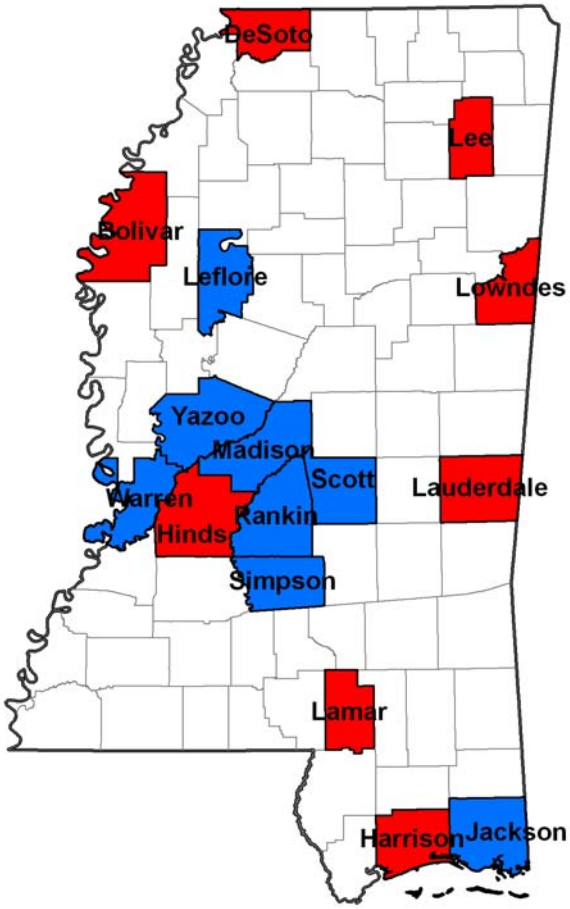
2006 Mississippi Safety Belt / Motorcycle Helmet Survey

Prepared for:

The Office of Highway Safety

Division of Public Safety Planning,
Mississippi Department of Public Safety



November 2006

Prepared by:

David R. Parrish
James W. Landrum
and
Jean A. Mann

BUCKLE UP IN YOUR TRUCK

SSRC
Social Science Research Center
Mississippi State University

INTRODUCTION

A milestone in highway safety for the state of Mississippi has been reached! In May of 2006 Mississippi passed a primary seat belt law making it lawful for an officer to stop and ticket a vehicle driver for no other reason than not using a seatbelt. The officer may also ticket the driver for unbelted passengers in the front seat of a vehicle. This small victory in public safety will hopefully reap big dividends for the state in the form of lives saved from increased seat belt usage.

Vehicle crashes, the leading killer of persons 3 to 33 years of age, has claimed many lives over the years and continues to claim many lives each and every day. On the American road network, 42,636 people lost their lives in motor vehicle crashes in 2004. In terms of a rate in 2004, the nation fell to an all-time low of 1.46 fatalities per 100 million vehicle miles of travel. Compare this figure with a rate of 1.73 per 100 million vehicle miles traveled in 1994. A great number of these fatalities may have been avoided if proper vehicle restraints would have been used at the time of the crashes. The National Highway Traffic Safety Administration (NHTSA) estimated, from 1975 to 2004, safety belts saved 195,382 lives on American roads.[1]

In 2005, Mississippi's traffic fatality rate of 31.9 fatalities per 100,000 Mississippians was 117 percent higher than the national average of 14.7. This rate is reflected by the 931 lives lost in Mississippi in 2005.[2] Not surprisingly, the high fatality rate for this state is accompanied the nation's lowest seat belt usage rate of 60.8%. Only New Hampshire ousted Mississippi for the bottom ranking by not supplying a seat belt rate in 2004. New Hampshire is the only state that does not have a seat belt law.[3]

For the past six years, Mississippi, along with other southeastern states and other states around the country, participated in a major effort conducted under the term "Click It or Ticket" during Memorial Day mobilizations. This year marked the second year Mississippi also targeted those drivers and passengers in pickup trucks with a campaign labeled "Buckle Up in Your Truck." The "Buckle Up in Your Truck" effort immediately preceded the "Click It or Ticket" mobilization and was initiated due to pickup truck occupants being over-represented in motor vehicle crashes and fatalities in the South. Both of these efforts were an attempt to increase seat belt awareness and use. The project included a number of phases. The first of these phases was an earned media phase including public service announcements, brochures, and newspaper articles that were introduced to the Mississippi public. After two weeks of earned media, an extensive paid media campaign began (second phase). Lastly a statewide law enforcement blitz (third phase) increased the intensity of seatbelt law enforcement throughout the state. All law enforcement agencies participated in this increased level of enforcement by using road blocks as well as saturated patrolling efforts.

---

[1] *NHTSA Traffic Safety Facts 2004 – Overview* (DOT HS 809 911)
[2] *NHTSA State Traffic Information* – Mississippi – August 2005
[3] *NHTSA Traffic Safety Facts 2004 – Occupant Protection* (DOT HS 809 909)

In 2006, two observational surveys were conducted by the Social Science Research Center at Mississippi State University. One was conducted prior to media and law enforcement intervention on a sub-sample of 64 sites in 8 Mississippi counties (henceforth referred to as "mini survey"). The official follow-up survey, using all 409 survey sites in 16 counties, was completed following all law enforcement and media interventions.

SEATBELT SURVEY METHODOLOGY

The Seat belt and motorcycle survey for Mississippi uses a multistage area probability approach. In the first stage, an appropriate number of sampling units are randomly selected. The primary sampling unit for the Mississippi survey is the county. The least populated counties, approximately 15% of the State's population, are excluded from the sampling process. The survey was conducted in 16 Mississippi Counties containing approximately 46% of the State's population.

Summary of Sampling Methodology

I. Three counties were selected as certainty counties because of having populations much larger than other Mississippi Counties. The certainty counties were Harrison, Hinds, and Jackson.

II. Thirty-two of the least populated counties, whose combined population accounted for only 15% of the state's population, were eliminated from sampling.

III. Sampling was done with replacement. In addition to the three certainty counties, 13 other counties were chosen, thus the sample consists of 16 counties.

IV. The sample includes 409 forty-minute observation periods. The three certainty counties were allotted 28 observation periods, while the remaining 13 counties were allotted 25 observation periods each.

V. The Mississippi Department of Transportation (MDOT) provided information for all road segments which Average Daily Travel (ADT) was equal to or exceeded 500 miles. Through a random variable generated by the computer program Statistical Program for the Social Sciences (SPSS), all road segments in each of the counties were randomly selected.

