

# SURGEONS AND MEDICAL LIABILITY:

A GUIDE TO UNDERSTANDING MEDICAL  
LIABILITY REFORM



DECEMBER 2014



**100+**years

**AMERICAN COLLEGE OF SURGEONS**

*Inspiring Quality:  
Highest Standards, Better Outcomes*



**Kathleen M. O'Neill; Nakul Raykar, MD; Charles Bush;  
Shilpa Murthy, MD; Matthew Coffron, MA;  
John H. Armstrong, MD, FACS; John G. Meara, MD, FACS;  
and Don Selzer, MD, FACS**



## TABLE OF CONTENTS

---

<b>Introduction</b> .....	4
---------------------------	---

---

<b>Medical Liability: A Brief Historical Narrative</b> .....	4
--	---

---

<b>The Current Crisis</b> .....	5–6
---------------------------------	-----

---

<b>The Importance of Patient Safety</b> .....	7
Current Status: Deny and Defend.....	7

---

<b>Traditional Reform Approaches</b> .....	8–13
Caps on Noneconomic Damages.....	8
Joint and Several Liability Reform.....	8–9
Attorney Contingency Reform.....	9
Collateral Source Reform.....	9
Pretrial Screening Panels.....	9
Periodic Payments.....	10
Statutes of Limitations.....	10
Package of Tort Reform.....	10
Table 1: Review of Traditional Reforms.....	11
Table 2: Summary of Evidence for Effectiveness of Traditional Reforms.....	12

---

<b>Alternative Reform Propositions</b> .....	14–24
Safe Harbors.....	14–15
Alternative Dispute Resolution.....	15–17
Administrative Compensation Systems.....	17–20
Enterprise Liability.....	20–21
Communication and Resolution Programs.....	21–15
Table 3: New Liability Claims at the University of Michigan Health System.....	22

---

<b>Conclusion/Discussion</b> .....	25–26
Table 4: Summary of Existing System, Tort Reforms, and Alternatives.....	25



## INTRODUCTION

The American College of Surgeons (ACS) developed this primer to inform ACS Fellows about the history of medical liability as well as alternative, innovative reform approaches to the status quo of tort law in the U.S.

Medical liability in the U.S. is criticized as being costly, inefficient, and inconsistent. This broken system is failing both doctors and patients alike. For more than 40 years, numerous reform efforts have failed to pass legislation that contains costs, stabilizes liability insurance premiums, and meaningfully promotes patient safety. As a result, a number of alternative reform propositions, very different from traditional tort reform,

are currently being considered for health system implementation in state and federal legislation.

In response to the current crisis, it is important that ACS Fellows remain well informed about the challenges facing medical liability reform in the U.S. Fellows should also understand the alternative reforms that are being considered at state and federal levels. This primer

provides an overview of the history of medical liability in the U.S., a critical analysis of traditional tort reform, and a review of the alternative reform propositions currently being studied and considered. Understanding these reforms and how they could affect a surgeon's practice and surgical patients is critical to the successful evaluation and implementation of these reforms.

## MEDICAL LIABILITY: A BRIEF HISTORICAL NARRATIVE

The concept of physician responsibility for outcomes in the medical profession has been around for thousands of years. First mention of medical liability can be found in the Code of Hammurabi, which called for a surgeon's hands to be cut off for bad outcomes.<sup>1</sup> The concept of medical liability is encoded in ancient Roman law and found throughout the legal systems of Europe. England's Court of Common Pleas demonstrates an unbroken series of medical liability cases all the way into modern times.<sup>2</sup> As American law derives from English common law, we inherited this system of court-based resolution of medical liability.

Traditionally in the U.S., medical liability laws are determined by the states rather than by federal law.

Within each state, medical liability claims are processed through the tort system, a body of law that deals with resolving civil wrongs.<sup>3</sup> Moreover, it is a system in which decisions are based off of precedents and prior rulings made by courts and judges; therefore, decisions vary widely depending on the state and jurisdiction where the claim is filed.

Due to this fragmented system, medical liability has a long history of recurrent crises. The first medical liability cases in the U.S. are documented in the 1800s; however, up until the 1960s, these cases were relatively rare.<sup>4</sup> There have been two nationally significant medical liability crises in U.S. history. The first occurred in the 1970s when increasing claims and payouts prompted a

major deficit in the liability insurer market. Physicians were unable to attain insurance coverage "at any price." This problem was overcome by the creation of physician-owned and operated insurance companies as well as state-sponsored joint underwriting associations. The second crisis occurred in the mid-1980s when physicians could not afford to actually pay the increasing cost of insurance premiums.<sup>5</sup> During both crises, physicians in certain states experienced a sudden and steep rise in the cost of insurance premiums and were no longer able to afford existing policies or obtain other ones, leading to fewer practicing physicians in those states and a resultant concern about access to care. A similar phenomenon is again occurring in the U.S.



## THE CURRENT CRISIS

The current crisis is one of both availability and affordability. Insurance carriers are choosing to leave many states, and those that do remain are charging extremely high premiums—especially to physicians who have previously been sued.<sup>6</sup> Insurers blame trial attorneys for the increase in premiums and claims, pointing to large payouts for successful plaintiffs. Trial attorneys, on the other hand, claim that medical liability suits are necessary to encourage physicians to prioritize patient safety and that when error rates decrease, so will litigation.<sup>7</sup>

On a broader scale, this crisis is a symptom of our broken medical liability system, which is ineffective at promoting patient safety, encourages the practice of defensive medicine, and leads to repeated cycles of medical liability insurance crises. In addition, it is estimated that medical liability currently costs the U.S. health care system approximately \$55.6 billion per year, which includes an estimated \$45.6 billion spent on defensive medicine, accounting for 2.4 percent of total health care expenditure in 2008.<sup>8</sup> Moreover, the overhead costs for liability litigation are exorbitant. For every dollar spent within the medical liability system itself, less than 50 cents actually goes to compensating injured patients.<sup>9</sup>

In the current medical liability system there are no real winners. The system fails its major stakeholders: patients, physicians, and the U.S. health care system. For patients, it compensates slowly and often without correlation to merit. Patients who sustain injury often do not sue and those who do have to wait a long time for payouts. Less than three percent of patients who sustain injury due to medical error sue for monetary compensation.<sup>10</sup>

In one study of closed liability claims, 37 percent of claims did not involve errors. Of the claims associated with errors, only 73 percent received any compensation.<sup>11</sup> The litigation involved in each medical liability claim is adversarial in nature and can be

emotionally and financially damaging for both sides.<sup>12</sup> Finally, the current system does not promote patient safety since for the most part the only possible outcome from litigation is monetary compensation.<sup>13</sup> Instead, it promotes a “deny and defend” approach to medical adverse events, with providers and health systems reluctant to acknowledge error, foregoing the opportunity to implement safety improvements for adverse events that “did not happen.” In fact, in many states, physicians are not even at liberty to apologize to patients for medical errors for fear of the apology being construed as an admission of guilt in an ensuing court battle.<sup>14</sup>

For physicians, the current system is a constant source of stress and encourages defensive medicine practices that are not in the best interest of the patient or the health care system.<sup>15</sup> Prior to the rise in claims in the 1970s, medical liability had little impact on a provider’s career, financial stability, and practice.<sup>16</sup> However, in the last 50 years it has become commonplace for physicians to be sued at least once during their careers. A recent survey demonstrated that by retirement age 99 percent of physicians in high-risk specialties, such as general surgery, had faced a liability claim.<sup>17</sup> The average time to resolution of a claim in general surgery is 20.1 months, and the average general surgeon will spend 18 percent of their career with an open malpractice claim.<sup>18</sup> Being sued causes both personal

### The problem with “deny and defend”

1. Providers are less likely to discuss perceived errors.
2. Due to fear of liability, there is no accurate method to count all adverse events in the country.

and financial hardship for physicians. They can experience significant anxiety, decreased productivity, financial loss, and an increase in liability insurance premiums.<sup>19</sup>

Medical liability reforms in this country have typically focused on tort reform. However, studies that evaluate the impact of these reforms show that most have minimal impact on cutting costs or improving patient safety.<sup>20</sup> In response, a number of effective alternatives have been developed. These innovations, many of which have a built-in component to contribute to patient safety, have the potential to fill the gap where past reforms have been wanting.



## THE CURRENT CRISIS *(cont.)*

### **SPECIAL TARGETED MEDICAL LIABILITY ISSUES**

The Emergency Medical Treatment and Labor Act (EMTALA) mandates that a physician provide care to stabilize a patient who presents at a hospital emergency department, regardless of their ability to pay.<sup>21</sup> Patients in emergency situations present urgently, sometimes late at night, and with minimal background information to physicians who are unfamiliar with their medical histories. Unfortunately, the high liability risk associated with providing such inherently risky care is broadly acknowledged as a key factor contributing to the growing shortage of specialists that are on-call for acute care or trauma. As such, the College continues to advocate for the Health Care Safety Net Enhancement Act, legislation that would provide Public Health Service Act liability protections for physicians providing EMTALA-mandated care.

Another deficit in the liability climate focuses on rapid medical response in disaster settings. Medical care is an essential part of disaster relief; however, the needs of victims often overwhelm the services that are available locally. The medical profession has a long history of stepping forward to assist disaster victims. Unfortunately, the Volunteer Protection Act, which was enacted specifically to encourage such actions, failed to address the issue of liability protections for health care providers who cross state lines to aid disaster victims.<sup>22</sup> To address this issue, the College is supportive of the Good Samaritan Health Professionals Act, legislation that would ensure that health professionals who wish to provide voluntary care in response to a federally declared disaster are able to do so without concern for potential liability lawsuits.



## THE IMPORTANCE OF PATIENT SAFETY

The 1999 Institute of Medicine (IOM) report revealed that there were up to 98,000 deaths in the U.S. each year due to medical errors.<sup>23</sup> Medicare data estimates 15 percent of Medicare beneficiaries experience adverse events, defined as harm to a patient as a result of medical care, while hospitalized. An additional 15 percent experience temporary harm, defined as a wide array of events that required medical intervention but did not prolong patient stay or lead to permanent harm.<sup>24</sup> The surgical profession is not without culpability. Several analyses suggest surgery has a higher preventable adverse event rate than other specialties and is responsible for up to two-thirds of all adverse events.<sup>25,26</sup>

Current consensus is that while both individual providers as well as systemic factors play a role in adverse events, the majority of adverse events are system-based, institutional errors.<sup>27</sup> Provider negligence or malice accounts for a very small proportion of litigated cases; 90 percent are due to failed system processes.<sup>28</sup> Multiple issues have been identified as contributing factors to these errors: low hospital volume for certain procedures, excessive workload, fatigue, inadequate technology and trainee supervision, inadequate hospital systems, hospital overcrowding, poor communication, emergency circumstances, and even the time of day.<sup>29</sup>

In a busy health system with millions of patients, many with complex problems requiring a variety of specialists and complicated technology, can we reliably reduce preventable adverse events on a system-wide level? Absolutely.

Meaningful strides toward patient safety depend on a safe environment to explore the root cause of adverse events and to brainstorm potential solutions to avert them in the future.<sup>30</sup> Over the past decade there has been tremendous growth in the number of quality improvement and patient safety initiatives throughout hospitals in the U.S.<sup>31</sup> Successful error reduction programs focus on continuous analysis, feedback, process improvements, transparency, and culture change.<sup>32</sup>

### CURRENT STATUS: DENY AND DEFEND

The toxic, litigious climate created by the U.S. medical liability system hinders the ability to be transparent, analyze errors, and develop feedback and process improvements. In short, it incentivizes a model of “deny and defend.” When an adverse event (AE) occurs, instead of acknowledging the AE, investigating the root cause, and implementing processes to prevent recurrence, providers and hospitals are incentivized to deny it ever occurred and defend existing, potentially imperfect processes. Institutions that rise above system pressures and disclose adverse events expose themselves to liability risk.

A liability system that promotes “deny and defend” leads to two problems. First, providers are far less likely to discuss perceived errors, even when compared with those in other low-tolerance-for-error industries such as air travel.<sup>33</sup> Secondly, so ingrained is the fear of liability that no accurate method of counting all AEs in the U.S. actually exists.<sup>34</sup> Current estimates of AE rates in the U.S. are, in most cases, based on incomplete data from a mishmash of state-based patient safety organizations and federal reporting systems.<sup>35</sup>

Acknowledging error is the first step to implementing an investigation, analysis, and improvement cycle. The current toxic medical liability climate, however, promotes the exact opposite—it discourages open discussion of adverse events, stifles efforts to study the processes leading to them, and thereby makes preventing recurrence unlikely. Improving the medical liability system is not the end-all in terms of improving patient safety, but it is an imperative part of the process.

**In a busy health system with millions of patients, many with complex problems requiring a variety of specialists and complicated technology, can we reliably reduce preventable adverse events on a system-wide level? Absolutely.**



## TRADITIONAL REFORM APPROACHES

Since the emergence of medical liability crises in the 1970s, a number of strategies for medical liability reform have been attempted.<sup>36</sup> The most prominent of these include caps on noneconomic damages, joint and several liability reform, attorney contingency reform, collateral source reform, pretrial screening panels, periodic payments, and statutes of limitations and repose. Because the U.S. relies on tort law in medical liability claims, these reforms are enacted primarily at the state level. However, due to the inconsistent success in advancing reforms at the state level, the effort has more recently focused on the federal level.<sup>37</sup>

There is a substantial amount of research on the effects of traditional tort reforms. This research looks at the individual effect of a reform on containing the costs associated with medical liability: decreasing claim payouts, decreasing claim frequency, decreasing insurance premiums, and increasing physician supply. See Table 1 for a review of the traditional reforms and their effect on the costs associated with medical liability.

