

# THE ECONOMIC AND SOCIETAL IMPACT OF MOTOR VEHICLE CRASHES

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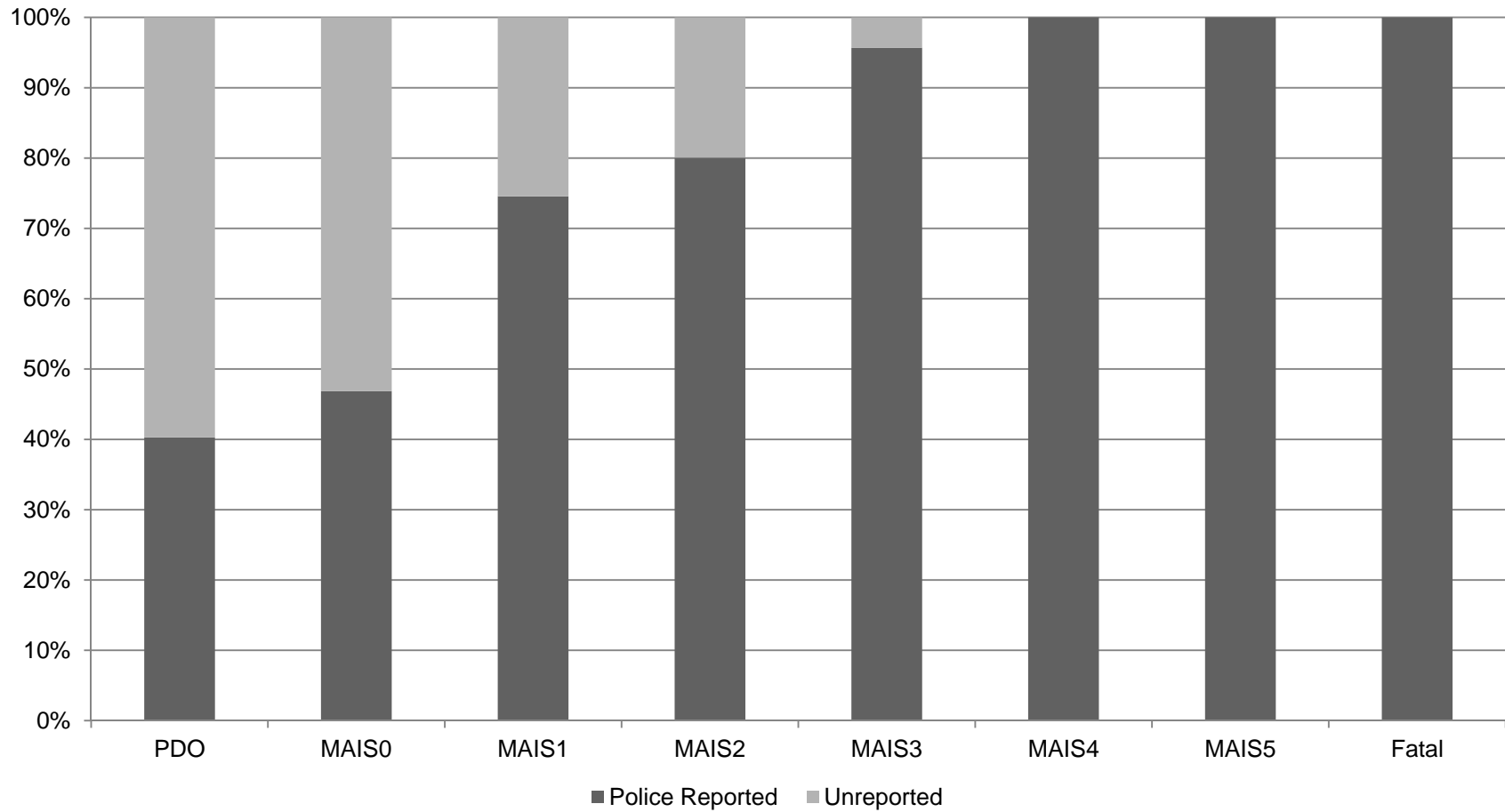


# Basic Findings

	2010	2000
Fatalities	32,999	41,821
Nonfatal Injuries	3.9 million	5.3 million
Damaged Vehicles	24 million	28 million
Economic Cost	\$277 billion	\$231 billion
Societal Harm	\$871 billion	NA

