



www.citizen.org

Defensive Medicine:

The Doctored Crisis

March 2011

Acknowledgments

This report was written by David Arkush and Taylor Lincoln.

About Public Citizen

Public Citizen is a national non-profit organization with more than 225,000 members and supporters. We represent consumer interests through lobbying, litigation, administrative advocacy, research, and public education on a broad range of issues including consumer rights in the marketplace, product safety, financial regulation, safe and affordable health care, campaign finance reform and government ethics, fair trade, climate change, and corporate and government accountability.



Public Citizen's Congress Watch
215 Pennsylvania Ave. S.E.
Washington, D.C. 20003
P: 202-546-4996
F: 202-547-7392
<http://www.citizen.org>

© 2011 Public Citizen. All rights reserved.

Contents

Introduction and Summary	3
Definitions.....	5
I. Most empirically sound, evidence-based studies have found that liability concerns have no more than a minimal effect on health care costs; doctor surveys finding high costs are wholly unreliable.	6
A. Most empirical studies examining doctors’ decisions and billing records show litigation threats to have at most a minimal influence.....	6
B. Most studies examining broad spending data find no more than a minimal correlation between litigation threats and health care costs.....	10
C. Unreliable surveys have provided fodder for most of the alarmist claims on defensive medicine.....	14
II. Factors other than defensive medicine offer better explanations for excessive medicine.	18
A. Providers have a strong financial incentive to engage in unnecessary tests and procedures.....	19
B. Numerous other explanations exist for excessive medicine and wild growth in health costs.....	23
1. Fraud accounts for substantial share of health care costs.....	23
2. Americans pay too much for pharmaceuticals.....	23
3. U.S. physicians are overpaid compared to their counterparts in other developed countries.	24
4. Additional explanations.	24
III. Broader trends in the empirical data also present problems for the defensive medicine argument.	25
A. Defensive medicine cannot be driving health costs because diagnostic testing—by far the largest category of purported defensive medicine—is a small fraction of overall health care costs.....	25
B. Reductions in litigation do not reduce health care spending because fear of litigation is unrelated to actual risk of litigation.	27

Introduction and Summary

Proposals to limit medical malpractice liability are a perennial feature of health care debates. Those favoring liability limits have long sought to convince the public and policy makers that their preferred course would benefit not just providers, but also the general public, by reducing medical costs. At present, the principal claim of those seeking to limit liability is that malpractice liability causes massive extra costs through “defensive medicine”: Fear of litigation leads doctors to exercise grossly excessive caution, ordering unnecessary tests and procedures.¹ The Department of Health and Human Services determined that U.S. health care costs in 2009 had risen to \$2.5 trillion, 17.6 percent of the nation’s gross domestic product (GDP). With health costs soaring, many diehard tort reform advocates have renewed their efforts, promising caps on liability as an elixir for health cost control.

Current House Speaker John Boehner (R-Ohio) claimed in 2010 that “medical malpractice and the defensive medicine that doctors practice” is the “biggest cost driver” in all of medicine.² Other colleagues of his agree. Darrell Issa, the new chairman of the House Committee on Oversight and Government Reform, has said “As much as \$210 billion is spent on defensive medicine annually.³ The largest claim among Boehner’s colleagues was made by a physician, Rep. Tom Price (R-Ga.), who said, “Defensive medicine isn’t an abstract notion, and it could be responsible for more than \$650 billion in unnecessary health care spending every single year [26 percent of health care spending].”⁴

Are Reps. Boehner, Issa and Price correct? The reliable empirical evidence paints a vastly different picture. In short, claims such as those above about defensive medicine are wildly overblown. Increasing numbers of published, evidence-based studies by academic researchers come to strikingly different conclusions about the magnitude of defensive medicine. Instead of the 26 percent of health care spending claimed by Price, the majority of studies that have attempted to put an overall price tag on defensive medicine have found that it amounts to only 1 or 2 percent of total health care costs, if that.

¹ Proponents of liability limits used to focus less on defensive medicine and more on the costs of litigation itself. Those claims were problematic because medical malpractice litigation represents only a tiny fraction of health care costs, and happens to have been declining at the same time as health care costs have skyrocketed (for example, a 2010 Public Citizen study found that, even when defined generously, litigation costs represented only 0.46 percent of health care costs in 2009 and were the lowest or second-lowest on record, depending on how one adjusts for inflation) [See, Public Citizen, “Medical Malpractice Payments Fall Again in 2009,” March 3, 2010. Available <http://www.citizen.org/documents/NPDBFinal.pdf>]. Over the last decade or so, liability opponents have shifted to broader, less empirically grounded claims about “defensive medicine.”

² Rep. Boehner’s comments during televised summit to debate health care legislation, Feb. 25, 2010. Available at <http://archives.cnn.com/TRANSCRIPTS/1002/25/se.06.html>.

³ Rep. Darrell Issa, “Bipartisan Health Care Reform Must Include Tort Reform,” *Politico*, Feb. 25, 2010. Available at <http://www.politico.com/news/stories/0210/33438.html>.

⁴ Rep. Tom Price, “Gallup: 26% of Health Care Dollars Spent to Fend off Trial Bar,” press release, Feb. 22, 2010. Available at <http://tomprice.house.gov/html/release.cfm?id=744>. The press release is based on a survey involving former Speaker of the House Newt Gingrich that is discussed in Section I of this report.

Moreover, compelling evidence suggests that much of the activity attributed to defensive medicine may stem from another source: the financial incentive to order unnecessary tests and procedures. As a recent report by the Congressional Research Service concluded, “some evidence suggests that factors other than defensive medicine, such as physician payment systems (*e.g.*, fee-for-service vs. capitation) and financial incentives, may explain the alleged over-provision of health services.”⁵

Some defensive medicine exists. But even in high-risk scenarios involving specialties that are at the highest risk for litigation, defensive medicine appears to be responsible for only a very small percentage of medical decisions, most of which involve diagnostic testing. Moreover, many practices that some would call defensive may be sound exercises of medical caution and therefore should not be categorized as waste.

This report, based on reliable published studies, covers the following topics:

1. The most empirically sound, evidence-based studies of defensive medicine usually find that its role is small.
2. Factors other than defensive medicine, such as financial incentives to order more tests, offer much better explanations for many of the practices that liability opponents deem defensive.
3. Defensive medicine cannot be driving the fast-paced growth of health care costs because the costs of diagnostic testing—the principal type of purported defensive medicine—are small in proportion to overall health care spending.
4. Malpractice litigation has declined, but the decline has not slowed the growth of health care costs. Malpractice litigation is at the lowest level on record, and there is no evidence that the decline in litigation has slowed the growth of health care costs. This may be because fear of litigation is unrelated to actual risk of litigation.

⁵ Bernadette Fernandez, *et al.*, “Medical Malpractice Insurance and Health Reform,” Congressional Research Service, April 15, 2010.

Definitions

Before proceeding, it is necessary to explain our use of certain terminology. In this paper, we use terms in the following manner:

Defensive medicine. We use the phrase “defensive medicine” to mean medical tests or procedures that offer minuscule value, particularly in proportion to their costs or potential adverse health effects, and that are ordered primarily out of concern for liability.

Many advocates and policy makers—particularly proponents of liability limits—appear to use the phrase “defensive medicine” to mean medicine that is essentially frivolous, delivered purely or almost entirely because of the fear of lawsuits. The more realistic view is that, in a given situation, the available medical diagnostic and treatment options exist on a continuum. On one end are practices that are obviously indicated and most likely to benefit the patient. On the other are what we and most empirical researchers call “defensive medicine”—practices that have very little likelihood of benefiting the patient, particularly in relation to their costs, and are carried out primarily because of a practitioner’s concern for liability.

Excessive medicine. We use the term “excessive medicine” to refer to tests and procedures that are not medically indicated, regardless of the reason they are ordered. As discussed below, there are many contributing causes in addition defensive medicine because of the fear of litigation, such as financial incentives, excessive caution due to factors other than litigation, and inadequate medical training.

I. Most empirically sound, evidence-based studies have found that liability concerns have no more than a minimal effect on health care costs; doctor surveys finding high costs are wholly unreliable.

For this report, Public Citizen assessed 12 studies published since 1989 that examined the influence of litigation fears on health care spending.⁶

We begin in subsection A by discussing six studies that assessed individual doctors' decision or actual actions. Section B reviews six studies that measured overall health care costs in different states (those with tort reforms versus those without) or over different time periods.