VI. The roads were then sorted by county and functional road classification. The functional road classifications of the road were re-coded into six functional classes.

VII. Total Vehicle Miles Traveled (VMT) per year for each county was calculated by multiplying ADT by road segment length. A similar statistic was calculated for each of the functional road classes. This figure was divided by the total county VMT and then multiplied by the number of observation time periods. For example, there are 3,860 road segments in Hinds County with a VMT of 5,905,627.26. Functional road Class 1 had a VMT of 640,676. The 640,676 was then divided by 5,905,627.26 equaling .1084857 which was in turn multiplied by 28, or the number of observation periods allotted to Hinds County. Thus 3.0375991, or three observation periods were allotted to Class 1 roads in Hinds County, etc. The first three segments chosen for sample were from road Class 1 in Hinds County. Similarly roads for each road class for the remaining five road classes were chosen.

VIII. All road segments were randomly selected and sorted by functional class. The number of roads to be sampled in each class was selected in the order that they were chosen in the random sampling process. For example, if Hinds County needed to sample three Class 1 roads, the first three Class 1 roads plus several back up selections were chosen. The TP number or location designation was then sent to MDOT to be placed on maps and sent back to Mississippi State.

IX. Sites for each county were then clustered according to geographical proximity.
X. For each cluster and each site a day of the week was randomly chosen. All days of the week were eligible for selection.
XI. Once a site was assigned a day of the week, observation times between 8:00 a.m. and 6:00 p.m. were randomly chosen in hourly increments. One hour for lunch was randomly chosen from the hours from 11:00 a.m. to 2:00 p.m.
XII. Direction of observation was randomly assigned for all 409 sites using random assignment procedure generated by SPSS.
XIII. Observers were instructed to observe from a site using the assigned direction for a period of 40 minutes. Interstate sites were surveyed on off ramps.
XIV. The sampling frame includes counting all passenger vehicles, sports utility vehicles, vans and pickup trucks not exempted by state law. Two observers are used at each observation site. One observer counts the driver and outside passengers on the front seat of passenger cars, sport utility vehicles and vans. The other observer counts the driver and outside passenger in pickup trucks.

Further details on the sampling methodology of the survey **"DOCUMENTATION OF MISSISSIPPI OBSERVATIONAL SURVEYS OF SEAT BELT AND MOTORCYCLE HELMET USE"** prepared by Dr. Stephen H. Richards Director, Transportation Center of the University of Tennessee and Dr. Tommy Wright Adjunct professor of Statistics of the University of Tennessee, and can be obtained from the Social Science Research Center at Mississippi State University, Box 5287 Mississippi State, MS 39762, or by calling Mr. David Parrish a 662-325-8116.

DESCRIPTION OF 2006 SURVEYS

This report will be divided into four sections.

Section I will compare seat belt use prior to project intervention and seat belt use following intervention. Only the mini survey (64 location sub-sample) sites in eight counties are compared. This sample consists of the same sites used for the mini surveys conducted in each of the years 2001 – 2005.

Section II will compare seat belt use prior to project intervention and seat belt use following intervention ***for pickup trucks only***. Again, only the mini survey (64 location sub-sample) sites in eight counties are compared.

Section III will include the analysis of the complete 2006 Mississippi observational seat belt survey of 409 sites in 16 Mississippi counties. This survey was conducted after project implementation between the dates of Tuesday June 6, 2006 and Wednesday July 5, 2006.

Section IV will include short analysis of Motorcycle Helmet Use in Mississippi.

SECTION I:
MINI SEAT BELT SURVEY COMPARISONS

Prior to any media or law enforcement efforts encouraging seat belt usage, a mini survey of 64 observation locations in 8 Mississippi counties was conducted as baseline information. These data – observations from eight sites in each of the eight counties – were collected around mid-to-late April, 2006. These counties, located in *Figure 1*, include a mixture of different geographical regions where both rural and urban counties are represented. The counties are **Bolivar County** in the Mississippi Delta; **Desoto County,** located in the Northwest corner of the State near Memphis; **Lee County,** in Northeast Mississippi; **Lowndes County,** in the Northeast; **Lauderdale County,** in East Central Mississippi; **Lamar County**, in Southeast Mississippi; **Harrison County,** on the Mississippi Gulf Coast; and **Hinds County,** in West Central Mississippi, where the Capital of Mississippi is located. Desoto, Harrison, Hinds, and Lamar are located in standard metropolitan areas. The observation sites within each of these counties are identical to the collection in years 2001 – 2005.

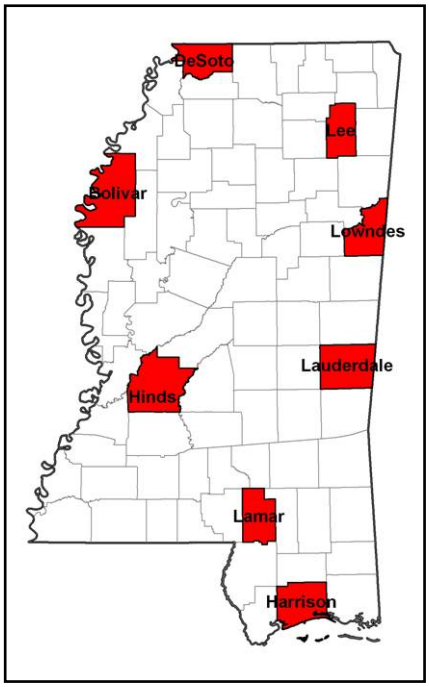


Figure 1: Mini Survey Counties

The percentage of sites drawn from each of the road types is roughly the same as the overall sample of 409 sites. It may be observed that the mini sample is slightly under-represented in rural interstate sites and slightly over-represented in urban interstate sites. See *Table 1* for a comparison of type of roads for mini survey sites versus overall survey sites.

Table 1: Counts and Percentage Breakdown of Type of Roads for Mini Survey and Overall Survey

Type of Road	Mini Survey Frequency	Mini Survey Percent	Overall Survey Frequency	Overall Survey Percent
Rural Interstates	7	10.9 %	58	14.2 %
Rural Major and Collector Roads	17	26.6 %	113	27.6 %
Rural Local Roads	9	14.1 %	61	14.9 %
Urban Interstates and Expressways	9	14.1 %	38	9.3 %
Urban Major Roads and Collector Roads	14	21.9 %	87	21.3 %
Urban Local Roads	8	12.5 %	52	12.7 %

Again, using the sub sample of 64 site locations, a comparison of 2006 seat belt usage rates before and after intervention shows a dramatic usage increase of 18.4%. *Table 2* illustrates the 74.7% post-intervention usage rate compared to the 63.1% pre-intervention usage rate. The confidence interval bounds and actual number of observations are also included in the same table below.

