



**DEPARTMENT OF TRANSPORTATION**

**4910-59-P**

**Agency:** National Highway Traffic Safety Administration

**Docket No.** NHTSA-2014-0025

**Request for Comments on New Information Collection**

**ACTION:** Notice and request for comments.

**SUMMARY:** In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), this notice announces that the Information Collection Request (ICR) abstracted below is being submitted to the Office of Management and Budget (OMB) for review and comments.

**DATES:** Written comments should be submitted by **[insert date 30 days after date of publication in the Federal Register]**.

**ADDRESSES:** Send comments to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17<sup>th</sup> Street, NW, Washington, DC 20503, Attention NHTSA Desk Officer.

**FOR FURTHER INFORMATION CONTACT:** For additional information or access to background documents, contact Julie Kang, Ph.D., Vehicle Safety Research, National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC, 20590. Dr. Kang's telephone number is (202) 366-5195.

**SUPPLEMENTARY INFORMATION:** Before a Federal agency can collect certain information from the public, it must receive approval from the Office of Management and Budget (OMB). In compliance with these requirements, this notice announces that the following information collection request has been forwarded to OMB. A Federal Register notice with a 60-

day comment period soliciting comments on the following information collection was published on March 13, 2014 (79 FR 14335).

NHTSA received one comment from the Insurance Institute for Highway Safety (IIHS) on the proposed information collection. In NHTSA's original proposed study, each driver would have experienced a one week baseline period and two one week periods where each driver would use each technology. IIHS stated a within-subject design may result in a carryover effect in which changes in behavior resulting from exposure to the first technology may influence behavioral responses to the second technology in a subsequent week. IIHS's concern is that the reinforcement contingencies drivers learn with the first technology may carry over to a subsequent phase of study and potentially confound the measurement of the second technology's effect on belt use. Based on IIHS's suggestion, NHTSA has changed the experimental design from a within-subjects design (32 participants, 3 weeks) to a between-subject design (48 participants, 3 weeks). In this between-subject design experiment, each participant will only experience one of the two seat belt interlock technologies. This new design holds reasonable statistical analysis power and clears out the concern of the behavior carry-on effect.

*OMB Control Number:* Not assigned.

*Title:* Recruitment and Debriefing of Human Subjects for Field Test of Vehicle Occupant Protection Technologies

*Form Numbers:* None.

*Type of Review:* New Information Collection

*Background:* NHTSA's mission is to save lives, prevent injuries, and reduce economic losses resulting from motor vehicle crashes. Increasing seat belt use is one of the agency's highest priorities. Seat belt use has shown an increasing trend since 1995, accompanied by a steady

decline in the percentage of unrestrained passenger vehicle occupant fatalities during daytime. In 2013, the nationwide seat belt use reached 87 percent for drivers and front seat passengers.<sup>1</sup> Despite gains in seat belt usage, data from the 2011 Fatality Analysis Reporting System (FARS) indicates that 52 percent of all passenger vehicle crash fatalities<sup>2</sup> were unbelted occupants.<sup>3</sup> The age group 21 to 24 had the highest percentage of unrestrained occupants killed: 2,172 fatalities, of which 1,385 (64 percent) were unrestrained. The second highest percentage of unrestrained passenger vehicle occupant fatalities was 63 percent among 25- to 34-year-olds.<sup>3</sup> Use of lap/shoulder seat belts reduces the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. In 2011 alone, seat belts saved an estimated 11,949 lives.<sup>3</sup>

The proposed study will examine seat belt use, users' acceptance of emerging vehicle technologies designed to increase seat belt use, the likelihood of and potential strategies to circumvent the system, and unintended consequences. The study method consists of a field operational test to collect objective and subjective data about two prototype technologies developed by automakers to increase seat belt use. In response to comments received during the 60-day comment period, NHTSA has changed the experimental design, from a within-subjects design (32 participants, 3-week) to a between-subject design (48 participants, 3-week). This new design holds reasonable statistical analysis power and clears out the concern of the behavior carry-on effect. A total of 48 drivers from two age groups would be recruited to participate in the study, 24 non-seat belt users (12 young drivers; 12 middle-aged drivers), and 24 part-time

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<sup>1</sup> Pickrell, T. M., & Liu, C. (2014, January). *Seat Belt Use in 2013 – Overall Results*. (Traffic Safety Facts Research Note. Report No. DOT HS 811 875). Washington, DC: National Highway Traffic Safety Administration.

<sup>2</sup> The 2012 and 2013 data on the percent of unrestrained passenger vehicle occupant fatalities during daytime is not yet available.

