HIGHWAY SAFETY RESEARCH GROUP

Louisiana Traffic Records Data Report 2016

crashdata.lsu.edu

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LSU E.J. OURSO COLLEGE OF BUSINESS

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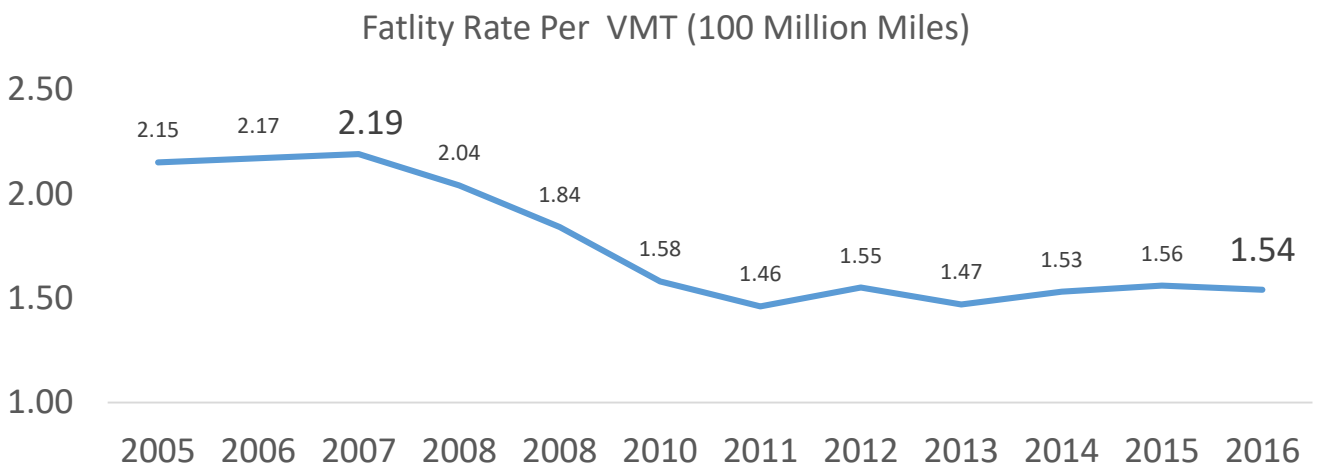
Trends in Fatalities



Since 2012 the fatalities have been on the rise again.

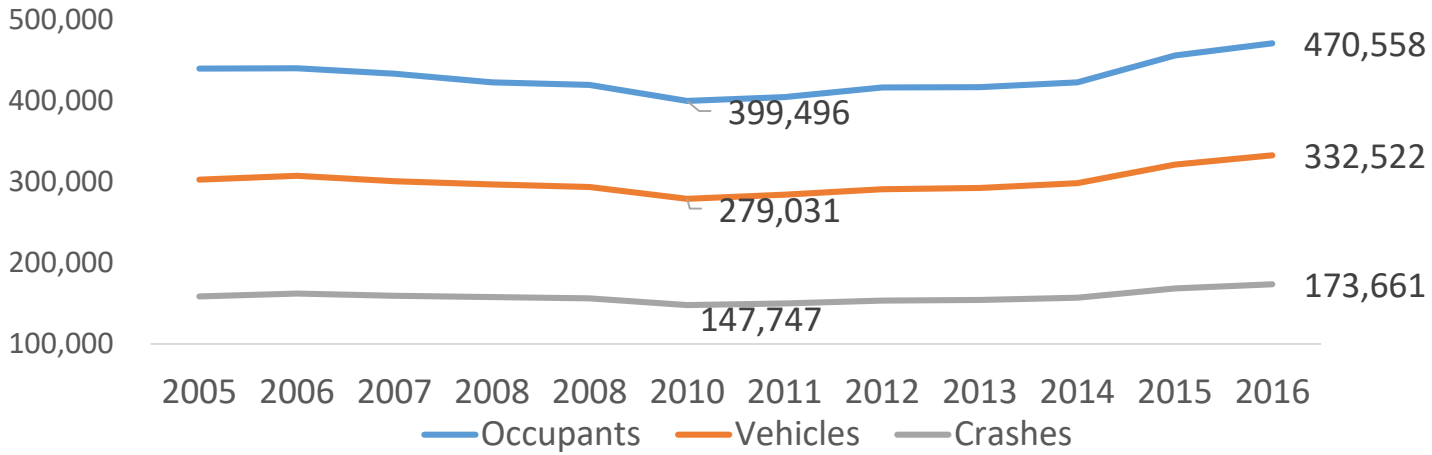
What causes the fatalities to increase?

Increased traffic may be part of the answer.

Fatalities per 100 million miles traveled have been steady about 1.55 since 2012.

For comparison, the U.S fatality rate has been at 1.11 since 2014.

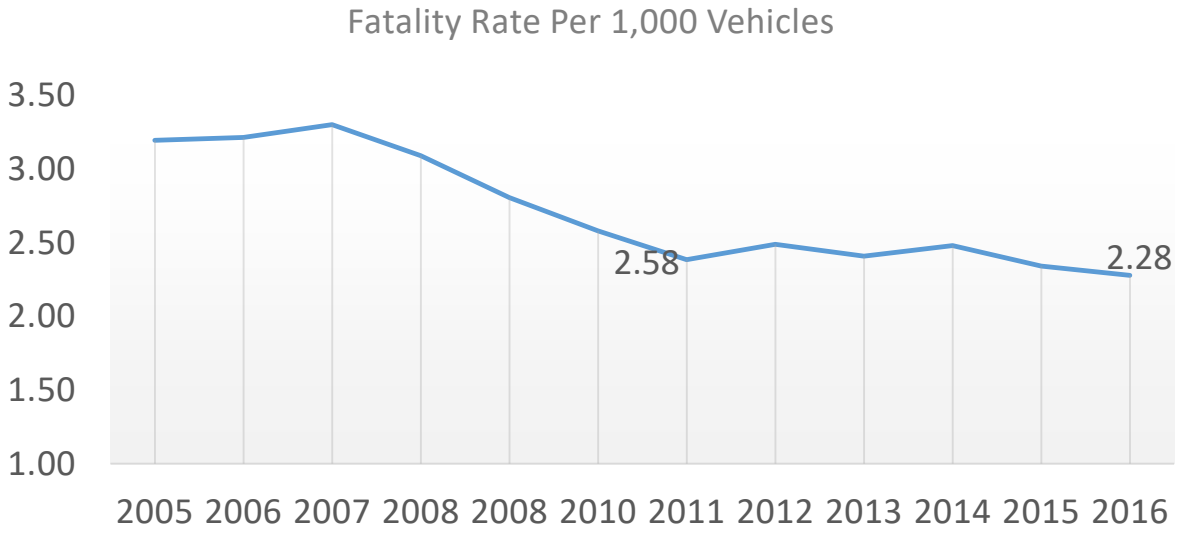
Crashes, Vehicles, Occupants

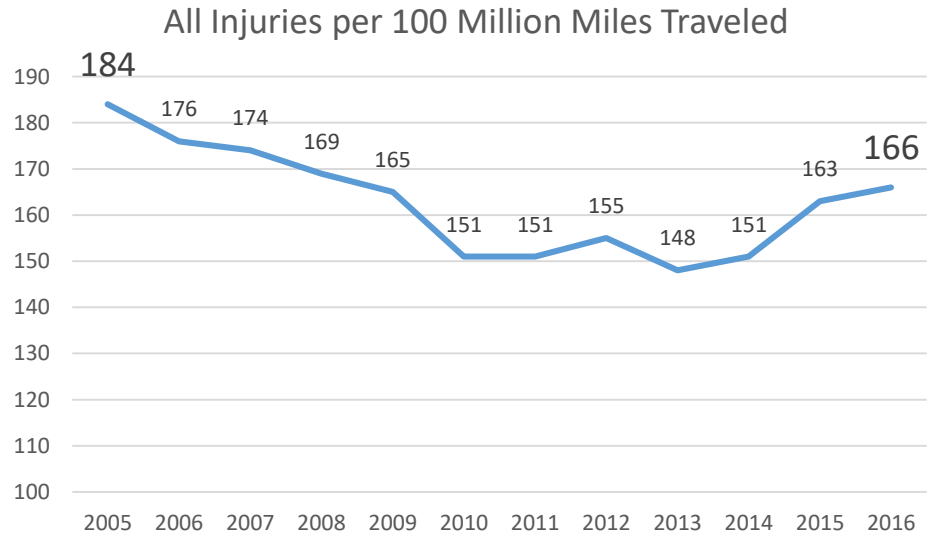


Number of occupants (+48k) and number of vehicles (+34k) in crashes have increased dramatically over the past two years. The number of crashes have increased by 16k over the past two years.

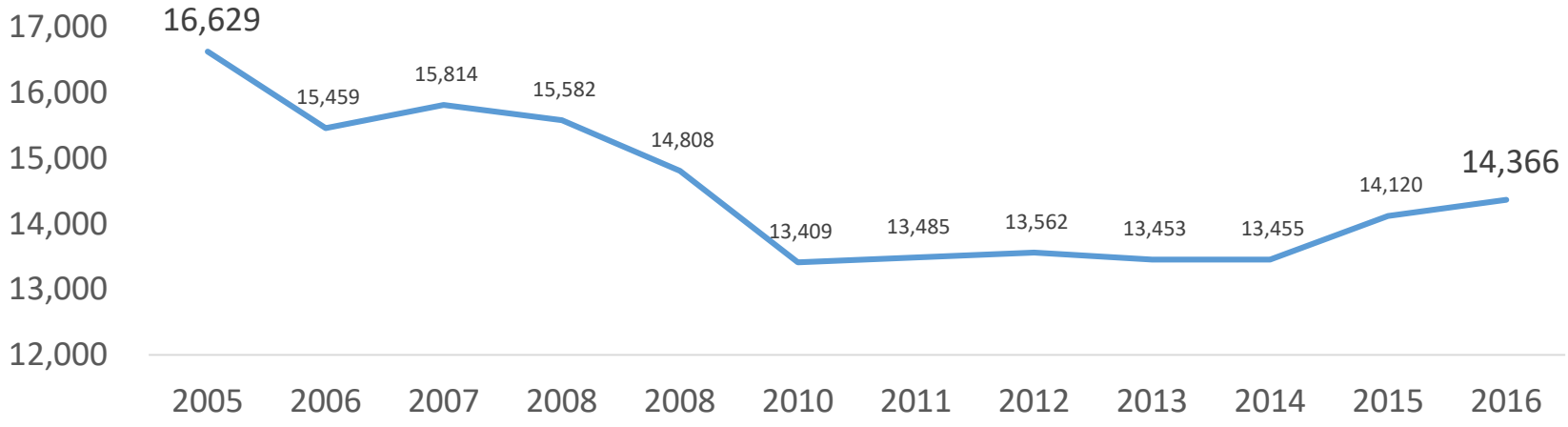
Injuries per 100 million miles have been increasing also.

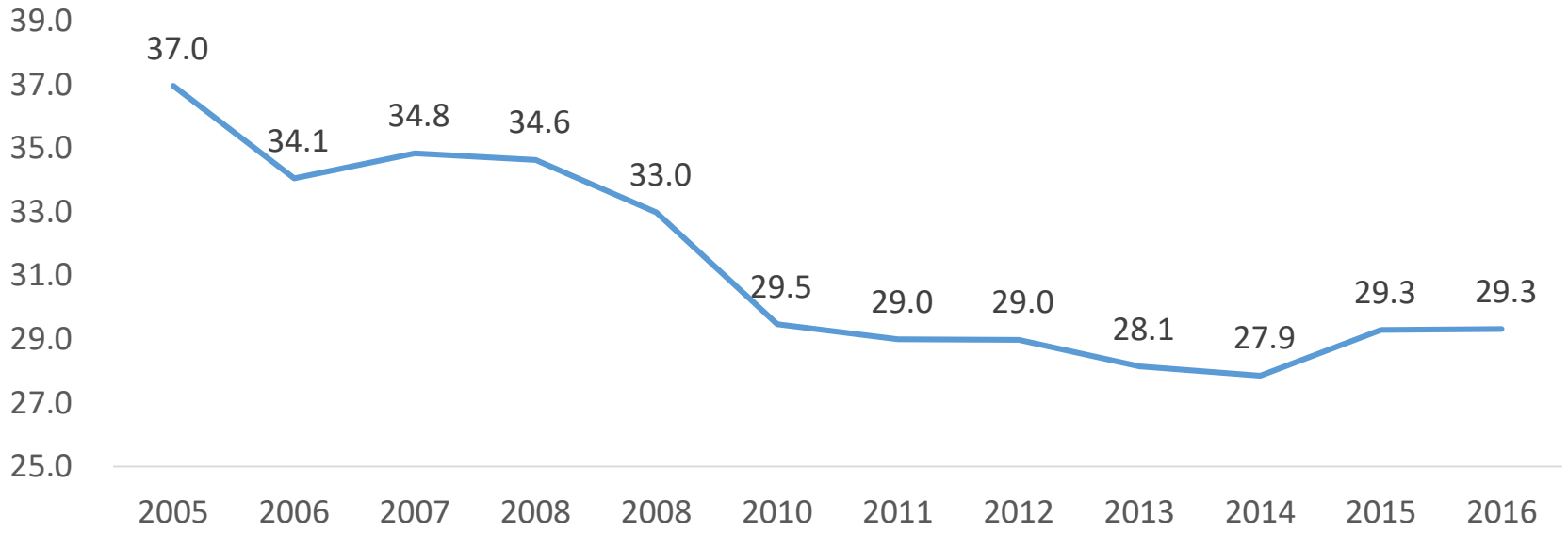
However, fatalities per 1,000 vehicles in crashes has been decreasing.





Moderate and Severe Injury



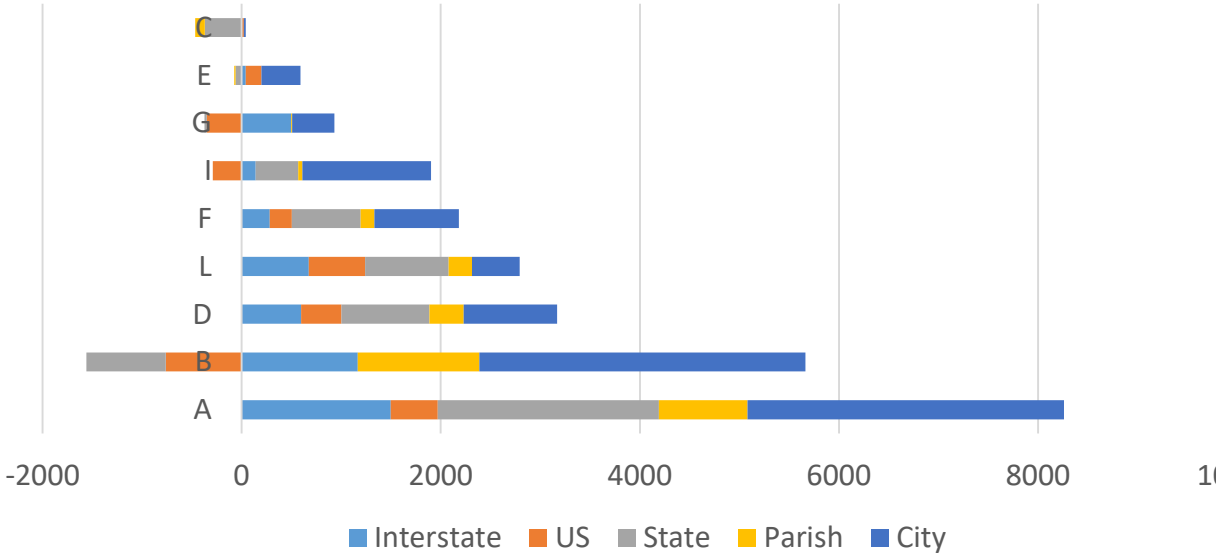


The number of Moderate-to-Severe Injuries has been increasing since 2015.

