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Why the “Tort Reform and Accidental Deaths” Report Is Fundamentally Flawed

The study, “Tort Reform and Accidental Deaths,” by Emory University faculty members Paul H. Rubin and Joanna M. Shepherd, has serious shortcomings that undermine its claim that restricting citizens’ legal rights has led to fewer accidental deaths from 1981 to 2000.

1. THE FUNDAMENTAL PREMISE DOESN’T MAKE SENSE: The study’s prism for analysis is accidental deaths (excluding, as the study notes, motor vehicle traffic deaths), with accidental deaths being a function of the presence or absence of tort law restrictions. This is based on a theory that such tort law changes lead to greater use of safer products and services. Specifically, the thesis is that:

- A. The tort law system, with its large liability expenses, increases the cost of goods and services, *which*
- B. businesses pass along to customers through higher prices, *which*
- C. means customers buy less of these particular goods and services, *causing*
- D. businesses to stop supplying the goods and services, *which*
- E. increases accident risk, *because*
- F. products that would have been offered, but weren’t, are safer than other offerings.

As the study says, “to evaluate the merits of the tort system and decide on the benefits of tort reform, it is necessary to examine the impact of tort reform on accidents.” (Page 3)

Problem: The critical link between the tort system and fewer deaths – safer (or more dangerous) products and services – breaks down. This is because the accidental deaths the authors studied are not necessarily associated with use of a product or service generally, or with a defective product or service in particular. Plainly, some accidental deaths depend on victim behavior alone, irrespective of design or use of any particular product or service. In Figure 1, for example, “unspecified” accidents are the third-ranking cause of all accidental deaths. But for this sizeable category, there is, by definition, no way of knowing whether the deaths are product- or service-related. Similarly, in other categories, it is easy to contemplate that accidents take place without a specific connection to use of a product or service. For example, among the elderly, falls are a leading cause of accidental death. But many falls are not associated with use of a product or service.

**Figure 1: Top 10 Causes of U.S. Accidental Deaths
(Excluding Motor Vehicle Traffic Deaths)**

Rank / Type of Accidental Death	2002 Number of Deaths	Percent of Total
1. Unintentional Poisoning	17,550	28.0%
2. Unintentional Fall	16,257	25.9%
3. Unintentional Unspecified	6,550	10.5%
4. Unintentional Suffocation	5,517	8.8%
5. Unintentional Drowning	3,447	5.5%
6. Unintentional Fire/burn	3,261	5.2%
7. Unintentional Natural/ Environment	1,554	2.5%
8. Unintentional Other	1,398	2.2%
9. Unintentional Other Transport	1,273	2.0%
10. Unintentional Other Land Transport	1,134	1.8%

Source: Public Citizen analysis of data from National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.

By resting its analysis on the availability of safer products and services, but then failing to discriminate in the data according to whether deaths were actually caused by use of a product or service, the study renders itself methodologically defective. To be accurate, the study ought to have taken account of the degree to which victims, either partially or entirely, contributed to their own deaths.

An additional complicating factor, which the study also fails to take into account, is workplace fatalities. In 2004, there were 5,703 reported fatal work injuries¹, a not-insignificant number compared to all accidental deaths. These deaths are problematic from the study's vantage point of tort law changes affecting consumer choice. Because the deaths take place in the workplace, it is the firm, and not necessarily its workers, that controls the environment. Thus, the ability of individuals to make their own choices among more or less safe products is constrained, undermining the market-based safety effect claimed by the study's authors.

Implicit in the study's claims about safer products and services is that *new* and safer offerings may never make it to market, having been torpedoed by tort system costs or concerns, while *older* products will be withdrawn. But real-world, commonsense examples show such generalizations often aren't true. New products aren't necessarily safer, as can be seen with pharmaceuticals. New and unsafe drugs can, and do, go to market even though they've been approved by the Food and Drug Administration. The recent recall of Vioxx is only the latest in a long line of problems with new drugs. In an extensive study, Public Citizen found the estimated probability of a newly approved drug acquiring warnings or being withdrawn from the market over 25 years was 20 percent. The deadly "Class of 1997" especially illustrates the perils: That year, 39 new drugs were approved by the FDA. Five years later, five of them had been taken off the market and two more were the subject of new warnings.² Older drugs, by contrast, are more likely to be safe because of experience in the marketplace without severe adverse reactions.

