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# 2002 Annual Assessment

National Center for Statistics & Analysis



Link to black and white version at:

<http://www-nrd.nhtsa.dot.gov/pdf/nrd-30/NCSA/Rpts/2003/Assess02BW.pdf>

## *Motor Vehicle Traffic Crash Fatality and Injury Estimates for 2002*

*Based on  
The Fatality Analysis Reporting System (FARS)  
and  
The National Automotive Sampling System  
General Estimates System (NASS GES)*



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# The 2002 Annual Assessment

National Center for Statistics & Analysis



This report updates the estimates from the 2002 Early Assessment numbers released in April 2003, which were based on incomplete/partial data. It also compares estimates of fatalities and injuries resulting from motor vehicle traffic crashes occurring in 2002 with estimates from final 2001 file. The 2002 estimates are based on Fatality Analysis Reporting System (FARS) and NASS General Estimates System (GES) files, as indicated in the sources listed on page 4. These estimates will be updated based on final FARS files released next year.



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# Data Sources

National Center for Statistics & Analysis



- **Crash Data**
  - ◆ **Fatality Analysis Reporting System (FARS)**
    - **2001 (and prior years) Final File**
    - **2002 Annual Report File**
  - ◆ **NASS General Estimates System (GES )**
    - **2002 (and prior years) Annual File**
- **Exposure Data**
  - ◆ **Vehicle Miles of Travel (VMT)**
    - **Federal Highway Administration (FHWA)**  
**March 2003 Traffic Volume Trends (TVT) Report**
  - ◆ **Registered Vehicles**
    - **Based on NHTSA's Projections and R.L.Polk**
  - ◆ **Population Estimates (based on 2000 Census)**
    - **Census Bureau**



# The 2002 Annual Assessment - Contents -

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<b>Long Term Trends and Comparison of 2002 Data to 2001 Data</b>	.....	Page	5
<b>Where were the Increases in Fatalities?</b>	.....	Page	18
<b>Fatalities by State</b>	.....	Page	23
<b>Agency Priorities</b>	.....	Page	30
Alcohol	.....	Page	31
Safety Belts	.....	Page	51
Rollovers	.....	Page	55
Vehicle Compatibility	.....	Page	67
<b>Other Focus Areas</b>	.....	Page	78
Motorcycles	.....	Page	79
Large Trucks	.....	Page	86
Non-Occupants	.....	Page	93
Children and Youth	.....	Page	97



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# *Long Term Trends and Comparison of 2002 Data to 2001 Data*



# 2002 Data Show ...

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- The Number of Persons Killed in Motor Vehicle Traffic Crashes **increased 1.5%...** reaching the Highest Level since 1990

But...

the Number of Persons Injured **declined.**



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# Persons Killed and Injured and Number of Crashes

National Center for Statistics & Analysis



	Year		% Change
	2001	2002	
<b>Persons Killed</b>	<b>42,196</b>	<b>42,815</b>	<b>+1.5%</b>
<b>Persons Injured</b>	<b>3,033,000</b>	<b><i>2,926,000</i></b>	<b><i>-3.5%</i></b>
<b>Fatal Crashes</b>	<b>37,862</b>	<b>38,309</b>	<b>+1.2%</b>
<b>Nonfatal Crashes</b>	<b>6,285,000</b>	<b>6,277,000</b>	<b>-0.1%</b>
<b>Injury Crashes</b>	<b>2,003,000</b>	<b><i>1,929,000</i></b>	<b><i>-3.7%</i></b>
<b>Property-Damage-Only</b>	<b>4,282,000</b>	<b>4,348,000</b>	<b>+1.5%</b>

Unless otherwise noted, changes in Persons Injured and Nonfatal Crashes are not statistically significant.

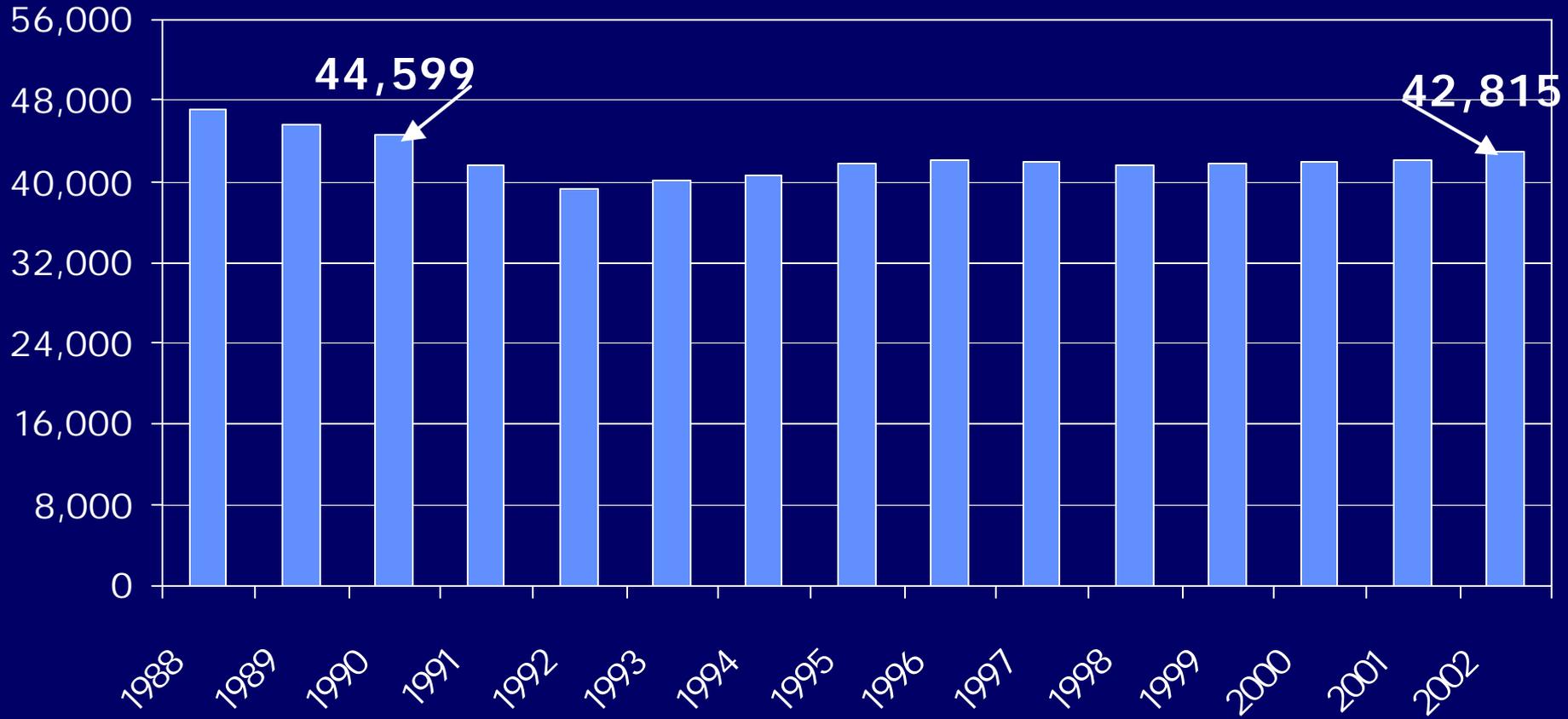
*Italics* signify Statistically Significant Change

Sources: FARS, NASS GES



# Persons Killed in Traffic Crashes by Year

National Center for Statistics & Analysis

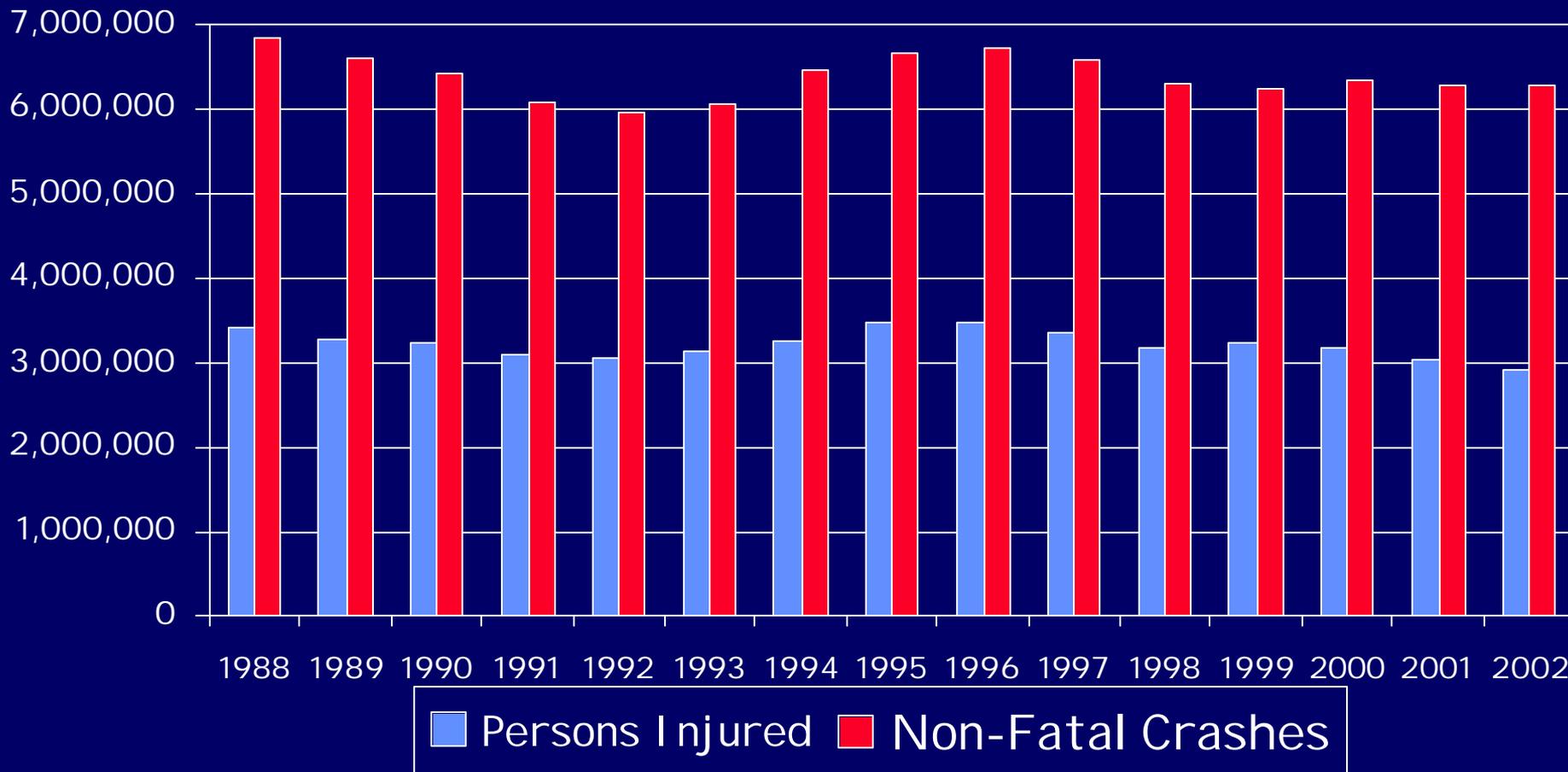


Source: FARS



# Non-Fatal Crashes and Persons Injured, by Year

National Center for Statistics & Analysis



Sources: NASS GES



# 2002 Data Show ...

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- **Fatality Rates remain at Historic Lows**
- **Injury Rates Declined**



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# Exposure Data

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Exposure Measure	Year		% Change
	2001	2002	
Vehicle Miles Traveled	2,781,462M	2,829,645M*	+1.7%
Registered Vehicles	221,230,000	225,655,000**	+2.0%
Population	285,317,559	288,368,698	+1.1%

\*FHWA's Estimate from Mar. 2003 Traffic Volume Trends

\*\*Based on NHTSA's Projections

Sources: R.L. Polk, FHWA, Census Bureau



# Motor Vehicle Crash Fatality and Injury Rates

National Center for Statistics & Analysis



Rate	Year		% Change
	2001	2002	
<b>Persons Killed</b>			
/100M VMT	1.52	1.51	-0.3%
/100K Reg. Vehicles	19.07	18.97*	-0.5%
/100K Population	14.79	14.85	+0.4%
<b>Persons Injured</b>			
/100M VMT	109	103	-5.5%
/100K Reg. Vehicles	1,371	1,297*	-5.4%
/100K Population	1,063	1,015	-4.5%

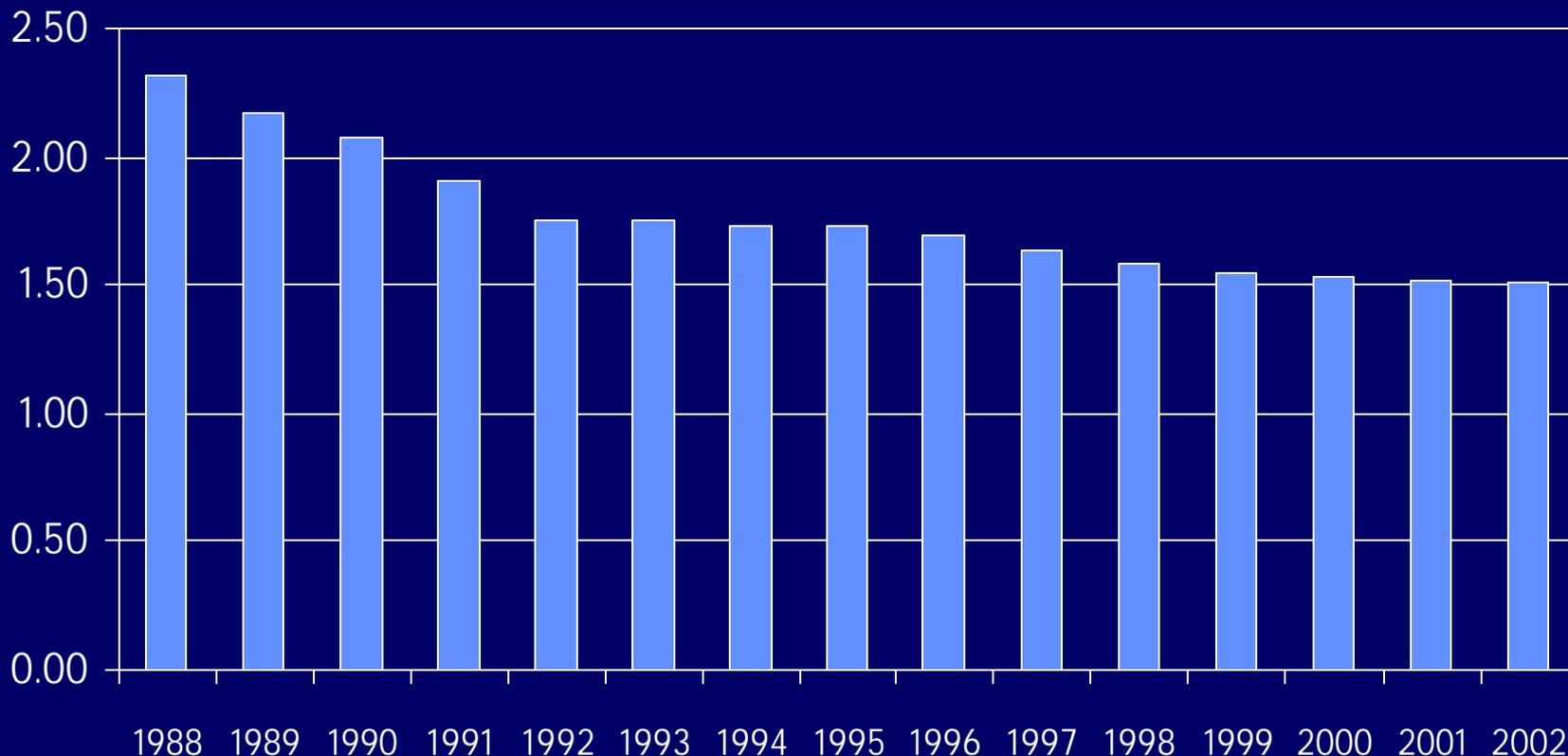
\* Reg. Vehicles Based on NHTSA's Projections

