

SUPPORTING STATEMENT FOR THE NATIONAL SURVEY OF THE USE OF BOOSTER SEATS

OMB Clearance Number: 2127-0644

Part A: Justification

1. Explain the circumstances that make the collection of information necessary. Attach a copy of the appropriate statute or regulation mandating or authorizing the collection of information.

The National Survey of the Use of Booster Seats is being conducted to respond to the Section 14(i) of the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act of 2000. The act directs the Department of Transportation to reduce the deaths and injuries among children in the 4 to 8 year old age group that are caused by failure to use a booster seat by 25%. Conducting the National Survey of the Use of Booster Seats will provide the Department with invaluable information on who is and is not using booster seats, helping the Department better direct its outreach programs to ensure that children are protected to the greatest degree possible when they ride in motor vehicles.

Great strides have been made in recent years in protecting child passengers. Among infants and toddlers, restraint use is at the highest levels ever recorded (98 percent for infants and 93 percent for toddlers), and crash-related child fatalities have dropped steadily to the lowest number since record keeping began in 1975.

Unfortunately, similar progress has not been achieved where older child passengers are concerned. Booster seat use -- estimated at only 10 to 20 percent nationwide -- remains unacceptably low. According to NHTSA's Fatality Analysis Reporting System (FARS), in 2003 there were 331 fatalities among booster-aged child passengers -- ages 4-8 (a 4 percent increase from 2002) as well as 53,000 injuries in this age group. Only 73 percent of children 4-8 were restrained in 2004, a 10 percentage point drop since 2002, according to NHTSA's National Occupant Protection Usage Survey (NOPUS). In addition, among child passengers 8-15, there were nearly 1,100 fatalities and 153,000 injuries in 2003.

In the TREAD Act and Anton's Law, NHTSA was directed to conduct a range of initiatives, including rulemaking, compliance testing, and consumer education programs, to enhance the safety of older child passengers.

2. Indicate how, by whom, and for what purpose the information is to be used. Indicate actual use of information received from the current collection.

NHTSA staff will use the information collected by the survey to better design Agency outreach programs to help ensure that more of the nation's children are using restraints

that will protect them in motor vehicles crashes. The survey data will allow programs to be better tailored to reach the caretakers whose children are unrestrained or not using the best restraint choice for their children's size. The findings will also support ongoing efforts by state legislatures to strengthen their child restraint laws by enacting mandatory booster seat use provisions. As of August 18, 2005, 33 states and the District of Columbia had enacted such requirements (see attached) up to as high as age nine.

3. Describe whether the collection of information involves the use of technological collection techniques or other forms of information technology.

This collection of information does not involve the use of such techniques or of other forms of information technology. NHTSA feels for this one time study the use of simple paper and pencil forms is cost effective (you don't have to purchase the design, software or equipment to collect the data in the field), provides a less formal and more comfortable environment for the interviewed motorists. However, once all the data is collected NHTSA will receive an electronic file containing all the results of the survey. The data gathering is zero percent on the part of the staffers doing the survey in the field, but NHTSA will receive 100% of the results an electronic file.

4. Describe efforts to identify duplication. Show specifically why similar information cannot be used.

There is no duplication of effort in conducting the National Survey of the Use of Booster Seats. No existing survey or other data source provides probability-based observational data on booster seat use. Such information (i.e. scientifically-based data obtained from observations of actual children in vehicles) is needed to tailor Agency booster seat programs effectively.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

The survey involves collecting data at fast food restaurants, gas stations, and recreation centers. Potential survey sites will be contacted in advance to see if they would be willing to voluntarily grant permission to conduct the survey at their establishment. Businesses will be fully informed as to the nature of the survey operations and the amount of time taken for the survey to be conducted at their establishment.

6. Describe the consequences to Federal program or policy activities if the information is not collected or collected less frequently.

If NHTSA does not collect this information, it will not have scientifically-based information from actual motorists on the use of booster seats with which to better target Agency outreach efforts. Outreach programs would be less effective, resulting in children suffering in death or injury in crashes who might not have suffered this fate had outreach programs been more effective at reaching children at risk.

As the survey information has not been collected previously and this clearance application is for a one-time survey, there is no issue about collecting it less frequently.

7. Explain any special circumstances that require the collection to be conducted in a manner inconsistent with the guidelines in 5 CFR 1320.6.

There are no circumstances requiring information to be collected in a manner inconsistent with the guidelines in 5 CFR 1320.6.