Table 2: Pre- and Post-Intervention Seat Belt Usage Rate for Mini Surveys in 2006 (includes confidence intervals and actual number of observations)

Counted:	Weighted Percent Seat Belt Use (%)	Bound (%)	Actual Number of Observations
Survey Prior to Intervention	63.1 %	± 1.9 %	19,036
Survey After Intervention	74.7 %	± 2.7 %	18,282

By separating the data by type of vehicle, *Table 3* shows that both car and pickup truck belt usage increased after the intervention phase of the campaigns. Although pickup truck belt usage lags behind passenger car usage in Mississippi, the observational data indicate there was a significantly higher percent increase in belt usage (+23.9%) for pickup trucks.

Table 3: Pre- and Post-Intervention Seat Belt Usage by Type of Vehicle

Type of Vehicle	Belt Use: Before Intervention (%)	Belt Use: After Intervention (%)	Percent Change (%)	Percent Increase or Decrease (%)
Car	66.3%	76.1%	+ 9.8%	+ 14.8%
Pickup Truck	58.9%	73.0%	+ 14.1%	+ 23.9%
Total	**63.1%**	**74.7%**	**+ 11.6%**	**+ 18.4%**

Note:
RED cells indicate ≤ 10 % positive change in belt use
GREEN cells indicate > 10 % positive change in belt use

Seatbelt use increased by a positive change greater than 10% in most of the sub sample survey counties with the exception of Desoto and Lee as can be seen in *Table 4*. Significant percent increases (over 20% increases) occurred in Bolivar (31.1%), Lauderdale (26.4%), Lamar (25.2%) and Hinds (21.8%). Harrison and Lowndes showed substantial usage increases slightly below 20%. However, the seat belt media and enforcement campaign nor the induction of a primary seat belt law in Mississippi was enough for Lee county to show a positive increase in belt usage. Lee dropped from an already low 53.2% usage rate before intervention to a 51.5% usage rate for a decrease of 3.2%.

Table 4: Pre- and Post-Intervention Seat Belt Usage by County Surveyed

County	Belt Use: Before Intervention (%)	Belt Use: After Intervention (%)	Percent Change (%)	Percent Increase or Decrease (%)
Bolivar	52.4%	68.7%	+ 16.3 %	+ 31.1 %
Desoto	66.1%	69.2%	+ 3.1 %	+ 4.7 %
Harrison	65.9%	77.4%	+ 11.5 %	+ 17.5 %
Hinds	64.8%	78.9%	+ 14.1 %	+ 21.8 %
Lamar	63.5%	79.5%	+ 16.0 %	+ 25.2 %
Lauderdale	50.3%	63.6%	+ 13.3 %	+ 26.4 %
Lee	53.2%	51.5%	- 1.7 %	- 3.2 %
Lowndes	57.3%	68.4%	+ 11.1 %	+ 19.4 %
Total	**63.1%**	**74.7%**	**+ 11.6%**	**+ 18.4%**

Note:
RED cells indicate ≤ 10 % positive change in belt use
GREEN cells indicate > 10 % positive change in belt use

Not only did seatbelt use increase in most of the counties in the sub sample, seat belt use also increased on all classes of roads surveyed. In *Table 5* comparisons of baseline and follow-up seatbelt use by road category are presented. Notice the largest percentage increases occurred on Urban Local Roads (+24.4%) and Rural Major and Collector Roads (21.4%). The other four types of roads did experience positive changes in seat belt usage, but Rural Local Roads and Urban Interstates and Expressways are the two classes of road with positive changes less than 10%.

Table 5: Pre- and Post-Intervention Seat Belt Usage by Type of Road

Type of Road	**Belt Use Before Intervention (%)**	**Belt Use After Intervention (%)**	**Percent Change (%)**	**Percent Increase or Decrease (%)**
Rural Interstates	71.5 %	82.3 %	+ 10.8 %	+ 15.1 %
Rural Major and Collector Roads	57.5 %	69.8 %	+ 12.3 %	+ 21.4 %
Rural Local Roads	54.9 %	61.8 %	+ 6.9 %	+ 12.6 %
Urban Interstates and Expressways	68.6 %	74.6 %	+ 6.0 %	+ 8.7 %
Urban Major Roads and Collector Roads	58.0 %	68.6 %	+ 10.6 %	+ 18.3 %
Urban Local Roads	51.6 %	64.2 %	+ 12.6 %	+ 24.4 %
Total	**63.1%**	**74.7%**	**+ 11.6%**	**+ 18.4%**

Note:
RED cells indicate ≤ 10 % positive change in belt use
GREEN cells indicate > 10 % positive change in belt use

For an additional accuracy check of the survey results, un-weighted belt usage rates were analyzed. The last three columns in *Table 6* demonstrate the precision that can be attained using mini survey results. The follow-up mini survey locations, follow-up non-mini locations and the overall sample had 73.8%, 74.2%, and 74.1% un-weighted belt usage rates, respectively. The closeness of these values seems to indicate the use of mini surveys is a very good approximation to the overall sample.

Table 6: Un-weighted Seat Belt Usage Counts and Rates for Mini and Non-Mini Observations in the Baseline and Follow-up Surveys

	Baseline Mini Sites N = 64	**Follow-up Mini Sites N = 64**	**Follow-up Non-Mini Sites N = 345**	**Combined Mini and Non-Mini Sites N = 409**
Using Seat Belts	12,133	13,488	67,352	80,840
Percent Using Seat Belts	63.7%	73.8%	74.2%	74.1%
Not Using Seat Belts	6,903	4,794	23,449	28,243
Percent Not Using Seat Belts	36.3%	26.2%	25.8%	25.9%
Total	**19,036**	**18,282**	**90,801**	**109,083**

SECTION II:
MINI SEAT BELT SURVEY COMPARISONS – PICKUP TRUCKS

In 2005, the State of Mississippi initiated a "Buckle Up in Your Truck" campaign that accompanied the "Click It or Ticket" effort. This campaign slogan continued in 2006. As implied by the title, this seat belt encouragement thrust focused on drivers and passengers in pickup trucks in Mississippi. Given the campaign's emphasis on trucks, this section of the report analyzes some before and after intervention statistics pertaining only to pickup trucks. The sample population for this analysis remains the 64 site locations in the 8 Mississippi counties identical to those described in Section I.

