UTAH OBSERVATIONAL SURVEYS OF SEAT BELT USE 2012

Prepared by

Ron Perkins

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EXECUTIVE SUMMARY

The National Highway Traffic Safety Administration (NHTSA) has issued new Uniform Criteria for State Observational Surveys of Seat Belt Use. The final rule was published in the Federal Register Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18042 – 18059. The Utah Plan was accepted as fully compliant with the Uniform Criteria and was used for the implementation of Utah's 2012 seat belt surveys.

The Utah Highway Safety Office (UHSO) contracted with R Perkins Consulting to help design, implement, and analyze the 2012 observational surveys of seat belt use in Utah. The Utah Highway Safety Office, with support from the National Highway Traffic Safety Administration (NHTSA), participates in nationwide observational surveys of occupant restraint usage on an annual basis. This report details the results of the observational surveys of vehicles and front seat occupants throughout Utah.

The National Highway Traffic Safety Administration requires observational surveys to be completed annually in each state to determine the level of seat belt use.

The 17 counties chosen for the Utah observations were:

> Box Elder , Cache, Carbon, Davis, Grand, Iron, Millard, Salt Lake, San Juan, Sanpete, Sevier, Summit, Tooele, Uintah, Utah, Washington, and Weber.

The 2012 observations took place from June 18–23, 2012. Seat belt use and gender were recorded for drivers and front seat outboard passengers in passenger cars, trucks, SUVs, and vans. A total of 27,983 vehicle occupants: 22,046 drivers and 5,937 outboard passengers were observed. Of the 27,983 occupants, seat belt use could not be determined for 141 or 0.5% of the total observations. Forty-three percent (43%) of the observed vehicles were cars, 25% sport utility vehicles (SUV), 24% trucks, and 8% were vans.

We stratified our roadway segments by functional classification (Interstate/Primary, Arterial/Secondary, and Local). This allowed for stratification of road segments and employed a systematic probability proportional to size (PPS) sample, to select the road segments to be used as observation sites. The total share of occupants wearing seat belts for Utah in 2012 (excluding "unknowns") was **81.9 percent**. Usage rates by type of vehicle were also analyzed. Eighty-five (84.6%) percent of the front seat outboard "car" occupants were belted, 87% of SUVs, 86% of vans, and 69% of truck occupants were using seat belts during these observations. Truck occupants, once again, had the lowest rate for any of the vehicle categories.

The "urban" counties of Cache, Davis, Salt Lake, Utah, Washington, and Weber were analyzed separately from the "rural" counties. The seat belt usage rate for the urban counties was 85% and 70.1% for the rural counties.

INTRODUCTION

Background

Utah is composed of 29 counties; 17 of which account for at least 85 percent of the passenger vehicle crash-related fatalities according to Fatality Analysis Reporting System (FARS) data averages for the period 2008 to 2010. Therefore, we propose to sample all 17 counties in our survey.

Using a combination of the Utah Department of Transportation (UDOT) roadway file and the 2010 TIGER data developed by the U.S. Census Bureau, we developed a listing of county road segments. The UDOT roads consist of all primary and secondary roads and contain VMT. We stratified our roadway segments by functional classification (Interstate/Primary, Arterial/Secondary, and Local). In addition, the listings include segment length as determined by TIGER or UDOT. This descriptive information allowed for stratification of road segments and employed a systematic probability proportional to size (PPS) sample, to select the road segments to be used as observation sites.

All passenger vehicles with a gross vehicle weight up to 10,000 pounds were included in the survey. This included small commercial vehicles. The target population is all drivers and right front seat passengers (excluding children harnessed in child safety seats) of these vehicles who travel on public roads between the hours of 7 AM and 6 PM. The observation period for each selected road segment was 45 minutes.

Data collection was performed by single observers who received one day of classroom and field training. Quality Control (QC) Monitors made unannounced visits to scheduled data collection locations in order to ensure that data were being collected according to the research protocol.

The approaches to data weighting and belt use estimation and variance estimation comply with the Uniform Criteria and stipulate procedures to be followed when data quality goals (e.g. item response rates) are not met.

