



# Traffic Safety Programs: Changing Traffic Safety Culture

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Presented at the Annual Mandatory Grantee Meeting



# Objectives

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- **Highway Safety Programs**
- **Highway Safety Performance Measures**
- **Accomplishments**
- **Challenges**
- **Strategies**
- **Project Review and Selection Criteria**

# Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21)

- Section 402 – **State & Community** Formula Grant
- Section 405b – **Occupant Protection** Incentive Grant
- Section 405c – **Traffic Safety Information Systems** Incentive Grant
- Section 408 – **Traffic Safety Information Systems** Incentive Grant
- Section 405d – **Impaired Driving** Incentive Grant
- Section 405f – **Motorcycle Safety** Incentive Grant

# Illinois Highway Safety Program Areas

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- **Occupant Protection**
- **Impaired Driving**
- **Speed Control**
- **Traffic Records**
- **Emergency Medical Services**
- **Pedestrian**
- **Pedalcycle**
- **Motorcycle Safety**
- **Large Truck**
- **Police Traffic Services**
- **Distracted Driving (Cell Phone Use and Texting)**

We are required to identify those programs most effective in reducing crashes, injuries, and deaths, and eligible use of highway safety funds awarded to the State of Illinois

# Highway Safety:

## Consensus Performance Measures

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### Core Measures

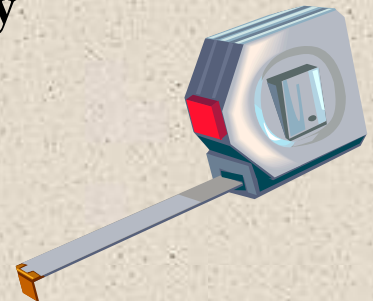
Overall fatalities  
Serious injuries  
Fatalities/VMT  
Unrestrained fatalities  
.08+ fatalities  
Speeding fatalities  
Motorcycle fatalities  
Unhelmeted fatalities  
<21 year drivers in fatalities  
Pedestrian fatalities  
Observed Belt Use

### Activity Measures

Belt citations  
Speeding citations  
DWI arrests

### Developmental Measures

Injuries  
Attitudes/Awareness  
Speed monitoring  
Enforcement Activity

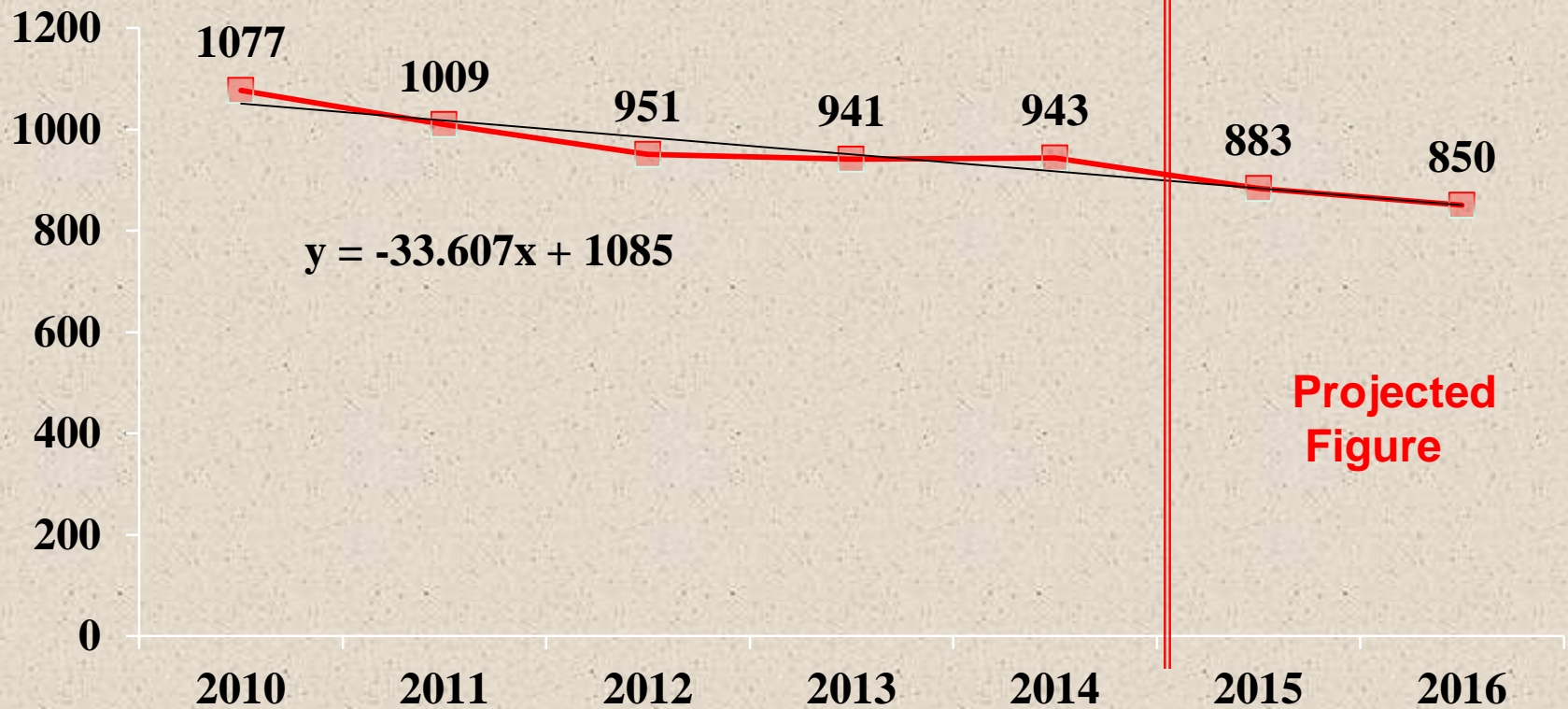


## CORE PERFORMANCE MEASURES

Selected Core Measures	Actual Data					Projected Figures (Targets)								
	2009	2010	2011	2012	2013	2014			2015			2016		
						Target	L 70%	U 70%	Target	L 70%	U 70%	Target	L 70%	U 70%
Total Fatalities	911	927	918	956	991	924*	N/A		N/A			N/A		
AVG.	1,164	1,077	1,009	951	941	943	N/A		883	839	927	850	799	900
Severe Injuries	12,997	12,638	11,942	12,401	12,299	N/A			N/A			N/A		
AVG.	15,607	14,488	13,379	12,686	12,455	11,292	10,767	11,816	10,481	9,876	11,087	9,671	8,975	10,367
Total Fatality Rate	0.86	0.88	0.89	0.91	0.94	N/A			N/A			N/A		
AVG.	1.088	1.01	0.954	0.904	0.896	0.8	0.8	0.9	0.8	0.7	0.8	0.7	0.7	0.8
Rural Fatality Rate	1.43	1.4	1.51	1.5	1.61	N/A			N/A			N/A		
AVG.	1.682	1.58	1.542	1.486	1.49	1.4	1.4	1.5	1.4	1.3	1.4	1.3	1.3	1.4
Urban Fatality Rate	0.67	0.7	0.68	0.72	0.73	N/A			N/A			N/A		
AVG.	0.874	0.812	0.752	0.708	0.7	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.5	0.6
Severe Injury Rate	14.61	13.62	12.66	12.08	11.87	N/A			N/A			N/A		
AVG.	12.29	11.95	11.55	11.87	11.66	10.9	10.4	11.3	10.2	9.6	10.7	9.4	8.8	10.1
Unrestrained Occupants	265	261	268	279	276	N/A			N/A			N/A		
AVG.	380.4	343	305.4	282.2	269.8	231.6	216.2	246.9	203.4	185.6	221.1	175.2	154.8	195.5
Impaired	313	292	278	322	322	N/A			N/A			N/A		
AVG.	402.4	369.2	335.6	312.2	305.4	269.7	254.3	285.0	244.6	226.9	262.3	219.5	199.1	239.8
Speed	325	438	441	387	421	N/A			N/A			N/A		
AVG.	463.6	445.6	422.6	395.4	402.4	374.1	358.5	389.7	356.9	338.9	374.9	339.6	318.9	360.3
Motorcyclist Fatalities	130	131	145	148	152	N/A			N/A			N/A		
AVG.	142.4	137	139.6	137.8	141.2	139.1	135.2	143.0	139.0	134.5	143.5	138.8	133.6	144.0
Unhelmeted	99	106	108	115	113	N/A			N/A			N/A		
AVG.	107.8	105.2	106.2	105	108.2	106.7	104.1	109.2	106.7	103.8	109.7	106.8	103.4	110.2
Young Driver	121	146	126	118	132	N/A			N/A			N/A		
AVG.	201.8	181.2	159.2	132	128.6	101.9	91.6	112.1	82.3	70.5	94.2	62.8	49.2	76.4
Pedestrian	112	115	134	138	125	N/A			N/A			N/A		
AVG.	144.4	134.4	133.4	126.8	124.8	118.7	115.0	122.4	114.0	109.7	118.3	109.4	104.4	114.3
Pedalcycle	19	24	27	29	30	N/A			N/A			N/A		
AVG.	21.8	22.4	23	25.2	25.8	26.9	26.1	27.6	28.0	27.1	28.8	29.0	28.0	30.0
Belt Usage Rate	91.7	92.6	92.9	93.6	93.7	94.1*	N/A		95.2*			N/A		
AVG.	89.26	90.58	91.56	92.26	92.9	93.38	N/A		94.9	N/A		95.8	95.3	96.3