Table 7 illustrates pickup truck belt use by county. All of the eight counties increased their belt usage rate after the intervention phase of the campaign. Four of the counties were above the 10% positive change mark; four others were not. Bolivar and Lamar counties show an astonishing 50+% increase in belt use. On the other hand, Lee County once again showed lackluster performance in seat belt usage among pickup trucks. Lee had a minimal increase (2.4%) from baseline to follow-up and is the lowest usage rate county after intervention at 51.8%. Harrison, Hinds and Lamar were all noteworthy with follow-up usage rates above 75%.

Table 7: Pre- and Post-Intervention Seat Belt Usage for Pickup Trucks by County

County	Pickup Truck Belt Use: Before Intervention (%)	Pickup Truck Belt Use: After Intervention (%)	Percent Change (%)	Percent Increase or Decrease (%)
Bolivar	41.7 %	64.2 %	+ 22.5 %	+ 54.0 %
Desoto	62.1 %	68.5 %	+ 6.4 %	+ 10.3 %
Harrison	62.2 %	76.2 %	+ 14.0 %	+ 22.5 %
Hinds	59.2 %	77.7 %	+ 18.5 %	+ 31.3 %
Lamar	49.4 %	77.8 %	+ 28.4 %	+ 57.5 %
Lauderdale	45.5 %	54.2 %	+ 8.7 %	+ 19.1 %
Lee	50.6 %	51.8 %	+ 1.2 %	+ 2.4 %
Lowndes	57.5 %	67.4 %	+ 9.9 %	+ 17.2 %
Total	**58.9 %**	**73.0 %**	**+ 14.1 %**	**+ 23.9 %**

Note:
RED cells indicate ≤ 10 % positive change in belt use
GREEN cells indicate > 10 % positive change in belt use

Analysis of pickup truck belt use by type of road is shown in *Table 8*. With the exception of Urban Interstates and Expressways, all road segment types show positive change in pickup truck belt usage above 10%. Approximately the same usage rate as the combined car and truck statistics seen before by road type (Table 5), it seems that an overwhelming majority of drivers and passenger of pickup trucks (82.6%) choose to buckle up on rural interstates.

Table 8: Pre and Post Intervention Seat Belt Usage for Pickup Trucks by Type of Road

Type of Road	**Pickup Truck Belt Use Before Intervention (%)**	**Pickup Truck Belt Use After Intervention (%)**	**Percent Change (%)**	**Percent Increase or Decrease (%)**
Rural Interstates	67.4 %	82.6 %	+ 15.2 %	+ 22.6 %
Rural Major and Collector Roads	51.1 %	66.5 %	+ 15.4 %	+ 30.1 %
Rural Local Roads	47.5 %	58.3 %	+ 10.8 %	+ 22.7 %
Urban Interstates and Expressways	67.3 %	71.3 %	+ 4.0 %	+ 5.9 %
Urban Major Roads and Collector Roads	51.6 %	67.5 %	+ 15.9 %	+ 30.8 %
Urban Local Roads	48.5 %	58.8 %	+ 10.3 %	+ 21.2 %
Total	**58.9 %**	**73.0 %**	**+ 14.1 %**	**+ 23.9 %**

Note:
RED cells indicate ≤ 10 % positive change in belt use
GREEN cells indicate > 10 % positive change in belt use

SECTION III:
COMPLETE OBSERVATIONAL SEAT BELT SURVEY RESULTS

This Section provides a results summary of the complete 2006 Mississippi Seat Belt / Motorcycle Helmet Survey of 409 sites in 16 Mississippi counties. This survey was conducted after project implementation between the dates of Monday June 5, 2006 and Wednesday July 5, 2006.

The methodology used for the survey was previously described in this report (pages 2 and 3). A more robust survey than the mini-surveys, there were 409 sites observed rather than 64 with the sites being located in 16 Mississippi Counties rather than 8. In addition to sites used in the sub sample (Bolivar, Desoto, Harrison, Hinds, Lamar, Lauderdale, Lee and Lowndes - Red Counties), the full survey includes sites in eight other counties (Leflore, Jackson, Madison, Rankin, Scott, Simpson, Warren and Yazoo - Blue Counties). See *Figure 2*.

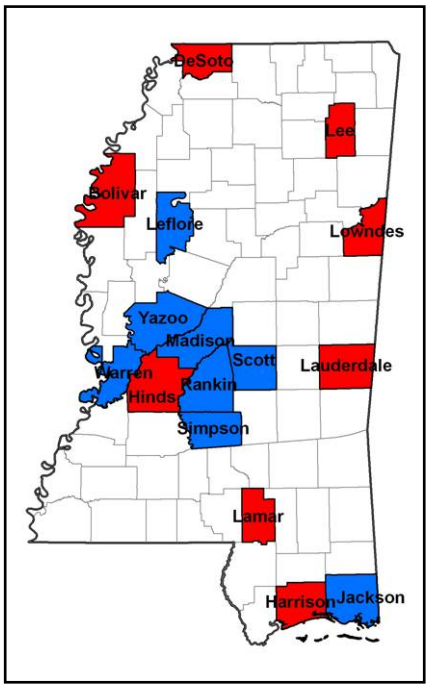


Figure 2: All Surveyed Counties

The percentage of road classes counted was very similar to those counted in the sub sample with two exceptions. There was a lower percentage of rural interstates in the sub sample than in the complete survey and a higher percentage of urban interstate sites in the sub sample. If rural and urban interstate sites are combined the percentage of sites counted in the sub sample with the overall sample are almost identical. See Table 1.

In 2006 Mississippi experienced a significant positive jump in overall seat belt usage rate from last year's result. Due most likely to the state's adoption of a primary seat belt law, the 2006 survey resulted in an official seat belt usage rate of **73.6% ± 2.4%**. This figure is up **12.8%** from the 2005 usage rate of **60.80% ± 3.43%**. To better illustrate the significance of this all time high belt usage rate and give a glimpse into the past 12 years of seat belt usage in Mississippi, see *Figure 3*. This graph illustrates a gradual increase in belt usage rates from 1994 to 1998 and a slight dip the next two years (1999 and 2000). However, since the *Click It or Ticket* campaigns began in 2001, we have witnessed usage rates in the low 60 percentile range with very minimal change in belt usage the past several years. The 2006 usage rate stands atop the chart and breaks the 70% usage rate line with confidence. The upper and lower bounds of the 95% confidence intervals are shown to better represent the usage rate for each year.