DATA COLLECTION

Survey Design

Dr. Lawrence J Cook of the University of Utah was contracted by UHSO to help with the design of the surveys. Dr. Cook used a probability-based design to gather data and estimate the seat belt usage rates for the state of Utah. All of the observations were completed in the month of June 2012. Our study design complies with criteria published in the Federal Register, Uniform Criteria for State Observational Surveys of Seat Belt Use, Vol. 76 No. 63, April 1, 2011, Rules and Regulations, pp. 18042 – 18059.

Utah is composed of 29 Counties; 17 of which account for about 86 percent of the passenger vehicle crash-related fatalities according to Utah Fatality Analysis Reporting System (FARS). Therefore, we drew sample sites from all 17 counties for inclusion in the survey. Road segments were selected randomly and with PPS from all segments in

the counties. The road segments were stratified by functional classification (Interstate/Primary, Arterial/Secondary, and Local). A random, systematic sample of 10 road segments were selected PPS within each sampled county. This process resulted in the selection of 170 road segments (17 counties x 10 sites per county).

All passenger vehicles with a gross vehicle weight up to 10,000 pounds were included in the survey. The target population was all drivers and right front seat passengers (excluding children in child safety seats) of these vehicles, travelling on the sample segment between the hours of 7 AM and 6 PM. The observation period for each selected road segment was 45 minutes.

Trained observers recorded shoulder belt use by drivers and outboard passengers at selected locations, for forty-five minute periods, between 7:00 a.m. and 6:00 p.m. in June 2012.

Training

The Contractor (Ron Perkins, MPH) individually trained each observer. A training manual was developed and given to each observer. The training covered each section of the manual and required field feedback from the observer to ensure understanding and implementation of the methodology. Quality Control checks were required for 9 of the sample sites, but QC visits were actually performed on each observer at a total of 12 sites, to make sure the observer understood how to read the maps, determine the direction of traffic to be measured, where to perform the observations, and to determine the accuracy of the observations.

Each observer was given a work schedule which included the days, times, locations, lanes and traffic directions to be observed. A detailed map for each site was also included to reduce confusion. Observers were encouraged to call with any discrepancies or questions, and were given instructions on what to do if a site could not be observed. Unannounced visits were made to 12 of the sites for quality control.

This was the first year for using voice recorders to document seat belt usage rates in Utah. This method eliminates the need to look down while writing and the problems associated with writing in inclement weather.

Observation Methodology

Each observer recorded seat belt use at predetermined locations for four to eight, 45 minute periods per shift. Random start times were selected for each day. Daily observation sites were grouped geographically to facilitate moving from one site to the next.

Observers used an Olympus DM-620 digital recorder to record their observations. These recorders were a tremendous asset in facilitating the transcription process. The observers recorded information on each vehicle in the <10,000 lb. category. Observers were instructed on what to do if traffic was moving too quickly to record information on each vehicle, or if they couldn't observe at the specified site. Finally, observers

recorded any comments they felt might be helpful when interpreting the data. Transcriptionist (Michelle Hess, Hess Transcriptions) was contracted to convert the voice recordings into an Excel spreadsheet.

DATA ANALYSIS

After data collection and transcription were completed, Dr. Cook compiled and weighted the data. Mr. Perkins then analyzed the data using *SPSS 15*, with collaboration from Dr. Cook. SPSS is a program for managing data and performing statistical analyses and it is particularly adept at manipulating data sets with many cases and variables.

Results

The surveyors observed a total of 27,983 vehicle occupants (22,046 drivers and 5,937 outboard passengers) in 2012. Forty-three percent (43%) of the observed vehicles were cars, 25% sport utility vehicles (SUV), 24% trucks, and 8% were vans.

During the 2012 observation period in Utah, the data (excluding "unknowns") showed that 81.8 percent of the drivers and 82.5 percent of the outboard passengers were wearing seat belts. The total proportion of occupants wearing seat belts was **81.9 percent.** Trucks occupants had the lowest seat belt usage rate at 69.3%, while SUVs had the highest usage rate at 87%.

Table 1 shows the percent of drivers, passengers, and combined occupants who were wearing seat belts and the change across study years (weighted).