\*Actual Values since 2014 were available

# Total Number of Traffic Fatalities



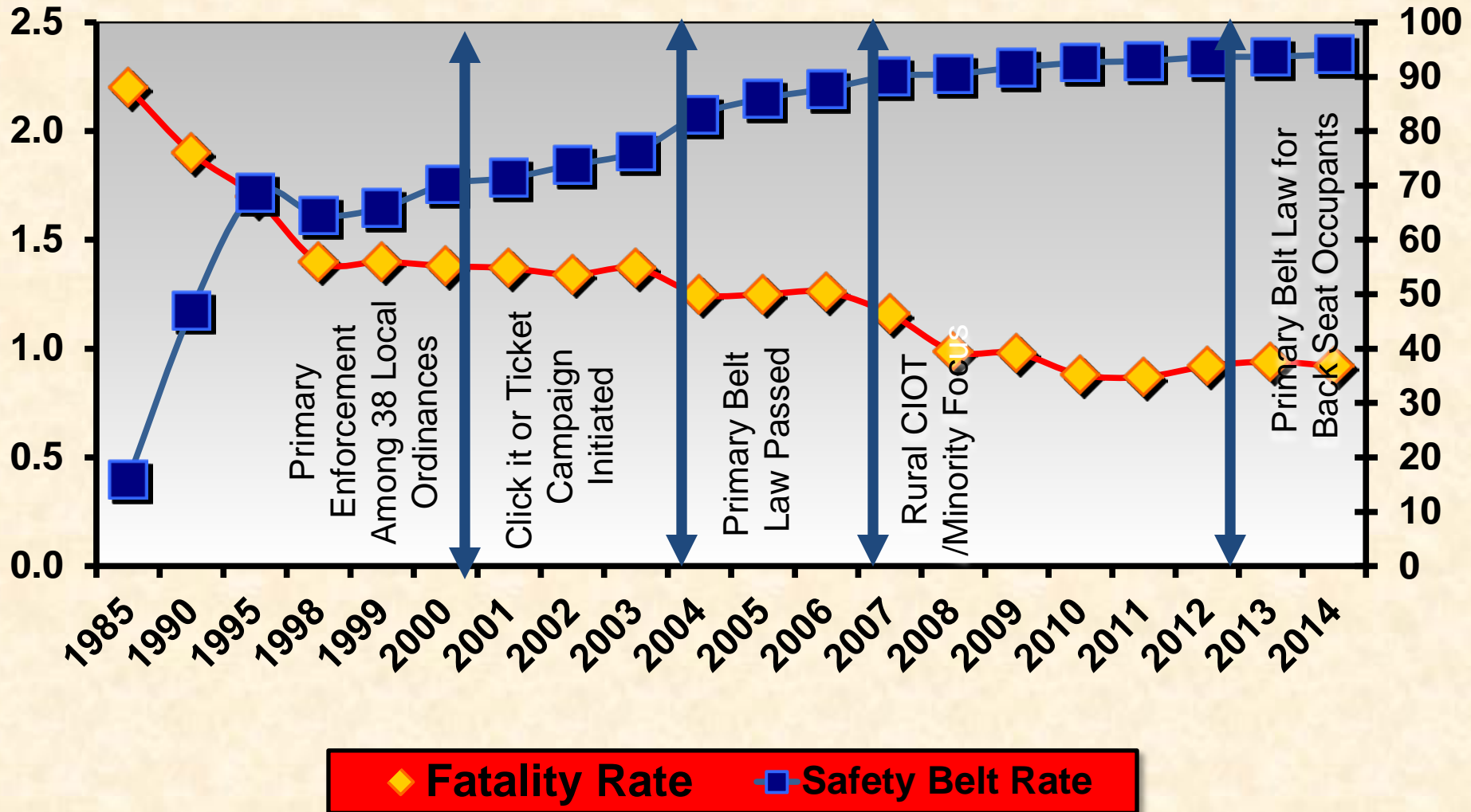
# Major Accomplishments

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- **Reduction in total Fatalities and Injuries**
- **High Belt Use (95.2%)**
- **Higher Message Awareness (Over 90%)**
- **Improvement in Alcohol-Related Fatalities (lower in absolute number)**
- **Establishment of Sustained Enforcement Activities**
- **Improvement in crash data reporting (Timeliness, Accessibility, and Data Integration)**

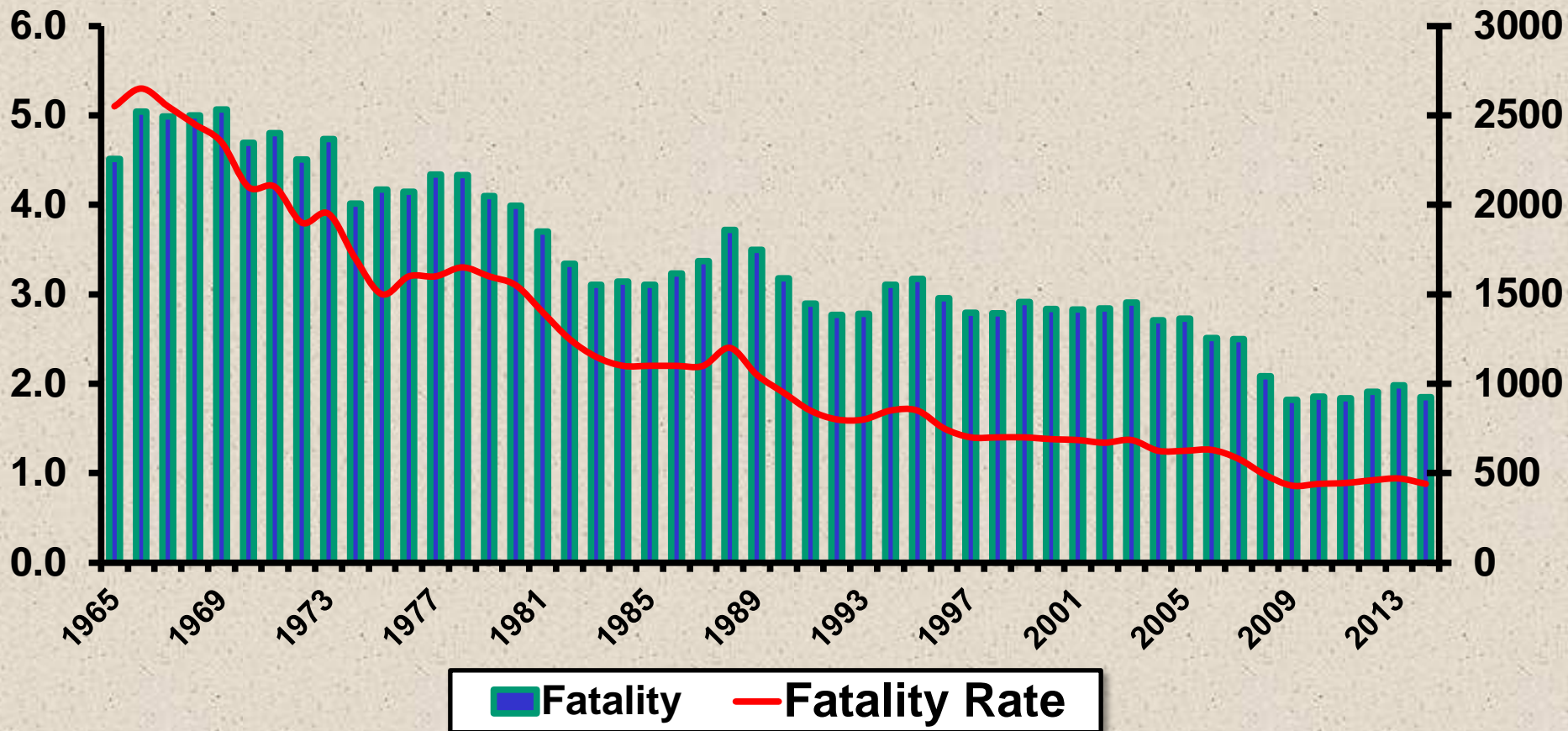


# Historical Data on Fatality and Safety Belt Usage Rates in Illinois



Data Source: Observational Survey and FARS

# Fatalities and Fatality Rate, by Year



# National Statistics on Total Traffic Fatalities in 2015

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According to the National Safety Council (NSC), traffic fatalities increased **by 14 percent** nationally in the first six months of this year and injuries were up by a third, according to data gathered by the National Safety Council.