Sources: FARS, NASS GES, FHWA, and Census Bureau



# Number of Persons Killed Per 100 M VMT, by Year

National Center for Statistics & Analysis

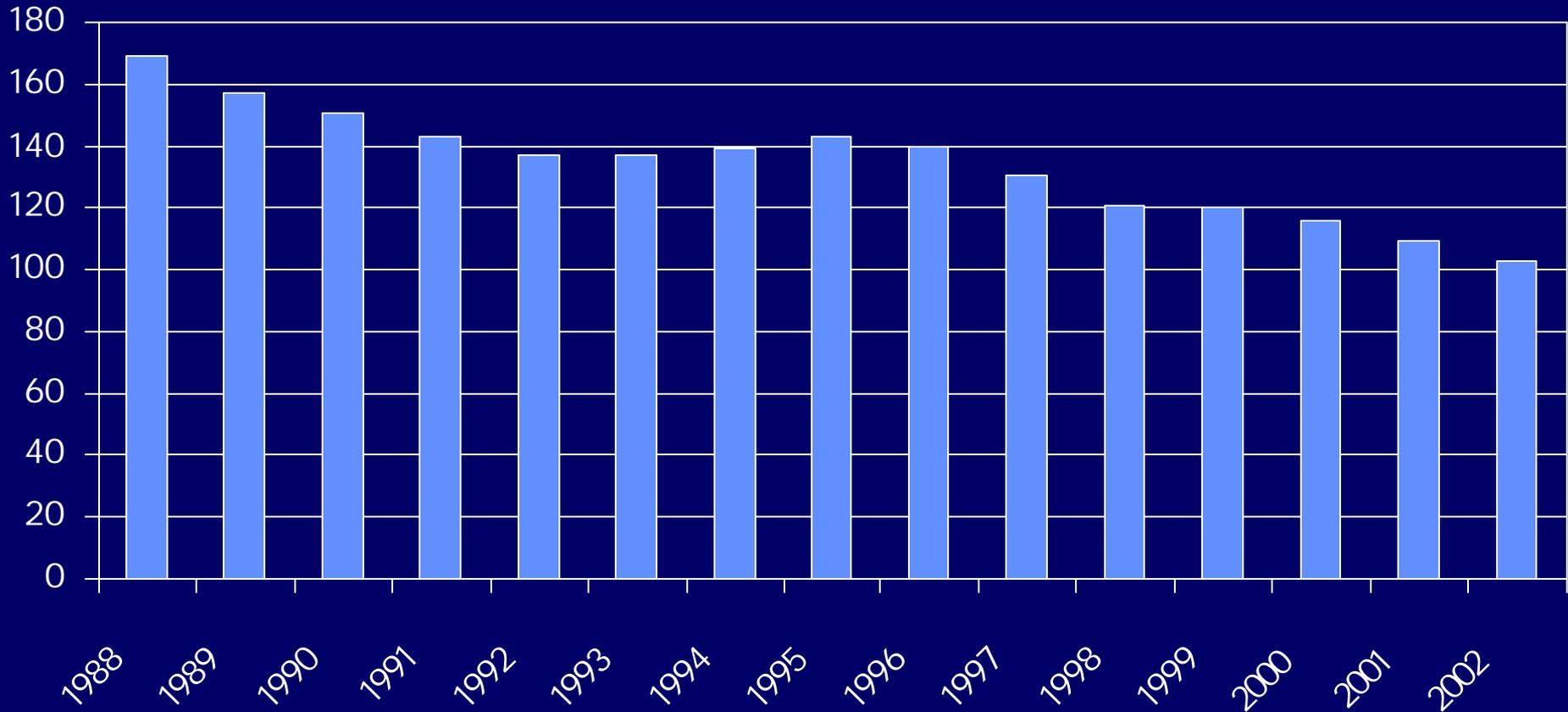


Source: FARS / FHWA VMT



# Number of Persons Injured per 100 M VMT, by Year

National Center for Statistics & Analysis



Sources: NASS GES / FHWA VMT



# 2002 Annual Assessment Shows

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- The change in Total Crash Fatalities was due to
  - ◆ Occupant fatalities increasing 2.2%
  - ◆ Motorcycle fatalities increasing 1.5%
- While Non-Occupant Fatalities declined 3.0%



# Persons Killed in Motor Vehicle Crashes, by Role

National Center for Statistics & Analysis



Role	2001	2002	Change	% Change
<b>Occupants</b>	<b>33,243</b>	<b>33,988</b>	<b>+745</b>	<b>+2.2%</b>
Drivers	22,914	23,539	+625	+2.7%
Passengers	10,329	10,449	+120	+1.2%
<b>Motorcyclists</b>	<b>3,197</b>	<b>3,244</b>	<b>+47</b>	<b>+1.5%</b>
<b>Non-Occupants</b>	<b>5,756</b>	<b>5,583</b>	<b>-173</b>	<b>-3.0%</b>
Pedestrians	4,901	4,808	-93	-1.9%
Pedalcyclists	732	662	-70	-9.6%
Other*	123	113	-10	-8.1%
<b>TOTAL</b>	<b>42,196</b>	<b>42,815</b>	<b>+619</b>	<b>+1.5%</b>

\*Includes occupants of motor vehicles not in transport and of non-motor vehicle transport devices.

Source: FARS



# Persons Injured in Motor Vehicle Crashes, by Role

National Center for Statistics & Analysis



Role	Year		% Change
	2001	2002	
<b>Occupants</b>	<b>2,841,000</b>	<b>2,735,000</b>	<b>-3.7%</b>
Drivers	1,934,000	1,863,000	-3.7%
Passengers	907,000	873,000	-3.7%
<b>Motorcyclists</b>	<b>60,000</b>	<b>65,000</b>	<b>+8.3%</b>
<b>Non-Occupants</b>	<b>131,000</b>	<b>126,000</b>	<b>-3.8%</b>
Pedestrians	78,000	71,000	-9.0%
Pedalcyclists	45,000	48,000	+6.7%
Other*	8,000	7,000	-13%
<b>TOTAL</b>	<b>3,033,000</b>	<b>2,926,000</b>	<b>-3.5%</b>

\*Includes occupants of motor vehicles not in transport and of non-motor vehicle transport devices.

Note: Totals may not add due to rounding. Percentages computed after rounding. Source: NASS GES



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# *Where were the Increases in Fatalities?*



# Summary of Increase in Fatalities

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- **619 total increase**
- **745 occupants**
  - ◆ 625 drivers
  - ◆ 120 passengers
- **459 occupants in LTVs**
- **509 passenger vehicle occupants in rollovers**



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Shows

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- Occupant Fatalities in Pickup Trucks, SUVs and Vans accounted for 62% of the Increase of Total Occupant Fatalities.



# Occupants Killed in Motor Vehicle Crashes, by Type of Vehicle

National Center for Statistics & Analysis



Type of Vehicle	Year		Change	% Change
	2001	2002		
<b><i>TOTAL Occupants</i></b>	<b>33,243</b>	<b>33,988</b>	<b>+745</b>	<b>+2.2%</b>
Passenger Cars	20,320	20,416	+96	+0.5%
LTVs*	11,723	12,182	+459	+3.9%
Large Trucks	708	684	-24	-3.4%
Other Vehicles**	429	467	+38	+8.9%
Unknown Vehicle Type	63	239	+176	n/a

\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

Source: FARS

\*\*Includes vehicle occupant fatalities in buses and other, e.g., farm equipment, construction equipment, etc., vehicle types. Excludes motorcycle riders.



# Occupants Injured in Motor Vehicle Crashes, by Type of Vehicle

National Center for Statistics & Analysis



Type of Vehicle	Year		% Change
	2001	2002	
<b><i>TOTAL Occupants</i></b>	<b>2,841,000</b>	<b>2,735,000</b>	<b>-3.7%</b>
Passenger Cars	1,927,000	<b>1,805,000</b>	<b>-6.3%</b>
LTVs*	861,000	879,000	+2.1%
Large Trucks	29,000	26,000	-10%
Other Vehicles**	25,000	25,000	0.0%

\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

*Italics* signify Statistically Significant Change

\*\*Includes vehicle occupants injured in buses and other vehicle types. Excludes motorcycle riders.

Note: Totals may not add due to rounding. Percentages computed after rounding.

Source: NASS GES



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# *Fatalities by State*



# States with Highest Percent Changes

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- **Following three states had the highest percent increase from 2001 to 2002**
  - ◆ Nebraska: +25%
  - ◆ Nevada: +21%
  - ◆ Montana: +17%
- **Following three states had the highest percent decrease from 2001 to 2002**
  - ◆ District of Columbia: -31%
  - ◆ Vermont: -15%
  - ◆ Hawaii: -15%



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# Trends in State Fatalities

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- Three states with high number of fatalities have shown increases each year
  - ◆ Arizona from 1997 to 2002
    - 951 to 1,117 (17.5%)
  - ◆ California from 1998 to 2002
    - 3,688 to 4,078 (10.6%)
  - ◆ Florida from 1996 to 2002
    - 2,753 to 3,132 (13.8%)



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# Trends in State Fatalities

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State	1996	1997	1998	1999	2000	2001	2002
Arizona	---	951	980	1,024	1,036	1,051	1,117
California	---	---	3,494	3,559	3,753	3,956	4,078
Florida	2,753	2,785	2,825	2,920	2,999	3,012	3,132

Note: All other states had +/- over same period.

Source: FARS



# Number of Persons Killed in Motor Vehicle Traffic Crashes, By State

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State	2001	2002	% Change	State	2001	2002	% Change
Alabama	991	1,033	+4.2%	Florida	3,012	3,132	+4.0%
Alaska	89	87	-2.2%	Georgia	1,647	1,523	-7.5%
Arizona	1,051	1,117	+6.3%	Hawaii	140	119	-15%
Arkansas	611	640	+4.7%	Idaho	259	264	+1.9%
California	3,956	4,078	+3.1%	Illinois	1,414	1,411	-0.2%
Colorado	741	742	+0.1%	Indiana	909	792	-13%
Connecticut	318	322	+1.3%	Iowa	446	404	-9.4%
Delaware	136	124	-8.8%	Kansas	494	512	+3.6%
Dist of Columbia	68	47	-31%	Kentucky	845	915	+8.3%

Source: FARS



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# Number of Persons Killed in Motor Vehicle Traffic Crashes, By State

National Center for Statistics & Analysis



State	2001	2002	% Change	State	2001	2002	% Change
Louisiana	952	875	-8.1%	Nebraska	246	307	+25%
Maine	192	216	+13%	Nevada	314	381	+21%
Maryland	659	659	0.0%	New Hampshire	142	127	-11%
Massachusetts	477	459	-3.8%	New Jersey	745	773	+3.8%
Michigan	1,328	1,277	-3.8%	New Mexico	464	449	-3.2%
Minnesota	568	657	+16%	New York	1,564	1,522	-2.7%
Mississippi	784	885	+13%	North Carolina	1,530	1,575	+2.9%
Missouri	1,098	1,208	+10%	North Dakota	105	97	-7.6%
Montana	230	270	+17%	Ohio	1,378	1,418	+2.9%

Source: FARS



# Number of Persons Killed in Motor Vehicle Traffic Crashes, By State

National Center for Statistics & Analysis



State	2001	2002	% Change	State	2001	2002	% Change
Oklahoma	682	734	+7.6%	Utah	291	328	+13%
Oregon	488	436	-11%	Vermont	92	78	-15%
Pennsylvania	1,532	1,614	+5.4%	Virginia	935	914	-2.2%
Rhode Island	81	84	+3.7%	Washington	649	659	+1.5%
South Carolina	1,060	1,053	-0.7%	West Virginia	376	439	+17%
South Dakota	171	180	+5.3%	Wisconsin	763	803	+5.2%
Tennessee	1,251	1,175	-6.1%	Wyoming	186	176	-5.4%
Texas	3,736	3,725	-0.3%	Puerto Rico	495	510	+3.0%

Source: FARS



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# *Agency Priorities*



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# *Alcohol*



# 2002 Annual Assessment Alcohol Numbers Show

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➤ Total alcohol related fatalities remain effectively unchanged

Of these 15,019 were killed in crashes in which the Highest BAC was  $\geq 0.08$  BAC g/dl



# Persons Killed by Highest BAC in Crash

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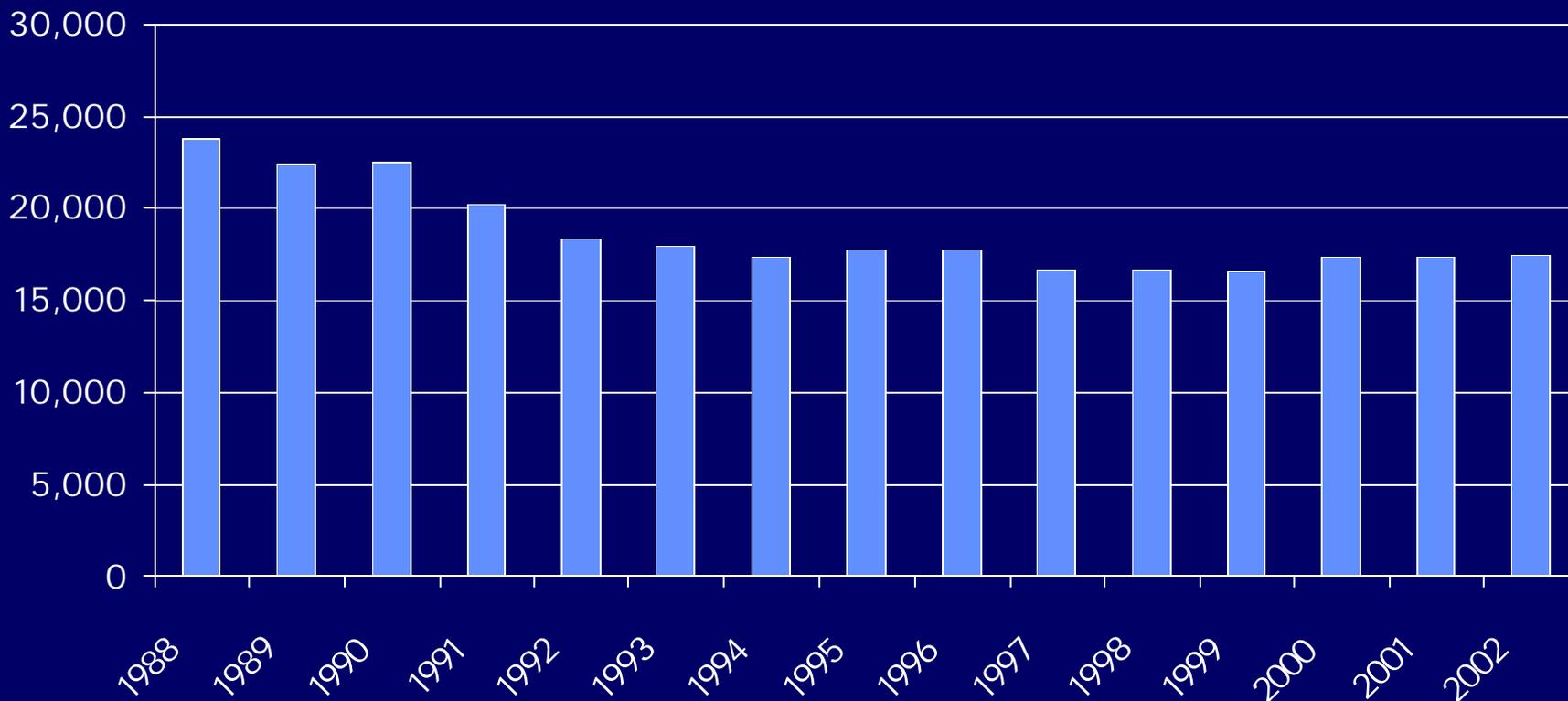
Highest BAC in Crash	Year		% Change
	2001	2002	
<b>Total Alcohol Related</b>	<b>17,400</b>	<b>17,419</b>	<b>+0.1%</b>
<b>Alcohol Fat/100M VMT</b>	<b>0.63</b>	<b>0.62</b>	
<b>% All Fatalities</b>	<b>41%</b>	<b>41%</b>	
<b>Impaired (0.01 &lt;= BAC &lt;= 0.07)</b>	<b>2,542</b>	<b>2,401</b>	<b>-5.5%</b>
<b>Intoxicated (0.08 &lt;= BAC)</b>	<b>14,858</b>	<b>15,019</b>	<b>+1.1%</b>

Source: FARS



# Persons Killed in Alcohol-Related Traffic Crashes, by Year

National Center for Statistics & Analysis



Source: FARS



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# Persons Killed in Alcohol-Related Crashes, by Role

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Role	2001	2002	Change	% Change
<b>Occupants</b>	<b>13,366</b>	<b>13,440</b>	<b>+74</b>	<b>+0.6%</b>
Drivers	9,518	9,617	+99	+1.0%
Passengers	3,847	3,822	-25	-0.6%
<b>Motorcyclists</b>	<b>1,342</b>	<b>1,422</b>	<b>+80</b>	<b>+6.0%</b>
<b>Non-Occupants</b>	<b>2,693</b>	<b>2,558</b>	<b>-135</b>	<b>-5.0%</b>
Pedestrians	2,371	2,278	-93	-3.9%
Pedalcyclists	282	243	-39	-14%
Other*	39	37	-2	-5.1%
<b>TOTAL</b>	<b>17,400</b>	<b>17,419</b>	<b>+19</b>	<b>+0.1%</b>

\*Includes occupants of motor vehicles not in transport and of non-motor vehicle transport devices.

Source: FARS



# Persons Injured in Alcohol-Related Crashes, by Role

National Center for Statistics & Analysis



Role	Year		% Change
	2001	2002	
<b>Occupants</b>	<b>254,000</b>	<b>237,000</b>	<b>-6.7%</b>
Drivers	173,000	163,000	-5.8%
Passengers	82,000	74,000	-9.8%
<b>Motorcyclists</b>	<b>7,000</b>	<b>8,000</b>	<b>+14%</b>
<b>Non-Occupants</b>	<b>14,000</b>	<b>13,000</b>	<b>-7.1%</b>
Pedestrians	11,000	10,000	-9.1%
Pedalcyclists	2,000	2,000	0.0%
Other*	1,000	1,000	0.0%
<b>TOTAL</b>	<b>275,000</b>	<b>258,000</b>	<b>-6.2%</b>

\*Includes occupants of motor vehicles not in transport and of non-motor vehicle transport devices.