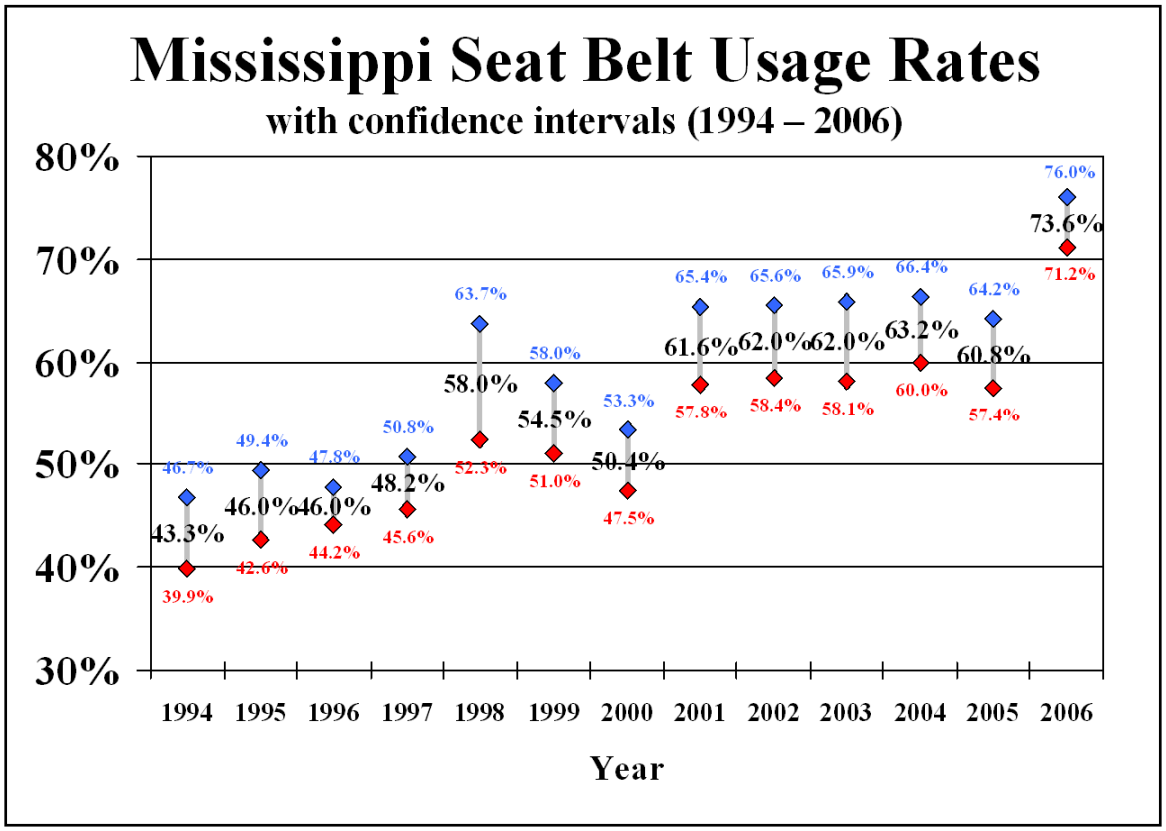


Figure 3: Twelve years of seat belt survey results including 95% confidence intervals

As can be observed in *Table 9*, there is considerable disparity of seatbelt use in the surveyed counties. Column 1 shows usage rates range from 81.9% in Rankin County to only 51.3% in Leflore County. Also presented in column 2 of *Table 9* is a comparison of seatbelt usage in the 8 sub sample counties compared to seatbelt use in the same counties gathered in the complete survey. As can be seen, the sub sample sites are very representative of the overall counts for each respective county.

Table 9: Seat Belt Usage by County

County	Belt Use – All Sites (%) N = 409	Belt Use – Mini Sites (%) N = 64
Bolivar	72.3 %	68.7 %
Desoto	67.6 %	69.2 %
Harrison	77.6 %	77.4 %
Hinds	78.2 %	78.9 %
Jackson	71.3 %	n/a
Lamar	77.1 %	79.5 %
Lauderdale	63.9 %	63.6 %
Lee	52.4 %	51.5 %
Leflore	51.3 %	n/a
Lowndes	67.6 %	68.4 %
Madison	76.5 %	n/a
Rankin	81.9 %	n/a
Scott	71.3 %	n/a
Simpson	74.5 %	n/a
Warren	75.2 %	n/a
Yazoo	63.1 %	n/a
Total	**73.6** %	**74.7** %

Note:
RED cells indicate below average belt use
GREEN cells indicate above average belt use

The following three pages presents information by county on overall seat belt use, passenger car belt use, and pickup truck belt use. *Figure 4* graphically represents the information in column 1 above. *Figures 5* and *Figure 6* illustrate belt usage rates by county for passenger cars and pickup trucks separately. Note the counties highlighted in red are counties which have a count below a 70% usage rate.

