

**CHILD SAFETY RESTRAINT
OBSERVATIONAL SURVEY**

-FINAL REPORT-

CONTRACT NO. K4-2009-03-00-00

STATE OF LOUISIANA
Bobby Jindal, Governor

LOUISIANA HIGHWAY SAFETY COMMISSION
John A. LeBlanc, Executive Director

August 2009

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INTRODUCTION

The Louisiana Highway Safety Commission sponsored this observational survey to determine compliance with the state's Child Passenger Safety Law. The law requires the use of safety restraints for children under thirteen (13) years of age. Prior to 1997, Louisiana's child safety restraint law only pertained to children under five years of age.

Observations on the 2009 survey were collected in accordance with a design prepared by Dr. Helmut Schneider, Ourso Family Distinguished Professor of Information Systems and Chairman of Information Systems and Decision Sciences, Louisiana State University, Baton Rouge, Louisiana¹. The Schneider design provided for data to be collected at specified locations throughout the eight regions comprising the State of Louisiana.

Data on child safety restraint usage were obtained by geographic location (substate, regional areas) and by categorical, estimated age of child (infant, 1 to 3 year olds, 4 and 5 year olds and 6 to twelve year olds). The categories were modified in 2006 to conform to child restraint compliance guidelines based on a child's age and weight.

The 2009 survey conducted during May 2009 was the twenty-fourth wave of statewide observations obtained relative to child safety restraint usage. The findings from the 2009 survey and the procedures used to collect the data are presented in this report.

FINDINGS

A total of 2,500 observations were made at 68 sites in 2009 using the new design (Table 1).

Slightly over eight in ten (80.9%) of the children subject to Louisiana's child safety restraint law are restrained while in a motor vehicle (Table 2). The sample error for the estimates (1.3%) is also shown in Table 1.

The use of child safety restraints decreases as age increases. Almost all (99.6%) of the infants observed were restrained. The child restraint usage rate for children ages one through three was 94.4% down from 96.2% in 2008. Among four and five year olds, the usage rate decreased to 86.1% from the 90.7% measured in 2008. Child restraint usage among children aged six through twelve was 74.4% a substantial drop from the 80.5% measured in 2008. The usage rate among children under thirteen (80.9%) is slightly over six points higher than seat belt usage among adults (74.5%) in Louisiana (Tables 2 and 3).

A comparison of 2009 findings to 2008 findings indicate the 2009 estimate of child safety restraint use is 4.7 percentage points lower than the 2008 estimate (Tables 4 and 5). Overall child restraint usage among children in all age categories except infants for 2009 is down from the 2008 estimates.

TABLE 1.
NUMBER OF OBSERVATIONS MADE AND SITES WORKED
BY REGION (24TH WAVE, 2009).

Area	Number of Observations	Number of Sites
Region 1. New Orleans and vicinity	341	15
Region 2. Baton Rouge and vicinity	486	11
Region 3. Houma/Thibodaux and vicinity	174	6
Region 4. Lafayette and vicinity	296	10
Region 5. Lake Charles and vicinity	165	5
Region 6. Alexandria and vicinity	332	6
Region 7. Shreveport and vicinity	456	9
Region 8. Monroe and vicinity	250	6
Total	2,500	68

TABLE 2.
CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED)
AND ASSOCIATED SAMPLE ERROR
BY REGION AND AGE CATEGORY (24TH WAVE, 2009) — WEIGHTED DATA.

REGION	AGE CATEGORY							Error for <6	Error for <13
	INFANTS	AGES 1 to 3	AGES 4 & 5	AGES 6-12	ALL UNDER 6	ALL UNDER 13			
1-New Orleans	100.0%	97.7%	87.1%	75.4%	93.9%	82.1%	1.7%	3.9%	
2-Baton Rouge	100.0%	95.7%	91.5%	84.5%	94.9%	88.4%	1.2%	1.7%	
3-Houma	100.0%	91.5%	91.4%	75.8%	93.0%	81.9%	1.9%	3.5%	
4-Lafayette	100.0%	94.3%	86.9%	85.1%	92.5%	87.8%	1.9%	2.3%	
5-Lake Charles	100.0%	90.8%	88.3%	81.3%	91.7%	85.1%	2.6%	3.2%	
6-Alexandria	100.0%	92.9%	78.6%	52.6%	88.9%	66.5%	2.1%	2.6%	
7-Shreveport	97.0%	92.3%	75.9%	59.1%	86.7%	69.3%	2.5%	3.0%	
8-Monroe	100.0%	90.6%	82.6%	61.5%	89.3%	71.7%	2.6%	3.4%	
STATE	99.6%	94.4%	86.1%	74.4%	92.1%	80.9%	0.7%	1.3%	
Error	0.2%	1.0%	1.5%	2.0%	0.7%	1.3%			

TABLE 3.
SEAT BELT USAGE IN LOUISIANA, 2009
BY REGION AND VEHICLE TYPE (WEIGHTED DATA).