By the same token, consider ladders, a product even the ladder industry itself (which has undertaken a safety education campaign) acknowledges are involved in many accidents. Each

year, more than 500,000 people are treated for injuries arising from ladder misuse, says the trade group American Ladder Association, with some 300 people dying from their injuries.³ Despite that, ladder makers are hardly retreating from the market: Eleven domestic manufacturers continue to introduce new products in a market worth some \$850 million annually.⁴ (This fact was lost upon Treasury Secretary John Snow, who last year, in blasting “frivolous lawsuits,” declared that lawsuits had forced all U.S. ladder makers to fold up.⁵)

2. RELYING ON AN IMPLAUSIBLE OCCURRENCE: In drawing its conclusions, the study relies heavily on changes in the accidental death rate in the year following enactment of tort law restrictions. Specifically, it looks at “the percentage change in accidental, non-motor vehicle death rates from the year before to the year after each tort reform is enacted.” (Page 12).

Problem: Even assuming there is an effect, it is unreasonable to expect tort law changes to flow seamlessly through the legal system and into the stream of commerce and have an impact in the first year after enactment. By the study’s logic, all the following occurs within a year’s time:

- A. A tort law change occurs, but only of a specific type, as the study finds not all tort law restrictions improve safety.**
- B. Because of the tort law change, there are fewer verdicts or settlements imposing liability expenses on businesses, which reduces businesses’ costs.
- C. As liability costs fall, the cost of production falls, leading the businesses to lower prices.
- D. With lower prices, customers buy more of the goods and services.
- E. Use of these goods and services, which presumably contain superior safety features, translates into fewer accidental deaths.

**According to the study, tort law restrictions of these kinds are associated with a decrease in deaths: cap on non-economic damages; higher evidence standard for punitive damages; product liability; and prejudgment interest. Meanwhile, these tort law changes are associated with increases in death rates: collateral source payments and admissibility of evidence of collateral source payments.

However, the legal system alone simply doesn’t react that quickly, as even tort law change supporters acknowledge. For instance, trial verdicts, as opposed to settlements, produce the largest liability judgments and associated costs. In state courts, half of tort cases disposed of by trial took longer than 22 months to go from filing of the complaint to final verdict or judgment, the U.S. Department of Justice recently estimated.⁶ In federal courts, the median time from filing to disposition was about 20 months.⁷ For medical malpractice – one of the most hotly contested areas in tort litigation – it often takes more than five years for a case that produces a damage award to progress through the system.⁸

Plainly, before tort law changes have an impact, cases affected by the changes must first be brought, and then reach disposition. If cases take years to reach disposition, it is not possible for their impact to be felt in the first year following enactment. Moreover, once the purported effect has played out in the legal system, there must be further adaptations in the world of commerce, such as businesses altering prices or changing designs and production lines, and

customers adapting in discernable ways. All this makes it highly unlikely that the full cycle of change contemplated by the study can be accomplished in a single year.

3. THE SOURCE DATA MAY BE WRONG: The foundation of the study is accidental deaths, as reported by the WISQARS database of the Centers for Disease Control and Prevention's National Center for Injury Prevention and Control for the period 1981 to 2002.⁹

Problem: There is potentially a significant problem with this data, for which the study has failed to take account. Beginning in 1999, the center's mortality data was coded using a new classification system. As a result, the National Center for Health Statistics specifically urges caution in the type of analysis employed by this study. "When looking at trends in annual numbers of deaths and death rates by mechanism/cause of injury, you should consider that changes in results from 1998 to 1999 could be a result of the change in code definitions and coding rules."¹⁰ Thus, researchers are cautioned: "You may not be able to compare numbers of deaths and deaths rates computed for some external causes of injury based on 1999 and later data to those based on data from 1998 and earlier."¹¹

The study includes no discussion of this limitation, nor any efforts to cure this potential problem in its most crucial variable. This change in the source data may account for the issue discussed in Item 4.

