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Public Interest Comment¹ on

The National Highway Traffic Safety Administration's Proposed Rule:

Federal Motor Vehicle Safety Standards; Child Restraint Systems, Child Restraint
Systems-Side Impact Protection, Incorporation by Reference

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Retrospective Review Comment Project

The George Washington University Regulatory Studies Center strives to improve regulatory policy through research, education, and outreach. As part of its mission, the Center conducts careful and independent analyses to assess rulemaking proposals from the perspective of the public interest. This comment on the National Highway Traffic Safety Administration's proposed rule setting side-impact requirements for child restraint systems is part of a new project to evaluate how well agencies are preparing for retrospective review and analysis of regulations, pursuant to Executive Order 13563. As such, it does not express judgment on the merits of NHTSA's proposal or whether the proposed objectives are worthwhile, but rather attempts to evaluate whether NHTSA's proposal incorporates plans for retrospective review, so that it and the public can determine whether those stated objectives are being achieved.

¹ This comment reflects the views of the author, and does not represent an official position of the GW Regulatory Studies Center or the George Washington University. The Center's policy on research integrity is available at <http://research.columbian.gwu.edu/regulatorystudies/research/integrity>.

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Introduction

The proposed rule would amend existing Federal Motor Vehicle Safety Standards (FMVSS) to adopt side impact performance standards for child restraint systems (e.g. car seats) that are designed for children that weigh up to 40 lbs. These standards are intended to “ensure that child restraints provide a minimum level of protection in side impacts by effectively restraining the child, preventing harmful head contact with an intruding vehicle door or child restraint structure, and by attenuating crash forces to the child's head and chest.”

To accomplish these goals, NHTSA developed a test procedure that imitates the effects of a T-bone type intersection collision on a child-sized test dummy in a child restraint system (CRS). NHTSA proposes to require car seat manufacturers to test their CRSs using the specified test procedure, and for performance outcomes to be below a certain injury threshold for test dummies. NHTSA expects that car seat manufacturers will add additional padding and size to the “side wings” of CRSs in order to comply with these standards.

As a part of its ongoing Retrospective Review Comment Project, the Regulatory Studies Center examines significant proposed regulations to assess whether agencies propose retrospective review as a part of their regulations, and submits comments to provide suggestions on how best to incorporate plans for retrospective review into their proposals. To facilitate meaningful retrospective review after the promulgation of a final rule, multiple government guidelines instruct agencies to incorporate retrospective review plans into their proposals during the rulemaking process.

Incorporating Retrospective Review into NPRMs

Through a series of Executive Orders, President Obama has encouraged federal regulatory agencies to review existing regulations “that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned.” On January 18, 2011, President Obama signed Executive Order 13563, Improving Regulation and Regulatory Review, which reaffirmed the regulatory principles and structures outlined in EO 12866. In addition to the regulatory philosophy laid out in EO 12866, EO 13563 instructs agencies to

consider how best to promote retrospective analysis of rules that may be outmoded, ineffective, insufficient, or excessively burdensome, and to modify, streamline, expand, or repeal them in accordance with what has been learned.

Such retrospective analyses, including supporting data, should be released online whenever possible.³

This ex post review makes it possible for the public—and for the agencies that regulate them—to measure whether a particular rule has had its intended effect. In his implementing memo on retrospective review, former Administrator of the Office of Information and Regulatory Affairs, Cass Sunstein, stated the importance of designing regulations to facilitate their evaluation:

With its emphasis on “periodic review of existing significant regulations,” Executive Order 13563 recognizes the importance of maintaining a consistent culture of retrospective review and analysis throughout the executive branch. To promote that culture, *future regulations should be designed and written in ways that facilitate evaluation of their consequences* and thus promote retrospective analyses and measurement of “actual results.” To the extent permitted by law, agencies should therefore give careful consideration to how best to promote empirical testing of the effects of rules both in advance and retrospectively.⁴ [Emphasis added]

