Traffic Safety Facts
2015 Data
May 2017
DOT HS 812 413

NHTSA

Key Findings

- In 2015 there were 22,144 passenger vehicle occupants who died in motor vehicle traffic crashes and an estimated 2.18 million passenger vehicle occupants who were injured.
- Among the passenger vehicle occupants killed in 2015 in motor vehicle traffic crashes, 56 percent were passenger car occupants and 44 percent were light-truck occupants.
- Passenger vehicles made up 93 percent of registered vehicles and accounted for 90 percent of total vehicle miles traveled in 2015. There were 44,886 vehicles involved in fatal crashes in 2015, of which 78 percent (38,209) were passenger vehicles.
- Occupant fatality rates per 100,000 registered vehicles from 2014 to 2015 increased 4 percent for both passenger cars and light trucks. Among light-truck categories, occupant fatality rates increased for vans (11%), SUVs (4%), and pickup trucks (3%).
- Eighty percent of passenger vehicle occupants who were totally ejected from vehicles were killed in fatal crashes in 2015.
- Among passenger vehicle occupants killed in 2015, the percentage of fatalities in rollover crashes was highest for SUVs (49%), followed by pickup trucks (43%), vans (28%), and passenger cars (23%).
- When a passenger car and a light truck hit head-on in 2015, an occupant was 3.1 times more frequently to be killed in the passenger car than in the light truck.
- Drivers of pickup trucks had the highest percentage of alcohol impairment in fatal crashes (22%) compared to other passenger vehicle drivers (21% for passenger cars, 20% for SUVs, and 10% for vans) in 2015.

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Passenger Vehicles

Passenger vehicles are defined as motor vehicles weighing less than 10,000 pounds and include passenger cars and light trucks (SUVs, pickup trucks, vans, and other light trucks).

In this fact sheet for 2015, the information on passenger vehicles is presented as follows.

This fact sheet contains information on fatal motor vehicle crashes and fatalities, based on data from the Fatality Analysis Reporting System (FARS). FARS is a census of fatal crashes in the 50 States, the District of Columbia, and Puerto Rico (Puerto Rico is not included in U.S. totals). Crash and injury statistics are based on data from the National Automotive Sampling System (NASS) General Estimates System (GES). The NASS GES is a probability-based sample of police-reported crashes, from 60 locations across the country, from which estimates of national totals for injury and property-damage-only crashes are derived.

Overview

In 2015:

- There were 22,441 passenger vehicle occupants who died in traffic crashes and an estimated 2.18 million passenger vehicle occupants who were injured.
- Passenger vehicles made up 93 percent of registered vehicles and accounted for 90 percent of total vehicle miles traveled (VMT).
- An estimated 11,070,000 vehicles were involved in police-reported traffic crashes; 96 percent (10,656,000) were passenger vehicles.
- There were 44,886 vehicles involved in fatal crashes, of which 78 percent (38,209) were passenger vehicles.

Registration Data Changes

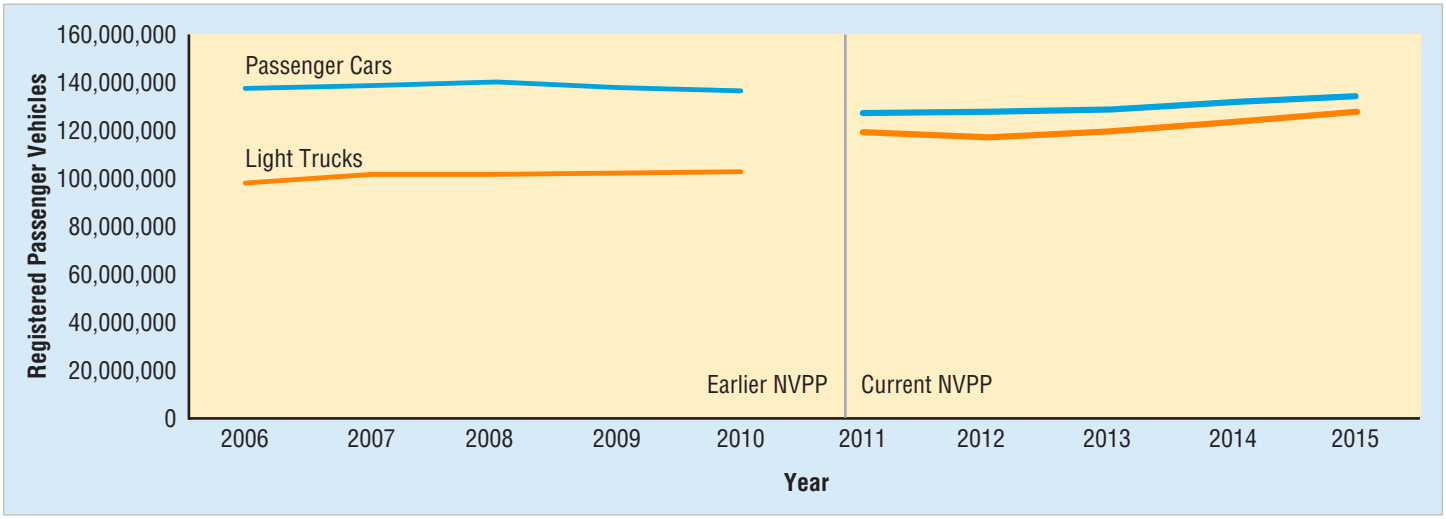
The passenger vehicle registration data contained in this fact sheet was obtained from R. L. Polk's National Vehicle Population Profile (NVPP), a compilation of all passenger vehicles registered in compliance with State requirements.

Due to enhancement in the passenger vehicle registration data from 2011 to 2015, registration counts for these years are calculated differently from the counts provided in 2010 and earlier years (Table 1 and Appendix). Consequently, the 2011-2015 data in this fact sheet for vehicle registration and fatality rates is not comparable with the data for all prior years, which were based on Polk's earlier NVPP. To make suitable comparisons over the 10-year period, all vehicle registration and fatality rate data are presented across two sets of years, 2006-2010 and 2011-2015.

Figure 1 highlights the passenger car and light-truck registration data changes between the

earlier NVPP (2006-2010) and the current NVPP (2011-2015). From 2014 to 2015, passenger car registrations increased by 2 percent and light-truck registrations increased by 3 percent. Among the light-truck categories in 2015 (compared to 2014), SUV registrations increased by 6 percent, pickup truck registrations increased by 2 percent, and van registrations decreased by 1 percent.