<u>REGION</u>	<u>AUTO</u>	<u>PICKUP</u>	<u>SUV</u>	<u>VAN</u>	<u>ALL</u>
1-New Orleans	74.2%	69.7%	75.3%	81.5%	73.7%
2-Baton Rouge	77.0%	69.5%	76.1%	78.7%	74.6%
3-Houma	74.9%	74.0%	78.4%	70.3%	76.0%
4-Lafayette	76.3%	72.8%	78.8%	76.5%	76.1%
5-Lake Charles	77.0%	73.9%	79.7%	86.5%	77.3%
6-Alexandria	76.7%	73.7%	79.1%	86.9%	76.9%
7-Shreveport	71.9%	69.7%	74.7%	71.7%	71.8%
8-Monroe	71.7%	68.3%	76.2%	57.7%	71.3%
Louisiana	75.0%	71.0%	76.9%	76.3%	74.5%

TABLE 4.
CHILD RESTRAINT USAGE (PERCENT RESTRAINED)
BY REGION AND AGE CATEGORY (23RD WAVE, 2008) — WEIGHTED DATA.

REGION	AGE CATEGORY					
	INFANTS	AGES 1 to 3	AGES 4 & 5	AGES 6-12	ALL UNDER 6	ALL UNDER 13
1-New Orleans	100.0%	97.6%	94.4%	80.3%	96.8%	86.3%
2-Baton Rouge	100.0%	91.4%	87.3%	80.4%	91.3%	84.4%
3-Houma	100.0%	98.8%	89.0%	81.4%	95.0%	86.2%
4-Lafayette	94.0%	94.1%	88.0%	78.1%	91.7%	83.2%
5-Lake Charles	100.0%	95.5%	94.3%	81.8%	96.0%	87.1%
6-Alexandria	100.0%	96.1%	93.8%	75.8%	95.7%	83.0%
7-Shreveport	100.0%	99.7%	89.9%	83.1%	95.8%	87.8%
8-Monroe	100.0%	100.0%	89.0%	84.6%	95.5%	88.5%
STATE	99.1%	96.2%	90.7%	80.5%	94.5%	85.6%

TABLE 5.
DIFFERENCE (PERCENTAGE POINTS) IN CHILD RESTRAINT USAGE ESTIMATES (2009-2008)
BY REGION AND AGE CATEGORY

REGION	AGE CATEGORY					
	INFANTS	AGES 1 to 3	AGES 4 & 5	AGES 6-12	ALL UNDER 6	ALL UNDER 13
1-New Orleans	0.0	0.1	-7.3	-4.9	-2.9	-4.2
2-Baton Rouge	0.0	4.3	4.2	4.1	3.6	4.0
3-Houma	0.0	-7.3	2.4	-5.6	-2.0	-4.3
4-Lafayette	6.0	0.2	-1.1	7.0	0.8	4.6
5-Lake Charles	0.0	-4.7	-6.0	-0.5	-4.3	-2.0
6-Alexandria	0.0	-3.2	-15.2	-23.2	-6.8	-16.5
7-Shreveport	-3.0	-7.4	-14.0	-24.0	-9.1	-18.5
8-Monroe	0.0	-9.4	-6.4	-23.1	-6.2	-16.8
STATE	0.5	-1.8	-4.6	-6.1	-2.4	-4.7

TRAINING

Each field observer participated in training prior to making on-site observations. As part of the training, observers were given an explanation of the Louisiana Child Passenger Safety Law, observation techniques, child safety seat requirements, and proper methods for documenting data. A copy of the training material is presented in the pages which follow.

CHILD SAFETY RESTRAINT OBSERVATION SURVEY

- 2009 OBSERVER TRAINING -

Introduction

Louisiana law requires every driver who transports a child or children under the age of thirteen (13) years in a motor vehicle (e.g. passenger car, pickup truck or van) to have the child properly secured in an age-appropriate or size-appropriate passenger restraint system.

You will be assigned locations where you are to make observations on compliance with the Louisiana law on child safety restraint.

Observation Locations and Times

Observation locations have been selected to provide a statistical representation of child restraint use among Louisiana children under thirteen years of age. Observations will be made at those locations where children as vehicle passengers can generally be observed.