This emphasis is repeated in Sunstein’s June 14, 2011 memo, “Final Plans for Retrospective Analysis of Existing Rules.” In its Draft 2013 Report to Congress on the Benefits and Costs of Federal Regulations, the Office of Management and Budget (OMB) states that such retrospective analysis can serve as an important corrective mechanism to the flaws of ex ante analyses. According to that report, the result of systematic retrospective review of regulations:

should be a greatly improved understanding of the accuracy of prospective analyses, as well as corrections to rules as a result of ex post evaluations. A large priority is the development of methods (perhaps including not merely before-and-after accounts but also randomized trials, to the extent feasible and consistent with law) to obtain a clear sense of the effects of rules. In addition, and importantly, *rules should be written and designed, in advance, so as to facilitate retrospective analysis of their effects.*

In line with the requirements of EO 13563, OMB’s implementation memo, and OMB’s Draft 2013 Report to Congress, it is clear that NHTSA should incorporate specific plans for retrospective review and ex post evaluation into the text of its final rule.

³ Exec. Order No. 13563, *Improving Regulation and Regulatory Review*, 76 FR 3821 (2011).

⁴ United States. Office of Management and Budget. Office of Information and Regulatory Affairs. *MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES: Retrospective Analysis of Existing Significant Regulations*. By Cass Sunstein. April 25, 2011.

Retrospective Review Requirements

To evaluate whether NHTSA’s proposal was “designed and written in ways that facilitate evaluation of [its] consequences,” we measure it against five criteria:

- Did NHTSA clearly identify the problem that its proposed rule is intended to solve?
- Did NHTSA provide clear, measurable metrics that reviewers can use to evaluate whether the regulation achieves its policy goals?
- Did NHTSA commit to collecting information to assess whether its measurable metrics are being reached?
- Did NHTSA provide a clear timeframe for the accomplishment of its stated metrics and the collection of information to support its findings?
- Did NHTSA write its proposal to allow measurement of both outputs and outcomes to enable review of whether the standards directly result in the outcomes that the Board intends?

Identifying the Problem

The first of the “Principles of Regulation” outlined by President Clinton in EO 12866 makes it clear that, as a first step, agencies must be able to identify the problem that justifies government action through regulation:

Each agency shall identify the problem that it intends to address (including, where applicable, the failures of private markets or public institutions that warrant new agency action) as well as assess the significance of that problem.

This step is crucial to the formulation of any policy. Without knowledge of the problem that the agency is trying to address, the public cannot assess whether the policy or regulation at hand has had the intended effect, which is key in retrospectively evaluating regulation.

In its proposal, NHTSA indicates the problem that its rule seeks to address: side impact crashes are a source of occupant fatalities and injuries to children ages 0 – 12. This is partly the case because, unlike in frontal or rear-end crashes, the sides of a passenger vehicle do not provide substantial metal barriers between the passenger compartment of a car and an impacting vehicle.

However, NHTSA also notes that accident data for covered CRSs indicate that existing car seats are “already remarkably effective in reducing the risk of death and serious injury in side impacts,” and that “side crashes resulting in severe injuries or fatalities to children in CRSs mainly occur in very severe, un-survivable side impact conditions.” This data casts some doubt as to whether the identified problem can be remedied through CRS regulation.

NHTSA also does not evaluate whether the problem stems from “the failures of private markets or public institutions,” pursuant to EO 12866. While NHTSA is statutorily required to promulgate car seat standards for side impacts pursuant to the Moving Ahead for Progress in the 21st Century Act of 2012, the agency should still attempt to identify the source of the identified problem so that legislators are aware of the effects of their statutes.

As with any policy, success in this case will depend upon whether the identified problem is addressed—and, to some extent, solved—by implementation of the rule. Therefore, to build a successful plan for retrospective review into this rule, we must measure how effective this rule is at reducing injuries and fatalities from side impact crashes to children in CRSs.

Measurement Criteria

In order to measure the success of this rule following implementation, it is necessary for NHTSA to define what constitutes a “success.” Any stated metrics of success should be linked to the problems identified, to show that the standards that the agency is proposing are effectively reducing children’s injuries and deaths as a result of side impact crashes.