Figure 1
Number of Passenger Car and Light-Truck Registrations, 2006-2015



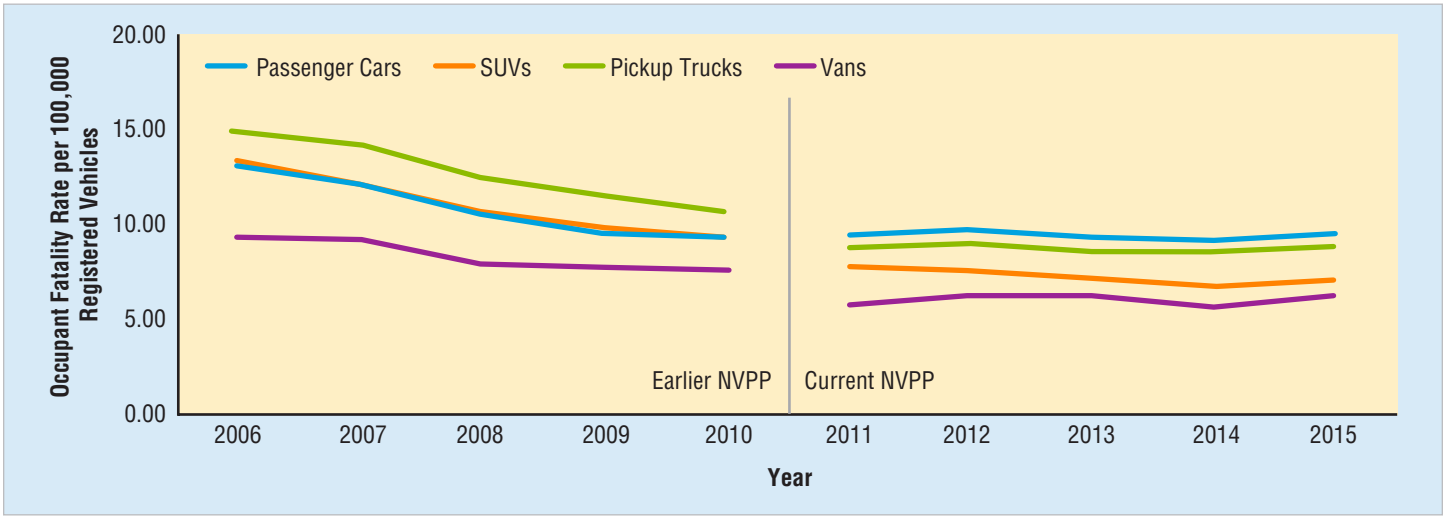
Source: Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

Occupant Fatalities and Occupant Fatality Rates

Figure 2 displays the occupant fatality rates per 100,000 registered vehicles for four passenger vehicle types (passenger cars, SUVs, pickup trucks, and vans) from 2006 to 2015. Overall, the occupant fatality rate trend for each vehicle type generally decreased over time, with a slight increase in 2015. The data for Figure 2 is presented in Tables 1 and 2.

Occupant fatality rates per 100,000 registered vehicles increased 4 percent for both passenger cars and light trucks from 2014 to 2015. Among light-truck categories, occupant fatality rates increased for vans (11%), SUVs (4%), and pickup trucks (3%).

Figure 2
Passenger Vehicle Occupant Fatality Rates per 100,000 Registered Vehicles, by Vehicle Type, 2006-2015



Sources: Fatalities –FARS 2006-2014 Final File, 2015 Annual Report File (ARF); Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

Table 1 presents the number of occupant fatalities, registered vehicles, and occupant fatality rates per 100,000 registered vehicles for total passenger vehicles as well as separately for passenger cars and light trucks from 2006 to 2015.

- The percentage of passenger car occupant fatalities decreased from 58 percent (17,925 of 30,686) in 2006 to 56 percent (12,628 of 22,441) in 2015.
- The percentage of light-truck occupant fatalities increased from 42 percent (12,761 of 30,686) in 2006 to 44 percent (9,813 of 22,441) in 2015.
- Earlier NVPP:
  - The total passenger vehicle occupant fatality rate per 100,000 registered vehicles decreased from 13.05 in 2006 to 9.37 in 2010.
  - The passenger car occupant fatality rate decreased from 13.08 in 2006 to 9.23 in 2010.
  - The light-truck occupant fatality rate decreased from 13.01 in 2006 to 9.55 in 2010.
- Current NVPP:
  - The total passenger vehicle occupant fatality rate increased from 8.68 in 2011 to 8.86 in 2012, decreased to 8.27 in 2014, and then increased to 8.61 in 2015.
  - The passenger car occupant fatality rate increased from 9.46 in 2011 to 9.73 in 2012, decreased to 9.11 in 2014, and then increased to 9.48 in 2015.
  - The light-truck occupant fatality rate increased from 7.84 in 2011 to 7.93 in 2012, decreased to 7.37 in 2014, and then increased to 7.70 in 2015.

Table 1

Passenger Vehicle Occupant Fatalities, Registered Vehicles, and Occupant Fatality Rates,* by Vehicle Type, 2006-2015

	Passenger Cars			Light Trucks**			Total Passenger Vehicles**		
Year	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*
2006	17,925	137,031,279	13.08	12,761	98,064,117	13.01	30,686	235,095,396	13.05
2007	16,614	137,929,951	12.05	12,458	100,817,496	12.36	29,072	238,747,447	12.18
2008	14,646	139,028,041	10.53	10,816	100,862,944	10.72	25,462	239,890,985	10.61
2009	13,135	137,203,972	9.57	10,312	102,008,600	10.11	23,447	239,212,572	9.80
2010	12,491	135,310,480	9.23	9,782	102,376,147	9.55	22,273	237,686,627	9.37
2011	12,014	126,966,714	9.46	9,302	118,702,389	7.84	21,316	245,669,103	8.68
2012	12,361	127,077,676	9.73	9,418	118,690,690	7.93	21,779	245,768,366	8.86
2013	12,037	128,936,225	9.34	9,186	120,491,485	7.62	21,223	249,427,710	8.51
2014	11,947	131,138,925	9.11	9,103	123,470,278	7.37	21,050	254,609,203	8.27
2015	12,628	133,218,368	9.48	9,813	127,401,051	7.70	22,441	260,619,419	8.61

Sources: Fatalities: FARS 2006-2014 Final File, 2015 ARF; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.
*Occupant fatality rate per 100,000 registered vehicles
**Includes other/unknown light-truck vehicle types

Table 2 presents the same information as in Table 1 for three light-truck categories (SUVs, pickup trucks, and vans) from 2006 to 2015.

- Earlier NVPP:
  - The SUV occupant fatality rate per 100,000 registered vehicles decreased from 13.26 in 2006 to 9.30 in 2010.
  - The pickup truck occupant fatality rate decreased from 14.81 in 2006 to 10.78 in 2010.
  - The van occupant fatality rate decreased from 9.29 in 2006 to 7.59 in 2010.
- Current NVPP:
  - The SUV occupant fatality rate decreased from 7.74 in 2011 to 6.75 in 2014, and then increased to 7.01 in 2015.
  - The pickup truck occupant fatality rate increased from 8.73 in 2011 to 8.96 in 2012, decreased to 8.58 in 2013, and then increased to 8.91 in 2015.
  - The van occupant fatality rate increased from 5.76 in 2011 to 6.23 in 2013, decreased to 5.66 in 2014, and then increased to 6.27 in 2015.