Subsection C reports on generalized surveys of doctors regarding the prevalence of defensive medicine. These surveys have provided most of the fodder for the alarmist claims put forth by proponents of liability limits. They are wholly unreliable for several reasons.

A. Most empirical studies examining doctors' decisions and billing records show litigation threats to have at most a minimal influence.

Of the six studies examining individual doctors' decisions, four found either no correlation or only a negligible connection between liability risks and doctors' decisions. One found that litigation fears modestly influence doctors' decisions in particularly high-risk scenarios. One found a significant correlation between regional liability insurance rates and caesarian section delivery rates but no correlation between doctors' own litigation histories and their decisions. (Studies are listed in reverse chronological order by date of publication.)

- 1. Finding: Defensive medicine practices account for only 0.13 percent of overall health care costs.** (Thomas *et al.*, *Health Affairs*, 2010.⁷) A 400 million-record database of health care billing reimbursement requests was studied. Researchers measured the correlation between physicians' billing claims and their liability risk, as measured by their liability insurance premiums. The researchers concluded that "defensive medicine practices exist and are widespread, but their impact on medical care costs is small." The researchers placed the cost of defensive medicine at only 0.13 percent of overall health care costs.

⁶ The studies included in this paper were chosen because they were recent, among the most frequently cited on the subject of defensive medicine or, as in the case of the 1994 Office of Technology Assessment (OTA) study, particularly thorough. The selected studies are intended to reflect the full range of conclusions on defensive medicine, from those that found the least cost (or prevalence) to those that found the most.

⁷ J. William Thomas, *et al.*, "Low Costs of Defensive Medicine, Small Savings from Tort Reform," *Health Affairs*, September 2010, p. 1578-1582.

- 2. Finding: Greater malpractice risk associated with higher caesarian rate for treatment of three-of-five socioeconomic groups, but change in practices increased total costs only by one-fourth of 1 percent.** (Dubay *et al.*, *Journal of Health Economics*, 1999.⁸) The authors compared the frequency of caesarian section use in the care of five socioeconomic groups of women with the doctors' liability risk, which the authors equated to the doctors' liability insurance premiums. They found that increased malpractice risk was associated with a greater likelihood of cesarean sections being performed for three of the five groups. But they found only a negligible potential savings from lowering doctors' liability risk. If caps on liability were imposed (thus, the authors hypothesized, resulting in lower liability insurance rates and, hence, fewer caesarians), the avoided caesarian sections would save about one-fourth of 1 percent (0.27 percent) of total obstetrical charges.

Summary of Empirical Studies Examining Doctors Decisions and Billing Records

This report reviews six studies that attempted to measure the influence of defensive medicine by studying doctors' decisions or actual billing records. Four of the studies looked at the frequency with which caesarian sections were used in the context of doctors' litigation risk (as measured by their personal litigation history or regional factors). One study assessed doctors' decisions in hypothetical, high-risk, scenarios, and one compared doctors' billing records with their litigation risk.

- Of the studies examining the prevalence of caesarian section use:
 - Two found no correlation between obstetricians' litigation risk and their likelihood of using a caesarian section;
 - One found a modest correlation, responsible for raising total obstetric spending by one-fourth of 1 percent (0.27 percent).
 - One found caesarian frequency varied by a factor of three according regional liability insurance rates but did not vary by obstetricians' personal litigation histories. The researchers were unable to determine if insurance rates or regional practices were responsible for the difference.
- The study examining hypothetical scenarios found that 8 percent of doctors in high-risk specialties who were presented with hypothetical, high-risk situations chose a course of action primarily because of liability concerns. The overwhelming majority acted out of medical necessity.
- The study examining billing records found that fears of litigation, while prevalent, were only responsible for driving health care costs up only 0.13 percent.

⁸ Lisa Dubay, *et al.*, "The Impact of Malpractice Fears on Cesarean Section Rates," *Journal of Health Economics*, Aug. 1, 1999.

3. **Finding: No correlation exists between physicians' liability risk and use of prenatal resources or caesarian deliveries in the care of low-risk obstetric patients.** (Baldwin *et al.*, *JAMA*, 1995.⁹) The researchers quantified the use of prenatal resources and the rates of caesarian section deliveries of 205 physicians caring for low-risk obstetric patients in the state of Washington in 1988 and 1989. The physicians' resource use was compared to their malpractice claims experience and their malpractice risk, based on county-by-county litigation rates. The authors found no association between the doctors' malpractice claims experience or litigation risk and their use of prenatal resources or cesarean deliveries.
4. **Finding: Physicians in high-risk specialties evaluating high-risk scenarios are occasionally influenced by liability concerns but far more frequently are guided by judgments of medical necessity.** (Office of Technology Assessment (OTA), 1994.¹⁰) OTA conducted four surveys of physicians in high-risk specialties. Cardiologists, obstetrician/gynecologists, and surgeons were presented with hypothetical scenarios that "involved a patient presenting with a probable minor condition but with a small chance for a potentially very serious or fatal condition." Each scenario was "explicitly designed to evoke concern about liability." Physicians were given options about how they would treat the patient and why.¹¹ The survey materials did not say that OTA's purpose was to study defensive medicine but did list malpractice concerns as one of the reasons for each possible course of action.

A median of 8 percent of physicians recommended a clinical action or hospital admission primarily because of liability concerns.¹² OTA concluded that physicians were overwhelmingly guided by their medical judgment in determining treatments.

"In clinical scenario surveys designed specifically to elicit a defensive response, malpractice concerns were occasionally cited as an important factor in clinical decisions; however, physicians' belief that a course of action is medically indicated was the most important determinant of physicians' clinical choices," OTA wrote. "These findings suggest that many physicians are more aggressive in diagnosis not because of fear of malpractice liability, but because they have come to believe that such practices are medically necessary."¹³

The study also shed light on the gray area between proper care and purportedly wasteful "defensive" care. "Due to lack of information on the relative effectiveness of many medical interventions, as well as lack of consensus on what level of risk indi-

⁹ Laura-Mae Baldwin, *et al.*, "Defensive Medicine and Obstetrics," *JAMA*, Nov. 22-29, 1995.

¹⁰ "Defensive Medicine and Medical Malpractice," Office of Technology Assessment, July 1994. Available at <http://biotech.law.lsu.edu/policy/9405.pdf>.

¹¹ *Ibid.*, p. 14.

¹² *Ibid.*, p. 8.

¹³ *Ibid.*, p. 74.

viduals or society are willing to accept, it is difficult if not impossible to classify most instances of defensive medicine as purely 'good' or 'bad.' ”¹⁴

Two-thirds of cardiologists surveyed, for instance, said “they would hospitalize a 50-year-old woman who had fainted in a hot church with no other serious problems, but only 10.8 percent of those would do so primarily out of concern for malpractice risk.” The vast majority of doctors recommending hospitalization did so because they believed “it was medically indicated.”¹⁵

The researchers concluded, “Most defensive medicine is not of zero benefit. Instead, fear of liability pushes physicians’ tolerance for medical uncertainty to low levels, where the expected benefits are very small and the costs are high.”¹⁶

5. **Finding: The rate of caesarian sections is strongly correlated to regional liability insurance rates but not to doctors’ litigation histories.** (Localio, *et al.*, *JAMA*, 1993.¹⁷) All deliveries in 1984 in 31 hospitals in four New York regions were studied. The authors measured the rate of caesarian section deliveries against several litigation-related factors, including the claims history against a hospital, the claims history against a physician, the perceived risks of litigation among physicians in each region (based on a separate survey) and the liability insurance rates in the region. The researchers found that hospitals’ litigation histories were only slightly correlated to caesarian frequency. Physicians’ individual liability history was not correlated. Physicians from regions with twice the rate of liability insurance were three times more likely to perform a caesarian, and those from regions in which doctors expressed slightly more fear of litigation were nearly twice as likely to perform a caesarian. Of the findings regarding liability rates and litigation fears, the authors wrote, “Because both are regional measures, they might demonstrate an association not between malpractice claims risk and caesarean delivery, but rather only between regional practice style and cesareans.”

6. **Finding: The rate of caesarian sections is not correlated to physicians’ legal history.** (Goyert, *et al.*, *New England Journal of Medicine*, 1989.¹⁸) The rate of caesarian section delivery among 11 obstetricians caring for more than 1,500 affluent patients in a suburban Detroit hospital in 1986 and 1987 was studied. The researchers found a significant range in the rate of caesarian deliveries (19.1 to 42.3 percent). But the researchers found that “[v]ariation in cesarean-section rates among physicians was not attributable to the practice setting, the patient population, the degree of obstetrical risk, or the physician’s recent medicolegal experience [emphasis added], and it was not accompanied by corresponding differences in neonatal outcome.”