Note: Totals may not add due to rounding. Percentages computed after rounding. Source: NASS GES



# 2002 Annual Assessment Shows

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- **Alcohol-Related Occupant Fatalities**  
**Increased 12% in SUVs,**  
**6% in Motorcycles and 4% in Vans**



# Occupants Killed in Alcohol-Related Crashes, by Vehicle Type

National Center for Statistics & Analysis



Type of Vehicle	Year		%
	2001	2002	Change
<b>Motor Vehicle Occupants Killed*</b>	<b>13,366</b>	<b>13,440</b>	<b>+0.6%</b>
Passenger Car	8,035	7,954	-1.0%
Vans	626	653	+4.3%
SUVs	1,463	1,632	+12%
Pickup Truck	2,983	2,850	-4.5%
Large Trucks	63	87	+38%
<b>Motorcycles</b>	<b>1,342</b>	<b>1,422</b>	<b>+6.0%</b>

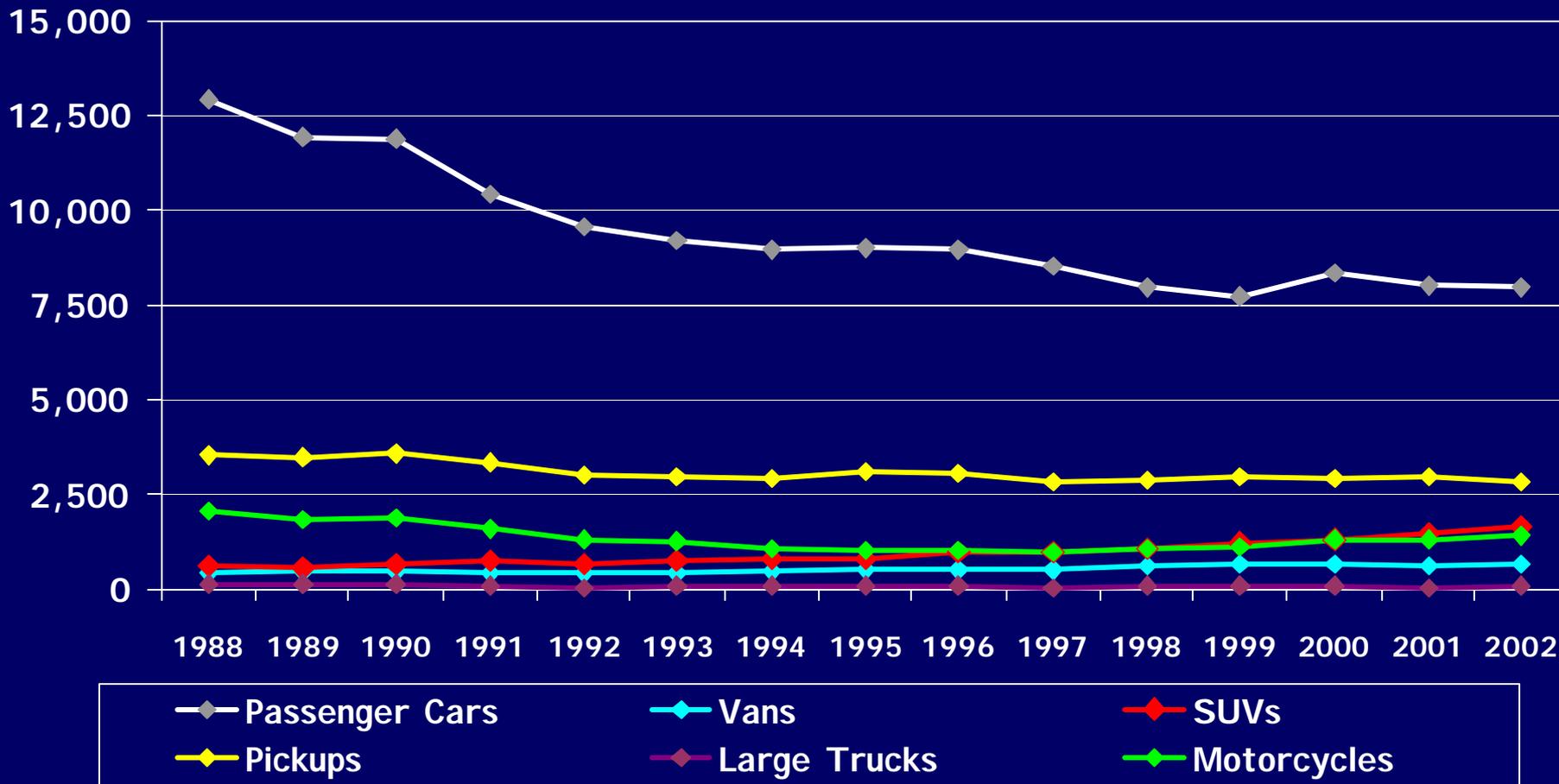
\*Includes Buses, Other Vehicles and Vehicles with Unknown Body Type

Source: FARS



# Occupants and Motorcyclists Killed in Alcohol-Related Crashes, by Type of Vehicle

National Center for Statistics & Analysis



Source: FARS



# 2002 Annual Assessment Shows

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- The Number of Alcohol-Involved Drivers in fatal crashes **increased** in SUVs (**12%**), Motorcycles (**8%**) and Vans (**7%**)



# Non-Sober Drivers Involved in Fatal Crashes by Vehicle Type

National Center for Statistics & Analysis



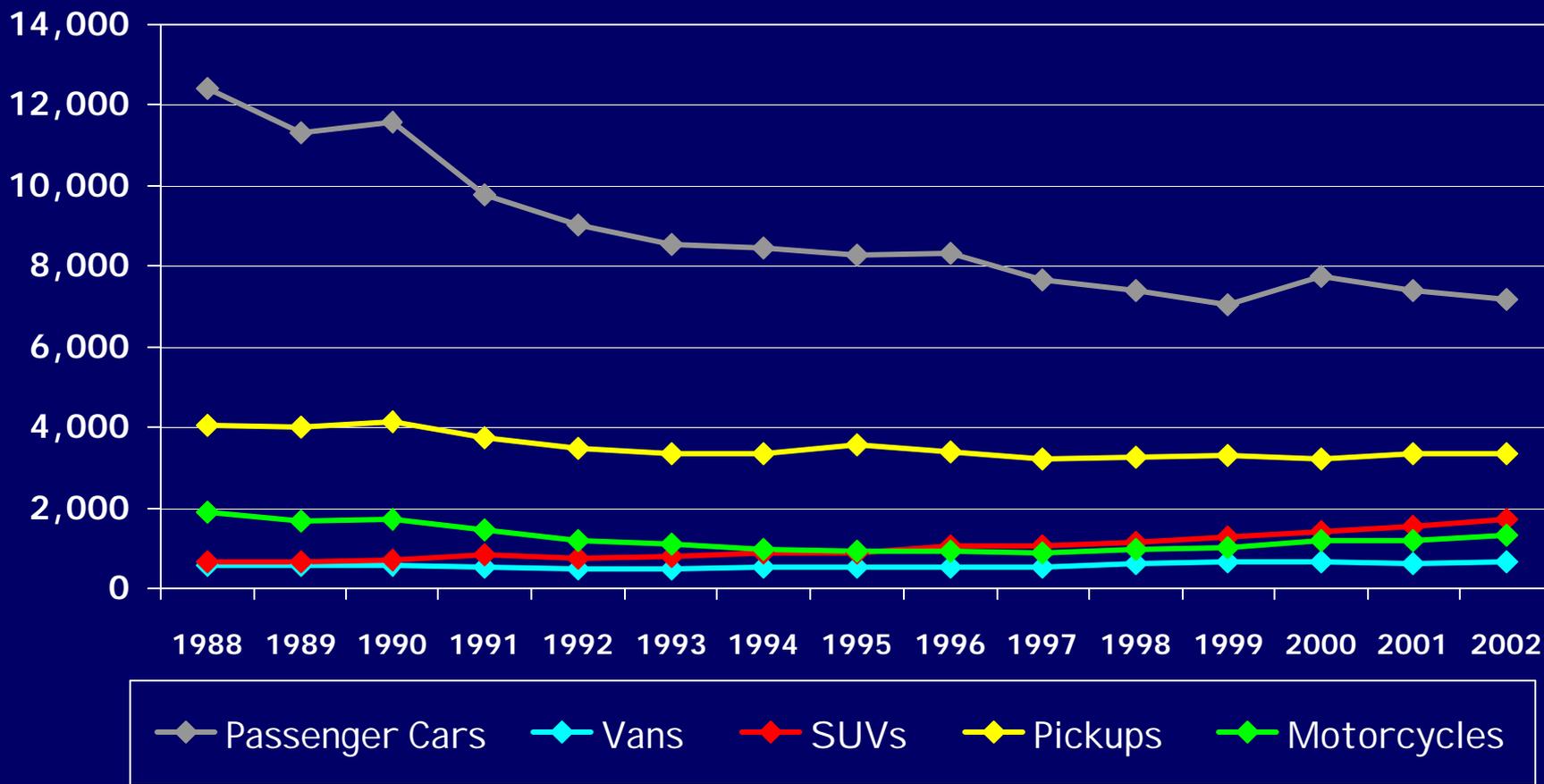
Type of Vehicle	Year		% Change
	2001	2002	
Passenger Cars	7,400	7,162	-3.2%
Vans	605	650	+7.4%
SUVs	1,550	1,737	+12%
Pickups	3,363	3,332	-0.9%
Motorcycles	1,202	1,300	+8.2%
Other/Unknown	533	481	-9.8%
<b>TOTAL</b>	<b>14,654</b>	<b>14,662</b>	<b>+0.1%</b>



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# Alcohol-Involved Drivers in Fatal Crashes, by Vehicle Type

National Center for Statistics & Analysis



Source: FARS



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# 2002 Data Show ...

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- Median and Mode BAC Value for Alcohol Involved Drivers was...

**0.16 BAC g/dl**

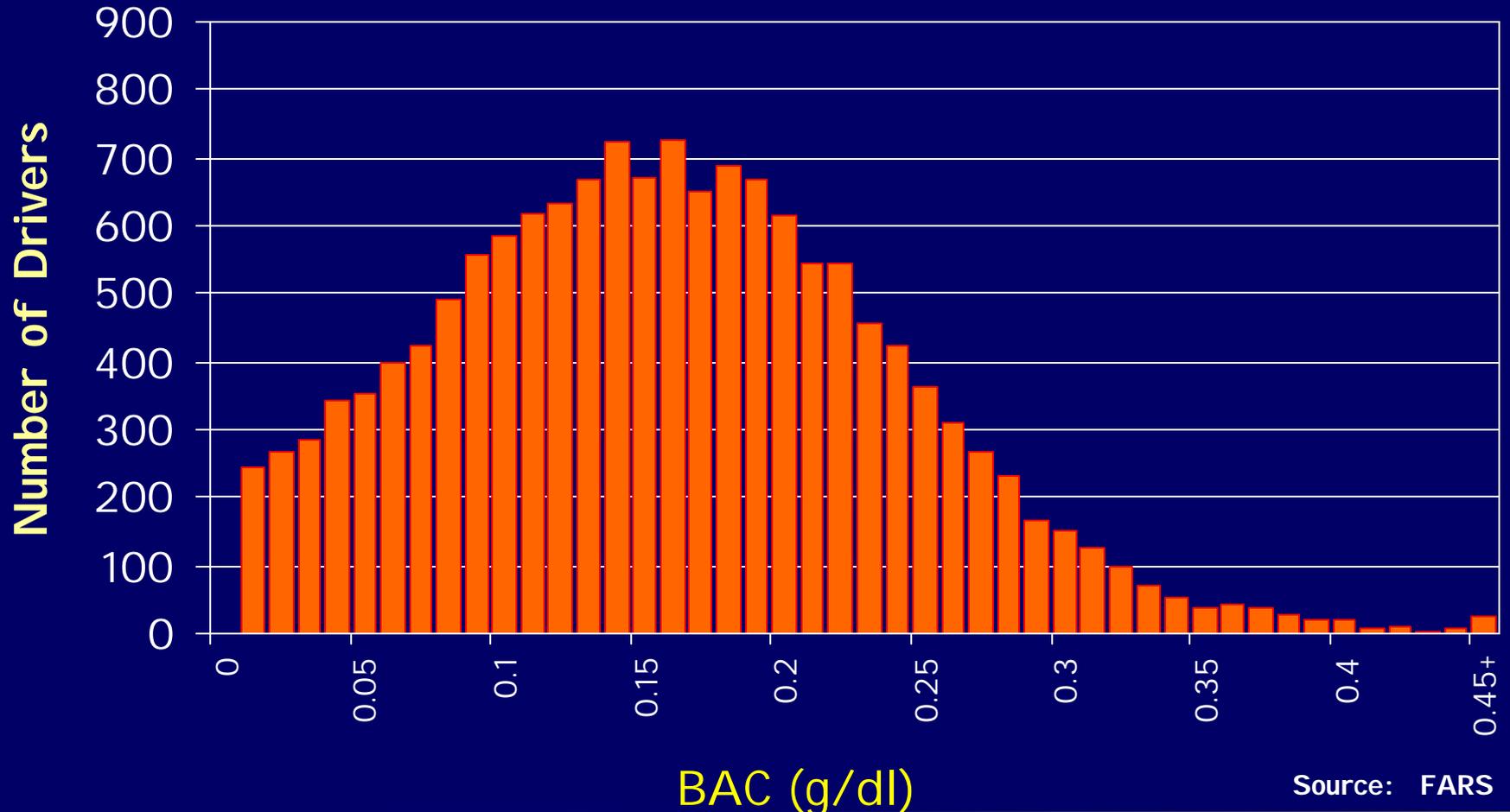
- Which means half of all alcohol involved drivers had BACs more than the legal limit in most states.



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# Drivers Involved in Fatal Crashes with Positive BACs (BAC>0), 2002

National Center for Statistics & Analysis

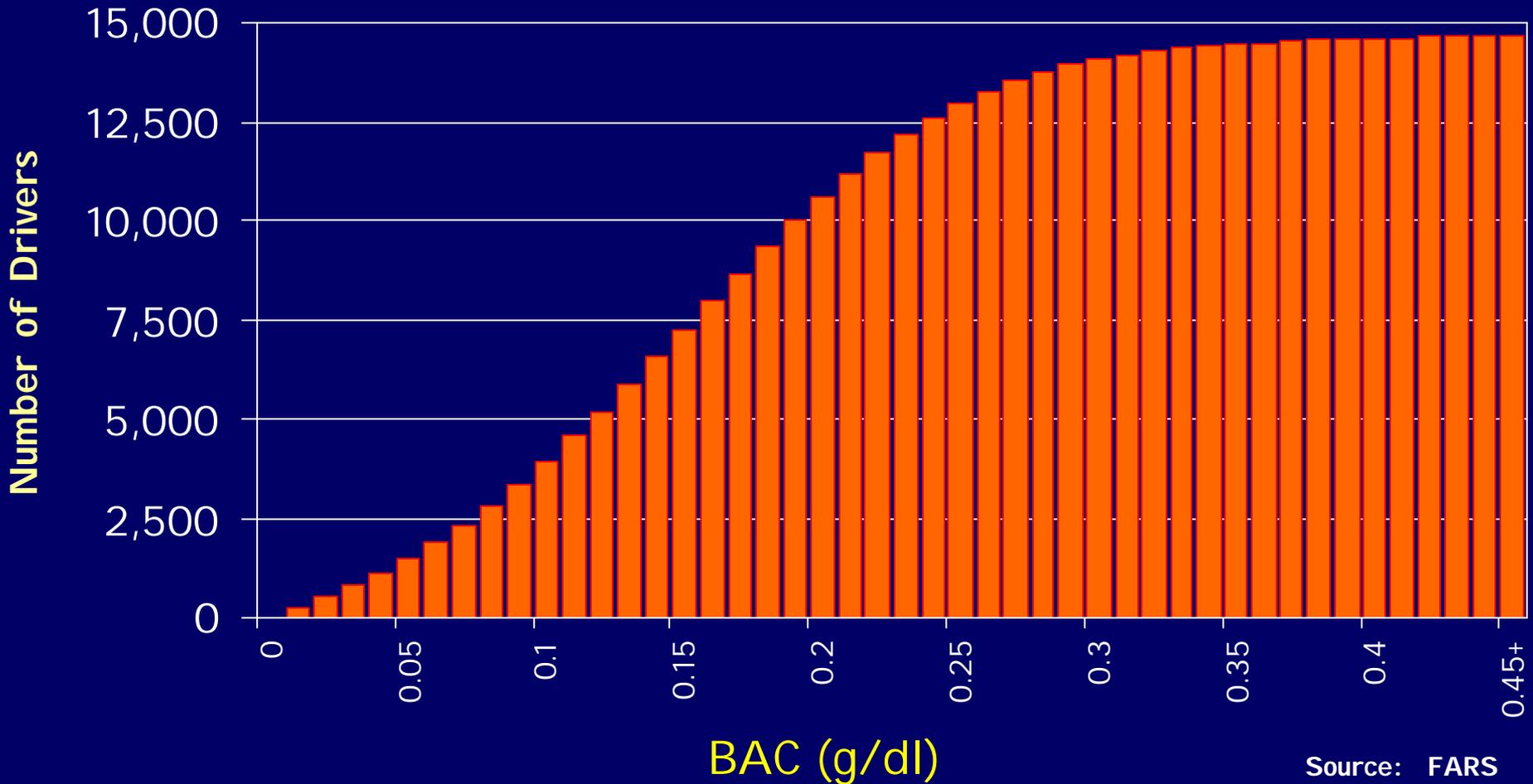


Source: FARS



# Drivers Involved in Fatal Crashes with Positive BACs (BAC>0), by Cumulative BAC Level 2002

National Center for Statistics & Analysis



Source: FARS



# 2002 Data Show ...

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- In 2002, about **1,343** fatalities occurred in crashes involving alcohol-impaired or intoxicated driver(s) who had at least one previous DWI conviction
  - Accounting for about **7.7 percent** of all alcohol-related fatalities.