### CAPS ON NONECONOMIC DAMAGES

Among the best-researched of medical liability reforms are caps on noneconomic damages (CNEDs). Noneconomic damages are those awarded as compensation for pain and suffering. This category is in contrast to economic damages, which account for lost wages, and punitive damages, which are meant to punish negligence and intentional harm.<sup>38</sup> CNEDs seek to control the costs of the medical liability system by limiting the payout for noneconomic damages.

Are caps on noneconomic damages effective? The evidence is mixed. In general, most studies show a significant decrease in the size of claim payouts, with the greatest limit on payout size seen in specialties with the highest litigation exposure, such as obstetrics and gynecology.<sup>39</sup> In addition, although inconsistently demonstrated throughout the literature, multiple studies suggest CNEDs decrease defensive medicine

practices and increases physician supply, particularly in rural areas and surgical specialties.<sup>40-44</sup>

The effect of CNEDs on claim frequency is even less clear.<sup>45,46</sup> One study by Avraham demonstrated that CNEDs can reduce the number of cases by 2.04 to 2.52 per 1,000 doctors, which is a reduction of about 10 percent to 13 percent. On the other hand, Zuckerman et al was not able to show a statistically significant correlation between this reform and changes in claims frequency.<sup>47,48</sup>

The effect on insurance premiums is also mixed.<sup>49</sup> Zuckerman et al concluded that within a year after caps were instituted, premiums for general surgeons dropped by 13 percent.<sup>50</sup> Viscusi et al were able to demonstrate overall increased profitability for insurance companies with this reform, showing a reduction of losses by about 8 percent; however, this reduction did not correlate with a subsequent decrease in insurance premiums.<sup>51</sup> One explanation for this disconnect may be that caps on noneconomic damages actually lead to increased overhead costs pertaining to litigation. Insurance companies may be inclined to take cases to trial, rather than settle, when there is a limit to how much they may have to pay at trial.<sup>52</sup> In fact, there is evidence to suggest that caps on damages are associated with higher expenditures for the defendant and the defense team.<sup>53</sup>

Finally, while multiple studies show that CNEDs lead to a decrease in the size of liability awards, opponents contend that a broadly applied cap is not consistent with the principles of a “just culture.” By broadly limiting payouts, it is possible that some severely injured patients are not receiving just compensation for legitimate claims. Furthermore, there is no direct connection to patient safety.

### JOINT AND SEVERAL LIABILITY REFORM

Joint and several liability reform, also known as the “fair share rule,” states that when there are multiple defendants in a medical liability case, the amount of liability per defendant is limited to the percentage of fault attributed to that defendant in the case. These laws are put into place to protect defendants with greater financial means from being responsible for an undue amount of the indemnity award. These so-called “deep-pocket” defendants, in some states, have to cover the cost of indemnity if other defendants cannot pay. While providing protection for some physicians, some argue that this reform could also increase individual physician liability relative to that of the hospital depending on how the “percentage of fault” is allocated.<sup>54</sup>

The effects of the joint and several liability reform on medical liability costs are equivocal. Multiple studies have shown that there is no effect on claims payouts.<sup>55-57</sup> In terms of claims frequency, one study demonstrated





that the reform decreased the number of cases by eight percent to nine percent, but there are no other comparable studies.<sup>58</sup> The data for this reform's effect on insurance liability premiums are mixed, with one study reporting an effect of decreasing losses by 6.9 percent and another showing no effect whatsoever.<sup>59-61</sup> There is little evidence surrounding the effect of joint and several liability on physician supply, but one study concluded that when states abolished this reform, it led to a decline of 2.9 doctors per 100,000 population ( $p = 0.01$ ), a decline in physician supply of 1.5 percent.<sup>62</sup> There have been no studies examining this reform's effect on patient care. As such, it is hard to definitively determine the effect this reform has on liability cost-containment or the quality of care.

### ATTORNEY CONTINGENCY REFORM

Attorney contingency reform seeks to limit the fees that plaintiffs' attorneys are allowed to charge for medical liability cases. Most plaintiffs' attorneys are paid a percentage of the award from liability cases, and their payment is contingent upon winning the case. This dynamic creates personal incentives for attorneys to seek larger awards and an environment where some small but meritorious claims may not be pursued.<sup>63</sup> Attorney contingency fee reform would ideally decrease the amount of marginal and nonmeritorious claims that are filed since there would be a lower return on the investment of the plaintiff's attorney. While it might work in theory, multiple studies have demonstrated no significant relationship between this reform and lower payouts, decreases in claim frequency, lowering insurance premiums, or increasing physician

supply.<sup>64-72</sup> Further, it is unclear how it would make pursuit of lower-paying but meritorious claims any more attractive for plaintiffs' attorneys.

### COLLATERAL SOURCE REFORM

In the current tort law system, oftentimes a jury is not allowed to consider awards a plaintiff might have received from other sources when determining damages. Plaintiffs therefore can be awarded sums from liability insurance as well as workers' compensation, health insurance, or other sources for the same injury. Collateral source reform allows deductions of an award if an injured patient has received compensation from another source and prevents double recovery on the part of the plaintiff. Although collateral source reform should in theory result in savings for medical liability systems, the evidence is mixed regarding the effect on claims payouts and frequency.<sup>73</sup> In addition, multiple studies have shown that collateral source reform has no effect on lowering insurance liability premiums or increasing physician supply.<sup>74</sup>

### PRETRIAL SCREENING PANELS

In this reform, expert panels review each liability claim prior to trial to determine if the case has merit. In theory, pretrial screening panels should decrease the number of frivolous lawsuits going to trial, thereby improving system efficiency. These panels have been instituted in many states, and the individual states have different rules regarding the applicability of the panels' findings and whether they are binding and/or admissible in court.<sup>75</sup> In 2002, 31 states had no malpractice review panel, seven had a nonmandatory submission panel, and 13 states had a mandatory submission panel.<sup>76</sup>

Despite the broad implementation of this reform, studies over efficacy are still equivocal. One study conducted in Nevada demonstrated that pretrial screening panels decrease the average duration of claims as well as increased the percentage of claims that were resolved by the court.<sup>77</sup> However, multiple other studies, some looking at all the states as an aggregate, concluded that there was no significant effect on costs for the medical liability system, frequency of claims, or amounts of payouts.<sup>78-80</sup> As such, there is little evidence that these panels decrease the number of claims that go to trial or the number of nonmeritorious claims. Furthermore, there is high-level evidence that they have no effect on the size of indemnity payments, possibly because a negative opinion of the panel usually does not prevent a claim from going to trial.<sup>81</sup> There is mixed evidence about the effect of pretrial screening panels on lowering liability premiums and no studies about its effect on the supply of physicians.<sup>82</sup>

Even in systems without pretrial screening panels, the plaintiff's attorney has a financial incentive to determine whether a case is meritorious before filing a claim, lest they waste time and resources on claims that are unlikely to produce an award. In many of the states, pre-trial screening panels are not binding or mandatory and therefore do not necessarily prevent frivolous lawsuits. Therefore, experts suggest that overhead expenses are actually more likely to increase with the institution of pretrial screening panels.<sup>83</sup> In sum, while there are numerous examples of pretrial screening panels being instituted in different states, they have not proven to be greatly beneficial as a method for decreasing medical liability costs.



## TRADITIONAL REFORM APPROACHES (cont.)

### PERIODIC PAYMENTS

Periodic payments allow for medical liability awards to be paid over a period of time rather than in a lump sum. This practice allows insurance companies to evenly distribute expenses over time, predict for future liabilities, and potentially lower premiums. Also, depending on the legislation, it may allow the insurance company to keep any portion of the indemnity payment that isn't paid out in the plaintiff's lifetime.<sup>84</sup> They can be mandatory or optional, and they can be for all awards or only for those awards over a certain threshold.

Periodic payments have not been shown to translate into lower premiums.<sup>85</sup> While one study shows that periodic payments reduce the average settlement by 38 percent to 54 percent, they did not reduce total payments or decrease costs associated with other areas of medical liability.<sup>86</sup> Multiple studies demonstrate that periodic payments neither decrease nor affect the supply of physicians.<sup>87</sup> However, while most of the evidence suggests that periodic payments do not effectively reduce costs, there is no evidence to suggest they have a negative effect. Since insurance companies contend that this measure allows them to more easily predict their costs, there is no reason to oppose their implementation.

### STATUTES OF LIMITATIONS

Statutes of limitations and repose are currently in place in all 50 states. Statutes of limitations state that a medical liability suit cannot be filed a certain amount of time after the discovery of an injury. Statutes of repose state that a liability suit cannot be filed after a predetermined amount of time has passed following an injury, regardless of when the injury is discovered. Typically these timeframes range from two to five years, and they frequently differ between minors and adults.

There is not enough evidence to definitively make a claim regarding the effect of statutes of limitations or repose on containing medical liability costs.<sup>88</sup> In one study, it was shown that reducing the statute of limitations for adults by one year reduces total claim frequency by eight percent and frequency of paid claims by six percent to seven percent.<sup>89</sup> Three subsequent studies were not able to replicate these results with statistically significant data, but their findings were consistent with the previous study.<sup>90</sup> There is mixed evidence that they decrease the growth of liability premiums. One study demonstrated that longer statutes of repose are associated with higher premiums, while another estimated that decreasing the statute of limitation by one year reduces general surgery premiums by up to 3.7 percent.<sup>91,92</sup> However, given that statutes of limitations average only 2.2 years, even if they were cut in half, the effect would be minimal.<sup>93</sup> There are no studies looking at this reform's effect on physician supply. In sum, it is unclear what effect this reform has, on its own, in terms of containing medical liability costs.

### PACKAGE OF TORT REFORM

As one begins to look at current and adopted liability reforms, it becomes obvious that, with the exception of caps on damages, these reforms individually do not have a great effect on liability cost-containment. However, when taken as a package it is possible that they can have an effect as a whole. In 2009 the Congressional Budget Office estimated that the nation's direct costs for medical malpractice would be reduced by about 10 percent if the common package of tort reforms was implemented nationwide.<sup>94</sup>

One of the best-studied examples of the effects of the implementation of a package of reforms is the Medical Injury Compensation Reform Act (MICRA), which was enacted in California in 1975. This piece of legislation included a \$250,000 cap on noneconomic damages, limits on attorney contingency fees, a statute of limitations, and a system for periodic payments. Since this law passed, the rate of increase of liability premiums in California slowed to less than 30 percent of the rate for the rest of the country—since its enactment, liability premiums have climbed only 283 percent compared with 925 percent for the rest of the U.S.<sup>95</sup> Nearly 40 years after the implementation of MICRA, it provides evidence that there are measures that can restrict ballooning liability costs.<sup>96</sup> It is therefore possible that if the reforms are combined into a comprehensive tort reform package, as was the case with MICRA in California, the results could be substantial.



**TABLE 1: REVIEW OF TRADITIONAL REFORMS**

Reform	Description	Evidence
<b>Caps on Damages</b>	Limits the amount of money that can be paid out as indemnity.	<p>Significant decrease in cost of claims.</p> <p>Decreases rate of increase in premium costs.</p> <p>Increases overhead costs.</p> <p>Modest decrease in defensive medicine.</p> <p>May increase access to care.</p> <p>No known effects on quality of care.</p>
<b>Joint and Several Liability Reform</b>	Limits amount of liability payment each defendant is responsible for paying to percentage of fault attributed to that defendant.	<p>Little effect on size of indemnity payments, unknown effect on claims frequency.</p> <p>There is no significant evidence that it affects any other areas of care.</p>
<b>Attorney Contingency Reform</b>	Limits amount attorneys can charge on contingency.	<p>Strong evidence that it does not affect claims size or frequency.</p> <p>No strong evidence that it affects overhead costs, premium costs, or patient care or access.</p>
<b>Collateral Source Reform</b>	Allows reduction from indemnity if plaintiff has received payment for injury from another source.	<p>High level evidence that it does not affect claims payouts.</p> <p>Mid-level evidence that it doesn't affect claims frequency.</p> <p>No evidence that it affects premium costs, defensive medicine, or physician supply.</p> <p>Some evidence that it has a negative effect on quality of care.</p>
<b>Pre-trial Screening Panels</b>	Cases are reviewed before trial to determine merit of claim.	<p>No evidence that they decrease claim frequency, non-meritorious claims, or cost of claims.</p> <p>Effects on physician supply or quality of care has not been studied.</p> <p>In theory, could increase overhead costs.</p>
<b>Periodic Payments</b>	Allow for medical liability awards to be paid over a period of time rather than in a lump sum.	<p>Little evidence that periodic payments affect claims size, frequency, or overhead costs.</p> <p>No evidence that it affects defensive medicine, physician supply, or quality of care.</p>
<b>Statute of Limitations and Repose</b>	Limits how long after the discovery or occurrence of an injury a plaintiff may file suit.	<p>Decrease growth of liability premiums, but otherwise do not have a significant effect on claims frequency or costs based on mid-level evidence.</p> <p>Little evidence that they affect defensive medicine, physician supply or quality of care.</p>

