ limiting legal fees⁴² and shrinking the limitation period in medical negligence suits,⁴³ such as the requirement to prove negligence through expert testimony⁴⁴ and setting standards for selecting the expert witness, the requirement for pre-trial screening of groundless claims through a medical panel or a mediation mechanism,⁴⁵ and setting alternative dispute resolution mechanisms, or ADRs.⁴⁶

⁴⁰ For federal and state reforms performed in the fields of torts for medical liability, information about and oversight of medical treatment's quality and the structure of the market for medical liability insurance, see the references at *supra* note 9.

⁴¹ See, for example, Okla. Stat. Ann., Title 63 § 1-1708.1F; Va. Code Ann., § 8.01-581.15. For a review on that issue, see, Nordman, Cermak & Mcdaniel, *supra* note 9, at pp. 45-48; PEGALIS, *supra* note 5, Vol. 2, at pp. 297-304; Zisk, *supra* note 9, at pp. 8-14. For a summary of the claims that was raised in the academic literature for and against medical malpractice damage caps, see Zeiler, *supra* note 37, at pp. 387-388. For a summary of the mixed empirical evidence on the influence of medical caps on medical malpractice insurance premiums, see *ibid*, at pp. 391-394.

⁴² See, for example, California Business and Professions Code, § 6146. For a review on that issue see: Nordman, Cermak & Mcdaniel, *ibid*, at pp. 53-54; PEGALIS, *ibid*, Vol. 2, at pp. 310-311; Budetti & Waters, *supra* note 9, at pp. 9-10.

⁴³ See, for example, Consolidated Laws of New York, CPLR § 214A; Code of Virginia, Title 12 § 521. For a national review on that issue see: PEGALIS, *ibid*, Vol. 2, at pp. 59-161.

⁴⁴ See, for example, West Virginia Code, § 55.7B.7. For a review on that issue see: PEGALIS, *ibid*, Vol. 2, at pp. 179-270.

⁴⁵ See, for example, Alaska Statutes, § 09.55.536. For a review on that issue see: Budetti & Waters, *supra* note 9, at pp. 6-7.

Two of the states which have intervened in their applicable tort laws, Florida⁴⁷ and Virginia,⁴⁸ have gone so far as to impose a partial arrangement of strict liability in medical liability suits in the obstetrics area.

Significant *federal* reform took place in the area of information about the quality of medical treatment and its oversight. This reform began with the Health Care Quality Improvement Act of 1986 (hereafter: HCQIA).⁴⁹ This act grants limited immunity to participants in the process of investigating accident events undertaken in hospitals, or "peer review", in order to encourage the implementation of appropriate investigative procedures. It also requires HMOs and insurance companies to disclose information⁵⁰ to the National

⁴⁶ See, for example, Connecticut General Statutes, Chapter 697, §§ 38a-33, 38a-36. For a review on that issue see: Nordman, Cermak & Mcdaniel, *supra* note 9, at pp. 51-53; PEGALIS, *supra* note 5, Vol. 2, at p. 179-270; Budetti & Waters, *ibid*, at p. 7.

⁴⁷ Florida's Birth-Related Neurological Injury Compensation Act, Fla. Stat. §§ 766.301-766.316.

⁴⁸ Virginia Birth-related Neurological Injury Compensation Act, Va. Code Ann. §§ 38.2-5000.

⁴⁹ 42 U.S.C. § 11101. For a background and description of HCQIA, see: Susan L. Horner, *The Health Care Quality Improvement Act of 1986: Its History, Provisions, Applications and Implications*, 16 AM. J. L. AND MED. 455 (1990); Susan O. Scheutzw, *State Medical Peer Review: High Cost But No Benefit - Is it time for a Change?*, 25 AM. J.L. & MED. 7 (1999); Yann H.H. van Geertruyden, *The Fox Guarding the Henhouse: How the Health Care Quality Improvement Act Of 1986 and State Peer Review Protection Statutes have Helped Protect Bad Faith Peer Review in the Medical Community*, 18 J. CONTEMP. HEALTH L. & POL'Y 239 (2001); Notes, *The Legal Ramifications Under the Health Care Quality Improvement Act of Physicians Labeled Disruptive for Advocating Patient Quality of Care Issues*, 24 J.L. & COM. 281 (2006).

⁵⁰ 42 U.S.C. § 11131-11137. According § 11131(b) the information includes: "(1) the name of the physician ..., (2) the amount of the payment, (3) the name (if known) of any hospital with which the physician ... is affiliated or associated, (4) a description of the acts or omissions and injuries or illnesses upon which the action or claim was based, and (5) such other information as the Secretary determines is required for appropriate interpretation of information reported ...".

Practitioner Data Bank (hereafter: NPDB) created for this process and to state licensing boards on any payment resulting from written claim or judgment regarding medical malpractice. Furthermore, the act requires hospitals to report to boards of medical examiners about any professional review action, *i.e.*, steps taken to limit doctors' medical authorities or privileges in the context of disciplinary procedures against them, and to demand and receive information from the NPDB about disciplinary actions taken against doctors whenever their membership in the medical staff is being reviewed, and also once biannually. Importantly, the information stored in the NPDB about any particular doctor may be reviewed by the doctor and hospital in question, but is inaccessible to the public.

According to the United States General Accounting Office (GAO), a high rate of all private healthcare service providers in the country, but not all, buy professional liability insurance.⁵¹ Apparently, in the medical liability area, self-insurance is usually an unsuitable alternative, even for large HMOs,⁵² though some of them do opt for it. Although commercial insurers are also active in the medical liability insurance market, 60% of them are either owned or managed by doctors.⁵³ The non-commercial organizations include independent or statutory collateral sources. The collateral source rules differ from state to state, but in one common arrangement, a state fund is being established for surplus compensation of patients who've suffered from negligent medical treatment; in order to participate in this arrangement,

⁵¹ United States General Accounting Office, *Report to Congressional Requesters: Medical Malpractice - Implications of Rising Premiums on Access to Health Care*, GAO-03-836 8-9, 25-26 (2003) available at <http://www.gao.gov/new.items/d03836.pdf>.

⁵² Nordman, Cermak & McDaniel, *supra* note 9, at pp. 9-10.

⁵³ See: United States General Accounting Office, *supra* note 9, at p. 6; United States General Accounting Office, *Report to Congressional Requesters: Medical Malpractice - Implications of Rising Premiums on Access to Health Care*, GAO-03-836 8-9 (2003) available at <http://www.gao.gov/new.items/d03836.pdf>.

HMOs are required to buy medical insurance policies and to pay the fund an annual premium.

2. Suggested Reforms

As mentioned above,⁵⁴ President G.W. Bush's administration has been attempting to enact federal legislation imposing limits on the medical negligence arrangement, including limiting non-financial damages to a ceiling of 250,000 dollars, limits on legal fees, shrinking the limitation period to three years following the event or one year following its discovery, and limits on the award of punitive damages. There are also various additional suggestions⁵⁵ for both federal and state reforms in the area of medical liability, including, for example, federal legislation granting financial incentives to states who would agree to establish special medical liability courts, and to enact alternatives to the existing tortuous mechanism subject to federally legislated criteria.⁵⁶ Another example is the suggestion to establish a federal authority in charge of patient safety which would encourage disclosure of medical errors by HMO and require a mandatory mediation mechanism for six months before filing any normal medical negligence suits.⁵⁷ Finally, it has been suggested to expand the disclosure requirements to the NPDB.⁵⁸

⁵⁴ See *supra* note 9 and the accompanying text.

⁵⁵ Among them scholar's suggestions, inter alia, Arlen and Macleod, *supra* notes 29-32 and the accompanying text; Stein, *supra* notes 33-35 and the accompanying text; Zeiler, *supra* note 37 and the accompanying text.

⁵⁶ S. 1337, The Fair and Reliable Medical Justice Act ("FRMJA") 109th Cong. (2005).

⁵⁷ S. 1784, The National MEDiC Act, 109th Cong. (2005).

⁵⁸ H.R. 2006, The Safe Health Care Reporting Act, 109th Cong. (2005).

Chapter III: Negligence versus Strict Liability – New Insights

1. Directing Behavior

a. The Healthcare Services Market and Its Cost Structure

Our first contention is that the healthcare service provision markets suffer from a crucial problem of *hidden actions* by service providers, medical staff and HMOs. What is the hidden actions problem, in this context, and which costs does it entail?

The players in our model are the patients, the doctors and the HMOs. Patients have incomplete information about the appropriate treatment they should receive in each case and about each practitioner's professional abilities. They also have incomplete information about the quality of oversight by the HMO each doctor belongs to on the treatment they receive and on her professional expertise. Importantly, the information patients have about doctors and organizations is not always a subgroup of the complete information. Sometimes it is simply wrong, and some patients often have completely different information than that of others. This information is reflected by the doctor's or the HMO's public reputation. When the patient contracts with the doctor for treatment, the latter undertakes to provide the medical treatment required at an appropriate level. This may not be the best possible treatment. In determining the appropriate level of treatment, a key factor is the fact that the costs of upgrading to a higher level of investment in individual treatment are higher than the utility of superfluous treatment. The patient's choice of a doctor is conditioned by her reputation.