4. MAJOR, UNEXPLAINED CHANGES IN THE ACCIDENTAL DEATH DATA: The study failed to account for a major shift in its most crucial variable. As noted, the key variable under study is accidental deaths, in this case for the period 1981-2002. When a variable covers an extended period, it's important to examine whether the underlying dynamics of the variable have changed over the period. If there has been a significant change, conclusions are suspect.

Problem: In this case, the underlying nature of accidental deaths (excluding motor vehicle traffic deaths) as reported by the federal database has changed substantially over the study period, as shown in Figure 2. Formerly leading causes of accidental death have been overtaken by causes that were less frequent in earlier years.

(continued next page)

Figure 2: The Large Shift in the Nature of Accidental Deaths

Type of Accidental Death	1981 Portion of Accidental Deaths	2002 Portion of Accidental Deaths	Change in Proportion, 1981-2002
Unintentional Fall	19.2%	25.9%	35.0%
Unintentional Drowning	12.4%	5.5%	-55.7%
Unintentional Fire/burn	11.7%	5.2%	-55.4%
Unintentional Unspecified	9.9%	10.5%	6.0%
Unintentional Poisoning	9.0%	28.0%	212.7%
Unintentional Suffocation	8.3%	8.8%	5.9%
Unintentional Other Transport	5.3%	2.0%	-61.3%
Unintentional Other	4.0%	2.2%	-44.5%
Unintentional Firearm	3.7%	1.2%	-67.2%
Unintentional Natural/ Environment	3.3%	2.5%	-24.8%

Source: Public Citizen analysis of data from National Center for Injury Prevention and Control, Centers for Disease Control and Prevention. Notes: Excludes category of “adverse effects,” found in 1981 data but not 2002. For 1981, adverse effects category was 5 percent of accidental deaths. Percentage change calculations may not tally exactly due to rounding.

The study didn’t take this shift into account, or if it did, it does not provide any discussion or explanation. As noted above in item 3, there was a significant change in the coding of information in the source database. This could account for the change in the nature of accidental deaths, but again, there is no discussion or explanation.

5. IMPORTANT CONTROL VARIABLES HAVE NOT BEEN CONSIDERED: In attempting to model a system, control variables should be included. Control variables represent factors that could influence the item being studied – here, accidental deaths – and are designed to isolate the influence of these factors so that the item under study can be examined on its own. For example, student achievement has been closely associated with the level of family income and education level of the parents. So in a study of student achievement test scores, it would be important to control for the effects of income and/or education.

Problem: While the study takes account of some control variables, it neglects others that, at least as a starting point, should also have been included. The study includes the unemployment rate and per capita income; it’s reasonable to think that overall economic conditions play a role in product safety and accidental deaths. It includes variables for minority population groups, which is also probably reasonable to the extent accidental deaths vary by racial/ethnic group. Because accidents vary by age group and gender, the study legitimately includes variables for age breakdown of the population and percentage of young males. Because alcohol consumption plays a role in accidents, a variable is properly included for per capita alcohol consumption. Finally, the study includes a variable reflecting availability of hospital beds, which can also play an obvious role in accidental deaths.

However, the study doesn't go far enough in other important areas. The variable under study, accidental deaths, suggests a number of other possible control variables. None of these

were included, or if they were considered, the absence was not explained, although each could have a significant influence on accidental deaths:

- Overall product safety.
- Exposure. Accidental deaths are, in significant part, a function of frequency of exposure to danger or risk. But the study does not take account of frequency of exposure, nor possible shifts in frequency of exposure to particular risks over time. If, as noted above in item 4, the nature of accidental deaths is changing over time, that suggests possible changes in frequency of exposure to risks.
- Product safety enforcement/regulation. Regulatory changes may be more likely to affect deaths than relatively infrequent tort cases.
- Level of safety education/awareness, generally, or by risk category.
- The magnitude of any reduction in liability costs attributable to restrictions, rather than simply the mere presence of tort law changes.
- Measures addressing the major types of accidental death, e.g. poisoning, suffocation, drowning, etc. For example, poison control education efforts will affect accidental poisoning deaths; building codes and the condition of housing will affect fire/burn deaths, and the like.