Table 2

Light-Truck Occupant Fatalities, Registered Vehicles, and Occupant Fatality Rates,* by Vehicle Type, 2006-2015**

Year	SUVs			Pickup Trucks			Vans		
	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*	Occupant Fatalities	Registered Vehicles	Occupant Fatality Rate*
2006	4,928	37,170,302	13.26	5,993	40,478,837	14.81	1,815	19,539,179	9.29
2007	4,834	39,463,148	12.25	5,847	41,121,470	14.22	1,764	19,406,561	9.09
2008	4,214	40,529,579	10.40	5,097	40,782,963	12.50	1,492	18,784,452	7.94
2009	4,104	41,383,289	9.92	4,801	41,676,351	11.52	1,396	18,222,255	7.66
2010	3,942	42,378,757	9.30	4,486	41,596,353	10.78	1,346	17,732,967	7.59
2011	3,884	50,161,565	7.74	4,270	48,912,291	8.73	1,128	19,592,314	5.76
2012	3,885	51,305,806	7.57	4,343	48,465,436	8.96	1,167	18,886,646	6.18
2013	3,831	53,477,838	7.16	4,175	48,644,891	8.58	1,142	18,339,481	6.23
2014	3,800	56,277,894	6.75	4,249	49,134,966	8.65	1,021	18,030,322	5.66
2015	4,182	59,662,506	7.01	4,449	49,911,616	8.91	1,116	17,801,045	6.27

Sources: Fatalities: FARS 2006-2014 Final File, 2015 ARF; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.

Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

*Occupant fatality rate per 100,000 registered vehicles

**Excludes other/unknown light-truck vehicle types

Occupants Injured and Occupant Injury Rates

Table 3 shows the estimated number of occupants injured, the number of registered vehicles, and occupant injury rates per 100,000 registered vehicles for total passenger vehicles as well as separately for passenger cars and light trucks from 2006 to 2015.

- The percentage of injured passenger car occupants remained the same, from 63 percent (1,475,000 of 2,331,000) in 2006 to 63 percent (1,378,000 of 2,181,000) in 2015.
- The percentage of injured light-truck occupants remained the same, from 37 percent (857,000 of 2,331,000) in 2006 to 37 percent (803,000 of 2,181,000) in 2015.
- Earlier NVPP:
  - The total passenger vehicle occupant injury rate per 100,000 registered vehicles decreased from 992 in 2006 to 826 in 2009 and then increased to 835 in 2010.
  - The passenger car occupant injury rate decreased from 1,076 in 2006 to 887 in 2009 and then increased to 926 in 2010.
  - The light-truck occupant injury rate decreased from 874 in 2006 to 716 in 2010.
- Current NVPP:
  - The total passenger vehicle occupant injury rate increased from 801 in 2011 to 851 in 2012, decreased to 815 in 2014, and then increased to 837 in 2015.
  - The passenger car occupant injury rate increased from 976 in 2011 to 1,045 in 2012, decreased to 985 in 2014, and then increased to 1,035 in 2015.
  - The light-truck occupant injury rate increased from 614 in 2011 to 642 in 2012, decreased to 622 in 2013, increased to 633 in 2014, and then decreased to 630 in 2015.

Table 3

Passenger Vehicle Occupants Injured, Registered Vehicles, and Occupant Injury Rates,* by Vehicle Type, 2006-2015

Year	Passenger Cars			Light Trucks**			Total Passenger Vehicles**		
	Occupants Injured	Registered Vehicles	Occupant Injury Rate*	Occupants Injured	Registered Vehicles	Occupant Injury Rate*	Occupants Injured	Registered Vehicles	Occupant Injury Rate*
2006	1,475,000	137,031,279	1,076	857,000	98,064,117	874	2,331,000	235,095,396	992
2007	1,379,000	137,929,951	1,000	841,000	100,817,496	835	2,221,000	238,747,447	930
2008	1,304,000	139,028,041	938	768,000	100,862,944	762	2,072,000	239,890,985	864
2009	1,216,000	137,203,972	887	759,000	102,008,600	744	1,976,000	239,212,572	826
2010	1,253,000	135,310,480	926	733,000	102,376,147	716	1,986,000	237,686,627	835
2011	1,240,000	126,966,714	976	728,000	118,702,389	614	1,968,000	245,669,103	801
2012	1,328,000	127,077,676	1,045	762,000	118,690,690	642	2,091,000	245,768,366	851
2013	1,296,000	128,936,225	1,005	750,000	120,491,485	622	2,046,000	249,427,710	820
2014	1,292,000	131,138,925	985	782,000	123,470,278	633	2,074,000	254,609,203	815
2015	1,378,000	133,218,368	1,035	803,000	127,401,051	630	2,181,000	260,619,419	837

Sources: Injured –NASS GES 2006-2015; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.

Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

*Occupant injury rate per 100,000 registered vehicles

**Includes other/unknown light-truck vehicle types.

Table 4 presents the same information as in Table 3 for three light-truck categories (SUVs, pickup trucks, and vans) from 2006 to 2015.

- Earlier NVPP:
  - The SUV occupant injury rate per 100,000 registered vehicles decreased from 1,042 in 2006 to 823 in 2009 and then increased to 851 in 2010.
  - The pickup truck occupant injury rate decreased from 682 in 2006 to 524 in 2010.
  - The van occupant injury rate decreased from 919 in 2006 to 761 in 2010.
- Current NVPP:
  - The SUV occupant injury rate increased from 703 in 2011 to 753 in 2012, decreased to 716 in 2013, and then increased to 731 in 2015.
  - The pickup truck occupant injury rate increased from 484 in 2011 to 497 in 2012, decreased to 462 in 2013, increased to 492 in 2014, and then decreased to 484 in 2015.
  - The van occupant injury rate increased from 705 in 2011 to 763 in 2013 and then decreased to 683 in 2015.

Table 4

Light-Truck Occupants Injured, Registered Vehicles, and Occupant Injury Rates,* by Vehicle Type, 2006-2015**

	SUVs			Pickup Trucks			Vans		
Year	Occupants Injured	Registered Vehicles	Occupant Injury Rate*	Occupants Injured	Registered Vehicles	Occupant Injury Rate*	Occupants Injured	Registered Vehicles	Occupant Injury Rate*
2006	387,000	37,170,302	1,042	276,000	40,478,837	682	179,000	19,539,179	919
2007	380,000	39,463,148	962	271,000	41,121,470	660	175,000	19,406,561	904
2008	361,000	40,529,579	891	250,000	40,782,963	612	145,000	18,784,452	770
2009	341,000	41,383,289	823	238,000	41,676,351	570	139,000	18,222,255	766
2010	360,000	42,378,757	851	218,000	41,596,353	524	135,000	17,732,967	761
2011	353,000	50,161,565	703	237,000	48,912,291	484	138,000	19,592,314	705
2012	386,000	51,305,806	753	241,000	48,465,436	497	135,000	18,886,646	713
2013	383,000	53,477,838	716	225,000	48,644,891	462	140,000	18,339,481	763
2014	410,000	56,277,894	729	242,000	49,134,966	492	129,000	18,030,322	715
2015	436,000	59,662,506	731	242,000	49,911,616	484	122,000	17,801,045	683

Sources: Injured – NASS GES 2006-2015; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.

Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

*Occupant injury rate per 100,000 registered vehicles

**Excludes other/unknown light-truck vehicle types

Restraint Use

The 2015 National Occupant Protection Use Survey (NOPUS) observed that the seat belt use rate among front seat occupants was 88.5 percent for passenger vehicles, 90.3 percent for passenger cars, 90.3 percent for vans and SUVs, and 80.8 percent for pickup trucks.[1]

Lap/shoulder seat belts, when used, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. For light-truck occupants, seat belts reduce the risk of fatal injury by 60 percent and moderate-to-critical injury by 65 percent.[2] Seat belts saved an estimated 13,941 lives of passenger vehicle occupants 5 and older in 2015.[3]

In fatal crashes in 2015, there were 22,441 passenger vehicle occupants who were killed. Rural areas accounted for 57 percent of these occupant fatalities. For these passenger vehicle occupant fatalities occurring in rural areas, 50 percent were unrestrained (based on known restraint use) compared to 46 percent in urban areas (based on known restraint use). Sixty-one percent of rural pickup truck occupants killed were unrestrained (based on known

[1] Pickrell, T. M., & Li, R. (2016, February). *Seat belt use in 2015 – Overall results* (Traffic Safety Facts Research Note. Report No. DOT HS 812 243). Washington, DC: National Highway Traffic Safety Administration. Available at crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812243

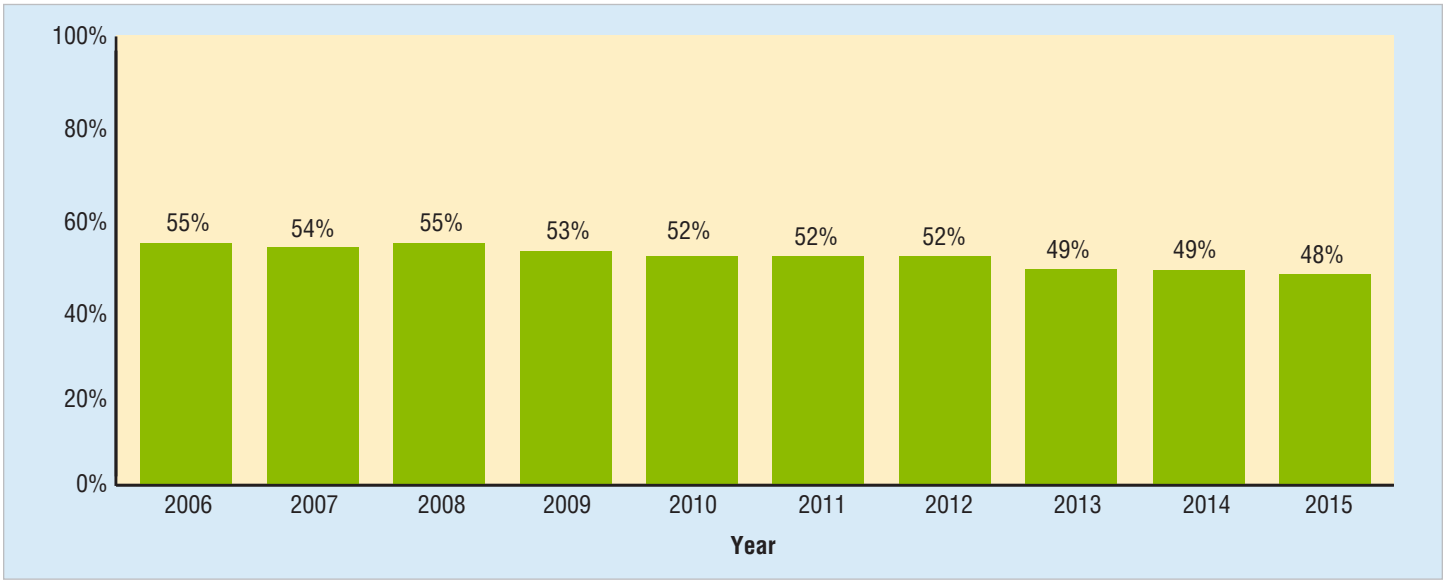
[2] Kahane, C. J. (2015, January). *Lives saved by vehicle safety technologies and associated Federal Motor Vehicle Safety Standards, 1960 to 2012 – Passenger cars and LTVs – With reviews of 26 FMVSS and the effectiveness of their associated safety technologies in reducing fatalities, injuries, and crashes* (Report No. DOT HS 812 069). Washington, DC: National Highway Traffic Safety Administration. Available at crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812069

[3] National Center for Statistics and Analysis. (2016, August). *Lives saved in 2015 by restraint use and minimum drinking-age-laws* (Traffic Safety Facts Crash•Stats. Report No. DOT HS 812 319). Washington, DC: National Highway Traffic Safety Administration. Available at crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/812319

restraint use) – the highest percentage of any passenger vehicle occupants killed among rural and urban areas.

Figure 3 displays the gradual decline of the percentage of passenger vehicle occupants killed who were unrestrained (based on known restraint use), from 55 percent in 2006 to 48 percent in 2015.

Figure 3
Percentage of Unrestrained* Passenger Vehicle Occupant Fatalities, 2006-2015



Source: FARS 2006-2014 Final File, 2015 ARF
*Based on known restraint use.

Table 5 presents the percentages of unrestrained (based on known restraint use) passenger vehicle occupant fatalities, by vehicle type, from 2006 to 2015. Passenger car occupant fatalities had the lowest percentage (42%) of unrestrained occupant fatalities in 2015 (based on known restraint use), while pickup truck occupant fatalities had the highest percentage (60%).

Table 5
Percentage of Unrestrained* Passenger Vehicle Occupant Fatalities, by Vehicle Type, 2006-2015

Year	Passenger Vehicle Type					Total Passenger Vehicles**
	Passenger Cars	Light Trucks				
		SUVs	Pickup Trucks	Vans	Total**	
2006	49%	63%	69%	51%	64%	55%
2007	47%	62%	68%	52%	63%	54%
2008	48%	62%	68%	52%	63%	55%
2009	46%	60%	67%	48%	62%	53%
2010	44%	59%	65%	49%	61%	52%
2011	45%	58%	65%	48%	60%	52%
2012	45%	59%	65%	43%	60%	52%
2013	43%	56%	63%	46%	58%	49%
2014	42%	55%	62%	41%	57%	49%
2015	42%	54%	60%	43%	56%	48%

Source: FARS 2006-2014 Final File, 2015 ARF
*Based on known restraint use.
**Includes occupants of other/unknown light-truck vehicle types

Ejection

When totally ejected, the occupant's body was entirely outside the vehicle but may be in contact with the vehicle; partially ejected means that part of the occupant's body was outside the vehicle at some time during the crash sequence. Eighty percent of passenger vehicle occupants (4,042 of 5,065) who were totally ejected from vehicles were killed in fatal crashes in 2015. Ejection from the

vehicle is one of the most injurious events that can happen to a person in a crash. Seat belts can be effective in preventing total ejections.

Table 6 presents the ejection status of passenger vehicle occupants involved in fatal crashes in 2015. In passenger cars, 13 percent of occupants killed were totally ejected from the vehicle, while 25 percent of those killed in light trucks were totally ejected.