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# Drivers in Alcohol-Related Fatal Crashes with Previous Alcohol Convictions

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	Year	
	2001	2002
<b>Drivers who were Alcohol Involved and had previous (within 3 years) Alcohol Conviction(s)</b>	<b>1,294</b>	<b>1,227</b>
<b>Percent of All Alcohol Involved Drivers</b>	<b>8.8%</b>	<b>8.4%</b>
<b>Number of Fatalities in Crashes in which Drivers were Alcohol Involved and had previous Alcohol Conviction(s)</b>	<b>1,459</b>	<b>1,343</b>



# Number of Persons Killed in Alcohol Related Crashes, By State

National Center for Statistics & Analysis



State	2001	% of Total	2002	% of Total	State	2001	% of Total	2002	% of Total
Alabama	374	38	413	40	Florida	1,281	43	1,276	41
Alaska	47	53	35	41	Georgia	558	34	529	35
Arizona	487	46	477	43	Hawaii	59	42	50	42
Arkansas	195	32	242	38	Idaho	91	35	91	34
California	1,552	39	1,612	40	Illinois	623	44	648	46
Colorado	328	44	307	41	Indiana	320	35	269	34
Connecticut	161	51	140	43	Iowa	152	34	131	32
Delaware	66	48	51	41	Kansas	193	39	229	45
Dist of Columbia	34	50	25	52	Kentucky	251	30	301	33

Source: FARS



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# Number of Persons Killed in Alcohol Related Crashes, By State

National Center for Statistics & Analysis



State	2001	% of Total	2002	% of Total	State	2001	% of Total	2002	% of Total
Louisiana	444	47	413	47	Nebraska	94	38	117	38
Maine	65	34	51	24	Nevada	133	42	171	45
Maryland	282	43	265	40	New Hampshire	67	47	51	40
Massachusetts	228	48	221	48	New Jersey	285	38	299	39
Michigan	520	39	490	38	New Mexico	216	47	215	48
Minnesota	225	40	255	39	New York	505	32	478	31
Mississippi	277	35	332	38	North Carolina	536	35	601	38
Missouri	520	47	525	43	North Dakota	53	51	48	50
Montana	104	45	127	47	Ohio	608	44	562	40

Source: FARS



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# Number of Persons Killed in Alcohol Related Crashes, By State

National Center for Statistics & Analysis



State	2001	% of Total	2002	% of Total	State	2001	% of Total	2002	% of Total
Oklahoma	270	40	249	34	Utah	70	24	73	22
Oregon	187	38	179	41	Vermont	34	37	27	35
Pennsylvania	646	42	656	41	Virginia	339	36	371	41
Rhode Island	48	59	46	55	Washington	281	43	298	45
South Carolina	582	55	551	52	West Virginia	136	36	180	41
South Dakota	85	50	92	51	Wisconsin	366	48	364	45
Tennessee	533	43	471	40	Wyoming	82	44	70	39
Texas	1,807	48	1,745	47	Puerto Rico	256	52	241	47

Source: FARS



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# *Safety Belts*



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



➤ **Most Passenger Vehicle  
Occupants Killed  
in Motor Vehicle Crashes  
Continue to be**

**Unrestrained**



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# Passenger Vehicle Occupant Fatalities (All Ages), by Restraint Use\*

National Center for Statistics & Analysis



Restraint Use	Year			
	2001		2002	
<b>Persons Killed</b>	<b>32,043</b>	<b>100%</b>	<b>32,598</b>	<b>100%</b>
<b>Restraint Used**</b>	<b>12,992</b>	<b>41%</b>	<b>13,471</b>	<b>41%</b>
<b>Restraint Not Used</b>	<b>19,051</b>	<b>59%</b>	<b>19,127</b>	<b>59%</b>

\*Occupant Fatalities whose restraint use was unknown were distributed proportionally to the known use categories. In both years restraint use was unknown for 8% of passenger vehicle occupants.

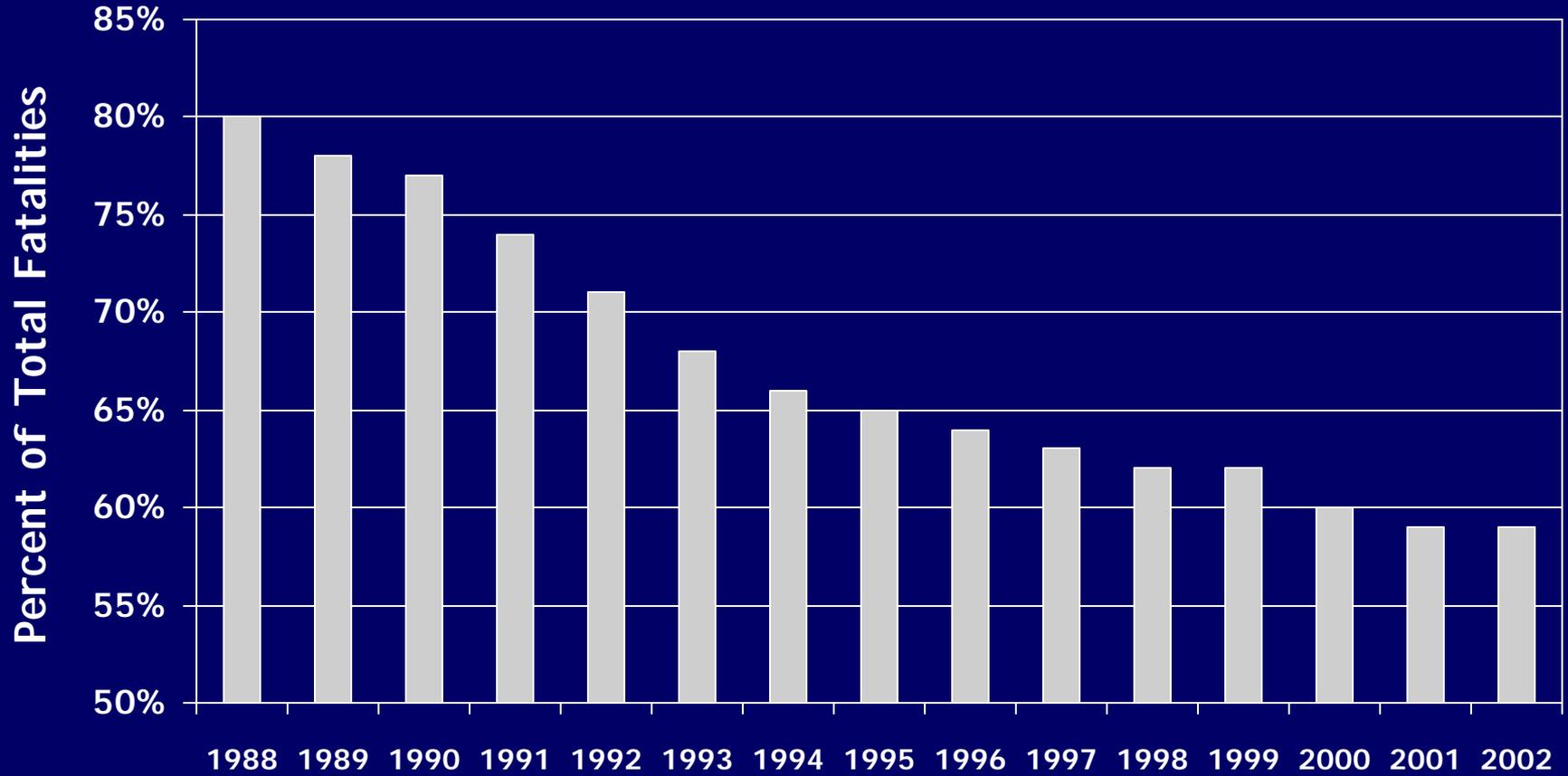
\*\* Restraint Used = Use of any type of restraint, e.g., lap belt, lap/shoulder belt, child safety seat, etc.

Source: FARS



# Percent of Total Passenger Vehicle Occupant Fatalities that were Unrestrained, by Year

National Center for Statistics & Analysis



Source: FARS



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# *Rollovers*



# 2002 Annual Assessment Show

National Center for Statistics & Analysis



➤ **Passenger Vehicle Occupant  
Fatalities in Rollover Crashes  
Increased  
for All Types of Vehicles  
except Vans**

**Accounting for 82% of total fatality  
increase**



# Passenger Vehicle Occupants Killed and Injured in Rollover Crashes, by Type of Vehicle

National Center for Statistics & Analysis



Type of Vehicle	2001	2002	% Change
<b>Persons Killed</b>	<b>10,157</b>	<b>10,666</b>	<b>+5.0%</b>
Passenger Car	4,559	4,768	+4.6%
Van	786	698	-11%
SUV	2,149	2,448	+14%
Pickup Truck	2,651	2,742	+3.4%
<b>Persons Injured</b>	<b>243,000</b>	<b>228,000</b>	<b>-6.2%</b>
Passenger Car	109,000	106,000	-2.8%
Van	17,000	14,000	-18%
SUV	60,000	58,000	-3.3%
Pickup Truck	56,000	48,000	-14%

Total Killed and injured includes Occupants of Other Light Trucks

Source: FARS, NASS GES

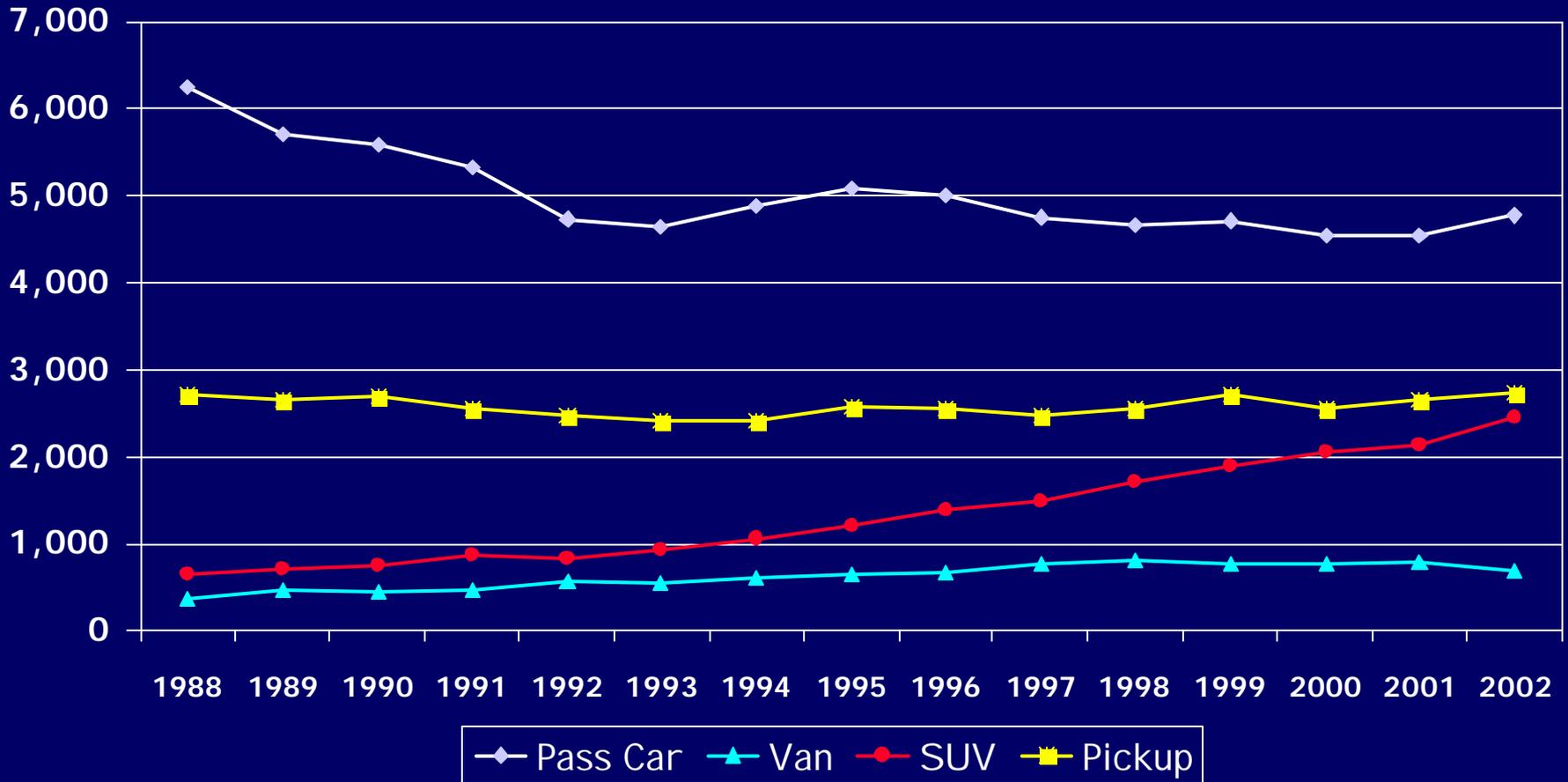
Note: Totals for injured may not add due to rounding. Percentages computed after rounding.



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# Passenger Vehicle Occupants Killed in Rollover Crashes, by Type of Vehicle and Year

National Center for Statistics & Analysis



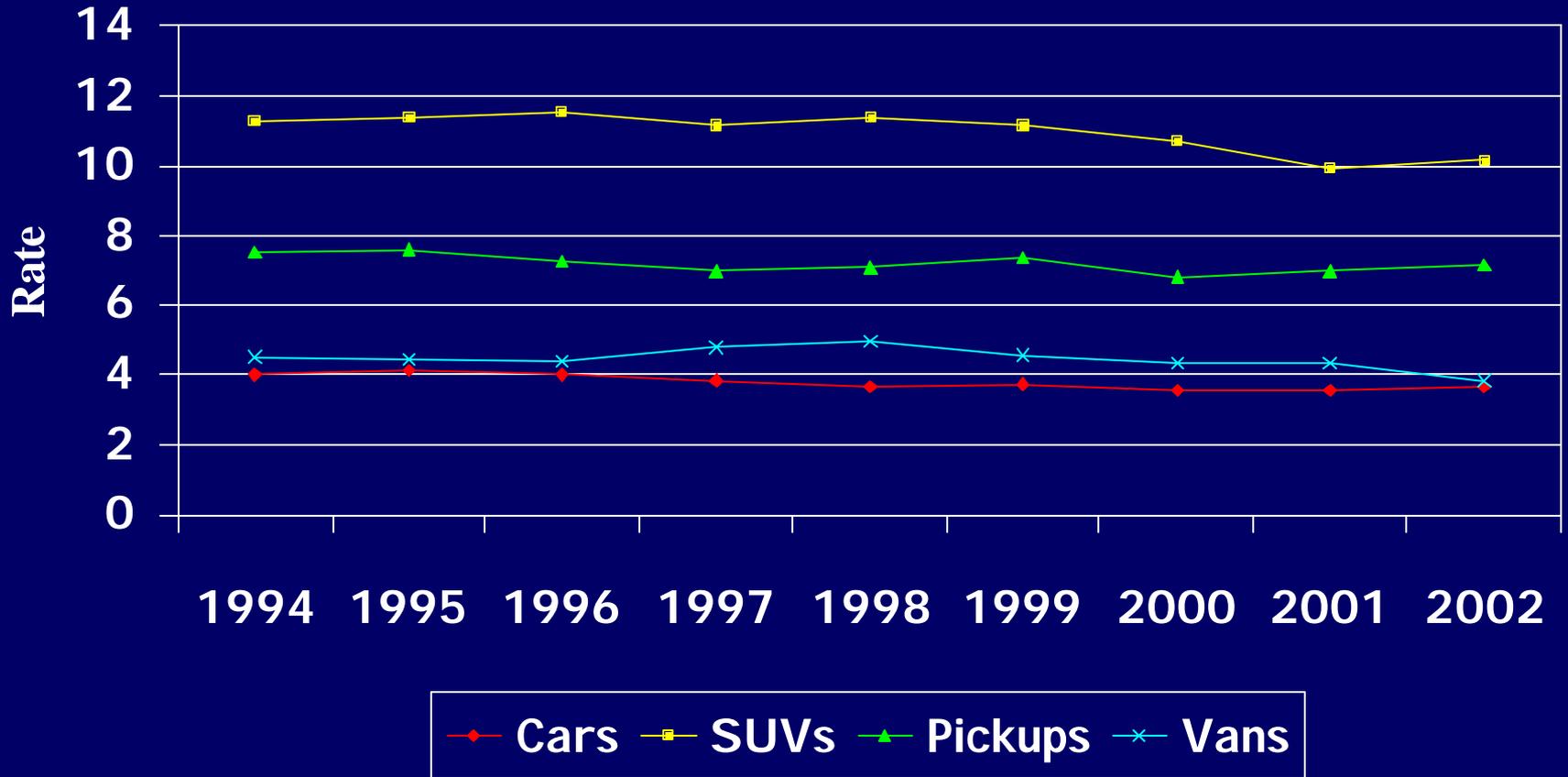
Source: FARS



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# Passenger Vehicle Occupant Fatality Rate\* in Rollover Crashes, by Type of Vehicle and Year

National Center for Statistics & Analysis



\*Rate per 100,000 Registered Vehicles

Source: FARS, Polk



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



➤ **61%** of SUV Occupant Fatalities Occur in **Rollover** Crashes.