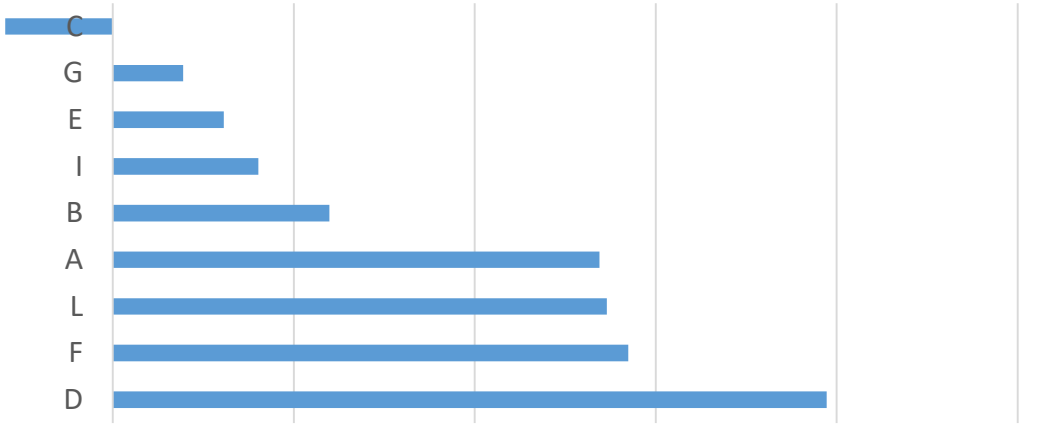
The Moderate-to-Severe-Injury Rate increased in 2015 but not in 2016.

Increase in Crashes
2011 – 2016 by Troop and Highway Type

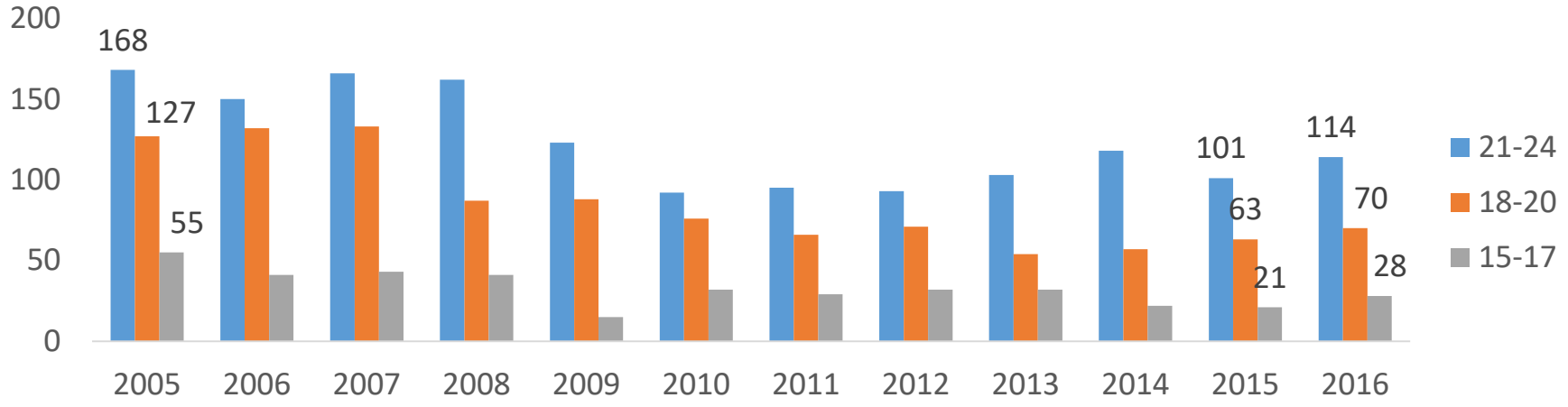
Increase Number Crashes

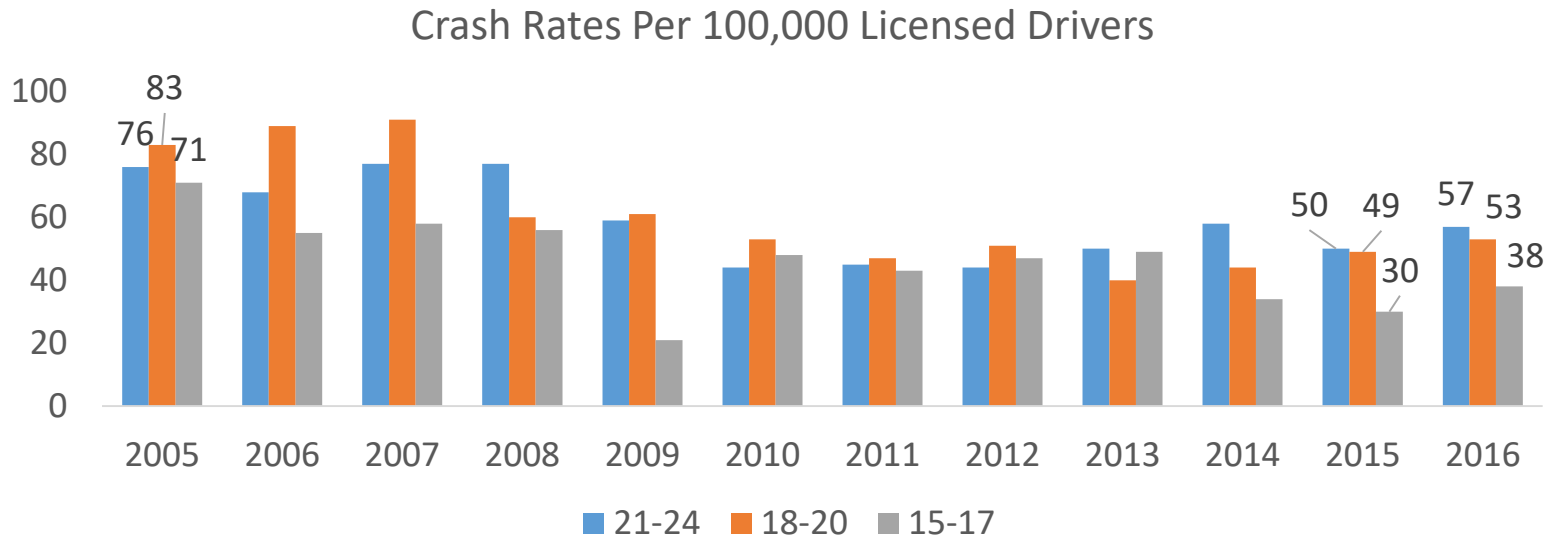


Percentage Increase



Young Drivers in Fatal Crashes



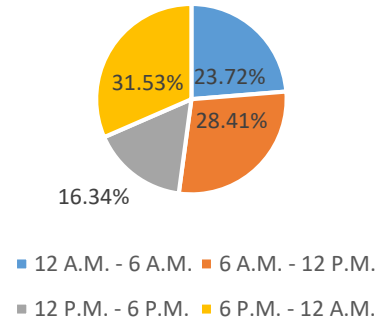


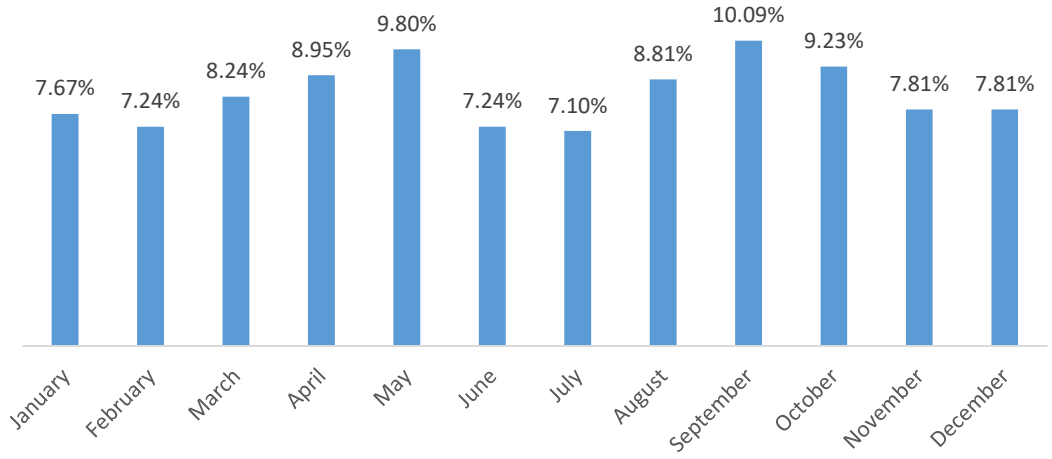
Fatality Highlights

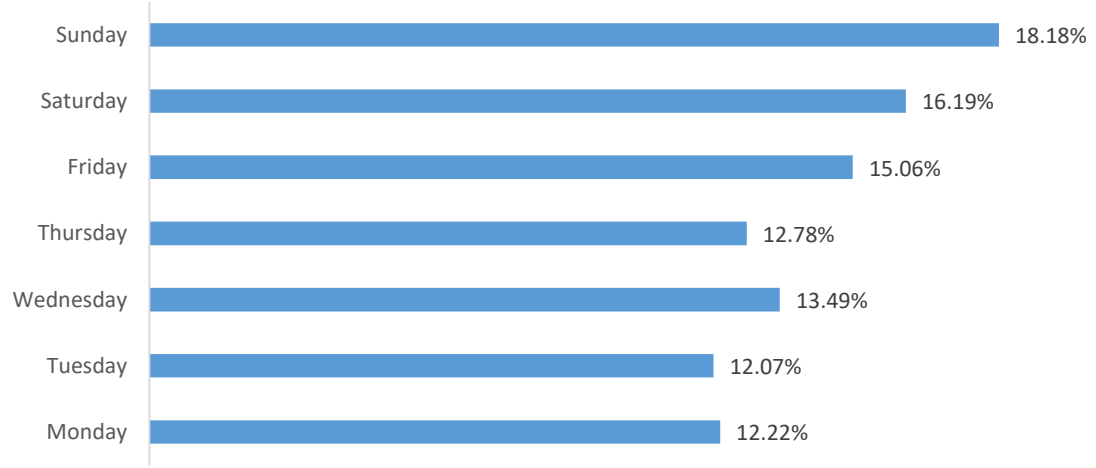
Fatal Crash Type	2016 versus 2015	Change
Interstates	**114 versus 96**	**up 18**
Elevated Interstates	8 versus 7	up 1
Bicycles	**21 versus 33**	**down 12**
Motorcycles	94 versus 92	up 2
Train Crashes	7 versus 2	Up 5
Hit-and-Runs Crashes	42 versus 41	up 1
Commercial Motor Vehicles	100 versus 98	up 2

Fatal Crashes

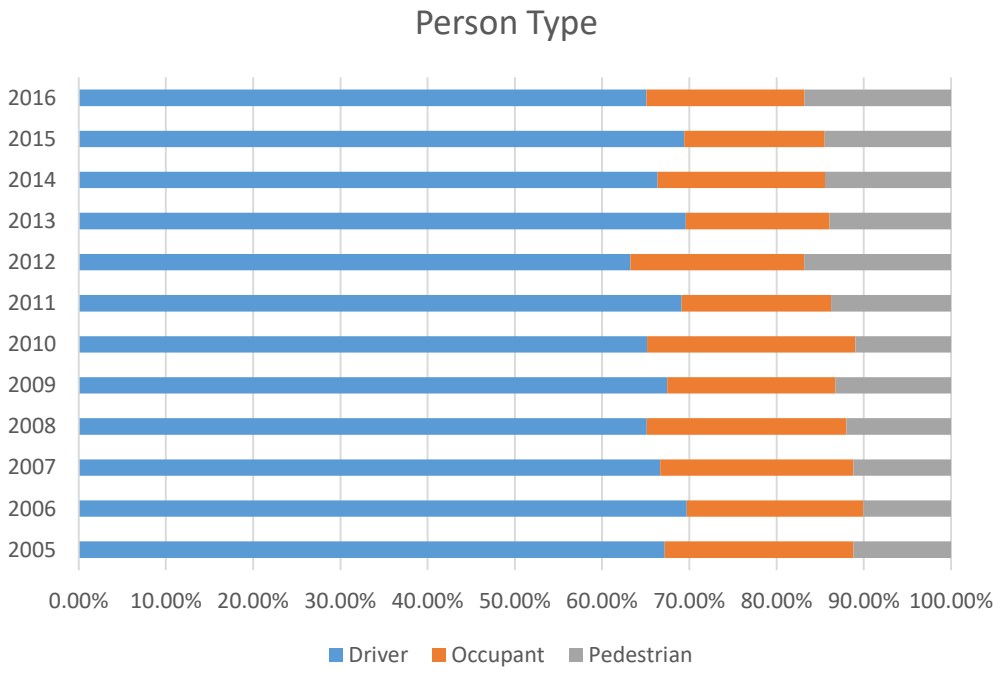
	January	February	March	April	May	June	July	August	September	October	Novembe	December
Monday	0.71%	0.99%	0.85%	1.14%	1.70%	0.43%	0.85%	1.28%	1.28%	0.99%	0.99%	0.99%
Tuesday	0.28%	1.56%	1.28%	0.85%	1.28%	0.43%	0.57%	1.14%	1.14%	0.85%	1.14%	1.56%
Wednesday	0.85%	0.28%	1.42%	1.56%	0.85%	1.56%	1.28%	1.42%	1.56%	1.28%	0.85%	0.57%
Thursday	0.85%	0.85%	0.85%	0.71%	0.71%	1.14%	1.70%	0.71%	1.14%	1.28%	1.56%	1.28%
Friday	1.14%	0.85%	0.85%	0.85%	1.56%	1.14%	1.42%	1.14%	2.41%	2.13%	0.57%	0.99%
Saturday	2.27%	1.14%	1.14%	1.28%	1.70%	1.14%	0.71%	1.85%	0.85%	1.42%	1.70%	0.99%
Sunday	1.56%	1.56%	1.85%	2.56%	1.99%	1.42%	0.57%	1.28%	1.70%	1.28%	0.99%	1.42%