Table 6
Passenger Vehicle Occupants in Fatal Crashes, by Vehicle Type and Ejection Status, 2015

Vehicle Type		Ejection Status										Total	
		Not Ejected		Totally Ejected		Partially Ejected		Ejected-Unknown		Unknown			
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Passenger Cars	Killed	10,472	83%	1,613	13%	473	4%	19	<0.5%	51	<0.5%	12,628	100%
	Survived	16,704	97%	334	2%	65	<0.5%	5	<0.5%	137	1%	17,245	100%
	Total	27,176	91%	1,947	7%	538	2%	24	<0.5%	188	1%	29,873	100%
Light Trucks*	Killed	6,717	68%	2,429	25%	613	6%	26	<0.5%	28	<0.5%	9,813	100%
	Survived	19,873	95%	689	3%	73	<0.5%	26	<0.5%	246	1%	20,907	100%
	Total	26,590	87%	3,118	10%	686	2%	52	<0.5%	274	1%	30,720	100%
Passenger Vehicles*	Killed	17,189	77%	4,042	18%	1,086	5%	45	<0.5%	79	<0.5%	22,441	100%
	Survived	36,577	96%	1,023	3%	138	<0.5%	31	<0.5%	383	1%	38,152	100%
	Total	53,766	89%	5,065	8%	1,224	2%	76	<0.5%	462	1%	60,593	100%

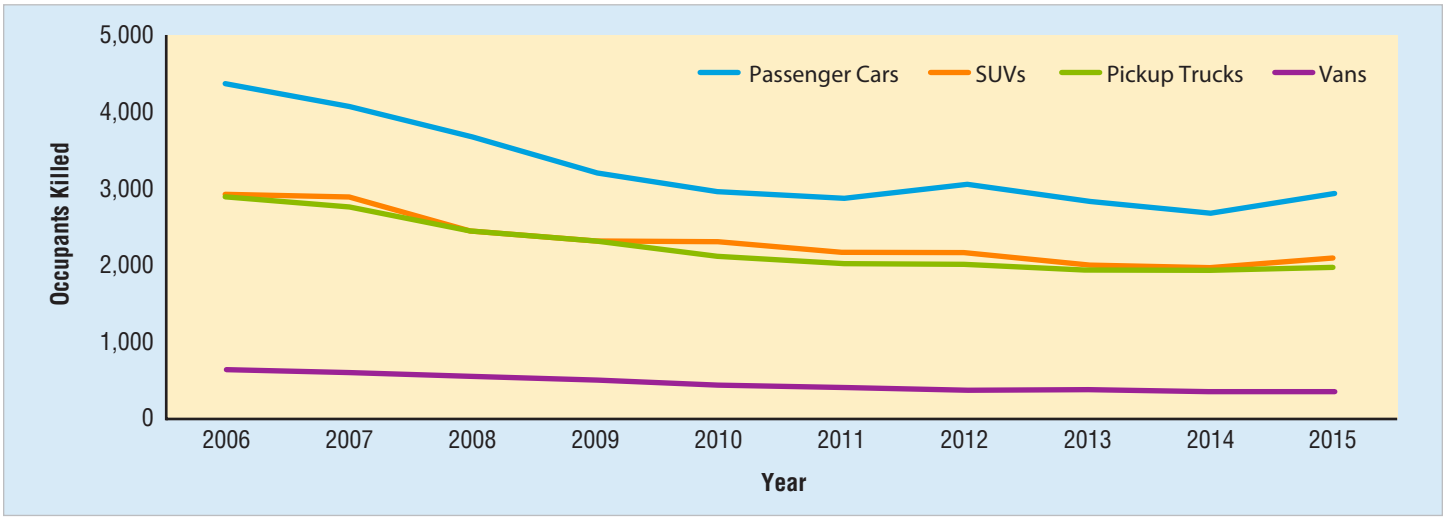
Source: FARS 2015 ARF
*Includes SUVs, pickup trucks, vans, and other/unknown light-truck vehicle types.

Rollover Crashes

The rollover crash is one of the most fatal forms of crashes among passenger vehicles, accounting for one-third (32%) of all occupant fatalities in 2015. Among passenger vehicle occupants killed in 2015, the percentage of fatalities in rollover crashes was highest for SUVs (49%), followed by pickup trucks (43%), vans (28%), and passenger cars (23%).

Overall, each of the four passenger vehicle categories in Figure 4 generally showed a decreasing trend in the number of occupants killed in rollover crashes from 2006 to 2015, with a slight increase from 2014 to 2015. The data used in Figure 4 is shown in Table 7.

Figure 4
Passenger Vehicle Occupants Killed in Rollover Crashes, by Vehicle Type, 2006-2015



Source: FARS 2006-2014 Final File, 2015 ARF

Table 7 presents the number of passenger vehicle occupants killed in rollover crashes by vehicle type from 2006 to 2015. In the past 10 years, the percentages of rollover occupant fatalities for:

- Passenger cars decreased by 35 percent from 4,376 in 2006 to 2,844 in 2015,
- SUVs decreased by 29 percent from 2,899 in 2006 to 2,065 in 2015,
- Pickup trucks decreased by 32 percent from 2,844 in 2006 to 1,935 in 2015, and
- Vans decreased by 50 percent from 609 in 2006 to 307 in 2015.

Table 7
Passenger Vehicle Occupant Fatalities in Rollover Crashes, by Vehicle Type, 2006-2015

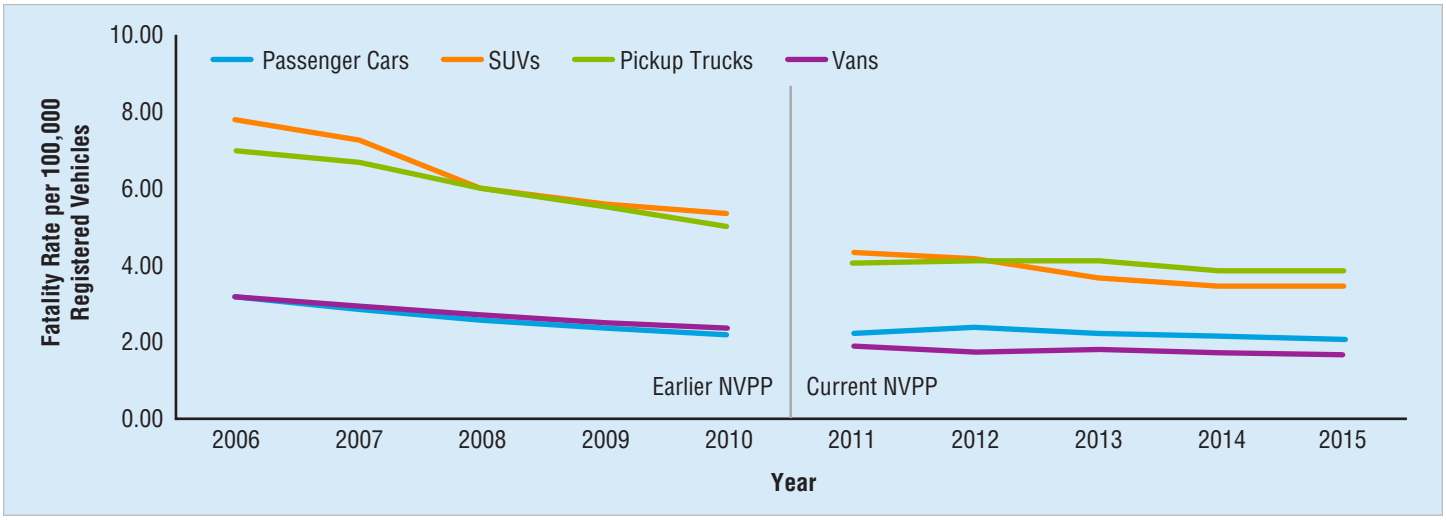
	Passenger Vehicle Type					
		Light Trucks				
Year	Passenger Cars	SUVs	Pickup Trucks	Vans	Total*	Total Passenger Vehicles*
2006	4,376	2,899	2,844	609	6,366	10,742
2007	4,055	2,861	2,748	572	6,185	10,240
2008	3,653	2,435	2,435	514	5,390	9,043
2009	3,230	2,303	2,295	457	5,061	8,291
2010	2,933	2,264	2,098	413	4,777	7,710
2011	2,849	2,172	1,993	375	4,551	7,400
2012	3,025	2,161	2,012	326	4,502	7,527
2013	2,823	1,966	1,903	326	4,207	7,030
2014	2,663	1,965	1,907	305	4,186	6,849
2015	2,844	2,065	1,935	307	4,330	7,174