Doctors have incomplete information about the best or most appropriate treatment in each case, but they do have the tools for acquiring the information necessary to inform their patients about the treatment they require. Doctors can refine those tools through continuous review of the literature and professional courses.

HMOs may contract with the doctor as an employee – the common practice in hospitals – or hire her services as a freelance – as in MCOs. The patient contracts with the

MCOs in a long-term agreement with special provisions.⁵⁹ When the patient hires an MCO's services, or goes to a hospital for treatment, he also hires the organization's reputation for overseeing its doctors. HMOs, including hospitals, also have only incomplete information about the doctor's investment in professional up-to-datedness, although it is safe to assume that it is much more complete than the information patients have in that regard. They also have incomplete information about the quality of actual treatment, based on their doctors' professional reports. Nevertheless, given a certain investment on their part, they are capable of gathering additional information about their doctors, both regarding their investment in professional expertise and regarding actual treatments.⁶⁰

The players' strategy set. For analytical purposes, we distinguish between long-term decisions concerning the transaction between the patient and the HMO, and between the latter and the doctor, on the one hand, and short-term decisions concerning individual treatments, on the other. The patient may choose the MCO he contracts with in the long run. His considerations for doing so are based on the price and risk involved, which are in turn assessed considering the organization's reputation. In the short run, when the insured needs medical treatment, he chooses the practitioner, again, considering her reputation.

In the long run, the doctor may determine his personal level of investment in professional expertise through continuous up-datedness and conferences or courses. In the short run, when a specific patient contacts her for treatment, she may select her level of investment in acquiring the information needed to ensure an appropriate medical diagnosis.

⁵⁹ See *supra* note 39 and the accompanying text.

⁶⁰ In the basic model presented in the article, the medical institute is the MCO. We also discuss the case where the doctor is an employee of a hospital, that receives patients for medical treatment, and the MCO pays the hospital for its services. The accepted outcome is not different.

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The HMO, in turn, selects its level of investment in overseeing doctors. First, it has to decide how much to invest in assessing the doctor's quality when contracting with her over the long run. Second, it has to decide on the appropriate level of investment in assessing the quality of medical treatment she provides each patient over the short run, and also on both the short- and long-term allocation of resources for medical treatments. In the long run, HMOs choose the treatment methods to be applied, and in the short run, they decide whether to approve medical recommendations concerning particular treatments.

Accordingly, the possible game moves are as follows. In the long run, the patient chooses to contract with an MCO, the MCO chooses the appropriate level of investment in assessing the quality of each doctor with which it contracts, following which, the doctor chooses her level of investment in professional expertise over the contract period while the MCO selects the appropriate level of investment in overseeing the doctor and the quality of her treatments. In the short run, the insured patient selects the practitioner among those employed or hired by the MCO. In turn, the practitioner chosen selects her level of investment in medical diagnosis while the MCO chooses the appropriate level of investment in assessing the quality of treatment provided by the doctor for each patient, and also decides whether to approve her treatment recommendations.

*The players' payoffs.*⁶² The patient makes his choices so as to maximize his personal

⁶¹ After the doctor acquired the necessary knowledge, she performs the diagnostic and advises the patient of the treatment he should receive. The patient has the right not to accept the recommendation but usually he consent to the offered treatment. In the basic model presented in the article, the assumption is that the doctor's suggestions lay in the range where the patient can not observe any differences between them, so that he consent to the offered treatment.

⁶² For a presentation of the players' payoffs in the game in the short run, see *infra* Appendix A. For a presentation of the players' payoffs in the game in the long run, see *infra* Appendix B.

welfare ($W_p(Q,P)$). The patient's personal welfare depends on the quality of medical treatment. The higher the levels of the doctor's investment in acquiring medical expertise, in the long run, and in treating the patient himself, in the short run, the greater the patient's personal welfare. Moreover, the higher the level of the MCO's investment in overseeing its doctors, the greater the patient's personal welfare. Appropriate investment by the doctor in treating the patient in a specific case is not a sufficient condition for maximizing his welfare, because the patient's welfare also depends on choices made by the MCO. When the MCO does not invest optimally in selecting doctors with appropriate expertise or in overseeing their continuous professional up-datedness, and when it underinvests in assessing the quality of treatment provided by the doctor in a specific case, it is liable to take inappropriate decisions regarding the allocation of resources for this particular treatment. The patient's welfare would also be compromised if, in the long run, a HMO would choose to invest in inappropriate treatment methods or, in the short run, would invest optimally in overseeing the doctor but deliberately choose not to approve her recommendation to provide the particular patient with a certain treatment and to opt for a less effective one, which is naturally also less expensive.

Importantly, the patient's own choices are based on his personal assessment of the expected level of medical care. When the patient needs to decide which MCO to contact in the long run, or which doctor to choose in the short run, he assesses the expected level of medical care given the reputation of the HMO or doctor in question: the better the reputation, the higher the expected quality of treatment. Finally, the patient's individual welfare also depends on the premium charged by the MCO.⁶³

The doctor's long-term decisions on the level of investment in professional expertise

⁶³ The search cost in the long run for MCO and in the short run for a doctor are relatively small, and the assumption in the article is that they do not affect the phenomena described in the model.

affect her reputation, both as perceived by the public at large and as perceived by the HMO in which she is employed. The public has only incomplete information on her investment in expertise and its effect on her professional capabilities, so that any change in the doctor's public reputation only partially reflects her professional progress. The HMO also has incomplete information regarding these matters, but it is more complete than the public's. Thus, the doctor's reputation as perceived by the HMO may be better or worse than her public reputation. Nevertheless, the HMO also takes her public reputation into account. In her long-term decisions, the doctor seeks to maximize the value of her reputation,⁶⁴ minus the costs of maintaining professional expertise ($W_{dl}(R_d, C_{dl})$). These costs include both the direct costs of professional training and indirect costs as a result of losing income and leisure time. The doctor makes her short-term choices in order to maximize the value of her reputation plus her incomes from medical treatment, minus the costs of investment in acquiring the information required to reach the correct medical diagnosis ($W_{ds}(R_d, C_{ds})$). It is safe to assume that the direct costs of acquiring information are very low and borne by the HMO by which the doctor is employed, while the main cost to the doctor is the loss of time and potential income due to giving up the option of treating other patients, or leisure time.

Similarly, in its long-term decisions, the HMO seeks to maximize the value of its reputation plus its (immediate) income in the form of healthcare insurance premiums, minus the costs of assessing the doctor's quality when contracting for her services in the long run and during the contract period, minus the costs of investment in the resources required for medical treatments ($W_{MCOI}(R_{MCO}, C_{MCOI})$).

The development of the doctor's and MCO's reputations is a significant element in the

⁶⁴ The reputation's value that weights reputation's value in the eyes of the public and of the medical institutions.

model.⁶⁵ The reputation of either, as aggregated up to the moment when the patient decides to adopt a certain strategy (R_0), is the probability as assessed by the patient, or his belief, that the doctor or HMO would undertake the appropriate medical action ($p(a_2)$). This reputation, in turn, depends on the quality of professional knowledge and resources available to the doctor or HMO and their history of medical successes and failures. Success means that in a previous case, the doctor or MCO undertook the appropriate medical action, and vice versa.⁶⁶

The patient has a certain belief regarding the doctor's or MCO's future behavior, which is their reputation aggregated hitherto (R_0). The patient believes that the probability the doctor or MCO would exert the optimal level of effort in a certain action equals to her or its reputation ($p(a_2)=R_0$). He also believes that there is a certain probability that the doctor or MCO would exert a lower-than-optimal level of effort ($p(a_1)$). Since he doesn't believe either of them would exert a higher-than-optimal level of effort, we find that the probability (as perceived by the patient) for either the doctor or the MCO to exert a low level of effort is: $p(a_1)=1-p(a_2)-p(a_3)=1-R_0$.

The doctor's and the HMO's reputations vary with the insured's assessment of their investment in expertise and appropriate resources, and also with the latter's assessment of their success rate. These variables cannot be assessed with complete certainty. Thus, the insured base their assessments of the doctor's effort level on information on medical failures gathered from various sources, including media reports. If reliable information is disclosed

⁶⁵ For an analysis of the medical malpractice's legal arrangement focused on the many influences of physician reputation on the society, see Sage, *Reputation, Malpractice Liability, and Medical Error*, *supra* note 10, *ibid*.