¹⁴ *Ibid.*, p. 36.

¹⁵ *Ibid.*, p. 8.

¹⁶ *Ibid.*, p. 1.

¹⁷ A. Russell Localio, *et al.*, “Relationship Between Malpractice Claims and Caesarian Delivery,” *JAMA*, Jan. 20, 1993.

¹⁸ Gregory L. Goyert *et al.*, “The Physician Factor in Cesarean Birth Rates,” *New England Journal of Medicine*, March 16, 1989, p. 706-709.

The authors concluded that “practice style may be an important determinant in the wide variations in the rates of cesarean delivery among obstetricians.”

B. Most studies examining broad spending data find no more than a minimal correlation between litigation threats and health care costs.

Of the studies examining broad health care costs, five found that the correlation between liability conditions and costs was either nonexistent, inconclusive, or modest. The sixth was an often-cited 1996 study by Kessler and McClellan that suffered from serious methodological flaws.¹⁹

- 1. Finding: Rates for “self-insured” health insurance in states with tort reforms are up to 2.3 percent lower than in other states; no difference exists in rates for conventional health insurance.** (Avraham, *et al.*, 2009.²⁰) The authors studied health insurance costs of large employers in various parts of the country from 1998 to 2006. They found that self-insured employers (*i.e.*, those that directly paid their for employees’ health care costs) in states imposing tort reforms had up to 2.3 percent lower costs than self-insured employers in other states. In contrast, among employers that were fully insured (*i.e.*, those that purchased insurance for their employees), the authors found no difference in costs between tort reform and non-tort reform states.

Summary of Studies of Broad Health Care Data in the Context of Litigation Risk Factors

This paper reviews six studies comparing litigation factors to broad health care data:

- Four found either no demonstrable correlation or only a slim correlation between liability caps and health care costs. Of studies finding a slim correlation, one found that costs in “tort reform” states were up to 2.3 percent lower in certain situations. The other found that decreased liability resulted in a slight reduction in health care spending but also caused a reduction in quality of care that, the researchers concluded, outweighed the cost savings.
- One found that a 10 percent increase in malpractice litigation was correlated with a 1 percent increase in health care costs.
- One found that caps on damages resulted in 5 to 9 percent savings in the treatment of two high-risk cardiac conditions. This study suffered from serious methodological flaws.

¹⁹ David P. Kessler and Mark McClellan, “Do Doctors Practice Defensive Medicine,” *Quarterly Journal of Economics*, March 1, 1996.

²⁰ Ronen Avraham *et al.*, “The Impact of Tort Reform on Employer-Sponsored Health Insurance Premiums,” September 2009.

2. **Finding: Reductions in quality of care from limiting liability outweigh slight economic savings.** (Lakdawalla and Seabury, National Bureau Of Economic Research, 2009.²¹) The authors studied jury verdicts, Medicare expenditures, hospital expenditures and mortality rates between 1980 and 2003. They found that although medical malpractice payments had grown “enormously” over the time period studied, the increase had a “modest impact on the cost of health care in the U.S.” and that “limiting malpractice liability is no panacea for rising health care costs.” Moreover, the authors found that malpractice liability leads to modest reductions in patient mortality that outweigh any gains that limiting liability offers. “Therefore,” they wrote, “we conclude that—for values of statistical life traditionally employed by U.S. regulators—reducing malpractice costs is not likely to be a worthwhile policy goal in itself.”
3. **Finding: No significant correlation exists between direct liability reforms (such as caps on payments) and Medicare spending.** (Sloane and Shadle, *Journal of Health Economics*, 2009.²²) In a study of Medicare payments from 1985 to 2000 in states that had implemented tort reforms compared with states that had not, the authors found that “[d]irect reforms (caps on damages, abolition of punitive damages, eliminating mandatory prejudgment interest, and collateral source offset) did not significantly reduce payments for Medicare-covered services in any specification.” The authors found that indirect reforms (limitations on contingency fees, mandatory periodic payments, joint-and-several liability reform, and patient compensation funds) “show more promise than do the direct reforms.” But, the authors wrote, “We are reluctant to place much weight on this evidence.”
4. **Finding: An increase in malpractice costs results in a slight increase in Medicare payments.** (Baiker *et al.*, *Health Affairs*, 2007.²³) The authors studied the prevalence of litigation, doctors’ liability insurance premiums and per-patient Medicare spending in two time periods: 1991 to 1993 and 1999 to 2001. The authors found that a 10 percent increase in average malpractice payments per physician within a state was associated with a 1 percent increase in Medicare payments.

This study compared health care costs in an era of historically low litigation (1991 to 1993) with costs in a time period when litigation was at a higher level (1999 to 2001). Further insight into litigation’s role on costs could be gained if this study’s methodology were repeated to compare Medicare spending rates in the 1999 to 2001 period with the 2007 to 2009 period, in which litigation rates returned to a historically low level. The corollary to this study’s findings suggests that a reduction in litigation would lead to a reduction in costs. But litigation has declined for several years, and there is no evidence of reduced costs.

²¹ Darius N. Lakdawalla and Seth A. Seabury, “The Welfare Effects Of Medical Malpractice Liability,” National Bureau Of Economic Research, Working Paper 15383, September 2009.

²² Frank A. Sloan and John H. Shadle, “Is There Empirical Evidence for “Defensive Medicine”? A Reassessment,” *Journal of Health Economics*, March 2009.

²³ Katherine Baicker, *et al.*, “Malpractice Liability Costs and The Practice Of Medicine In The Medicare Program,” *Health Affairs*, May-June 2007.

- 5. Finding: No conclusive correlation exists between health care spending and changes in liability laws.** (Congressional Budget Office, 2006.²⁴) Researchers compared Medicare spending from 1980 to 2003 and overall health care spending from 1980 to 2000 between states that had imposed tort reforms and those that had not. The researchers found modest reductions in costs in states that had imposed caps on non-economic damages. But they questioned “whether those associations between certain tort limits and spending reflect[ed] causal impacts.” The researchers reported that many of the instances in which spending declined in the tort reform states, “there was evidence that relative spending was already moving in [that] direction . . . prior to the implementation of those tort limits.”²⁵

CBO’s researchers hypothesized that states imposing tort reforms may have had a general concern about high medical costs and may have made additional efforts to reduce costs along with their imposition of changes to their liability systems.

CBO found the correlation between legal reforms and costs inconclusive. “Although this analysis provides some evidence of links between tort limits and health care spending, the results are inconsistent,” CBO concluded. “The mixed results also demonstrate the difficulty of disentangling any effects of tort limits from other factors that affect levels of spending for health care.”²⁶

- 6. Finding: States imposing liability reforms experienced 5 to 9 percent reductions in Medicare spending for the treatment of two specialized conditions in high-risk practice areas.** (Kessler and McClellan, *Quarterly Journal of Economics*, 1996.²⁷) In the most cited study on defensive medicine, the authors compared the costs of treating Medicare patients with acute myocardial infarction (AMI) or ischemic heart disease (IHD) from 1984 to 1990 in states that had imposed liability reforms with those that had not. They concluded that states with liability reforms saw a reduction of 5 to 9 percent in the cost of treating the conditions and that the reduced expenditures were not associated with adverse health effects.

The authors then hypothesized that these savings for the treatment of AMI and IHD could be extrapolated across all health care services. “If our results are generalizable to medical expenditures outside the hospital, to other illnesses, and to younger patients,” they wrote, “then direct reforms could lead to expenditure reductions of well over \$50 billion per year without serious adverse consequences for health outcomes.”²⁸

But the authors’ “generalizable” hypothesis was directly undercut by their acknowl-

²⁴ “Limiting Tort Liability for Medical Malpractice,” Congressional Budget Office, 2004, p. 6-7. Available at www.cbo.gov/ftpdocs/49xx/doc4968/01-08-MedicalMalpractice.pdf.

²⁵ *Ibid.*, p. 34.

²⁶ *Ibid.*, p. 35.

²⁷ David P. Kessler and Mark McClellan, “Do Doctors Practice Defensive Medicine,” *Quarterly Journal of Economics*, March 1, 1996.

²⁸ *Ibid.*

edgment that they studied AMI and IHD specifically because the conditions involved greater litigation risks. “Cardiovascular illness is likely to be sensitive to defensive medical practices,” they wrote. “In a ranking of illnesses by the frequency of and payments to the malpractice claims that they generate, AMI is the third most prevalent and costly, behind only malignant breast cancer and brain-damaged infants.”²⁹ This acknowledgement contradicts the proposition that savings in the care of these conditions could simply be assumed for all of medicine.

