

## § 1340.8

passenger motor vehicles, including but not limited to passenger motor vehicles used for commercial purposes, passenger motor vehicles exempt from the State's seat belt use law and passenger motor vehicles bearing out-of-State license plates.

(d) *Occupant coverage.* Data shall be collected by direct observation of all drivers and right front passengers, including right front passengers in booster seats, but excluding right front passengers in child safety seats. Observers shall record a person as—

(1) Belted if the shoulder belt is in front of the person's shoulder;

(2) Unbelted if the shoulder belt is not in front of the person's shoulder;

(3) Unknown if it cannot reasonably be determined whether the driver or right front passenger is belted.

(e) *Survey data.* At a minimum, the seat belt use data to be collected by direct observation shall include—

(1) Seat belt status of driver;

(2) Presence of right front passenger; and

(3) Seat belt status of right front passenger, if present.

(f) *Data collection environment.* When collecting seat belt survey data—

(1) Observers shall not wear law enforcement uniforms;

(2) Police vehicles and persons in law enforcement uniforms shall not be positioned at observation sites;

(3) Communications by signage or any other means that a seat belt survey is being or will be conducted shall not be present in the vicinity of the observation site.

## § 1340.8 Quality control.

(a) *Quality control monitors.* Monitors shall conduct random, unannounced visits to no less than five percent of the observation sites for the purpose of quality control. The same individual shall not serve as both the observer and quality control monitor at the same observation site at the same time.

(b) *Training.* Observers and quality control monitors involved in seat belt use surveys shall have received training in data collection procedures within the past twelve months. Observers and quality control monitors shall be trained in the observation procedures

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of § 1340.7 and in the substitution and rescheduling requirements of § 1340.5(c).

(c) *Statistical review.* Survey results shall be reviewed and approved by a survey statistician, *i.e.*, a person with knowledge of the design of probability-based multi-stage samples, statistical estimators from such designs, and variance estimation of such estimators.

## § 1340.9 Computation of estimates.

(a) *Data used.* Except as otherwise provided in this section, all data collected pursuant to § 1340.7(e) shall be used, without exclusion, in the computation of the Statewide seat belt use rate, standard error, and nonresponse rate.

(b) *Data editing.* Known values of data contributing to the Statewide seat belt use rate shall not be altered in any manner.

(c) *Imputation.* Unknown values of variables shall not be imputed unless NHTSA has approved the State's imputation procedure prior to data analysis.

(d) *Sampling weights.* The estimation formula shall weight observed data by the sampling weights as required by the sample design and any subsequent adjustments.

(e) *Sampling weight adjustments for observation sites with no usable data.* States shall include a procedure to adjust the sampling weights for observation sites with no usable data, including observation sites where no data were collected and observation sites where data were discovered to be falsified.

(f) *Nonresponse rate.* (1) Subject to paragraph (f)(2) of this section, the nonresponse rate for the entire survey shall not exceed 10 percent for the ratio of the total number of recorded unknown values of belt use to the total number of drivers and passengers observed.

(2) The State shall include a procedure for collecting additional observations in the same calendar year of the survey to reduce the nonresponse rate to no more than 10 percent if the nonresponse rate in paragraph (f)(1) of this section exceeds 10 percent.

(g) *Variance estimation.* (1) Subject to paragraph (g)(2) of this section, the estimated standard error, using the variance estimation method in the survey

design, shall not exceed 2.5 percentage points.

(2) If the standard error exceeds this threshold, additional observations shall be conducted in the same calendar year of the survey until the standard error does not exceed 2.5 percentage points.

### Subpart C—Administrative Requirements

#### § 1340.10 Submission and approval of seat belt survey design.

(a) *Contents.* The following information shall be included in the State's seat belt survey design submitted for NHTSA approval:

(1) *Sample design.* The State shall—

(i) Define all sampling units, with their measures of size, as provided in § 1340.5(a);

(ii) Specify the data source of the sampling frame of road segments (observation sites), as provided in § 1340.5(a)(2)(i);

(iii) Specify any exclusions that have been applied to the sampling frame, as provided in § 1340.5(a)(2)(iii);

(iv) Define what stratification was used at each stage of sampling and what methods were used for allocation of the sample units to the strata;

(v) Specify the method used to select the road segments for observation sites as provided by § 1340.5(b).

(vi) List all observation sites and their probabilities of selection;

(vii) Explain how the sample sizes were determined, as provided in § 1340.5(d);

(viii) Describe how observation sites were assigned to observation time periods, as provided in § 1340.6; and

(ix) Identify the name and describe the qualifications of the State survey statistician meeting the requirements in § 1340.8(c).

(2) *Data collection.* The State shall—

(i) Define an observation period;

(ii) Specify the procedures to be implemented to reschedule or substitute observation sites when data collection is not possible on the date and time assigned, as provided in § 1340.5(c);

(iii) Specify the procedures for collecting additional data to reduce the nonresponse rate, as provided in § 1340.9(f)(2);

(iv) Describe the data recording procedures; and

(v) Specify the number of observers and quality control monitors.

(3) *Estimation.* The State shall—

(i) Describe how seat belt use rate estimates will be calculated;

(ii) Describe how variances will be estimated, as provided in § 1340.9(g);

(iii) Specify imputation methods, if any, that will be used, as provided in § 1340.9(c);

(iv) Specify the procedures to adjust sampling weight for observation sites with no usable data, as provided in § 1340.9(e); and

(v) Specify the procedures to be followed if the standard error exceeds 2.5 percentage points, as required in § 1340.5(g).

(b) *Survey design submission deadline.* For calendar year 2012, States shall submit proposed survey designs to NHTSA for approval no later than January 3, 2012. Thereafter, States should submit survey designs for NHTSA approval as specified in § 1340.11.

#### § 1340.11 Post-approval alterations to survey design.

After NHTSA approval of a survey design, States shall submit for NHTSA approval any proposed alteration to their survey design, including, but not limited to, sample design, seat belt use rate estimation method, variance estimation method and data collection protocols, at least three months before data collection begins.

#### § 1340.12 Re-selection of observation sites.

(a) *Re-selection of observation sites.* States shall re-select observation sites using updated sampling frame data, as described in § 1340.5(a), no less than once every five years.

(b) *Re-selection submission deadline.* States shall submit updated sampling frame data meeting the requirements of § 1340.5(a) for NHTSA approval no later than March 1 of the re-selection year.

#### § 1340.13 Annual reporting requirements.

(a) *Survey data.* States shall report the following information no later than March 1 of each year for the preceding