# Many Crashes are Unreported

## Distribution of Police Reported/Unreported Injuries



# Economic Cost Components

**Medical Care**

**Emergency Services**

**Market Productivity**

**Household Productivity**

**Legal Costs**

**Insurance Administrative Costs**

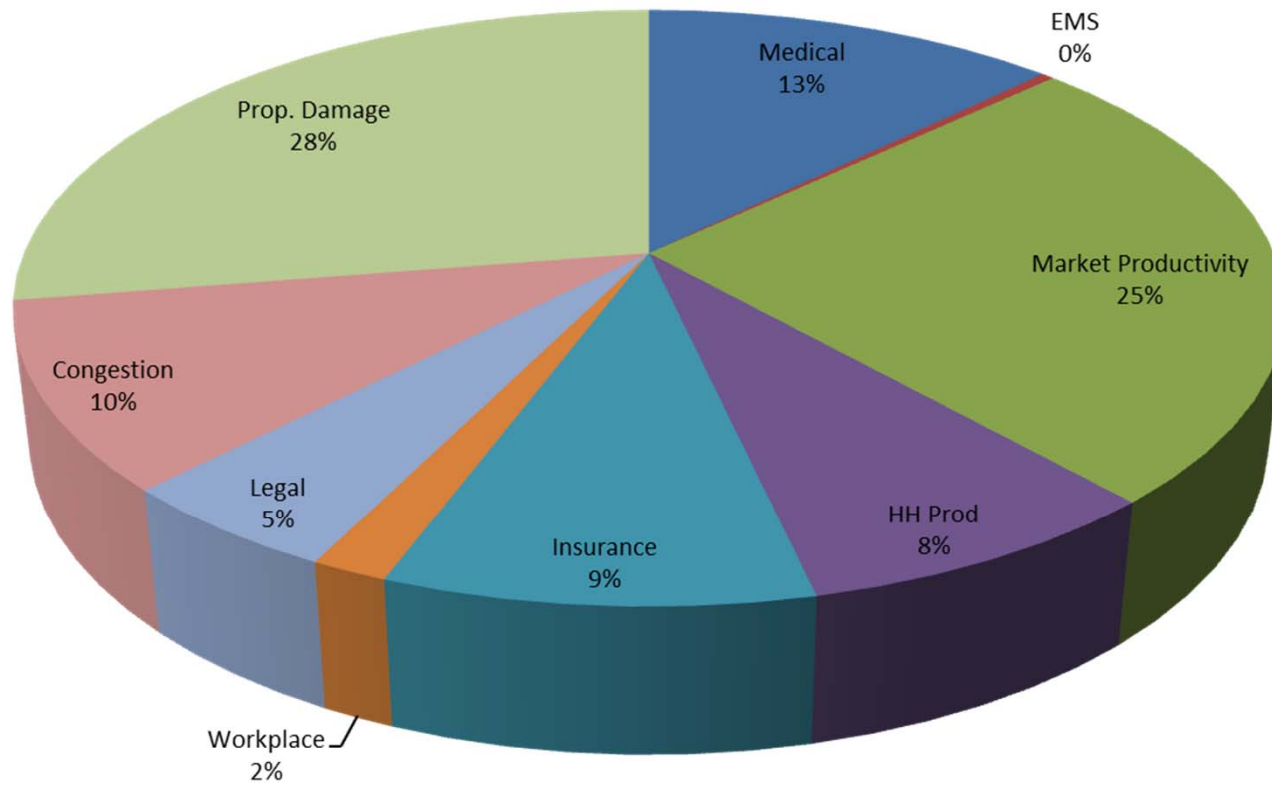
**Workplace Costs**

**Property Damage**

**Congestion**

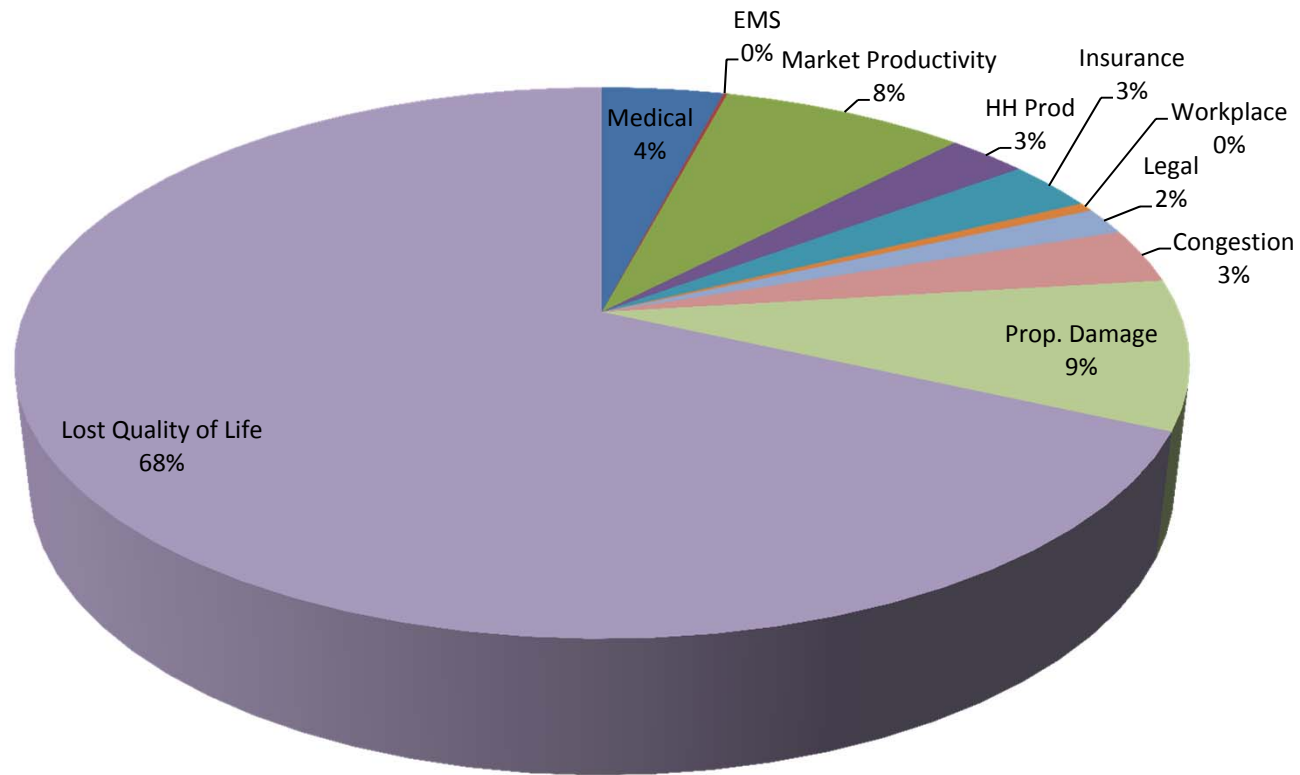
# Which Impacts are the Most Costly?