The Congressional Budget Office (CBO) tested Kessler and McClellan’s extrapolation hypothesis in 2004 and was unable to confirm it. “[W]hen CBO applied the methods used in the study of Medicare patients hospitalized for two types of heart disease to a broader set of ailments, it found no evidence that restrictions on tort liability reduce medical spending,” CBO wrote. In a further study of the extrapolation hypothesis, CBO wrote, “Moreover, using a different set of data, CBO found no statistically significant difference in *per capita* health care spending between states with and without limits on malpractice torts.”³⁰

Setting aside the unjustified extrapolation, Kessler and McClellan’s primary conclusion that tort reform laws led to reductions in costs for the care of discrete conditions is in doubt. States that imposed caps on non-economic damages for medical malpractice in the 1980s were already experiencing declining health care costs before their caps went into effect, CBO observed in a report published in 2006. CBO hypothesized that changes in the Medicare policies “might have coincided with the implementation of tort limits and been driving Medicare spending trends, confounding the estimates of the effects of tort limits.”³¹

Specifically, CBO focused on a major change in 1983 in payment rates. The change “compressed payment rates differentially across states, meaning that states with hospitals that previously received high average payments per discharge from Medicare tended to have their average payment rates reduced, and states with hospitals that previously received low average payments per discharge tended to have their average payment rates increased.”³² Because the tort reform states typically had above average costs, their payments would have fallen because of the changes to Medicare’s system.

In short, Kessler and McClellan reached a doubtful conclusion about the influence of liability limits on two particular practices, then committed a gross error by multiplying the dubious conclusion across all medical care.

²⁹ *Ibid.*

³⁰ “Limiting Tort Liability for Medical Malpractice,” Congressional Budget Office, 2004, p. 6-7. Available at www.cbo.gov/ftpdocs/49xx/doc4968/01-08-MedicalMalpractice.pdf.

³¹ “Medical Malpractice Tort Limits and Health Care Spending” Congressional Budget Office, April 2006. Available at www.cbo.gov/ftpdocs/71xx/doc7174/04-28-MedicalMalpractice.pdf, p. 31.

³² *Ibid.*, p. 31.

C. Unreliable surveys have provided fodder for most of the alarmist claims on defensive medicine.

The greatest claims regarding the prevalence and costs of defensive medicine stem from physician surveys. These surveys have a number of significant flaws that render them wholly unreliable, as discussed below.

Among the results of physician surveys:

- In 2009, Jackson HealthCare conducted an online survey of physicians. Of 138,686 physicians invited, 2.2 percent participated. The survey advised respondents that, “Fear of litigation has been cited as the driving force behind defensive medicine. Defensive medicine is especially common in the United States of America, with rates as high as 79 percent to 93 percent particularly in emergency medicine, obstetrics, and other high-risk specialties.”³³ Respondents, on average, estimated that 34 percent of health care costs were due to defensive medicine. Jackson Healthcare used that result to peg the costs of defensive medicine at \$850 billion.³⁴

This survey’s leading question and its unacceptably small response rate render its findings meaningless.

- Jackson HealthCare has claimed that a Gallup survey it commissioned found that physicians estimated that defensive medicine was responsible for 26 percent of health care in the United States.³⁵ Jackson Healthcare is a member of former House Speaker Newt Gingrich’s for-profit Center for Health Transformation. Gingrich and Jackson Healthcare announced the results of this survey at the National Press Club at the height of the health care reform debate. In his presentation, Gingrich compared the 26 percent result with the nation’s overall health care bill (about \$2.4 trillion) to conclude that defensive medicine is responsible for \$625 billion in spending

³³ Quantifying The Cost Of Defensive Medicine,” Jackson Healthcare, 2010. Available at www.jacksonhealthcare.com/healthcare-research/healthcare-costs-defensive-medicine-study.aspx. The full definition of defensive medicine with which respondents were presented was: “Defensive medicine is the practice of diagnostic or therapeutic measures conducted primarily not to ensure the health of the patient, but as a safeguard against possible malpractice liability. Fear of litigation has been cited as the driving force behind defensive medicine. Defensive medicine is especially common in the United States of America, with rates as high as 79 percent to 93 percent, particularly in emergency medicine, obstetrics, and other high-risk specialties. Defensive medicine takes two main forms: assurance behavior and avoidance behavior. Assurance behavior involves the charging of additional, unnecessary services in order to a) reduce adverse outcomes, b) deter patients from filing medical malpractice claims, or c) provide documented evidence that the practitioner is practicing according to the standard of care, so that if, in the future, legal action is initiated, liability can be pre-empted. Avoidance behavior occurs when providers refuse to participate in high-risk procedures or circumstances.”

³⁴ *Ibid.*

³⁵ The survey defined defensive medicine as “the practice of diagnostic or therapeutic measures conducted primarily not to ensure the health of the patient, but as a safeguard against possible malpractice liability. This may include tests, prescriptions, hospitalizations and referrals that may not be medically necessary, but are viewed as providing protection from a potential lawsuit.”

each year.³⁶ In the same news conference, Jackson Healthcare CEO Rick Jackson stated that the cost was \$650 billion.³⁷

Jackson Healthcare has not publicly released detailed results from this survey, which indicates a lack confidence in its analysis of the numbers, as well as a simple lack of seriousness. But from the numbers Jackson and Gingrich cited publicly, in the press conference and in press releases, at least one major flaw is apparent: Jackson Healthcare's 26 percent number is wholly unjustified. Respondents were asked two questions: 1. "What percentage of your practice do you estimate to be defensive in nature?" 2. "Thinking more broadly, what percentage of overall healthcare costs do you attribute to the practice of defensive medicine?"³⁸

Twenty-seven percent of respondents said they personally did not practice any defensive medicine in the previous year.³⁹ The 73 percent who reported some said it made up 21 percent of their care. Twenty-one percent of 73 percent is 15 percent. At best, then, the respondents attributed 15 percent of their care to defensive medicine. Jackson's 26 percent figure derives not from these reports by doctors on their own practices—already a dubious source for a genuine study—but rather from doctors' uninformed guesses about the share of overall health costs attributable to defensive medicine. Inexplicably, Gingrich and Jackson all but ignored doctors' lower estimate regarding their own practices in favor of doctors' higher estimate for health care at large.

- A Harvard research team (Studdert *et al.*, JAMA 2005) surveyed Pennsylvania physicians in six high-risk specialties in 2003, when medical malpractice insurance rates were portrayed by many as a statewide crisis. Of respondents, 93 percent said they had engaged in some form defensive medicine at least sometimes.⁴⁰

This study appears more sincere than most surveys on defensive medicine practices because it asked doctors to describe their most recent defensive act, as opposed to asking general questions about defensive medicine. However, the did not seek confirmation that litigation concerns were the decisive reason, as opposed to a contributing reason, for the purported defensively motivated actions. The researchers acknowledged this shortcoming, stating, "Measurement and self-identification of defensive medicine are difficult because distinctions between inappropriate and ap-

³⁶ "Newt Gingrich and Wayne Oliver Participate at Defensive Medicine Press Briefing," Center for Health Transformation Web site, Feb. 22, 2010. Available at http://www.healthtransformation.net/cs/newt_gingrich_wayne_oliver_participate_at_defensive_medicine_event_at_national_press_club

³⁷ *Ibid.*

³⁸ Questions provided to Public Citizen by Gallup via e-mail.

³⁹ Jackson HealthCare CEO Rick Jackson summarized the survey's results by reporting that "73 percent of physicians practice defensive medicine. But the big result was, physicians attribute 26 percent of health care cost to be defensive in nature." For the remainder of the press conference, presenters focused on the 26 percent finding.

⁴⁰ David M. Studdert *et al.*, "Defensive Medicine Among High-Risk Specialist Physicians in a Volatile Malpractice Environment," *JAMA*, Aug. 2, 2005.

appropriate care are not clear in many clinical situations.”⁴¹ Finally, the survey’s results should not be generalized to medical care as a whole because they pertained only to doctors in high-risk specialties at a time in which access to liability insurance was a highly visible political issue.

More meaningful results could have been gleaned from the Pennsylvania study if, for example, the researchers had examined the medical files of the responding physicians’ patients and asked the respondents to articulate which treatments they definitively would not have prescribed if not for the possibility of facing litigation. The costs for these procedures could then be measured against the costs of all care provided by the physicians in the time period studied. Such a study could yield a potentially valuable estimate on the share of wasteful “defensive” care in the context of overall costs.