## TRADITIONAL REFORM APPROACHES (cont.)

TABLE 2: SUMMARY OF EVIDENCE FOR EFFECTIVENESS OF TRADITIONAL REFORMS

Type of Reform	Positive	Mixed	Negative
<b>Caps on Damages</b>	Avraham 2007 Avraham 2009 Born et al. 2009 Danzon 1984 Danzon 1986 Encinosa & Hellinger 2005 Hellinger & Encinosa 2003 Kessler 2005 Kilgore 2006 Klick & Stratmann 2003 Klick & Stratmann 2007 Sloan et al. 1989 Thorpe 2004 Viscusi & Born 2005 Waters 2007 Yang 2009	Blackmon & Zeckhauser 1991 Matsa 2005 Zuckerman et al. 1990	Ambrose 2007 Donohue 2007 Morrisey 2008 Sloan 1985 Viscusi et al. 1993 Yang 2008
<b>Joint and Several Liability Reform</b>	Danzon et al. 2004 Klick & Stratmann 2007	Avraham 2007 Blackmon & Zeckhauser 1991 Viscusi et al. 1993	Thorpe 2004
<b>Attorney Contingency Reform</b>			Blackmon & Zeckhauser 1991 Danzon 1984 Danzon 1986 Klick & Stratmann 2003 Sloan 1985 Sloan et al. 1989 Thorpe 2004 Zuckerman et al. 1990
<b>Collateral Source Reform</b>	Avraham 2009 Danzon 1984 Danzon 1986 Kessler 2005		Blackmon & Zeckhauser 1991 Danzon et al. 2004 Klick & Stratmann 2003 Klick & Stratmann 2007 Sloan 1985 Sloan et al. 1989 Thorpe 2004 Zuckerman et al. 1990
<b>Pre-trial Screening Panels</b>	Sloan 1985 Yoon 2004		Danzon 1984 Danzon 1986 Sloan et al. 1989 White 2008 Zuckerman et al. 1990
<b>Periodic Payments</b>		Avraham 2007	Blackmon & Zeckhauser 1991 Danzon 1984 Klick & Stratmann 2003 Sloan et al. 1989
<b>Statute of Limitations and Repose</b>	Kilgore 2006	Danzon 1984 Zuckerman et al. 1990	Sloan et al. 1989 Blackmon & Zeckhauser 1991 Sloan 1985



## CONTEXT OF NATIONAL REFORM

For more than two decades, based on California's 1975 MICRA law that stabilized malpractice insurance premiums, tort reform efforts at the national level have focused on caps on noneconomic damages. In this interval, the U.S. House of Representatives, largely under Republican leadership, has passed a bill with such caps on multiple occasions; companion bills in the U.S. Senate have not progressed under the leadership of either party. Even with a Republican President, Republican majorities in the House and Senate, and a Senate majority leader who was a surgeon, no meaningful liability reform law with caps on noneconomic damages was passed for six years, 2001–2006. Under Senate rules, a 60-vote majority is required to close debate, or, in other words, to achieve cloture on a bill and move it to a full vote. No liability measure has achieved 60 votes for cloture. The chances of electing a 60-vote Senate majority willing to pass substantive liability reform remains remote. We can therefore conclude that the Senate is extremely unlikely to pass national liability reform.

Liability reform in the national health care reform conversation has remained on the sidelines. The 2010 Patient Protection and Affordable Care Act did not include meaningful liability reform and only authorized \$50 million for the testing of alternative dispute mechanisms by states and health care systems.

The states have been regarded as the incubators for liability reform legislation and have had mixed results. There is a diversity of approaches to damage caps, joint liability, collateral sources of benefits, attorney fee limitations, and periodic payments. Damage caps have been the subject of judicial scrutiny. States with caps on noneconomic damages are being challenged in the courts regarding the constitutionality of caps. Currently, caps on noneconomic damages have been upheld in 15 states and overturned in 11 states (Alabama, Georgia, Illinois, Kansas, Missouri, New Hampshire, North Dakota, Oklahoma, Oregon, Washington, and Wisconsin). In five states, caps on both economic and noneconomic damages have been upheld.

In sum, federal liability reform has remained elusive, regardless of the political party in charge, and does not appear to be viable in the political system.<sup>97</sup>



## ALTERNATIVE REFORM PROPOSITIONS

Until recently, medical liability reform in the U.S. has focused on tort reform. Thus far, however, it has been unsuccessful in making significant changes to the medical liability system, and its future is bleak given significant legislative opposition at the federal level. Fortunately, there has been growing interest in exploring options outside the realm of traditional reforms.<sup>98</sup> Here is a review of alternatives to the traditional reforms that include legislative options at both the state and federal level as well as innovative reforms that can be instituted by health care institutions and liability insurers without time-intensive legislative action.

### SAFE HARBORS

In order to promote reproducible and reliable court decisions, some states have instituted programs to protect physicians that follow accepted guidelines of practice, termed “safe harbors.” Traditionally, guidelines have been used in the courtroom as a “two-way street,” which is to say that they can be used either as exculpatory, to demonstrate that practitioners adhered to accepted guidelines, or inculpatory, to show that the practitioner deviated from the standard of care.<sup>99</sup> In one review of legal cases that used guidelines, Hyams et al concluded that, in general, practice guidelines are currently used more often for plaintiffs than for a physician’s defense.<sup>100</sup>

Safe harbor laws are designed to use guidelines only as an exculpatory device to protect physicians from frivolous lawsuits while not endangering physicians who use their clinical judgment to deviate from standard guidelines. To do this, the laws generally provide a clause that allows for a new affirmative defense for physicians while inhibiting the introduction of guidelines to claim that the standard of care was not followed.<sup>101</sup> For example, in the original Minnesota safe harbor law, it stated that the guidelines are only to be used as “an absolute defense against an allegation that a provider did not comply with

accepted standards of practice in the community.” It further asserted that “[e]vidence of a departure from a practice parameter is admissible only on the issue of whether the provider is entitled to an absolute defense.”<sup>102</sup>

In theory these safe harbor guidelines should improve the system in two ways. First, they should prevent or provide for quick dismissal of claims that lack merit as well as provide the physician with a presumption of nonnegligence if they adhered to approved guidelines of care, thus avoiding the traditional “battle of the experts” in the courtroom. Second, they should encourage physicians to stay up-to-date on current practice guidelines and feel secure in their clinical judgment when they adhere to them, thereby decreasing the amount of “defensive medicine.” The concept of safe harbors has been used in a number of states with variable success.

In 1990, the Maine Medical Liability Demonstration Project was a five-year safe harbor program enacted by the state legislature limited to four main areas: OB/GYN, emergency medicine, radiology, and anesthesia.<sup>103</sup> For physicians who agreed in advance to follow certain practice guidelines, it allowed them a new affirmative defense using those guidelines. Despite having high physician buy-in, the program was not renewed

or expanded following the five-year program. In fact, during the five years of the program, the safe harbor defense was employed in a medical liability case only once.<sup>104</sup> One explanation for the failure of the program is the lack of comprehensive guidelines for each specialty. In all, the project included only 22 protocols on its list of approved guidelines for all of the specialties combined. In fact, the Maine Medical Association legal counsel has concluded that the Demonstration Project covers only “three to four percent of medicine in Maine.”<sup>105</sup>

From 1994 to 1998, Florida conducted a Caesarian Demonstration Project (CDP) using safe harbors. The law was similarly structured to provide affirmative defense for physicians who adhered to accepted practice guidelines, hoping that adherence to guidelines would decrease the rate of caesarian sections. However, physician buy-in was not as robust, and only 20 percent of eligible physicians decided to participate—and these physicians were found to be the least likely, on average, to perform caesarian sections.<sup>106</sup> The project was terminated due to the fact that the state was unable to analyze the effects of the program because they could not gather data on medical liability premiums or the number of medical liability cases. It was likewise unable to evaluate the question of whether the



program increased the defensibility of medical liability claims for physicians and therefore decreased the need to practice defensive medicine.<sup>107</sup> As of January 1998 there was no known case of a physician using guideline compliance as a defense in a medical liability claim. However, the state was equivocal in their final report and recommended that the safe harbor program be initiated for other guidelines that may be able to have more of an impact.<sup>108</sup>

Other states that have also enacted similar programs include Vermont and Connecticut; however, there is no information readily available about their programs or any analysis of their success.<sup>109</sup> In Minnesota, similar legislation was enacted in 1992 that allowed the state health commissioner to select guidelines to be used by physicians as affirmative defense. Unfortunately, no outcomes were reported about the project, and it was discontinued. Current Minnesota law delineates that guidelines are inadmissible as evidence in a courtroom.<sup>110</sup>

Recently, the Agency for Healthcare Research and Quality (AHRQ) conducted a retrospective study of 907 closed medical liability claims. The study was designed to determine whether safe harbors could have improved the processing of claims. The study concluded that at least one guideline could apply in only 133 (14.7 percent) of the cases. In addition, the authors found that safe harbors did not provide much protection for physicians from unjust claims, as they would have changed the outcome in favor of the defendant in less than one percent of claims analyzed. However, up to one-third of the cases where a guideline applied could have potentially been avoided if the physician had adhered to the guideline. As a consequence, the author concluded that by preventing adverse outcomes through adherence



to guidelines, liability compensation costs could be reduced by up to 30 percent. As such, the authors finally concluded that the benefits of safe harbor legislation would be mostly found in improved patient safety by encouraging doctors to adhere to accepted practice guidelines.<sup>111,112</sup>

**Safe Harbors:**  
Laws that protect physicians who follow accepted guidelines of practice.

In conclusion, the evidence base for safe harbors is very small—the only true evaluations of demonstration projects were in Maine and Florida, and their results are equivocal at best. The main barriers to enactment of safe harbors is the difficulty of establishing one rule of national guidelines that all can agree to follow. For example, while the U.S. Preventative Services Task Force recommends against using prostate-specific antigen (PSA) as a screening test for prostate cancer, the American Urological Association

states that “the greatest benefit of screening appears to be in men 55 to 69 years of age” and recommends that patients make that decision with their doctors.<sup>113,114</sup> Wading through each of these guidelines and determining which is approved is a herculean task, which may be practically difficult at a national level. Finally, in most states the guidelines can be overcome with a “preponderance of evidence,” leading to continued legal wrangling over which guidelines to use and how to apply them to specific clinical scenarios.

### ALTERNATIVE DISPUTE RESOLUTION

Critics contend that the current model unnecessarily creates adversarial relationships between doctors and patients that are detrimental to patient safety in the long run. Following an adverse event most patients want simply to know what happened, an understanding of how it happened, a clear path to prevent a similar outcome in the future, and a sincere apology that acknowledges their pain and suffering.<sup>115</sup> However, physicians are rarely taught to have those conversations and moreover are cautioned against having them for



## ALTERNATIVE REFORM PROPOSITIONS (cont.)

fear of their words being used against them during litigation. This concern further impedes patient safety by preventing a productive investigation and conversation into the root causes of a mistake and how it can be prevented.

There are four categories of alternative dispute resolution (ADR): mediation, arbitration, negotiation, and collaborative law. Of these, mediation and arbitration are the best equipped to deal with medical liability claims. In arbitration, there is no jury. Instead, a judge hears both sides and provides a ruling that is final.<sup>116</sup> During mediation, a neutral third party is present and facilitates negotiations between parties by breaking down barriers in communication, mitigating emotions, and promoting trust. This form of negotiation is nonbinding, which is to say both parties are free to leave the negotiations at any time and maintain the right to go to trial should either party wish to do so.

That being said, the purpose of mediation is to avoid a long, stressful, and costly trial. Mediation, in general, takes less time, with most disputes being resolved with only one to three days of mediation and cases closing between 85 and 165 days from filing. By comparison, it is not unusual for litigation to stretch on for five years or more.<sup>117</sup> The negotiations are by nature informal, which allows for greater creativity for dispute resolution. Whereas litigation can only result in monetary compensation, in mediation both sides are encouraged to consider both monetary and nonmonetary resolutions, which can be an important advantage since for most plaintiffs money is not the main motivating factor for filing a liability suit.<sup>118</sup> In some cases, resolutions have included a demonstration of assurance from physicians or hospitals that a medical error will be prevented in the future, thereby improving patient safety overall.

In 1995, Rush Medical Center in Chicago, IL, instituted an ADR model for the resolution of medical liability claims. The program was structured such that for each medical liability claim, the patients were approached with the possibility of entering voluntarily into mediation. In the five years of the program, 55 cases were resolved via mediation. The program recorded a significant reduction in the time spent per lawsuit—80 percent of disputes were resolved within a year of the lawsuit being filed and usually within three to four hours

side's willingness to embrace negotiation. While compulsory mediation may not be a method for widespread reform, it is critical that physicians and patients are aware of alternatives to traditional litigation and are able to make appropriate decisions for each individual case.

There have also been instances where binding arbitration was used to settle medical liability disputes. Binding arbitration is a form of alternative dispute resolution in which discussions between each side of the

**Alternative Dispute Resolution:** A different kind of trial.

**Arbitration:** A trial that involves only a judge; no jury is present. The judge's decision is final.

**Mediation:** Instead of a judge and jury, a neutral third party facilitates negotiation to come to a mutually agreed upon resolution.

after beginning mediation. Payouts were lower, but patients were willing to accept them because they could be received quickly. By report, cases resolved through voluntary mediation are settled at 40 percent to 60 percent of the payouts of comparable cases that have gone to trial.<sup>119</sup> In general, the success of the Rush program is a result of both sides being willing to step outside of the traditional litigation role to work together cooperatively and creatively to solve disputes.<sup>120</sup>

Another model was adopted in North Carolina, where each medical liability claim must first undergo “compulsory mediation” prior to being brought to court. However, the success rate for mandatory mediation is much lower, 90 percent with voluntary versus 23.7 percent with compulsory mediation.<sup>121</sup> This fact is not surprising, as the strength of mediation lies in each

dispute are overseen by a neutral third-party outside of the courts. In this system, the third-party decides the outcome, and those involved in the dispute are bound to adhere to it. Parties can end up in arbitration as the result of a court ruling or due to contractual obligations to do so.<sup>122</sup> Contract-based arbitrations can occur voluntarily after the emergence of a dispute, or they can occur predispute and may or may not be a requirement for entering into business.<sup>123</sup> There are examples of both predispute and postdispute arbitration being used in the health care arena.