## Components of Total Economic Costs



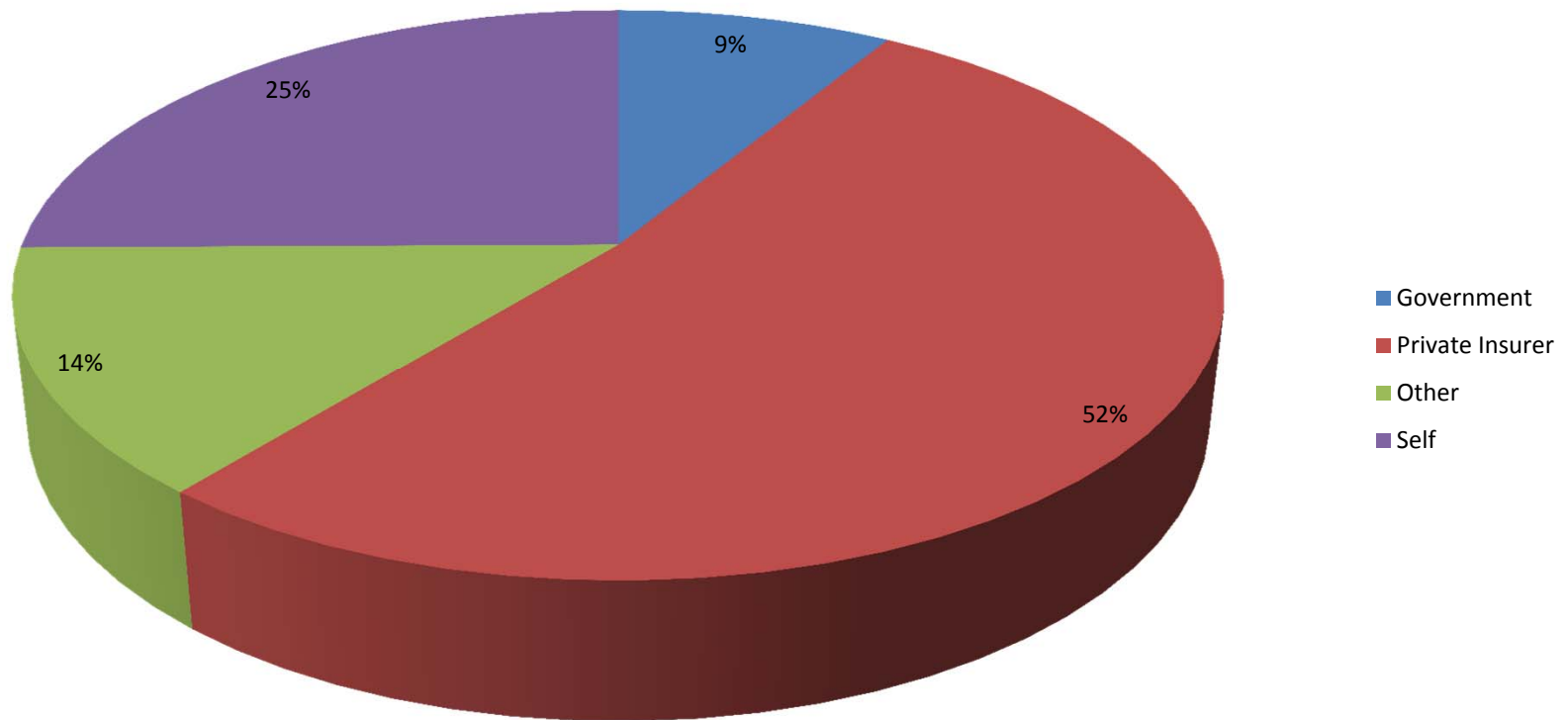
# Comprehensive Impacts

## Components of Comprehensive Costs



# Who Pays the Costs?

## Source of Payment for Motor Vehicle Crash Costs



# Costs of Behavioral Risk Factors

**Alcohol