Source: FARS 2006-2014 Final File, 2015 ARF
*Includes occupants of other/unknown light-truck vehicle types

Among passenger vehicles involved in rural fatal crashes in 2015, SUVs experienced the highest rollover percentage (36%), compared to 30 percent for pickup trucks, 22 percent for vans, and 20 percent for passenger cars. The rollover percentages for passenger vehicles in urban areas were much lower: 18 percent for SUVs, 15 percent for pickup trucks, 8 percent for vans, and 9 percent for passenger cars.

Figure 5 displays the occupant fatality rates per 100,000 registered vehicles by vehicle type from 2006 to 2015. The data for Figure 5 is presented in Table 8.

Figure 5
Passenger Vehicle Occupant Fatality Rates per 100,000 Registered Vehicles in Rollover Crashes, by Vehicle Type, 2006-2015



Sources: Fatalities – FARS 2006-2014 Final File, 2015 ARF; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.

Table 8 presents the passenger vehicle occupant fatality rates per 100,000 registered vehicles in rollover crashes by vehicle type from 2006 to 2015.

- The occupant fatality rates per 100,000 registered vehicles in rollover crashes in earlier NVPP for:
  - Passenger cars decreased by 32 percent from 3.19 in 2006 to 2.17 in 2010,
  - SUVs decreased by 32 percent from 7.80 in 2006 to 5.34 in 2010,
  - Pickup trucks decreased by 28 percent from 7.03 in 2006 to 5.04 in 2010, and
  - Vans decreased by 25 percent from 3.12 in 2006 to 2.33 in 2010.
- The occupant fatality rates in rollover crashes in current NVPP for:
  - Passenger cars decreased by 5 percent from 2.24 in 2011 to 2.13 in 2015,
  - SUVs decreased by 20 percent from 4.33 in 2011 to 3.46 in 2015,
  - Pickup trucks decreased by 5 percent from 4.07 in 2011 to 3.88 in 2015, and
  - Vans decreased by 10 percent from 1.91 in 2011 to 1.72 in 2015.

Table 8

Passenger Vehicle Occupant Fatality Rates* in Rollover Crashes, by Vehicle Type, 2006-2015

Year	Passenger Vehicle Type					Total Passenger Vehicles**
	Passenger Cars	Light Trucks				
		SUVs	Pickup Trucks	Vans	Total**	
2006	3.19	7.80	7.03	3.12	6.49	4.57
2007	2.94	7.25	6.68	2.95	6.13	4.29
2008	2.63	6.01	5.97	2.74	5.34	3.77
2009	2.35	5.57	5.51	2.51	4.96	3.47
2010	2.17	5.34	5.04	2.33	4.67	3.24
2011	2.24	4.33	4.07	1.91	3.83	3.01
2012	2.38	4.21	4.15	1.73	3.79	3.06
2013	2.19	3.68	3.91	1.78	3.49	2.82
2014	2.03	3.49	3.88	1.69	3.39	2.69
2015	2.13	3.46	3.88	1.72	3.40	2.75

Sources: Fatalities – FARS 2006-2014 Final File, 2015 ARF; Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
Note: Due to an enhancement in Polk's 2011-2015 passenger vehicle registration data processes, results for these years are not strictly comparable to prior years. Refer to the Appendix for more information about these changes.
*Occupant fatality rate per 100,000 registered vehicles
**Includes other/unknown light-truck vehicle types

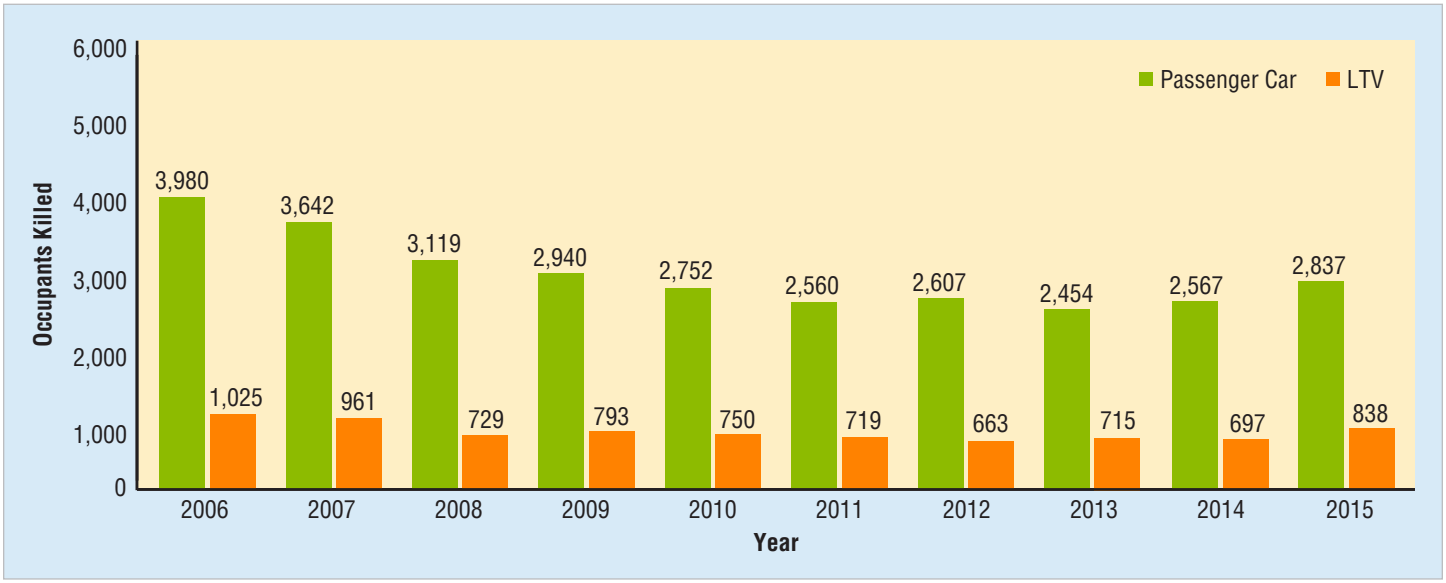
Two-Vehicle Crashes Between a Passenger Car and a Light Truck