The Council claims the main reasons for an increase in fatalities are:

1. Improved economy
2. low gas prices
3. low unemployment rates

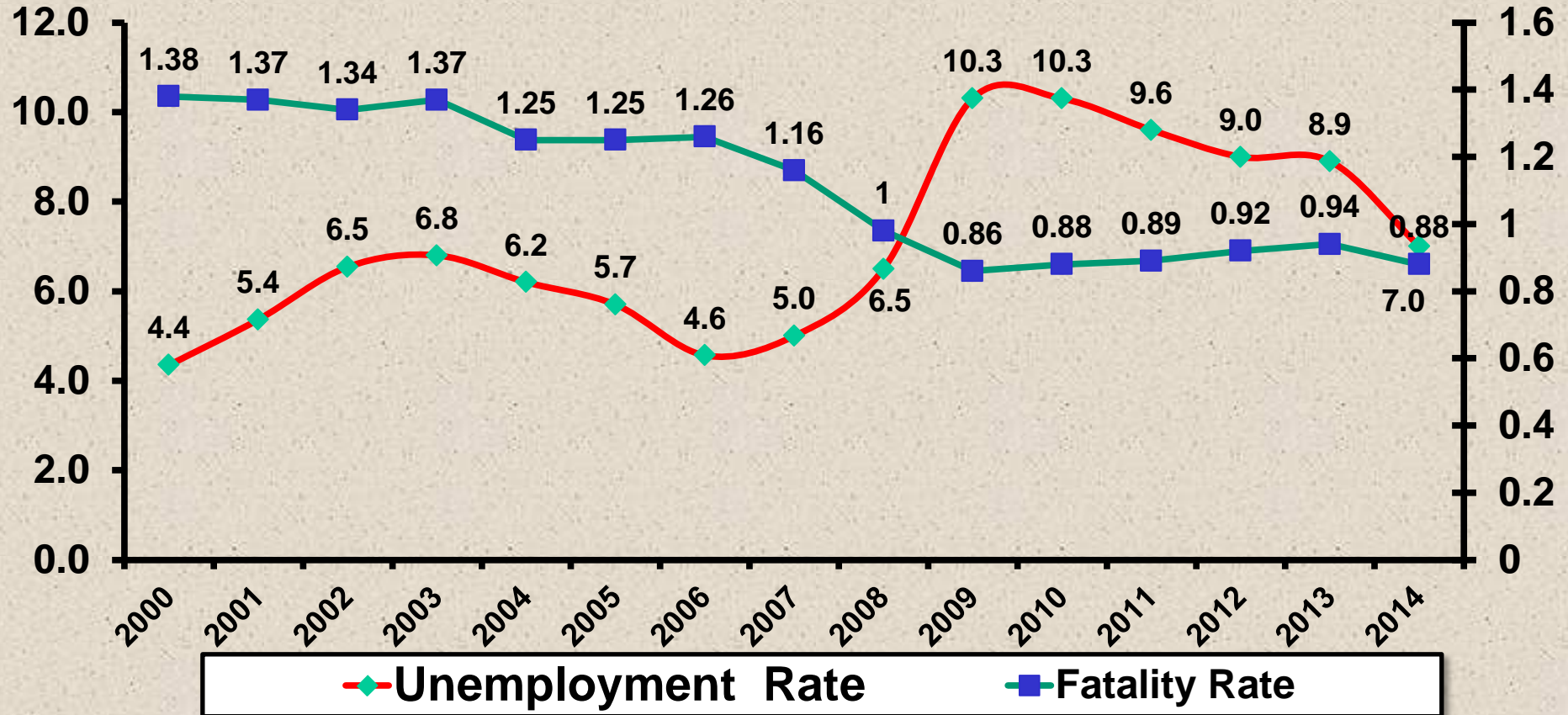
Other factors that contribute to high fatal and injury crashes are:

1. Temperature and nice weather
2. Speed (increase in speed limit)
3. Cell Phone use and texting
4. Alcohol/Drug

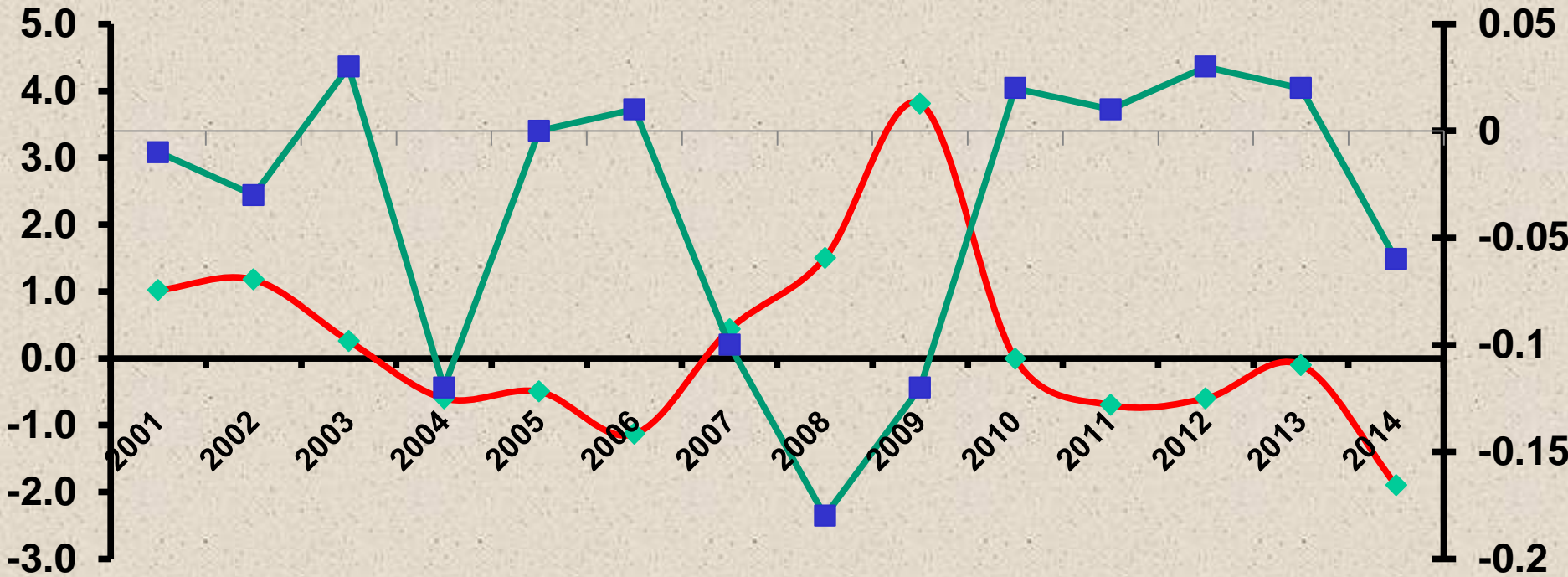
# U.S. All Grades All Formulations Retail Gasoline Prices (Dollars per Gallon)

Year	Jan	Feb	March	April	May	June
2012	\$3.44	\$3.64	\$3.91	\$3.96	\$3.79	\$3.60
2013	\$3.39	\$3.74	\$3.78	\$3.64	\$3.68	\$3.69
2014	\$3.39	\$3.43	\$3.61	\$3.74	\$3.75	\$3.77
2015	\$2.21	\$2.30	\$2.55	\$2.56	\$2.80	\$2.89