use**

**Speeding**

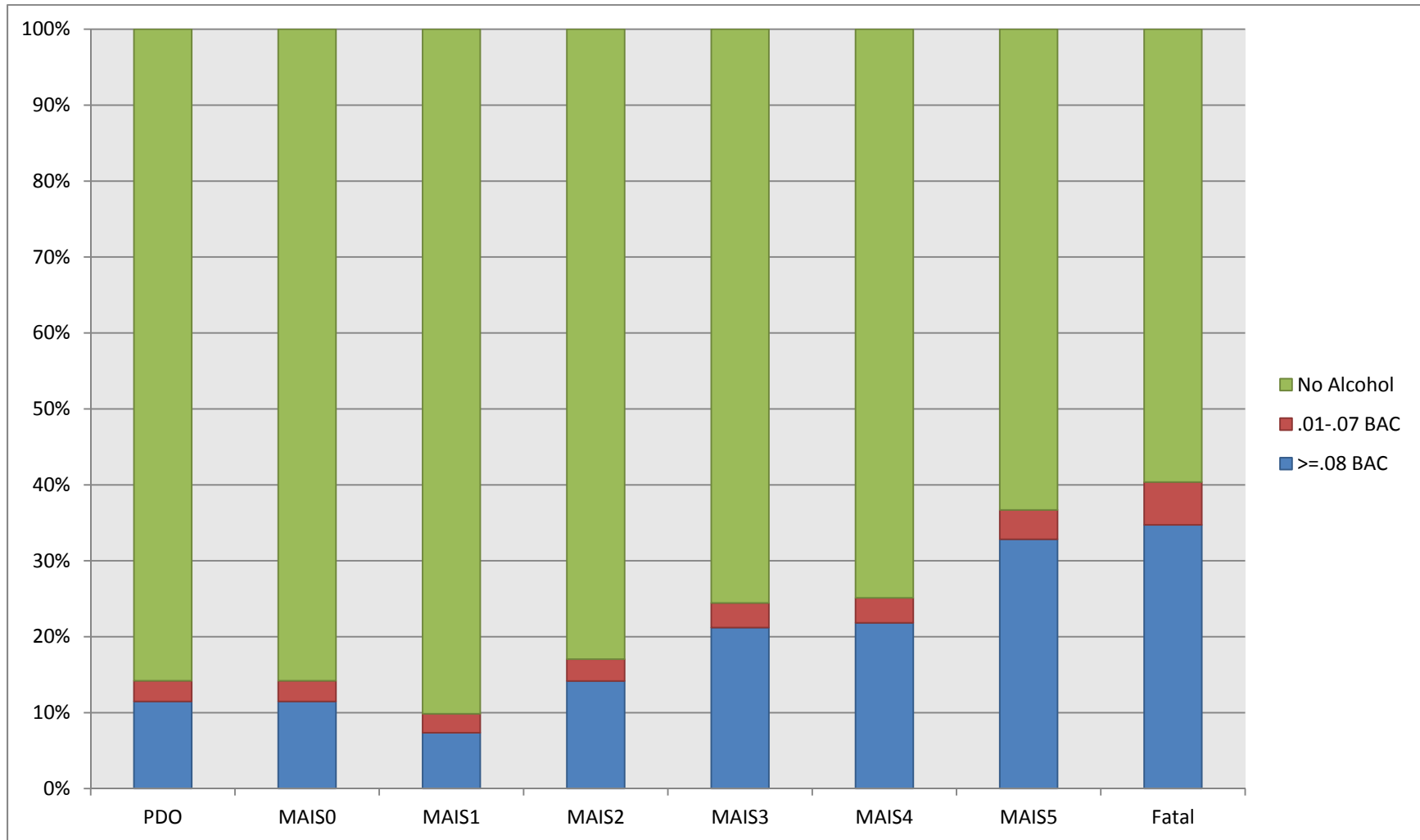
**Distracted Driving**

**Motorcycle Helmet non-use**

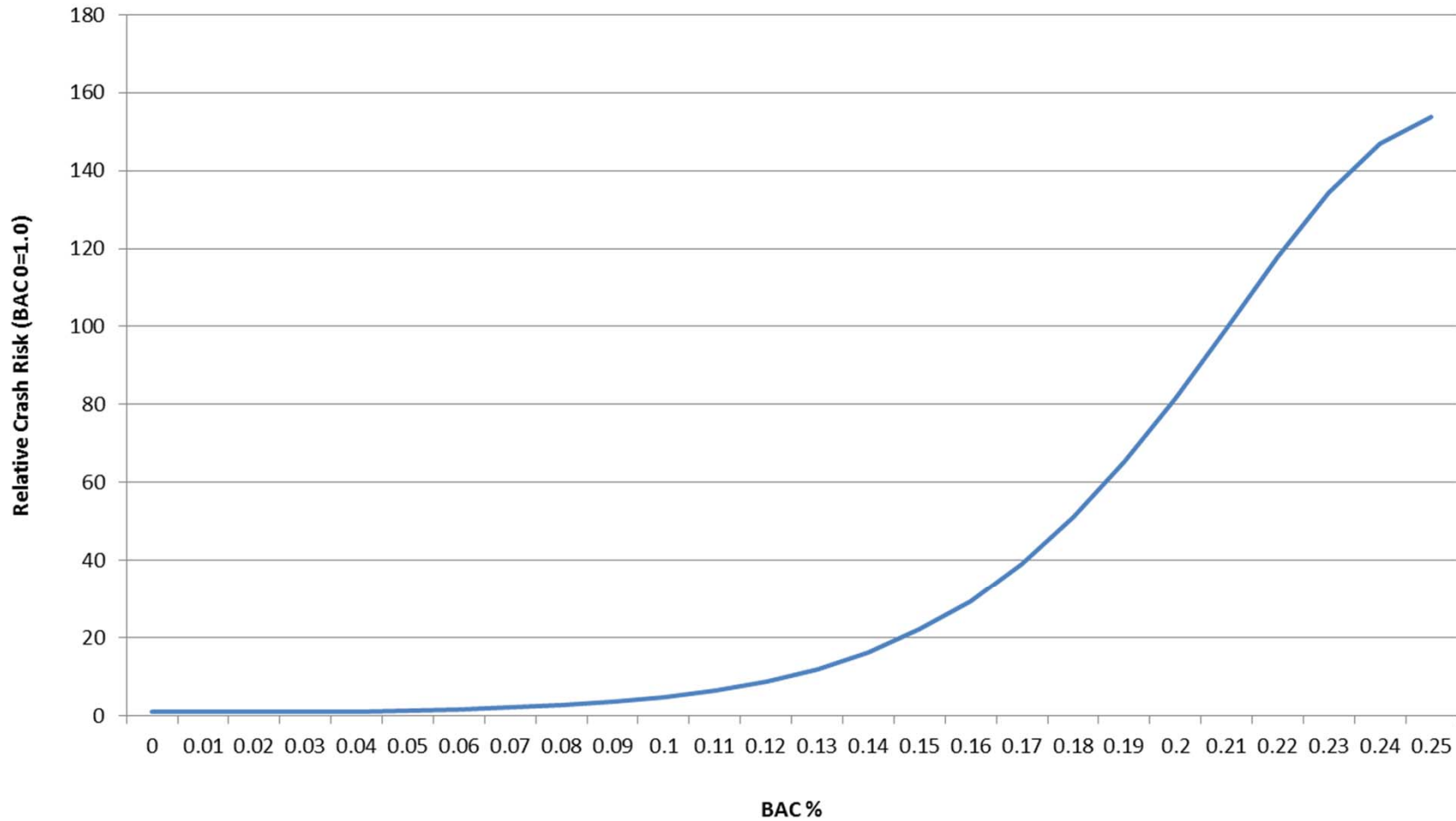
**Seat Belt non-use**



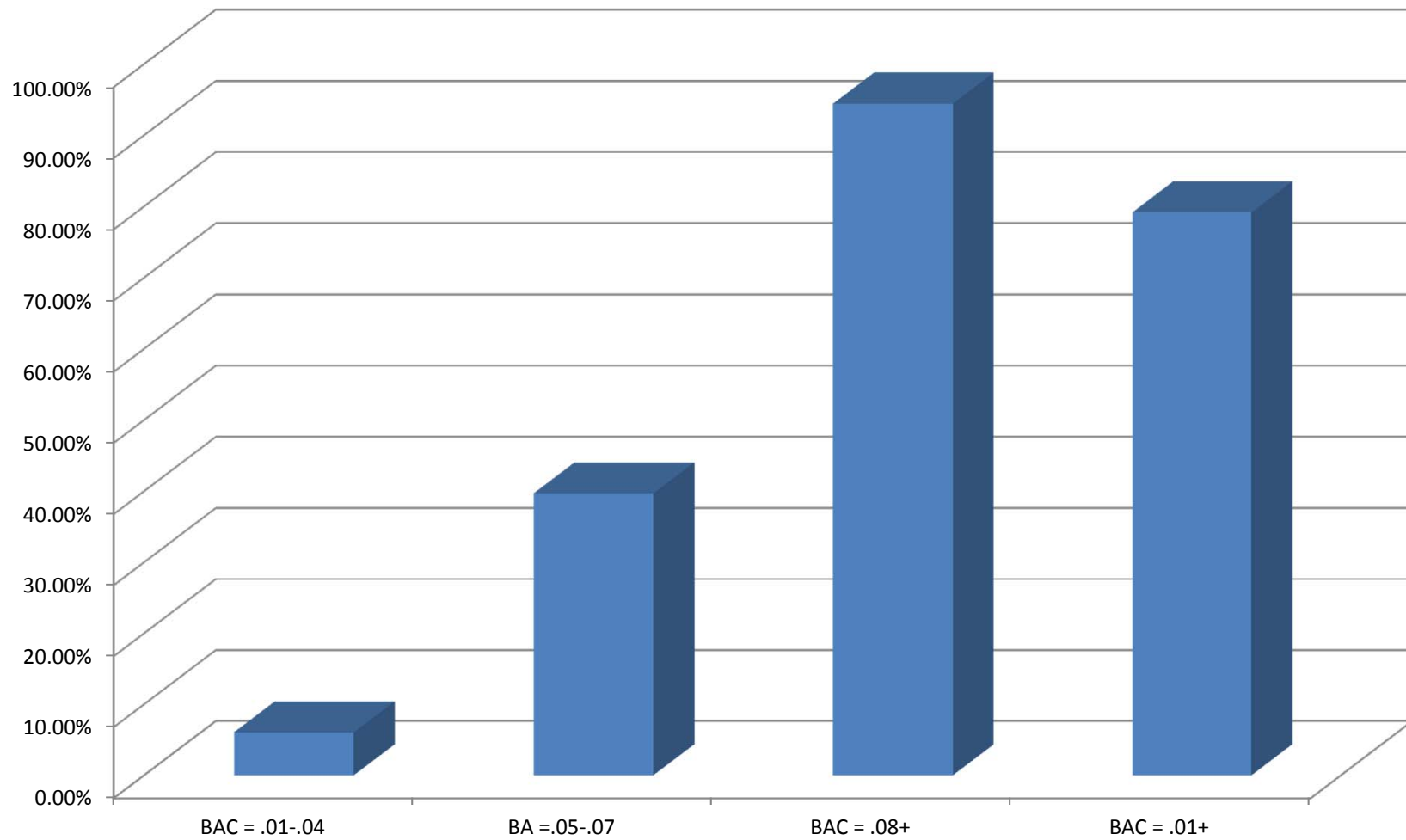
# Alcohol involvement by crash severity



# Crash