Figure 6 displays the number of occupant fatalities in two-vehicle crashes involving one passenger car and one LTV (SUV, pickup truck, or van) from 2006 to 2015. In these crashes, there were a range of 3.4 to 4.3 times as many passenger car occupant fatalities as LTV occupant fatalities. In more detail from 2006 to 2015:

- When a passenger car and an LTV hit head-on, an occupant was between 3.1 to 4.1 times more likely to be killed in a passenger car than in an LTV.
- When the front of a passenger car hit the side of an LTV, an occupant was between 1.3 to 1.7 times more likely to be killed in an LTV than in a passenger car.
- However, when the front of an LTV hit the side of a passenger car, an occupant was between 13.3 to 24.8 times more likely to be killed in a passenger car than in an LTV.

Figure 6

Occupants Killed in Two-Vehicle Crashes Involving a Passenger Car and an LTV,* 2006-2015



Source: FARS 2006-2014 Final File, 2015 ARF
*LTV includes SUV, pickup truck, or van

Table 9 presents the number of occupants killed in two-vehicle crashes between one passenger car and one light truck from 2014 to 2015:

- The number of passenger car occupants killed increased by 11 percent from 2,567 in 2014 to 2,837 in 2015.
- The number of LTV occupants killed increased by 20 percent from 697 in 2014 to 838 in 2015.

Table 9

Occupants Killed in Two-Vehicle Crashes Involving a Passenger Car and an LTV,* 2014 and 2015

Occupants	Year		Percent Change
	2014	2015	
Killed in Passenger Car	2,567	2,837	+10.5%
Killed in LTV*	697	838	+20.2%

Source: FARS 2014 Final File, 2015 ARF
*LTV includes SUV, pickup truck, or van

Alcohol

A driver is considered to be alcohol-impaired when the driver's blood alcohol concentration (BAC) is .08 grams per deciliter (g/dL) or higher. From 2006 to 2015, the percentage of alcohol-impaired passenger vehicle drivers involved in fatal crashes changed slightly among each vehicle type, as shown in Table 10. Pickup truck drivers had the highest percentage of alcohol impairment in fatal crashes (22%) compared to other passenger vehicle drivers (21% for passenger cars, 20% for SUVs, and 10% for vans) in 2015. The percentage of alcohol-impaired van drivers involved in fatal crashes was substantially lower than other passenger vehicle drivers.

Table 10

Percentage of Alcohol-Impaired (BAC=.08+ g/dL) Passenger Vehicle Drivers in Fatal Crashes, By Vehicle Type, 2006-2015

	Drivers by Passenger Vehicle Type											
			Light Trucks									
	Passenger Cars		SUVs		Pickup Trucks		Vans		Total*		All Passenger Vehicles*	
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2006	5,466	23%	1,986	24%	2,873	27%	488	14%	5,358	24%	10,824	23%
2007	5,144	23%	1,895	23%	2,725	27%	457	14%	5,083	23%	10,227	23%
2008	4,679	23%	1,651	23%	2,316	26%	337	12%	4,311	23%	8,991	23%
2009	4,186	23%	1,583	23%	2,258	27%	291	12%	4,136	23%	8,322	23%
2010	4,164	24%	1,423	21%	2,041	25%	286	12%	3,752	22%	7,916	23%
2011	4,103	24%	1,410	21%	1,877	24%	256	12%	3,551	21%	7,654	22%
2012	4,129	23%	1,482	21%	1,919	24%	253	12%	3,663	21%	7,792	22%
2013	4,072	23%	1,420	21%	1,887	24%	251	12%	3,573	21%	7,645	22%
2014	3,892	22%	1,494	21%	1,936	25%	246	12%	3,688	22%	7,579	22%
2015	4,085	21%	1,529	20%	1,900	22%	214	10%	3,673	20%	7,758	20%

Source: FARS 2006-2014 Final File, 2015 ARF
*Includes drivers of other/unknown light-truck vehicle types

Occupant Fatalities by State

For each State, the District of Columbia, and Puerto Rico, Table 11 presents the number of passenger vehicle occupant fatalities in 2015 by vehicle type. Puerto Rico is not included in the overall U.S. total.

Of the total passenger vehicle fatalities by State (excluding the District of Columbia and Puerto Rico) in 2015:

- The States with the largest percentages of passenger car fatalities were Delaware (74%), Connecticut (70%), Massachusetts (70%), and New Jersey (70%).
- The States with the largest percentages of SUV fatalities were Wyoming (31%) and Vermont (29%).
- The States with the largest percentages of pickup truck fatalities were North Dakota (45%), Alaska (38%), and Wyoming (35%).
- The States with the largest percentages of van fatalities were Alaska (16%) and South Dakota (10%).

Additional State/county-level data is available at NHTSA's State Traffic Safety Information website: https://cdan.nhtsa.gov/stsi.htm