The Next Highest Proportion of Occupant Fatalities in Rollover Crashes was **45%** in Pickup Trucks



# Passenger Vehicle Occupants Killed and Injured, by Percent Rollover and Type of Vehicle

National Center for Statistics & Analysis



	2001			2002		
	Rollover		Total	Rollover		Total
	Yes	No		Yes	No	
<b>Persons Killed</b>						
<b>Passenger Car</b>	22%	78%	20,320	23%	77%	20,416
<b>Van</b>	39%	61%	2,019	33%	67%	2,095
<b>SUV</b>	61%	39%	3,530	61%	39%	3,995
<b>Pickup Truck</b>	43%	57%	6,139	45%	55%	6,057
<b>Persons Injured</b>						
<b>Passenger Car</b>	6%	94%	1,927,000	6%	94%	1,805,000
<b>Van</b>	8%	92%	204,000	7%	93%	208,000
<b>SUV</b>	21%	79%	290,000	18%	82%	315,000
<b>Pickup Truck</b>	16%	84%	360,000	14%	86%	344,000

Note: Totals may not add due to rounding. Percentages computed after rounding. Source: FARS, NASS GES



# 2002 Annual Assessment Shows

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## ➤ The Increase in SUV and Pickup Truck Rollover Crash Fatalities

*Accounted for 52% of the Increase in All Occupant Fatalities and 77% of the Increase in Passenger Vehicle Rollover Fatalities.*



# 2002 Annual Assessment Single Vehicle Rollover Fatalities Show

National Center for Statistics & Analysis



## ➤ Passenger Vehicle Occupant Fatalities in Single Vehicle Rollover Crashes

**Increased**  
for All Types of Vehicles  
except Vans

Accounting for **68%** of total rollover fatality increase



# Passenger Vehicle Occupants Killed in Single Vehicle Rollover Crashes, by Type of Vehicle

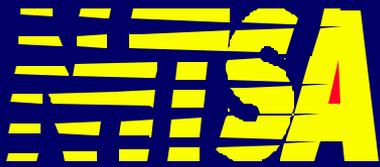
National Center for Statistics & Analysis



Type of Vehicle	2001	2002	% Change
Persons Killed	8,424	8,768	+4.1%
Passenger Car	3,956	4,055	+2.5%
Van	555	512	-7.7%
SUV	1,735	1,959	+13%
Pickup Truck	2,171	2,236	+3.0%

Total Killed includes Occupants of Other Light Trucks

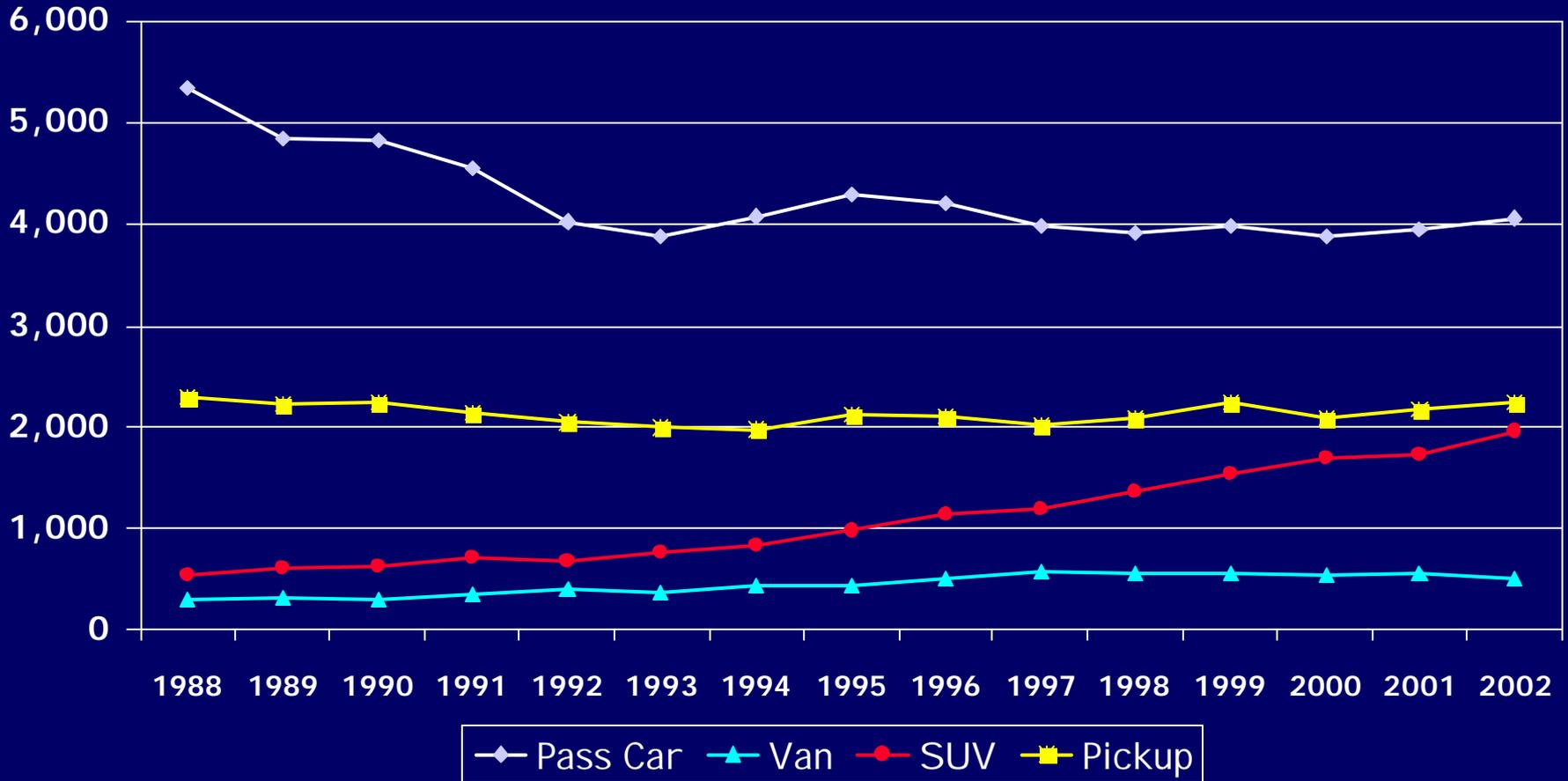
Source: FARS



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# Passenger Vehicle Occupants Killed in Single Vehicle Rollover Crashes, by Type of Vehicle and Year

National Center for Statistics & Analysis



Source: FARS



# Passenger Vehicle Occupants Killed in Single Vehicle Crashes by Percent Rollover and Type of Vehicle

National Center for Statistics & Analysis



Persons Killed	2001			2002		
	Rollover		Total	Rollover		Total
	Yes	No		Yes	No	
Passenger Car	45%	55%	8,725	45%	55%	8,958
Van	61%	39%	904	54%	46%	940
SUV	76%	24%	2,279	75%	25%	2,604
Pickup Truck	60%	40%	3,605	61%	39%	3,651

Source: FARS



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# *Vehicle Compatibility*

National Center for Statistics & Analysis



## *Two-Vehicle Crashes between Passenger Cars and LTVs*



➤ The Number of Passenger Car Occupant Fatalities in Two-Vehicle Crashes with a Pickup Truck, Van or SUV (LTV) **Increased** slightly

while the Number of Fatalities in the LTV in these crashes **Declined**.



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# Persons Killed and Injured in Two Vehicle Crashes Involving a Passenger Car and a LTV\*

National Center for Statistics & Analysis



	Year		% Change
	2001	2002	
<b>Fatal Crashes</b>			
Killed in PC	4,405	4,465	+1.4%
Killed in LTV*	1,160	1,125	-3.0%
<b>Injury Crashes</b>			
Injured in PC	472,000	439,000	-7.0%
Injured in LTV*	306,000	295,000	-3.6%

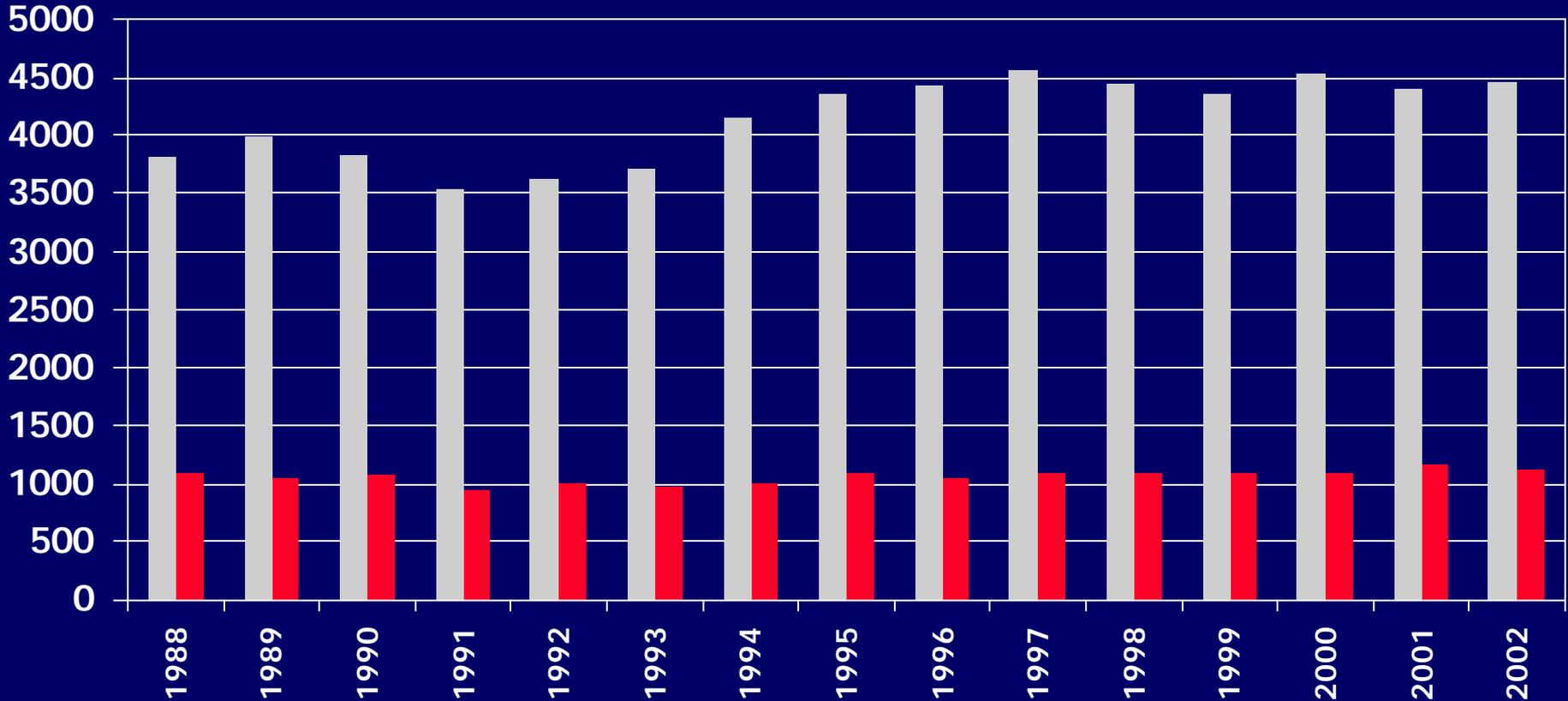
\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

Sources: FARS, NASS GES



# Persons Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis



\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

■ Killed in PC ■ Killed in LTV

Source: FARS



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# Analyzing the different two-vehicle crashes show... ..

National Center for Statistics & Analysis



- **In two-vehicle crashes involving a passenger car and LTV\* show**
  - ◆ In a head-on collision, the car occupants were 3.3 times more likely to be killed
  - ◆ When a car was struck in the side by an LTV, the car occupants were 20.8 times as likely to be fatally injured
  - ◆ When a LTV was struck in the side by a car, the car occupants were 0.8 times as likely to be fatally injured

\*Include pickup truck, SUV and van



# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis **NCSA**

Year	Head-On Collision Fatalities	
	Passenger Car Occupant	LTV Occupant
1993	1,565	488
1994	1,610	469
1995	1,736	535
1996	1,627	470
1997	1,748	509
1998	1,711	487
1999	1,661	473
2000	1,679	483
2001	1,598	508
2002	1,606	481

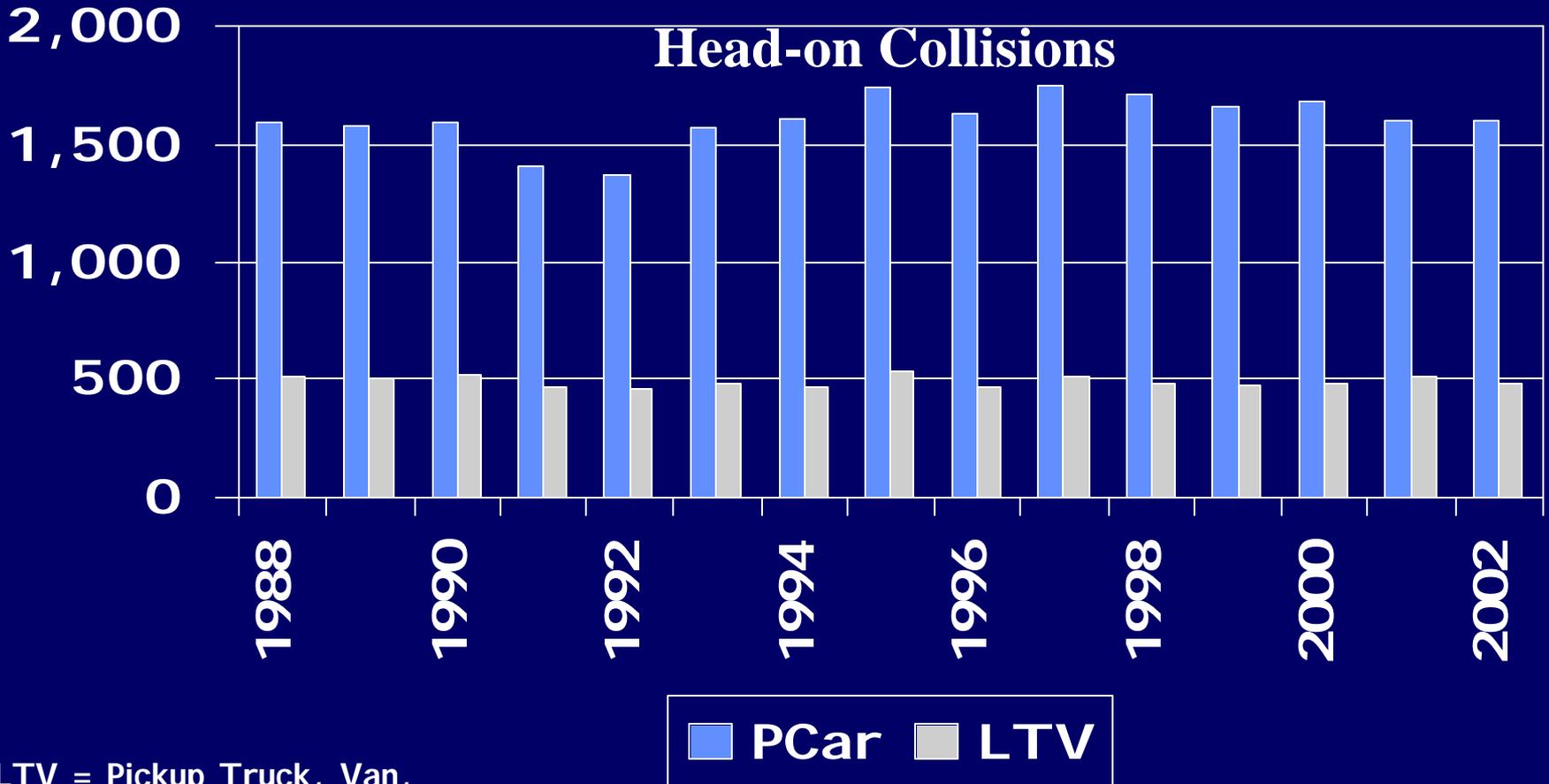
\*LTV = Pickup trucks, Vans and Sport utility vehicles

Source: FARS



# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis



\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

Source: FARS



# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis



Year	Passenger Car Front to LTV Side Fatalities	
	Passenger Car Occupant	LTV Occupant
1993	190	232
1994	170	233
1995	196	239
1996	209	287
1997	177	241
1998	205	265
1999	197	286
2000	164	270
2001	182	300
2002	227	293