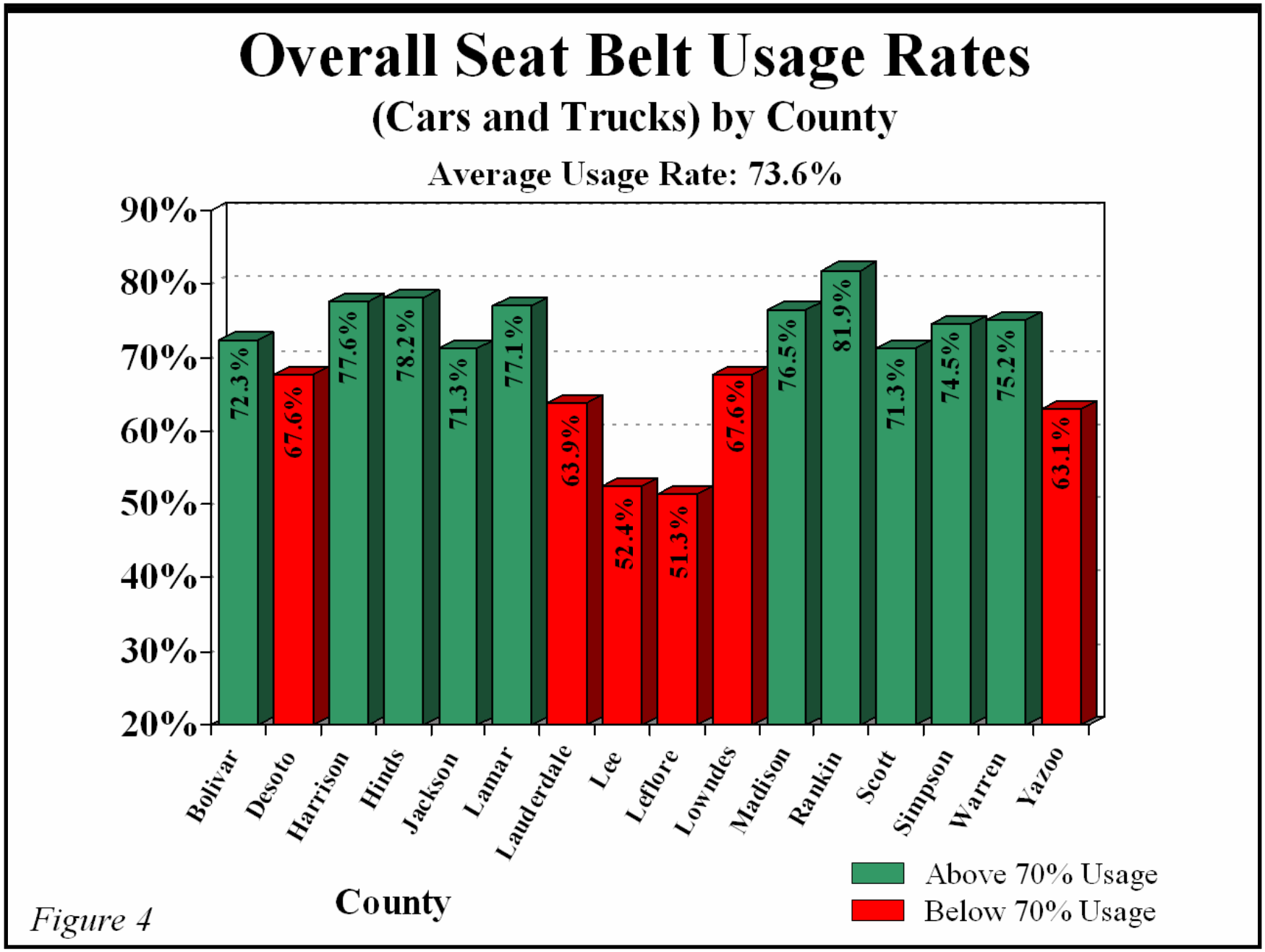

Overall Seat Belt Usage Rates
(Cars and Trucks) by County
Average Usage Rate: 73.6%
90%
80%
70%
60%
50%
40%
30%
20%
72.3%
67.6%
77.6%
78.2%
71.3%
77.1%
63.9%
52.4%
51.3%
67.6%
76.5%
81.9%
71.3%
74.5%
75.2%
63.1%
Bolivar
Desoto
Harrison
Hinds
Jackson
Lamar
Lauderdale
Lee
Leflore
Lowndes
Madison
Rankin
Scott
Simpson
Warren
Yazoo
County
Above 70% Usage
Below 70% Usage