CRICO, the largest medical liability insurer in Massachusetts, allows for voluntary postdispute arbitration as an alternative to litigation. CRICO has found that the process of arbitration usually allows them to conclude medical liability cases faster and with less variability in indemnity award





amounts.<sup>124</sup> Also, meritorious claims are more likely to be compensated since it is cheaper than allowing them to go to trial. This cuts down on the more harmful aspects of the current “deny and defend” model. During a 2002 study, the rate of CRICO cases settled in arbitration was exactly the same as that for cases settled via litigation. However, whereas cases settled via litigation resulted in average and median awards of \$2.9 million and \$1.4 million, respectively, cases settled via arbitration resulted in average and median awards of \$399,000 and \$170,000.<sup>125</sup> Based on the experience of CRICO, arbitration clearly has potential to be an effective form of alternative dispute resolution.

Kaiser Permanente, a large managed care consortium in the U.S., employs a system of mandatory predispute binding arbitration to settle all medical liability cases. Kaiser is in a unique situation, since they are both the insurer and the health provider. Therefore, the patient agrees to mandatory arbitration when they sign up for their health insurance rather than at the point of care. This system forces patients to agree to binding arbitration to settle all medical liability claims before they are allowed to receive care at a Kaiser facility. Kaiser does not release any statistics related to liability claims, so it is not possible to accurately compare its experience with the U.S. health care system as a whole.<sup>126</sup> There are some points worth noting, though.<sup>127</sup> As a result of a 1997 lawsuit, some statistics relating to Kaiser’s system of binding arbitration were brought to light. It was discovered that it took Kaiser an average of 674 days to retain an arbitrator for a liability case and an average of 863 days, nearly two and a half years, to take a case to arbitration.<sup>128</sup> These numbers do not represent significant improvements over the tort-based system. It should be noted, though, that this data is from only one managed care

organization; therefore, it wouldn’t necessarily be the case in other settings.

In this case, it is important to consider not only whether this method is effective at cost-containment but also whether it is just for the patient and physician. Many stakeholders in the medical liability process are uncomfortable with binding mandatory arbitration. Physicians dislike the concept of a prior binding contract because they believe it “sets the wrong tone” for doctor-patient

#### **Administrative Compensation Systems:**

A parallel system of courts specifically designed for medical liability cases with specialized judges, adherence to the “avoidability” standard, evidence-based compensation awards, guidelines on the size of economic and noneconomic damages, and fast-tracking of common claims.

interactions in the future.<sup>129</sup> Physicians and insurers also tend to shy away from arbitration, and mediation for that matter, since jury trial outcomes tend to favor physicians rather than plaintiffs.<sup>130,131</sup> Furthermore, the American Arbitration Association, the largest organization of arbitrators in the U.S., does not endorse mandatory predispute binding arbitration for medical liability cases. They do not believe a sick patient has a fair amount of bargaining power when deciding whether or not to accept the arbitration contract.<sup>132</sup>

In sum, the research to date is inconclusive about whether arbitration and mediation leads to faster processing of claims, lower payouts/costs, or better patient and physician satisfaction.<sup>133</sup> Additionally, there are significant barriers to more widespread practice of alternative dispute resolution to resolve medical liability claims. One major barrier comes from physicians who dislike that liability payments made through alternative dispute resolution must still be reported to the National Practitioner Data Bank (NPDB), even when a system-based error is found to be responsible.<sup>134</sup> Though physicians are allowed to include a note of explanation with the record, a payout remains on their NPDB record. For mediation and arbitration to become more acceptable for physicians, the current system of reporting payouts must be reformed. In the meantime, it is important for both physicians and patients wishing to resolve disputes without a drawn-out trial to know that this option for the resolution of claims exists.<sup>135</sup>

#### **ADMINISTRATIVE COMPENSATION SYSTEMS**

Studies note that up to one-third of claims are not associated with any error, and those associated with errors are compensated inconsistently.<sup>136</sup> Clearly, a major defect in the medical liability system is the inconsistency of rulings. Many experts point to the use of juries in civil suits as a cause of unreliable rulings and higher awards.<sup>137</sup> This system of jury trials was first developed from British Common Law. However, in Britain, courts have long done away with the use of juries in civil suits, including medical liability.<sup>138</sup> This difference is one explanation of why the British system of liability insurance is less prone to recurrent crises.<sup>139</sup>



## ALTERNATIVE REFORM PROPOSITIONS (cont.)

### International Examples of No-Fault Administrative Compensation Systems

In 2005, New Zealand went to a fully no-fault system by categorizing all injuries as “treatment injuries” rather than “medical errors” or “medical mishaps” attributed to individual physicians or hospitals—thereby lumping all injuries as due to “accident” rather than “negligence.” This is an important distinction because in a no-fault system the negligence or even the “avoidability” standard is replaced with one that does not require proof that the provider is at fault.<sup>156</sup> As such, it de-stigmatizes the provider and creates an atmosphere where the physician feels free to discuss medical errors openly with both the patient and the medical community at large. The reason that New Zealand decided to switch to a no-fault health court system was to encourage physicians to assist injured patients in making claims earlier—thereby streamlining the process of compensation for the majority of patients and encouraging better reporting of injuries.<sup>157</sup>

Sweden also has a patient insurance company (LOF) that assumes a no-fault system, which makes it much easier for patients to seek compensation for injury while preserving the doctor-patient relationship. In fact, in Sweden more than 60 percent of claims are filed with the assistance of the patient’s physician.<sup>158</sup> In addition, the LOF conducts its own descriptive analysis of claims data and disseminates its findings to hospitals.<sup>159</sup> The main difference between the two systems is that in Sweden, patients instead may request a panel of physician experts and then proceed to arbitration if they are unsatisfied with the ruling of LOF.<sup>160</sup> In New Zealand, patients have the option to appeal to the courts.

One of the greatest strengths of this system is that it better serves injured patients. In the U.S., most patients with preventable injuries are ineligible for compensation because they do not reach the higher standard of gross negligence.<sup>161</sup> Even of those patients who are eligible, only a small fraction of them pursue a lawsuit because of the administrative barriers of entering in a long, drawn-out process of litigation. Less than 3 percent of patients who sustain injury due to medical error sue for monetary compensation.<sup>162</sup> By changing the standard of compensation from “negligence” to “avoidability” and simplifying the claims process, a broader range of patients have access to appropriate compensation. This effect would be even more evident in a no-fault system where the provider could assist the patient in applying for compensation. Moreover, by serving as a centralized repository for all claims, health courts collect data on hospital error/avoidable complication rates and set up a natural incentive for hospitals to improve patient safety. As such, they serve as a wealth of information for patient safety research and regulation.<sup>163</sup>

Of note: New Zealand hospitals, after 30 years of a no-fault system, appear no safer than comparable hospitals in other countries.<sup>164</sup> For example, the adverse event rate in New Zealand is around 12.9 percent, compared with 16.6 percent in Australia, 13.5 percent in the U.S., and 10.8 percent in the U.K.<sup>165</sup> New Zealand hospitals are average at best.<sup>166</sup>



One solution for this problem is to jettison the tort system altogether and set up a parallel system of courts specifically designed for medical liability cases. Also known as health courts, this system would provide administrative compensation for medical injuries.<sup>140</sup> As described by Mello et al, this court system would have five key components: specialized judges, an “avoidability” standard, evidence-based compensation awards, guidelines on the size of economic and noneconomic damages, and fast-tracking of common claims.<sup>141</sup> First, specialized judges, specifically trained in medical liability issues, would hear all claims. Some of these individuals may have a combined judicial-medical background. Second, the court would adopt an “avoidability” or “preventability” standard instead of the current “negligence” standard. This means that patients would not have to prove gross negligence but only that the injury would not have occurred had the practitioner either followed best practices or if a better system were in place. Providers, likewise, would not need to accept that they were “negligent” in order to admit that an avoidable adverse event occurred. Third, compensation awards would be based on expert interpretation of the literature. Fourth, the evidence base for these compensation awards would be guidelines informing decisions on the size of economic and noneconomic damages. In theory, court decisions would then be more reliable and “runaway juries” would be prevented from delivering large, unwarranted awards. Fifth and finally, given court familiarity with certain common claims and the awards that they generally receive, courts could allow for fast-tracking of compensation for certain kinds of injuries, significantly streamlining the system for legitimately injured patients.

Limited success has been demonstrated for administrative compensation systems in the U.S. For example, in an effort to keep liability coverage for obstetricians affordable, Virginia banned medical liability claims for severe neurological, birth-related injuries in 1987.<sup>142</sup> In place of tort law, they instituted the Virginia Birth-Related Injury Compensation Program (BIP). Similar to a health court, patients have access to an administrative system akin to workers compensation in lieu of the traditional tort system. Florida faced a similar crisis of rising medical liability insurance premium among obstetricians, so they enacted the Florida Neurological Injury Compensation Association (NICA) law. Similar to the legislation in Virginia, this system was effective at keeping liability costs down. Comparable compensation was provided to patients in a more efficient manner with a much lower overhead cost. In addition, patient and physician satisfaction were similar to that in a traditional tort system.<sup>143</sup> These programs are small but they reveal the potential of an expanded health court system.

Administrative compensation systems have also been successful around the world. In 1974, New Zealand decided to completely overhaul their tort-based system of medical liability and instead instituted a government-funded administrative compensation system.<sup>144</sup> With the New Zealand Accident Compensation Corporation (ACC), patients, in exchange for receiving government-funded compensation, give up the right to sue for damages for personal injury. However, in cases where there is an element of conscious or reckless conduct, patients are allowed to sue for additional damages.<sup>145</sup> Studies have shown that this system is very cost-effective—total medical injuries cost around \$29 million per year, about \$6.50 per capita, with

its administrative costs accounting for about 10 percent of the money spent.<sup>146</sup> In addition, the ACC regularly uses its claims data for safety improvement.<sup>147</sup>

Despite the potential benefits, there are major barriers to the implementation of a health court system in the U.S. Critics contend that nation-wide health courts have not been shown to increase patient safety or necessarily reduce costs, and therefore would be unlikely to do so in the future. New Zealand hospitals, after 30 years of the ACC, appear no safer than comparable hospitals in other countries.<sup>148</sup> For example, the adverse event rate in New Zealand is around 12.9 percent, compared with 16.6 percent in Australia, 13.5 percent in the U.S., and 10.8 percent in the U.K.<sup>149,150</sup> Therefore, New Zealand hospitals are average at best. In terms of cost, it is possible that through the creation of an expensive administrative system that will be available to a broader range of patients, costs could increase rather than decrease. Moreover, it is unclear what effect health courts would have on payouts since in some states greater than 90 percent of cases are settled out of court either before a trial or before the jury made a verdict.<sup>151</sup> For individual patients as well, levels of compensation tend to be lower in a health court system.<sup>152</sup> Finally, there are significant legal barriers to the institution of a health court system. Legal scholars disagree over whether the constitution includes a right to jury trial in liability cases.<sup>153</sup> A particular barrier for a no-fault system is that many Americans afraid of unchecked “bad-apple” doctors are quick to equate “no-fault” with “no-accountability” in medical liability claims.<sup>154</sup> While some of these barriers could potentially be overcome with innovations such as opt-out provisions, provisions for legal representation, or commissioners charged with investigating gross



## ALTERNATIVE REFORM PROPOSITIONS (cont.)

negligence and appeal rights, this effort would require significant political will on the part of politicians in the federal government.<sup>155</sup>

In conclusion, while administrative compensations systems, both no-fault systems and otherwise, have shown significant success in regulating medical liability abroad, it is unclear whether this system can be appropriately adapted in the U.S. Given that this change requires a complete overhaul of the current system, it is reasonable to ask for empirical evidence that health courts will deliver on their potential for cutting costs, better serving patients and contributing to patient safety initiatives. As such, it is clear that it would be worthwhile to invest in demonstration projects that provide this evidence base for proceeding forward.

### ENTERPRISE LIABILITY

Enterprise liability refers to a system in which the institutional health care provider assumes some or all of the liability for medical errors rather than the individual physicians. As such, physicians are not held responsible for the systemic failures of the hospitals.<sup>167</sup> In addition, since there would only be one plaintiff and one legal defense team, overhead costs are decreased. However, increased expenses for hospitals due to liability coverage would likely be passed on to physicians through decreased payment or surcharges.<sup>168</sup> The most important change, however, is that institutions are directly responsible for the systemic failures that cause the vast majority of medical errors.<sup>169</sup> Therefore, it creates an appropriate incentive structure for medical errors to be translated into improved patient safety and a higher quality of patient care.

While there are no true examples of enterprise liability systems operating in the U.S., the best approximates

include self-insured academic medical centers, integrated delivery systems, and Veteran's Affairs (VA) hospitals. Many academic medical centers in the U.S. are self-insured and directly employ the physicians who operate in their hospitals. These hospitals then provide malpractice insurance to their employees as a part of their employment contract. Similarly, many hospital systems, such as Kaiser Permanente, are self-insured and directly employ physicians. In these "integrated delivery systems"

#### **Enterprise Liability:**

A system in which the institutional health care provider assumes some or all of the liability for medical errors rather than the individual physicians.

physicians can be sued, but, again, the hospital is ultimately held financially responsible for the liability.<sup>170</sup> In VA hospitals, physicians cannot be sued. However, the U.S. government can be sued instead for malpractice if certain special conditions are met.