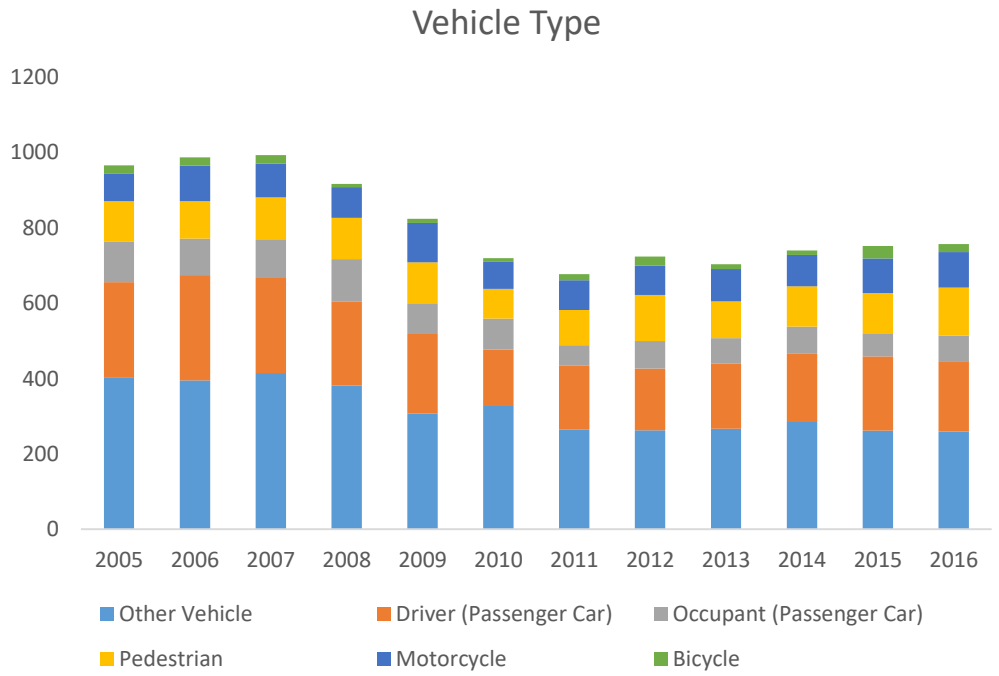






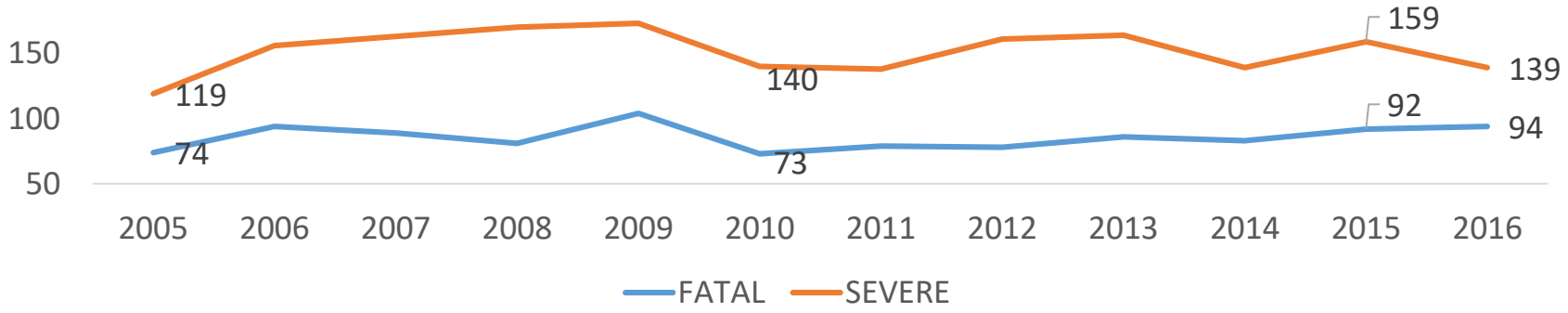
Role of Fatality



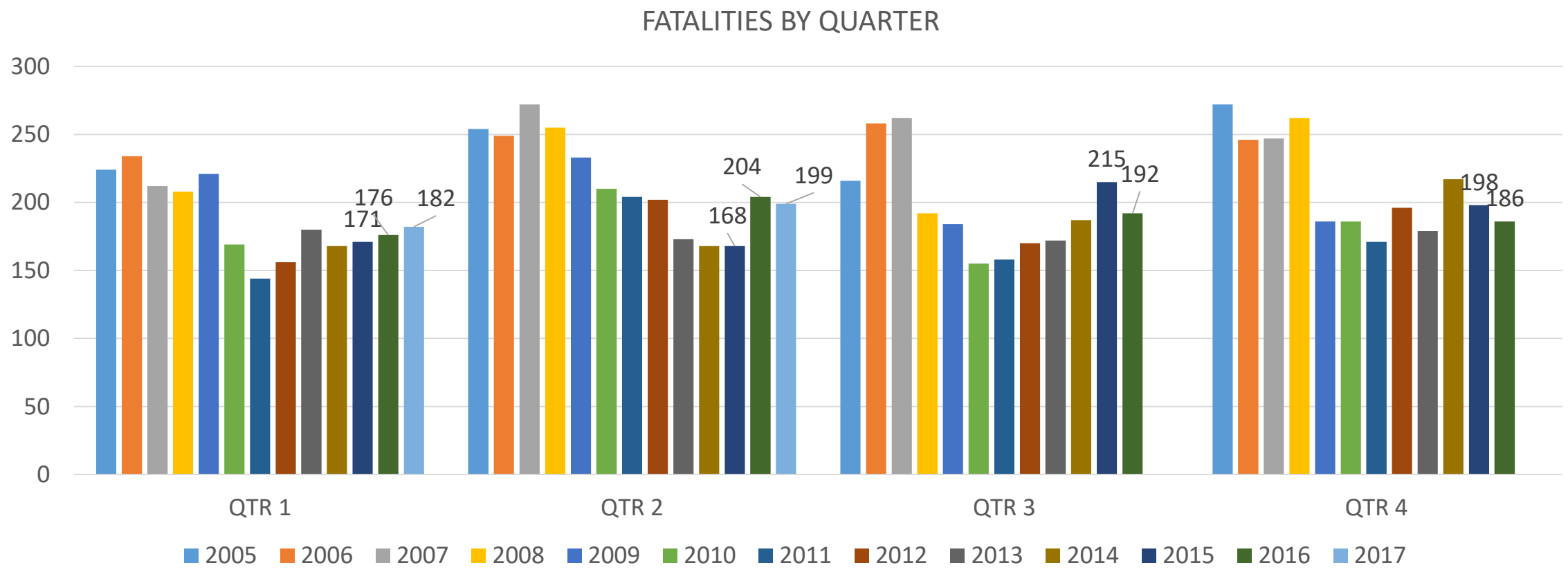


Motorcycle Injury Levels

	FATAL	SEVERE	MODERATE	COMPLAINT	NO INJURY
2005	3.60%	5.80%	32.98%	33.46%	24.16%
2006	4.20%	6.97%	32.98%	31.95%	23.91%
2007	3.87%	7.09%	32.70%	33.43%	22.91%
2008	3.28%	6.88%	31.66%	33.68%	24.49%
2009	4.47%	7.43%	31.96%	31.27%	24.87%
2010	3.60%	6.90%	31.80%	34.27%	23.42%
2011	3.36%	5.86%	33.31%	33.52%	23.96%
2012	3.38%	6.97%	30.97%	32.44%	26.25%
2013	3.99%	7.60%	32.30%	31.65%	24.47%
2014	3.98%	6.66%	32.97%	32.30%	24.10%
2015	4.24%	7.33%	31.75%	31.47%	25.21%
2016	4.61%	6.82%	31.40%	30.67%	26.50%



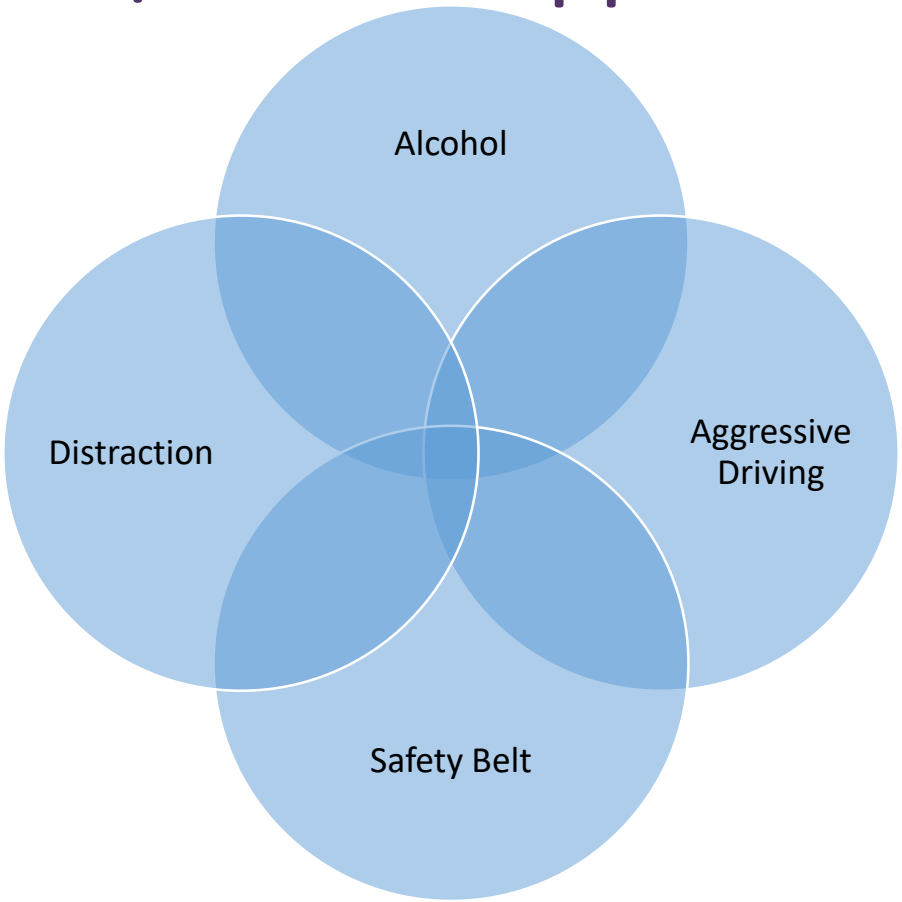
FATALITIES BY QUARTER



Cost of Crashes

Type	Average Cost per Person	Number of People	Total Cost In $Billion
Fatality	$1,520,182	757	$1.15
Severe Injury	$393,602	1,398	$0.55
Moderate Injury	$115,471	12,950	$1.50
Complaint Injury	$25,057	67,129	$1.68
Person – No Injury	$4,818	385,773	$1.86
Property Damage	$6,684	332,474	$2.22
Grand Total Cost		800,481	$8.96
Cost per Licensed Driver			$3,022
Licensed Drivers			2,964,471
Percent Increase			3.6%

The four Major Contributing Factors 20/80 Rule Applies

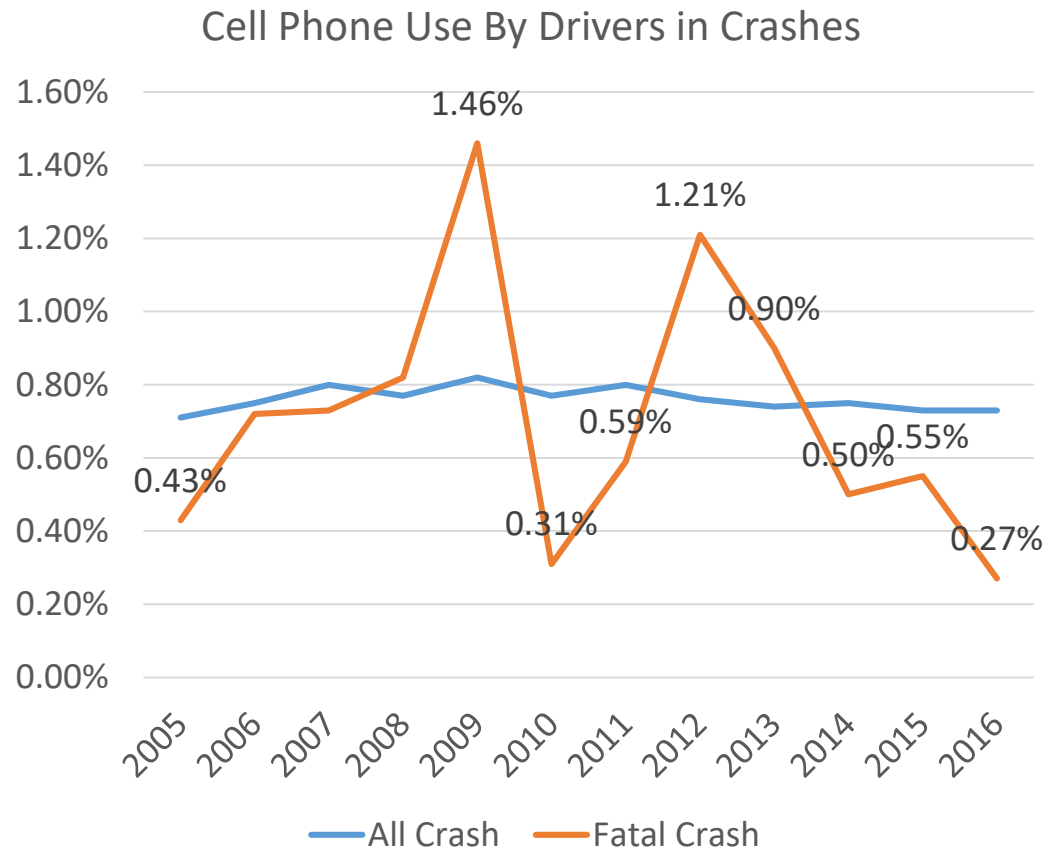


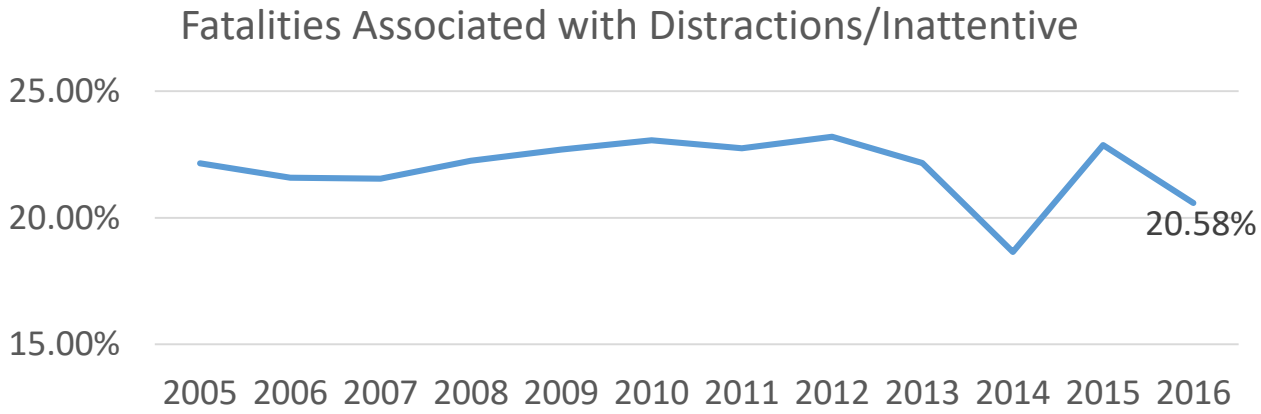
80% of fatalities involves one of the four driver behavior issues