# Fatality and Unemployment Rates by Year



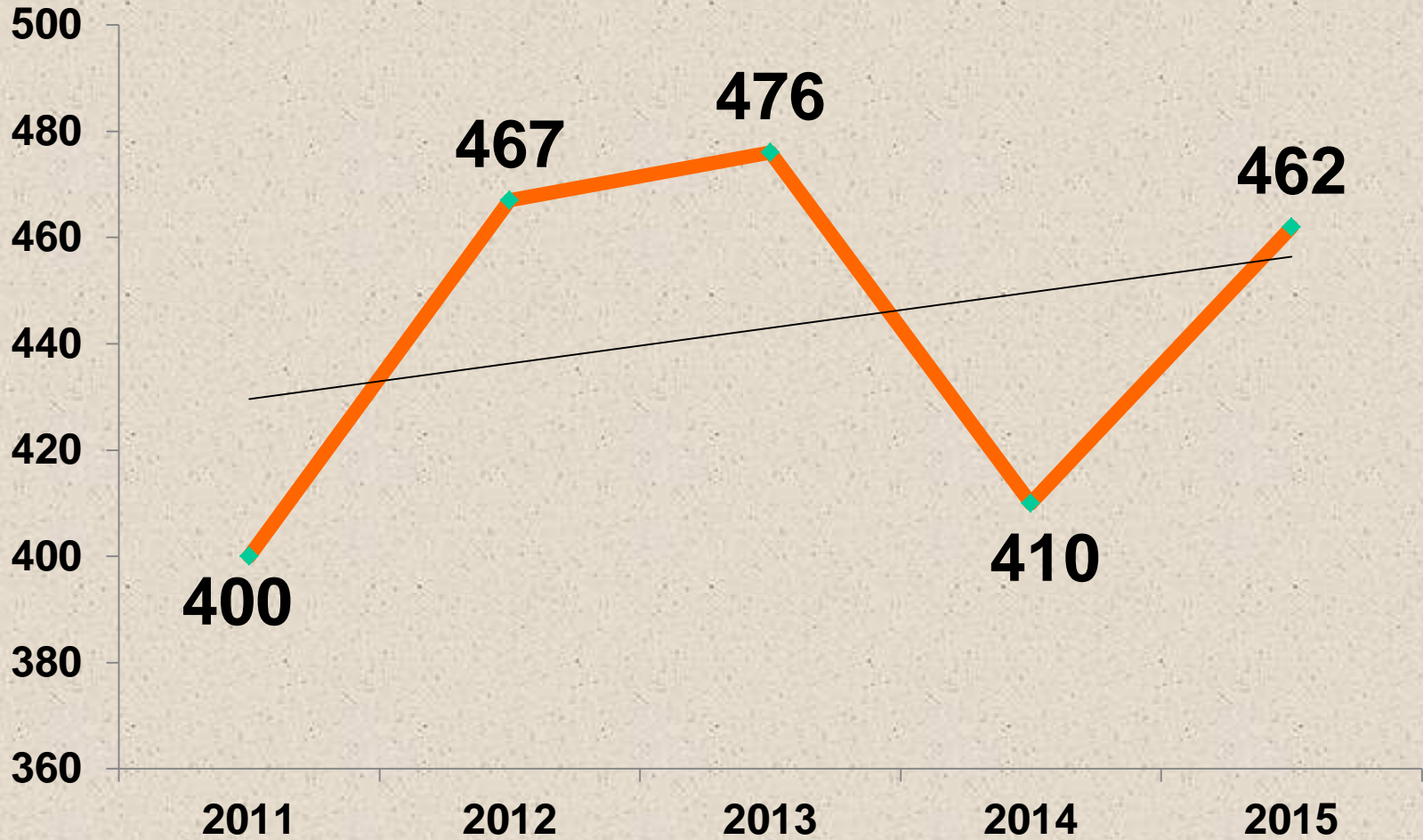
# Year to Year Percent Changes in Illinois Fatality and Unemployment Rates by Year



◆ Unemployment Rate

■ Fatality Rate

# Illinois Traffic Fatalities During the First Six Months in in 2015



# Challenges (Occupant Protection)

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- **Lower belted occupant fatalities**
  - **Low usage rate among African Americans and Hispanics**
  - **Low usage rate among young male drivers**
  - **Low usage rate at night among those who fatally injured (62.7%)**
  - **Lower usage rate among back seat occupants**



## Total Fatalities, Injuries, and A-Injuries for Passengers of Passenger Cars, Pickup Trucks, Vans, and SUVs (2010 - 2013)

	Fatalities	Injuries	A Injuries	% Fatalities	% Injuries	% A Injuries
Drivers	1,776	201,442	26,871	72.0%	69.9%	70.4%
Front seat Passengers	415	52,727	7,146	16.8%	18.3%	18.7%
Backseat Passengers	207	30,431	3,615	8.4%	10.6%	9.5%
Enclosed and Exposed Passengers	67	3,393	523	2.7%	1.2%	1.4%
UNK./N/A	0	150	18	0.0%	0.1%	0.0%
<b>Grand Total</b>	<b>2,465</b>	<b>288,143</b>	<b>38,173</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

# Strategy to Improve Usage Rate and Reduce Rear Seat Occupant Fatalities and Injuries

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- **Passing Primary Rear Seat Law on January 1, 2012**
- **High Visibility Enforcement focusing on Back Seat**
  - Increase Seat Belt Zone Enforcement
  - Expand Nighttime Belt Enforcement
  - Continue/Expand Roadside Safety Checks
  - Multiple Enforcement Waves

# Comparison of Percent Safety Belt Usage Rates Among Occupants of Passenger Cars in Illinois in 2013 and 2014

	Driver			Front Seat Passengers			Rear Seat Occupants		
	Belt Use (2013)	Belt Use (2014)	% Change	Belt Use (2013)	Belt Use (2014)	% Change	Belt Use (2013)	Belt Use (2014)	% Change
<b>Total</b>	93.8%	95.62%	1.82%	90.00%	92.66%	2.66%	77.40%	84.00%	6.60%
<b>Chicago</b>	90.1%	90.63%	0.53%	81.90%	84.35%	2.45%	61.20%	70.63%	9.43%
<b>Cook</b>	93.2%	96.00%	2.80%	89.30%	93.54%	4.24%	77.00%	79.40%	2.40%
<b>Upstate<sup>1</sup></b>	94.4%	95.40%	1.00%	89.60%	93.00%	3.40%	82.40%	85.64%	3.24%
<b>Downstate<sup>2</sup></b>	95.0%	98.00%	3.00%	95.00%	96.20%	1.20%	76.80%	92.00%	15.20%

1. Upstate region includes the following counties: DuPage, Kane, Lake, McHenry and Winnebago

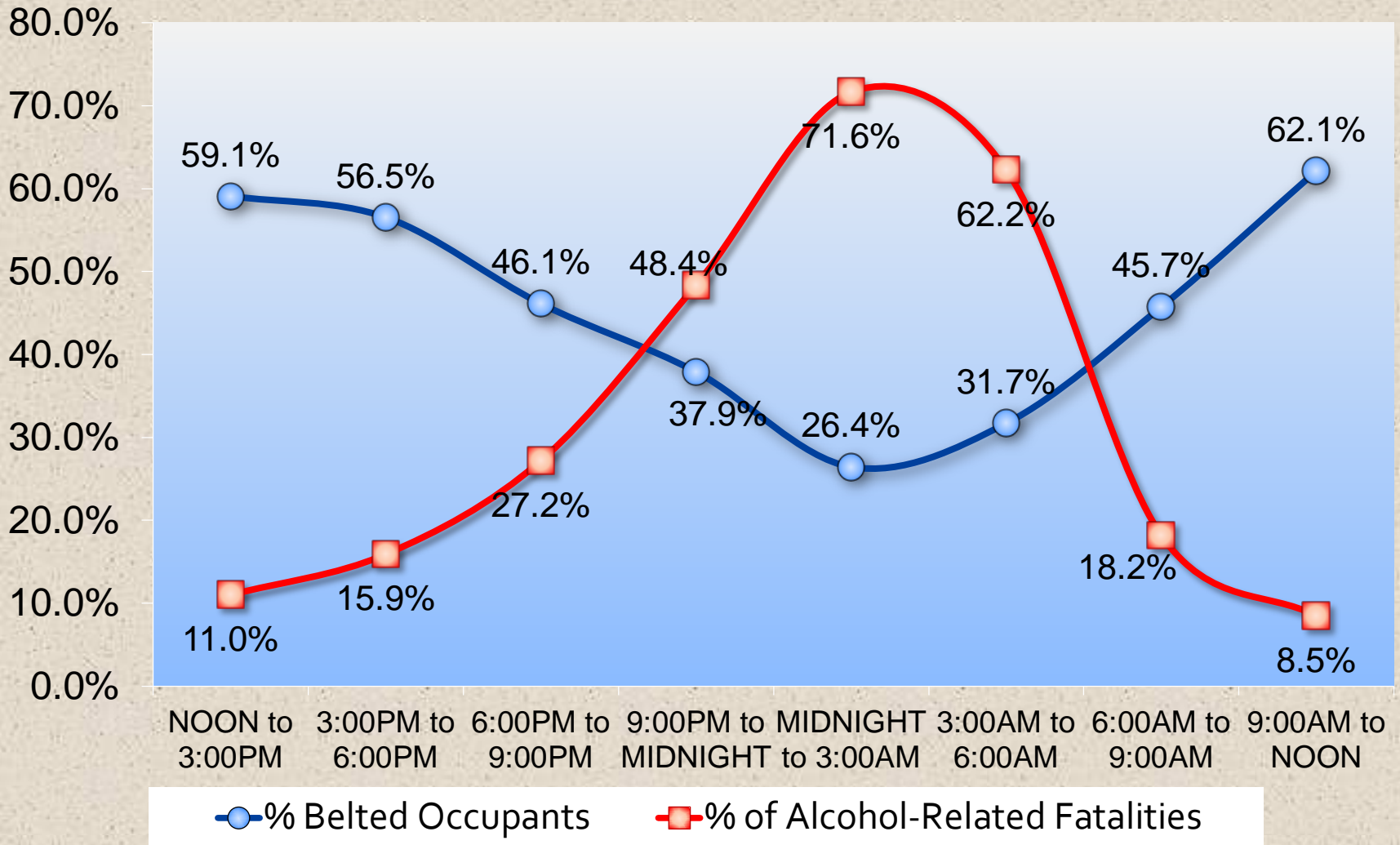
2. Downstate Region includes the following counties: Champaign, Bureau, Effingham, Rock Island, Madison and St. Clair