risk rises dramatically when BAC exceeds .08

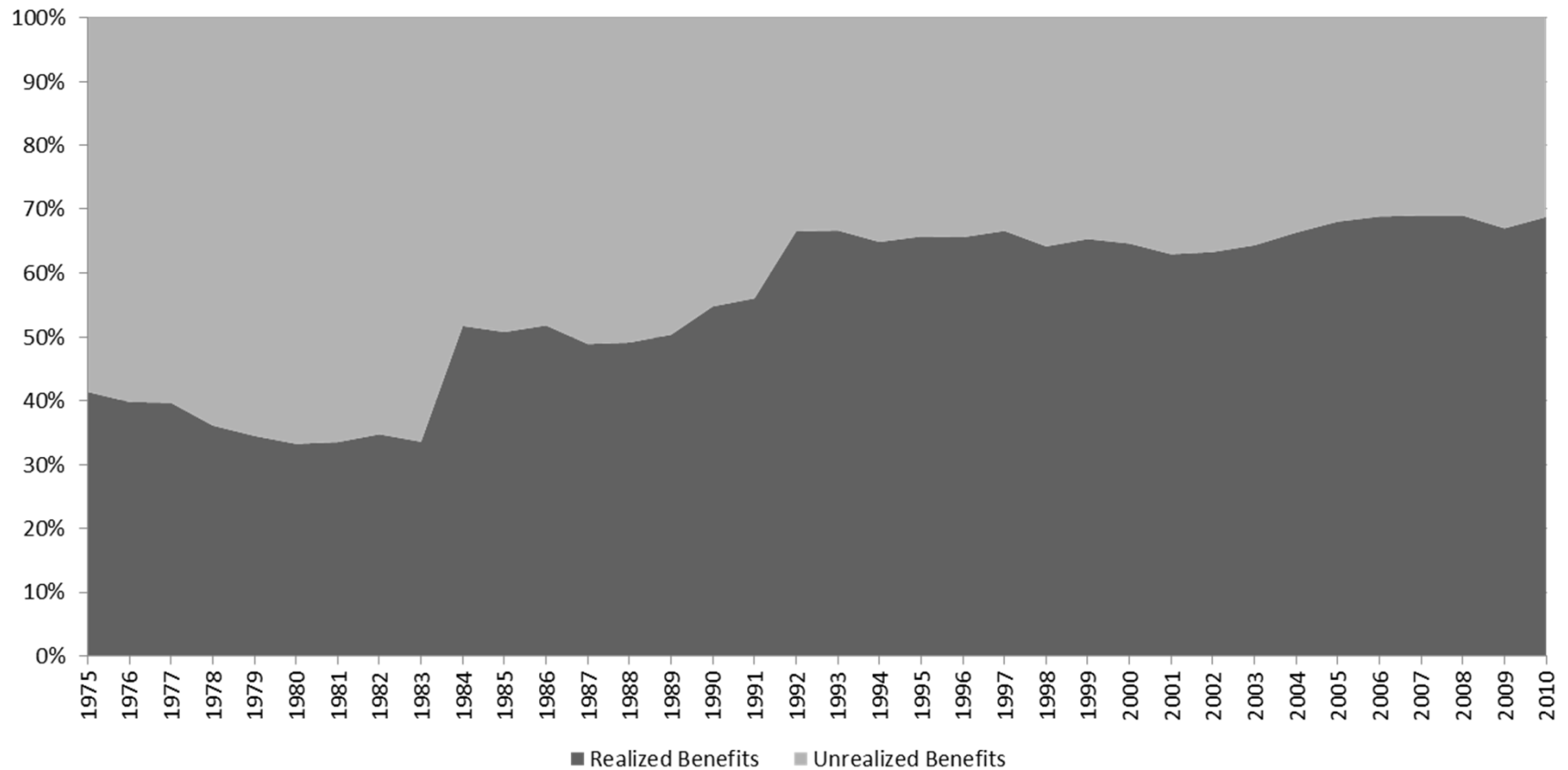


# Alcohol is not necessarily the cause of the crash



# Motorcycle Helmets

## Realized and Unrealized Fatality Benefits from Motorcycle Helmet Use

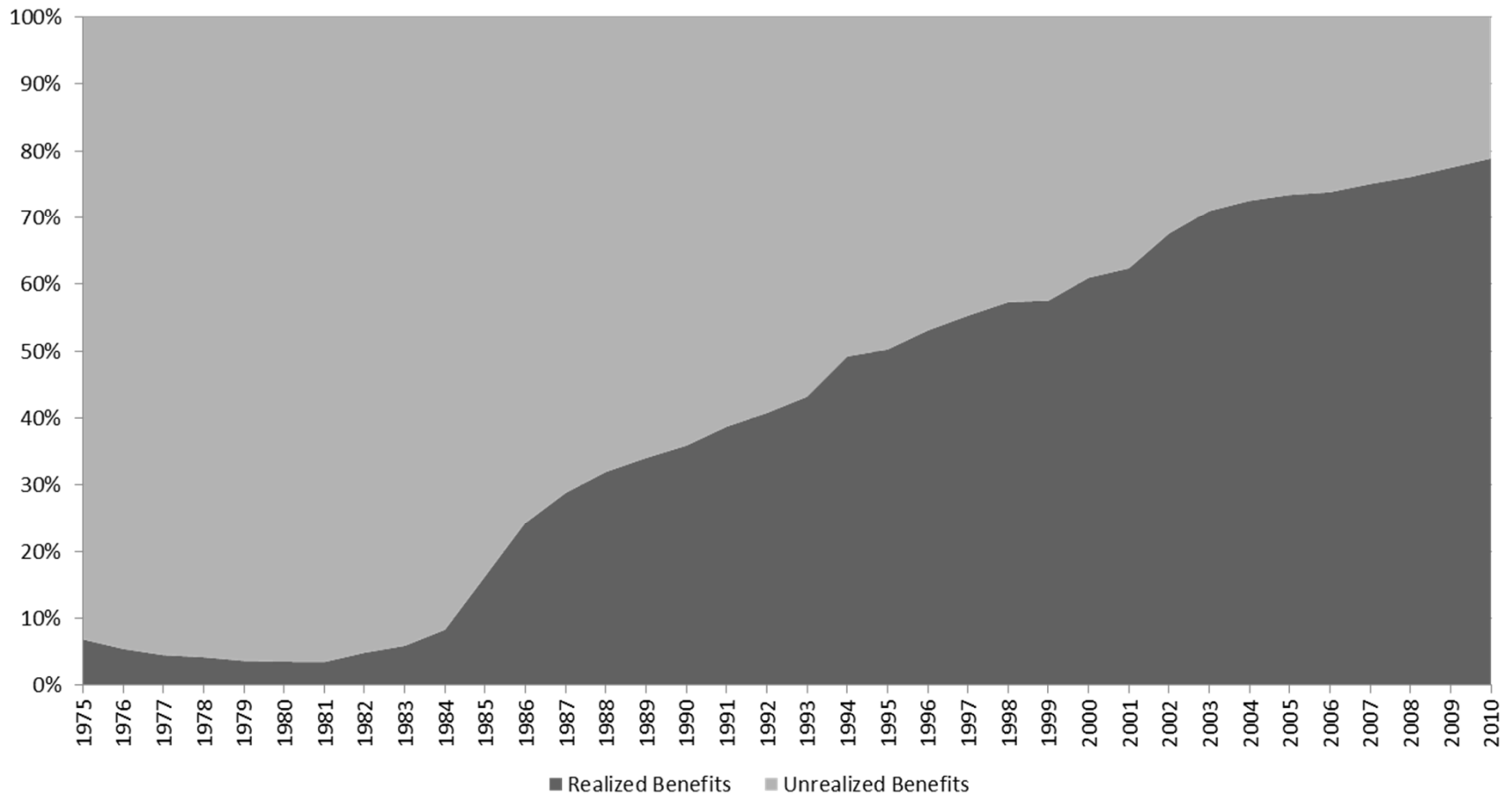


## Impacts of Motorcycle Helmet Use

	Saved	Lost	% Realized
Lives (annual)	1,556	708	69%
Lives 1975-2010	33,544	28,878	54%
Economic B\$ (annual)	\$3	\$1	68%
Economic B\$ 1975-2010	\$62	\$49	56%
Harm B\$ (annual)	\$17	\$8	69%
Harm B\$ 1975-2010	\$370	\$300	55%