Table 1: Seat belt Use by Vehicle type in Utah, 2012

		2012
All Vehicles	Share of Occupants Belted	81.9 %
SUVs	Share of Occupants Belted	87.0 %
Vans	Share of Occupants Belted	86.4 %
Cars	Share of Occupants Belted	84.6 %
Trucks	Share of Occupants Belted	69.3 %

Table 1 shows that the use of seat belts in "SUVs" was the highest and the lowest rate was seen in "Trucks".

According to federal guidelines, the reliability of the survey results should be within the 95 percent confidence interval. The **standard error was determined to be 0.0081**. The data were analyzed and found to be well within a standard error of 2.5 percentage points as required by NHTSA guidelines.

Regional Differences

Survey results reflect restraint use by the driver and outboard passenger in a probability sample of vehicles drawn from the counties with the greatest motor vehicle fatality rates in Utah. The seat belt usage rates for occupants are very different from county to county.

Table 2 presents the seat belt usage rates by county and by gender within each county.

Table 2: Seat belt Use by County and Gender, 2012

County	% Belted	% Male Belted	% Female Belted
Box Elder	75.0 %	70.0	80.0
Cache	75.1	68.7	81.5
Carbon	57.3	55.5	59.8
Davis	82.1	80.6	83.6
Grand	78.1	71.9	86.4
Iron	73.4	65.7	83.1
Millard	57.2	52.3	62.7
Salt Lake	88.3	85.4	92.0
San Juan	62.3	56.6	67.9
Sanpete	57.3	52.7	63.9
Sevier	73.2	68.0	79.5
Summit	92.6	90.2	95.7
Tooele	74.4	73.6	75.7
Uintah	70.8	69.5	72.7
Utah	87.1	82.5	93.5
Washington	79.0	73.2	88.1
Weber	78.4	74.6	83.5
TOTAL	**81.9 %**	**78.4 %**	**86.4 %**

Table 2 shows Summit county had the highest usage rate and the rural counties of Millard, Carbon, and Sanpete had the lowest. Also, women had a significantly higher usage rate than men.

Table 3 presents the Urban-Rural results for seat belt use. The Urban counties included Cache, Davis, Salt Lake, Utah, Washington, and Weber. Summit County was excluded from this analysis because it contained many of the urban characteristics and was considered an outlier. The other 10 counties were considered Rural.

Table 3: Occupant Restraint Use (%) by Urban/Rural

	Urban	Rural
All Occupants	85.0%	70.1%
Male Occupants	81.6	65.8
Female Occupants	89.4	75.4
CARS	87.0	73.8
SUVs	89.2	78.0
Trucks	74.1	55.6
Vans	89.0	77.8

Table 3 shows that seat belt usage rates were considerably higher for “Urban” counties but the difference is most dramatic for urban/rural truck drivers.

Conclusions

The survey methodology for observing seat belt use changed in 2012 for the entire U.S. and territories. Utah was one of the few states that had their new methodology approved by NHTSA. The sampling methodology and statistical analyses used in this survey yielded results well within the parameters required by the Utah Highway Safety Office and the National Highway Traffic Safety Administration.

SUV occupants, females, and Urban residents were the leaders for seat belt usage this year. The theoretical profile for the individual most likely to be wearing a seat belt in Utah in June 2012, would be a female passenger riding in an SUV while in Summit County. The lowest seat belt usage profile would be a male driving a truck in Millard County.

Future enforcement and educational campaigns would be most beneficial if directed toward rural residents, and especially truck occupants.