You will be allowed personal discretion in the selection of an observation station or stations within an assigned location. Choose stations with a sufficiently high volume of traffic which have adequate traffic control - specifically the traffic should be controlled by a yield sign, a stop sign or a traffic light. It is extremely important that observations be made of slow moving or stopped vehicles.

Observations at each site will be made for a minimum period of sixty (60) minutes. After the first hour (60 minutes), if the number of observations is 20 or more, continue working the location for another 60 minutes. If the number of observations made the first hour is less than 20, leave the location and proceed to your next location.

Equipment and Credentials

You will be provided with an orange safety vest, a clip board with "TRAFFIC SURVEY" stenciled on the back, and a letter of identification from the Louisiana Highway Safety Commission. Always carry the clip board and letter and wear the orange vest.

Child Safety Seat Requirements

Several elements are involved in child safety restraint observation, these include:

- 1) determination of the child's age and/or weight,
- 2) placement of child in vehicle (infants must always be positioned facing the rear of the vehicle while restrained), and
- 3) appropriateness of safety restraint device used,

During your observations you will need to make decisions as follows (in the order presented) (refer to the attached copy of the form you will be using-- EXHIBIT A.):

1. Determine age and/or weight of the child (remember, the law now pertains to all children under 13 years of age and that provisions for securing each age group -- infants, 1 to 3 year olds, 4 and 5 year olds, and 6 to twelve year olds -- are different).
2. Determine if the child is restrained (on the form "UND" means undetermined, i.e. you couldn't tell).

Table 1 summarizes proper child safety restraint practices. Carefully study the table on proper child safety restraint use.

TABLE 1.

Louisiana Child Safety Restraint Compliance Guidelines, 2009				
<u>Age Group</u>	<u>Ages</u>	<u>Weight</u>	<u>Facing</u>	<u>Restraint Device</u>
Infant	less than one year old	under 20 pounds	rear-facing	child safety seat
1 to 3	1, 2, 3	20 to 39 pounds	forward-facing	child safety seat
4 & 5	4, 5	40 to 59 pounds	(not specified)	child booster seat or safety belt
6 through 12	6, 7, 8, 9, 10, 11, 12	60 or more pounds	(not specified)	child booster seat or safety belt

Observation Form

It is extremely important that you have studied and are familiar with the material we've covered so far before we discuss the form. If you have any questions, ASK!

There are actually two forms that you will be using. One form has spaces at the top for you to record information about the observation site and when you made observations (EXHIBIT A). The bottom of that form has space for recording 40 observations (two columns of 20 each). You will use only one of these forms for each time you make observations at a specific location.

Since you may make more than 40 observations at a location, a second form is provided (EXHIBIT B). The second form only has space for making observations. As you start to use a second form, the only thing you need to do is record the page number in the upper right hand corner of the form. Continue recording page numbers in numeric sequence (e.g. 2,3,4, etc.) whenever you start a new second form at a location. The second forms are to be stapled to the first form which has the location and time identification information.

At the top of the first form (EXHIBIT A. -- entitled CHILD RESTRAINT OBSERVATION FORM), fill in the items as follows:

<u>ITEM</u>	<u>ENTRY</u>
Observer	• your name,
Sheet <u> 1 </u> of <u> </u>	• In the first blank, a "1" has been typed; in the second blank enter the page number on the last sheet used to make observations at that site,
Date	• the date you worked the site,
Day	• the day of week you worked the site,
Parish	• the parish the site is located,
Location	• the description of the site per the site location sheet,
Start Time	• The time you STARTED making observations at the site,
End Time	• The time you STOPPED making observations at the site.

Observation Form (continued)

You will record observation data on the lower portion of the first form and consecutively record data on continuation pages (second forms).

When making an observation, the first thing you must do is determine the age of the child being observed. If you determine the child is 13 or older you do not record anything. If you determine that a child is in the 6-12 year range, simply check that age category on the form under the column with the heading "APPROX AGE" (this is an abbreviation of APPROXIMATE AGE.) If that child is restrained, check the "YES" block under the column headed "RESTRAINED". If that child is not restrained, check the "NO" block under the column headed "RESTRAINED". If you are not sure if a child is restrained, check "UND" which stands for "undetermined" under the "RESTRAINED" column.

Review the training manual once more and ASK about anything that you're not quite sure about.

REFERENCES

1. Schneider, Helmut, 2003, Design of Child Safety Restraint Observational Survey for Louisiana, February 11, 2004.