# Seat Belts

## Realized and Unrealized Fatality Benefits from Seat Belt Use

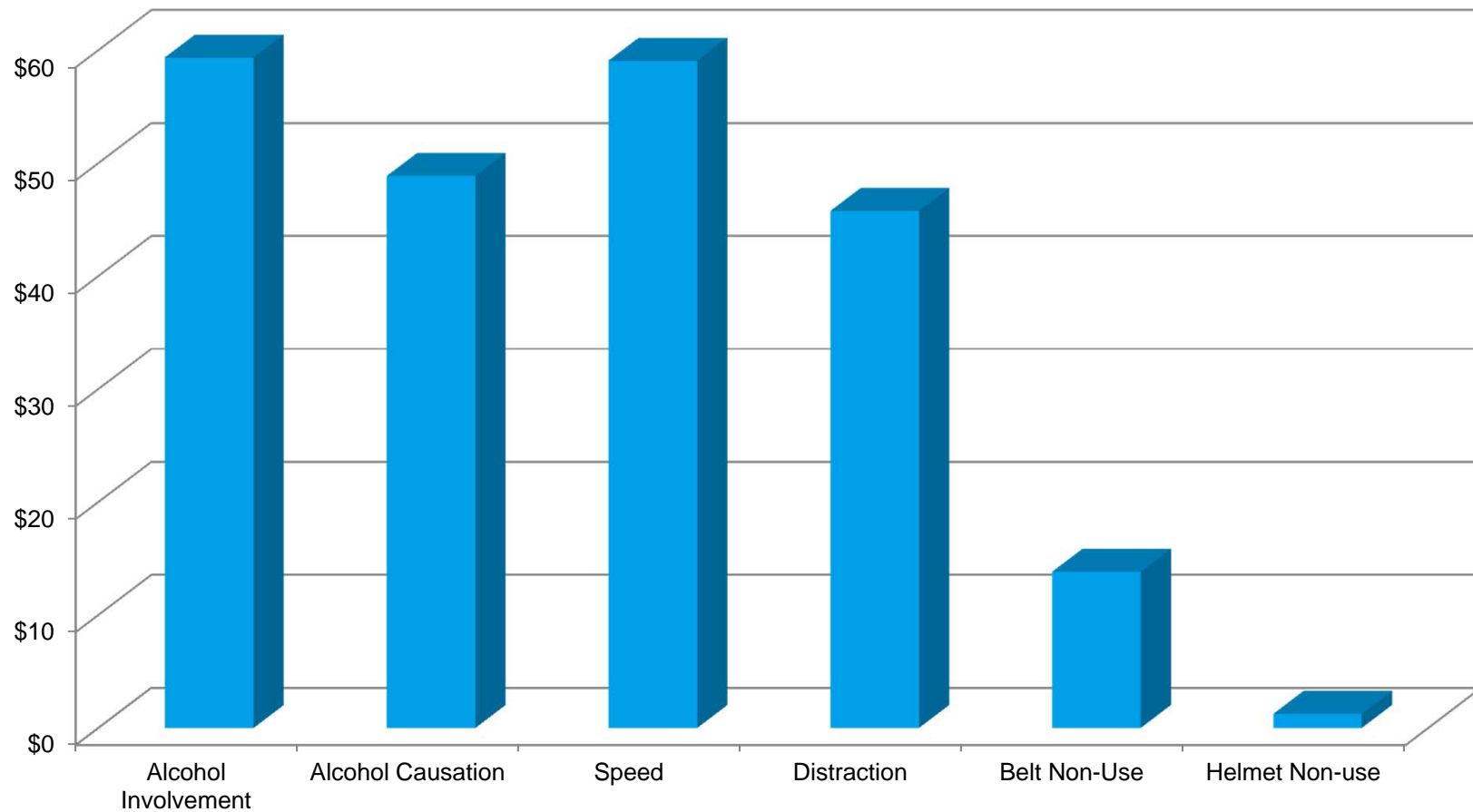


## Impacts of Seat Belt Use

	Saved	Lost	% Realized
Lives (annual)	12,500	3,350	79%
Lives 1975-2010	280,000	367,000	43%
Economic B\$ (annual)	\$69	\$14	83%
Economic B\$ 1975-2010	\$1,610	\$1,490	52%
Harm B\$ (annual)	\$349	\$72	83%
Harm B\$ 1975-2010	\$8,066	\$7,776	51%