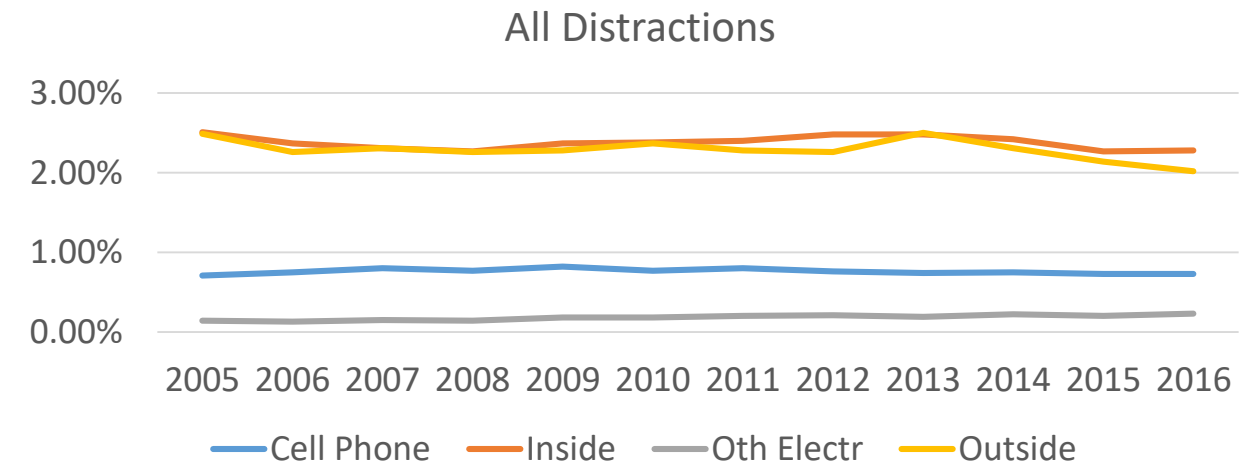
	DISTRACTION	Distracted/Inattentive	Distracted/Inattentive	Not Distracted	Not Distracted		
DUI	AGRESSIVE	Aggressive	Not Agressive	Aggressive	Not Agressive		
N	Num Tot Kil BELTED	606	102	936	996	2,640	
N	Num_kil_no_belt	311	48	581	287	1,227	
U	Num Tot Kil BELTED	493	142	848	950	2,433	
U	Num_kil_no_belt	172	27	563	296	1,058	
Y	Num Tot Kil BELTED	90	38	462	456	1,046	
Y	Num_kil_no_belt	86	27	783	462	1,358	
						9,762	
N	Num Tot Kil BELTED	6.2%	1.0%	9.6%	10.2%	27.0%	
N	Num_kil_no_belt	3.2%	0.5%	6.0%	2.9%	12.6%	39.6%
U	Num Tot Kil BELTED	5.1%	1.5%	8.7%	9.7%	24.9%	
U	Num_kil_no_belt	1.8%	0.3%	5.8%	3.0%	10.8%	35.8%
Y	Num Tot Kil BELTED	0.9%	0.4%	4.7%	4.7%	10.7%	
Y	Num_kil_no_belt	0.9%	0.3%	8.0%	4.7%	13.9%	24.6%
		18.0%	3.9%	42.7%	35.3%		
	Distracted/Inattentive		21.9%				
	Aggressive		60.8%				

Distractions

Are Other Distractions Properly Reported in Crashes?





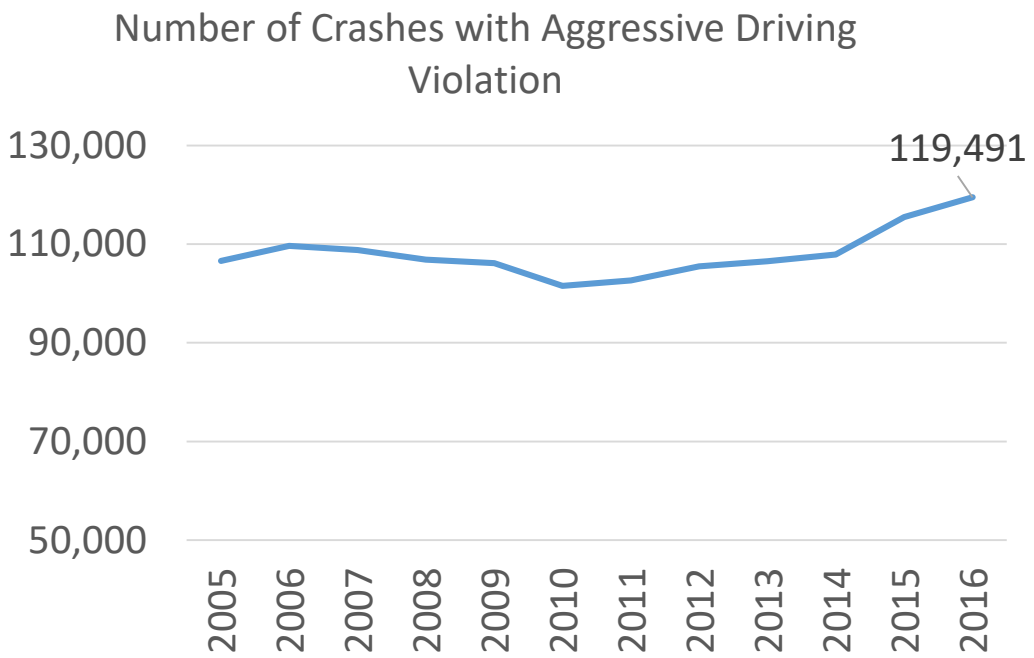


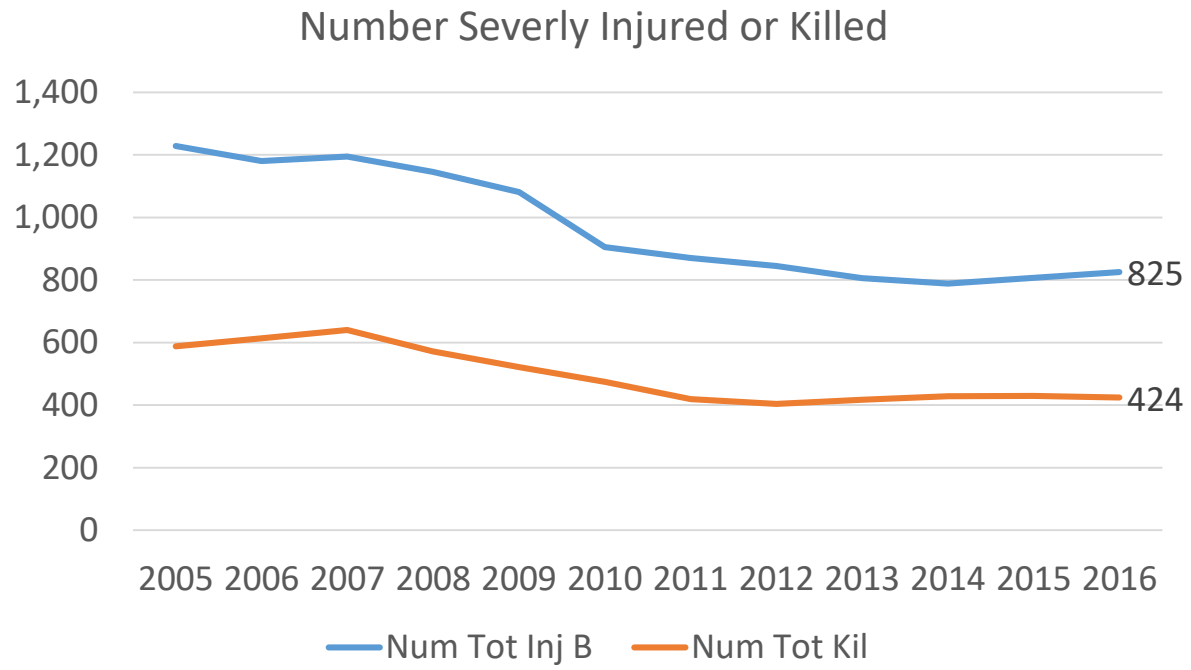
"You can't manage **what you can't measure**." Peter Drucker

Aggressive Driving

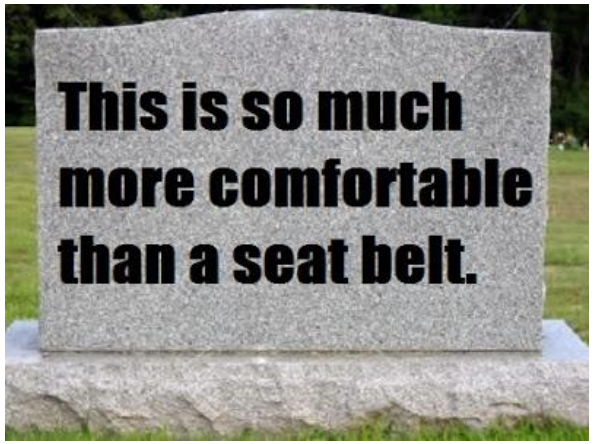
- Aggressive Driving is defined as either
- Exceeding stated speed limit
- Exceeding safe speed limit
- Failure to Yield
- Following too closely
- Cutting in improper passing
- Disregarded traffic control
- Careless operation

Aggressive Driving Violations

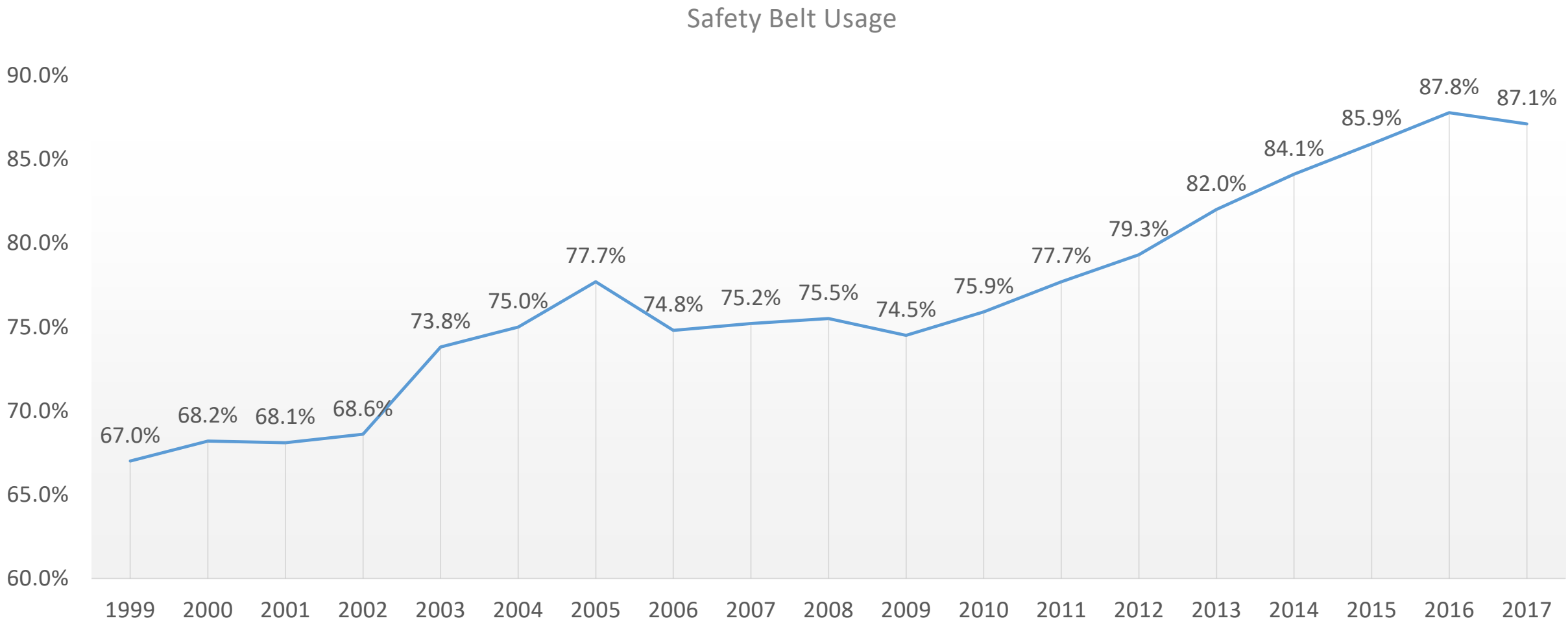




Occupant Protection

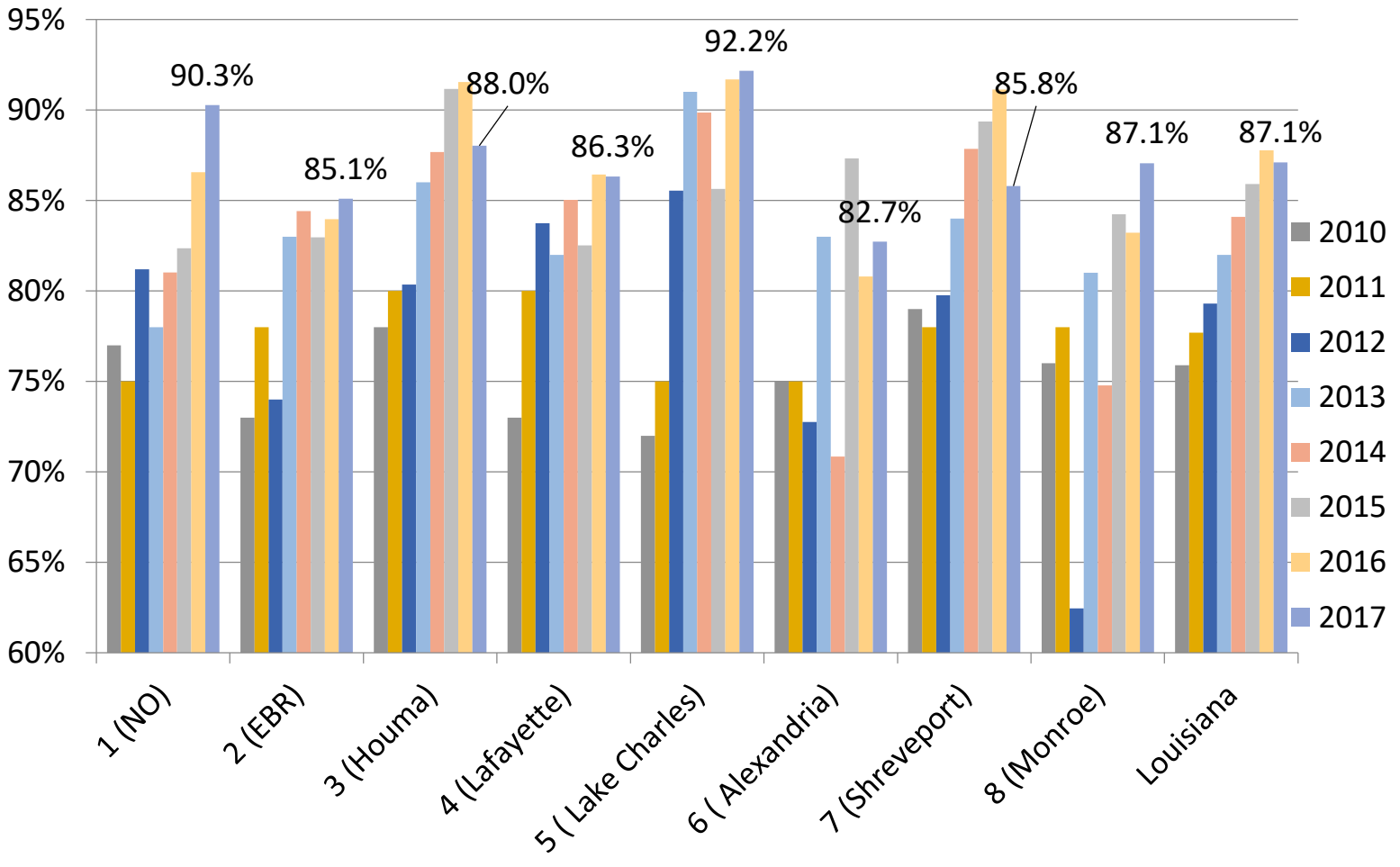


Seat Belt Usage (Survey)