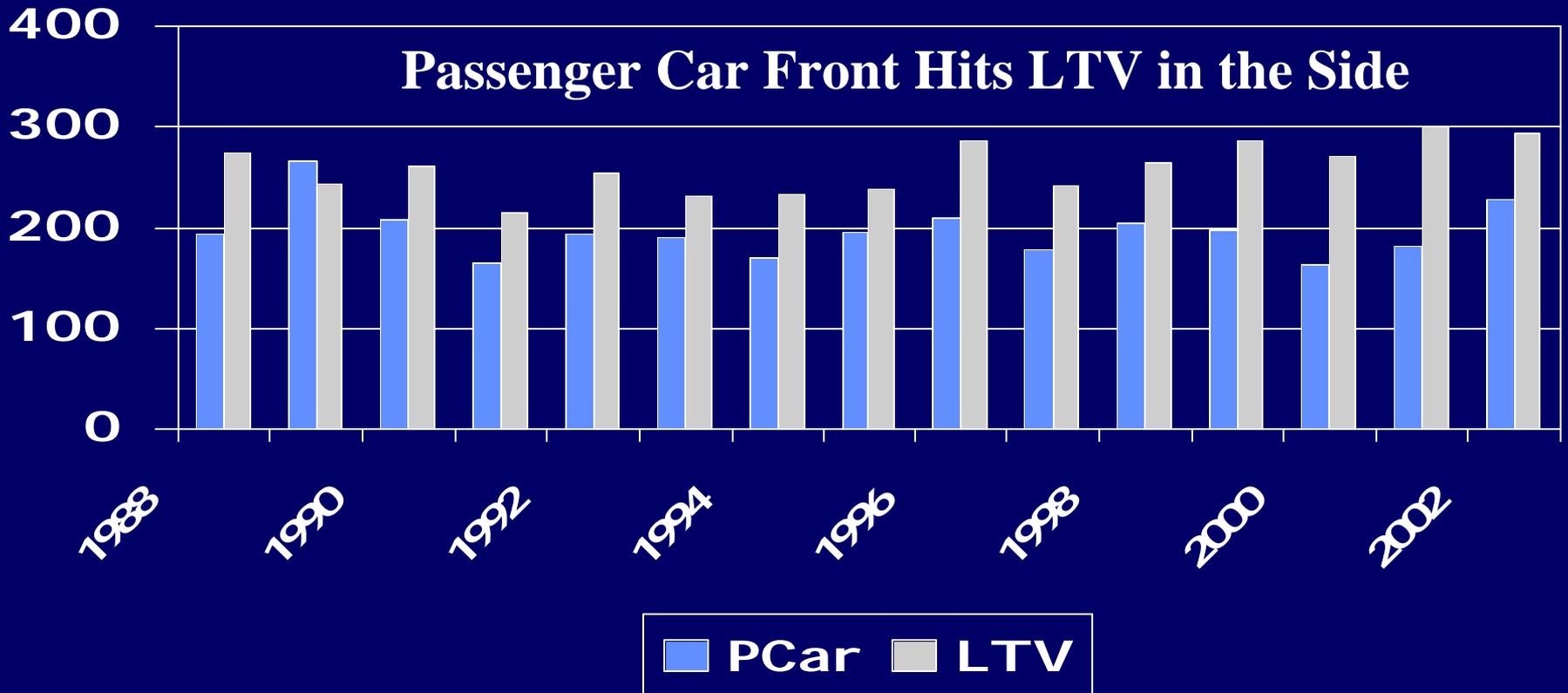
\*LTV = Pickup trucks, Vans and Sport utility vehicles

Source: FARS



# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis



\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

Source: FARS



# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis **NCSA**

Year	LTV Front to Passenger Car Side Fatalities	
	Passenger Car Occupant	LTV Occupant
1993	1,642	91
1994	2,016	123
1995	2,087	120
1996	2,230	103
1997	2,259	132
1998	2,159	113
1999	2,143	126
2000	2,274	114
2001	2,202	119
2002	2,182	105

\*LTV = Pickup trucks, Vans and Sport utility vehicles

Source: FARS

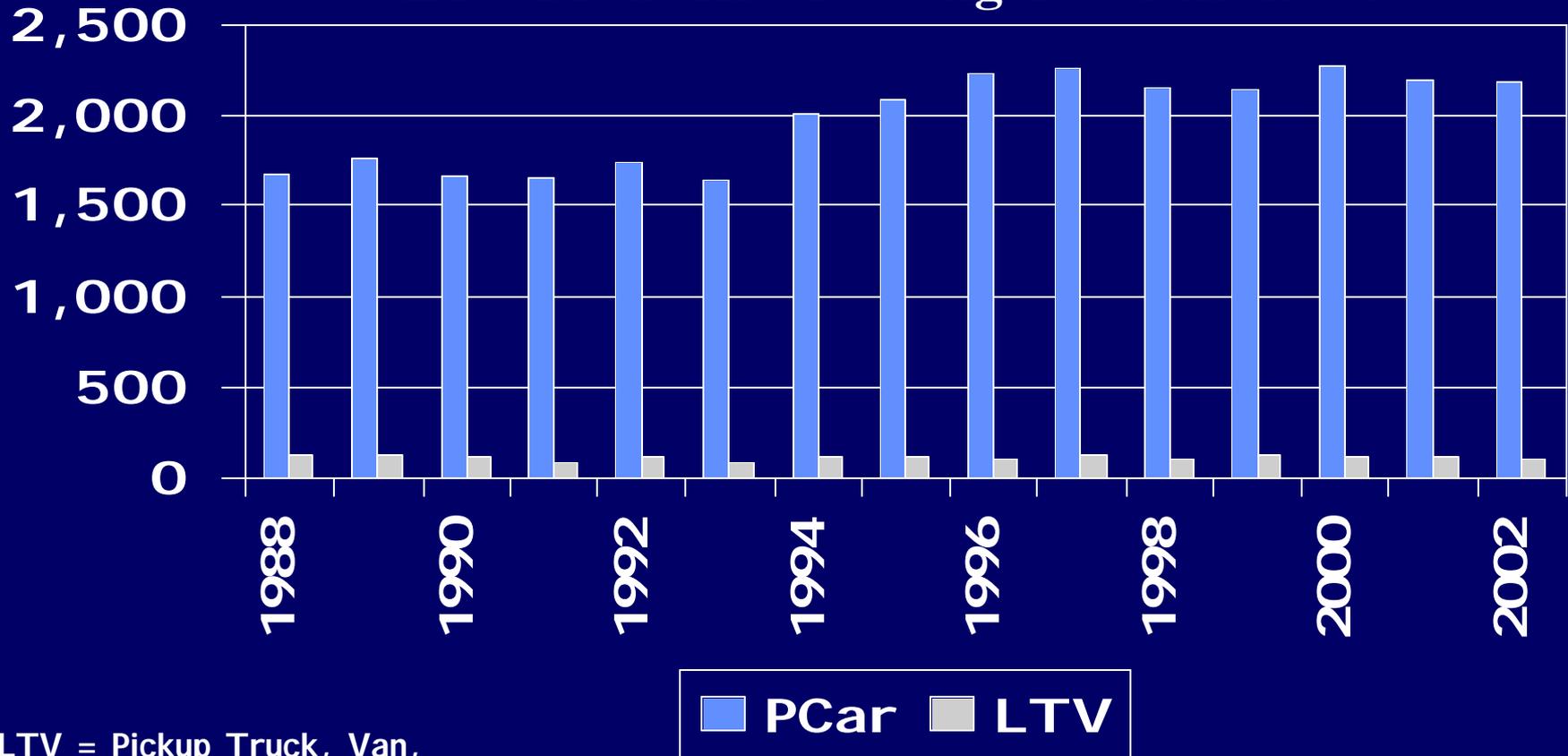


# Occupants Killed in Two Vehicle Crashes Involving a Passenger Car and a LTV\*, by Year

National Center for Statistics & Analysis



## LTV Front Hits Passenger Car in the Side



\*LTV = Pickup Truck, Van, and Sport Utility Vehicle

Source: FARS



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# *Other Focus Areas*



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# *Motorcycles*



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# 2002 Data Show ...

National Center for Statistics & Analysis



## ➤ Motorcyclist Fatalities

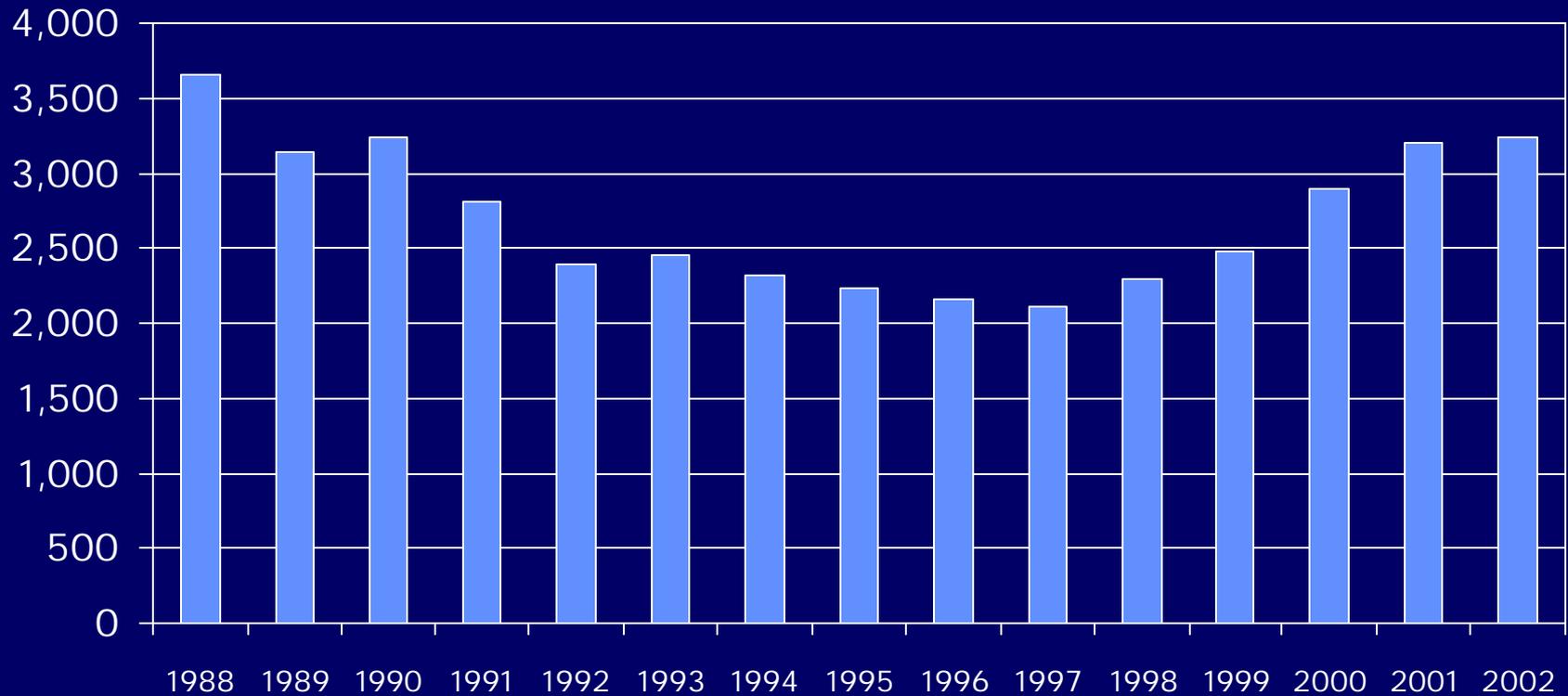
*Increased 5<sup>th</sup> Year in a Row  
Compared to 1997 An increase of  
over 50% -- 1,128 more Fatalities*

- *The increase in motorcyclist fatalities was the smallest in 5 years.*



# Motorcyclists Killed by Year

National Center for Statistics & Analysis



Source: FARS



# Total vs. Motorcyclist Fatalities by Year, 1997-2002

National Center for Statistics & Analysis



Fatalities	Year					
	1997	1998	1999	2000	2001	2002
<b>Total</b>	<b>42,013</b>	<b>41,501</b>	<b>41,717</b>	<b>41,945</b>	<b>42,196</b>	<b>42,815</b>
Change	---	-512	+216	+228	+251	+619
<b>Motorcyclists</b>	<b>2,116</b>	<b>2,294</b>	<b>2,483</b>	<b>2,897</b>	<b>3,197</b>	<b>3,244</b>
Change	---	+178	+189	+414	+300	+47
Percent of all Fatalities	5.0	5.5	6.0	6.9	7.6	7.6

Source: FARS



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# 2002 Data Show ...

National Center for Statistics & Analysis



- **Motorcycle fatalities increased in only 40 and over age groups**

**But . . .**

**the largest percentage increase was in the over 49 age group**



# Motorcyclists Killed by Age Group

National Center for Statistics & Analysis



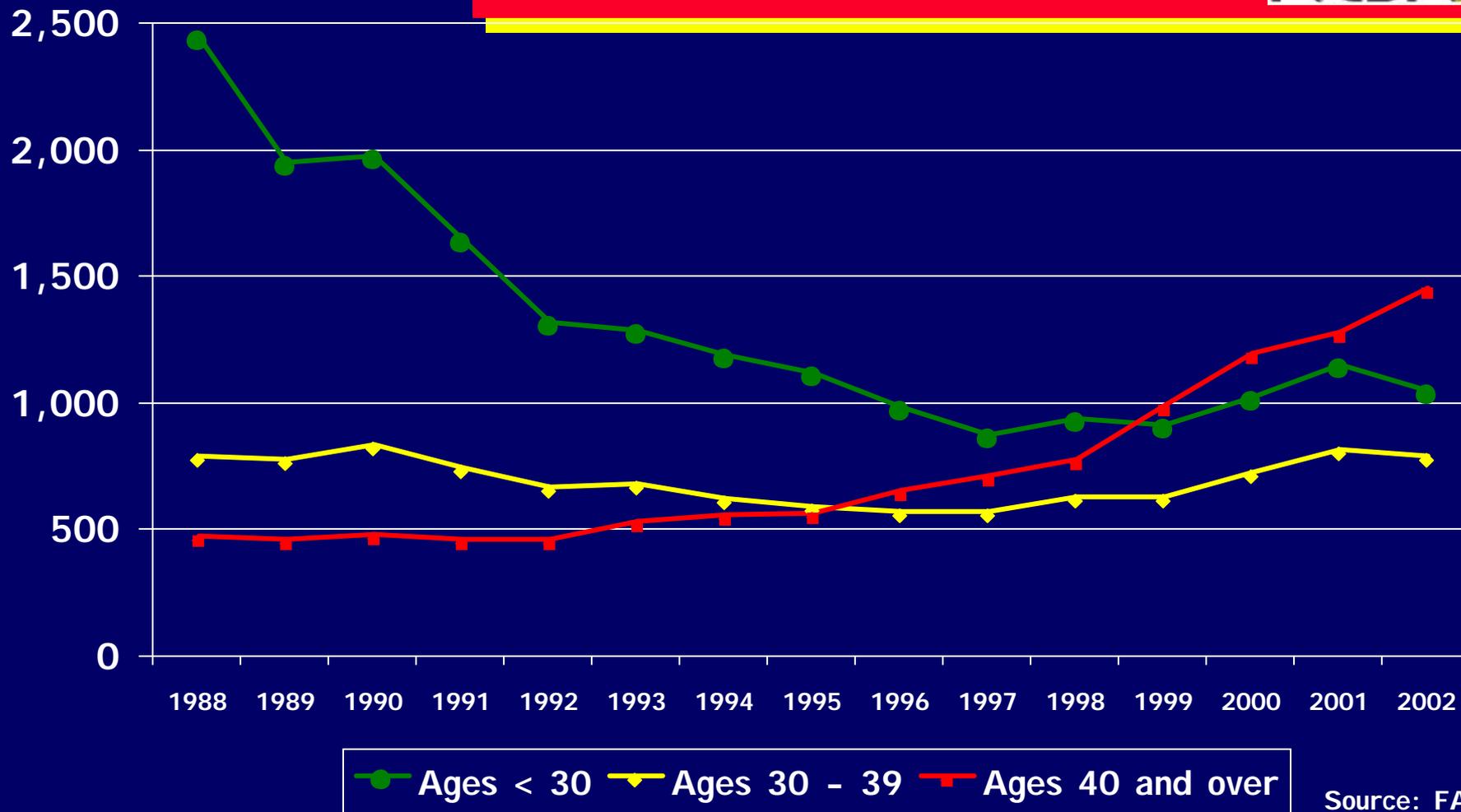
Age Group	Year		Change	% Change
	2001	2002		
Under 20	211	172	-39	-18%
20-29	925	857	-68	-7.4%
30-39	798	776	-22	-2.8%
40-49	729	764	+35	+4.8%
50+	532	672	+140	+26%
Unknown	2	3	+1	---
<b>Total</b>	<b>3,197</b>	<b>3,244</b>	<b>+47</b>	<b>+1.5%</b>

Source: FARS



# Number of Motorcyclists Killed, by Age Group, by Year

National Center for Statistics & Analysis



Source: FARS



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# *Large Trucks*



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



- **The Number of Persons Killed and Injured in Crashes involving Large Trucks Continued to decline.**



# Persons Killed in Large Truck Crashes, by Type

National Center for Statistics & Analysis



Type	Year		% Change
	2001	2002	
<b>Truck Occupants</b>	<b>708</b>	<b>684</b>	<b>-3.4%</b>
Single Vehicle	474	447	-5.7%
Multiple Vehicle	234	237	+1.3%
<b>Other Vehicle Occupants</b>	<b>3,962</b>	<b>3,853</b>	<b>-2.8%</b>
<b>Non-Occupants</b>	<b>441</b>	<b>360</b>	<b>-18%</b>
<b>Total</b>	<b>5,111</b>	<b>4,897</b>	<b>-4.2%</b>