8. Provide a copy of the FEDERAL REGISTER notice soliciting comments on extending the collection of information, a summary of all public comments responding to the notice, and a description of the agency's actions in response to the comments. Describe efforts to consult with persons outside the agency to obtain their views.

Attached is the FEDERAL REGISTER notice soliciting comments on this collection of information. There were no comments. No comments have been received to date.

9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.

No payments or gifts are provided to respondents.

10. Describe any assurances of confidentiality provided to respondents.

Data collectors will recite the following statement, found on page 2 of the attached data collection form, to each motorist they approach: "Hi, My name is _____ from Westat, a national research organization. We are conducting a national booster seat survey for the National Highway Traffic Safety Administration. We would simply like to record the restraint use of everyone in your vehicle and ask some simple questions. " This statement conveys to each potential respondent that their participation is voluntary.

No sensitive information of a personal nature, such as respondents' names, addresses, or phone numbers, will be collected. Only national estimates, and no estimates at a county level or site level, will be published.

11. Provide additional justification for any questions on matters that are commonly considered private.

The survey will not collect such information.

12. Provide estimates of the hour burden of the collection of information on the respondents.

NHTSA estimates that the data collection will take 4 minutes of the respondent's time. (The respondent in this case is an adult motorist providing information on children in their vehicle.) Multiplying the 4 minutes of burden per respondent by the estimated 4,800 respondents yields 320 total burden hours for all respondents collectively. The associated cost to the government of the burden hours is approximately \$86,000.

13. Provide estimates of the total annual cost to the respondents or record keepers.

It costs the respondents nothing to participate in the survey. (In fact they receive a small monetary benefit in the form of an incentive.)

There are no record keepers for this survey.

14. Provide estimates of the annualized cost to the Federal Government.

This one-time survey is estimated to cost \$605,000. This estimate reflects the total survey cost, including the costs to design the survey, conduct the survey, and analyze the results.

15. Explain the reasons for any changes or adjustments reported in Item 13 or 14 of the OMB Form 83-1.

There are no changes or adjustments to report to items 13 or 14

16. For collections of information whose results are planned to be published, outline plans for tabulation, and publication.

NHTSA will tabulate the survey data, analyze the results, and publish the data in a series of annual reports. The NSUBS data are to be collected each year in July. The results will be analyzed and presented via publications released in approximately January of the following year. These publications can be obtained by anyone at the following location:

<http://www-nrd.nhtsa.dot.gov/Cats/index.aspx>

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.

NHTSA intends to display the expiration date for OMB approval and the PRA burden statement.

18. Explain each exception to the certification statement identified in item 19, "Certification for Paperwork Reduction Act Submissions," of OMB Form 83-1.

No exception is made to any of the items in the certification statement.

Part B: COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

1. Describe the potential respondent universe and any sampling or other respondent selection methods to be used.

The purpose of the survey is to gather information on the restraint use, and in particular, the use of booster seats, among children ages 4 to 8. The survey will visit gas stations, recreation centers, and five specific fast food restaurants (McDonald's, Taco Bell, Burger King, Wendy's, and Kentucky Fried Chicken). Data collectors will approach as many vehicles as possible that appear to have at least one child occupant under the age of 13 in order to allow for data collector visual misestimation of ages and try to ensure that as many children ages 4 to 8 are captured.

In this sense, the potential respondent universe consists of all child motorists ages 4 to 8 who frequent gas stations, recreation centers, and the five specific fast food restaurants (McDonald's, Taco Bell, Burger King, Wendy's, and Kentucky Fried Chicken).

These site types (gas stations, recreation centers, and the five fast food restaurants) were chosen because they are frequented by child motorists and because their parking lots are usually sufficiently small that data collectors can likely approach vehicles as they are parking, before child restraints have been unfastened.

Data collectors will approach as many motorists as possible who appear to have at least one child under the age of 13 in their vehicle for possible participation in the survey.

2. Describe the collection of information procedures.

Following are information on the probabilistic sample design, information collected, and other statistical procedures that will be used by the National Survey of the Use of Booster Seats.

Sample Design

Selection of PSUs

Twenty-four Primary Sampling Units (PSUs) were selected from the PSUs utilized by the National Occupant Protection Use Survey (NOPUS).

Each NOPUS PSU consists of a county or group of counties, and there are 50 NOPUS PSUs in all. The NOPUS PSUs were selected as stratified PPS (probability proportional to size) sample, using Vehicle Miles Traveled as the measure of size. The strata used in this selection were based on four geographic regions (Northeast, Midwest, South, and West), and whether or not the county or group of counties comprises a Metropolitan Statistical Area. For more information on the selection of the NOPUS PSUs, please see Chapter 5 of the attached Technical Report.