Submitted by: **Ron Perkins, MPH**
ronperkins44@gmail.com
907-227-0703

County * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
County	Box Elder	Count	836754	2505714	3342468
		% within County	25.0%	75.0%	100.0%
	Cache	Count	519261	1562375	2081636
		% within County	24.9%	75.1%	100.0%
	Carbon	Count	337218	452719	789937
		% within County	42.7%	57.3%	100.0%
	Davis	Count	1411108	6451660	7862768
		% within County	17.9%	82.1%	100.0%
	Grand	Count	269406	961521	1230927
		% within County	21.9%	78.1%	100.0%
	Iron	Count	615102	1694125	2309227
		% within County	26.6%	73.4%	100.0%
	Millard	Count	767344	1025245	1792589
		% within County	42.8%	57.2%	100.0%
	Salt Lake	Count	2716042	20503861	23219903
		% within County	11.7%	88.3%	100.0%
	San Juan	Count	411895	680968	1092863
		% within County	37.7%	62.3%	100.0%
	Sanpete	Count	264569	355556	620125
		% within County	42.7%	57.3%	100.0%
	Sevier	Count	301253	822633	1123886
		% within County	26.8%	73.2%	100.0%
	Summit	Count	188627	2349425	2538052
		% within County	7.4%	92.6%	100.0%
	Tooele	Count	688105	2003297	2691402
		% within County	25.6%	74.4%	100.0%
	Uintah	Count	300359	727780	1028139
		% within County	29.2%	70.8%	100.0%
	Utah	Count	1387601	9337789	10725390
		% within County	12.9%	87.1%	100.0%
	Washington	Count	798096	3010282	3808378
		% within County	21.0%	79.0%	100.0%
	Weber	Count	1025260	3716402	4741662
		% within County	21.6%	78.4%	100.0%
Total		Count	12838000	58161352	70999352
		% within County	18.1%	81.9%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		
				unbelted	belted	Total
Box Elder	Vehicle Type	car	Count	258031	1049434	1307465
			% within Vehicle Type	19.7%	80.3%	100.0%
		SUV	Count	150382	640940	791322
			% within Vehicle Type	19.0%	81.0%	100.0%
		truck	Count	323779	448206	771985
			% within Vehicle Type	41.9%	58.1%	100.0%
		van	Count	104562	367134	471696
			% within Vehicle Type	22.2%	77.8%	100.0%
	Total		Count	836754	2505714	3342468
			% within Vehicle Type	25.0%	75.0%	100.0%
Cache	Vehicle Type	car	Count	156832	744306	901138
			% within Vehicle Type	17.4%	82.6%	100.0%
		SUV	Count	103739	418023	521762
			% within Vehicle Type	19.9%	80.1%	100.0%
		truck	Count	228725	255575	484300
			% within Vehicle Type	47.2%	52.8%	100.0%
		van	Count	29965	144471	174436
			% within Vehicle Type	17.2%	82.8%	100.0%
	Total		Count	519261	1562375	2081636
			% within Vehicle Type	24.9%	75.1%	100.0%
Carbon	Vehicle Type	car	Count	138069	207414	345483
			% within Vehicle Type	40.0%	60.0%	100.0%
		SUV	Count	60268	103873	164141
			% within Vehicle Type	36.7%	63.3%	100.0%
		truck	Count	124793	106751	231544
			% within Vehicle Type	53.9%	46.1%	100.0%
		van	Count	14088	34682	48770
			% within Vehicle Type	28.9%	71.1%	100.0%
	Total		Count	337218	452720	789938
			% within Vehicle Type	42.7%	57.3%	100.0%
Davis	Vehicle Type	car	Count	676835	3025005	3701840
			% within Vehicle Type	18.3%	81.7%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		
				unbelted	belted	Total
Davis	Vehicle Type	SUV	Count	261094	1612077	1873171
			% within Vehicle Type	13.9%	86.1%	100.0%
		truck	Count	372585	1029487	1402072
			% within Vehicle Type	26.6%	73.4%	100.0%
		van	Count	100594	785092	885686
			% within Vehicle Type	11.4%	88.6%	100.0%
	Total		Count	1411108	6451661	7862769
			% within Vehicle Type	17.9%	82.1%	100.0%
Grand	Vehicle Type	car	Count	64465	329986	394451
			% within Vehicle Type	16.3%	83.7%	100.0%
		SUV	Count	63874	331269	395143
			% within Vehicle Type	16.2%	83.8%	100.0%
		truck	Count	126463	229993	356456
			% within Vehicle Type	35.5%	64.5%	100.0%
		van	Count	14605	70273	84878
			% within Vehicle Type	17.2%	82.8%	100.0%
	Total		Count	269407	961521	1230928
			% within Vehicle Type	21.9%	78.1%	100.0%
Iron	Vehicle Type	car	Count	187012	738588	925600
			% within Vehicle Type	20.2%	79.8%	100.0%
		SUV	Count	50886	391205	442091
			% within Vehicle Type	11.5%	88.5%	100.0%
		truck	Count	341637	356054	697691
			% within Vehicle Type	49.0%	51.0%	100.0%
		van	Count	35567	208278	243845
			% within Vehicle Type	14.6%	85.4%	100.0%
	Total		Count	615102	1694125	2309227
			% within Vehicle Type	26.6%	73.4%	100.0%
Millard	Vehicle Type	car	Count	216789	433314	650103
			% within Vehicle Type	33.3%	66.7%	100.0%
		SUV	Count	188878	281732	470610