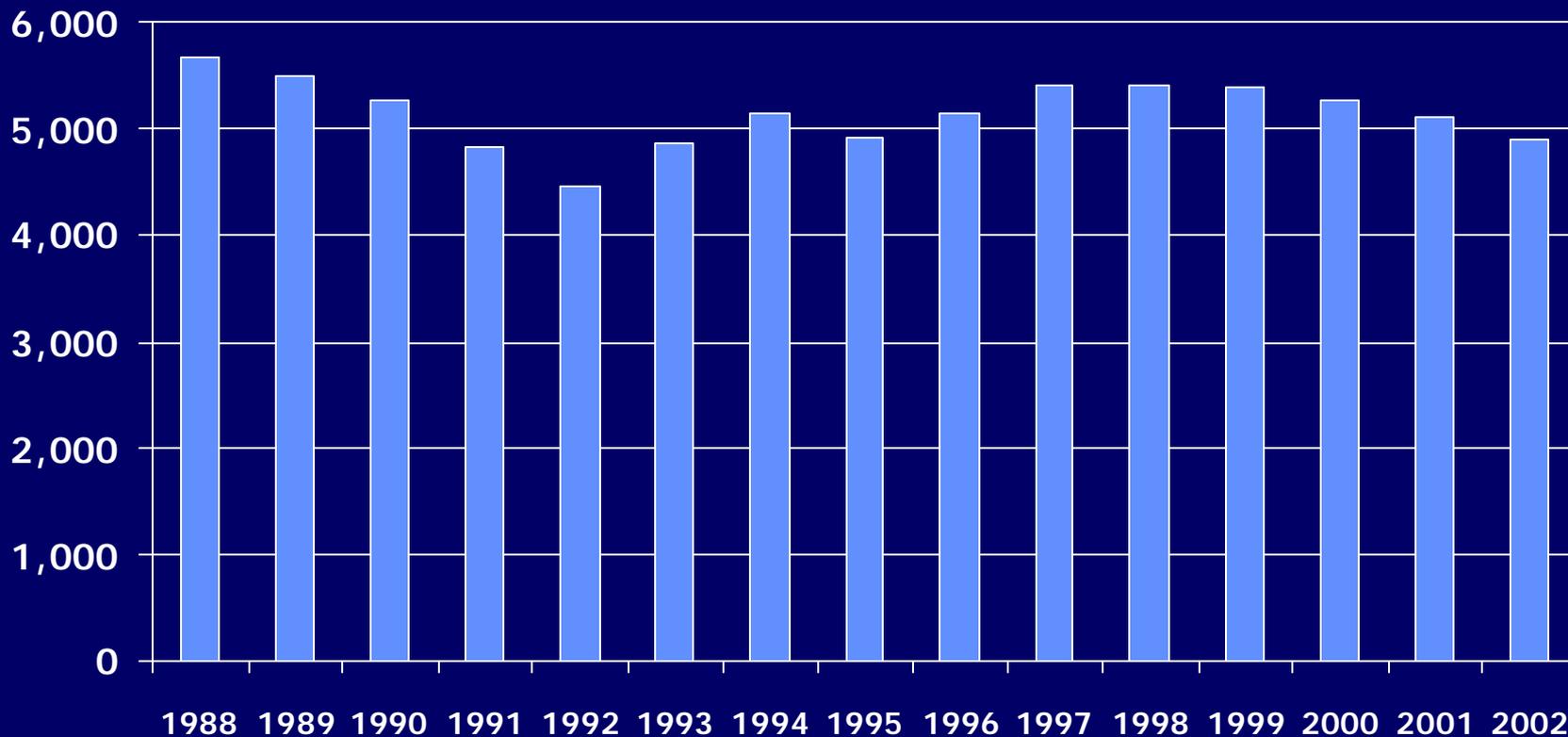
Source: FARS



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# Persons Killed in Large Truck Crashes, by Year

National Center for Statistics & Analysis

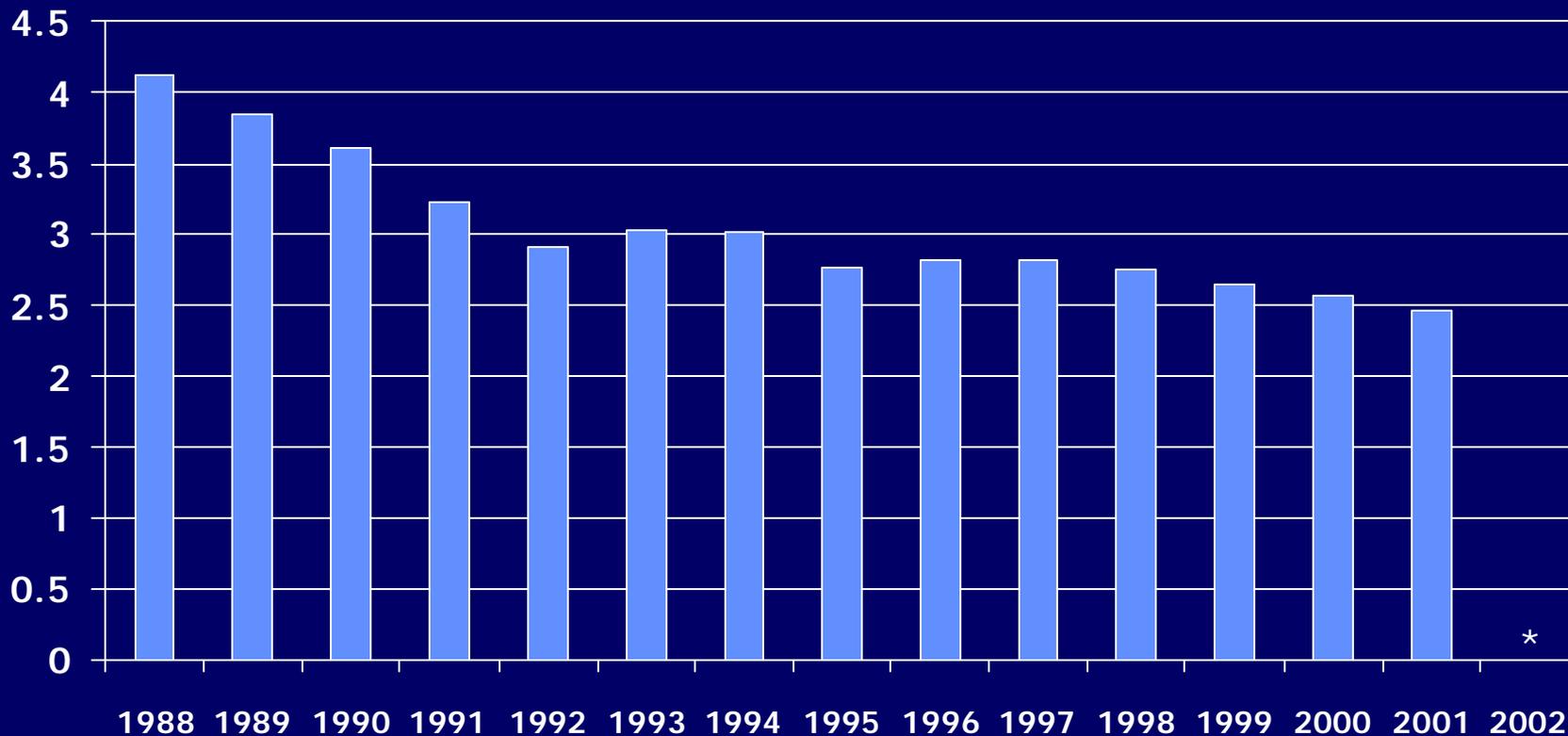


Source: FARS



# Fatality Rate\* in Large Truck Crashes, by Year

National Center for Statistics & Analysis



\*Per 100M Large Truck VMT. 2002 VMT not available.

Source: FARS



# Persons Injured in Large Truck Crashes, by Type

National Center for Statistics & Analysis



Type	Year		% Change
	2001	2002	
<b>Truck Occupants</b>	<b>29,000</b>	<b>26,000</b>	<b>-10%</b>
Single Vehicle	13,000	12,000	-7.7%
Multiple Vehicle	16,000	14,000	-13%
<b>Other Vehicle Occupants</b>	<b>99,000</b>	<b>100,000</b>	<b>+1.0%</b>
<b>Non-Occupants</b>	<b>3,000</b>	<b>4,000</b>	<b>+33%</b>
<b>Total</b>	<b>131,000</b>	<b>130,000</b>	<b>-0.8%</b>

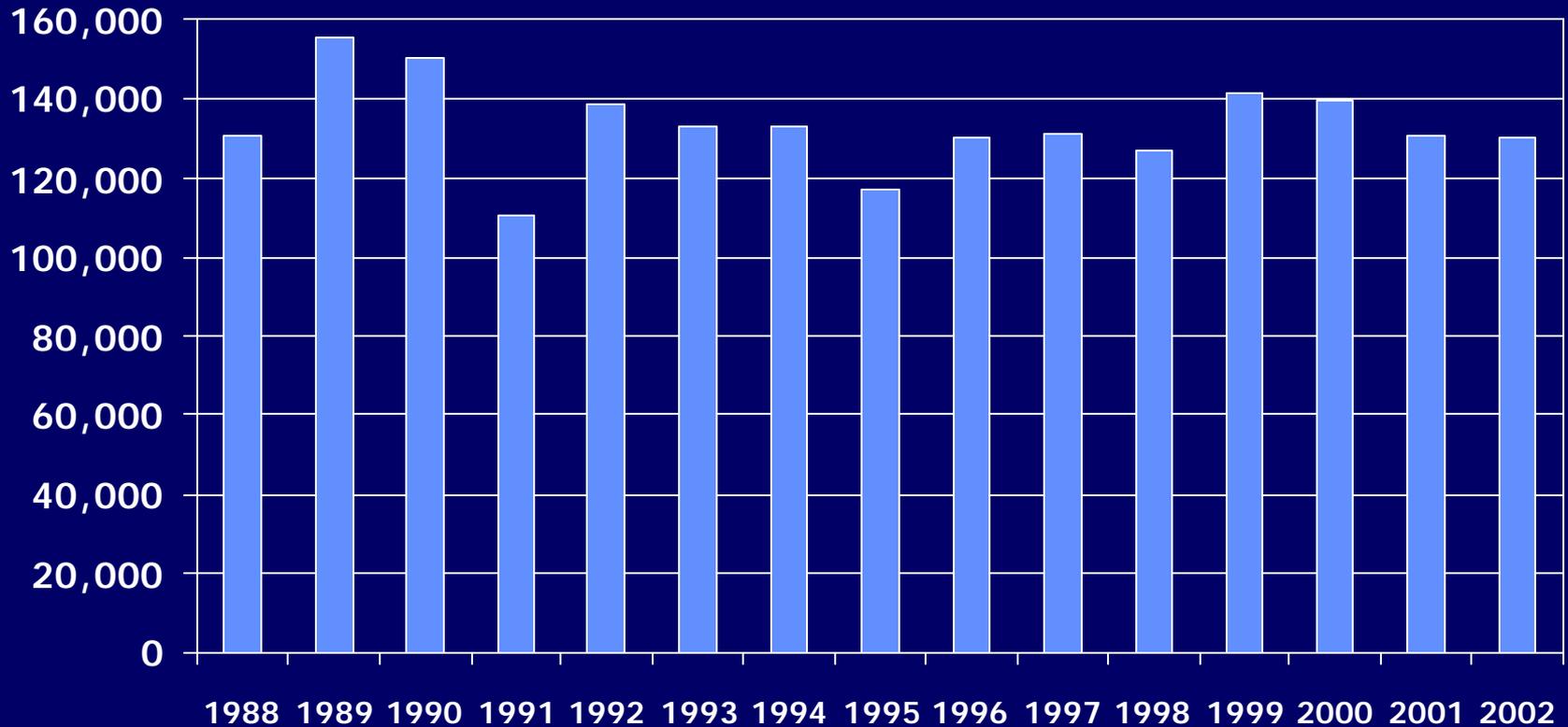
Note: Totals may not add due to rounding. Percentages computed after rounding.

Source: NASS GES



# Persons Injured in Large Truck Crashes, by Year

National Center for Statistics & Analysis



Source: NASS GES



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# *Non-Occupants*



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



➤ **The Number of Non-Occupants  
of All Types Killed  
Declined**

**The Total Number of  
Non-Occupants Injured  
Declined**



# Non-Occupants Killed or Injured, by Type

National Center for Statistics & Analysis



Type	Year		% Change
	2001	2002	
<b>Persons Killed</b>	<b>5,756</b>	<b>5,583</b>	<b>-3.0%</b>
Pedestrians	4,901	4,808	-1.9%
Pedalcyclists	732	662	-9.6%
Others *	123	113	-8.1%
<b>Persons Injured</b>	<b>131,000</b>	<b>126,000</b>	<b>-3.8%</b>
Pedestrians	78,000	71,000	-9.0%
Pedalcyclists	45,000	48,000	+6.7%
Others *	8,000	7,000	-13%

Note: Totals may not add due to rounding. Percentages computed after rounding.

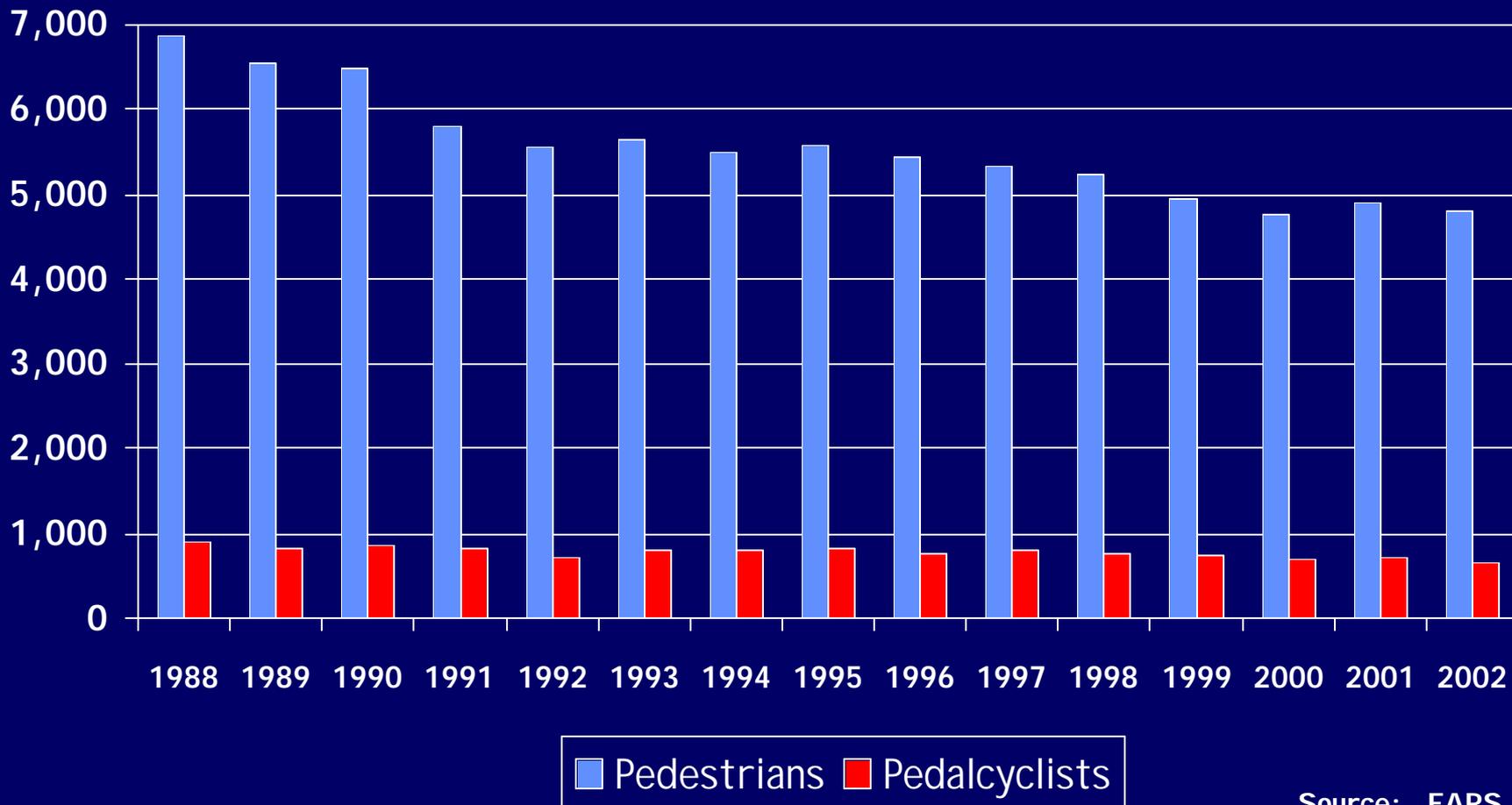
\*Includes occupants of motor vehicles not in transport and of non-motor vehicle transport devices.