Seat Belt Usage by Region

Region	Estimate	STD Error	Statistically significant Change from 2016
1-New Orleans	90.3%	0.4%	Yes
2-Baton Rouge	85.1%	0.8%	No
3-Houma	88.0%	0.8%	Yes
4-Lafayette	86.3%	1.8%	No
5-Lake Charles	92.2%	1.2%	No
6-Alexandria	82.7%	0.9%	No
7-Shreveport	85.8%	1.0%	Yes
8-Monroe	87.1%	1.4%	No
LA total	87.1%	0.4%	No



Seat Belt Use by Troop

Troop	Estimate	STD Error	Diff to 2016	Statistically significant
A-Baton Rouge	85.5%	0.7%	1.1%	No
B-New Orleans	88.4%	0.4%	2.5%	Yes
C-Houma	90.4%	1.0%	-3.3%	No
D-Calcasieu	92.2%	1.2%	0.5%	No
E-Natchitoches	83.7%	0.8%	2.7%	No
F-Monroe	87.4%	1.3%	4.0%	No
G-Shreveport	85.3%	1.4%	-5.9%	Yes
I-Lafayette	86.3%	1.8%	-0.1%	No
L-Hammond	89.9%	1.2%	1.9%	No

Belt Use by Parish

1. Union
2. Assumption
3. Washington
4. Rapides
5. De Soto

Parish-2017	OCCUPANTS-2017	OCCUPANTS-2016	OCCUPANTS-2015	OCCUPANTS-2014	OCCUPANTS-2013	5-Year Average
Beauregard	96.2%	91.0%	90.9%	91.0%	95.8%	93.0%
Lafourche	94.9%	94.3%	94.8%	87.7%	88.3%	92.0%
Calcasieu	93.8%	93.4%	78.9%	88.3%	85.5%	88.0%
Terrebonne	93.6%	95.7%	90.0%	92.8%	93.0%	93.0%
Acadia	93.2%	87.5%	82.0%	81.8%	72.5%	83.4%
St. Tammany	92.6%	86.4%	87.9%	88.7%	79.8%	87.1%
Jefferson Davis	92.5%	93.5%	92.5%	89.2%	90.1%	91.6%
St. Charles	92.4%	93.0%	83.1%	87.5%	68.8%	85.0%
Pointe Coupee	92.2%	92.4%	83.4%	83.0%	75.8%	85.3%
St. Mary	91.5%	82.0%	82.6%	79.6%	64.8%	80.1%
Jefferson	90.0%	88.5%	83.6%	80.7%	80.5%	84.7%
Lincoln	89.4%	88.7%	87.1%	81.8%	83.2%	86.0%
Livingston	89.1%	85.8%	82.1%	82.6%	79.2%	83.8%
Orleans	89.0%	90.1%	75.5%	72.2%	73.9%	80.2%
East Baton Rouge	88.7%	89.2%	83.3%	85.2%	84.6%	86.2%
Iberia	88.3%	84.0%	68.8%	79.0%	81.0%	80.2%
Vermilion	88.2%	89.4%	91.5%	83.2%	87.2%	87.9%
Ouachita	87.9%	87.1%	83.9%	76.9%	81.1%	83.4%
Lafayette	87.6%	89.0%	78.7%	84.1%	77.3%	83.4%
Natchitoches	87.4%	85.5%	81.5%	81.7%	78.9%	83.0%
Ascension	87.4%	88.2%	91.3%	87.4%	86.8%	88.2%
Vernon	87.3%	86.6%	84.5%	93.2%	89.7%	88.3%
Tangipahoa	87.1%	82.3%	81.9%	82.1%	83.1%	83.3%
Caddo	87.0%	88.9%	89.5%	87.6%	83.7%	87.3%
Bossier	86.9%	87.0%	89.6%	91.2%	83.8%	87.7%
St. Landry	86.8%	89.2%	88.9%	87.5%	84.8%	87.4%
Evangeline	86.7%	88.0%	93.6%	82.6%	74.0%	85.0%
St. Martin	86.5%	92.1%	86.7%	85.4%	89.9%	88.1%
St. John	86.4%	82.2%	76.0%	69.2%	85.4%	79.8%
West Baton Rouge	86.3%	82.9%	79.9%	85.7%	77.0%	82.3%
St. James	84.6%	80.1%	82.3%	86.3%	85.2%	83.7%
Sabine	83.6%	85.9%	86.2%	79.5%	82.7%	83.6%
Iberville	83.1%	87.1%	80.0%	87.1%	81.3%	83.7%
De Soto	81.1%	92.1%	86.3%	82.8%	80.5%	84.6%
Rapides	80.9%	82.0%	87.5%	68.7%	82.5%	80.3%
Washington	79.3%	76.9%	77.3%	82.6%	75.0%	78.2%
Assumption	77.4%	83.9%	94.5%	86.3%	78.2%	84.1%
Union	75.8%	76.2%	86.0%	59.2%	80.4%	75.5%

	% Use Rate							
	Driver		Passenger		All Occupants			
	Estimate	STDError	Estimate	STDError	Estimate	STDError	Diff	Significance
Sex								
Male	84.3%	0.6%	82.4%	1.5%	84.1%	0.6%	-0.6%	45.8%
Female	90.6%	0.6%	91.0%	0.9%	90.7%	0.5%	-0.5%	46.7%
Race								
White	87.9%	0.5%	89.5%	0.9%	88.2%	0.5%	-1.5%	95.4%
Black	84.2%	0.9%	82.0%	1.7%	83.8%	0.8%	1.2%	64.6%
Hispanic	86.1%	3.2%	86.4%	2.5%	86.2%	2.4%	-5.4%	87.1%
Other	85.5%	4.5%	93.4%	1.9%	89.2%	4.8%	1.7%	17.0%
Vehicle Type								
Car	88.5%	0.6%	89.3%	0.9%	88.6%	0.6%	-0.2%	17.9%
Pick-up	81.7%	1.0%	81.6%	1.9%	81.7%	0.9%	-1.2%	59.0%
SUV	90.1%	0.8%	90.1%	1.5%	90.1%	0.7%	-0.4%	29.5%
Van	91.4%	1.3%	93.9%	1.2%	92.0%	1.0%	-0.03%	1.0%

Road Type and Vehicle Type

Road Type	Estimate	STD Error	Diff to 2016
Interstate	89.0%	0.5%	-0.2%
US & State	87.4%	0.2%	1.2%
Local Road	86.2%	1.0%	-1.8%

Region	CAR	STD Error	PICKUP	STD Error	SUV	STD Error	VAN	STD Error
1-New Orleans	91.0%	0.5%	85.5%	1.0%	92.7%	0.5%	91.6%	1.3%
2-Baton Rouge	87.4%	1.0%	**78.9%**	1.9%	88.2%	1.6%	92.0%	1.6%
3-Houma	86.5%	1.3%	87.2%	1.4%	90.9%	1.4%	91.7%	2.4%
4-Lafayette	88.2%	2.8%	**77.1%**	4.3%	92.2%	1.5%	92.5%	2.6%
5-Lake Charles	94.4%	1.7%	89.9%	2.0%	96.2%	1.5%	85.2%	7.2%
6-Alexandria	84.4%	1.0%	**76.9%**	1.9%	87.6%	1.3%	84.7%	2.9%
7-Shreveport	88.6%	1.3%	**78.9%**	2.3%	87.0%	1.9%	95.5%	1.3%
8-Monroe	87.9%	2.4%	81.5%	3.0%	90.7%	1.9%	96.2%	1.5%
LA total	**88.6%**	**0.6%**	**81.7%**	**0.9%**	**90.1%**	**0.7%**	**92.0%**	**1.0%**

Rear Seat Belt Use

	Auto	Pickup	SUV	Van	Total
Rear Seat 2008	27.30%	12.50%	31.30%	29.40%	27.20%
Rear Seat 2010	50.00%	47.80%	77.20%	90.70%	58.40%
Rear Seat 2011	46.00%	40.30%	71.40%	93.60%	53.80%
Rear Seat 2013	50.88%	46.97%	67.09%	62.30%	54.84%
Rear Seat 2014	48.76%	42.39%	69.31%	77.36%	54.92%
Rear Seat 2015	67.85%	55.12%	80.53%	79.22%	68.86%
Rear Seat 2016	70.92%	45.83%	80.52%	84.09%	68.83%
Rear Seat 2017	**65.75%**	**50.00%**	**71.22%**	**77.78%**	**65.61%**

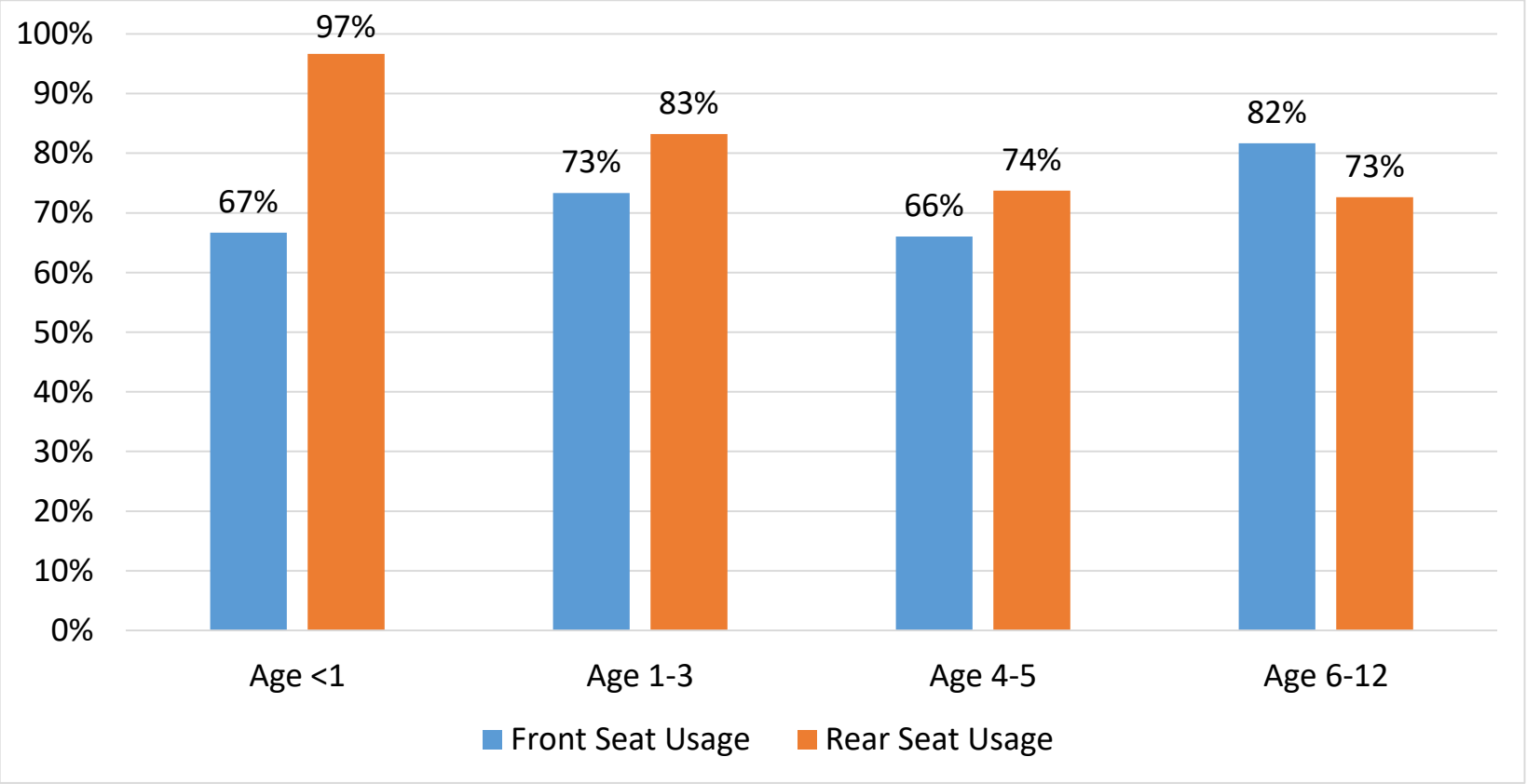
Child Occupant Protection

Age Group	Ages	Weight	Facing	Restraint Device	
Infar	< 1	< 20 pounds	rear-facing	infant seat	
1 - 3	1, 2, 3	20-39 pounds	forward-facing	child safety seat (with internal harness)	
4 - 5	4, 5	40-59 pounds	(not specified)	belt positioning booster seat (backless or high-backed)	
6 - 12	6, 7, 8, 9, 10, 11, 12	60 or more pounds	(not specified)	child booster seat or safety belt	