From the other side of the equation, another serious omission is that accidental deaths as reported in the study don't capture many thousands of other accidental deaths. Chief among them: those resulting from medical negligence. In hospitals alone, deaths through medical negligence or error have been estimated by the Institute of Medicine to range from 44,000 to 98,000 annually. The upper end of that range exceeds the total number of annual accidental deaths accounted for by the study. The study also omits motor vehicle deaths, which would otherwise dwarf the largest categories of accidental deaths employed in the study. The authors cite justifications for doing this, but such deaths are the subject of a substantial number of tort claims.

6. QUESTIONABLE ASSUMPTIONS ABOUT BUSINESS BEHAVIOR: The study casts the tort issue as revolving around the cost of goods and services, with price increases occurring as a matter of course as goods and services providers raise prices in order to cover tort liability costs. As the study says:

“[V]ictims will pay for potential damage payments ex ante in the form of higher prices. The ex ante payments must cover not only pecuniary damages, but also non-pecuniary damages...and administrative costs. As prices increase, consumers become less willing to pay for the goods and services covered by tort law. Suppliers may decide to stop supplying the goods and services altogether. And because many of these goods and services would reduce accident risk, increasing tort liability may actually lead to increased, not reduced, accident risk.” (Page 2)

Problem: It is an undocumented assertion that prices will, or must, increase. Further, there is not necessarily a relation between tort law changes that limit access to the courts and tort liability costs. Most tort liability costs are paid through insurance proceeds.¹² It might be expected that cost of liability insurance would vary with loss experience – the greater the losses, the higher the cost of insurance premiums; the lower the losses, the lower the insurance cost. However, the insurance industry itself acknowledges that tort law restrictions will not lower the

cost of insurance.¹³ (The industry also spends considerable sums on loss prevention as the most efficient way to cut loss costs.) If most tort liability is covered through insurance, and tort law restrictions do not affect firms' tort liability costs, tort law changes will not affect the cost of goods and services. Without an impact on the cost of goods and services, there cannot be the market-based safety effect claimed by the study's authors.

Likewise, there is an unsupported assertion that firms will pass lower costs to their customers. In fact, evidence suggests otherwise. In health care, for example, enactment of tort law restrictions has not reduced the number of uninsured, or underinsured, Americans, nor produced lower costs for Americans with health coverage.

7. BOGUS METHODOLOGY: The study is flawed because it assumes its own conclusion to be true, and goes beyond the capability of the analytical technique used, to wrongly state that tort liability restrictions *cause* fewer accidental deaths.

Problems: That the study assumes its conclusion to be true can be seen in such affirmative language as:

- “We [examine] *the effect of* tort reforms on non-motor vehicle accidental death rates...” (Abstract)
- Tort law changes “*lead to*” changes in accidental death rates. (Abstract)
- “[I]t is necessary to examine *the impact of* tort reform on accidents.” (Page 3)
(emphasis added for all items)

These constructions pre-suppose tort law changes necessarily cause changes in accidental death rates. More properly, the study would have asked *whether* there is any relationship, and then plumbed that question in a neutral fashion. As is, the study essentially finds a correlation and then imposes a desired cause – unsupported by the empirical evidence.