			% within Vehicle Type	40.1%	59.9%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		Total
				unbelted	belted	
Millard	Vehicle Type	truck	Count	302946	148821	451767
			% within Vehicle Type	67.1%	32.9%	100.0%
		van	Count	58731	161377	220108
			% within Vehicle Type	26.7%	73.3%	100.0%
	Total		Count	767344	1025244	1792588
			% within Vehicle Type	42.8%	57.2%	100.0%
Salt Lake	Vehicle Type	car	Count	1202335	10452589	11654924
			% within Vehicle Type	10.3%	89.7%	100.0%
		SUV	Count	508561	5024049	5532610
			% within Vehicle Type	9.2%	90.8%	100.0%
		truck	Count	829805	3297431	4127236
			% within Vehicle Type	20.1%	79.9%	100.0%
		van	Count	175341	1729793	1905134
			% within Vehicle Type	9.2%	90.8%	100.0%
	Total		Count	2716042	20503862	23219904
			% within Vehicle Type	11.7%	88.3%	100.0%
San Juan	Vehicle Type	car	Count	140919	282838	423757
			% within Vehicle Type	33.3%	66.7%	100.0%
		SUV	Count	65459	175439	240898
			% within Vehicle Type	27.2%	72.8%	100.0%
		truck	Count	155840	141313	297153
			% within Vehicle Type	52.4%	47.6%	100.0%
		van	Count	49677	81378	131055
			% within Vehicle Type	37.9%	62.1%	100.0%
	Total		Count	411895	680968	1092863
			% within Vehicle Type	37.7%	62.3%	100.0%
Sanpete	Vehicle Type	car	Count	112153	177312	289465
			% within Vehicle Type	38.7%	61.3%	100.0%
		SUV	Count	37689	76267	113956
			% within Vehicle Type	33.1%	66.9%	100.0%
		truck	Count	105350	90403	195753
			% within Vehicle Type	53.8%	46.2%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		Total
				unbelted	belted	
Sanpete	Vehicle Type	van	Count	9377	11574	20951
			% within Vehicle Type	44.8%	55.2%	100.0%
	Total		Count	264569	355556	620125
			% within Vehicle Type	42.7%	57.3%	100.0%
Sevier	Vehicle Type	car	Count	84040	343594	427634
			% within Vehicle Type	19.7%	80.3%	100.0%
		SUV	Count	62150	246580	308730
			% within Vehicle Type	20.1%	79.9%	100.0%
		truck	Count	139195	165920	305115
			% within Vehicle Type	45.6%	54.4%	100.0%
		van	Count	15868	66539	82407
			% within Vehicle Type	19.3%	80.7%	100.0%
	Total		Count	301253	822633	1123886
			% within Vehicle Type	26.8%	73.2%	100.0%
Summit	Vehicle Type	car	Count	57856	914874	972730
			% within Vehicle Type	5.9%	94.1%	100.0%
		SUV	Count	39730	808808	848538
			% within Vehicle Type	4.7%	95.3%	100.0%
		truck	Count	86840	490659	577499
			% within Vehicle Type	15.0%	85.0%	100.0%
		van	Count	4201	135083	139284
			% within Vehicle Type	3.0%	97.0%	100.0%
	Total		Count	188627	2349424	2538051
			% within Vehicle Type	7.4%	92.6%	100.0%
Tooele	Vehicle Type	car	Count	342240	805800	1148040
			% within Vehicle Type	29.8%	70.2%	100.0%
		SUV	Count	100637	496069	596706
			% within Vehicle Type	16.9%	83.1%	100.0%
		truck	Count	198943	521615	720558
			% within Vehicle Type	27.6%	72.4%	100.0%
		van	Count	46285	179814	226099
			% within Vehicle Type	20.5%	79.5%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		
				unbelted	belted	Total
Tooele	Total		Count	688105	2003298	2691403
			% within Vehicle Type	25.6%	74.4%	100.0%
Uintah	Vehicle Type	car	Count	76367	191591	267958
			% within Vehicle Type	28.5%	71.5%	100.0%
		SUV	Count	49930	194488	244418
			% within Vehicle Type	20.4%	79.6%	100.0%
		truck	Count	168940	279696	448636
			% within Vehicle Type	37.7%	62.3%	100.0%
		van	Count	5122	62005	67127
			% within Vehicle Type	7.6%	92.4%	100.0%
	Total		Count	300359	727780	1028139
			% within Vehicle Type	29.2%	70.8%	100.0%
Utah	Vehicle Type	car	Count	557534	4193597	4751131
			% within Vehicle Type	11.7%	88.3%	100.0%
		SUV	Count	163278	2421564	2584842
			% within Vehicle Type	6.3%	93.7%	100.0%
		truck	Count	596300	1842644	2438944
			% within Vehicle Type	24.4%	75.6%	100.0%
		van	Count	70490	879983	950473
			% within Vehicle Type	7.4%	92.6%	100.0%
	Total		Count	1387602	9337788	10725390
			% within Vehicle Type	12.9%	87.1%	100.0%
Washington	Vehicle Type	car	Count	226178	1256335	1482513
			% within Vehicle Type	15.3%	84.7%	100.0%
		SUV	Count	136720	777556	914276
			% within Vehicle Type	15.0%	85.0%	100.0%
		truck	Count	386672	718802	1105474
			% within Vehicle Type	35.0%	65.0%	100.0%
		van	Count	48526	257589	306115
			% within Vehicle Type	15.9%	84.1%	100.0%
	Total		Count	798096	3010282	3808378
			% within Vehicle Type	21.0%	79.0%	100.0%