Figure 4

Passenger Car Seat Belt Usage Rates

by County

Average Usage Rate: 76.3%

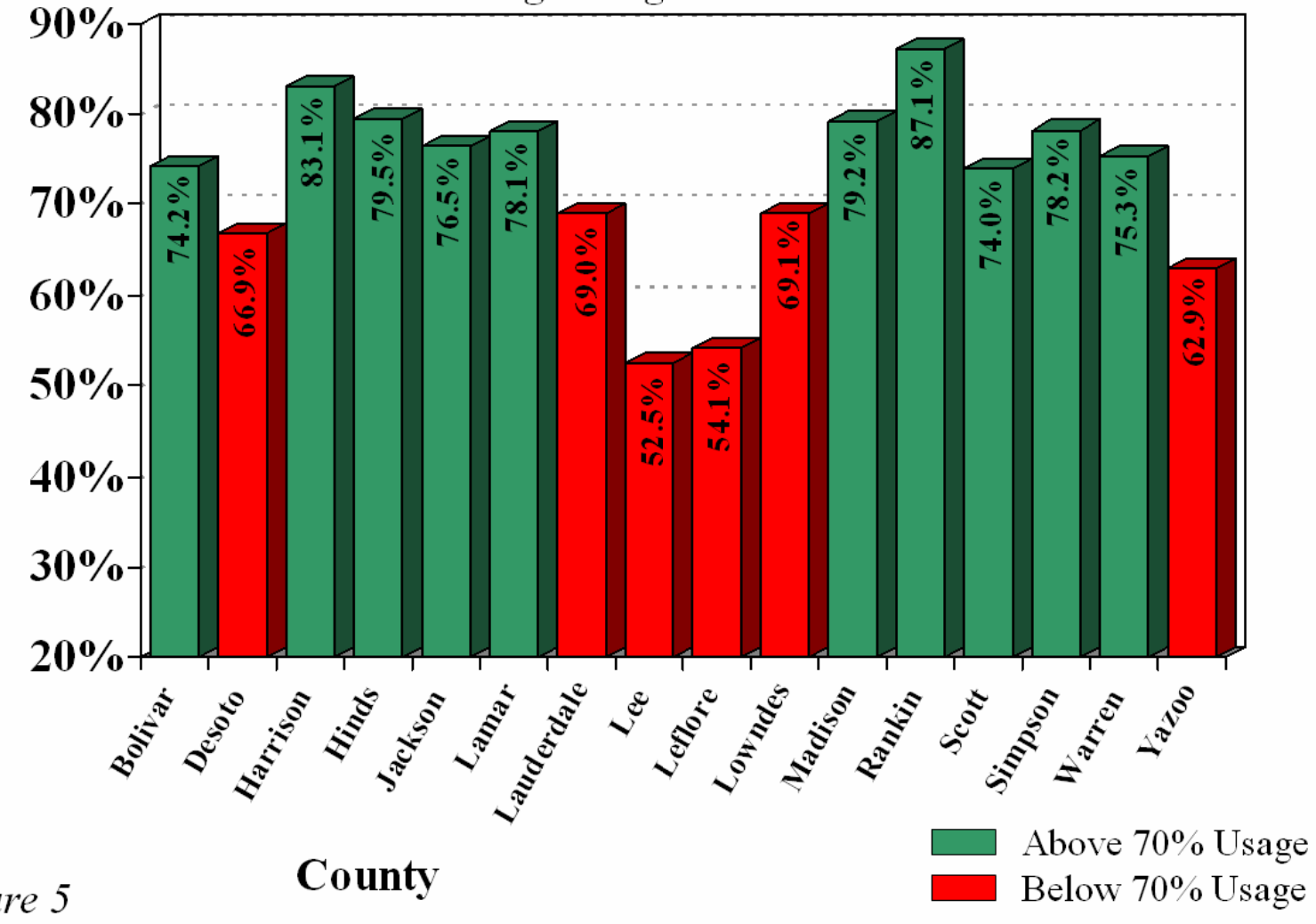


Figure 5

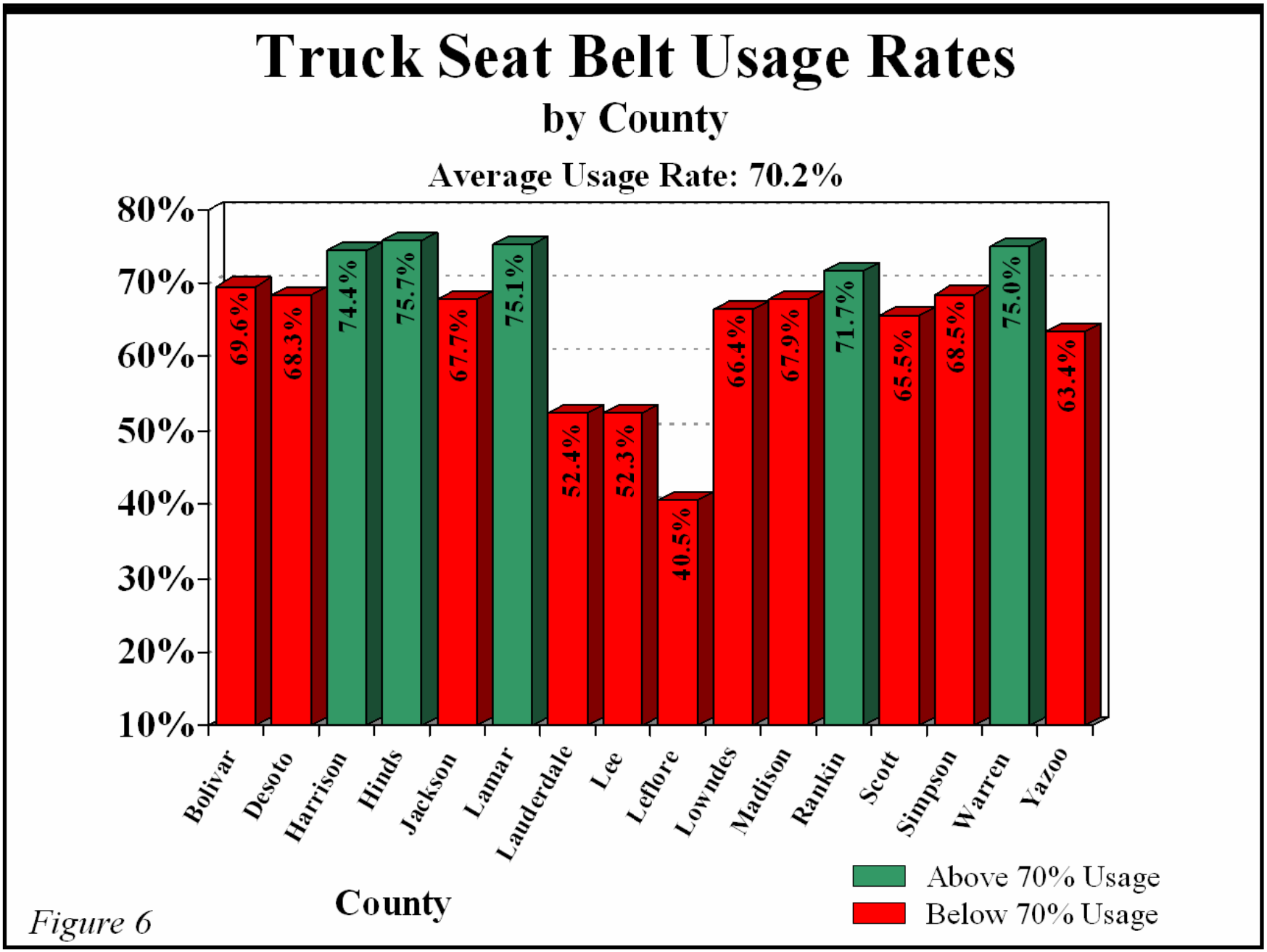

Truck Seat Belt Usage Rates
by County
Average Usage Rate: 70.2%
80%
70%
60%
50%
40%
30%
20%
10%
69.6%
68.3%
74.4%
75.7%
67.7%
75.1%
52.4%
52.3%
40.5%
66.4%
67.9%
71.7%
65.5%
68.5%
75.0%
63.4%
Bolivar
Desoto
Harrison
Hinds
Jackson
Lamar
Lauderdale
Lee
Leflore
Lowndes
Madison
Rankin
Scott
Simpson
Warren
Yazoo
County
Above 70% Usage
Below 70% Usage

Figure 6

Presented in *Table 10* is a breakdown of seat belt usage rates by type of road. It can clearly be seen that drivers and passengers in motor vehicles are more likely to utilize their restraints on rural interstates (81.3%) than any other type of road. Urban interstate traffic also shows strong use of belt use (77.7%). Rural and urban local roads continue to lag behind in usage rate; however, the rates on these roads in 2006 are equivalent to the overall seatbelt use for the state last year. Therefore, it is another indication of Mississippi's move in the right direction concerning seat belt use.

Table 10: Seat Belt Usage by Type of Road

Type of Road	Seat Belt Use (%)
Rural Interstates	81.3 %
Rural Major and Collector Roads	69.3 %
Rural Local Roads	60.4 %
Urban Interstates and Expressways	77.7 %
Urban Major Roads and Collector Roads	68.3 %
Urban Local Roads	63.9 %
Total	**73.6 %**

A summary of ***total seat belt use for 2006 in Mississippi*** is presented in *Table 11* below. Despite the dedicated efforts of the "Buckle Up in Your Truck" campaign, seat belt use by occupants in pickup trucks (70.2%) continues to lag behind the use of seat belt in occupants of passenger cars (76.3%). Overall, 2006 was a victory for seat belt use in Mississippi. The state's official result was a usage rate of 73.6% ± 2.4%.