⁶⁶ For a presentation of the concept of doctors' and MCOs' reputation development in mathematical terms, see *infra* Appendix C.

about inappropriate actions taken by a certain doctor, actions which should have been discovered by her employing organization, both the doctor's and the organization's reputation will certainly be compromised. If the doctor is only suspected of malpractice and the organization is suspected of lack of supervision, the insured would assess the results of the action in question – the more severe the consequences of the treatment, the greater their tendency to assume that they result from inappropriate actions by the doctor and lack of oversight by the HMO.

b. The Equilibrium and a Discussion of the Roles Played by Reputation and the Law in the Model

In the short run, the patient has to decide which doctor to contact in order to receive treatment, while the doctor has to decide on the level of her investment in treating the patient. The fundamental problem in this transaction is that *ex post facto*, the patient has no way of knowing whether the doctor acted optimally or provided substandard treatment. The doctor's *modus operandi* is thus *hidden action*. The patient cannot formulate a contract with such an incentive structure so as to motivate the doctor to act optimally. There are several reasons for that, including the patient's inferior position in the negotiation and the high cost of negotiation time. But even assuming the patient is able to conduct a virtually costless negotiation with the doctor, and that he is not unconscious, such an incentive structure is *objectively impossible*. It is quite possible in other areas; in order to solve the hidden action problem in the conduct of directors, they may be offered percentages of the company's profits. In our case, however, when the treatment results are revealed, they cannot be used to assess the doctor's conduct. If the treatment failed, there is some probability that it failed as a result of negligence. Conversely, there is also a certain probability that the doctor exerted the appropriate level of effort and failed nonetheless.

The resulting problem is a *moral hazard* problem,⁶⁷ created "where one party to a transaction [in our case – the doctor] may undertake certain action that (a) affects the other party's valuation of the transaction [in our case – the patient's valuation of the transaction] but that (b) the second party cannot monitor/enforce perfectly".⁶⁸

The doctor's compensation structure cannot therefore solve the problem. The fact that the doctor is usually paid by a HMO may even exacerbate the problem. When the organization in question is a MCO, it has an incentive to cut costs and therefore determine a contractual regime wherein the doctor receives a fixed payment for each patient, providing the doctor with a disincentive to invest excessive time in each patient. Thus, the fact that the doctor's welfare is also affected by her reputation – which reflects her long-term income potential – is crucial. However, the fact that the doctor has reputation which may be compromised by inappropriate action is insufficient to resolve the problem, since if the action is *hidden* her reputation is actually not risked at all, assuming – as we have above – that the treatment results are not necessarily indicative of her actions. A moral hazard problem thus ensues, so that any doctor chosen by the patient cannot be reliably trusted to provide the appropriate treatment.

⁶⁷ Not every *Hidden Action* problem is a *Moral Hazard* problem, and vice versa. For a theoretical illustration of a *Hidden Action* problem leading to a *Moral Hazard* problem, see DAVID M. KREPS, A COURSE IN MICROECONOMIC THEORY 577-624 (1990); ERIC RASMUSEN, GAMES AND INFORMATION: AN INTRODUCTION TO GAME THEORY 161–210 (3rd ed., 2001); IAN MOLHO, THE ECONOMICS OF INFORMATION: LYING AND CHEATING IN MARKETS AND ORGANIZATIONS 60-184 (1997).

⁶⁸ KREPS, *ibid*, at p. 577. For similar definitions of Moral Hazard, see: ROBERT S. PINDYCK & DANIEL L. RUBINFELD, MICROECONOMICS 606 (5th ed., 2001) ("In general, moral hazard occurs when a party whose actions are unobserved affects the probability or magnitude of a payment"); ROGER B. MYERSON, GAME THEORY – ANALYSIS OF CONFLICT 263 (1991) ("The need to give players an incentive to implement recommended actions can be called moral hazard").

Another incomplete information problem created in the model is the *adverse selection* problem,⁶⁹ resulting from “where one party to a transaction [in our case – the doctor] knows things pertaining to the transaction that are relevant but unknown to the second party [in our case – the patient]”.⁷⁰ Here, the doctor is aware of her skills, based on her professional training and success rate. The patient not only has incomplete information regarding those skills, but may also have wrong information. He has no objective means of assessing the doctor's so that the choice between doctors cannot take all relevant data into account. Hence the collapse of the doctors' incentive to keep optimally up to date: they pay the full price of professional up-to-datedness but receive only part of the return, since the market cannot acknowledge its complete value.

The doctors' contractual relationship with MCOs constitutes a partial mechanism for resolving the incomplete information problems described above. Together with the latter's role as a medical insurance provider, including financing the activities in the healthcare market, the MCO also has a medical role in this relationship. The MCO has economic incentives to promote the research and development of optimal medical procedures, to hire the services of expert doctors, to see to their professional training and to oversee the quality of treatment they provide. However, the actions undertaken by the HMO in order to supervise its doctors are *also hidden*, so that the *moral hazard* problem *isn't solved*: even after the fact,

⁶⁹ For a game theory's discussion of the *Adverse Selection* problem and for the distinction between moral hazard and adverse selection, see: KREPS, *ibid*, at pp. 577-578, 625-660; RASMUSEN, *supra* note 67, at pp. 211-239; MOLHO, *supra* note 67, at pp. 17-59.

⁷⁰ KREPS, *ibid*, at p. 57. For similar definitions of *Adverse Selection*, see: PINDYCK & RUBINFELD, *supra* note 68, at p. 598 (“Adverse selection arises when products of different qualities are sold at a single price because buyers or sellers are not sufficiently informed to determine the true quality at the time of purchase”); MYERSON, *supra* note 68, *ibid* (“The need to give players an incentive to report information honestly can be called *adverse selection*”).

the patient cannot assess the level of oversight applied in practice.

Hiring an MCO's services also inherently entails hiring its reputation. However, just like the doctor, the MCO does not really risk its reputation when inappropriately overseeing doctors or deciding to provide less costly and substandard treatments in specific cases. This is due to the above-mentioned fact that treatment results are not directly indicative of the level of oversight or treatment quality. Therefore, from the patient's point of view, both the doctor and the HMO cannot be shown to be compromised as a result of opting for the less costly options. Thus, their commitment to provide proper medical treatment or optimally oversee the quality of medical treatment is unreliable, and the patient would not be willing to pay the price demanded for quality treatment by the doctor and the MCO or to pay for quality oversight. On the other hand, it would not be worthwhile for the doctor and MCO to invest in quality treatment and oversight since they bear their full cost without reaping their full benefits.

Similarly, the equilibrium in the long-term market is subject to the same informational problems, which are fundamentally moral hazard problems: the doctors' choice of level of investment in professional expertise affects the quality of treatment provided to the patients, but can hardly be assessed by them. The same is true for the HMO's decision on how much to invest in assessing the doctor's quality when contracting for her services and during the contract period, and on how much to invest in medical resources. Again, the doctors' and the MCOs' reputation isn't completely compromised following any decision to prefer suboptimal investment (cut costs) over optimal investment (maintain quality). Knowing therefore that the doctors and MCOs cannot be trusted to undertake optimal actions, the patients would not be willing to pay the MCOs for the full value of optimal medical service. Consequently, the MCOs would only be able to charge a partial price for their services, and would be unable to provide optimal services.

Therefore, both doctors and HMOs should be held legally liable. In this model, the

law could play a crucial role in resolving the issue. Holding both the doctor and the HMO liable may contribute to revealing both parties' *modus operandi* thus conveying valuable information to the market, which could not have been conveyed otherwise. This information or oversight solves the incomplete information problems, the moral hazard and the adverse selection problems.

Without the existence of a reputable HMO overseeing the provision of medical services, it would be difficult to convince the patients that the doctors indeed invest appropriately in professional training and in the particular medical treatment, since the doctors stand to gain much from underinvestment. When the MCO harnesses its reputation to resolving the incomplete information problems, it is easier for the law to achieve their complete resolution. In a market where the customers cannot tell precisely enough how each set of actions would affect the MCO's reputation, there are several possible equilibria. One of them is the equilibrium in which the MCO invests optimally in selecting and overseeing its doctors and in specific medical treatments, while the patients pay the full value of optimal medical care. Here, the law operates in two ways. *First*, it deters service providers from opting for suboptimal actions by increasing their cost. *Second*, it can formulate a *convention*⁷¹ regarding the strategy undertaken by the HMO. Such a convention may prove to be a significant contribution (which may even constitute a sufficient condition) for preferring the game play leading to the desirable equilibrium. In practice, the MCO uses this legal convention to convince the patients that it would indeed undertake the optimal actions and thus ensures a real price for quality medical services, as well as the socially desirable

⁷¹ KREPS, *ibid*, at pp. 410-413, 449-451. See also, Fieke Van der Lecq, *Conventions and Institutions in Coordination Problems*, 144 DE ECONOMIST 397, 401-410 (1996); H. Peyton Young, *The Economics of Convention*, 10 J. ECON. PERSP. 105, 107 (1996); Hans Van Ees & Harry Garretsen, *Existence and Stability of Conventions and Institutions in a Monetary Economy*, 28 J. ECON. BEHAV. & ORG. 275, 283-287 (1995).

result.

Now, given that the MCO selects its doctors optimally, assesses their professional training over the long run and oversees their particular actions optimally, doctors have much greater incentives to invest optimally in professional training and specific treatments. They now know that they would be caught if they chose suboptimal treatment, their benefits from inappropriate investment would erode, and they might even lose their job. Therefore, suboptimal investment would become much less worthwhile. In this situation, the law would also have to exert less effort to persuade doctors to act optimally.

c. Why Opt for Negligence (rather than Strict Liability?)