# Challenge (Alcohol/Speed)

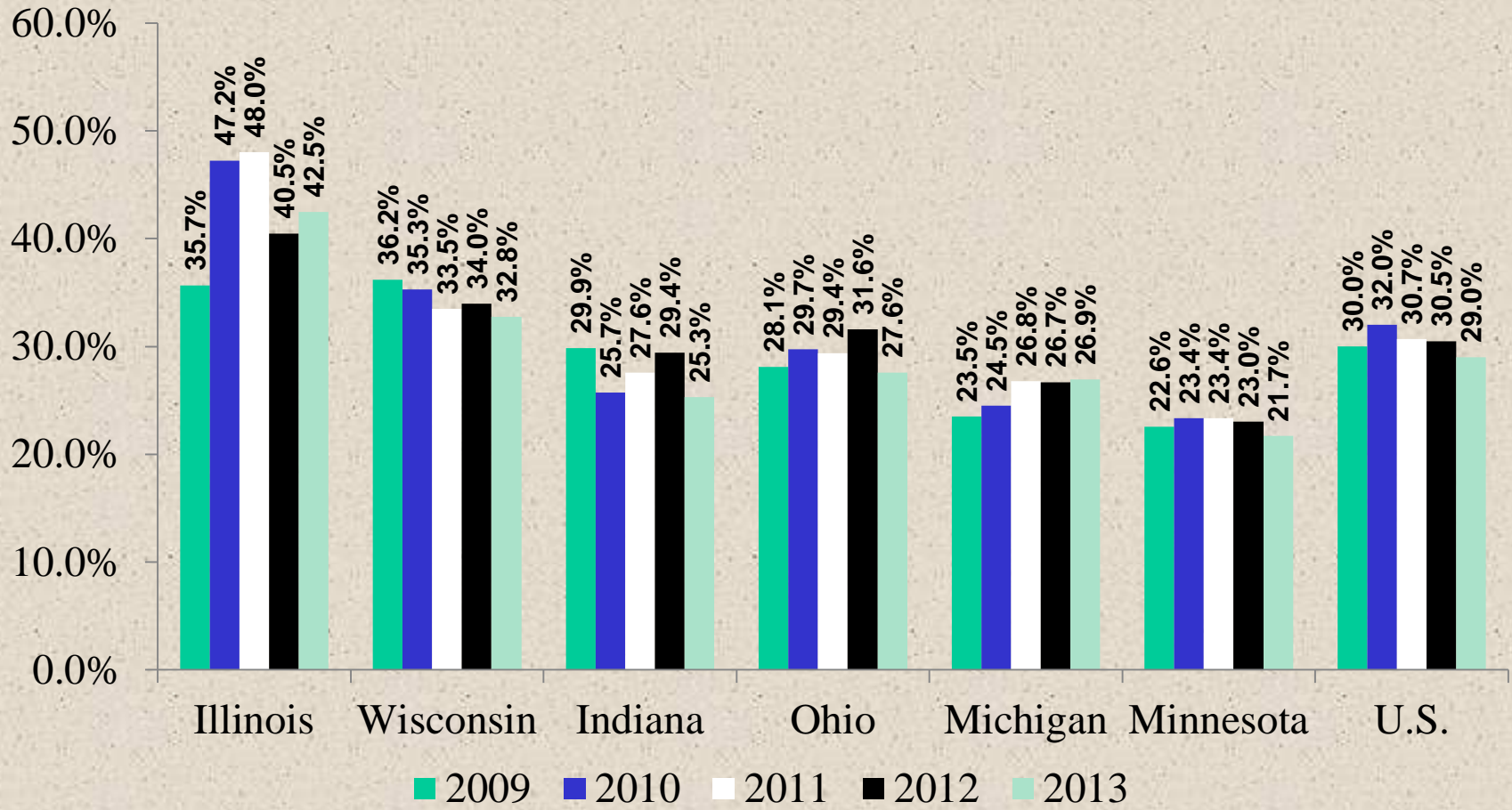
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- **Higher % alcohol-related fatalities**
- **Lower rate of state and local agency participation during alcohol campaigns**
- **Accurate Problem IDs for the State and local agencies to select high crash locations to patrol**
- **High % speed related fatalities**
- **Accurate and reasonable coding of alcohol-related and speed related fatalities**

# Percent Alcohol Related Fatalities and Percent Belted Occupant Fatalities by Time of Day in Illinois in 2009-2013



# Percent Speed Related Fatalities Among Great Lakes States and US in 2009 - 2013



# Strategies to Combat Nighttime Belt Use and Alcohol Problems

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- In 2007, we started focusing on nighttime enforcement by asking the local and state law enforcement agencies to shift at least 50% of their enforcement activities from daytime to nighttime.
- Since 2011, all our enforcement grantees were required to conduct enforcement activities during major belt and alcohol campaigns at night.
- Nighttime hours are 9:00PM – 6:00AM