The NOPUS PSUs were utilized to select the PSUs for the National Survey of the Use of Booster Seats because they provide a set of PSUs selected to reflect traffic volume and

because using NOPUS PSUs will allow us to directly compare restraint use results between the two surveys (the NOPUS and the National Survey of the Use of Booster Seats).

The NOPUS PSUs were sorted by Vehicle Miles Traveled, and a systematic sample of 24 PSUs was selected without replacement from this sorted list.

Selection of Sites within PSUs

Within each selected PSU, 10 sites comprising gas stations, recreation centers, and five specific fast food restaurants (McDonald's, Taco Bell, Burger King, Wendy's, and Kentucky Fried Chicken) were selected as a stratified simple random sample without replacement from 3 strata: gas stations, recreation centers, and fast food restaurants. A sampling frame of potential sites was formed using an internet search of all gas stations, recreation centers, and fast food restaurants from the five specified restaurant chains in the selected PSUs. Fast food restaurants located in a shopping mall were eliminated from the sampling frame because the parking lot for these sites could be too large to capture vehicles as they park. The allocation of the sample size of 10 within each PSU was allocated proportionally to the 3 site-type strata based on the number of sites of each type located in the PSU.

Regarding the internet-based search for sites, we are not aware of any studies on the accuracy and reliability of internet-based searches of establishments, neither for our particular site types of fast food restaurants, recreation centers, and gas stations, nor for the search of establishments in general. However the Internet does appear to have a wealth of information in this regard and the information appears to be reasonably accurate for our limited use.

Thus there were a total of 240 sites selected.

The site types used by the National Survey of the Use of Booster Seats (gas stations, recreation centers, and the five fast food restaurants) were chosen because they are frequented by child motorists and because their parking lots are sufficiently small that data collectors can likely approach vehicles as they are parking, before child restraints have been unfastened.

Data Collection Schedule

Data collectors will visit each site for approximately 4 hours.

The data collection schedule was set to take advantage of time periods during which child motorists are more likely to visit the sites. Fast food site visits will only be scheduled between the hours of 10 am and 2 pm on weekdays and 10 am – 6 pm on weekends. Recreation centers will only be visited between 10 am and 4 pm on weekdays and weekends. Gas stations will only be visited during morning and evening rush hours (7-9 am and 4-6 pm) on weekdays, and between 10 am and 6 pm on weekends. The specific schedule of site visits, in terms of which team will visit which site at which time, will be set to yield efficient collection of data given the site locations.

Estimated Yield

We estimate that based on the number of hours of data collection, data collectors will approach approximately 4,800 vehicles.

Information Collected

If an adult in the approached vehicle agrees to participate in the survey, data collectors will ask the adult for the following information:

- Age of each occupant
- Children's heights
- Children's weights
- How many hours in the last week has each child spent in the vehicle?
- How many times in the last week has each child been to this type of site (e.g. gas stations)?

In addition, data collectors will collect the following information by observation only, and not by interview:

- Date
- Time
- Survey site
- Site type (e.g. gas station, fast food restaurant, etc)
- Vehicle type
- Seating position of each occupant
- Restraint use for each occupant, specifying the types of child restraints used
- Gender of each occupant
- Race of each occupant

Data Collection Form

The data collection form to be used by the survey is attached.

Data collectors for this survey will fill out page 1 of the form (site type, weather, etc) when they arrive at each data collection site. Data collectors will then fill out one copy of pages 2 and 3 of the form for each vehicle whose occupants agree to participate in the survey.

On page 1 of the form, the PSU and site numbers are identification numbers for the survey site assigned by the survey. The "booklet" consists of the entire package of forms filled out by the data collector on a given day. For information on "misses and refusals", please see the explanation below explaining page 4 of the form.

Data collectors will recite the text on page 2 of the form "Hi, my name is ___ ..." to each potential respondent to ensure them that their participation is voluntary and that any information they give will be kept confidential.

For motorists who agree to participate, data collectors will interview an adult motorist in a vehicle containing children for answers to the questions on the form, and fill out the form's information on restraint use based on observing the children in the vehicle. One member of each team of two data collectors will conduct and record the interview data and the other data collector will observe and record the observed data on restraint use. The part of the form with the pictures of signs from McDonald's, Taco Bell, etc is where

data collectors will record information from the last question - on the number of times the motorists have visited each of those establishments in the past week.