The negligence rule conveys more of the information required by the market in order to resolve its inherent incomplete information problems – the moral hazard and adverse selection problems. It optimally serves this legal function by creating a mechanism motivating both parties to any potential damages suit to invest in seeking and assessing the information they require in order to file the suit or defend against it. Importantly, the negligence rule ensures a very high correlation between the information required for filing and defending against legal suits, on the one hand, and the information required by the market, in general, to resolve its inherent moral hazard and adverse selection problems: the judicial process requires both parties to disclose the relevant information. Moreover, any negligence claim requires the court to inquire into questions relevant for conveying the information required by the market. During the trial, the court would inquire whether the doctor acted optimally,⁷² including maintaining professional expertise,⁷³ and whether the

⁷² For a discussion of the legal questions regarding physician and surgeon liability and for references to courts rulings on those questions, see, for example, PEGALIS, *supra* note 5, at pp. 119-279.

⁷³ For a discussion of the physician and surgeon duty to keep abreast of medical knowledge and for

MCO acted optimally,⁷⁴ including the selection of appropriate medical gear, maintaining an appropriately skilled medical staff, overseeing the medical staff and determining appropriate medical procedures.⁷⁵ The court would expose the routine work methods of the doctor and her employing organization and particularly, their actions pertaining to the case in question. Thus, *through the negligence mechanism, the court would convey invaluable information to the market, focused on disclosing the hidden actions and qualities of both the doctor and the HMO.* Now, when the market "knows" that such information would one day be disclosed, it would be able to rely on presentations by the doctor and the MCO *ex ante* and trust them to act optimally. Conversely, *the strict liability mechanism dispenses with those inquiries and therefore conveys much less information to the market.* Without the information or a reliable threat that the information will eventually be conveyed to the market, the equilibrium in which the public relies *ex ante* on the doctor's and HMO's presentations to the effect that they have acted optimally will simply not exist.

The development of medical science and equipment. Informational failures prevent patients from assessing the suitability and scientific up-to-datedness of medical methods used by the doctors and HMOs and from assessing the rate at which the HMO purchases

references to courts rulings on this issue, see, PEGALIS, *ibid*, at pp. 246-247.

⁷⁴ For a discussion of the legal questions regarding hospital liability and for references to courts rulings on those questions, see, for example, PEGALIS, *supra* note 5, *ibid*, at pp. 529-615. For a discussion of the legal questions regarding MCOs liability, see the references at *supra* note 39 and the accompanying text.

⁷⁵ For example, in *Brodowski v. Ryave*, 2005 PA Super 354, 885 A.2d 1045 (2005), the Superior Court of Pennsylvania held that a hospital is directly liable under the doctrine of "corporate negligence" if it fails to uphold any one of the following four duties: "(1) a duty to use reasonable care in the maintenance of safe and adequate facilities and equipment; (2) a duty to select and retain only competent physicians; (3) a duty to oversee all persons who practice medicine within its walls as to patient care; and (4) a duty to formulate, adopt and enforce adequate rules and policies to ensure quality care for the patients". *ibid*, at p. 1056.

innovative medical instruments. The negligence rule not only makes it possible for the law to prevent specific medical errors of selecting inappropriate medical treatments or equipment. Crucially, it also provides doctors and HMOs with an incentive to adjust their medical procedures and equipment *over time* so as to reflect scientific progress or to reassess the appropriate medical instruments. The courts lack powerful tools to evaluate this continuous adjustment process. Nevertheless, when the applicable rule is the negligence rule, the courts are able to ensure that such adjustment is in fact taking place. On the other hand, the strict liability rule does not allow this, as it provides doctors and HMOs no incentive to adjust their procedures and equipment in accordance with scientific and technological progress.

The role played by the doctor's and HMO's reputations. Our discussion of the role played by the doctor's and HMO's reputations showed that they constitute a market instrument, albeit insufficient, for solving the market's inherent moral hazard and adverse selection problems. In addition, being held liable increases the threat to reputation and thus complements the deterrence strategy vis-à-vis the doctor and HMOs, which in turn, resolves the remaining moral hazard and adverse selection problems. Hence, the negligence mechanism is more efficient than the strict liability mechanism in that it helps markets take better advantage of the reputation factor. First, the negligence mechanism poses a direct threat to the medical players' reputation. Conversely, the strict liability mechanism attempts to create deterrence while hardly attempting to harness the reputation factor. The effect of negligence on the market – through reputation – may be described as taking advantage of a *positive externality* on the market, while the effect of strict liability can be seen as dispensing with or neutralizing an existing positive externality. Second, the negligence mechanism better assists the doctor and HMO to develop reputation which would serve, in the future, as a stronger means of solving the moral hazard and adverse selection problems. The fact that the doctor's or the HMO's reputations are threatened under a negligence rule allows the market to assign greater value to successful treatments. In other words, the more data are accumulated

on medical successes and failures, the more precise the market's evaluation of reputation. Thus, in the future, the market would be able to rely on the positive reputation created under a negligence rule better than on that created under a strict liability rule. The resulting enhancement of the reputation's efficiency in solving the existing incomplete information problems would enable the law to intervene more effectively to solve the remaining problems.

Negligence contributes to the creation of an additional, impartial and reputable oversight mechanism. The market mechanism's attempt at solving its inherent informational problems on its own relies on creating a mechanism of oversight by the HMO on the doctors. Holding both doctors and HMOs liable adds the court to the game, as a reputable oversight mechanism. A negligence rule allows society to make maximal use of the court's oversight capability and also allows the court, over the long run, to establish reputation based on experience in overseeing medical procedures. On the other hand, a strict liability rule prevents the court from applying all of its oversight capability and does not require it to refine its oversight tools and to establish reputation in that regard. Importantly, the court represents a unique type of oversight mechanism as it is impartial. Although the court cannot, of course, be said to constitute a completely disinterested player, it is clear that unlike the HMOs – whose role as overseers may be tainted with conflicts of interest stemming from their economic interests – the interests it *does* represent are very much in line with the public interest.

The incentive to disclose particular types of information. When the applicable rule is strict liability, the HMO has no incentive to invest in oversight in cases where the chance for medical accident to be discovered, or when the chance for its discovery to be interpreted as an indication of unprofessional conduct by the doctor and the HMO is negligible. Strict liability allows the HMO to dispense with oversight in areas where the potential socioeconomic cost of oversight is lower than its benefit; however, in those cases, relatively

few suits are filed, so that the cost of oversight is actually higher than the cost of deterrence through legal suits. These areas are also difficult to monitor through the insurance companies' risk-management mechanism, since the insurers' incentive to provide oversight in those areas is very weak. A negligence rule allows the court to deal even with those types of cases, despite their relative rarity, and prevents the HMOs from neglecting them *en masse*. Repeated affirmation by the courts that a certain area does indeed suffer from comprehensive neglect can be dealt with through negligence suits, but will not be diagnosed as such at all under a strict liability rule.

The relationship between different types of behavior directing mechanisms. Beside the civil mechanism of filing medical liability suits, criminal and quasi-criminal (disciplinary) mechanisms also attempt to direct the doctors' and HMOs' behavior. The various mechanisms feed back into one another. When a patient discovers that a certain HMO was negligent in his case, criminal or quasi-criminal proceedings may be initiated. Thus, the patient's investment in seeking and assessing such information offers additional social benefits in terms of savings in information seeking and assessment efforts by the state and those benefits derived from the activation of the state enforcement system. The patient often has a significant advantage over the state in seeking information regarding medical errors. In other cases, it is state authorities that have the advantage. In some cases of deaths due to medical errors, for example, the heirs are unaware of circumstances relevant to a potential malpractice suit. A negligence rule serves the feedback mechanism between the various behavior-directing mechanisms mentioned above since information gathered by individuals for the purpose of filing civil suits is also relevant to criminal and quasi-criminal proceedings, while information collected and assessed by state authorities is relevant to civil suits. Any incomplete information collected by individuals for the purpose of filing a civil suit under a strict liability rule can hardly serve such a purpose, since this information is almost irrelevant to proceedings initiated by state authorities.