# Major Enforcement Campaigns in Illinois

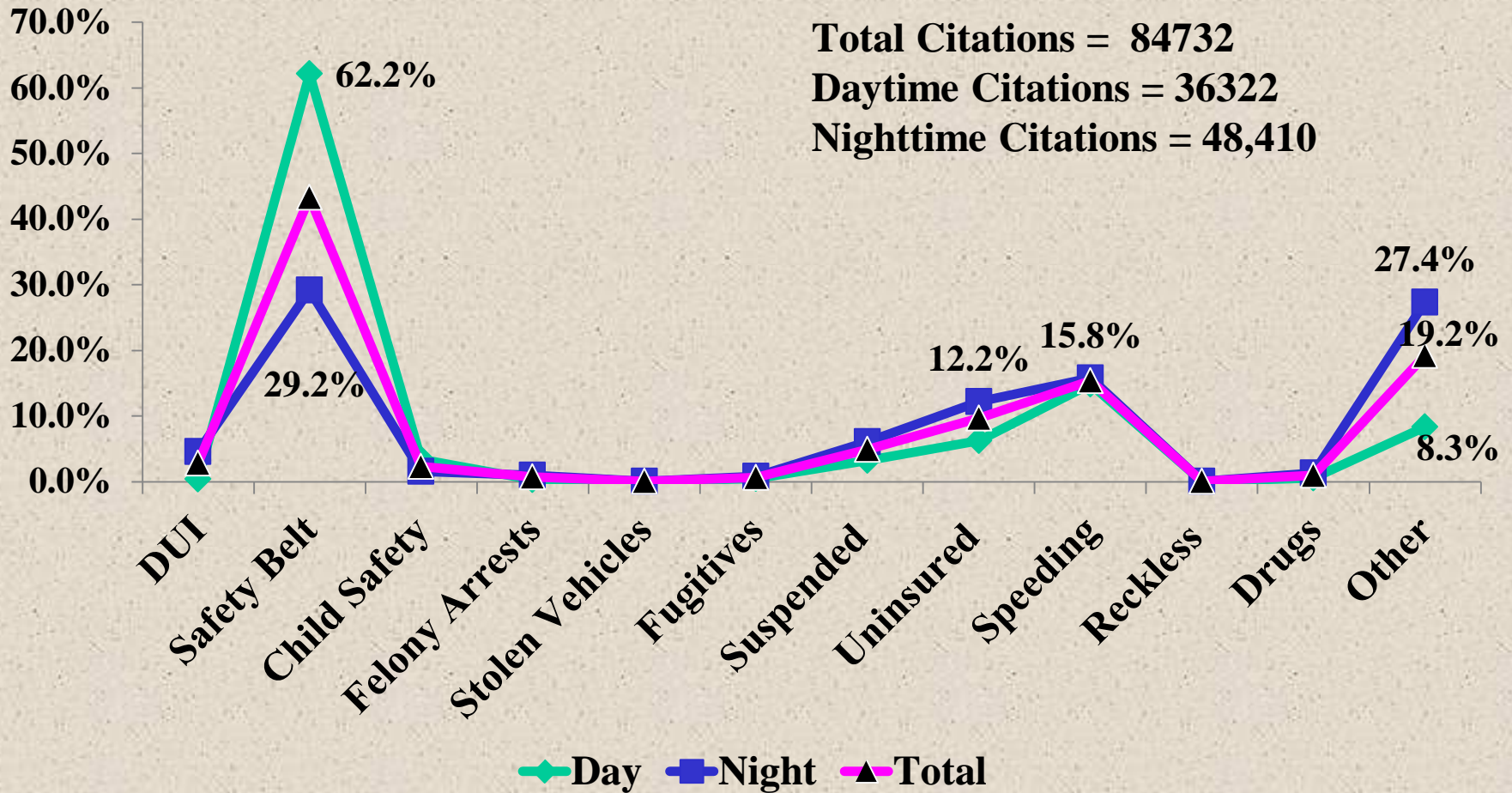
Thanksgiving (Belt)	Memorial Day (Belt)
Christmas (Alcohol)	July 4th (Alcohol)
Super Bowl (Belt/Alcohol)	Labor Day (Alcohol)
St. Patrick's (Belt/Alcohol)	Unassigned (locals) <sup>o</sup>
Cinco De Mayo (Belt/Alcohol)	Unassigned (ISP) <sup>†</sup>

<sup>†</sup> The hours and citations for the unassigned enforcement could not be broken down by daytime and nighttime enforcement activities.

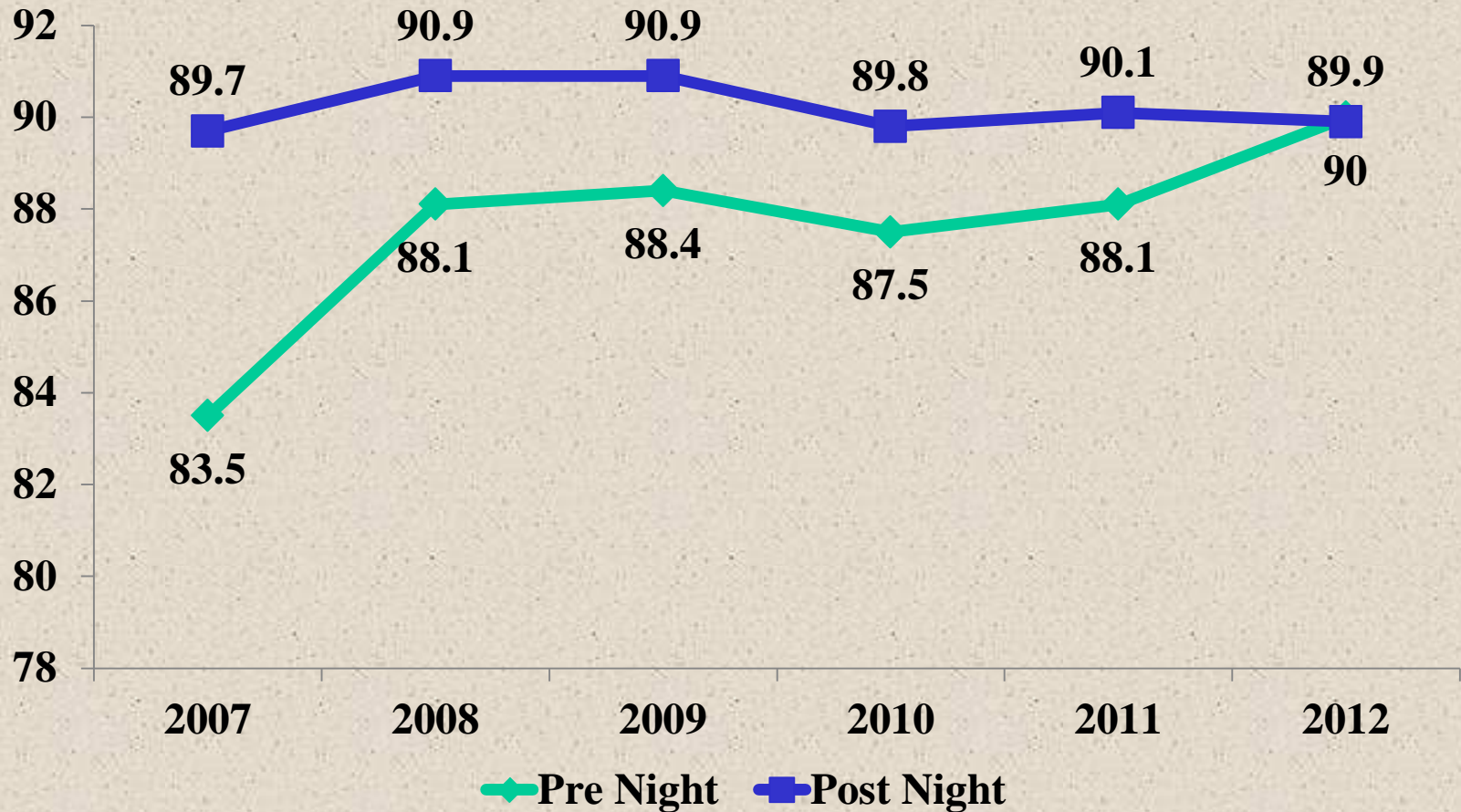
<sup>o</sup> Unassigned (locals) indicates local enforcement agencies conducted additional enforcement outside the required holiday campaigns.