In assuming its conclusion, the study also exceeds the bounds of its analytical technique. As a general rule, the regression modeling technique employed in this study does not establish *causation*; here, that tort law restrictions *cause* a change in the accidental death rate. In regression analysis, variables may be associated, or *correlated* with one another, but this does not mean that one causes the other. As one text observes, echoing a classic caution on the matter:

“[No] statistical technique that measures or expresses the relationship among variables can prove that one variable is the *cause* and one or more other variables are the *effects*. Indeed, through the centuries, there has been philosophical speculation and debate about the meaning of cause and effect and whether such a relationship can ever be demonstrated by experimental methods. In any event, [a regression analysis] does not prove the existence of a cause-and-effect relationship between two variables.”¹⁴

Even when the variables under study are strongly associated with one another, it may be true that an outside variable is influencing the closely correlated variables, rather than one closely correlated variable is causing a change in the other.

In linking tort law restrictions and accidental death rates, the study also makes this observation: “Many factors that affect death rates change only slightly over a short period of

time. Therefore, quick changes in a state's death rate following the enactment of a tort reform suggest a relationship between these variables.” (Page 12)

Here again, without supporting evidence, the authors simply assume a causal relationship is likely present.

8. LACK OF INDEPENDENCE: Like data on accidental deaths, equally crucial to the study is information on tort law restrictions in the states. The study obtained all such data from the American Tort Reform Association. (Data Appendix)

Problem: The American Tort Reform Association is a lobbying organization supported by business interests that favor tort law restrictions, and thus is not a neutral source. Calling attention to “looney lawsuits” and “judicial hellholes,” the organization complains: “Some astonishing decisions come out of the courts these days. Hundreds of millions in punitive damages piled on top of relatively minor actual damages. Meritless cases settled because defendants fear the outcome of an emotion-filled jury trial or a lawless court.”¹⁵

While the association is entitled to its perspective, credible academic work does not rely on data obtained from a partisan source; or, failing that, without independently verifying data obtained from such a source. There is no indication in the study of independent confirmation of this crucial data.

ENDNOTES

¹ See *Census of Fatal Occupational Injuries (CFOI) - Current and Revised Data*, U.S. Department of Labor, Bureau of Labor Statistics, available at <http://www.bls.gov/iif/oshcfoi1.htm#19922002>.

² For details, see <http://www.citizen.org/publications/release.cfm?ID=7171>.

³ See *Spring Safety*, American Ladder Institute, available at http://www.americanladderinstitute.org/ali/press_releases.asp.

⁴ See *North American Ladder Makers Caring to Make a Difference*, American Ladder Institute, available at http://www.americanladderinstitute.org/ali/about_ali.asp

⁵ *American ladder makers deny reports of their demise*, Agence France Presse, March 26, 2004.

⁶ *Tort Trials and Verdicts in Large Counties, 2001*, U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, November 2004, available at <http://www.ojp.usdoj.gov/bjs/abstract/ttvlc01.htm>.

⁷ *Federal Tort Trials and Verdicts, 2002-03*, U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics, August 2005, available at <http://www.ojp.usdoj.gov/bjs/abstract/fttv03.htm>.

⁸ See *AMA disputes Texas lawyers' findings* news release, American Medical Association, March 10, 2005, available at <http://www.ama-assn.org/ama/pub/category/14833.html>.

⁹ The period of analysis varies for different portions of the study – 1981-2002 in section IIIA, and 1981-2000 in section IIIB – depending on data availability.

¹⁰ See <http://www.cdc.gov/ncipc/wisqars/fatal/help/datasources.htm#6.3>.

¹¹ See http://www.cdc.gov/ncipc/wisqars/fatal/help/faq.htm#coding_change.

¹² See chapter 4 of *The Economics of U.S. Tort Liability: A Primer*, by the Congressional Budget Office, available at <http://www.cbo.gov/showdoc.cfm?index=4641&sequence=5>.

¹³ See *Insurance Companies and Their Lobbyists Admit It: Caps on Damages Won't Lower Insurance Premiums*, by Public Citizen, available at <http://www.citizen.org/congress/civjus/medmal/articles.cfm?ID=9008>.

¹⁴ *Statistical Analysis for Decision Making*, Morris Hamburg, second edition, 1977.

¹⁵ See <http://www.atra.org>.