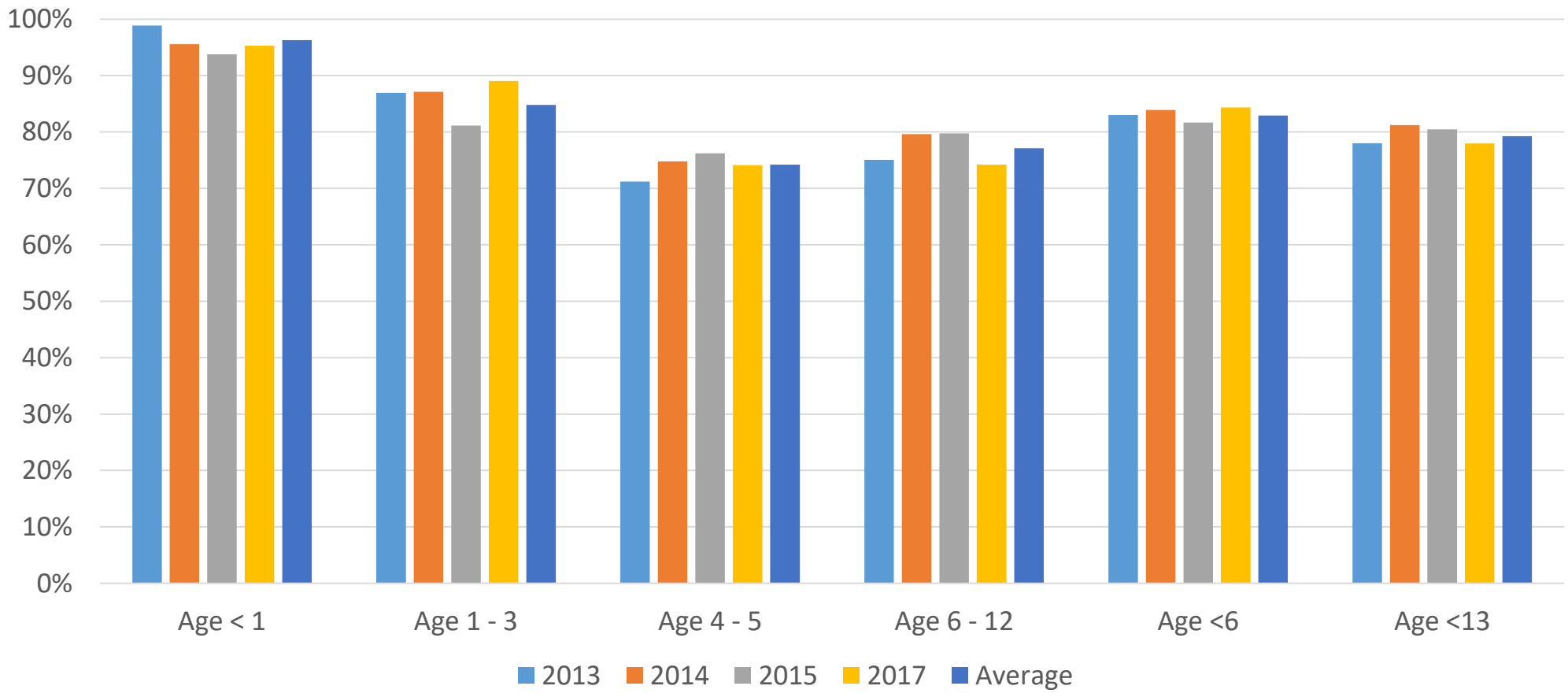
2017 Child Occupant Protection Survey

Regions	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	Age <6	Age <13	Error Age <6	Error Age <13
1. New Orleans	100.0%	98.9%	88.6%	77.9%	95.0%	84.1%	1.7%	2.3%
2. Baton Rouge	100.0%	100%	90.5%	85.5%	96.2%	89.5%	1.8%	1.8%
3. Houma/Thibodaux	91.8%	69.2%	72.8%	66.6%	75.0%	69.6%	3.5%	4.6%
4. Lafayette	98.2%	90.1%	43.8%	69.8%	73.6%	71.2%	3.2%	4.0%
5. Lake Charles	96.3%	100%	83.3%	78.0%	92.6%	83.4%	2.8%	3.2%
6. Alexandria	100.0%	94.9%	63.6%	76.2%	83.9%	79.2%	3.3%	3.6%
7. Shreveport	76.7%	71.1%	65.7%	55.3%	**70.1%**	60.7%	3.9%	5.2%
8. Monroe	89.2%	57.4%	53.4%	75.1%	**62.1%**	70.4%	4.0%	5.9%
Statewide	95.3%	89.0%	74.1%	74.2%	84.4%	78.0%	1.0%	1.3%
Error	1.1%	1.2%	2.1%	1.9%	1.0%	1.3%		

Child Occupant Protection by Seating Position



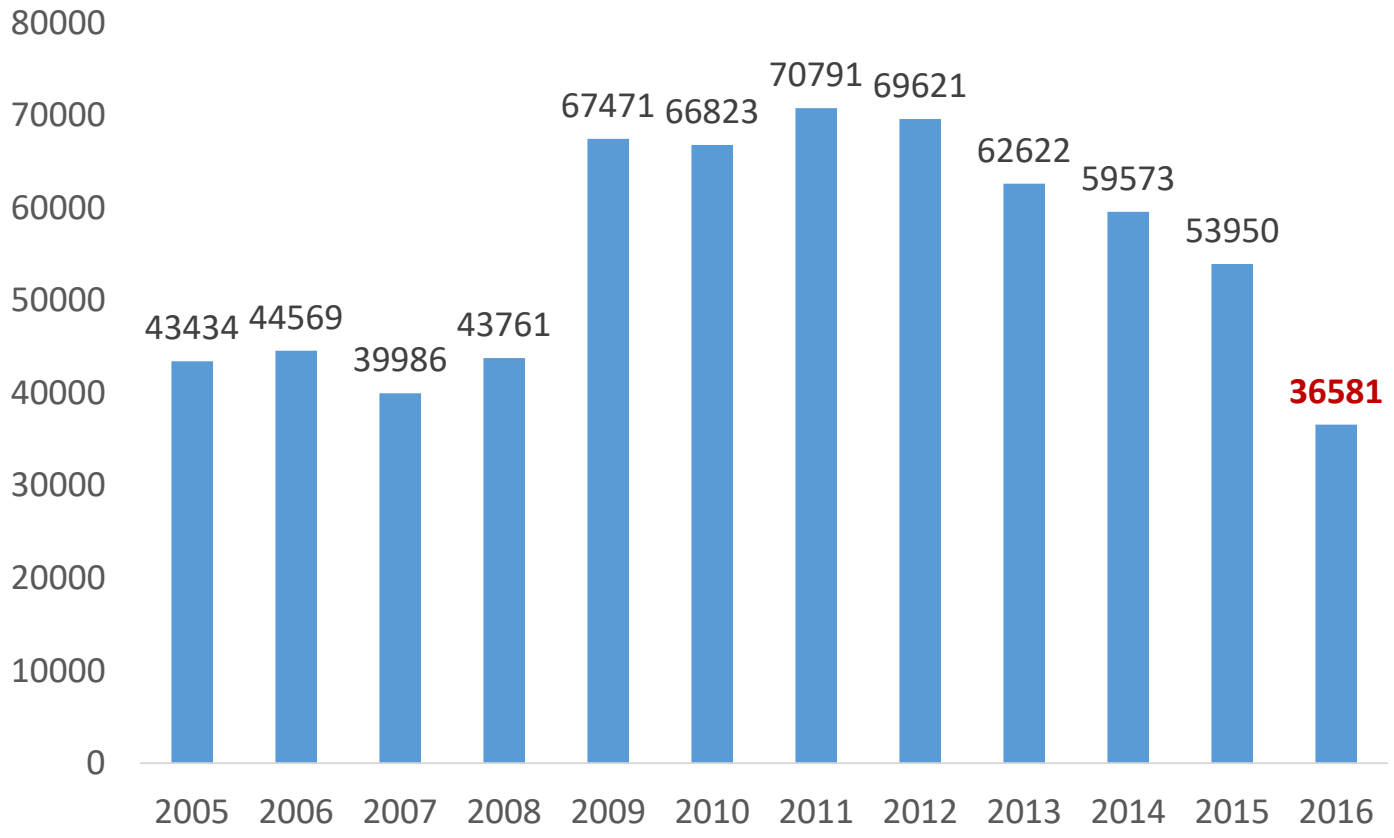
Child Occupant Protection by Year and Age Group



4-Year Average

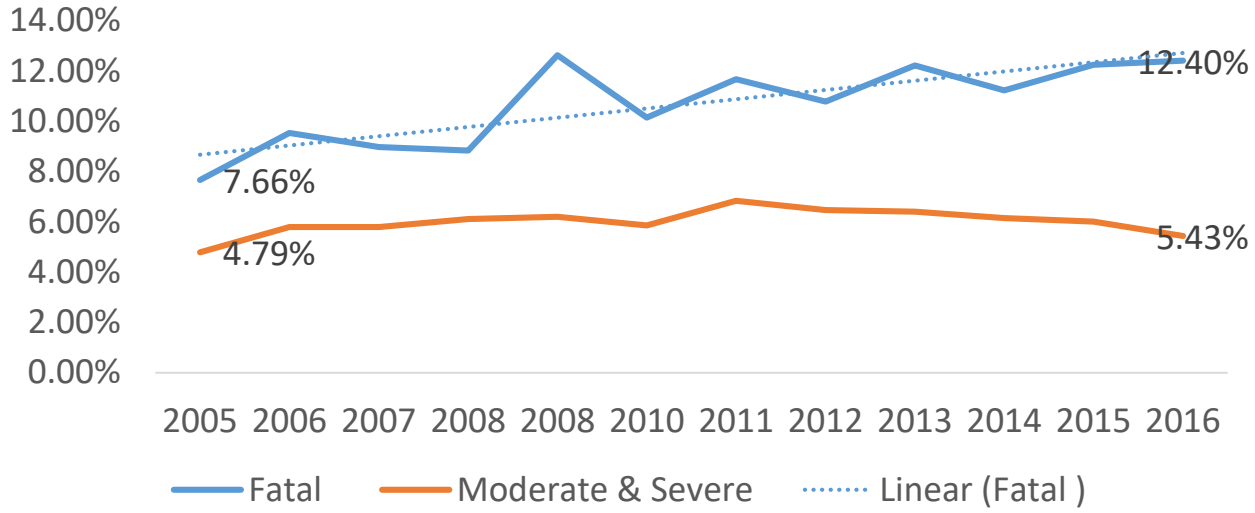
REGION	Age < 1	Age 1 - 3	Age 4 - 5	Age 6 - 12	**Age < 6**	Age < 13	STD Error (Age <6)	STD Error (Age 6-12)
1. New Orleans	99.5%	94.7%	86.4%	82.2%	**92.3%**	85.9%	1.2%	1.2%
2. Baton Rouge	100.0%	96.1%	83.0%	84.1%	**91.7%**	86.9%	0.9%	0.9%
3. Houma/Thibodaux	91.7%	77.2%	73.5%	68.9%	**78.5%**	72.3%	2.2%	2.2%
4. Lafayette	97.2%	79.2%	58.6%	72.4%	**74.8%**	73.3%	1.7%	1.5%
5. Lake Charles	98.5%	88.4%	76.0%	78.8%	**85.6%**	81.3%	1.7%	1.5%
6. Alexandria	98.0%	87.0%	71.3%	75.6%	**83.3%**	78.6%	1.5%	1.4%
7. Shreveport	87.0%	66.1%	64.0%	68.6%	**69.4%**	68.9%	1.7%	1.7%
8. Monroe	89.4%	64.2%	55.4%	72.7%	**65.7%**	70.1%	1.8%	1.7%
Average 2013–2017	96.3%	84.8%	74.2%	77.1%	**82.9%**	79.3%	0.6%	0.5%
Standard Error	0.6%	0.8%	1.1%	0.8%	**0.6%**	0.5%		

Recorded Seat Belt Violations and Number Issued during Overtime

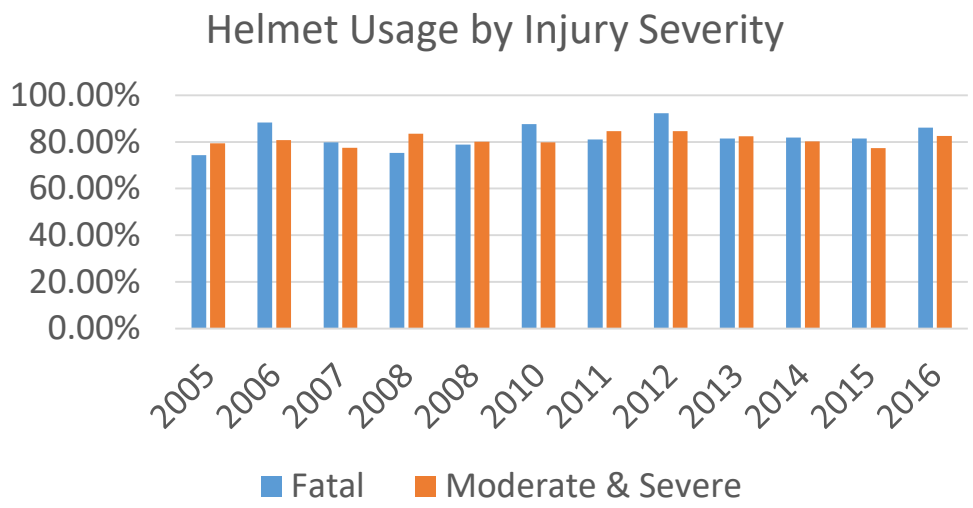


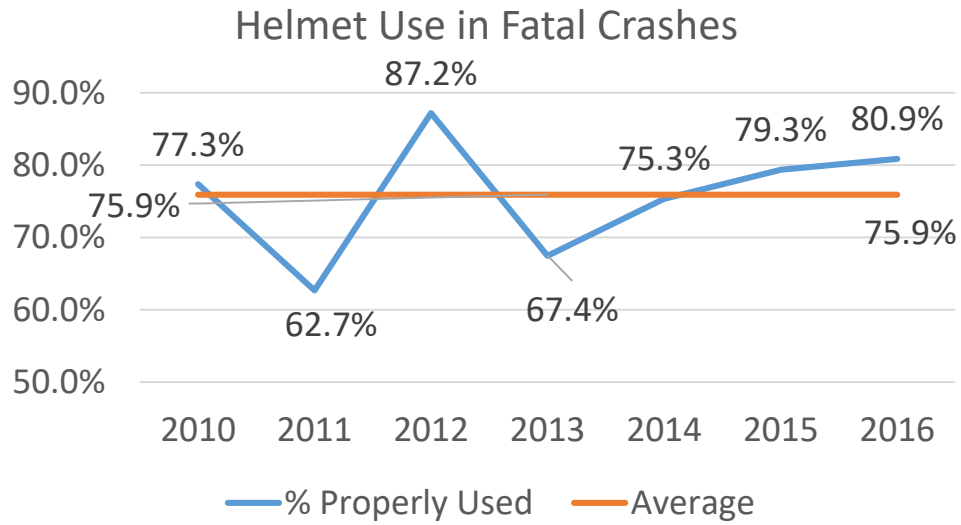
# OCCUPANT PROTECTION HOURS WORKED	36,320
# OCCUPANT PROTECTION CHECKPOINTS CONDUCTED	969
# OCCUPANT PROTECTION O.T HOURS WORKED	8,687
# ADULT SEAT BELT CITATIONS ISSUED	**57,904**
# CHILD SAFETY SEAT CITATIONS ISSUED	5,108
TOTAL OF ALL CITATIONS ISSUED	63,012

Motorcycle Injuries

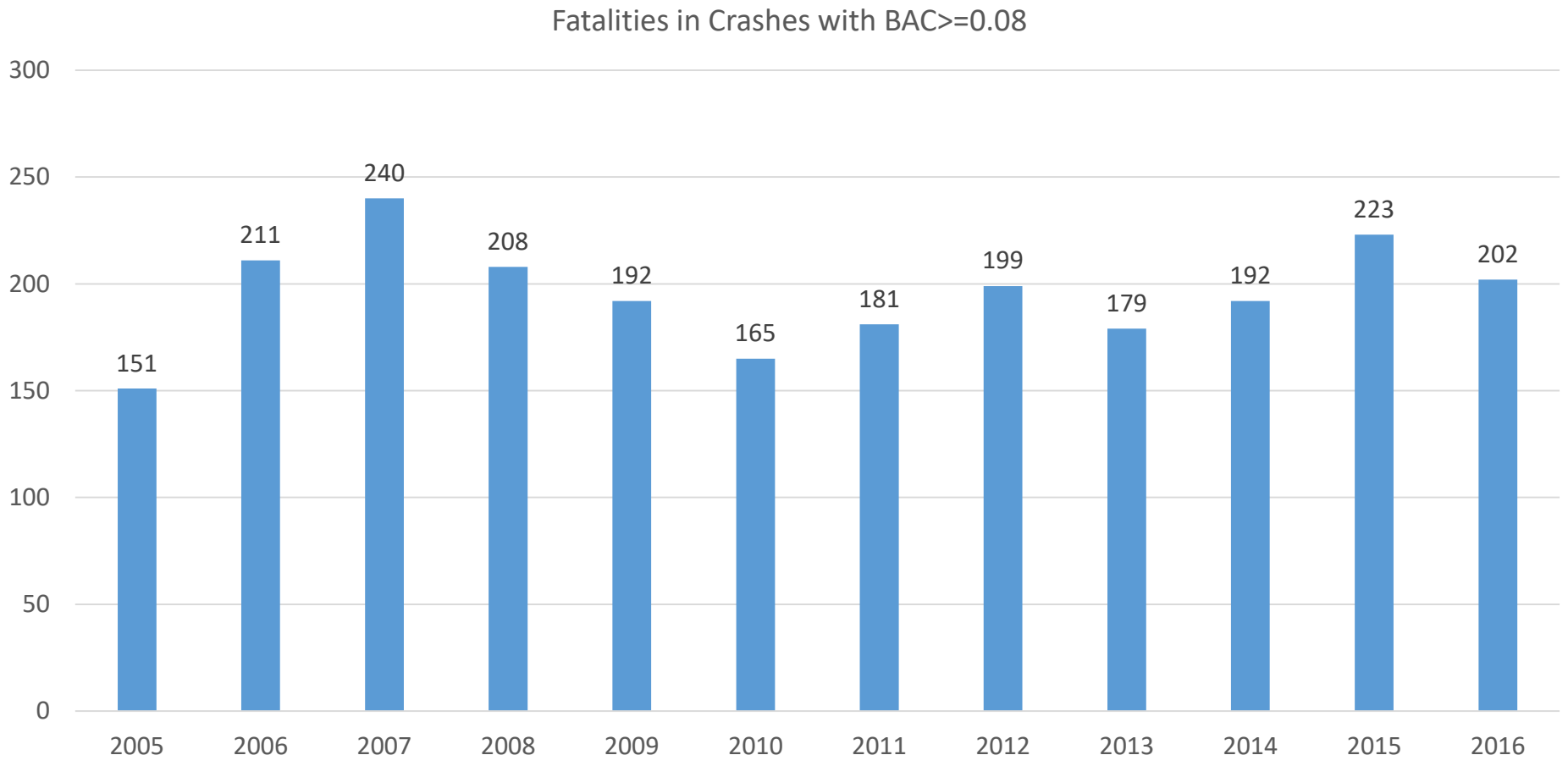


While 99% are observed wearing a helmet only 76% of motorcycle fatalities were wearing a helmet properly.