Standardization. In view of the moral hazard and adverse selection problems inherent to the healthcare market, it is crucially important for doctors and HMOs to employ identical or very similar medical procedures. Standard medical methods allow for relatively low-cost transfer of medical services, learning from previous cases in other organizations, and even comparison among doctors and HMOs by the patients themselves. Such comparison contributes to the resolution of the moral hazard and adverse selection problems, since the patients cannot objectively assess the medical procedures undertaken. Had the patients been able to contract with all doctors and HMOs at negligible cost, they would have required them to maintain standard medical methods, so as to allow the patients to better understand their practitioners' recommendations, thus ensuring true informed consent. Moreover, such standardization would allow the patients to carry out optimal comparison among HMOs and would enable smoother transfer of medical services so that valuable information would be better distributed throughout the healthcare system. According to this argument, the law would contribute to the enforcement of standard procedures since by themselves, doctors and HMOs do not have coordination incentives, and are sometimes even motivated to digress from the standard method.⁷⁶ A free-rider problem, for instance, crops up when hospitals consider whether to invest funds necessary for the adoption of a novel treatment. Each would prefer another hospital to invest the necessary funds, and to learn from another's experience, in order to decide whether the change is worth its while. Each hospital thus has an incentive to delay the adoption of advanced methods. *A negligence rule optimally assists the law in reducing costs resulting from lack of standardization*, as it creates an incentive for

⁷⁶ For a similar argument regarding the law's role of standardization in another context, see: FRANK H. EASTERBROOK & DANIEL R. FISCHER, *THE ECONOMIC STRUCTURE OF CORPORATE LAW*, 290-292, 300-302 (Harvard Univ. Press, 1991); Edward Rock, *Securities Regulation as Lobster Trap: A Credible Commitment Theory of Mandatory Disclosure*, 23 *CARDOZO L. REV.* 675 (2002).

standardization. This incentive is created thanks to the fact that occasionally, courts disclose the *modus operandi* of doctors and HMOs, including their investment in keeping up to date with scientific and technological developments. A negligence rule requires the courts to review the appropriate medical procedures from time to time, thus serving as a coordination mechanism among HMOs. A strict liability rule, however, does not create an incentive for standardization.

Developing risk-management mechanisms. Insurance companies have a critical role to play in directing their insured's behavior. Not only do they provide insurance services, but they also act as an additional *oversight* mechanism, better known as a *risk-management* mechanism. A negligence rule provides HMOs and liability insurance companies stronger incentives to develop risk-management mechanisms. It conveys more information not only to patients and HMOs but also to the insurers, allowing the latter to better oversee the doctors and HMOs and also achieve the additional legal objective of risk distribution with greater efficiency.

2. How the Negligence Rule Ensures More Efficient Risk Distribution and an Efficient Liability Insurance Market

The existence of insurance against medical liability suits has significant effects on social welfare.⁷⁷ Buying liability insurance allows HMOs to substitute a premium for the high risk of medical liability litigation and thus tremendously increase their budgetary planning efficiency. Liability insurance assigns the risk distribution management, including the litigation management, to experts, and this is also very advantageous.

⁷⁷ For an investigation of insurance's effects on social welfare, see, for example, STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW*, *supra* note 14, at pp. 186-261; ROBERT H. JERRY, II, *UNDERSTANDING INSURANCE LAW* 17-19 (3rd ed., 2002).

What is the relationship between the advantages offered by liability insurance and the negligence rule? Earlier in this chapter, we claimed that the richer information conveyed to the insurance companies thanks to the application of a negligence rule in medical liability suits increases the efficiency of the insurance mechanism's oversight on the insured, so as to better direct their behavior. In other words, the existence of liability insurance (also) has a positive effect on the behavior of market players, which is more significant when the applicable rule is negligence, rather than strict liability.

The applicable liability rule has additional socioeconomic effects, one of which is its effect on the achievement on another important legal objective – damage distribution.⁷⁸ Why, then, is it better to opt for a negligence rule, rather than a strict liability rule, in order to ensure damage distribution?

The efficiency of damage distribution is compromised due to the market's inherent incomplete information problems. The efficiency of damage distribution through liability insurance depends on the insurer's ability to assess the optimal level of care required of potential injurers – doctors and HMOs. When the optimal level of care cannot be overseen by the insurer, the liability insurance market can be said to have a moral hazard problem. After having paid the premium, the insured do not have an incentive to undertake optimal precautions since the risk is borne by the insurance company, which is incapable of overseeing them. Two consequences ensue: *first*, the mechanism directing the insured's behavior is compromised;⁷⁹ *second*, damage distribution through insurance companies

⁷⁸ For other presentations of the differences between strict liability and negligence in the presence of liability insurance, see: SHAVELL, *ibid*, at pp. 206-227; Steven Shavell, *On Liability and Insurance*, 13 BELL J. OF ECO. 120 (1982); Shavell, *Liability for Accidents*, *supra* note 15, at pp. 7-9; Schäfer & Schönenberger, *supra* note 14, at pp. 616-617; Baharat Sarath, *Uncertain Litigation and Liability Insurance*, 22 RAND J. OF ECO. 218 (1991).

⁷⁹ Liability Insurance has several advantages, including: its ability to direct the behavior of doctors and

becomes more expensive, since they increase the price of their policies. Potential solutions for this problem can be market solutions – for example, when both insurers and insured act as repeated players who also take into account their negotiations at the beginning of the next contract period; contractual solutions – such as adding provisos to the insurance contract requiring the insured to pay deductibles; or regulatory solutions – *e.g.*, proscribing the payment of insurance benefits in case of intentional torts. As argued above, negligence also functions as a solution for the moral hazard problem, so that it can be expected not only to direct the insured's behavior more efficiently, but also to lead to a reduction in insurance premiums.

Distribution of damage due to negligent versus non-negligent errors. Non-negligent errors occur when doctors and MCOs apply optimal levels of action and care, and are inherent to medical treatment. The negligence mechanism makes it possible to distinguish reliably between negligent and non-negligent errors and to distribute the risk each type of error entails separately. Conversely, the strict liability mechanism combines those two types of errors and distributes the aggregate risk. One crucial problem here is that the confusion of those two types of risk entails high costs. This is because it is very difficult to distinguish between errors in general, be they negligent or not, and the realization of risks which are inherent to treatments completely free of any medical error. The strict liability mechanism enables us to distinguish between medical *errors*, which require compensation, and the realization of medical *risk*, which do not. The costs of making such a distinction are forbiddingly high, if it is indeed feasible at a cost which would justify the very existence of such a mechanism. On the other hand, the medical negligence mechanism requires the

medical institutes, budget planning and insurers' expertise. Shavell argued that there is no basis for regulatory intervention in liability insurance markets. Shavell, *Liability for Accidents*, *ibid*. Historically, liability insurance was perceived as a mean to escape liability and in several countries it was forbidden by law. *Ibid*, *ibid*.

distinction between negligent errors and other types of risk, at a cost which is expected to be much lower.

The most efficient insurer and types of insurance. It may be assumed that distributing the risk for medical errors through liability insurers is efficient in view of the advantages of the insurance mechanism enumerated above. One possible justification for holding doctors and HMOs, including MCOs, liable is their advantages as players who would better distribute the risk for negligent medical errors by transferring it to liability insurers, thus creating and maintaining the liability insurance market. Without holding them liable, it is reasonable to assume that patients would not buy insurance policies to protect them from medical errors, or that only relatively few patients would do so, and that doctors and medical insurance services providers would not undertake to provide such insurance protection. Holding doctors and HMOs liable gives a significant incentive to medical players to buy liability insurance policies and thus distribute the risk. Big HMOs, particularly MCOs, have a relative advantage over the other participants in the healthcare market thanks to their ability to secure the best insurance policies. Their immense economies of size ensure their ability to drive the premium prices down; they have both the knowledge and the ability to enter into the best insurance agreement with potential insurers. They are also less risk averse than other market participants. In addition, they are better able to bargain with potential insurers, and also have reputations which can be relied on to reduce insurance premiums. Finally, they also deal with questions related to negligence as part of their medical-economical role (such as the appropriate level of oversight on doctors or the efficient investment in medical technology). Crucially, however, these advantages are significant *only* when liability is imposed merely for negligent errors, rather than errors per se. The assessment of the optimal level of care when negligent errors are at stake raises complex medical, legal and economic questions; when liability is transferred from the doctor to the HMO, the effort to solve them gains much added value. This added value is due to the organization's advantages in knowledge, professionalism

and size, and the fact that it routinely deals with such questions out of medical-economical considerations. The same goes for transferring liability from the HMO to the liability insurer. On the other hand, the added value gained by transferring the inquiry into questions regarding *non-negligent* errors from the patients bearing the risk for them to their doctors, from the doctors to the HMOs and from the latter to the insurers is expected to be relatively low. The correlation between the medical-economic interests of HMOs and their dealing with questions having to do with non-negligent errors is rather low, and there is also no special expertise in conducting litigation in this particular area through insurers, of all players. Thus, the cost of any mechanism for dealing with the risks for non-negligent errors may be higher than its benefits.

3. Combined Welfare Considerations

Our main argument is that the negligence rule has greater efficiency advantages than the strict liability rule, both in reference to the legal objective of directing the healthcare market participants' behavior and from the point of view of insurance and damage distribution. At first glance, the major advantage of the strict liability mechanism is its ability to create mandatory insurance of all patients against non-negligent errors. However, this does not mean that a strict liability rule would achieve greater distributional justice than a negligence rule.

Efficiency advantages mean greater distributional justice. The greater success of the negligence rule in resolving the market's inherent moral hazard and adverse selection problems would be reflected in lower insurance premiums, better insurer oversight on medical actions and, in turn, better oversight by the HMOs on the doctors, regarding both specific medical treatments and professional training. The market's added efficiency would mean greater general welfare. Thus, it is highly probable for all market participants to gain from the application of a negligence rule: the insurers would gain from a more efficient

liability insurance market which would not partially collapse as a result of incomplete information problems; the MCOs would be able to offer policies in such a market; the doctors would be able to invest all that is required for medical treatment and continuous professional training, since in a market where incentives do not collapse, they would also be rewarded for their investment; finally, the patients would receive high-quality treatment from better doctors in medical institutions which invest optimally in selecting the appropriate medical gear, employing an appropriately skilled medical staff, supervising this staff optimally and approving appropriate medical procedures.