Although NHTSA does not explicitly say that it will use any metric or set of metrics to evaluate its rule, the agency does reference some anticipated outcomes of its proposal that could potentially be measured after its implementation. Therefore, the ability to measure these intended outcomes can help the agency and the public evaluate the rule’s success or failure.

Stated Metrics

Below are 14 potential metrics that NHTSA identifies in its proposed rule which may enable measurement of the rule’s success.

Fatalities & Injuries

1. The proposed standards will result in 36.7 fewer non-fatal injuries to children in rear-facing child restraints annually. In addition, 5.2 fatalities and 27.6 non-fatal injuries to children in forward-facing child restraints annually would be prevented by the proposed requirements. (79 FR 4597)
2. This proposal is expected to save 18.26 equivalent lives annually. (79 FR 4571)
3. The agency is proposing to address the potential for head injuries by setting a maximum on the Head Injury Criterion value measured by the child-sized test dummies in the side impact test (79 FR 4590). The proposed head and chest injury criteria allow a quantitative evaluation of the effectiveness of the CRS, and the ability of the CRS to prevent or diminish head and chest impact with the intruding car door in case of a side impact crash. (79 FR 4574)

Costs

4. NHTSA estimates that the annual cost of this proposed rule would be approximately \$3.7 million. (79 FR 4571)
5. “Good” side coverage for car seats can be achieved by having more side structure with padding on the interior side and/or by adding padded head inserts to the CRS (79 FR 4595). The retail cost of padding for rear-facing seats is estimated to be \$0.66 per CRS. (79 FR 4596)
6. The retail cost of padding for convertible/toddler seats that do not already comply with the proposed crash test is estimated to be approximately \$0.82 per CRS, so the annual consumer cost would be \$1.321 million. (79 FR 4596)
7. The retail cost of padding for combination seats that do not already comply with this test is estimated to be approximately \$0.82 per CRS, so the annual consumer cost would be \$0.925 million.
8. The total annual consumer cost for the CRSs is estimated to be approximately \$3.687 million. Distributing this total cost to all child restraints sold annually for children weighing up to 40 lb (7.42 million child restraints) results in an average cost of \$0.50 per child restraint. (79 FR 4596)
9. NHTSA assumes that manufacturers would be conducting the dynamic test specified in the proposed rule (or a similar test) to certify their child restraints to the new side impact requirements. NHTSA estimates that, overall, manufacturers will conduct 196 sled tests for the current 96 models available in the market, for an annual testing cost of \$254,800. This testing cost, distributed among the 7.42 million CRSs sold annually, with an average model life of 5 years, is less than \$0.01 per CRS. (79 FR 4597)

Implementation/Additional Outcomes

10. NHTSA believes that its proposed test procedure is specified such that it can be conducted on an acceleration or a deceleration sled, and that it is repeatable and reproducible in different laboratories. (79 FR 4596)
11. Regardless of whether a manufacturer re-labels the belt-positioning seat to restrict use of the belt-positioning seat to children weighing over 40 lbs. or designs a belt-positioning seat to meet the proposed requirements, the effect of the proposed requirement would be to improve the side impact protection to children weighing less than 40 lbs. (79 FR 4597)
12. NHTSA does not expect any lost sales due to the change in the booster seat label. (79 FR 4597)
13. NHTSA expects that combination seats that are sold for use with younger children (with a harness) and older children (as a booster) will continue to be marketed to the same children as before the rule. The only change resulting from the new label would be that

the booster seat mode would not be recommended for use until the child reaches 40 lbs. (79 FR 4597)

14. NHTSA believes that a 3 year lead time after implementation of this rule will give manufacturers sufficient time to design CRSs that comply with the side impact requirements. (79 FR 4597)

The stated metrics in the first section above, *Fatalities & Injuries*, are most clearly associated with the problem that NHTSA is intending to solve through this proposed rule. As such, whether this rule accomplishes the reductions in child fatalities and injuries that NHTSA projects will determine the success or failure of its rule. The remaining stated metrics pertaining to cost and to implementation are important to measure insofar as they inform NHTSA on the validity of its ex ante analysis, and can improve methodology for future analyses. For instance, if the actual costs of this rule vary significantly from the estimated costs, or if the sled tests prove not to be reproducible in other laboratory settings, NHTSA can learn from these measurements and apply the new information to other relevant analyses for estimating outputs.