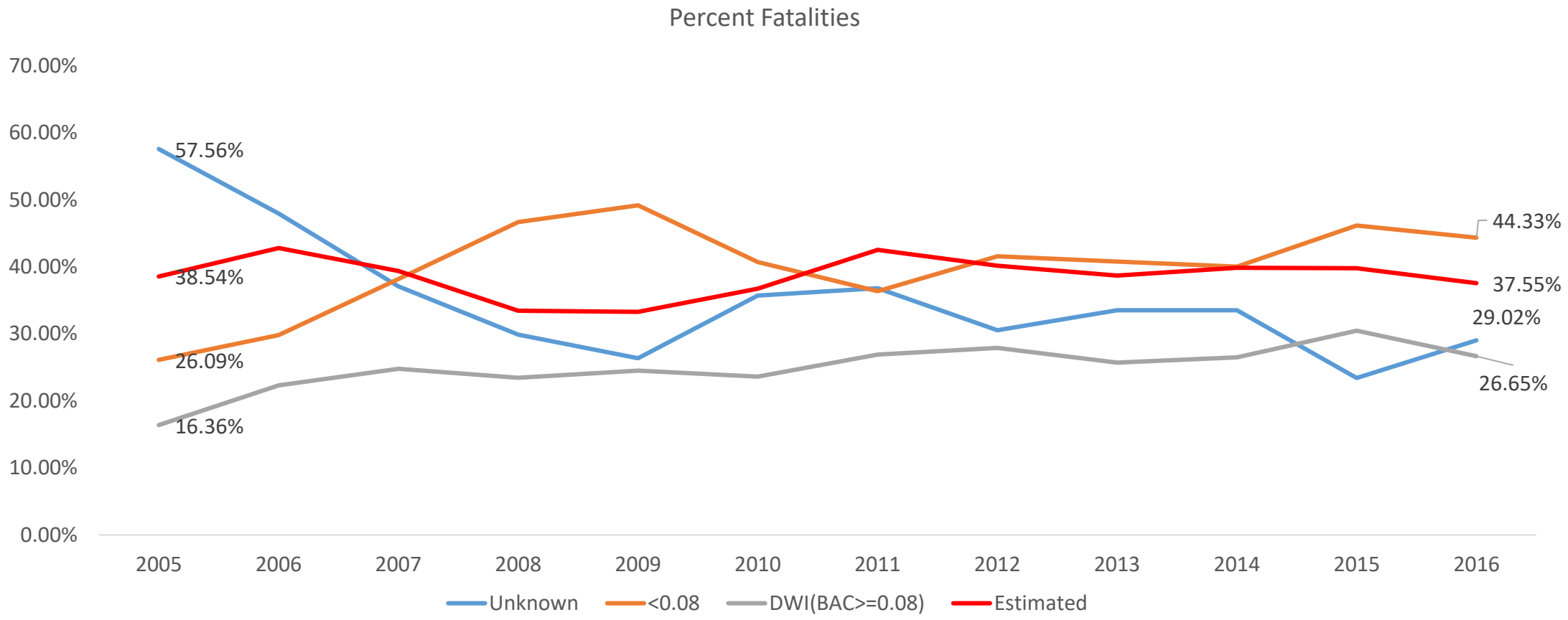




Drinking and Driving

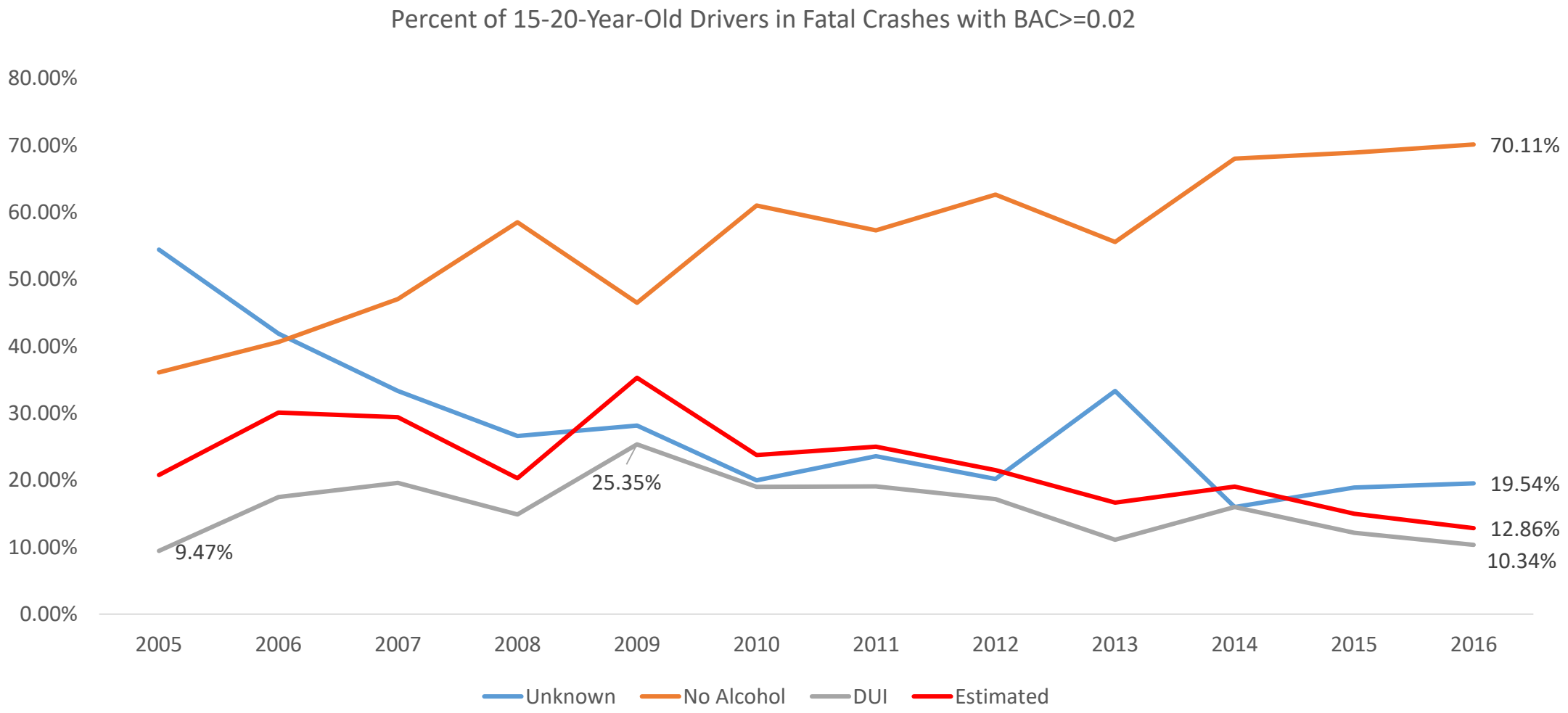

Fatalities in Crashes with BAC>=0.08
300
250
200
150
100
50
0
151
211
240
208
192
165
181
199
179
192
223
202
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016

Observed Alcohol Impairment (DWI: BAC>=0.08)

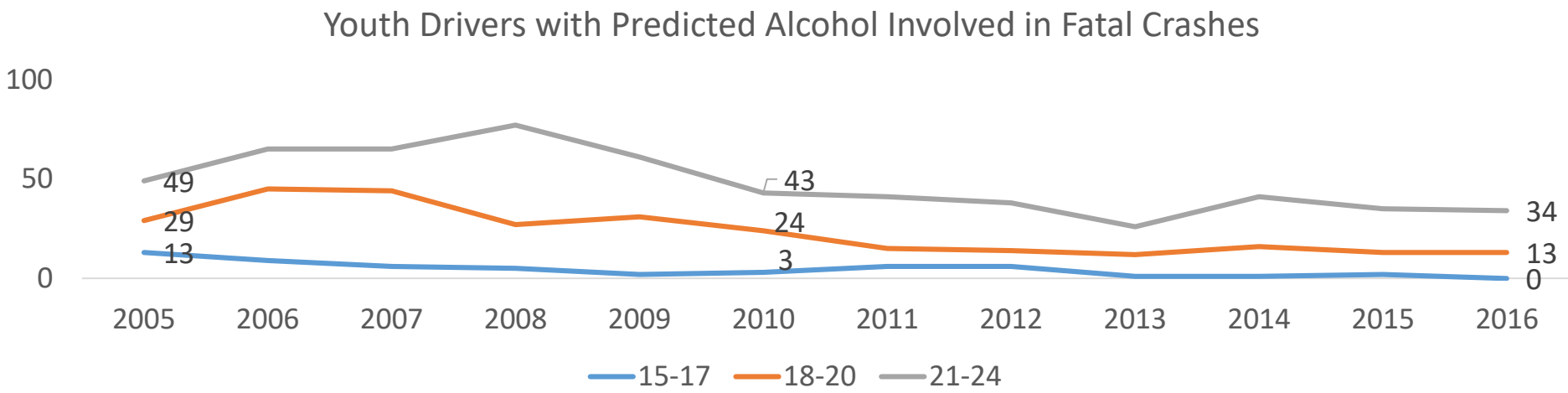


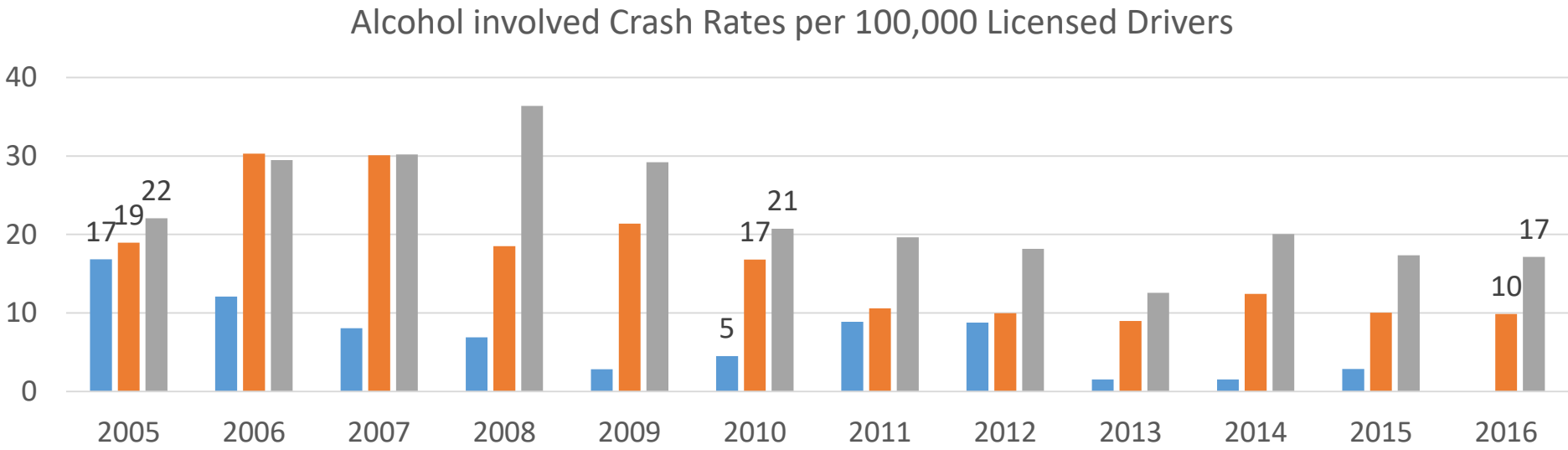
Fatalities in crashes with alcohol impaired drivers (DWI) was at 26.65%. However, 29.02% of fatal crashes had drivers not tested. The percent DWI fatalities was 37.55% in 2016 when crashes with only known BAC levels are used.