Vehicle Type * Belted * County Crosstabulation

County				Belted		
				unbelted	belted	Total
Weber	Vehicle Type	car	Count	379458	1686990	2066448
			% within Vehicle Type	18.4%	81.6%	100.0%
		SUV	Count	162428	812416	974844
			% within Vehicle Type	16.7%	83.3%	100.0%
		truck	Count	402713	920167	1322880
			% within Vehicle Type	30.4%	69.6%	100.0%
		van	Count	80662	296829	377491
			% within Vehicle Type	21.4%	78.6%	100.0%
	Total		Count	1025261	3716402	4741663
			% within Vehicle Type	21.6%	78.4%	100.0%

- Rural

Rural-urban * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Rural-urban	rural	Count	4792004	11229556	16021560
		% within Rural-urban	29.9%	70.1%	100.0%
Total		Count	4792004	11229556	16021560
		% within Rural-urban	29.9%	70.1%	100.0%

Belted

Gender * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Gender	male	Count	3026351	5833514	8859865
		% within Gender	34.2%	65.8%	100.0%
	female	Count	1764576	5395146	7159722
		% within Gender	24.6%	75.4%	100.0%
Total		Count	4790927	11228660	16019587
		% within Gender	29.9%	70.1%	100.0%

Rural gender

Vehicle Type * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Vehicle Type	car	Count	1620085	4559871	6179956
		% within Vehicle Type	26.2%	73.8%	100.0%
	SUV	Count	830152	2937860	3768012
		% within Vehicle Type	22.0%	78.0%	100.0%
	truck	Count	1987885	2488772	4476657
		% within Vehicle Type	44.4%	55.6%	100.0%
	van	Count	353882	1243053	1596935
		% within Vehicle Type	22.2%	77.8%	100.0%
Total		Count	4792004	11229556	16021560
		% within Vehicle Type	29.9%	70.1%	100.0%