Efficiency advantages reduce the number of medical accident victims. Perhaps one of the most important results of maintaining a more efficient oversight mechanism, through the application of the negligence rule, is a significant reduction in the number of victims to negligent medical errors. From a distributional justice perspective, the importance of reducing of the rates of injury and death due to medical treatments cannot be overstated.

Long-term distributional justice. In the long run, applying the negligence rule allows for the improvement of both the doctors' and the HMOs' reputation, and relying on this reputation to resolve the market's inherent information problems, thus improving the efficiency of the liability rule in resolving the rest of the problems. A more sophisticated market, in the future, means greater social welfare, which in turn means greater distributional justice.

Chapter IV: Applying the Distinctions between Negligence and Strict Liability: Medical Negligence Reforms

1. The Negligence Mechanism and Required Reforms

a. Is There Need for Reforms Limiting the Negligence Mechanism?

We recommend not to entail limitations on the negligence medical liability mechanism. Several such liability limiting policies have been implemented and suggested, and are discussed below.

Reducing the risk to doctors' reputation, for example, by giving doctors *immunity* in a situation where the suit may be filed against the HMO where she is employed or against an MCO which pays for the treatment given to the insured. In our opinion, such policies are inappropriate since they undermine the resolution of the critical failure in the healthcare market – the moral hazard problems. As mentioned above, the negligence mechanism operates optimally when it harnesses the doctor's reputation for the purpose of resolving their moral hazard problem. It also contributes to the establishment of reputation over the long run. Therefore, policies intended to protect the doctor's reputation would obstruct the mechanism. Among other things, this obstruction would mean that the doctor would be less motivated to invest optimally in medical treatment and long-term professional training.

Other policies may have an *indirect negative effect* on the mechanism's operation. For example, *shrinking the limitation period* or *capping legal fees* may reduce the number of suits filed or change their composition. In the medical liability area, only few of the medical negligence victims file suits,⁸⁰ so that any further reduction in the number of suits might mean that the threat to the medical players' reputation would be weakened to an extent that would compromise the mechanism's efficiency. Furthermore, shrinking the limitation period

⁸⁰ BAKER, *supra* note 6, at pp. 68-70.

might lead to a reduction in the number of suits where damage is discovered or consolidated over a relatively long period, and thus to reduced investment by insurers, HMOs and doctors in preventing such damages.

The same goes for the controversial policy tool of medical malpractice *damage caps* – limiting compensations paid to victims, particularly for pain and suffering. Reducing compensation due to pain and suffering might mean that insurance companies and hospitals would invest relatively less in monitoring the prevention of patients' pain and suffering. Thus, the doctor would also not be rewarded fully for investing in preventing pain and suffering, and in professional training oriented specifically to that end.

b. Creating Oversight and Information Distribution Mechanisms

Since the key problems in the healthcare market are informational in nature, particularly moral hazard problems, we need to focus on policies that can attenuate their costs. The following is a brief discussion of several such policies.

Mandatory disclosure. In our opinion, the enactment of comprehensive and mandatory disclosure should be considered in the healthcare market, similarly to the mandatory disclosure applicable in the securities market. In the 1930's, following the collapse of the stock markets in 1929 and the Great Depression, the commercial and investment banks and the securities markets were subjected to an intense system of legal arrangements, including The Securities Act of 1933 and The Securities Exchange Act of 1934. This system of laws, enacted as part of President Roosevelt's New Deal, was supposed to deal with the stock-market failures which were blamed for the 1929 crash. These laws, reflecting the modern approach of limited legislative intervention wherever a market failure is identified, were supposed to cope, above all, with the incomplete information problem of investors active in the IPO and security trade markets. The disclosure principle, including the enforcement of mandatory disclosure duties, is the key solution offered by this legislation for

the incomplete information problem. This legal approach to the American securities market became the key concept of the New Deal in general, replacing the older concepts. These were, on the one hand, the traditional concept according to which it is not enough to enforce disclosure to better protect investors from interest holders in public corporations and the financial players active in the securities market, and that central intervention to ensure the quality of corporations whose securities are traded in the market is necessary. On the other hand, the concept that even intervention limited to mandatory disclosure is largely unnecessary and costly, since the market would operate efficiently even without any intervention.⁸¹

Accordingly, we suggest examining whether the full and adequate disclosure principle should be applied also to the regulation of healthcare markets. To do so, we suggest to inquire into all the key components of the mandatory disclosure laws, including the establishment of a central authority, such as the Securities and Exchange Commission (SEC),⁸² the formulation of mandatory disclosure duties in the framework of regulation mandating various report requirements and enforcing them criminally, quasi-criminally and administratively, and through special torts and civil litigation.⁸³

⁸¹ For a review of the evolution of the American securities regulation, of the principles of its foundations and of competing philosophies, see LOUIS LOSS, JOEL SELIGMAN & TROY PAREDES, *SECURITIES REGULATION*, Vol. I, 254-325 (4th ed., 2006).

⁸² See *ibid.*, at Vol I, pp. 432-481.

⁸³ For a telescopic preview of the SEC statutes, see *ibid.*, at Vol. I, pp. 326-425. For a more detailed discussion of the reporting requirements of the SEC statutes, see LOUIS LOSS & JOEL SELIGMAN, *SECURITIES REGULATION*, Vol. II, pp. 597-784 (3rd ed., 1999), Vol. IV, pp. 1849-1912 (3rd ed., 2000). For a more detailed discussion of the civil and criminal provisions of the SEC statutes, see *ibid.*, at Vol. VII, pp. 3393-3545.11 (3rd ed., 2003), Vol. VIII, pp. 3547-3807 (3rd ed., 2004), Vol. IX, pp. 4174-4277 (3rd ed., 2004), Vol. X, pp. 4773-4898 (3rd ed., 2005).

The thesis presented herein offers justification for mandating disclosure in the healthcare market. The main operative costs of the two markets compared here – the securities and the healthcare markets – are incomplete information problems, particularly moral hazard problems. In both cases, the market mechanism partially collapses as a result of these problems. In both, the market harnesses the reputation of the professional player interacting with the customers – company directors or doctors – as a partial means of resolving the incomplete information problems. In both cases, additional oversight mechanisms operate as gatekeepers – underwriters, lawyers and accountants in the securities market and MCOs in the healthcare market. The latter's reputation is also harnessed by the respective markets in order to resolve the incomplete information problems and establish a reliable oversight mechanism, and in both cases, the market mechanism does so with only partial success. In order to solve the incomplete information problems in the securities market, a comprehensive system of mandatory disclosure has been imposed and enforced. In this system, a key role is played by the mechanism of imposing negligence liability for the existence of misleading details in market participants' reports. The securities market reaps the benefits of the negligence rule in terms of creating a reliable information-transfer mechanism. The healthcare market, however still suffers from most consequences of the incomplete information failure. The solution suggested here – mandatory disclosure, in which one of the key components would be civil negligence liability – is currently inoperative, or only partly so.⁸⁴

Federal record. We further suggest the creation of a federal record listing all information relevant to ensure full and adequate disclosure in the healthcare market. This record would have to include all data relevant for resolving any incomplete information

⁸⁴ For a review of some mandatory and voluntary disclosure requirements in the healthcare market, see *supra* notes 49-50 and the accompanying text.

problem. Among other things, it must include information on successful medical treatments by each practitioner and HMO, on the continuous professional training of each doctor and about the resources acquired by each organization. This listing should detail all medical treatments provided by each doctor and by each ward or unit in each medical institution, and should also comprise information about all suits filed and legal proceedings initiated and legal decisions reached in those cases. The existing NPDB (National Practitioner Data Bank)⁸⁵ includes part of the information required for this purpose, and may be used as a basis for expanding the application of the disclosure principle as a solution for the healthcare market's existing incomplete information problems.

2. Medical Liability Insurance

a. Commercial Insurers and Funds

Some 60% of the insurers in the medical liability insurance markets are either owned or managed by doctors,⁸⁶ some of those are independent while others are statutory collateral sources. However, we believe that the thesis presented here points to the advantages of commercial insurers. Insurers play a key oversight role in the healthcare market. Since harnessing the doctor's and the HMO's reputation is not enough to resolve the market's inherent incomplete information problems, transferring the risk to the insurer creates an additional oversight mechanism, one that does *not* rely on strictly medical reputation. The use of funds owned or managed by doctors could result in irrelevant considerations in civil litigation, particularly the willingness to pay excessive damages in cases where the doctor's or the organization's reputations are at stake. As suggested here, putting the doctors' and HMOs' reputations at risk is one of the key components of proposed solution for the market's

⁸⁵ See the references at *supra* notes 49-50 and the accompanying text.