# Relative Impact of Behavioral Risk Factors, Economic Costs

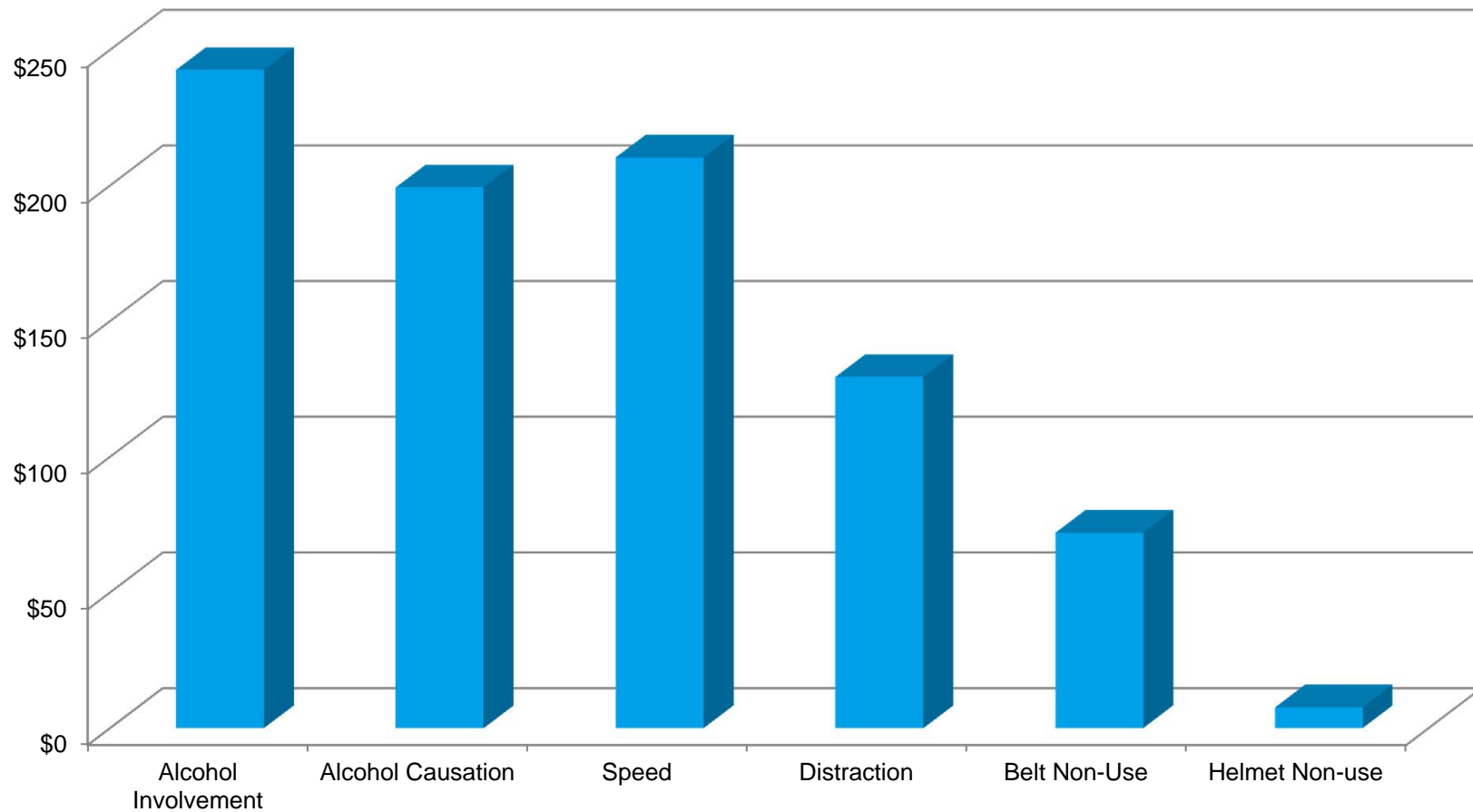
## Economic Cost of Behavioral Risk Factors(\$B)





# Relative Impact of Behavioral Risk Factors, Societal Harm

## Comprehensive Cost of Behavioral Risk Factors(\$B)



# Cost Summary

	<i>Economic Cost (millions of 2010\$)</i>	<i>% Total</i>	<i>Comprehensive Cost (millions of 2010\$)</i>	<i>% Total</i>
<i>Outcome Severity:</i>				
<i>Fatalities</i>	\$46,163	16.7%	\$301,809	34.7%
<i>Nonfatal Injuries</i>	\$146,347	52.8%	\$484,506	55.6%
<i>PDO Vehicles</i>	\$71,480	25.8%	\$71,480	8.2%
<i>Uninjured (MAIS0)</i>	\$13,030	4.7%	\$13,030	1.5%
<i>Total</i>	\$277,020	100.0%	\$870,826	100.0%
<i>Adverse Driver Behavior:</i>				
<i>Seat Belt Non-use</i>	\$13,819	5.0%	\$71,984	8.3%
<i>Helmet non-use</i>	\$1,251	0.5%	\$7,606	0.9%
<i>Distraction</i>	\$45,763	16.5%	\$129,452	14.9%
<i>Alcohol Involvement</i>	\$59,362	21.4%	\$242,602	27.9%
<i>Alcohol Causation</i>	\$48,858	17.6%	\$199,346	22.9%
<i>Speed</i>	\$59,078	21.3%	\$210,342	24.2%
<i>Non-Occupants:</i>				
<i>Motorcycles</i>	\$13,537	4.9%	\$66,380	7.6%
<i>Pedestrian/Cyclist</i>	\$19,443	7.0%	\$91,150	10.5%
<i>Crash Types:</i>				
<i>Roadway Departure Crashes</i>	\$73,313	26.5%	\$307,022	35.3%
<i>Single Vehicle Crashes</i>	\$88,605	32.0%	\$357,052	41.0%
<i>Crash Location:</i>				
<i>Interstate Highway Crashes</i>	\$27,983	10.1%	\$88,203	10.1%
<i>Intersection Crashes</i>	\$139,535	50.4%	\$390,512	44.8%
<i>Urban roadways</i>	\$170,553	61.6%	\$491,064	56.4%
<i>Rural roadways</i>	\$106,467	38.4%	\$379,762	43.6%

# Incidence Summary

Severity	Police Reported	Not Police Reported	Total	Percent Unreported
<b>Vehicles</b>				
Injury Vehicles	3,225,839	2,121,769	5,347,608	39.7%
PDO Vehicles	7,454,761	11,053,871	18,508,632	59.7%
Total Vehicles	10,680,601	13,175,640	23,856,241	55.2%
<b>People in Injury Crashes</b>				
MAIS0	2,147,857	2,435,409	4,583,265	53.1%
MAIS1	2,578,993	880,207	3,459,200	25.4%
MAIS2	271,160	67,570	338,730	19.9%
MAIS3	96,397	4,343	100,740	4.3%
MAIS4	17,086	0	17,086	0.0%
MAIS5	5,749	0	5,749	0.0%
Fatal	32,999	0	32,999	0.0%
Total	5,150,241	3,387,528	8,537,770	39.7%
Total Injuries	3,002,385	952,120	3,954,504	24.1%
<b>Crashes</b>				
PDO	4,255,495	6,310,019	10,565,514	59.7%
Injury	1,791,572	1,178,391	2,969,963	39.7%
Fatal	30,296	0	30,296	0.0%
Total Crashes	6,077,362	7,488,411	13,565,773	55.2%