# Percent Distribution of Citations During the Three Major Campaigns (Memorial, Labor Day and Thanksgiving)



# Nighttime Pre and Post Safety Belt Usage Rates

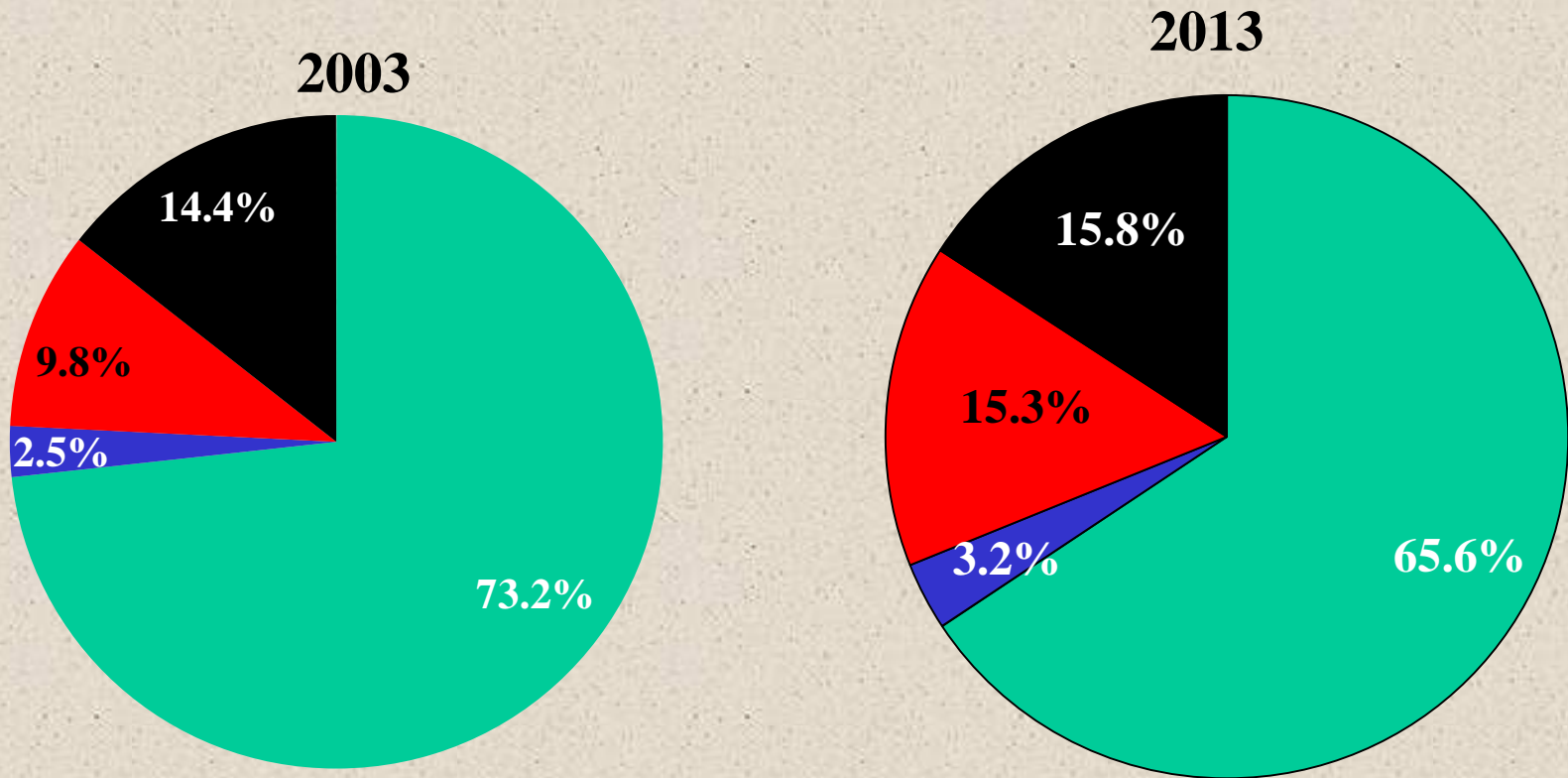


# Challenge (Non Occupants/Others)

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- **Pedestrian/Pedal-cycle**
- **Motorcycle Riders**
- **Others**
  - **Distracted Driving including cell phone and text messaging**

# Change in Composition of Fatalities



- Passenger vehicle occupants
- Large trucks, buses & other vehicle occupants
- Motorcyclists
- Peds, bicyclists & other non-occupants

# Motorcycle Helmet Use

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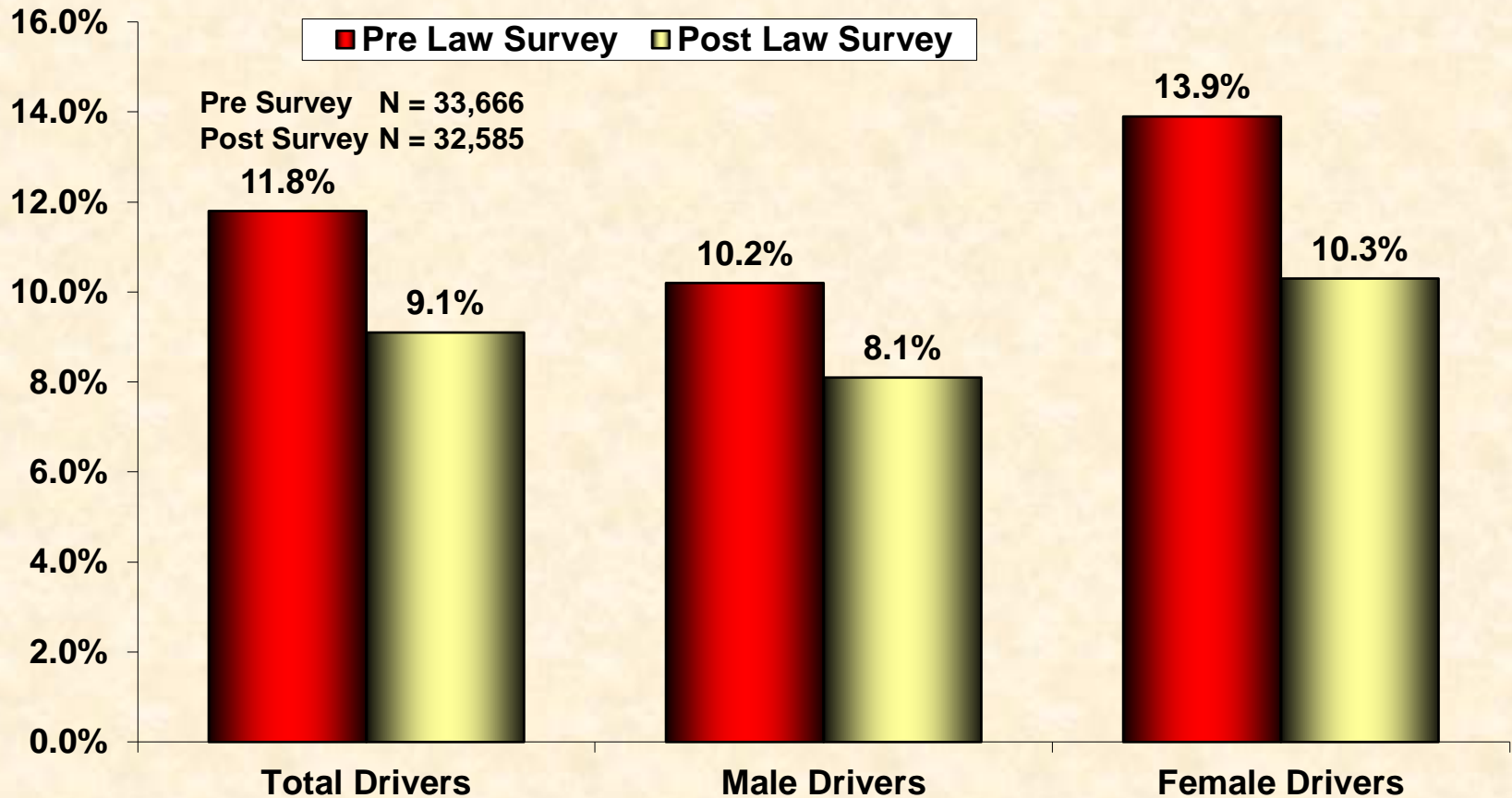
- **Motorcycle Helmet Usage Rate--Based on the recent annual survey of 288 sites in June 2015, the motorcycle helmet usage rate was 45.5 percent. It should be noted that Illinois does not have a helmet law. The 2014 FARS data show that the total number of motorcyclists who died in motor vehicle crashes went down by 22.7 percent from 152 fatalities in 2013 to 118 fatalities in 2014.**

# Helmet Laws

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- **Laws requiring all motorcyclists to wear a helmet are in place in 20 states and the District of Columbia (Universal Helmet Law)**
- **Laws requiring only some motorcyclists to wear a helmet are in place in 27 states**
- **There is no motorcycle helmet use law in 3 states (Illinois, Iowa, and New Hampshire)**

# Electronic Device Usage Rates by Gender in Illinois (Pre Law and Post Law Surveys)



# Challenges (Traffic Records/Data)

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- **Accuracy, and completeness of Crash Data**
- **Lack of a comprehensive and systematic data quality control**
- **Increase electronic reporting**
- **Integration of Crash and EMS data**
- **DUI Tracking System using SOS and Administrative Office of Courts**
- **Link vehicle and driver databases**