Information on page 2 on the vehicle type, time, and vehicle number will be filled out by the data collector. (S/he will not ask the motorist for this information.) The vehicle number simply reflects the number of vehicles the data collector has observed so far, i.e. the first vehicle, second vehicle, etc. It does not reflect any identifying information for the vehicle, such as the Vehicle Identification Number or license plate.

Data collectors will keep track of the number of vehicles that they missed and the number of vehicles whose occupants declined to participate in the survey and record these counts on page 4 of the form when they leave the site.

Data collectors will receive extensive training in protocols for interviewing motorists and observing restraint use in a manner that is professional and as unobtrusive as possible.

Statistical Editing, Imputation, Estimation, and Variance Estimation

Simple range edits will be performed on the data to improve data quality. For instance the data will be edited to ensure that children's ages fall between 0 and 18 years. Data that fall out of range will be treated as missing.

We do not expect many missing values in the observed portion of the data (both the site information on page 1 of the data collection form and the observed motorist data on pages 2-3) because the data collectors will be well trained and they should have adequate time to record site information and restraint use.

Regarding the interview data, we do not expect many missing values for the ages of children, as the interviewed adult motorist will most likely know the ages. We will not impute for missing values of the remaining interview variables (children's weights and heights and time spent in the vehicle or at the site type) as there would not seem to be a good basis for forming reasonable imputed values.

Restraint use will be estimated by $(\sum w(i) R(i)) / (\sum w(i) T(i))$ where i runs over the observation sites; $w(i)$ is the inverse of the selection probability for site i multiplied by the ratio of the number of vehicles estimated to have frequented the site during the observation period (obtained from the counts of unapproached vehicles and vehicles approached but not participating) to the number of responding vehicles; $R(i)$ is the number of restrained children observed at site i , and $T(i)$ is the total number of children observed at site i . The adjustment ratio in the $w(i)$ term reflects the only adjustment that will be made for vehicles at the sites that do not participate in the survey, as NHTSA does not believe there is reliable information with which to adjust for possible bias incurred by not having data on the nonparticipating vehicles.

The estimates generated by this formula will be reported as estimates of restraint use by children (of the age range in question) at gas stations, recreation centers, and the five specific fast food restaurants. NHTSA does not feel that these estimates can be extrapolated to estimates reflecting all child motorists (i.e. to account for children who do not frequent these site types).

Variance estimates will be computed using WesVar, which utilizes a jackknife variance methodology.

3. Describe the methods used to maximize response rates and to deal with issues of nonresponse.

The refusal rate by year is described in the following table:

Year	Total Number of Observed Vehicles	Total Number of Interviews	Total Number of Refusals	Refusal Rate
2006	3489	2920	548	15.7
2007	4828	4199	181	3.7
2008	6204	4899	224	3.6
2009	6033	4601	286	4.7

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Regarding the interview data, we do not expect many missing values for the ages of children, as the interviewed adult motorist will most likely know the ages. We will not impute for missing values of the remaining interview variables (children’s weights and heights and time spent in the vehicle or at the site type) as there would not seem to be a good basis for forming reasonable imputed values.

Data collectors for the National Survey of the Use of Booster Seats will undergo extensive training in order to minimize errors that could arise from their categorizing or recording data incorrectly.

NHTSA does not believe that there is reliable information with which to adjust the survey results to account for inaccurate responses given by motorists, motorists who choose not to participate in the survey, motorists who do not frequent the site types, or motorists who frequent the site types outside of the observation period. The Agency’s published report will clearly state that the results are based on motorists who visit the site types and voluntarily chose to participate in the survey.

4. Describe any tests of procedures or methods to be undertaken.

Before conducting the national survey, NHTSA will conduct a pilot test of the data collection procedures at businesses in the Washington DC vicinity. The test will examine the following issues: challenges in obtaining cooperation from gas stations, the five fast food restaurant chains (McDonald’s, Burger King, Taco Bell, Wendy’s, and Kentucky Fried Chicken), and recreation centers, and the types of incentives we need to offer to get their cooperation; the level of response rate we get from motorists and the kinds of

incentives that are useful to get their cooperation; the numbers of children we see (especially 4-7 year olds) at the various types of sites; where we should approach vehicles in fast food lines, gas stations, etc in order to catch children before they unbuckle or unfasten safety belts or harnesses; and other problems or challenges we encounter during data collection that would be useful for conducting the survey.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the Agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the Agency.

This survey was designed and will be conducted under Federal contract with Westat, Inc. The Contracting Officer's Technical Representative is Timothy M. Pickrell and can be reached at (202) 366-2903. The Program Manager at Westat, Inc. is Fran Bents, (240) 314-7557.