Information Collection

In order for retrospective review to be effective, NHTSA should identify how it will gather information to assess whether its stated metrics are being accomplished. Although NHTSA doesn't describe in its proposal how it might collect the relevant information to evaluate its rule, the methodologies used by NHTSA to measure current crash fatalities and injuries to children can be applied to future measurements, as well. In its proposed rule, NHTSA references the agency's own crash databases within the Fatality Analysis Reporting System (FARS) and the National Automotive Sampling System—Crashworthiness Data System (NASS-CDS). This indicates that NHTSA has access to the most relevant metrics, and should be able to easily compile an analysis of the reductions in child fatalities and injuries that can be associated with its rule. Consistent with the requirements of the Paperwork Reduction Act, NHTSA should commit to collecting additional information as needed to measure the rule's success and to measure the validity of its ex ante analysis and assumptions.

Timeframe

The text of the proposed rule does not include a timeframe for retrospective review, although NHTSA does specify that manufacturers will be required to implement these standards three years after publication of a final rule. After this three-year lead time, NHTSA should commit to measuring child injury and fatality rates for side impact crashes through the FARS and NASS-CDS databases every year as new CRSs are being introduced into the market.

Measure Linkages

As NHTSA commits to measuring the effects of its rule, it should also be aware of mediating factors that may have accomplished or undermined the stated metrics absent the rule. Determining linkages between the rule and the measured outcomes is necessary to ensure that the policy itself resulted in the desired outcomes, rather than other factors beyond the agency's control. For instance, if a new fleet of vehicles with reinforced passenger side doors enters the market, improvements in vehicle safety may be responsible for reductions in child injuries and fatalities from side impact crashes rather than the agency's proposed standards.

Recommendations

Each of the below recommendations addresses a specific stated metric listed previously in this comment, and is intended to simplify the retrospective review of this rule for NHTSA.

Fatalities & Injuries

- NHTSA should measure annual reductions in non-fatal injuries to children and child fatalities in rear-facing and forward-facing child restraints due to side impact crashes, and assess whether they meet the expectations outlined by the agency.
- NHTSA should measure specifically the change in child fatalities and injuries caused by intruding car doors during side impact crashes.

Costs

- NHTSA should measure the annual cost of its final rule to assess whether its estimate of \$3.7 million was approximately correct. If this estimate is not correct, NHTSA should attempt to identify why, and should apply the lessons learned to estimating similar costs in future analyses.
- NHTSA should assess the retail costs, the total consumer cost, and the per-unit marginal cost of adding additional padding to child restraint systems to assess whether its estimated costs were approximately correct. If its estimates were not correct, NHTSA should attempt to identify why, and should apply the lessons learned to estimating similar costs in future analyses.
- NHTSA should commit to measuring manufacturers' annual testing costs to assess whether its estimate of \$254,800 was approximately correct. If this estimate is not correct, NHTSA should attempt to identify why, and should apply the lessons learned to estimating similar costs in future analyses.

Implementation/Additional Outcomes

- NHTSA should commit to working with manufacturers after implementation to confirm the agency's belief that its proposed test procedure is specified such that it can be conducted on an acceleration or a deceleration sled, and that it is repeatable and reproducible in different laboratories. If this is not the case, NHTSA should reformulate its test procedure to address the relevant feedback.
- NHTSA should measure whether there were any lost sales of booster seats as a result of its booster seat label, and whether any changes to booster seats occur other than the recommended weight threshold. If sales are lower than expected, NHTSA should evaluate whether older, noncompliant CRSs are not being replaced, and the effect on estimated benefits.
- NHTSA should assess whether three years is sufficient lead time for CRS manufacturers to implement these standards.