Source: FARS, NASS GES



# Pedestrians and Pedalcyclists Killed, by Year

National Center for Statistics & Analysis



Source: FARS



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# *Children and Youth*



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



- **Fatalities for Children Ages 0 – 3 Continued Their Recent Declined (by 5%).**  
**Fatalities are now below 500 for the First Time.**

**Although Injuries were virtually Unchanged**



# Children, Under Age 4, Killed or Injured, by Role

National Center for Statistics & Analysis



Role	Year		% Change
	2001	2002	
<b>Killed</b>	<b>516</b>	<b>491</b>	<b>-4.8%</b>
Occupants	412	387	-6.1%
Non Occupants	104	104	0.0%
<b>Injured</b>	<b>47,000</b>	<b>48,000</b>	<b>+2.1%</b>
Occupants	45,000	46,000	+2.2%
Non Occupants	2,000	2,000	0.0%

Note: Totals may not add due to rounding. Percentages computed after rounding.

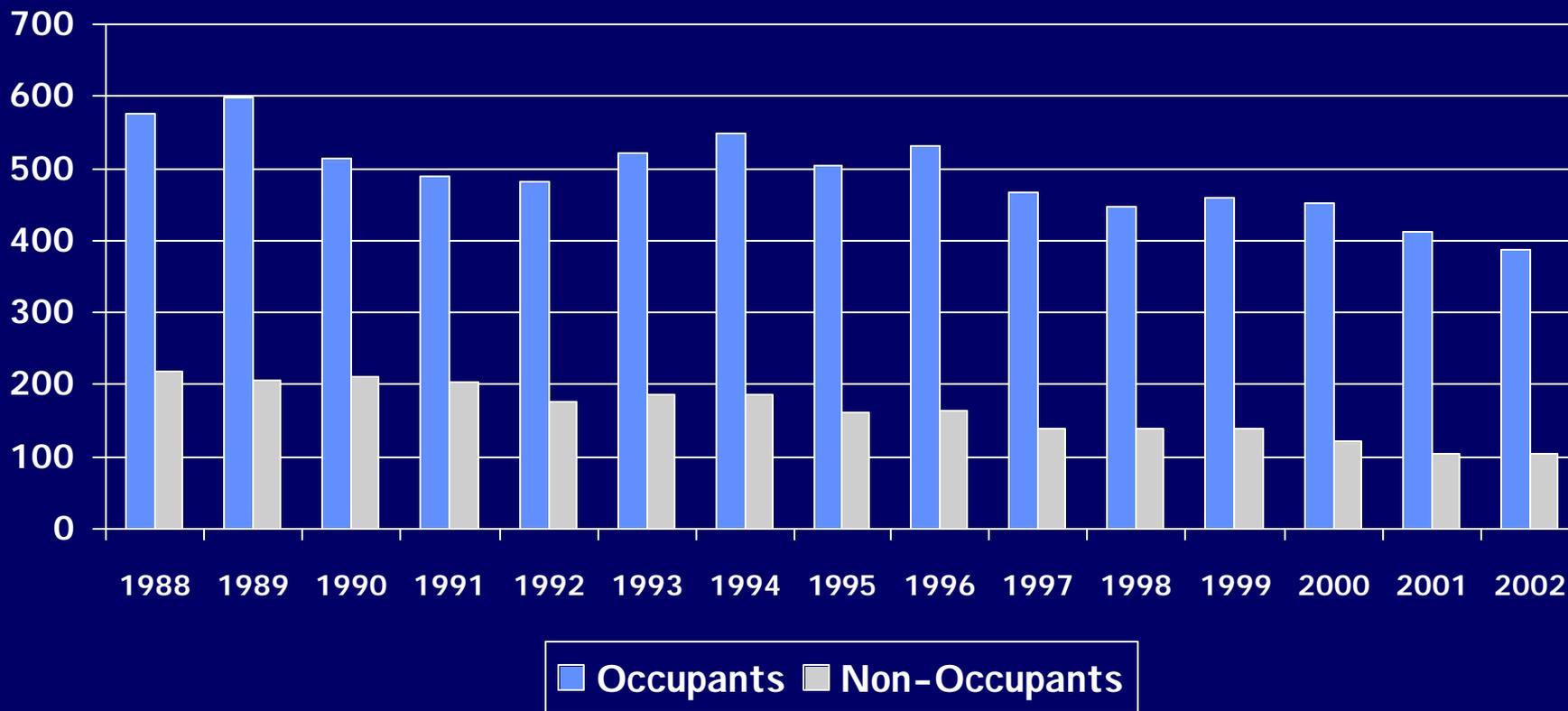
Source: FARS, NASS GES



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# Children Under Age 4, Killed, by Year and Role

National Center for Statistics & Analysis



Source: FARS



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



- **Fatalities for Children Ages 4 - 7 also Declined (by 12%).**  
**Fatalities are now below 500 for the First Time.**

**Injuries to Children of These Ages also Declined**



# Children, Ages 4 thru 7 Killed or Injured, by Role

National Center for Statistics & Analysis



Role	Year		% Change
	2001	2002	
<b>Killed</b>	<b>543</b>	<b>477</b>	<b>-12%</b>
Occupants	388	329	-15%
Non Occupants	155	148	-4.5%
<b>Injured</b>	<b>67,000</b>	<b>66,000</b>	<b>-1.5%</b>
Occupants	58,000	58,000	0%
Non Occupants	9,000	8,000	-11%

Note: Totals may not add due to rounding. Percentages computed after rounding.

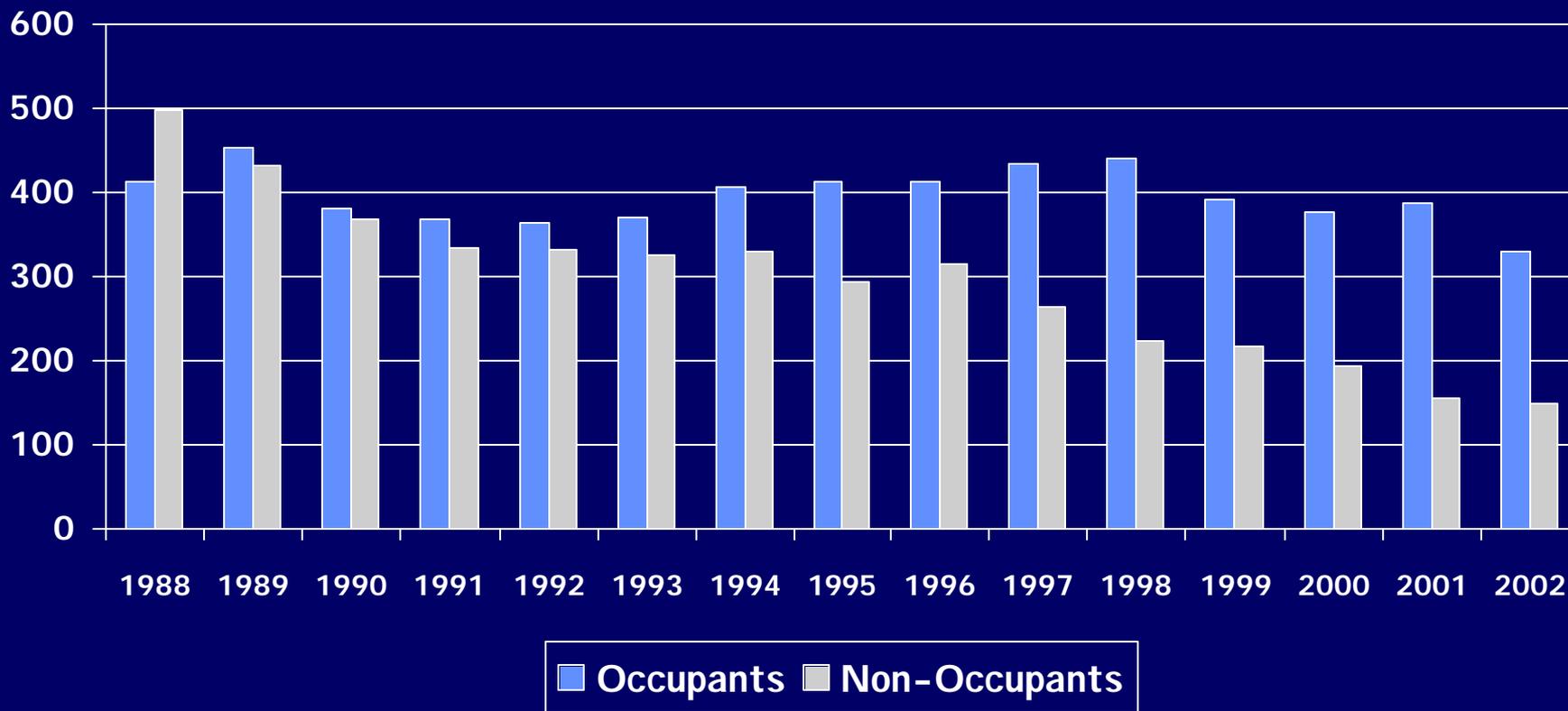
Source: FARS, NASS GES



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# Children Ages 4-7, Killed, by Year and Role

National Center for Statistics & Analysis



Source: FARS



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



- **Fatalities for Children and Youth  
Ages 8 - 15 who were  
Motor Vehicle Occupants  
Increased by 8%**

**But Total Injuries Declined**



# Children and Youth, Ages 8-15, Killed or Injured, by Role

National Center for Statistics & Analysis



Role	Year		% Change
	2001	2002	
<b>Killed</b>	<b>1,544</b>	<b>1,574</b>	<b>+1.9%</b>
Occupants	1,120	1,209	+7.9%
Non Occupants	424	365	-14%
<b>Injured</b>	<b>191,000</b>	<b>189,000</b>	<b>-1.0%</b>
Occupants	159,000	160,000	+0.6%
Non Occupants	32,000	29,000	-9.4%

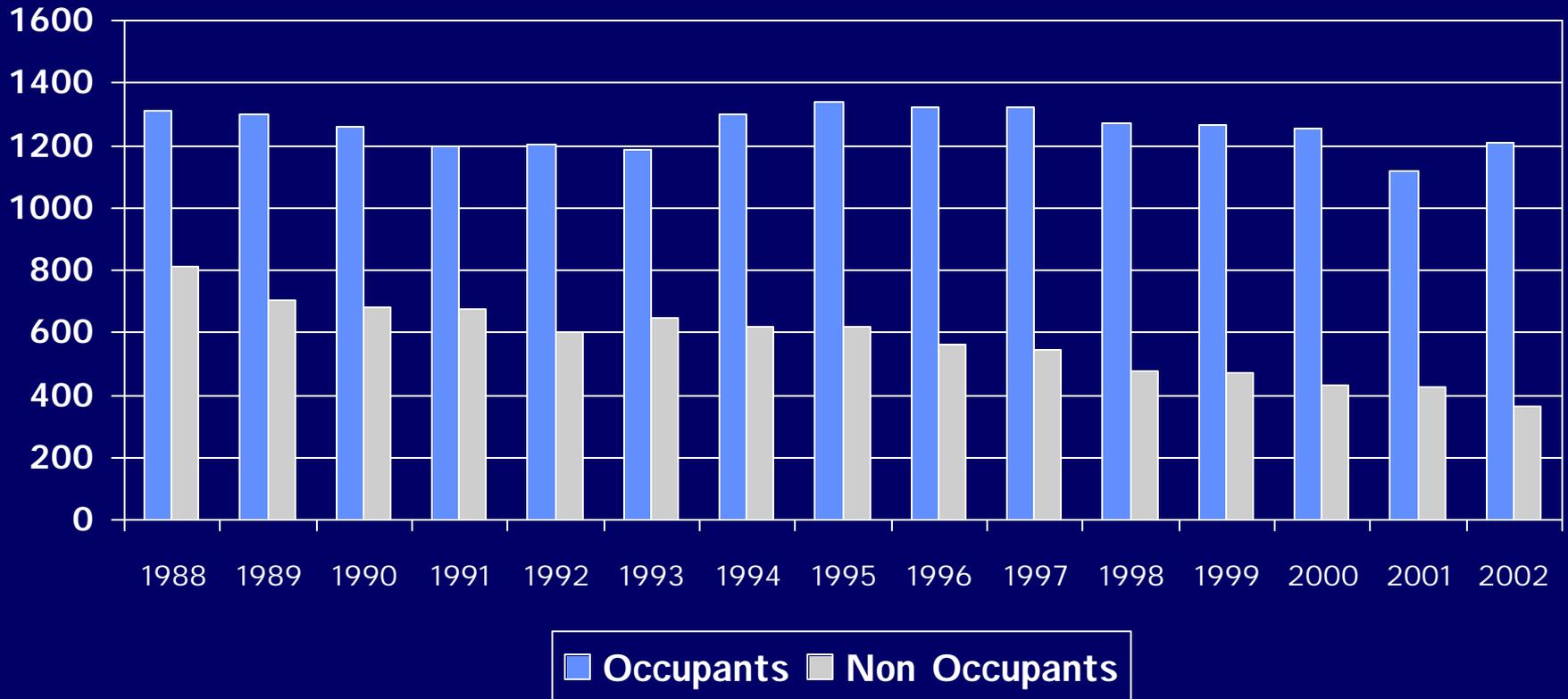
Note: Totals may not add due to rounding. Percentages computed after rounding.

Source: FARS, NASS GES



# Children and Youth (Ages 8-15) Fatalities, by Year and Role

National Center for Statistics & Analysis



Source: FARS



# 2002 Annual Assessment Shows

National Center for Statistics & Analysis



- **The Number of Young Drivers (Ages 16 - 20) Killed Increased by 185**

**But Total Crash Involvements of Young Drivers Declined slightly**



# Number of Crashes and Persons Killed in Crashes Involving Young Drivers (Ages 16-20)

National Center for Statistics & Analysis



Crashes or Persons Killed	Year		% Change
	2001	2002	
<b>Crashes</b>	<b>1,666,000</b>	<b>1,638,000</b>	<b>-1.7%</b>
Fatal	7,627	7,738	+1.5%
Injury	564,000	519,000	-8.0%
PDO	1,094,000	1,111,000	+1.6%
<b>Persons Killed</b>	<b>8,879</b>	<b>8,984</b>	<b>+1.2%</b>
Young Drivers	3,538	3,723	+5.2%
Passengers*	2,449	2,472	+0.9%
All Others*	2,892	2,789	-3.6%

\*In vehicles with young drivers

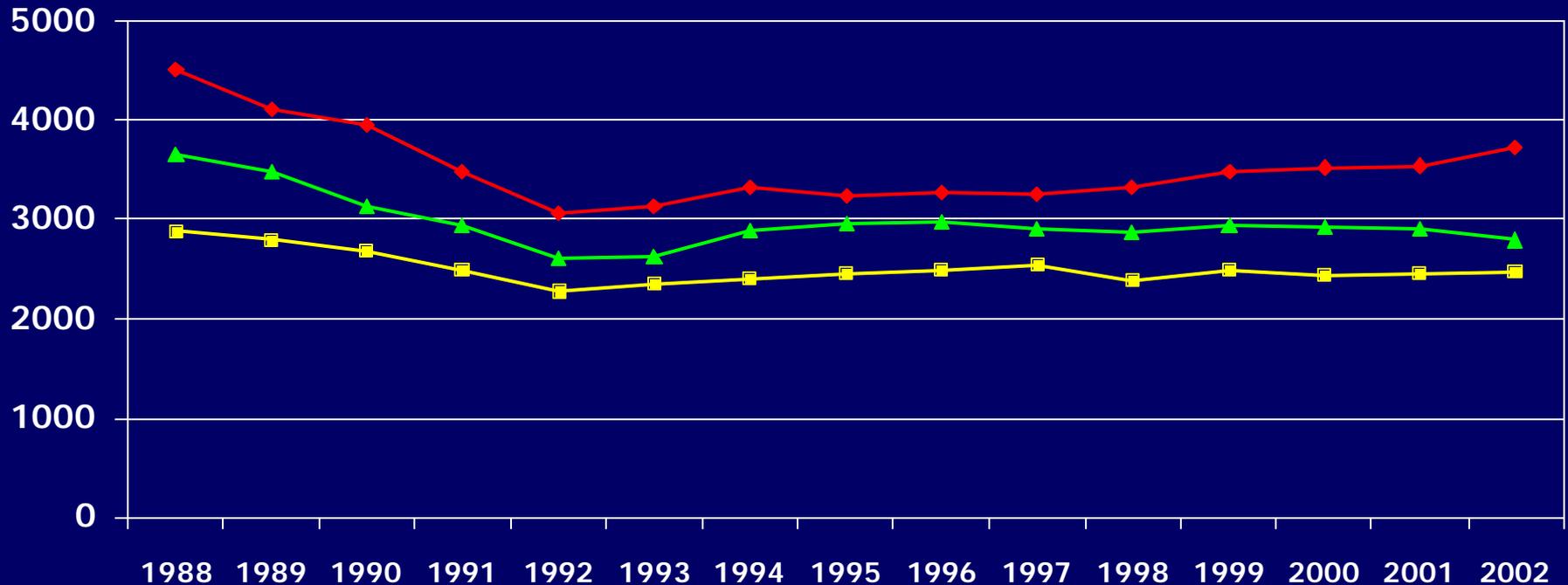
Source: FARS, NASS GES



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# Persons Killed in Crashes Involving Young Drivers (Ages 16-20), by Year and Role

National Center for Statistics & Analysis



◆ Young Driver    □ Passengers\*    ▲ All Others\*

\* In vehicles with young drivers

Source: FARS



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*Questions about the data in this  
report may be sent  
by E-Mail to:  
[ncsaweb@nhtsa.dot.gov](mailto:ncsaweb@nhtsa.dot.gov)  
or  
made by phone to:  
1.800.934.8517*