

B. Collections of Information Employing Statistical Methods

The proposed study will use a convenience sample of volunteers recruited to participate in an on-road vehicle pilot study entitled, *Investigate the Use and Feasibility of Speed Warning Systems*.

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

This is a non-representative feasibility study using a convenience sample of volunteers. The universe is drivers in the Rockville area of Maryland over 21 years of age with at least three speeding violations in the previous five years. NHTSA plans to recruit 80 drivers from the Rockville, MD area, with a driving history of at least three speeding violations in the previous five years, through the MVA (see MVA letter of agreement, Attachment F). The participants will be stratified; with 20 male and 20 female drivers age 21-29 and 20 male and 20 female drivers age 30 and above. Participation would be voluntary and subjects will not be identified in any way. All data will be stripped of all personal identifiers. The research team has obtained a Certificate of Confidentiality (see Attachment G) to protect all participants in the study.

Potential subjects will be contacted through the Maryland MVA (see model letter, Attachment H). The MD MVA will produce a mailing list from their database based on screening criteria of a minimum number (3) of speeding citations in the past three years and being at least 21 years of age, and location near the Rockville research office. An invitation letter will be mailed to potential subjects from the MVA that informs them of the project and providing the phone number of the research team contact to call if they would like to participate. Subjects will then be screened when they call about participation and selected based on meeting the criteria with the numbers for each demographic being accepted until that particular demographic is completed.

B.2. Procedures for collection the information

The MVA in Maryland has agreed to send out letters of invitation to potential participants that fit the recruitment criteria. The letters will include a description of the project and contact information for the contractor doing the study. Respondents receiving the mailing will then contact the Contractor if they want to volunteer to participate. They will be asked a few screening questions to insure that they qualify for the study and then told they will be contacted later if they are selected for the study. The participants who are selected based on age and gender criteria described in B.1 will then come in to the contractor's facility in Rockville, undergo consent procedures, and have their vehicle outfitted with the speed warning device. At the end of the 12 week on-road period, participants will return and have the device removed from their vehicle. The device described in A-3 above, records and provides a warning not only for speeding but also for speeding up or slowing down suddenly, or making erratic changes in course. While at the contractor's facility having the device removed, the participants will be asked a few debriefing questions regarding their experience with the speed warning device.

Most participants will be enrolled in the study for a total of 8 weeks. The first 2 weeks with the device will include no in-car feedback. This will serve to establish a baseline measure of driving

behavior. Following this initial period, the device will be initialized to begin the experimental phase for 4 weeks. Upon completion of the 4 week experimental phase, the feedback and notification features of the device will be turned off for a 2 week “cool down” phase to assess if behavior changes once the device stops providing feedback. After the 2 week cool down phase, the device will be removed from the participant’s car.

In addition, several participants will experience an extended treatment period in order to gain insight into the robustness of the effects of the device. As with the other participants, the first 2 weeks with the device will include no in-car feedback. Following this initial period, the device will be initialized to begin the experimental phase for 8 weeks. Upon completion of the 8 week experimental phase, the feedback and notification features of the device will be turned off for a 4 week “cool down” phase to assess if behavior changes once the device stops providing feedback.

During the installation process the researchers will explain that for the first two weeks we will be recording their normal driving behavior and that the system alert will not be turned on. Participants will also be told at this time that, after the baseline period, the alert will be turned on and provide feedback regarding their driving, and that for the final weeks the feedback will be turned off again. The researchers will also demonstrate how the alert system works by showing each participant a video when they come in to have the device installed. This will allow the participant to become familiar with the system, and avoid any confusion when the alert system is activated.

Participants will be receiving feedback about their driving habits during the period when the feedback system is initialized. Following the study, NHTSA will publish a report summarizing the aggregated findings from the research; however, no participant will receive individual feedback from NHTSA or its contractor regarding their driving behavior.

B.3. Describe methods to maximize response rates and to deal with issues of non-response.

This is a convenience sample of volunteers for a pilot test of the effectiveness of the speed warning device for people with a history of speeding. The participants will receive a \$150 honorarium for data collection to compensate them for their time and effort, which should help assure adequate participation for the pilot test. Each demographic category (age/gender) will be actively recruited until that category has been filled and their data complete.

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

We are using a simple set of screening questions on the front end to ensure that any subjects volunteering for the participation meet the basic criteria for inclusion in the study. They have to be insured and have a valid driving license. They have to be at least 21 years of age. They have to drive a minimum number of miles per week. They have to have had speeding violations because this project is targeting habitual speeders. (See Attachment E)

After subjects complete the on-road portion of the project, each subject will be asked some

debriefing questions regarding their experience with the speed monitoring device on their vehicle. These responses, along with the on-road data from the monitoring device, will then be examined to determine the feasibility of using these devices to deter speeding behavior. (See Attachment C)

B.5. Provide the name and telephone number of individuals consulted on statistical aspects of the design.

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