- In an unpublished survey the results of which were released in February 2011, orthopedic surgeons reported that 20 percent of imaging tests they ordered were for defensive purposes.⁴² These tests accounted for nearly 35 percent of the survey subjects’ total testing costs. Participating physicians coded each of their tests as either “required for clinical care” or “ordered for defensive reasons.” The costs of reported defensive procedures were higher than the frequency because the most frequently reported defensive tests were for magnetic resonance imaging (MRI) exams, which are more expensive than most tests. MRIs accounted for 85 percent of the reported defensive expenditures.

This inquiry showed progress compared to previous surveys because it sought to measure distinct tests reportedly ordered for defensive reasons, as opposed to asking for historical estimates. But the project suffered from many of the faults that often afflict doctor surveys:

1. The response rate was unreliably low. All orthopedic surgeons in Pennsylvania were invited to participate but only 11 percent did. Doctors who chose to participate were likely more passionate about the subject of defensive medicine than most. A better inquiry would study a smaller sample (perhaps just doctors in a single hospital) but with 100 percent cooperation.
2. The study did not ask respondents to stipulate that tests they “ordered for defensive reasons” would not have been ordered except for liability concerns. This distinction is essential to gaining insight into the role of liability concerns on health costs.

⁴¹ *Ibid.*, p. 2616-2617.

⁴² Bob Roehr, “Defensive Medical Practices Consume 35% of Orthopaedic Imaging Costs, Study Finds,” *British Medical Journal*, Feb. 16, 2011.

3. Participants' answers were anonymous and not checked for validity. More meaningful results could be obtained if medical records were examined by third-party experts to determine if the purportedly defensive tests truly were not medically justified.

In general, the results of physician surveys are unreliable for several reasons. Among them:

1. **Physicians' bias.** Doctors have incentives to report engaging in high levels of defensive medicine because such responses are apt to encourage legislation to minimize their liability. As Studdert *et al.* wrote in their study of Pennsylvania physicians' survey results, "Physician self-reports of defensive medicine may be biased toward giving a socially desirable response or achieving political goals."⁴³

Similarly, the Office of Technology Assessment wrote, "[T]he attention paid to defensive medicine by physician organizations, the news media, and policy makers might cause physicians to exaggerate the impact of liability concerns on their practices in the hope of eliciting a favorable political response."⁴⁴

2. **Prompting.** Each of the surveys mentioned in this section expressly focused on defensive medicine, placing the topic in the mind of the respondent. As the Office of Technology Assessment (OTA) (above) wrote: "Most physician surveys of this sort inadvertently prompt respondents to think about malpractice liability and its potential effects on their medical practices. This 'prompting' may lead physicians to respond in ways they would not if they were simply asked how and why their practices have changed—without asking directly about liability concerns."⁴⁵

OTA's study, as discussed above, did not inform doctors that it was investigating defensive medicine—and OTA found a far lower reported prevalence of purported defensive medicine.

3. **Failure to distinguish between merited and wasteful "defensive" practices.** The surveys discussed here fail to assess whether tests and procedures reportedly ordered for defensive reasons would be justified in the absence of liability concerns. This distinction is critical to evaluating the studies' value to debates on defensive medicine. If the care deemed "defensive" would still occur in the absence of litigation threats, then it is not truly defensive, and it offers no justification for policies that purport to cut costs by restricting patients' access to the courts.

⁴³ *Ibid.*

⁴⁴ "Defensive Medicine and Medical Malpractice," Office of Technology Assessment, July 1994, p. 41.

⁴⁵ *Ibid.*

Much of the care reported by one practitioner as “defensive” would be viewed by another as medically indicated. As Duke University economics professor Frank Sloan wrote, “one person’s defensive medicine is another’s quality of care.”⁴⁶

Michelle Mello (a co-author on the Pennsylvania doctor survey), wrote in a separate review of defensive medicine (Synthesis Project, 2006), “[P]hysicians may have more than one reason for ordering a test, and it can be difficult to draw a clear line between the desire to avoid lawsuits and the desire to make absolutely sure that the patient receives an accurate diagnosis and all treatment that might benefit him.”⁴⁷

- 4. Doctors likely have imperfect knowledge of their own motivations and behavior.** Many studies have shown that doctors exaggerate their risk of litigation.⁴⁸ Doctors may also overestimate the frequency with which they take “defensive” actions. For example, Baldwin *et al.* (above) found the lack of correlation between doctors’ liability risk and their defensive practices “surprising, as surveys of physicians have reported substantial changes in obstetric resource use in response to the malpractice environment and physicians’ claims experience. One explanation for this finding is that physicians have overestimated the changes they have made in resource use.”⁴⁹
- 5. Response bias.** Doctors who agree with common complaints about defensive medicine are more likely to answer surveys seeking their input on the matter. For this reason, the Jackson Healthcare Web survey, with a 2.2 percent response rate, should be dismissed out of hand. But even the survey of Pennsylvania doctors by Studdert *et al.*, which was published in a peer reviewed journal, had only a 65 percent response rate. More reliable results could be gained if participation were compulsory among the universe of doctors studied.

II. Factors other than defensive medicine offer better explanations for excessive medicine.

There is little dispute that the United States gets less than it pays for in health care. U.S. health care spending is 50 percent higher than any other country in the world and more than 2.5 times as much as the average country in the Organisation for Economic Cooperation and Development (OECD).⁵⁰ But U.S. outcomes do not remotely justify the spend-

⁴⁶ “Frank Sloan: Reforming Malpractice Liability to Improve Health Care,” Research in Profile Series, April 2010.

⁴⁷ Michelle M. Mello, “Medical Malpractice: Impact of the Crisis And Effect Of State Tort Reforms,” Robert Wood Johnson Fund, The Synthesis Project, Research Synthesis Report No. 10, May 2006, p. 5.

⁴⁸ See, *e.g.*, Emily R. Carrier, *et al.*, “Physicians’ Fears of Malpractice Lawsuits Are Not Assuaged by Tort Reforms,” *Health Affairs*, September 2010.

⁴⁹ Laura-Mae Baldwin, *et al.*, “Defensive Medicine and Obstetrics,” *JAMA*, Nov. 22-29, 1995, p. 1609.

⁵⁰ OECD, “Total health expenditure per capita, US\$ PPP.” Available at http://www.oecd.org/document/16/0,3343,en_2649_34631_2085200_1_1_1_100.html.

ing. The United States ranks 46th in the world in infant mortality and 49th in life expectancy.⁵¹

The disconnect between spending and results is also apparent when one compares regional data within the United States. The Dartmouth Institute for Health Policy and Clinical Practice, which has studied Medicare spending and patient outcomes for two decades, has found twofold disparities in the volume of care⁵² between regions in the United States and concluded that “the higher volume of care does not produce better outcomes for patients.”⁵³

Remarkably, in the higher volume areas, patients have worse communication with their physicians, worse continuity of care, worse access to care, worse inpatient experiences, and longer waiting times.⁵⁴

Although it is not the primary purpose of this report to offer a comprehensive review of the reasons for rising medical costs, this section discusses some of the factors that provide better explanations than defensive medicine.

Chief among these are the financial incentives embedded in our health care delivery system that reward quantity, rather than quality, of care. Some other explanations for excessive costs, each of which is discussed briefly below, are outright fraud, excessive spending for pharmaceuticals, and disproportionately high pay for doctors.

A. Providers have a strong financial incentive to engage in unnecessary tests and procedures.

Of all the explanations for excessive care, financial incentives are most relevant to this report because they implicate many of the same tests and procedures that some attribute to defensive medicine. “Some so-called defensive medicine may be motivated less by liability concerns than by the income it generates for physicians,” the Congressional Budget Office (CBO) wrote in 2004.⁵⁵

Several empirical studies have found, as Jean M. Mitchell wrote in *Health Affairs* in 2007, that “financial incentives inherent in physician self-referral arrangements resulted in increased use of services.”⁵⁶

⁵¹ Central Intelligence Agency, World Factbook, “Infant mortality rate” and “Life expectancy at birth.” Available at www.cia.gov/library/publications/the-world-factbook/rankorder/rankorderguide.html.

⁵² By studying volume, the Institute’s measurement is not sensitive to differences in costs of living delivered between different regions in the country. The Institute has found three-fold spending differences.

⁵³ Dartmouth Institute for Health Policy and Clinical Practice, “Health Care Spending, Quality, and Outcomes: More Isn’t Always Better,” Feb. 27, 2009. Available at www.dartmouthatlas.org/downloads/reports/Spending_Brief_022709.pdf.