Fatalities Underage DUI

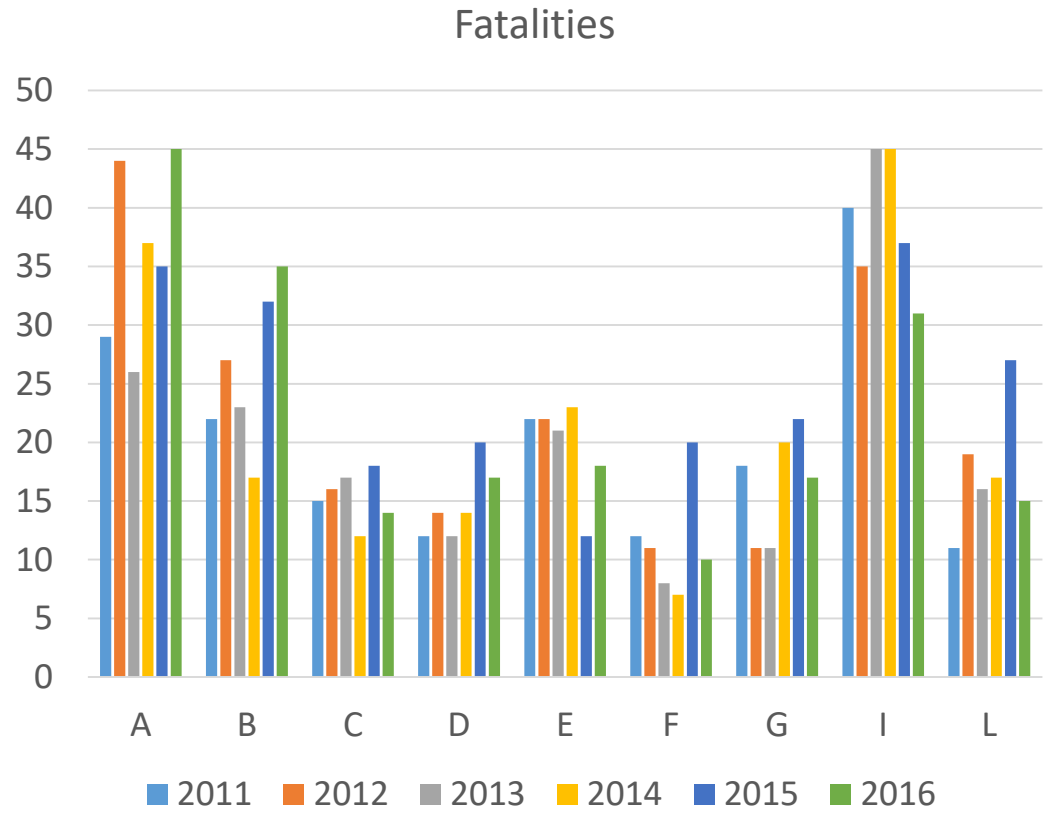


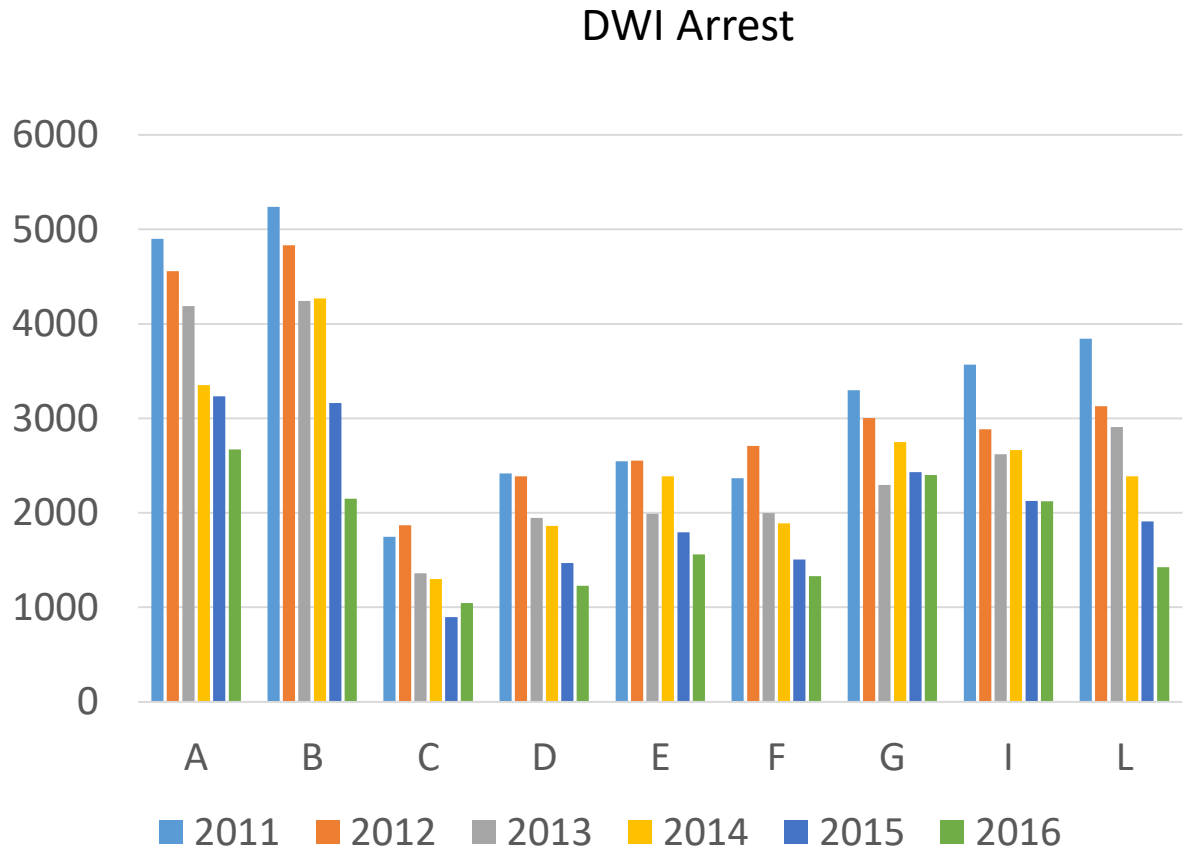
Youth Drivers and Alcohol Involvement



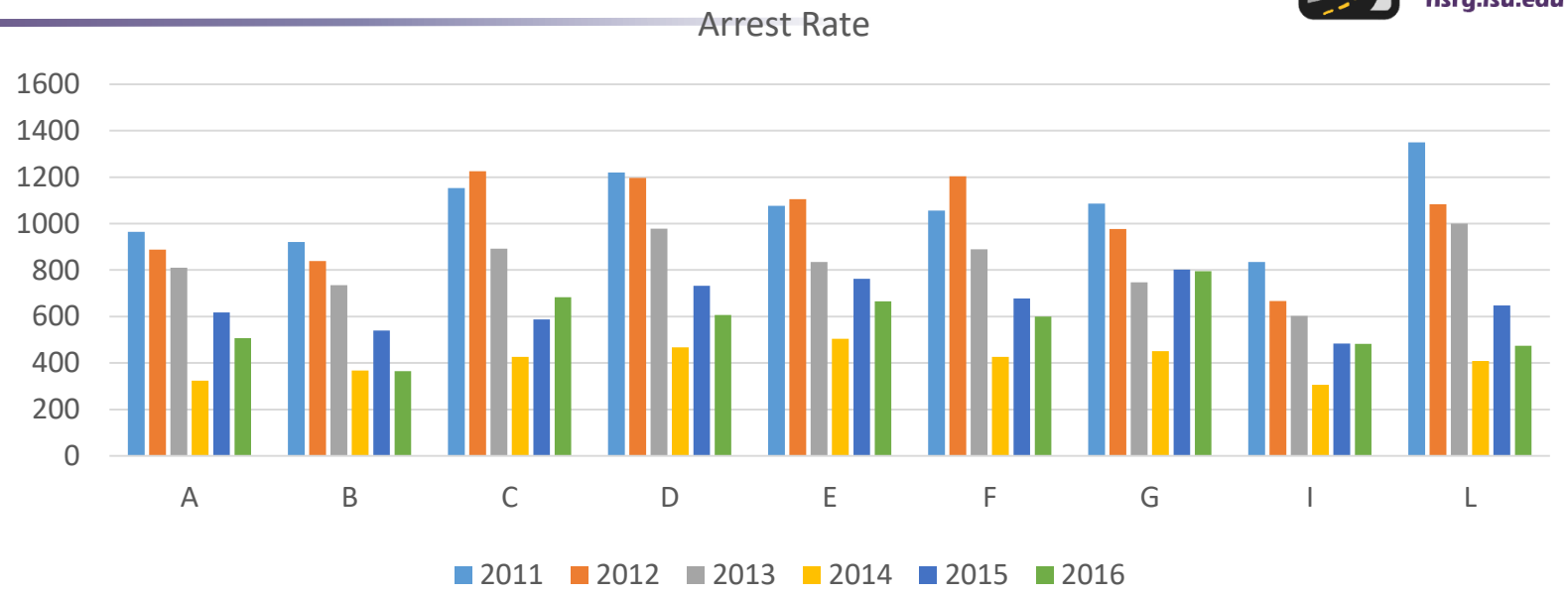


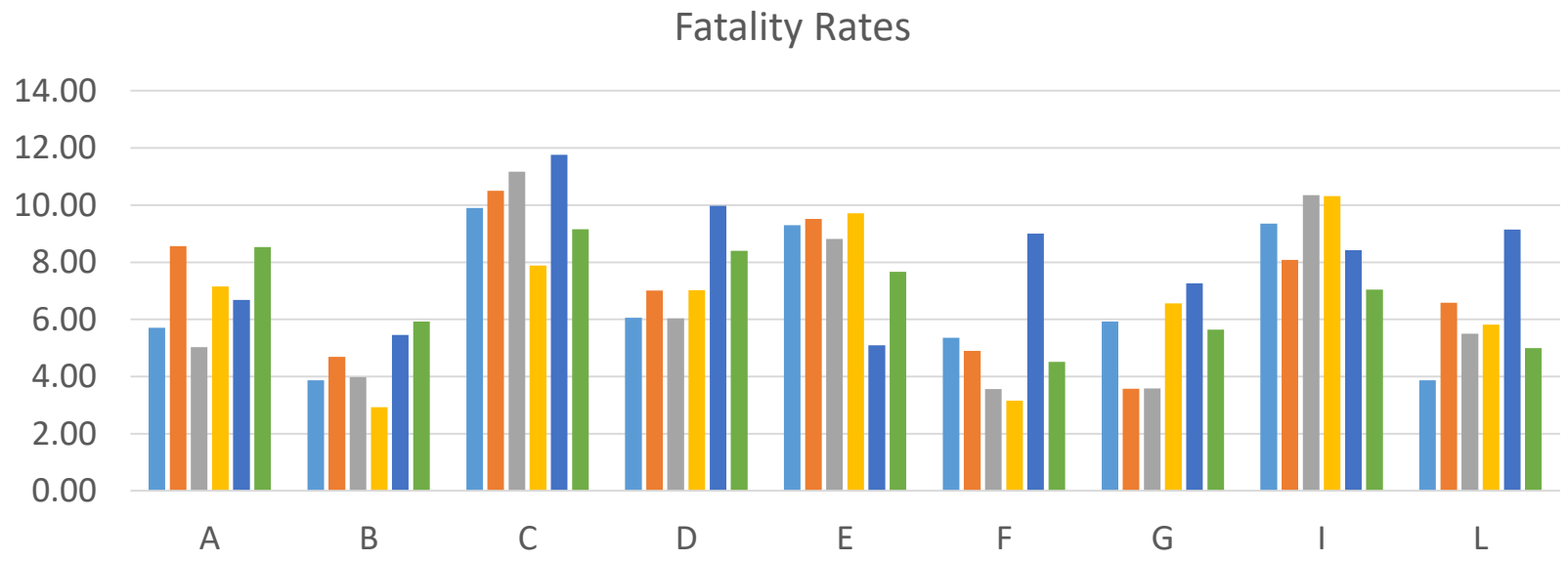
DWI Fatalities by Troop Area



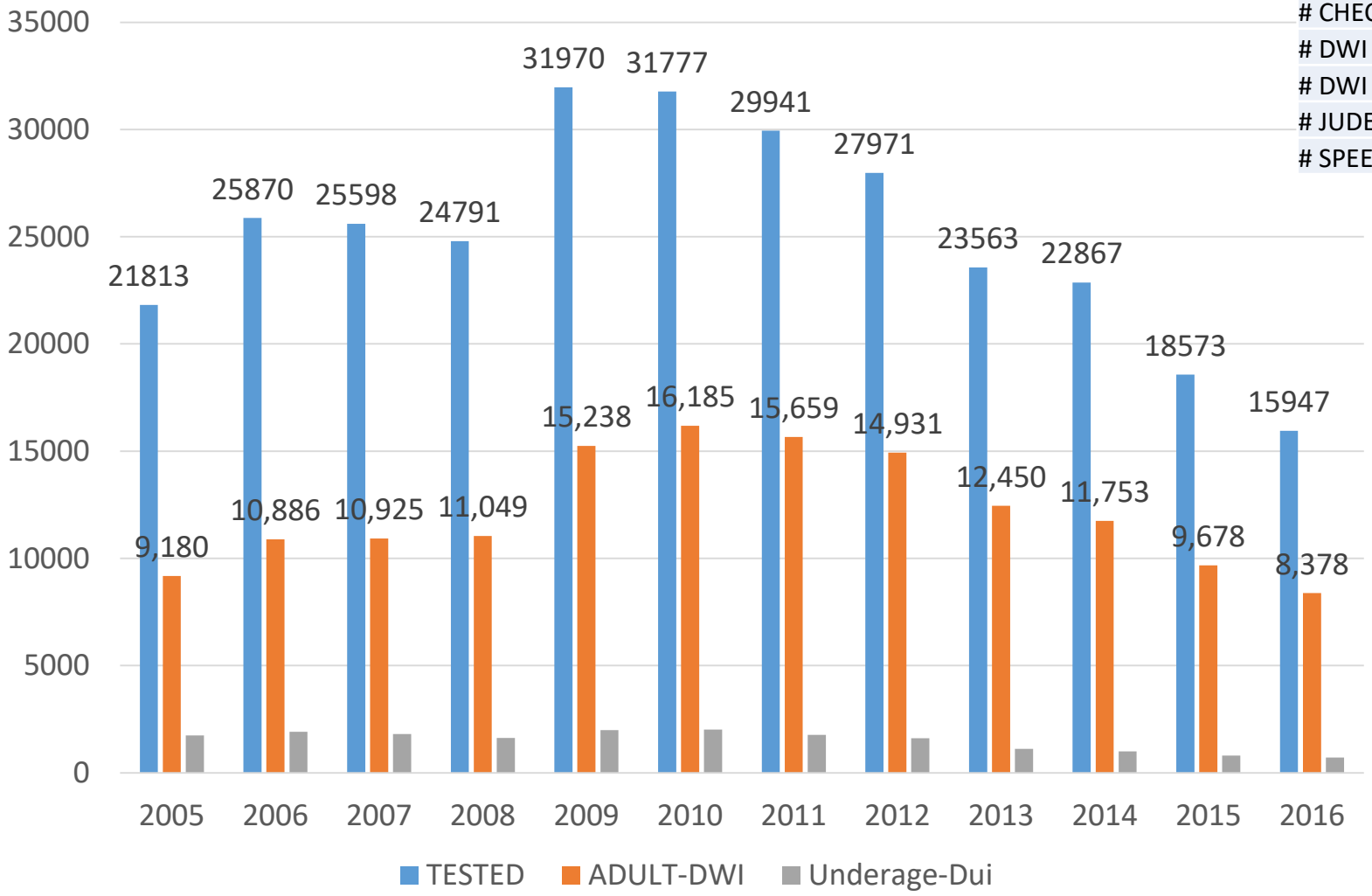


DWI Fatality and Arrest Rates (BAC>=0.08) by Troop Area





DWI Arrests



# DWI SATURATION PAROL HOURS WORKED	31,344
# DWI CHECKPOINTS WORKED	363
# CHECKPOINT O.T. HOURS WORKED	14,812
# DWI SATURATION PATROL ARREST	2,748
# DWI CHECKPOINT O.T. ARREST	552
# JUDE CITATIONS ISSUED	2,816
# SPEEDING CITATIONS ISSUED	4,327

Rule of Thumb:

For every 1,000 hours Saturation Patrol 4 fewer fatalities.

For every SFST conducted 3 fewer fatalities.

Source: Target of Opportunity Report.

My top three items for reducing fatalities

1. Increase DWI enforcement in the Lafayette and Houma area
2. Increase seat belt enforcement in the Alexandria and Monroe area
3. Increase campaigns targeted at pickup truck drivers seat belt use