Table 11

Passenger Vehicle Occupant Fatalities, by State and Vehicle Type, 2015

State	Passenger Vehicle Type										Total Passenger Vehicle* Fatalities
	Passenger Cars		Light Trucks								
			SUVs		Pickup Trucks		Vans		Total*		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Alabama	355	55%	111	17%	155	24%	23	4%	292	45%	647
Alaska	8	22%	9	24%	14	38%	6	16%	29	78%	37
Arizona	249	51%	106	22%	106	22%	30	6%	242	49%	491
Arkansas	176	47%	87	23%	83	22%	27	7%	197	53%	373
California	1,107	63%	279	16%	286	16%	81	5%	654	37%	1,761
Colorado	162	47%	85	25%	77	22%	21	6%	184	53%	346
Connecticut	108	70%	27	18%	15	10%	4	3%	46	30%	154
Delaware	48	74%	9	14%	5	8%	3	5%	17	26%	65
Dist of Columbia	6	100%	0	0%	0	0%	0	0%	0	0%	6
Florida	903	62%	271	19%	214	15%	73	5%	560	38%	1,463
Georgia	561	56%	184	18%	212	21%	50	5%	446	44%	1,007
Hawaii	19	51%	8	22%	9	24%	1	3%	18	49%	37
Idaho	69	42%	42	26%	38	23%	8	5%	94	58%	163
Illinois	381	59%	126	20%	92	14%	38	6%	260	41%	641
Indiana	328	57%	115	20%	91	16%	41	7%	248	43%	576
Iowa	111	47%	42	18%	71	30%	12	5%	125	53%	236
Kansas	136	53%	48	19%	58	23%	14	5%	120	47%	256
Kentucky	314	56%	99	18%	120	22%	25	4%	244	44%	558
Louisiana	246	51%	71	15%	141	29%	16	3%	232	49%	478
Maine	62	61%	18	18%	13	13%	7	7%	39	39%	101
Maryland	212	67%	50	16%	42	13%	11	3%	103	33%	315
Massachusetts	120	70%	26	15%	14	8%	11	6%	52	30%	172
Michigan	341	58%	118	20%	95	16%	30	5%	243	42%	584
Minnesota	159	57%	40	14%	66	24%	14	5%	121	43%	280
Mississippi	256	47%	112	21%	161	29%	14	3%	290	53%	546
Missouri	331	53%	112	18%	144	23%	33	5%	289	47%	620
Montana	69	41%	39	23%	52	31%	4	2%	101	59%	170
Nebraska	83	45%	43	23%	53	28%	7	4%	103	55%	186
Nevada	96	55%	40	23%	28	16%	9	5%	80	45%	176
New Hampshire	49	66%	12	16%	10	14%	3	4%	25	34%	74
New Jersey	214	70%	49	16%	25	8%	14	5%	90	30%	304
New Mexico	79	43%	45	25%	50	27%	5	3%	103	57%	182
New York	363	64%	113	20%	47	8%	40	7%	201	36%	564
North Carolina	605	64%	149	16%	154	16%	39	4%	343	36%	948
North Dakota	36	36%	18	18%	45	45%	1	1%	64	64%	100
Ohio	449	60%	130	17%	104	14%	58	8%	296	40%	745
Oklahoma	221	50%	78	18%	121	27%	21	5%	220	50%	441
Oregon	150	52%	55	19%	60	21%	21	7%	138	48%	288
Pennsylvania	478	61%	144	18%	112	14%	48	6%	306	39%	784
Rhode Island	18	67%	5	19%	3	11%	1	4%	9	33%	27
South Carolina	358	58%	121	20%	105	17%	33	5%	259	42%	617
South Dakota	38	40%	18	19%	29	31%	9	10%	56	60%	94
Tennessee	373	55%	129	19%	143	21%	38	6%	311	45%	684
Texas	1,146	49%	474	20%	618	27%	88	4%	1,181	51%	2,327
Utah	95	55%	29	17%	38	22%	12	7%	79	45%	174
Vermont	20	59%	10	29%	2	6%	1	3%	14	41%	34
Virginia	322	58%	103	19%	103	19%	24	4%	231	42%	553
Washington	235	64%	44	12%	73	20%	17	5%	134	36%	369
West Virginia	90	47%	50	26%	45	23%	5	3%	102	53%	192
Wisconsin	236	61%	56	14%	70	18%	25	6%	152	39%	388
Wyoming	37	35%	33	31%	37	35%	0	0%	70	65%	107
U.S. Total	**12,628**	**56%**	**4,182**	**19%**	**4,449**	**20%**	**1,116**	**5%**	**9,813**	**44%**	**22,441**
Puerto Rico	112	82%	13	9%	10	7%	2	1%	25	18%	137

Source: FARS 2015 ARF

*Includes occupants of other/unknown light-truck vehicle types

Appendix

Polk improved the data quality of NVPP, which resulted in a complete rewrite of the data. They:

- Enhanced their business rules for vehicles on the road,
- Have more consistent reporting/processing across States, and
- Upgraded their basis for vehicle coding.

A comparison between Polk's earlier and current versions of the NVPP registration data for 2011 shows that Polk's enhancements have resulted in over a 3-percent increase in passenger vehicle registration counts from what was previously reported. When looking at passenger cars and light trucks separately, the passenger car count decreased by 5.6 percent and the light-truck count increased by 14.6 percent between the earlier NVPP and current NVPP for 2011 (see passenger car and light truck counts in Table 12).

This fact sheet uses 2011-2015 data for passenger car and light-truck registrations based on Polk's current NVPP. From 2006 to 2010 using Polk's earlier NVPP, passenger vehicle registrations increased 3 percent (Figure 1). Using 2006 to 2010 earlier NVPP, light trucks had a 4-percent increase in registrations, while passenger cars had a 1-percent decrease. Among the light-truck categories, SUV registrations increased by 14 percent, pickup truck registrations increased by 3 percent, and van registrations decreased by 9 percent.

Table 12
Registered Vehicle Data Changes, 2006-2015

	Registered Vehicles					
			Light Trucks			
Year	All Passenger Vehicles	Passenger Cars	All*	SUVs	Pickup Trucks	Vans
2006 (earlier NVPP)	235,095,396	137,031,279	98,064,117	37,170,302	40,478,837	19,539,179
2007 (earlier NVPP)	238,747,447	137,929,951	100,817,496	39,463,148	41,121,470	19,406,561
2008 (earlier NVPP)	239,890,985	139,028,041	100,862,944	40,529,579	40,782,963	18,784,452
2009 (earlier NVPP)	239,212,572	137,203,972	102,008,600	41,383,289	41,676,351	18,222,255
2010 (earlier NVPP)	237,686,627	135,310,480	102,376,147	42,378,757	41,596,353	17,732,967
2011 (earlier NVPP)	238,138,184	134,543,655	103,594,529	43,891,547	41,778,775	17,308,359
2011 (current NVPP)	245,669,103	126,966,714	118,702,389	50,161,565	48,912,291	19,592,314
2012 (current NVPP)	245,768,366	127,077,676	118,690,690	51,305,806	48,465,436	18,886,646
2013 (current NVPP)	249,427,710	128,936,225	120,491,485	53,447,838	48,644,891	18,339,481
2014 (current NVPP)	254,609,203	131,138,925	123,470,278	56,277,894	49,134,966	18,030,322
2015 (current NVPP)	260,619,419	133,218,368	127,401,051	59,662,506	49,911,616	17,801,045

Source: Registered Vehicles – Polk data from R. L. Polk & Co., earlier NVPP (2006-2010) and current NVPP (2011-2015), a foundation of IHS Markit automotive solutions.
*Includes other/unknown light-truck registrations

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For More Information:

Information on traffic fatalities is available from the National Center for Statistics and Analysis, NSA-230, 1200 New Jersey Avenue SE., Washington, DC 20590. NCSA can be contacted at 800-934-8517 or by e-mail at ncsarequests@dot.gov. General information on highway traffic safety can be found at www.nhtsa.gov/NCSA. To report a safety-related problem or to inquire about motor vehicle safety information, contact the Vehicle Safety Hotline at 888-327-4236.

Other fact sheets available from the National Center for Statistics and Analysis are *Alcohol-Impaired Driving, Bicyclists and Other Cyclists, Children, Large Trucks, Motorcycles, Occupant Protection, Older Population, Pedestrians, Rural/Urban Comparison in Traffic Fatalities, School Transportation-Related Crashes, Speeding, State Alcohol Estimates, State Traffic Data, Summary of Motor Vehicle Crashes,* and *Young Drivers.* Detailed data on motor vehicle traffic crashes are published annually in *Traffic Safety Facts: A Compilation of Motor Vehicle Crash Data from the Fatality Analysis Reporting System and the General Estimates System*. The fact sheets and annual Traffic Safety Facts report can be found at https://crashstats.nhtsa.dot.gov/.

U.S. Department of Transportation
National Highway Traffic Safety Administration