⁵⁴ *Ibid.*

⁵⁵ “Limiting Tort Liability for Medical Malpractice,” Congressional Budget Office, 2004, p. 6. Available at www.cbo.gov/ftpdocs/49xx/doc4968/01-08-MedicalMalpractice.pdf.

⁵⁶ Jean M. Mitchell, “The Prevalence of Physician Self-Referral Arrangements After Stark II: Evidence From Advanced Diagnostic Imaging,” *Health Affairs*, 2007.

This dichotomy between defensive medicine and financial incentives for excessive care was highlighted in a 2009 *New Yorker* article in which the author recounted sitting down with a group of physicians in McAllen, Texas, a city that had the second highest per-patient Medicare reimbursement rate in the country. Although the doctors initially sought to blame litigation fears for the high spending, they acknowledged that the changes to the state's liability laws had significantly reduced lawsuits.⁵⁷

"Come on," a surgeon said. "We all know these arguments are bullshit. There is overutilization here, pure and simple." Since the mid-1990s, the surgeon said, "the way to practice medicine has changed completely. Before, it was about how to do a good job. Now it is about 'How much will you benefit?'"⁵⁸

Many inquiries into the role of financial incentives have focused on "self-referrals," in which physicians order tests that will be run on machines in which they have a financial stake. Although doctors are generally prohibited from referring Medicare patients to an entity in which they have a financial interest, many loopholes exist. For example, Medicare rules allow physicians to be paid for imaging services that are conducted in their offices.

Hillman and Goldsmith (*Health Affairs*, 2010) explained that many physicians have stretched the in-office exception to include the use of equipment they lease in other buildings. In these "per click arrangements . . . physicians profit by purchasing, at negligible economic risk, scanning time at imaging facilities at rates much lower than Medicare and private insurer payments. The referring physician bills Medicare or a private insurer and pockets the difference between his or her cost and the insurer's payment."⁵⁹

The incentive for physicians to seek payment for running tests is significant. Medicare reimburses both for a "professional" component, which includes prescribing and interpreting the test, and a "technical" component, which is intended to pay for purchasing and operating the machine that runs the test. The technical component makes up 80 to 90 percent of the overall reimbursement, which is more than \$1,000 in some cases.⁶⁰

A 2008 study by the Government Accountability Office (GAO) included several findings that suggest financial incentives are driving unnecessary testing:⁶¹

⁵⁷ Atul Gawande, "The Cost Conundrum: What a Texas Town Can Teach Us About Health Care," *The New Yorker*, June 1, 2009.

⁵⁸ *Ibid.*

⁵⁹ Bruce J. Hillman and Jeff Goldsmith, "Imaging: The Self-Referral Boom And The Ongoing Search For Effective Policies To Contain It," *Health Affairs*, December 2010.

⁶⁰ David C. Levin, "Physician Orders Contribute To High-Tech Imaging Slowdown," *Health Affairs*, January 2010.

⁶¹ Government Accountability Office, "Medicare Part B Imaging Services: Rapid Spending Growth And Shift to Physician Offices Indicate Need For CMS To Consider Additional Management Practices," June 2008. Available at www.gao.gov/new.items/d08452.pdf.

- Between 2000 and 2006, the proportion of Medicare spending on imaging services performed in-office rose from 58 to 64 percent.
- In 2006, cardiologists obtained 36 percent of their total Medicare revenue from in-office imaging, up from 23 percent in 2000.⁶²
- Sixty-one percent of Medicare reimbursements for magnetic resonance imaging (MRI) tests were self-referrals, as were 64 percent of computerized tomography (CT) scans. These physicians, GAO found, “were involved in lease or payment-per-scan referral arrangements that might violate federal and state laws.”⁶³

In addition, empirical studies have consistently shown that doctors who benefit financially are more likely to prescribe tests than those who do not. The citations below are not comprehensive, but they provide a window into this extensive body of research:

1. **Finding: Self-referring physicians are up to seven times more likely to order radiology tests.** (Kouri *et al.*, *American Journal of Roentgenology*, 2002.⁶⁴) This literature review found that “[n]onradiologists performing their own imaging are at least 1.7–7.7 times as likely to order imaging as non-self-referring physicians in the same specialty who see patients with the same problems. Nonradiologists’ interpretation of images is usually less accurate than that of radiologists, the authors wrote. This finding is particularly inimical to the defensive medicine argument because it shows doctors putting patients at greater risk by self-referring tests.

Kouri *et al.* concluded: “The limited evidence available generally indicates that increased financial incentives, such as those in self-referral, lead to more imaging and that self-referral involves overutilization.”⁶⁵

2. **Finding: Self-referrers are twice as likely to order tests and 40 percent more likely to order more complicated tests.** (Litt *et al.*, *Radiology*, 2005.⁶⁶) The authors compared the radiology referral patterns of more than 3,000 providers in three specialties over the course of a year. Physicians who were solely self-referrers were nearly twice as likely to order radiology tests for their patients than those who solely referred patients to radiologists (32 tests per 100 visits versus 17 tests per 100 visits). Moreover, the researchers found that self-referring physicians were 40 percent more likely to order a more expensive test than those who referred to radiologists. “This demonstrates a preference for more intense and, hence, more highly remunerative examinations when studies are performed in the referring physician’s office,” the authors concluded.

⁶² *Ibid.*

⁶³ *Ibid.*

⁶⁴ Brian E. Kouri, *et al.*, “Physician Self-Referral For Diagnostic Imaging: Review of The Empirical Literature,” *American Journal of Roentgenology*, 2002.

⁶⁵ *Ibid.*

⁶⁶ Andrew W. Litt *et al.*, “Relative Procedure Intensity with Self-Referral and Radiologist Referral: Extremity Radiography,” *Radiology*, 2005.

3. **Finding: Self-employed urologists are more than twice as likely to order imaging tests than salaried urologists.** (Hollingsworth *et al.*, *Journal of Urology*, 2010.⁶⁷) The authors reported in a study published in 2010 that urologists who were self-employed were more than twice as likely than salaried urologists to order imaging tests. “Our data highlight the possible difficulty of constraining imaging use in situations in which physicians are rewarded financially for practice ownership. New reimbursement reforms may be required,” the authors concluded.
4. **Finding: At least 8 percent of stent procedures are “inappropriate.”** A joint Harvard University and Brown University study of stent usage found that at least 160,000 of 2 million stent procedures were “inappropriate,” meaning they should not have been done, according to cardiologists’ own rules for when to put in a stent or do an angioplasty.⁶⁸ The findings in the Harvard-Brown University study coincide with recent allegations that a Baltimore doctor implanted 585 stents that were not medically necessary.⁶⁹ “What was going on in Baltimore is going on right now in every city in America,” Dr. Steven Nissen, chief of cardiovascular medicine at the Cleveland Clinic, told *The New York Times*. “We’re spending a fortune as a country on procedures that people don’t need,” said Nissen, adding that he routinely treats patients who have been given multiple unneeded stents.⁷⁰ Research has show many heart patients fare no better with stents, which can cost up to \$10,000 to place, than when treated only with drugs.⁷¹
5. **Finding: Patients treated by self-referring physicians are more likely to receive tests than patients treated by non self-referring physicians.** (MedPAC, 2009.⁷²) The Medicare Payment Advisory Commission (MedPAC), an independent congressional agency, examined the care of patients with 13 conditions based on whether they were treated by self-referring physicians.⁷³ For each condition, patients who were treated by self-referring physicians were more likely to undergo imaging tests and were the subject of more imaging spending. On average, patients who were seen by self-referring physicians were 50 percent more likely to receive tests. Patients with congestive heart failure or ischemic heart disease who were treated by self-referring physicians were the subjects of 96 percent to 104 percent

⁶⁷ John M. Hollingsworth *et al.*, “Imaging Use Among Employed and Self-Employed Urologists,” *Journal of Urology*, December 2010, p. 2484.

⁶⁸ Shannon Brownlee, *OVERTREATED: WHY TOO MUCH MEDICINE IS MAKING US SICKER AND POORER*, Bloomsbury, 2007, p. 99, as quoted in “Staff Report On Cardiac Stent Usage At St. Joseph Medical Center,” Senate Finance Committee, December 2010. Available at

<http://finance.senate.gov/newsroom/chairman/release/?id=ce0c5525-b352-474f-9970-96f5afc140bb>.