Because the liability insurance is owned by the academic medical center or hospital system, any losses through malpractice will eventually be absorbed by the hospital itself. In the end, this provides the incentive for the hospital to improve patient care similar to what one would find in enterprise liability. One such example took place in Harvard-affiliated hospitals' anesthesiology departments. After years of high medical liability premiums, the risk management team at Harvard asked the anesthesiology departments to investigate the problems with their anesthesia care. The results of their findings were then transformed into

a system of protocols and anesthetic techniques that were implemented across the anesthesiology departments. This caused a significant decrease in mortality by a factor of 10. As would be expected, the liability premiums for anesthesiologists dropped from near the top of all specialties at Harvard to near the bottom.<sup>171</sup> Another interesting method of enterprise liability can be found in the University of California (UC) hospital system. Due to California law, university hospitals can be held liable for the actions of the physicians who practice in the UC system. When a suit is filed against a UC physician, the general counsel requests that the plaintiff drop the suit against the physician and list the Board of Regents of the University of California as the only defendant. Doing so eases the amount of stress that is placed on the physician during discovery, though the physician usually acts as the primary witness if the case does go to trial.<sup>172</sup>

Hospitals that employ and insure their nurses and physicians have played a large role in creating and implementing patient safety measures.<sup>173</sup> The shared liability of the hospitals has led both the VA and Kaiser Permanente to invest in patient safety initiatives. In fact, they collaborate on the development of new tools and technologies to improve patient care. Most significant among these innovations is the implementation of Web-based decision support programs that aid physicians in the diagnosis of medical conditions.<sup>174</sup> One of these systems, called Isabel, has been used in a number of hospitals.<sup>175</sup>

There are a number of reasons why enterprise liability has not been implemented on a large scale in the U.S. One of the main concerns is that it could result in physicians losing autonomy in making clinical decisions for their patients. This



concern came to the forefront of discussion in 1993, when enterprise liability was made a cornerstone of the Clinton Administration's health care reform proposals. Both the American Medical Association and the Physician Insurer Association of America opposed and actively lobbied against this proposal, and it eventually died in Congress.<sup>176</sup> A second issue that inhibits implementation of enterprise liability is that it would be financially difficult for many hospitals in lower socioeconomic areas to absorb the costs associated with being responsible for all medical liability costs. Many hospitals that serve large proportions of uninsured patients are already on a very tight budget, and having to cover 100 percent of the medical liability may be too much for them to handle financially.<sup>177</sup>

Enterprise liability also faces some sociopolitical barriers to implementation. One of the reasons it has failed in the past is that since it takes liability away from individuals and concentrates it into organizations, it may be viewed as being a step toward "socialized" medicine, which carries negative connotations in the American political sphere.<sup>178</sup>

Finally, not all physicians practice within a large medical system. When a medical error takes place in a rural physician's office, there is no organization to cover the medical liability costs. Therefore, physicians with private practices, comprising approximately one-fifth of surgeons, would not benefit from

this approach.<sup>179</sup> Additionally, it would be difficult to assign liability to a hospital when a physician is in private practice but has admitting privileges at multiple hospitals.<sup>180</sup>

In spite of these barriers, in theory, enterprise liability makes sense as a means of controlling costs and increasing patient safety. However, there simply has not been a significant amount of research into how the implementation of enterprise liability might affect overall costs or patient care.<sup>181</sup> Therefore, the feasibility of this



model of medical liability deserves further study. As such, further exploration of enterprise liability as a means of controlling medical liability costs and improving patient safety should be encouraged.

### COMMUNICATION AND RESOLUTION PROGRAMS (CRP)

The traditional approach to medical liability claims is known as "deny and defend." It is essentially a destructive attitude—in response to a potential medical error, physicians are taught to instinctively deny that any error occurred and aggressively defend their provision of care. One of the

reasons doctors are incentivized to essentially hide medical errors is that an honest disclosure might lead to legal consequences down the line.<sup>182</sup> As such, the current medical liability climate has generated reluctance from providers to discuss not only medical errors but also complications that were not due to negligence.

A "communication and resolution" model to medical adverse events, however, takes the reverse approach. Initially introduced at the Veterans Affairs Hospital in Lexington, VA, in

1987, the University of Michigan Health System (UMHS) adopted, improved, and implemented the model in the early 2000s.<sup>183,184</sup> There are three main pillars of the disclose and offer model, as per UMHS: (1) Compensate quickly and fairly when unreasonable medical care causes injury; (2) Defend medically reasonable care vigorously; and (3) Reduce patient injuries, and

therefore claims, by learning from patients' experiences.<sup>185</sup>

The UMHS communication and resolution program (CRP) accomplishes this through a series of strategies that prioritize timely and open communication between patient and provider. Patient claims are investigated expeditiously and representatives offer to meet regularly with patients, families, and legal counsel for updates and for input into the process. If the investigators conclude that the patient was injured as a result of medical error, they offer a prompt apology as well



## ALTERNATIVE REFORM PROPOSITIONS (cont.)

as compensation. However, if the committee finds that the patient received appropriate care then they aggressively defend the care provided and, as a policy, will not settle the case.<sup>186</sup> Underlying the entire process is a feedback loop into clinical practice that incorporates committee findings to prevent recurrences of similar events.

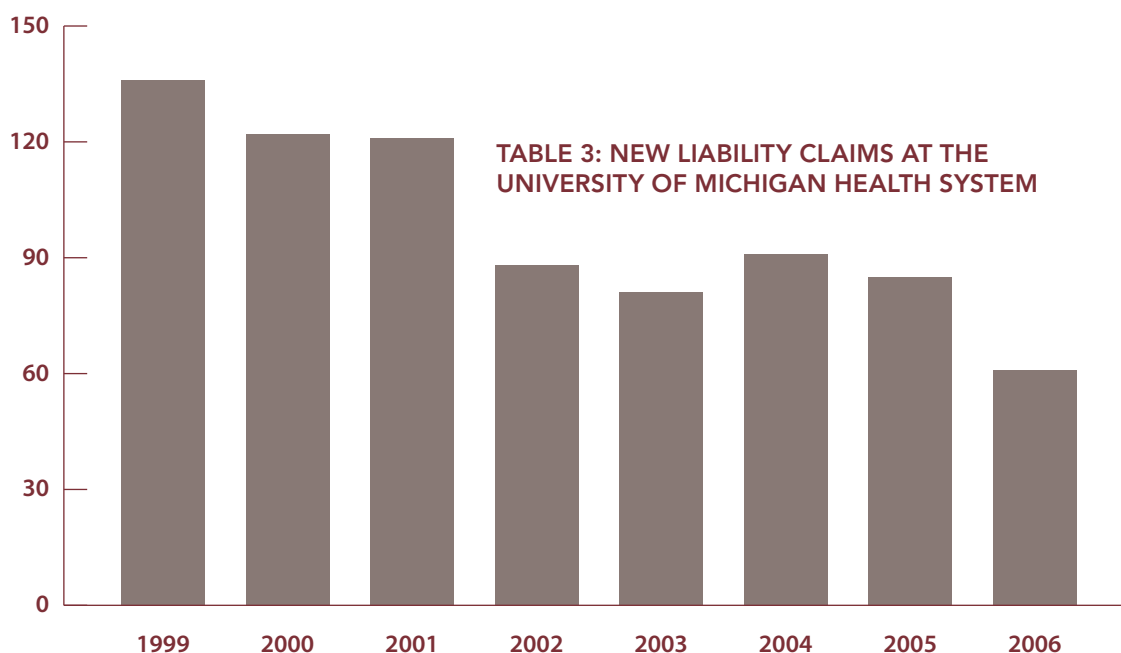
The positive impact the program has had on medical liability costs at UMHS is clear. In August 2001, UMHS had an average of 260 ongoing cases at any given time. Four years later, this number was less than half, at 114.<sup>187</sup> Average monthly rate of lawsuits decreased from 2.13 to 0.75 per 100,000 patient encounters. The median time from claim reporting to resolution decreased from 1.36 to 0.95 years.<sup>188</sup> From an economic standpoint as well, UMHS decreased their annual litigation costs by \$2 million, with average monthly cost rates for total liability, patient compensation, and

legal costs dropping to 40 percent of the initial values.<sup>189,190</sup> Perhaps most telling, however, is that the total number of new claims per year dropped significantly upon program implementation (see Table 3).<sup>191</sup>

The initial proponents of the program demonstrated equally compelling results. In 1987, the VA Hospital in Lexington, KY, instituted a robust program for the early disclosure of medical errors and the offer of appropriate compensation. As a result, they have an average settlement per claim of about \$15,000, which is significantly lower than those of other VA hospitals with an average settlement per claim of about \$98,000. They experienced a dramatically reduced time to resolution from two to four years to two to four months while also reducing legal costs.<sup>192</sup> The VA program was not as focused on adverse event prevention/future liability reduction as it was on current cost control and claim

resolution. Therefore, the program did not incorporate a robust patient safety initiative to complement cost containment.

COPIC, a Colorado-based risk management and insurance company, started its own version of a CRP in 2000. COPIC's program is focused on early recognition of events, disclosure, and quick resolution. However, the program was more modest in scope to the UHMS program; it did not include complaints involving patient deaths, complaints that already had attorney involvement, complaints directed to the Board of Medical Examiners, or claims that had already been filed.<sup>193</sup> If the adverse event met specific criteria, patients would receive monetary awards up to \$30,000 and reimbursement for out-of-pocket expenses. In the first five years of the program, 2000–2005, claims dropped 50 percent and settlement costs dropped 23 percent.<sup>194</sup> Like the VA program before it, COPIC,





**Communication and Resolution Programs:** A program that can be implemented by a hospital system with three main pillars: (1) Compensate quickly and fairly when unreasonable medical care causes injury; (2) Defend medically reasonable care vigorously; and (3) Reduce patient injuries, and therefore claims, by learning from patients' experiences.

too, was not coupled to an error prevention program but nonetheless demonstrates a welcome alternative to "deny and defend."<sup>195</sup>

In more recent years, several other disclose and offer models have been developed at top academic centers (Illinois, Stanford, Harvard/BIDMC) and risk management firms nationwide (West Virginia Mutual, ProMutual Group).<sup>196</sup> Early data suggest the programs are working. The number of liability filings against the University of Illinois has been cut in half in the first two years of the program. Only one lawsuit was generated amongst the 37 cases where the hospital acknowledged a preventable error and apologized.<sup>197</sup> Stanford University noted that the percentage of reported claims that have been closed in the same year they were opened increased to a seven-year high and

average claim costs for cases closed within the same year decreased to a seven-year record low.<sup>198</sup>

Despite the encouraging results at programs across the country, there are significant barriers to implementation as well as uncertainty over the optimal conditions on which to make offers. In a study assessing views on implementation amongst hospital and clinical stakeholders, Bell et al identified anxiety about greater liability exposure among physicians and providers, fear of name-based reporting of liability settlements, complexities of insurance coordination, and inadequate protections of apologies or statements of empathy in legal suits as significant but surmountable barriers to widespread adoption of CRPs.<sup>199</sup> A study by Murtagh et al demonstrated that even generous and

well-intentioned offers by hospitals may promote suspicion and greater likelihood to pursue litigation.<sup>200</sup>

Recent publications have analyzed the early challenges and lessons learned from the demonstration projects of CRPs across the country. While the long-term financial impact has not yet been published, the authors reflected on the qualitative advances after only a few years into the project. In a look at six early adopters of CRPs—Stanford University Medical Indemnity and Trust Insurance Company, University of Illinois Medical Center at Chicago, University of Michigan Health System, COPIC Insurance Company, West Virginia Mutual Insurance Company, and Coverys—three key factors were associated with successful implementation. The authors found that it was crucial that the CRP invest in building and marketing the program to skeptical physicians. Achieving physician buy-in was difficult on two levels. First, many practitioners were unfamiliar with the program and needed significant education around the issue. Second, program leaders found it very difficult to overcome skepticism about the program due to concerns about disclosure of errors leading to more lawsuits that would have to be reported to the National

## Culture Change: A Significant Barrier

The most formidable barrier to adoption of communication and resolution programs may be physicians and hospitals themselves. Decades of the toxic medical liability climate has institutionalized "deny and defend" as the default approach to adverse events. The story of Wag Dodge comes to mind. Mr. Dodge was a firefighter who led 15 firefighters into a blaze consuming Mann Gulch, the rugged region of Central Montana, in 1949. Within hours, the blaze redirected its path directly toward Mr. Dodge's men. With the fire less than 200 yards away, he invented what is now known as an "escape fire"—igniting a swath of grassland to provide immediate shelter from an oncoming blaze.<sup>210</sup> His crew, however, either did not believe in his innovative approach or were too panicked to take his heed.<sup>211</sup> They continued to run from the fire as had been ingrained in their training. Mr. Dodge survived the fire; his crew did not. Changing physician attitudes, shaped by anecdotes and gut-wrenching personal experience, may be the hardest part about implementing communication and resolution programs.



## ALTERNATIVE REFORM PROPOSITIONS (cont.)

Practitioner Data Bank. As such, education and investment upfront were very important to the success of the program. In addition, many pointed to one or two key individuals who championed the program and were responsible for making it a success at each institution. Finally, it was imperative that from the very beginning the leaders made it clear that the program would take some time before creating meaningful change.

One demonstration project concentrated specifically on serious adverse events in general surgery and was implemented in five New York hospitals in 2009. The author noted that by implementing a CRP, there was tangible culture shift among the surgeons to prioritize patient safety by strengthening the relationship between clinicians and risk management staff, improved tracking of reported events, and the institution encouraged more robust disclosure practices. However, none of the hospitals were truly able to implement the resolution component of the program as envisioned. The reasons for this stemmed from two sources. The first was resistance from providers. It was difficult to convince practitioners to embrace the concept of early settlement offers. Worried that compensation offers would prompt more lawsuits rather than deter them, most practitioners preferred to defer to negotiations by the insurer. The second roadblock had to do with the liability environment in New York. Most of the insurers of each of the hospitals required that

the family consult a lawyer prior to signing a release of liability contract—increasing the amount of time, effort, and money required to resolve claims. Moreover, since lawyers are loathe to take on cases that have little chance of significant pay out, the programs found it difficult to find lawyers willing to take on smaller claims.<sup>201</sup>

Some progress has been made in the legislative realm to accommodate CRPs, though considerable variability in interpretations and language of the laws preclude meaningful protection. Thirty-five states have adopted some form of “apology law,” which protect a physician’s apology or statements of sympathy as inadmissible to prove negligence in a civil lawsuit.<sup>202</sup> Considerable variability, however, exists with these laws ranging from offering broad protection such as in Colorado to narrow interpretations in Texas and Vermont.<sup>203</sup> In many cases these laws can be counter-productive, as they may promote a false sense of confidence among providers regarding true protections the laws actually provide.<sup>204</sup>

Name-based reporting requirements of individual physicians requirements to national and state agencies like the National Provider Data Bank (NPDB) and Board of Registration in Medicine (BORM) with medical liability settlements was another strong barrier to adoption.<sup>205</sup> Physicians were particularly reluctant to have the settlement tied to their name when it was paid out over a systems-based or institutional culpability.