⁸⁶ See the references at *supra* notes 51-53 and the accompanying text.

incomplete information problems. Therefore, the use of *commercial* insurers, which are less sensitive to their insured's reputation, can add to the mechanism's efficiency.

b. Making the Insurance Market more Sophisticated

If we want to make the medical liability insurance market more sophisticated, establishing statutory funds in each state does not contribute to greater competition. There is no reason for the state to provide a product such as professional liability insurance, which has none of the essential characteristics of a public product. This is particularly true where a private market already supplies this product. Instead of these tools, the state can contribute to the market's sophistication through its regular antitrust laws and insurers' oversight.

3. Legal Principles Suggested for Application by the Courts

a. The Courts' Contribution to the Efficiency of Mechanisms for Resolving the Healthcare Market's Incomplete Information Problems

The thesis presented here suggests that the courts can play a key role in refining the medical liability mechanism. When the applicable liability mechanism is negligence, the court does not act solely as a mediator or as a regulator determining future norms. It also plays a central role in the mechanism for solving the market's inherent incomplete information problems, as a gatekeeper with unique capabilities. The court thus acts as an additional oversight mechanism wherein the overseer is reputed to be impartial and free of commercial conflicts of interest. Moreover, the court has tools to enforce the disclosure of documents and facts so as to allow for *ex post* review of the level of investment adopted by the defendant, in terms of medical treatment, equipment, etc. Hence, the courts may contribute more to solving the market's informational problems if they would develop and make greater use of these available tools in order to lead to the disclosure of lacking information. Formulating legal decisions such that they would convey to the market as much as possible of the information it

needs to assess the defendants' past actions would go a long way to resolve its incomplete information problems.

b. Blocking "Escape Routes"

The thesis presented here justifies further legal intervention in contractual arrangements which might substantially compromise the advantages of the negligence mechanism – for example, intervention in indemnification or participation clauses in contracts between MCOs and doctors. One option is for such contracts to be required to determine that in case of practitioner negligence compelling the MCO to compensate the patient injured thereby, the practitioner would reimburse the MCO. Another option is for these contracts to determine the parties' rate of participation in compensating the patient. In our opinion, although participation clauses are an efficient insurance tool, it is appropriate for the law to prohibit contractual arrangements exceeding conventional rates of deductible, since such arrangements largely prevent the negligence mechanism from having its described effect on the doctor's and MCO's reputations, as legal acknowledgement of such arrangements weakens the legal threat on both players' reputation. In many cases, such legal enforcement of indemnification and participation clauses may save the need for judicial inquiry into each party's actions, for example, the doctor in investing in medical treatment in question, or the MCO in purchasing appropriate medical gear. Thus, despite the expected simplification of the litigation concerning this question, when it is clear that negligence is evident in the relationship between the medical players and the plaintiff, ending the litigation without looking into each player's actions might compromise the negligence mechanism's ability to resolve the market's informational problems. Contractual indemnification and participation clauses make the discussion of liability distribution redundant, thus preventing any *ex post* inquiry into their actions and reducing the amount of information conveyed to the market, compared to the amount conveyed given full application of the tortious negligence

mechanism. It is therefore advisable for the law *not* to acknowledge contractual indemnification and sharing mechanisms between doctors and MCOs.

Chapter V: Summary

The thesis presented here focuses on the existing differences between the negligence and strict liability mechanisms. These differences reveal much about how laws pertaining to the healthcare and healthcare liability insurance markets should be designed in the future. The healthcare market currently provides some solutions for its inherent incomplete information problems, such as contributions by the practitioners' the hospitals' and the MCOs' reputations together with the operation of the negligence mechanism. These do not fully resolve the informational problems, but it is recommended for the law to support existing market mechanisms as ways of dealing with its failures, rather than undermine their operation. The negligence mechanism meets this requirement, and weakening it would reduce social welfare.

Since the healthcare market's main costs result from incomplete information, it is also appropriate to consider solutions that would act directly do reduce these costs, such as regulation modeled on the securities market and the establishment of a databank that would facilitate information flow.

The liability insurance market plays a key role, both in distributing the risk for negligent medical errors and in directing the doctors' and HMOs' behavior. Regulatory intervention in this market, such as the creation of statutory funds for compensating victims, might undermine the desirable operation of this market and reduce its positive effect on the healthcare market. As the liability insurance market suffers from no particular failures, we recommend overseeing it through existing antitrust and insurance regulation mechanisms.

Appendix A – The Game in the Short Run

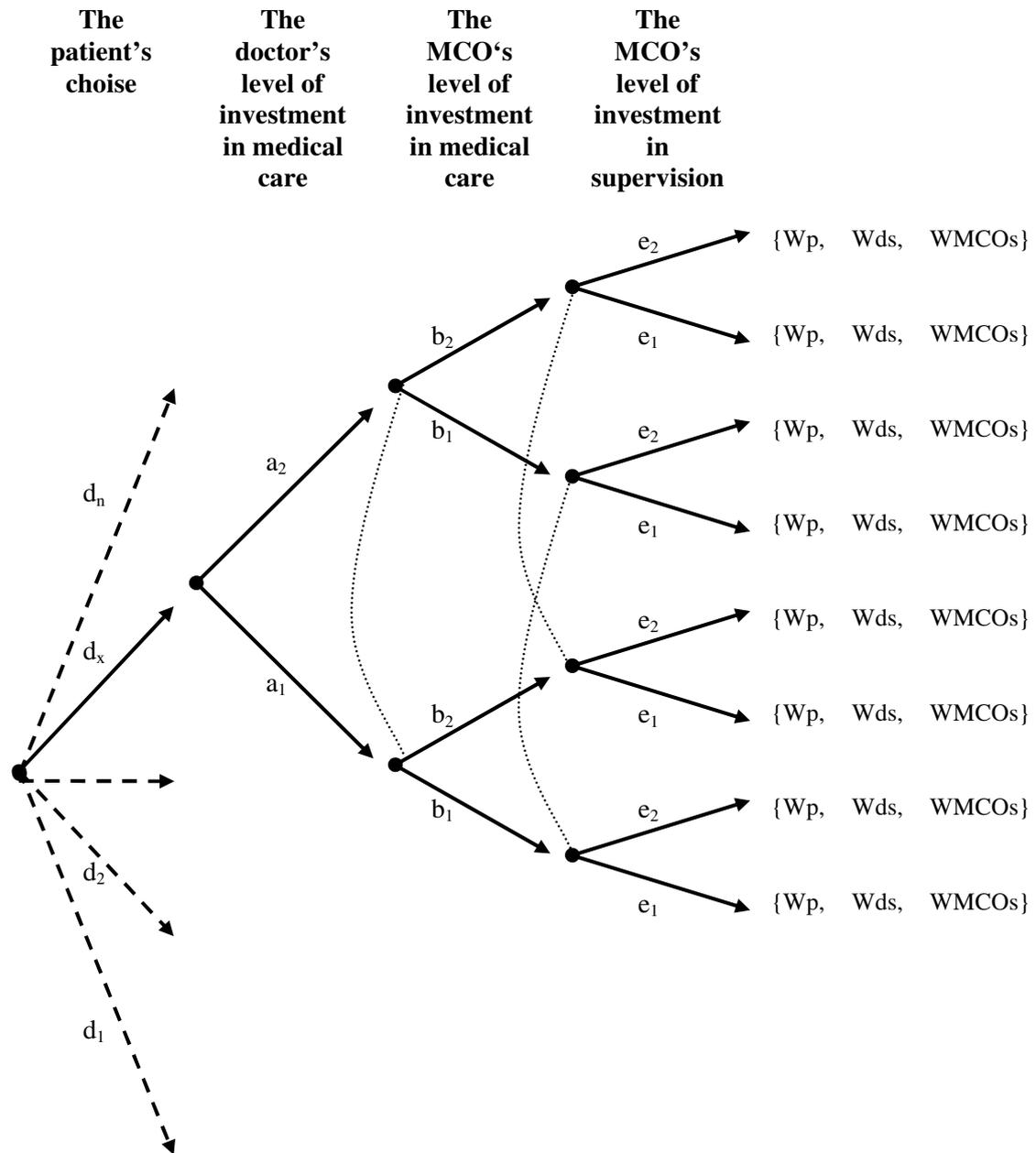


Figure 1. Doctors and MCOs reputation effects on the Moral Hazard problems in the Sort Run.