Table 11: Seat Belt Usage by Type of Vehicle

Type of Vehicle	Weighted Belt Use (%)	Bound (%)
Car	76.3 %	3.0 %
Pickup Truck	70.2 %	1.7 %
Total	**73.6 %**	**2.4 %**

SECTION IV:
MOTORCYCLE HELMET USE

The final segment to be discussed concerns the motorcycle helmet use in Mississippi. As a part of the Seat Belt Survey, motorcycle helmets are also counted. Mississippi is fortunate to have an excellent Motorcycle Helmet law. Mississippi has a primary law in regards to motorcycle helmet use. All motorcycle riders must wear helmets or receive a ticket.

Whereas motorcycle helmet use has shown a sharp decline in use in the U.S., Mississippi has maintained a consistently high percentage of use. A number of studies (Arkansas, Texas to name two) have consistently and very strongly, shown that helmet use is directly correlated with having a primary law. It is hoped that the legislature will continue to resist efforts to roll back the primary law.

Motorcycle helmet use in 2006 in Mississippi was is 99.1% ± 0.09%

Table 12 provides a summary on the 2006 Motorcycle Helmet Survey in Mississippi. There was no attempt in the survey to judge whether the helmet was legal or illegal.

Table 12: Mississippi 2006 Un-weighted Motorcycle Helmet Usage

	Counts	**Percentage (%)**
Using Helmet	707	99.1 %
Not Using Helmet	7	0.9 %
Total	**714**	**100 %**

SUMMARY

For the past six years, intense media and enforcement campaigns have been directed towards Mississippians with the intent of increasing seat belt use. The newest of these, "Buckle Up in Your Truck," has accompanied "Click It or Ticket" and other seatbelt awareness campaigns the past two years. The effectiveness of these efforts was evaluated by several types of surveys managed by the Social Science Research Center at Mississippi State University.

The 2006 mini survey of 64 observation locations in 8 Mississippi counties was conducted as baseline information. These data – observations from eight sites in each of the eight counties – were collected from mid to late April, 2006. The complete 2006 Mississippi observational seat belt survey of 409 sites in 16 Mississippi counties was conducted after project implementation during the month of June.

A concentrated effort on pickup trucks resulted in an 11.3% increase in belt use among pickup truck drivers and front seat outside passengers. The baseline figure for trucks was 58.9% and the follow-up was 70.2%. Belt use rates for pickup trucks increased across all eight counties and across all six road classes surveyed before and after intervention.

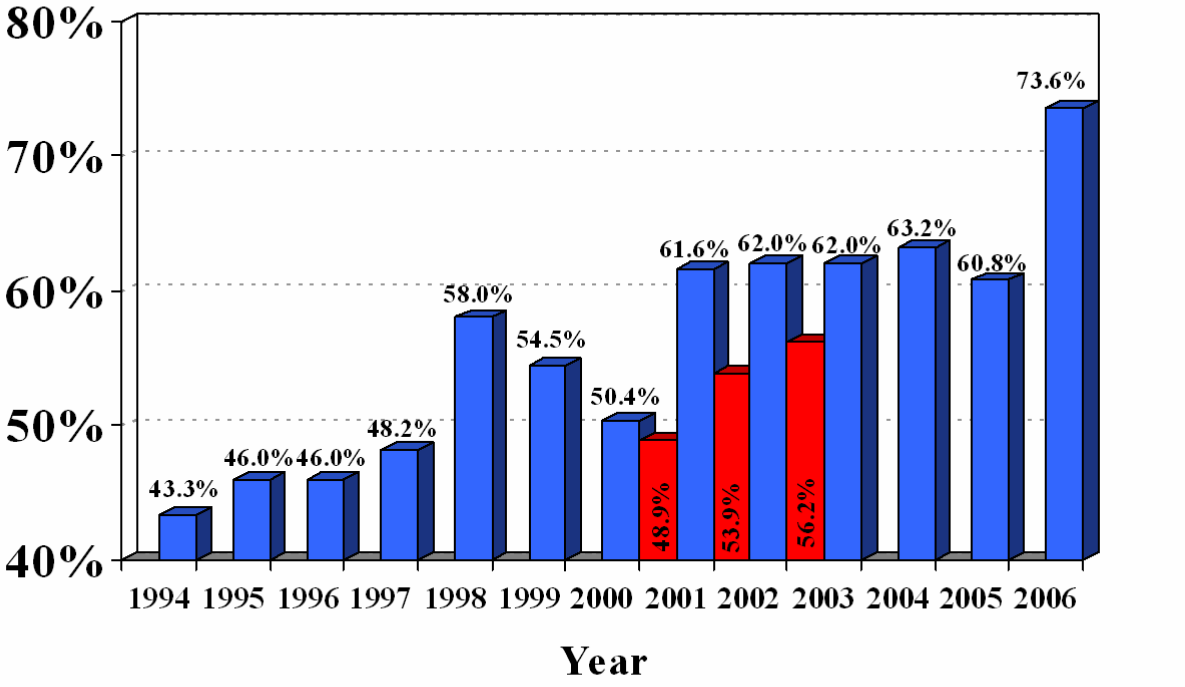
Lee County is the outstanding blemish of an otherwise completely uniform increase in belt use from pre to post campaign observations. Lee's 3.2% decrease in belt use is unexplainable and needs further investigation.

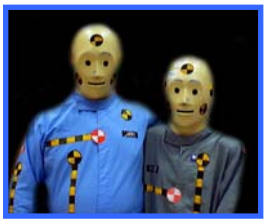
Overall, the baseline information indicated a 63.1% belt use rate and when compared to the 73.6% count in the post intervention, Mississippi showed an increase in belt usage by 12.8%. This long awaited jump in seat belt usage can most likely be attributed to the introduction of the Mississippi primary seat belt law in May, 2006. However, the seat belt media and enforcement campaign may have also been instrumental in the effective usage increase. The individual effects of either event on usage rate cannot be determined at this point in time. Further observational studies will perhaps shed light onto the cause and effect of this year's usage hike.

Finally, as is evident by the survey numbers, Mississippi has an excellent usage rate for motorcycle helmets. For a number of years, the helmet use rate has been over 99%.

Mississippi Seat Belt Usage Rates

1994 – 2006





Please Buckle Up

Mississippi State University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation or group affiliation, age, disability, or veteran status.