⁶⁹ *Ibid.*

⁷⁰ Gardiner Harris, “Doctor Faces Suits Over Cardiac Stents,” *The New York Times*, Dec. 5, 2010.

⁷¹ *Ibid.* and Barnaby J. Feder, “In Trial, Drugs Equal Benefits of Artery Stents,” *The New York Times*, March 27, 2007.

⁷² Medicare Payment Advisory Commission (MedPAC), “Report to Congress: Improving Incentives in the Medicare Program,” June 2009. Available www.medpac.gov/documents/jun09_entirereport.pdf.

⁷³ The study categorized physicians that self-referred at least 50 percent of their tests as self referrers.

more imaging spending than those with the same conditions who were treated by non self-referring physicians.

B. Numerous other explanations exist for excessive medicine and wild growth in health costs.

The items above relate to forms of excessive care for which defensive medicine is often blamed. But several other factors account for hundreds of billions of waste in medical care as well. Policymakers intent on stemming the tide of rising health care costs should consider the following:

1. Fraud accounts for substantial share of health care costs.

Outright fraud—billing for services not rendered or for services that were not plausibly necessary—is rampant in medical care.

Malcolm K. Sparrow, a professor at the Kennedy School of Government at Harvard University who has written extensively on fraud, said in 2009 Senate testimony that health care fraud costs up to a half trillion dollars a year. “The units of measure for losses due to health care fraud and abuse in this country are hundreds of billions of dollars per year,” Sparrow told the Senate Judiciary Committee’s Subcommittee on Crime and Drugs. “We just don’t know the first digit. It might be as low as one hundred billion. More likely two or three. Possibly four or five.”⁷⁴

Just one segment of our health care system—the pharmaceutical industry—is the greatest defrauder of all U.S. industries if one measures by the number of settlements under the False Claims Act (FCA), a Public Citizen report published in December 2010 reported. The study found that pharmaceutical companies have paid out \$19.2 billion over the past decade, accounting for 25 percent of the money paid in FCA settlements.⁷⁵

2. Americans pay too much for pharmaceuticals.

A 2008 study by McKinsey Global found that prescription drugs account for 12 percent of all U.S. health costs and \$98 billion of the U.S.’s “above expected” costs in comparison with other OECD countries.⁷⁶ “The United States spends over 118 percent more for an ‘average’ pill than peer OECD countries despite the country’s use of

⁷⁴ Malcolm K. Sparrow, Professor of the Practice of Public Management, John F. Kennedy School of Government, Harvard University, Testimony before the Senate Committee on the Judiciary: Subcommittee on Crime and Drugs, May 20, 2009.

⁷⁵ “Pharmaceutical Industry Is Biggest Defrauder of the Federal Government under the False Claims Act, New Public Citizen Study Finds,” Public Citizen press release, December 16, 2010. Available at www.citizen.org/pressroom/pressroomredirect.cfm?ID=3239

⁷⁶ McKinsey Global Institute, “Accounting for the Cost of U.S. Health Care: A New Look At Why Americans Spend More,” December 2008. Available at www.mckinsey.com/mgi/reports/pdfs/healthcare/US_healthcare_report.pdf.

more generics,” McKinsey wrote. “While higher U.S. prices are a large driver of higher pharmaceutical spending, the use of a relatively more expensive mix of drugs is an even larger driver of cost.”⁷⁷

3. U.S. physicians are overpaid compared to their counterparts in other developed countries.

Physicians in the United States are paid a higher premium over average wages than physicians in other countries. A 2005 OECD study of 14 industrialized nations found that generalist U.S. doctors were the highest paid relative to their country’s average wage and that specialists in the U.S. were the second-highest paid relative to average wage.⁷⁸

The 2008 study by McKinsey Global found that U.S. health care costs were \$477 billion above expected costs in relation to peer OECD countries after adjusting for *per capita* GDP. McKinsey estimated that \$64 billion of the costs above expected were due to higher physician pay.⁷⁹

4. Additional explanations.

There are many other explanations for our burgeoning health care costs. For example, before political expediency incited the “death panels” uproar, experts across the political spectrum agreed that better end-of-life planning could save tens of billions of dollars and better serve patients’ desires. Meanwhile, duplicative tests and procedures that could be avoided with integrated, electronic records have been blamed for wasting another \$25 billion to \$50 billion a year.⁸⁰

Even the general consensus in the United States favoring widespread screening may be misguided—and costly both in dollars and adverse health consequences. A provocative new book contends that manufacturers of diagnostic and treatment devices, health care organizations, disease advocacy groups, have—largely through advertising—have fomented an unhealthy national obsession with early diagnosis.⁸¹ The results, author Gilbert Welch contends, are harms that stem directly from excessive diagnostic tests, such as exposure to radiation, as well as potentially greater harms from the treatment protocols that inevitably take place after a positive test

⁷⁷ *Ibid.*

⁷⁸ Rie Fujisawa and Gaetan Lafortune, “The Remuneration of General Practitioners And Specialists In 14 OECD Countries: What Are The Factors Influencing Variations Across Countries?” Organisation for Economic Cooperation and Development (OECD), December 2008.

⁷⁹ McKinsey Global Institute, “Accounting for the Cost of U.S. Health Care: A New Look At Why Americans Spend More,” December 2008. Available at www.mckinsey.com/mgi/reports/pdfs/healthcare/US_healthcare_report.pdf.

⁸⁰ Eric Wicklund, “Report: Americans Waste Up to \$850 billion a Year In Healthcare,” HealthCare Finance News, Oct. 26, 2009.

⁸¹ Gilbert H. Welch, Lisa M. Schwarz and Steven Woloshin, *Overdiagnosed: Making PEOPLE SICK IN THE PURSUIT OF HEALTH*, Beacon Press, 2011.

result. These harms “may range from mild medication side effects, to surgical complications, to problems requiring hospitalization, and even to death.”⁸²

III. Broader trends in the empirical data also present problems for the defensive medicine argument.

The review in sections I and II demonstrates that researchers have found little evidence of defensive medicine and even less evidence of non-negligible costs stemming from defensive medicine, while evidence increasingly points to other explanations for the practices often labeled defensive—in particular the financial incentive to order unnecessary tests and procedures. In addition to these points, broad empirical trends cast further doubt on the defensive medicine argument: First, the common claim that defensive medicine is driving the rapid growth in health care costs is contradicted by the fact that diagnostic testing accounts for a relatively small fraction of health care costs. Second, the recent decline in malpractice litigation, coupled with evidence that doctors’ fear of lawsuits bears a weak connection to actual litigation risk, challenges the argument that liability limits would remedy cost growth purportedly fueled by defensive medicine.

A. Defensive medicine cannot be driving health costs because diagnostic testing—by far the largest category of purported defensive medicine—is a small fraction of overall health care costs.

Defensive medicine is thought to include many types of care, including prescriptions, admissions to hospitals, and referrals to specialists. But the largest category by far is diagnostic testing. One instructive study asked physicians in six “high-risk” specialties (emergency physicians, general surgeons, orthopedic surgeons, obstetrical gynecologists, and radiologists) to identify “their most recent defensive act.”⁸³ For five of the six specialties, the most-reported act was ordering a computed tomography (CT) test, magnetic resonance imaging (MRI), or X-ray. Other tests—such as biopsies, mammography, ultrasonography, “other imaging,” or “other tests”—also figured highly. [See Figure 1] These responses align with the uncontroversial view that the bulk of purported defensive medicine comes in the form of diagnostic tests.

Figure 1: Physicians’ Most Recent “Defensive Acts”

Specialist Type	Percentage of Physicians Naming a Testing-related Item as Their Most Recent Defensive Act
Emergency physicians	74 percent
General surgeons	66 percent
Orthopedic surgeons	69 percent
Neurosurgeons	81 percent
Obstetricians	55 percent
Radiologists	100 percent

Source: Public Citizen analysis of data within Studdert *et al.*, *JAMA*, 2005.

⁸² *Ibid.*

⁸³ David M. Studdert *et al.*, “Defensive Medicine Among High-Risk Specialist Physicians in a Volatile Malpractice Environment,” *JAMA*, Aug. 2, 2005, p. 2610.