CRPs hold great promise but additional work needs to be done on an institutional and legislative level to promote a friendlier environment for adoption. The two major barriers with simple, legislative solutions are apology protection and name-based reporting. Indeed, in some states these barriers have already been addressed. Massachusetts recently passed legislation—the Health Payment Reform Act—which includes a six-month prelitigation resolution period that promotes sharing of medical records and full disclosure by providers and offers strong apology protection.<sup>206</sup> A seven-hospital collaborative, including Beth Israel Deaconess Medical Center and affiliates, has since started a communication and resolution program. The results from this legislation and program, in addition to the lessons learned from programs across the country, will hold great interest for the rest of the industry in implementing fair, patient-centered medico-legal reform.





## CONCLUSION/DISCUSSION

The medical liability system is broken and failing all key stakeholders: physicians, patients, and the health care system. It is costly, inefficient, and the process of compensating injuries related to medical errors is imprecise. For the past 40 years, reforms to the tort system have met with variable success, partly due to tepid political enthusiasm and partly due to equivocal cost-control and patient safety outcomes. Increasingly partisan political climates have made advancing additional tort reforms difficult, especially on the federal level. The time has come for a paradigm shift in our strategy for addressing medical liability from simple tort reform focused on cost-containment to a patient-centered approach that prioritizes patient safety and preserves the doctor-patient relationship.

The mission of the ACS is to improve care of the surgical patient, safeguard standards of care, and create an ethical practice environment.<sup>207</sup> The ACS has proven itself to be a leader in promoting patient safety through its ACS National Surgical Quality Improvement Program (ACS NSQIP) and Inspiring Quality campaigns.<sup>208,209</sup> The ACS must continue to lead by advancing realistic, patient-centered reforms to the medical liability system.

Alternative solutions to traditional tort reform are in various stages of exploration; some more consistent with ACS principles, and some more

realistic in implementation than others. It will be important that the ACS support reform options that restore a less stressful work experience for surgeons, push patient-safety to the forefront of the reform agenda and have a realistic path towards adoption.

Safe harbors, while attractive in concept, are complicated in implementation for surgical issues. To date, there have been no successful demonstration projects and recent studies assessing potential utility have been equivocal. That being said, AHRQ and Congress have a renewed interest

in safe harbors, and they may prove useful in highly protocolized situations, such as the workup for acute coronary syndrome, to provide some protection against liability.

Voluntary mediation has shown some promise as a form of alternative dispute resolution and it is relatively easy to implement with moderate improvement in outcomes. Further, it does not require significant legislative change and can be adopted by institutions quickly. National reporting requirements, however, persist as a potential barrier.

TABLE 4: SUMMARY OF EXISTING SYSTEM, TORT REFORM AND ALTERNATIVES

	Current System	Tort Reform	Alternative Dispute Resolution	Health Courts	Enterprise Liability	Safe Harbors	Communication and Resolution Programs
Cost Control	✗		✓	✓			✓
Just Culture	✗		✓	✓	✓		✓
Patient Safety	✗				✓		✓
Feasibility			✓				✓
Requires Culture Change?					YES		YES



## CONCLUSION/DISCUSSION *(cont.)*

Mandatory mediation and arbitration have proven neither effective nor consistent with the “just culture” patient-safety principles of the ACS.

Health courts may be worth exploring as a strong alternative to the tort system, having shown promise at home and abroad in decreasing administrative costs of liability claims and providing timely, appropriate compensation to injured patients. While health courts also do not directly address the issue of patient safety, if implemented correctly they could provide an apparatus for patient safety research through data collection on adverse events. Enterprise liability, likewise, shows promise as an adjunctive measure but would require significant legislative and political capital as well as investment in demonstration projects and research.

On balance, however, communication and resolution programs may represent the most attractive reform solution, best encapsulating ACS principles of a “just culture” while also restoring financial stability to the liability system. Multiple pilot programs demonstrate significant cost-savings and a direct investment in patient safety improvements. Adoption is largely institution-dependent with minimal required legislative changes, making implementation relatively fast. The legislative needs that do exist,

such as more clear and consistent apology laws and a change to National Provider Data Bank reporting requirements may be easier to advance with bipartisan support in the setting of innovative, patient-safety focused reform.

In summary, the ACS should continue to advocate on behalf of sensible, realistic tort reform efforts at the state and federal level. However, given the minimal impact of traditional reforms on patient safety and increasing political gridlock in advancing sensible reforms, the focus of future efforts must also focus on reforms that value physician accountability, insurance market stability and patient-safety. Several alternative solutions to standard tort reform hold promise but perhaps the most encapsulating of these goals is the communication and resolution program whose most significant barrier to implementation may be provider and hospital attitudes themselves. The ACS must encourage its fellows to push boundaries in order to lead the necessary culture change, promote best practices, and advocate for appropriate legislation to further explore all promising alternative reforms, but most so towards communication and resolution programs.



## REFERENCES

1. Smith, JM Powis. *Origin & History of Hebrew Law*. Chicago, IL: University of Chicago Press, 1931.
2. Bal BS. An introduction to medical malpractice in the United States. *Clin Orthop Relat Res*. 2009 Feb;467(2):339-347. doi: 10.1007/s11999-008-0636-2. Epub 2008 Nov 26. PubMed PMID: 19034593; PubMed Central PMCID: PMC2628513.
3. White GE. *Tort Law in America: An Intellectual History*. New York, NY: Oxford U Press, 2003.
4. Bovbjerg RR. Malpractice crisis and reform. *Clin Perinatol*. 2005, Vol. 32:203–233, viii–ix.
5. Mello MM, Studdert DM, Brennan TA. The new medical malpractice crisis. *N Engl J Med*. 2003 Jun 5;348(23):2281-2284.
6. Mello MM, Studdert DM, Brennan TA, et al.
7. Mello MM, Studdert DM, Brennan TA, et al.
8. MM Mello, A Chandra, AA Gawande, DM Studdert. National costs of the medical liability system. Millwood: *Health Aff*. 2010, Vol. 29(9): 1569-1577.
9. MM Mello, A Chandra, AA Gawande, et al, + Studdert DM, Mello MM, Gawande AA, Gandhi TK, Kachalia A, Yoon C, Puopolo AL, Brennan TA. Claims, errors and compensation payments in medical malpractice litigation. *N Engl J Med*. 2006; 354(19):2024-2033.
10. Brennan T, Leape L, Laird N, Hebert L, Localio A, Lawthers A, Newhouse J, Weiler P, Hiatt H. Incidence of adverse events and negligence in hospitalized patients. Results of the harvard medical practice study I. *N Engl J Med*. 1991;324(6):370-376. + Localio AR, Lawthers AG, Brennan TA, Laird NM, Hebert LE, Peterson LM, Newhouse JP, Weiler PC, Hiatt HH. Relation between malpractice claims and adverse events due to negligence. Results of the harvard medical practice study III. *N Engl J Med*. 1991;325(4):245-251. + Studdert DM, Thomas EJ, Burstin HR, Zbar BI, Orav EJ, Brennan TA. Negligent care and malpractice claiming behavior in Utah and Colorado. *Med Care*. 2000;38(3):250-260 + Studdert DM, Mello MM, Sage WM, DesRoches CM, Peugh J, Zapert K, Brennan TA. Defensive medicine among high-risk specialist physicians in a volatile practice environment. *JAMA*. 2005; 293(21):2609-2617.
11. Studdert DM, Mello MM, Gawande AA, et al.
12. Balch CM, Oreskovich MR, Dyrbye LN, Colaiano JM, Satele DV, Sloan JA, Shanafelt TD. Personal consequences of malpractice lawsuits on American surgeons. *J Am Coll Surg*. 2011;213(5):657-667 + Rice B. Malpractice Rates. How high now. *Med Econ*. 2004; 81(1):57-59.
13. Studdert DM, Mello MM, Brennan TA. Medical malpractice. *N Engl J Med*. 2004;350(3):283-292.
14. Mastroianni AC, Mello MM, Sommer S, Hardy M, Gallagher TH. The flaws in state 'apology' and 'disclosure' laws dilute their intended impact on malpractice suits. *Health Aff (Millwood)*. 2010 Sep; 29(9): 1611-1169.
15. Balch CM, Oreskovich MR, Dyrbye LN, Colaiano JM, Satele DV, Sloan JA, Shanafelt TD. Personal consequences of malpractice lawsuits on American surgeons. *J Am Coll Surg*. 2011;213(5):657-667.
16. FA Sloan, RR Bovbjerg, PB Githens. *Insuring Medical malpractice*. New York, NY : Oxford University Press, 1991.
17. Ciofu DC. The Frequency and Severity of Medical malpractice Claims: High Risk and Low Risk Specialties. *Maedica (Buchar)*. 2011 Jul, Vol. 6(3): 230-231.
18. Seabury et al. *Health Aff (Millwood)*. 2013 Jan;32(1) 111-119.
19. Jena AB, Chandra A, Lakdawalla D, Seabury S. Outcomes of medical malpractice litigation against US physicians. *Arch Intern Med*. 2012;172(11):892-894.
20. Kachalia AB, Mello MM, Brennan TA, Studdert DM. Beyond negligence: Avoidability and medical injury compensation. *Soc Sci Med*. 2008;66(2):387-402.
21. Liability Protections for EMTALA Mandated Care. American College of Surgeons.
22. Ensuring Medical Volunteers Can Reach Patients in a Disaster. American College of Surgeons.
23. Kohn LT, Corrigan JM, Donaldson MS, eds. *To err is human: building a safer health system*. Washington, DC.: National Academy Press, 2000.

## REFERENCES (cont.)

24. Levinson, Daniel. "Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries." Department of Health and Human Services. Office of the Inspector General. November 2010. Downloaded September 2013 from [oig.hhs.gov/oei/reports/oei-06-08-00220.pdf](http://oig.hhs.gov/oei/reports/oei-06-08-00220.pdf).
25. Gawande AA, Thomas EJ, Zinner MJ, Brennan T. The incidence and nature of surgical adverse events in Colorado and Utah in 1992. (*Surgery* 1999;126:66-75.) + Rogers SO, Gawande AA, et al. Analysis of surgical errors in closed malpractice claims at 4 liability insurers. (*Surgery* 2006;140:25-33.)
26. Leape LL, Brennan TA, Laird N, et al. The nature of adverse events in hospitalized patients: results of the Harvard Medical Practice Study II. *N Engl J Med*. 1991;324:377-84.
27. ACS March *Bulletin* article 9. Mello.
28. Kohn LT, Corrigan JM, Donaldson MS, eds. To err is human: building a safer health system. Washington, DC.: National Academy Press, 2000.
29. Rogers SO, Gawande AA, et al. Analysis of surgical errors in closed malpractice claims at 4 liability insurers. (*Surgery* 2006;140:25-33). + Weissman JS, et al. Hospital Workload and Adverse Events. *Med Care*. 2007 May;45(5):448-455.
30. A Better Approach to Medical Malpractice Claims? The University of Michigan Experience. Richard C. Boothman, Amy C. Blackwell, Darrell A. Campbell, Jr., Elaine Commiskey, and Susan Anderson + Sexton JB, Thomas EJ, Helmreich RL. Error, stress, and teamwork in medicine and aviation: cross sectional surveys. *BMJ*. 2000;320:745-749.
31. Ayers LR, Beyea SC, Godfrey MM, Harper DC, Nelson EC, Batalden PB. Quality improvement learning collaboratives. *Qual Manag Health Care*. 2005, 14(4):234 + Morath J, Leary M. Creating safe spaces in organization to talk about safety. *Nursing Economics*. 2004, 22(3): 334-351.
32. <http://www.cincinnatichildrens.org/assets/0/78/1067/2709/2807/2813/2a39304a-386d-49d4-ad78-19c941b20033.pdf>. + McCannon CJ, Hackbarth AD, Griffin FA. Miles to go: An introduction to the 5 Million Lives Campaign. Joint Commission Journal on Quality and Patient Safety. 2007 Aug;33(8):477-484.
33. Sexton JB, Thomas EJ, Helmreich RL. Error, stress, and teamwork in medicine and aviation: cross sectional surveys. *BMJ*. 2000;320:745-749.
34. Andrews. An alternative strategy for studying adverse events in medical Care. *Lancet* 1997; 349: 309-313.
35. Wright, Stuart. Adverse Events in Hospitals: Public Disclosure of Information About Events. January 2010.
36. Mello MM, Studdert DM, Brennan TA. The new medical malpractice crisis. *N Engl J Med*. 2003 Jun 5;348(23):2281-4. Erratum in: *N Engl J Med*. 2003 Sep 4;349(10):1010. PubMed PMID: 12788991.
37. Bal BS. An introduction to medical malpractice in the U.S. *Clin Orthop Relat Res*. 2009 Feb;467(2):339-47. doi: 10.1007/s11999-008-0636-2. Epub 2008 Nov 26. PubMed PMID: 19034593; PubMed Central PMCID: PMC2628513.
38. Metzler IS, Meara JG. Medical liability reform: evidence for legislative and alternative approaches. *Bull Am Coll Surg*. 2012 Jan;97(1):6-11. PubMed PMID: 22315877.
39. Bal BS, et al.
40. Klick J, Stratmann T. Does Medical Malpractice Reform Help States Retain Physicians and Does It Matter? Working Paper; 2003.
41. Mello MM, Kachalia A, Goodell S. Medical malpractice. April 2011 update. *Synth Proj Res Synth Rep*. 2011 Apr;(21 Suppl 1). doi:pii: 72097. 72097. Epub 2011 Apr 1. PubMed PMID: 22052245.
42. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Et al.
43. Medical Liability Reform NOW!: The facts you need to know to address the broken medical liability system. 2013 ed. American Medical Association. GDB:13-0053:PDF:4/13.
44. Klick J, Stratmann T. Medical Malpractice Reform and Physicians in High-Risk States. *Journal of Legal Studies*. 2007;36:S121-S42.
45. Matsa D. Does Liability Keep the Doctor Away? Evidence from Tort Reform Damage Caps. MIT Department of Economics Working Paper 2005.
46. Encinosa & Hellinger 2005, Hellinger & Encinosa 2003.
47. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010. ([http://www.medpac.gov/documents/Apr10\\_MedicalMalpractice\\_CONTRACTOR.pdf](http://www.medpac.gov/documents/Apr10_MedicalMalpractice_CONTRACTOR.pdf)).