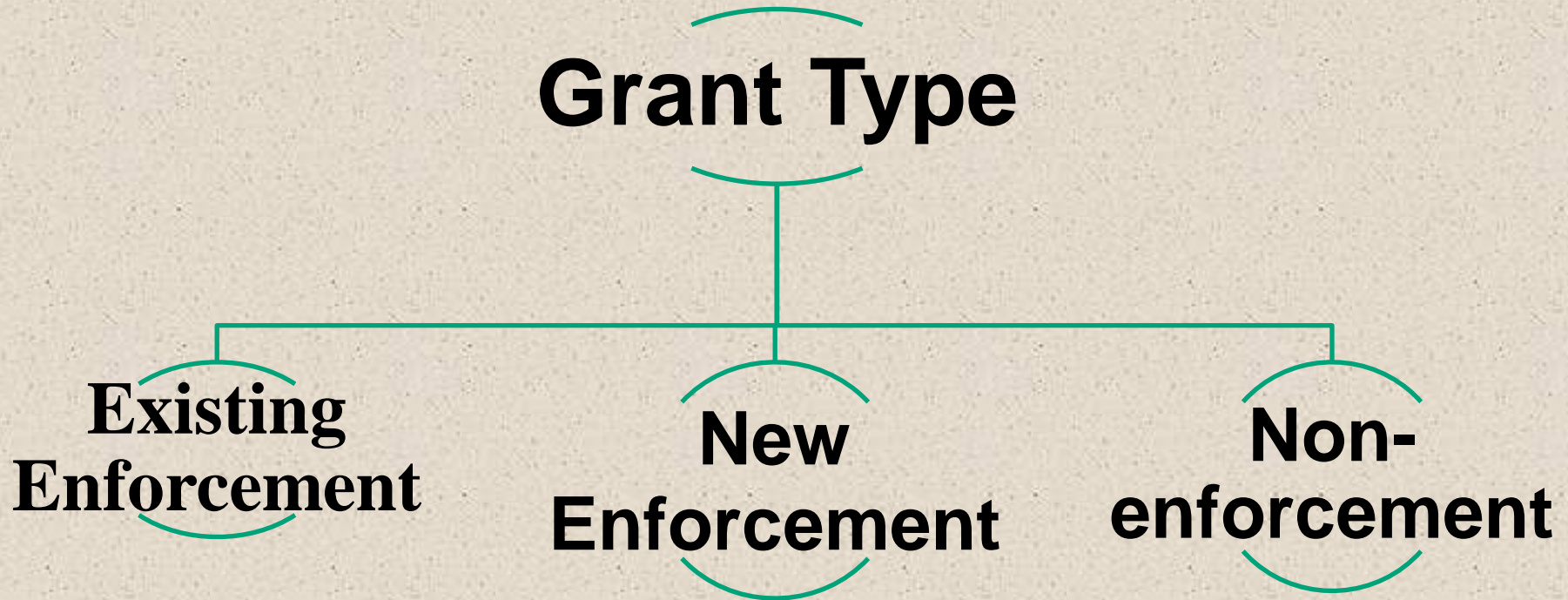
# Existing and Future Plans (Traffic Records/Data)

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- **Improve Data Accuracy and Integration (Crash & EMS Data) through CODES and IDPH projects (CODES grant and FHWA grant)**
- **Implementing Crash Data Quality Matrix in Illinois**
- **Improve the BAC reporting among survived drivers through access to Trauma Registry Data**

# Grants at DTS/IDOT

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# Project Selection Scorecard for Established Enforcement Grantees

Project Evaluation Form for Enforcement Grantees							
Reviewer #1:		Reviewer #2:		Reviewer #3:			
Agency:							
Project Request Title:							
Project Request Number:							
Requested Funding Level:		Recommended Funding Level:					
Selection Factors	Weight	Reviewer #1	Score	Reviewer #2	Score	Reviewer #3**	Comment
Located within 23 Counties	40		0		0		
Specific City Population and Crash Data							
City/Unincorporated population size of 25,000+	5		0		0		
Over 500 crashes for the last three years	5		0		0		
Over 20 percent fatal/injury crashes	5		0		0		
Adequate number of enforcement officers to implement the proposed objectives and have a reasonable budget	5		0		0		
Have successful previous performance (results of prior years of conducting enforcement activities for both daytime and nighttime):							
Submitting acceptable reports and claims	5		0		0		
Below average cost of citation	15		0		0		
Below average time it takes to issue citation per hour/minutes	15		0		0		
Above average nighttime enforcement hours	5		0		0		
<b>TOTAL</b>			0		0	AVG: 0.0	

\*Rating (1-low 2 3 4 5 6-high)

600

600

\*\*Reviewer #3: 1 = Accept, 2 = Reject, 3 = Accept with Changes

# Project Selection Scorecard for NEW Enforcement Grantees

Project Evaluation Form for <u>NEW</u> Enforcement Grantees							
Reviewer #1:		Reviewer #2:			Reviewer #3:		
Agency:							
Project Request Title:							
Project Request Number:							
Requested Funding Level:		Recommended Funding Level:					
Selection Factors	Weight	Reviewer #1	Score	Reviewer #2	Score	Reviewer #3**	Comment
Located within 23 Counties	50	0	0	0	0		
Specific City Population and Crash Data							
City/Unincorporated population size of 25,000+	5	0	0	0	0		
Over 500 crashes for the last three years	10	0	0	0	0		
Over 20 percent fatal/injury crashes	10	0	0	0	0		
Adequate number of enforcement officers to implement the proposed objectives and have a reasonable budget	25	0	0	0	0		
<b>TOTAL</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>AVG: 0.0</b>	

\*Rating (1-low 2 3 4 5 6-high)

600

600

\*\*Reviewer #3: 1 = Accept, 2 = Reject, 3 = Accept with Changes

# Project Selection Scorecard for NON-Enforcement Grantees

Project Evaluation Form for Non-Enforcement Grantees							
Reviewer #1:		Reviewer #2:		Reviewer #3:			
Agency:							
Project Request Title:							
Project Request Number:							
Requested Funding Level:		Recommended Funding Level:					
Selection Factors	Weight	Reviewer #1	Score	Reviewer #2	Score	Reviewer #3**	Comment
Located within 23 Counties	20		0		0		
Affected Population (the higher the number of the affected population the higher the rating of the score)	10		0		0		
Adequate staff experience and qualification to implement the proposed objectives	10		0		0		
Have successful previous work experience based on the annual evaluation	15		0		0		
<b>Project Evaluation: Does the project request:</b>							
Address a safety problem adequately?	10		0		0		
Have measurable and reasonable goals?	5		0		0		
Method(s) of resolving specific safety problems?	5		0		0		
Reasonable budget?	5		0		0		
Have an evaluation component?	5		0		0		
<b>TOTAL</b>			0		0	AVG: 0.0	

\*Rating (1-low 2 3 4 5 6-high)

600

600

\*\*Reviewer #3: 1 = Accept, 2 = Reject, 3 = Accept with Changes



# Where to obtain information for Enforcement Project Evaluation Forms

Use Excel spreadsheet labeled 'FY 2015 Project Selection Criteria' provided by Evaluation Unit staff for the following items:

- 1) Located within 23 counties
- 2) City/Unincorporated population size of 25,000+
- 3) Over 500 crashes for the last three years
- 4) Over 20 percent fatal/injury crashes
- 5) Adequate number of enforcement officers to implement proposed objectives and have a reasonable budget
- 6) Below average cost of citation
- 7) Below average time it takes to issue citation per hour/minutes
- 8) Above average nighttime enforcement hours

# Where to obtain information for NON-Enforcement Project Evaluation Form

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Use Excel spreadsheet labeled 'FY 2015 Project Selection Criteria' provided by Evaluation Unit staff for the following items:

- 1) Located within 23 Counties
- 2) Affected population

Refer to Project Proposal for the following items:

- 3) Adequate Staff experience and qualification
- 4) Address a safety problem adequately
- 5) Have measurable and reasonable goals
- 6) Methods of resolving specific safety problems
- 7) Reasonable budget
- 8) Have an evaluation component



## **Additional Supporting Materials (optional):**

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- 1) Enforcement Activity Reports (select enforcement table at the following link):**  
<http://www.idot.illinois.gov/transportation-system/safety/evaluations>
- 2) U.S. Census:**  
<http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>
- 3) Fatal Accident Reporting System (FARS):**  
<http://www-fars.nhtsa.dot.gov/Main/index.aspx>
- 4) Illinois Roadway Crash Data:**  
<http://www.idot.illinois.gov/transportation-system/safety/Illinois-Roadway-Crash-Data>

# Common Mistakes in Completing TS 205 Form

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- Leaving the wrong campaign box checked
- Using last year's project number
- Incorrectly reporting hours worked, Sections II,III and IV
- Reporting a certain number of details, but not reporting hours for that type of detail, Sections II,III and IV (**Agency will report working 3 saturation patrols, but list hours worked for roadside safety check only**).
- Reporting daytime or nighttime citations but not reporting hours for that time of the day/night, Section V (**Agency will report citations for daytime, but no hours for daytime enforcement**).
- Not updating media effort numbers on each report (**Agency either leaves blank or doesn't update media efforts from last report**).

# Contact Information

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DTS' Evaluation Website:

<http://www.idot.illinois.gov/transportation-system/safety/evaluations>