Diagnostic testing, in turn, appears to account at most for 14 percent of all health care spending, and that is a generous estimate. The costs of diagnostic, laboratory, and X-ray services comprised between 12.9 and 14.3 percent of overall Medicare outpatient spending (Medicare “Part B”) in each year between 2000 and 2007.⁸⁴

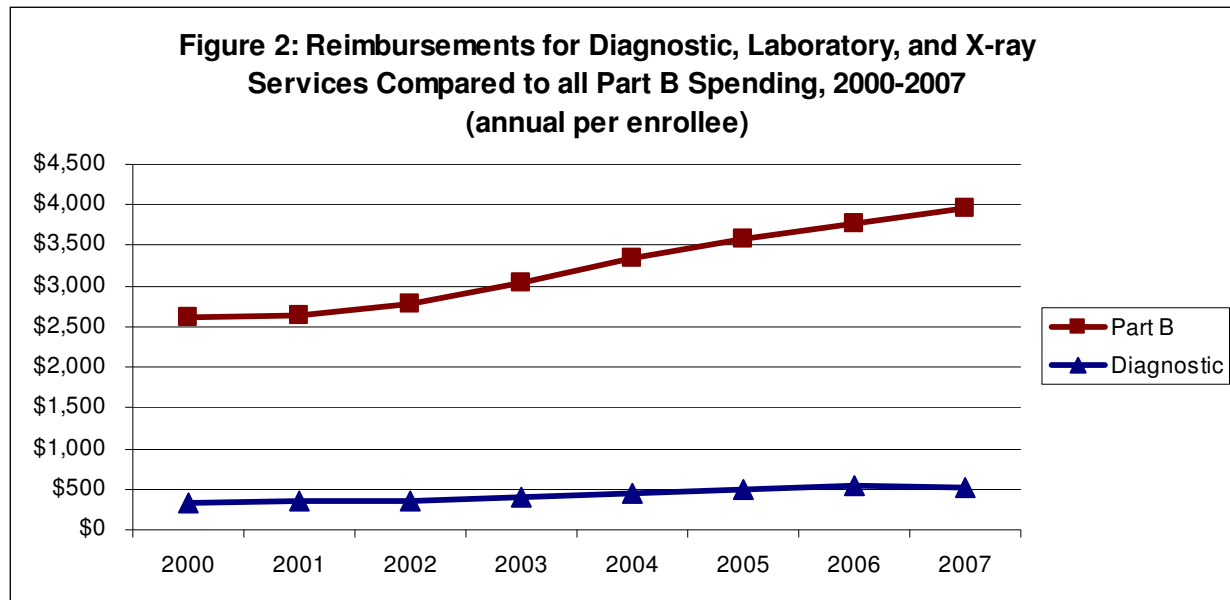
If most defensive medicine is diagnostic testing, and diagnostic testing comprises less than 14 percent of all health care spending, then defensive medicine at most comprises a small fraction of 14 percent of health costs. This means that defensive medicine cannot be a large factor in health costs—and it certainly cannot be driving the growth in medical costs.

Moreover, in recent years diagnostic testing has declined as a share of total spending. In 2000, spending for diagnostic, laboratory, and X-ray services accounted for 13 percent of Medicare Part B spending. Data from the Dartmouth Atlas Project, which is available through 2007, shows that although diagnostic testing’s share rose slightly after 2000 (peaking at 14.3 percent in 2006), it fell to 12.9 percent in 2007. [See Figure 2] The decline likely was due to terms in the Deficit Reduction Act of 2005, which altered Medicare’s reimbursements for tests.

Although the most comprehensive publicly available Medicare data (as provided by the Dartmouth Atlas Project) are available only through 2007, some analyses have been conducted on more recent of Medicare data. One such study found that spending for imaging services, the most costly facet of the diagnostic testing category, remained below 2006 levels in each year from 2007 to 2009. This study, conducted on behalf of the Access to Medical Imaging Coalition (AMIC), shows that the quantity of advanced tests declined by 7.1 percent between 2008 and 2009.⁸⁵

⁸⁴ Medicare Part B provides the most detailed publicly available health care data. The most recent year for which comprehensive Medicare Part B data are available is 2007. Medicare does not track diagnostic testing costs for its inpatient program, known as “Part A.” Instead, the service refunds hospitals a bundled fee based on the diagnosis of each patient. The prevalence of diagnostic testing for Part A patients should be lower than for Part B patients for several reasons: many inpatients’ conditions have already been diagnosed when they arrive at the hospital; there are many expensive non-diagnostic inpatient costs, such as hospital stays themselves, that should occupy a large proportion of costs; and hospitals lack the financial incentive to prescribe excess tests for Part A patients because they do not receive additional reimbursements. On financial incentives and excessive medicine, see Section II of this report.

⁸⁵ The Moran Co., “Trends in Imaging Services Billed to Part B Medicare Carriers and Paid under the Medicare Physician Fee Schedule, 1999-2009,” October 2010. Available at www.scribd.com/doc/48500946/Moran-Company-AMIC-Analysis-of-Imaging-Trends-1999-2009.



Source: Dartmouth Atlas Project

B. Reductions in litigation do not reduce health care spending because fear of litigation is unrelated to actual risk of litigation.

Nationwide, litigation has declined steadily in recent years while health care costs have skyrocketed. The number of medical malpractice payments fell in every year from 2003 to 2009, sinking to an all-time low in 2009.⁸⁶ But between 2003 and 2009, while malpractice payments fell 41 percent, *per capita* health care costs rose 35 percent.⁸⁷ This creates a basic problem for the defensive medicine argument: It makes little sense that the fear of litigation is driving growth in health costs if litigation is declining while health costs skyrocket.

A reasonable response to the data about declining litigation is that doctors' fear could, in fact, remain constant or even rise while litigation declines. This is correct. In fact, evidence suggests that doctors' fear of litigation is unresponsive to reductions in the actual likelihood of litigation.

One study surveyed doctors on the prevalence with which they engaged defensive medicine. The researchers found no association between doctors' histories of being sued and their propensity to practice defensive medicine. The authors surmised that "the signal to

⁸⁶ Public Citizen, Medical Malpractice Payments Fall Again in 2009, March 3, 2010. Available at <http://www.citizen.org/documents/NPDBFinal.pdf>. Source data for this report was the National Practitioner Data Bank (NPDB). NPDB began collecting records of malpractice payments made on behalf of doctors in October 1990. The first full year such data were collected was 1991.

⁸⁷ Health spending data from U.S. Census Bureau, "National Health Expenditures—Summary, and Projections." Available at www.census.gov/compendia/statab/cats/health_nutrition/health_expenditures.html; population data from U.S. Census Bureau, National and State Population Estimates. Available at www.census.gov/popest/states/NST-ann-est.html.

practice defensively may have been broadcast so widely that individual experience is overshadowed by collective anxiety.”⁸⁸

Another study found concerns about liability to be “pervasive” but found only a slight difference (less than 3 percentage points) between the litigation fears of doctors at higher risk for litigation (measured by such factors as the number of claims, average payments, and rates for malpractice insurance in the states in which they practiced) versus those at lower risk.⁸⁹ The authors hypothesized that political campaigning was responsible for physicians’ exaggeration of their risk.⁹⁰

These studies demonstrate that the dominant argument for liability reform is weak even on its own terms. Even if one assumes that the fear of litigation is driving the increase in medical costs, liability limits are a poor solution if doctors’ fear is not rationally related to the actual risk of litigation. If the researchers are correct that political campaigning on tort reform is responsible for doctors’ irrational fears, then the better solution would be for lobbyists, think tanks, and public officials to stop spreading fear and misinformation about malpractice litigation.

The best solutions for reducing unnecessary spending involve intervening more directly to stop doctors from engaging in unwarranted medical procedures. For example, the cost and volume of tests have been reduced by appropriateness guidelines developed by medical societies and alterations to Medicare reimbursement formulas that limit the profitability of owning high-technology equipment. Policy makers also should consider limiting the loophole that permits physicians to self-refer tests for equipment in their own offices. Such efforts would be far more effective than liability limits and would not have the attendant downsides of restricting the rights of innocent victims of malpractice and saddling victims and taxpayers with the costs created by malpractice.

⁸⁸ David M. Studdert *et al.*, “Defensive Medicine Among High-Risk Specialist Physicians in a Volatile Malpractice Environment,” *JAMA*, Aug. 2, 2005, p. 2615, quoting from Glassman *et al.*, “Physicians’ Personal Malpractice Experiences Are Not Related to Defensive Clinical Practices,” *Journal of Health Politics, Policy and Law*, 1996.

⁸⁹ Emily R. Carrier, *et al.*, “Physicians’ Fears of Malpractice Lawsuits Are Not Assuaged By Tort Reforms,” *Health Affairs*, September 2010.

⁹⁰ *Ibid.* (“Advocacy efforts by medical professional societies in support of tort reform may contribute to this problem by conveying the impression that most or all states and specialties are in crisis and require additional legal protection.”)