48. Danzon 1984, Danzon 1986, Sloan, et al 1989, Blackmon & Zeckhauser 1991, Viscusi & Born 2005, Zuckerman, et al 1990, Viscusi, et al 1993.
49. Avraham R. An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments. *Journal of Legal Studies* 2007;36:S186-S229.
50. Zuckerman, et al 1990.
51. Zuckerman, et al 1990, Danzon, et al 2004, Thorpe 2004, Viscusi & Born 2005, Sloan 1985, Zuckerman, et al 1990, Blackmon & Zeckhauser 1991, Viscusi, et al 1993.
52. Zuckerman, et al 1990.
53. Viscusi, et al 1993.
54. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Et al.
55. Ambrose JM, Carroll A. Medical Malpractice Reform and Insurer Claims Defense: Unintended Effects? *Journal of Health Politics, Policy and Law*. 2007;32:843-65.
56. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Et al.
57. Blackmon G, Zeckhauser RJ. State Tort Reform Legislation: Assessing Our Control of Risks In: Schuck P, ed. *Tort Law and the Public Interest: Competition, Innovation, and Consumer Welfare*. New York: W.W. Norton and Company and the American Assembly; 1991:272-309.
58. Viscusi WK, Zeckhauser RJ, Born P, Blackmon G. The Effect of 1980s Tort Reform Legislation on General Liability and Medical Malpractice Insurance. *Journal of Risk and Uncertainty* 1993;6:165-86.
59. Avraham R. An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments. *Journal of Legal Studies*. 2007;36:S186-S229.
60. Avraham R. An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments. *Journal of Legal Studies*. 2007;36:S186-S229.
61. Blackmon G, Zeckhauser RJ. State Tort Reform Legislation: Assessing Our Control of Risks In: Schuck P, ed. *Tort Law and the Public Interest: Competition, Innovation, and Consumer Welfare*. New York: W.W. Norton and Company and the American Assembly; 1991:272-309.
62. Viscusi WK, Zeckhauser RJ, Born P, Blackmon G. The Effect of 1980s Tort Reform Legislation on General Liability and Medical Malpractice Insurance. *Journal of Risk and Uncertainty*. 1993;6:165-86.
63. Thorpe KE. The Medical Malpractice 'Crisis': Recent Trends and the Impact of State Tort Reforms. *Health Affairs*. 2004;Suppl Web Exclusives:W4-20-30.
64. Klick J, Stratmann T. Medical Malpractice Reform and Physicians in High-Risk States. *Journal of Legal Studies*. 2007;36:S121-S42.
65. Bal BS. An introduction to medical malpractice in the U.S. *Clin Orthop Relat Res*. 2009 Feb;467(2):339-47. doi: 10.1007/s11999-008-0636-2. Epub 2008 Nov 26. PubMed PMID: 19034593; PubMed Central PMCID: PMC2628513.
66. Avraham R. An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments. *Journal of Legal Studies*. 2007;36:S186-S229.
67. Danzon PM. The Frequency and Severity of Malpractice Claims. *Journal of Law and Economics*. 1984;27:115-48.
68. Danzon PM. The Frequency and Severity of Medical Malpractice Claims: New Evidence. *Law and Contemporary Problems*. 1986;49:57-84.
69. Sloan FA, Mergenhausen PM, Bovbjerg RR. Effects of Tort Reforms on the Value of Closed Medical Malpractice Claims: A Microanalysis. *Journal of Health Politics, Policy and Law*. 1989;14:663-89.
70. Zuckerman, et al 1990.
71. Blackmon & Zeckhauser 1991.
72. Sloan 1985.
73. Thorpe 2004.
74. Klick & Stratmann 2003.
75. Danzon 1984, Danzon 1986, Sloan, et al 1989, Zuckerman, et al 1990, Blackmon & Zeckhauser 1991.
76. Sloan 1985, Zuckerman, et al 1990, Blackmon & Zeckhauser 1991, Danzon, et al 2004, Thorpe 2004, Klick & Stratmann 2003.
77. Pollack J, Selzer D, Meara JG. The state of medical liability reform. *Bull Am Coll Surg*. 2011 Jul;96(7):22-5. PubMed PMID: 22315898.
78. White FJ, Pettiette LW, Wiggins RB, Kiss A. Medical Malpractice Review Panels and Medical Liability System Cost, Timeliness, and Efficiency: A Cross-Sectional Study. *Journal of Empirical Legal Studies*. 2008;5:375-405.

## REFERENCES (cont.)

79. Yoon A. Mandatory Arbitration and Civil Litigation: An Empirical Study of Medical Malpractice Litigation in the West. *American Law and Economic Review*. 2004;6:95-134.
80. White FJ, et al.
81. Danzon PM. The Frequency and Severity of Medical Malpractice Claims: New Evidence. *Law and Contemporary Problems* 1986;49:57-84.
82. Danzon 1984, Sloan, et al 1989, Zuckerman, et al 1990.
83. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010. ([http://www.medpac.gov/documents/Apr10\\_MedicalMalpractice\\_CONTRACTOR.pdf](http://www.medpac.gov/documents/Apr10_MedicalMalpractice_CONTRACTOR.pdf)).
84. Sloan 1985, Zuckerman, et al 1990.
85. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Et al.
86. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010. ([http://www.medpac.gov/documents/Apr10\\_MedicalMalpractice\\_CONTRACTOR.pdf](http://www.medpac.gov/documents/Apr10_MedicalMalpractice_CONTRACTOR.pdf)).
87. Blackmon & Zeckhauser 1991.
88. Avraham R. An Empirical Study of the Impact of Tort Reforms on Medical Malpractice Settlement Payments. *Journal of Legal Studies*. 2007;36:S186-S229.
89. Danzon 1984, Sloan, et al 1989, Blackmon & Zeckhauser 1991, Klick and Stratmann 2003.
90. Mello MM, Kachalia A, Goodell S. Medical malpractice. April 2011 update. *Synth Proj Res Synth Rep*. 2011 Apr;(21 Suppl 1). doi:pii: 72097. 72097. Epub 2011 Apr 1. PubMed PMID: 22052245.
91. Danzon PM. The Frequency and Severity of Medical Malpractice Claims: New Evidence. *Law and Contemporary Problems* 1986;49:57-84.
92. Zuckerman, et al 1990, Sloan, et al 1989, Blackmon & Zeckhauser 1991.
93. Kilgore ML, Morrissey MA, Nelson LJ. Tort Law and Medical Malpractice Insurance Premiums. *Inquiry* 2006;43:255-70.
94. Zuckerman, et al 1990.
95. Zuckerman, et al 1990.
96. Congressional Budget Office. Letter from Douglas W. Elmendorf, Director, to Senator John D. Rockefeller IV. 2009.
97. Pollack J, Selzer D, Meara JG. The state of medical liability reform. *Bull Am Coll Surg*. 2011 Jul;96(7):22-5. PubMed PMID: 22315898.
98. Pollack J, Selzer D, Meara JG. The state of medical liability reform. *Bull Am Coll Surg*. 2011 Jul;96(7):22-5. PubMed PMID: 22315898.
99. American Medical Association, Advocacy Resource Center, State Laws Chart I: Liability Reforms, accessed at <http://www.ama-assn.org/resources/doc/arc/state-laws-chart-1.pdf>.
100. American Medical Association, Medical Liability Reform—Now! Accessed at [ama-assn.org/go/mlrnw](http://ama-assn.org/go/mlrnw).
101. Kachalia A, Mello M. New Directions in Medical Liability Reform. *NEJM*. 364(16), 1562-72.
102. Mello M, Brennan T. The Role of Medical Liability Reform in Health Care Reform. *NEJM*. 361(1), 1-3.
103. Mello M, Gallagher T. Malpractice Reform—Opportunities for Leadership by Health Care Institution and Liability Insurers. *NEJM*. 362(15), 1353-56.
104. Mello MM, Gallagher TH. Malpractice Reform—Opportunities for Leadership by Health Care Institutions and Liability Insurers. *N Engl J Med*. April 15, 2010. 362(15): 1353-1356.
105. Hyams AL, Shapiro DW, Brennan TA. Medical practice guidelines in malpractice litigation: An early retrospective. *J Health Polit Policy Law*. 1996;21(2): 289-313.
106. Hyams AL, et al.
107. Hyams, et al.
108. Hyams, et al.
109. Begel J. Maine physician practice guidelines: Implications for medical malpractice litigation. *Maine Law Review*. 1995;47:69-103. + Smith GH. A case study in progress: Practice guidelines and the affirmative defense in Maine. *Jt Comm JQual Improv*. 1993;19:355-362.
110. Hyams AL, Shapiro DW, Brennan TA. Medical practice guidelines in malpractice litigation: An early retrospective. *J Health Polit Policy Law*. 1996;21(2): 289-313. + Matthews JR. Practice guidelines and tort reform: The legal system confronts the technocratic wish. *JHealth Polit Policy Law*. 1999;24(2):275-304.



111. Smith GH, et al.
112. Matthews JR. Practice guidelines and tort reform: The legal system confronts the technocratic wish. *JHealth Polit Policy Law*. 1999;24(2):275-304.
113. Matthews JR. Practice guidelines and tort reform: The legal system confronts the technocratic wish. *JHealth Polit Policy Law*. 1999;24(2):275-304.
114. Matthews JR. Practice guidelines and tort reform: The legal system confronts the technocratic wish. *JHealth Polit Policy Law*. 1999;24(2):275-304.
115. [http://leg.mt.gov/content/Committees/Interim/2009\\_2010/Children\\_Family/Assigned\\_Studies/SJR\\_35/sjr35-safe-harbor-background.pdf](http://leg.mt.gov/content/Committees/Interim/2009_2010/Children_Family/Assigned_Studies/SJR_35/sjr35-safe-harbor-background.pdf).
116. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Et al.
117. Agency for Healthcare Research and Quality. AHRQ Medical Liability & Patient Safety Planning Grant: Final Progress Report. Available at: [www.oregon.gov/oha/OHPR/PSDM/AHRQ\\_MLPS\\_Report.pdf](http://www.oregon.gov/oha/OHPR/PSDM/AHRQ_MLPS_Report.pdf) Accessed February 19, 2013.
118. Kachalia A, Little A, Isavoran M, Crider LM, Smith J. Greatest impact of safe harbor rule may be to improve patient safety, not reduce liability claims paid by physicians. *Health Affairs*. 33 No 1 (2014): 59-66.
119. Screening for Prostate Cancer: Current Recommendation. Available at: <http://www.uspreventiveservicestaskforce.org/prostatecancerscreening.htm>. Accessed August 29, 2013.
120. Early Detection of Prostate Cancer: AUA Guidelines. Available at: <http://www.auanet.org/education/guidelines/prostate-cancer-detection.cfm>. Accessed August 29, 2013.
121. Gallagher TH, Waterman AD, Ebers AG, Fraser VJ, Levinson W. Patients' and physicians' attitudes regarding the disclosure of medical errors. *JAMA*. 2003;289(8):1001-1007.
122. Metzloff TB. The Future of Binding Arbitration in Medical Malpractice. Forum: Risk Management Foundation of The Harvard Medical Institutions. Feb 2003; 23(1): 14-15.
123. Szmania SJ, Johnson AM, Mulligan M. Alternative dispute resolution in medical malpractice: a survey of emerging trends and practices. *Conflict Resolution Q*. 2008;26:71-96.
124. Szmania SJ, et al.
125. Guadagnino D. Malpractice mediation poised to expand. *Physician's News Digest*. 2004. Available at: [www.physiciansnews.com/2004/04/23/malpractice-mediation-poised-to-expand/](http://www.physiciansnews.com/2004/04/23/malpractice-mediation-poised-to-expand/). Accessed January 8, 2013.
126. Blatt R, Brown M, Lerner J. Co-mediation: A success story at Chicago's Rush Medical Center. 2001. Available at: [www.adrsystems.com/news/Co-Mediation.pdf](http://www.adrsystems.com/news/Co-Mediation.pdf). Accessed January 8, 2013.
127. Peebles T, Harris C, Metzloff T. Following the script: An empirical analysis of court-ordered mediation of medical malpractice cases. *J Disp Resolution*. 2007;1:101-118.
128. Rolph E, Moller E, Rolph JE. Arbitration agreements in health care: myths and reality. *Law & Contemporary Problems*. 1997; 60:153.
129. Rolph, et al.
130. Alternatives to litigation are available: The liability insurer's perspective. *Bulletin of the American College of Surgeons*. March 2013.
131. Metzloff TB. The Future of Binding Arbitration in Medical Malpractice. Risk Management Foundation Forum. Vol 23 No. 1. February 2003.
132. Rolph E, Moller E, Rolph JE. Arbitration agreements in health care: myths and reality. *Law & Contemporary Problems*. 1997; 60:153.
133. Metzloff, et al.
134. Engalla v. Permanente Medical Group, Inc., 15 Cal. 4th 951 - Cal: Supreme Court 1997.
135. Rolph E, et al.
136. US Dept of Health and Human Services, Public Health Service, Health Resources and Services Administration. National Practitioner Data Bank Guidebook. Rockville, MD: US Dept of Health and Human Services, Public Health Service, Health Resources and Services Administration; 1999.
137. Metzloff TB. Resolving malpractice disputes: imaging the jury's shadow. *Law & Contemporary Problems*. 1991;54:43.