<sup>3</sup> NHTSA. (2013, June) *Occupant Protection* (Traffic Safety Facts 2011 Data. Report No. DOT HS 811 729). Washington, DC: National Highway Traffic Safety Administration. <http://www-nrd.nhtsa.dot.gov/Pubs/811729.pdf>

users (12 young drivers; 12 middle-aged drivers). The study sample would have equal numbers of male and female drivers from each age group. The research team acknowledges that it may be difficult to recruit non-users given the high seat belt use rate in Michigan (more than 90 percent). As a result, the research team will also draw from the University of Michigan Transportation Research Institute's (UMTRI) previous field operational test study participant pool of low seat belt users. This pool of previous participants have indicated that they would be willing do other studies; therefore, it is expected that this strategy will greatly expedite the recruitment process. The estimated burden hours are shown for a maximum of 391 respondents to respond to the recruitment advertisements. The number of call-ins was calculated based on:

- A 93 percent seat belt use rate in Michigan, so it takes about 343 call-ins to find the 24 non-seat belt users for screening purposes;

- It is estimated at least 50 percent of the part-time seat belt users from previous studies will participate in the current study (pulling from those who have indicated that they would be interested in participating in future studies), so it takes about 48 call-ins to find 24 part-time seat belt users.

Each driver will be presented with one baseline condition and one vehicle occupant protection technology. Each condition will last one week. Therefore, each participant will drive the research vehicles for two weeks. A data acquisition system will record system state (i.e., door, ignition, driver seat belt buckle) and video inside the vehicle cabin. The University of Michigan Transportation Research Institute, in collaboration with the Virginia Tech Transportation Institute and Montana State University, Western Transportation Institute, will conduct this study under a research contract with NHTSA.

*Description of the Need for the Information and Proposed Use of the Information:* The collection of information consists of: (1) an eligibility questionnaire, (2) a demographic questionnaire; and (3) post-study questionnaires. In the revised study design, minor changes were also made to the three instruments to reflect the study changes. Example changes include deleting the question asking for driver's social security number in the demographic questionnaire, and adding more open-end questions in the post-study questionnaires.

The information to be collected will be used to:

- *Eligibility questionnaire(s)* will be used to obtain self-reported driving history information. Individuals interested in participating in the study will be asked to provide information about their driving history. People who have been convicted of felony motor convictions will be excluded. Individuals who pass the initial screening will be asked to provide their driver's license number and consent to review their driving records to confirm self-reported driving history information. Drivers' consent and driving license numbers will be used to obtain official driving records from the state of Michigan. Individuals will be excluded from participating in the study if they refuse to grant UMTRI permission to review their public driving records or if they have been convicted of felony motor convictions in the last 2 years. This exclusion criterion is used to reduce the liability risk of providing participants with research vehicles.
- *Demographic questionnaire* will be used to obtain demographic information to confirm that the study group includes participants from various groups (e.g., age; gender; part-time seat belt users or those who sometimes wear their belts; non-users

or those who never wear a seat belt; etc. Other demographic information will be collected to describe the study sample (e.g., annual travel distance).

- *Post-study questionnaire(s)* will be used to get information about drivers' beliefs and attitude towards each occupant protection technology tested, and to identify potential problems associated with each system. These questionnaires will also be used to assess perceived usability of the systems in terms of acceptance and satisfaction, as well as willingness to have this technology in their vehicle. Each driver will complete a post-study questionnaire once, at the end of the second week.

*Respondents:* Michigan drivers with a valid driver license.

*Estimated Number of Respondents:* 50 to 391.

*Estimated Number of Responses:* One to three responses per person, 17 to 85 questions total.

*Estimated Total Annual Burden:* 10 to 45 minutes per respondent (95.2 hours total).

*Estimated Frequency:* One-time for the eligibility; demographic questionnaire; and the post-study questionnaire.

**Table 1: Estimated Burden Hours**

<b>Instrument</b>	<b>Number of Respondents<sup>4</sup></b>	<b>Frequency of Responses</b>	<b>Number of Questions</b>	<b>Estimated Individual Burden</b>	<b>Total Estimated Burden Hours</b>	<b>Total Annualize Cost to respondents<sup>5</sup></b>
Eligibility questionnaire	391	1	17	10 minutes	65.2 hours	\$ 1377.60
Demographic questionnaire	60	1	23	5 minutes	5 hours	\$ 105.70

<sup>4</sup> The number of respondents in this table includes drop-out rates.

<sup>5</sup> Estimated based on the mean hourly rate for Michigan (all occupations) is \$21.14 as reported in the May 2011 Occupational Employment and Wage Estimates, Bureau of Labor Statistics. [http://www.bls.gov/oes/oes\\_dl.htm](http://www.bls.gov/oes/oes_dl.htm)

Post-study questionnaire	50	1	45	30 minutes	25 hours	\$ 528.50
TOTAL					95.2 hours	\$ 2011.80

Comments are invited on: whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; the accuracy of the Department's estimate of the burden of the proposed information collection; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

**AUTHORITY:** The Paperwork Reduction Act of 1995, 44 U.S.C. Chapter 35, as amended; 5 CFR Part 1320; and 49 CFR 1.95.

Issued in Washington, D.C.

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Nathaniel Beuse  
Associate Administrator for Vehicle Safety Research

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