Appendix B – The Game in the Long Run

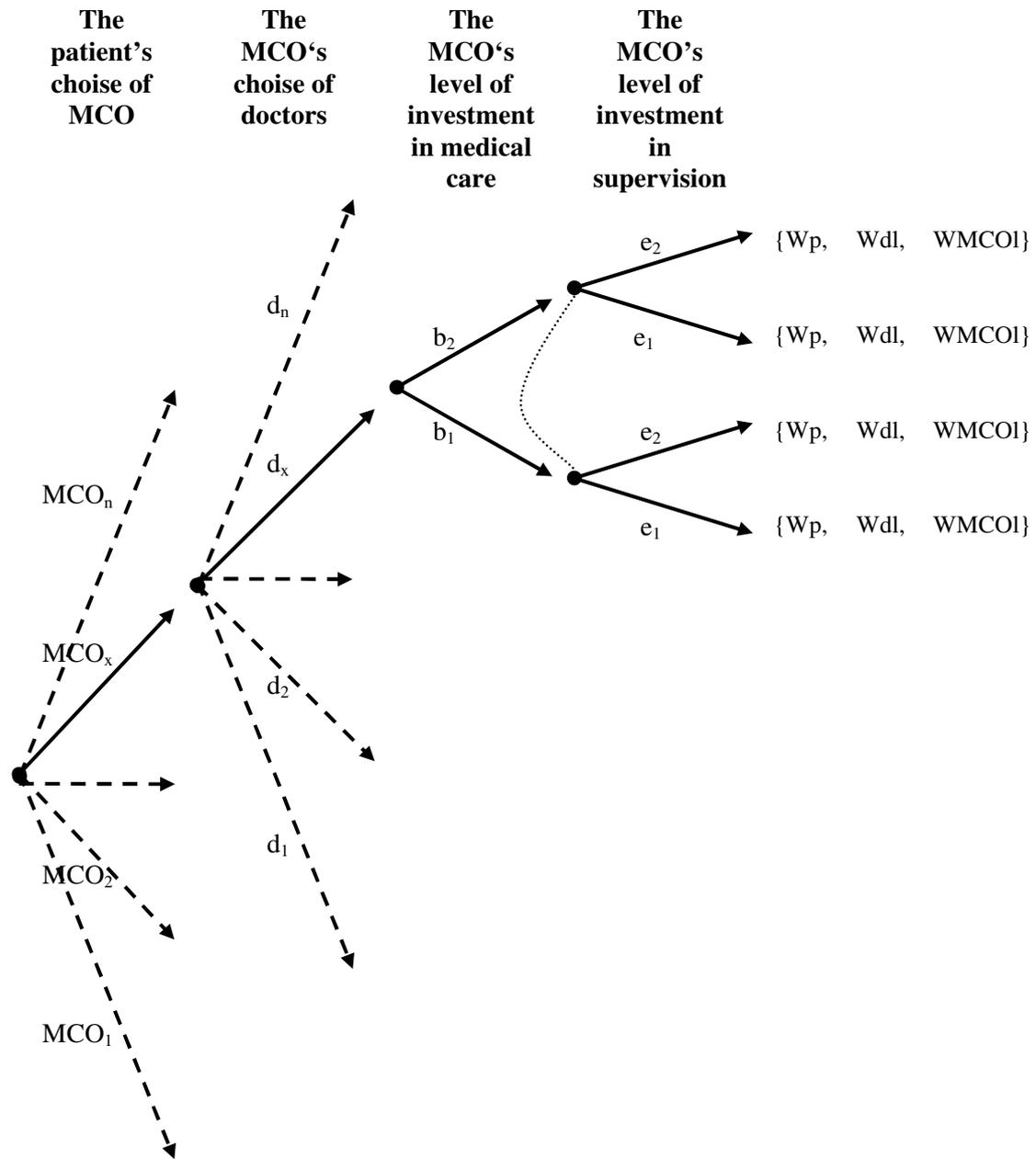


Figure 2. Doctors and MCOs reputation effects on the Moral Hazard problems in the Long Run.

Appendix C – Doctors' and MCOs' reputation development

In mathematical terms, the doctors's and MCOs' reputation evolves as follows: (1) The medical organ had reputation (R) in range [0,1]; and (2) Among N treatments over a certain period of time (which defines the long run in the model), a successful treatment (as defined in the article) increases reputation and vice versa, as follows,

$$R = KF * RS = KF \left[\frac{1}{2} \left(1 + \alpha^{\frac{1}{G}} - \frac{2}{b} B \right) \right] \quad (1)$$

where NF is a number in the range [0,1] expressing the rate of reputation accumulation regarding Know how and Facilities and RS is a number in the range [0,1] expressing the rate of reputation accumulation regarding successful treatments, such that α is a number in the range [0,1] expressing the rate of successful reputation accumulation (we can suppose, for example, that $\alpha=0.01$), G is the number of successful offerings over a certain period (assuming $G>0$), b is the number of times necessary to destroy a doctors's and MCOs' perfect RS reputation (reduce RS from 1 to 0) (we can assume, for example, that $b=10$), while B is the number of failed offerings over a certain period.

Figure 3.1 shows that in case a doctor have a perfect reputation regarding know how and facilities and succeeds in all treatments, her reputation approaches 1,

$$\lim_{KF=1, B=0, G \rightarrow \infty} 1 \left[\frac{1}{2} \left(1 + \alpha^{\frac{1}{G}} - \frac{2}{b} B \right) \right] = 1 * \left[\frac{1}{2} \left(1 + 1^- - \frac{2}{b} 0 \right) \right] = 1^- \quad (2)$$

Conversely, in case of a single failure of a doctor have a perfect reputation regarding know how and facilities and successes in all the other treatments (Figure 3.2), the doctor's reputation approaches 0.9,

$$\lim_{KF=1, B=1, G \rightarrow \infty} 1 \left[\frac{1}{2} \left(1 + \alpha^{\frac{1}{G}} - \frac{2}{b} B \right) \right] = 1 \left[\frac{1}{2} \left(1 + 1^- - \frac{2}{b} \right) \right] = 1 \left(1^- - \frac{1}{b} \right) = 0.9^- \quad (3)$$

such that any additional failure allows the doctor to accumulate, over a certain period of time, a reputation approaching a value 0.1 lower than the reputation she could have approach had it not been for that single failure.

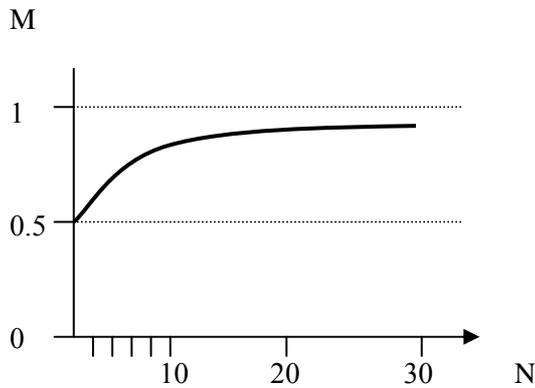


Figure 3.1 -
Doctor's reputation accumulation
in case she have a perfect reputation
regarding know how and facilities and all
treatments are successful

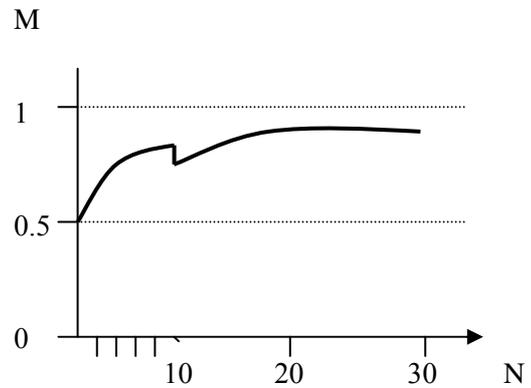


Figure 3.2 -
Doctor's reputation accumulation
in case she have a perfect reputation
regarding know how and facilities and
the 10th treatment is a failure

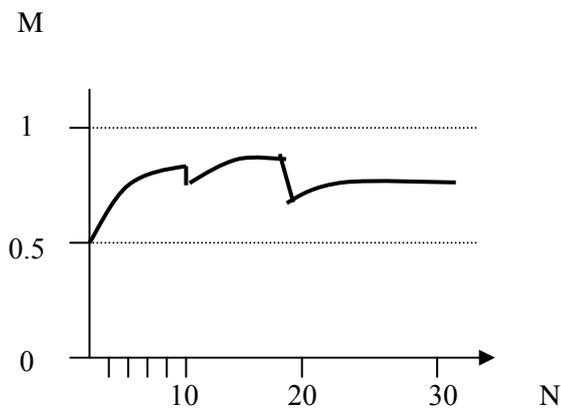
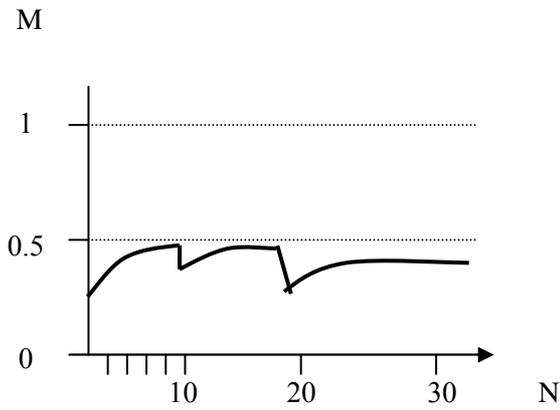


Figure 3.3 -
Doctor's reputation accumulation
in case she have a perfect reputation regarding know how and facilities and the 10th,
19th and 20th treatments are failures



**Figure 3.4 -
Doctor's reputation accumulation
in case she have a bad reputation regarding know how and facilities (KF=0.5) and
the 10th, 19th and 20th treatments are failures**

Figures 3.1–3.4. Four Cases of Doctor's Reputation Accumulation