## REFERENCES (cont.)

138. Metzloff, et al + American Arbitration Association Healthcare Policy Statement. Accessed September 4, 2013. Available at: [https://www.adr.org/cs/idcplg?IdcService=GET\\_FILE&dDocName=ADRSTG\\_011014&RevisionSelectionMethod=LatestReleased](https://www.adr.org/cs/idcplg?IdcService=GET_FILE&dDocName=ADRSTG_011014&RevisionSelectionMethod=LatestReleased).
139. Rolph E, et al.
140. John J. Fraser, Jr., and the Committee on Medical Liability. Technical Report: Alternative Dispute Resolution in Medical Malpractice. *Pediatrics*. 2001;107:60.
141. Studdert DM, Brennan TA. Toward a Workable Model. Et al.
142. Studdert DM, Mello MM, Gawande AA, et al.
143. Toulmin JK. Major current as seen by the lawyer. In: Wood C, ed. The influence of litigation on medical malpractice. London: Academic Press; 1977:82-94 + Cameroon CTM. Some aspects of the US medical malpractice insurance crisis. *BR Med J*. 1997;ii:877-80.
144. Quam L, Fenn P, Dingwall R. Medical malpractice in Perspective II—The Implications for Britain. *British Medical Journal*. 1987 June 20: 294; 1597-1600.
145. Quam L, et al.
146. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 'Health courts' and Accountability for Patient safety. *The Milbank Quarterly*. 2006: 84(3):459-492.
147. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 'Health courts'
148. Bovbjerg RR, Raymond B. Patient Safety, Just Compensation and Medical Liability Reform. Kaiser Permanente: Institute for Health Policy. January 2003.
149. The study is summarized in Randall R. Bovbjerg and Frank A. Sloan, "No Fault for Medical Injury: Theory and Evidence," *University of Cincinnati Law Review* 67(1):53-123 (Fall 1998).
150. Bismark M, Paterson R. No-Fault Compensation in New Zealand: Harmonizing Injury Compensation, Provider Accountability and Patient Safety. *Health Aff*. 2006: 25(1):278-283.
151. Bismark M, et al.
152. Bismark M, et al.
153. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 2006.
154. Bismark M, et al.
155. Levinson, DR. Adverse Events in Hospitals National Incidence Among Medicare Beneficiaries. DHHS, Office of Inspector General. 2010 Nov. Available at: <http://oig.hhs.gov/oei/reports/oei-06-09-00090.pdf>.
156. Davis P, et al. Adverse Events in New Zealand Public Hospitals I: Occurrence and Impact. *New Zealand Medical Journal* 115. 2002; 1167:u271. + Wilson RM, et al. The Quality in Australian Health Care Study. *Medical Journal of Australia*. 1995. 163(9):458-471. + Vincent C, Neale G, Woloshynowych. Adverse Events in British Hospitals: Preliminary Retrospective Record Review. *British Medical Journal*. 2001. 322(7285): 517-519.
157. Holman M, Vidmar N, Lee P. Most claims settle: Implications for alternative dispute resolution from a profile of medical-malpractice claims in Florida. *Law and Contemporary Problems*. 2011;74(103):30.
158. Bismark M, et al.
159. Widman A, Hochberg FA. Federal Administrative Health Courts are Unconstitutional: A reply to Elliot, Narayan and Nasmuth. *Journal of Health Politics, Policy and Law*. 2008 Aug: 33(4): 799-832 + Elliot DE, Narayan SA, Nasmuth MS. Administrative "Health Courts" for Medical Injury Claims: The Federal Constitutional Issues. *Journal of Health Politics, Policy and Law*. 2008 Aug: 33(4):761-798.
160. Wachter R, Shojania KG. Internal Bleeding: The Truth behind America's Terrifying Epidemic of Medical Mistakes. New York: Rugged Land, 2004.
161. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 2006.
162. Mello MM, Studdert DM, Moran P, Dauer EA. Policy experimentation with administrative compensation for medical injury: Issues under state constitutional law. *45 Harv. J. on Legis*. (59) 2008.
163. Bismark M, et al.
164. Studdert DM, Brennan TA. Toward a Workable Model of "No-Fault" Compensation for Medical Injury in the US. *American Journal of Law and Medicine*. 2001: 27: 225-252.
165. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 2006.





166. Studdert DM, Brennan TA. Toward a Workable Model. Et al.
167. Baker T. The Medical malpractice Myth. Chicago: University of Chicago press + Bovbjerg RR, Berenson A. Surmounting Myths and Mindsets in Medical Malpractice. Washington DC: Urban Institute:2005.
168. Brennan T, Leape L, Laird N, Hebert L, Localio A, Lawthers A, Newhouse J, Weiler P, Hiatt H. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *N Engl J Med*. 1991;324(6):370-376. + Localio AR, Lawthers AG, Brennan TA, Laird NM, Hebert LE, Peterson LM, Newhouse JP, Weiler PC, Hiatt HH. Relation between malpractice claims and adverse events due to negligence. Results of the Harvard Medical Practice Study III. *N Engl J Med*. 1991;325(4):245-251. + Studdert DM, Thomas EJ, Burstin HR, Zbar BI, Orav EJ, Brennan TA. Negligent care and malpractice claiming behavior in Utah and Colorado. *Med Care*. 2000;38(3):250-260 + Studdert DM, Mello MM, Sage WM, DesRoches CM, Peugh J, Zapert K, Brennan TA. Defensive medicine among high-risk specialist physicians in a volatile practice environment. *JAMA*. 2005; 293(21):2609-2617.
169. Mello MM, Studdert DM, Kachalia AB, Troyen AB. 2006.
170. Bismark M, et al.
171. Levinson, DR. Adverse Events in Hospitals National Incidence Among Medicare Beneficiaries. DHHS, Office of Inspector General. 2010 Nov. Available at: <http://oig.hhs.gov/oei/reports/oei-06-09-00090.pdf>.
172. Davis P, et al. Adverse Events in New Zealand Public Hospitals I: Occurrence and Impact. *New Zealand Medical Journal* 115. 2002; 1167:u271. + Wilson RM, et al. The Quality in Australian Health Care Study. *Medical Journal of Australia*. 1995. 163(9):458-471. + Vincent C, Neale G, Woloshynowych. Adverse Events in British Hospitals: Preliminary Retrospective Record Review. *British Medical Journal*. 2001. 322(7285): 517-519.
173. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010. ([http://www.medpac.gov/documents/Apr10\\_MedicalMalpractice\\_CONTRACTOR.pdf](http://www.medpac.gov/documents/Apr10_MedicalMalpractice_CONTRACTOR.pdf)).
174. Mello MM, Kachalia A, et al.
175. Clinton HR, Obama B. Making patient safety the centerpiece of medical liability reform. *N Engl J Med*. 2006 May 25;354(21):2205-8. PubMed PMID: 16723612.
176. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010.
177. Peters. Resuscitating Hospital Enterprise Liability.
178. US Congress, Office of Technology Assessment, Defensive Medicine and Medical Malpractice. OTA-H-602, Washington, D.C.: US Government Printing Office, July 1994. pp. 87-88.
179. Peters. Resuscitating Hospital Enterprise Liability.
180. Landro L. The Informed Patient: Preventing the Tragedy of Misdiagnosis. *The Wall Street Journal*. Nov 29, 2006. Accessed online September 10, 2013. Available at: <http://online.wsj.com/article/SB116476417544135251.html>.
181. Landro, et al.
182. Tappan K. Medical-Malpractice Reform: Is Enterprise Liability or No-Fault a Better Reform? 46 B.C.L. Rev. 1095. 2005.
183. Tappan, et al.
184. Tappan, et al.
185. Independent Practice Becoming Increasingly Rare Among Surgeons. HPRI Data Tracks. [http://www.facs.org/fellows\\_info/bulletin/2011/poley0311.pdf](http://www.facs.org/fellows_info/bulletin/2011/poley0311.pdf).
186. Tappan, et al.
187. Mello MM, Kachalia A. Evaluation of options for medical malpractice system reform. Washington, DC: Medicare Payment Advisory Commission, 2010. ([http://www.medpac.gov/documents/Apr10\\_MedicalMalpractice\\_CONTRACTOR.pdf](http://www.medpac.gov/documents/Apr10_MedicalMalpractice_CONTRACTOR.pdf)).
188. Boothman RC, Blackwell AC, Campbell DA, Commiskey E, Anderson A. A Better Approach to Medical Malpractice Claims? The University of Michigan Experience. *J Health Life Sci Law*. 2009 Jan;2(2):125-59.
189. Kraman SS, Cranfill L, Hamm G, Woodard T, John M, Eisenberg. Patient Safety Awards. Advocacy: the Lexington Veterans Affairs Medical Center. *Jt Comm J Qual Improv*. 2002, Dec; 28(12):646-50.



## REFERENCES (cont.)

190. Boothman, et al + Kraman, et al.
191. Boothman, et al.
192. Boothman, et al.
193. Clinton, Obama. Making Patient Safety the Center of Liability Reform. *NEJM Perspective*. May 25, 2006.
194. Kachalia A, Kaufman SR, Boothman R, Anderson S, Welch K, Saint S, Rogers MA. Liability claims and costs before and after implementation of a medical error disclosure program. *Ann Intern Med*. 2010 Aug 17; 153(4): 213-21.
195. Clinton, Obama, et al.
196. Kachalia A, Kaufman SR, Boothman R, Anderson S, et al.
197. Boothman RC, Blackwell AC, et al.
198. Kraman SS, et al.
199. Boothman RC, Blackwell AC, et al.
200. Boothman RC, Blackwell AC, et al.
201. Boothman RC, Blackwell AC, et al.
202. Gallagher TH. A 62-year-old woman with skin cancer who experienced wrong-site surgery: review of medical error. *JAMA*. 2009 Aug 12; 302(6):669-77.
203. Sack K. Doctors Say 'I'm Sorry' Before 'See You in Court. *NY Times*. 2008 May 18. Available at: [http://www.nytimes.com/2008/05/18/us/18apology.html?pagewanted=all&\\_r=1](http://www.nytimes.com/2008/05/18/us/18apology.html?pagewanted=all&_r=1) Accessed August 18, 2013.
204. Gallagher TH, et al.
205. Bell SK, Smulowitz PB, Woodward AC, Mello MM, Duva AM, Boothman RC, Sands K. Disclosure, Apology, and Offer Programs: Stakeholders' Views of Barriers to and Strategies for Broad Implementation. *Milbank Q*. 2012 Dec; 90(4):682-705.
206. Murtagh L, Gallagher TH, Andrew P, Mellow MM. Disclosure-And-Resolution Programs That Include Generous Compensation Offers May Prompt A Complex Patient Response. *Health Aff*. Dec 2012; 31:122681-2689.
207. Mello MM, Senecal SK, Kuznetsov, Cohn JS. Implementing Hospital-Based Communication-And-Resolution Programs: Lessons Learned in New York City. *Health Affairs*. 33 no 1 (2014): 30-38.
208. Boothman RC, Blackwell AC, et al.
209. Boothman RC, Blackwell AC, et al.
210. Mastroianni AC, Mello MM, Sommer S, Hardy M, Gallagher TH. The flaws in state 'apology' and 'disclosure' laws dilute their intended impact on malpractice suits. *Health Aff (Millwood)*. 2010 Sep; 29(9):1611-9.
211. Murtagh L, Gallagher TH, Andrew P, Mellow MM. Disclosure-And-Resolution Programs That Include Generous Compensation Offers May Prompt A Complex Patient Response. *Health Aff*. Dec 2012; 31:122681-2689.
212. Miller SM, Hedrick SF. "Disclose, Apology and Offer." Clear and Convincing Evidence. Available at: <http://mccumberdaniels.wordpress.com/2012/08/14/disclosure-apology-and-offer/>. Accessed August 29, 2013 + Gallegos A. "Massachusetts hospitals launch patient apology program." *American Medical News*. Published on May 21, 2012. Available at: [www.amednews.com/article/20120521/profession/305219941/4/](http://www.amednews.com/article/20120521/profession/305219941/4/). Accessed August 29, 2013.
213. ACS website.
214. <http://inspiringquality.facs.org/>.
215. Hall BL, et al. "Does Surgical Quality Improve in the American College of Surgeons National Surgical Quality Improvement Program." *Annals of Surgery*. 205 (3):363-376; Sept 2009.
216. <http://www.escapefiremovie.com/escape-fire-defined>.
217. [https://mbaa.fuqua.duke.edu/ldi/press\\_wagdodge.html](https://mbaa.fuqua.duke.edu/ldi/press_wagdodge.html).





**100+**years

## AMERICAN COLLEGE OF SURGEONS

---

*Inspiring Quality:  
Highest Standards, Better Outcomes*

### **American College of Surgeons**

**HOME OFFICE**  
633 N. SAINT CLAIR ST.  
CHICAGO, IL 60611-3211

**WASHINGTON DC OFFICE**  
DIVISION OF ADVOCACY AND HEALTH POLICY  
20 F STREET, NW SUITE 1000  
WASHINGTON, DC 20001

*[www.facs.org](http://www.facs.org)*