Rural Vehicle type

Occupant * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Occupant	Driver	Count	3531295	7973608	11504903
		% within Occupant	30.7%	69.3%	100.0%
	Passenger	Count	1260709	3255948	4516657
		% within Occupant	27.9%	72.1%	100.0%
Total		Count	4792004	11229556	16021560
		% within Occupant	29.9%	70.1%	100.0%

Rural Occupant

Rural-urban * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Rural-urban	urban	Count	7857369	44582369	52439738
		% within Rural-urban	15.0%	85.0%	100.0%
	rural	Count	4792004	11229556	16021560
		% within Rural-urban	29.9%	70.1%	100.0%
Total		Count	12649373	55811925	68461298
		% within Rural-urban	18.5%	81.5%	100.0%

Urban

Rural-urban * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Rural-urban	urban	Count	7857369	44582369	52439738
		% within Rural-urban	15.0%	85.0%	100.0%
Total		Count	7857369	44582369	52439738
		% within Rural-urban	15.0%	85.0%	100.0%

urban gender

Gender * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Gender	male	Count	5444791	24151819	29596610
		% within Gender	18.4%	81.6%	100.0%
	female	Count	2412577	20430551	22843128
		% within Gender	10.6%	89.4%	100.0%
Total		Count	7857368	44582370	52439738
		% within Gender	15.0%	85.0%	100.0%

urban vehicle Type

Vehicle Type * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Vehicle Type	car	Count	3199172	21358821	24557993
		% within Vehicle Type	13.0%	87.0%	100.0%
	SUV	Count	1335819	11065685	12401504
		% within Vehicle Type	10.8%	89.2%	100.0%
	truck	Count	2816800	8064106	10880906
		% within Vehicle Type	25.9%	74.1%	100.0%
	van	Count	505577	4093757	4599334
		% within Vehicle Type	11.0%	89.0%	100.0%
Total		Count	7857368	44582369	52439737
		% within Vehicle Type	15.0%	85.0%	100.0%

urban seating position

Occupant * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Occupant	Driver	Count	6644209	36730479	43374688
		% within Occupant	15.3%	84.7%	100.0%
	Passenger	Count	1213159	7851890	9065049
		% within Occupant	13.4%	86.6%	100.0%
Total		Count	7857368	44582369	52439737
		% within Occupant	15.0%	85.0%	100.0%

Vehicle Type * Belted * Gender Crosstabulation

Gender				Belted		
				unbelted	belted	Total
male	Vehicle Type	car	Count	2629745	13401383	16031128
			% within Vehicle Type	16.4%	83.6%	100.0%
		SUV	Count	1127941	6373353	7501294
			% within Vehicle Type	15.0%	85.0%	100.0%
		truck	Count	4309637	8998803	13308440
			% within Vehicle Type	32.4%	67.6%	100.0%
		van	Count	545860	2522001	3067861
			% within Vehicle Type	17.8%	82.2%	100.0%
	Total		Count	8613183	31295540	39908723
			% within Vehicle Type	21.6%	78.4%	100.0%
female	Vehicle Type	car	Count	2246554	13430545	15677099
			% within Vehicle Type	14.3%	85.7%	100.0%
		SUV	Count	1077497	8438367	9515864
			% within Vehicle Type	11.3%	88.7%	100.0%
		truck	Count	581889	2044470	2626359
			% within Vehicle Type	22.2%	77.8%	100.0%
		van	Count	317801	2949893	3267694
			% within Vehicle Type	9.7%	90.3%	100.0%
	Total		Count	4223741	26863275	31087016
			% within Vehicle Type	13.6%	86.4%	100.0%

Road Type * Belted Crosstabulation

			Belted		
			unbelted	belted	Total
Road Type	Primary	Count	4356058	26189353	30545411
		% within Road Type	14.3%	85.7%	100.0%
	Secondary	Count	7221701	28012051	35233752
		% within Road Type	20.5%	79.5%	100.0%
	Local	Count	1260240	3959946	5220186
		% within Road Type	24.1%	75.9%	100.0%
Total		Count	12837999	58161350	70999349
		% within Road Type	18.1%	81.9%	100.0%