



Lives Saved in 2016 by Restraint Use and Minimum-Drinking-Age Laws

Findings

In 2016 the use of seat belts in passenger vehicles saved an estimated 14,668 lives of occupants 5 and older. An estimated 2,756 lives of occupants 13 and older were saved by frontal air bags. An estimated 328 child occupants 4 and younger were saved by the use of child restraints, and 1,859 lives were saved by the use of motorcycle helmets. An additional 2,456 lives would have been saved in 2016 if all unrestrained passenger vehicle occupants 5 and older involved in fatal crashes had worn their seat belts. Similarly, if all motorcyclists had been helmeted, then an additional 802 lives would have been saved. An estimated 552 lives were also saved due to minimum-drinking-age laws.

Introduction

NHTSA's National Center for Statistics and Analysis has been producing annual estimates of lives saved since 1975. Table 1 presents estimates of lives saved in 2016 by restraint use and

as a result of minimum-drinking-age laws. The estimates are calculated using the effectiveness of each device or law. More information on the methodology of lives-saved estimates is available in two NHTSA publications, *Lives Saved FAQs* (NCSA, 2009), which answers 30 common questions about lives saved and includes references to many other reports on lives saved; and *Lives Saved Calculations for Seat Belts and Frontal Air Bags* (Glassbrenner & Starnes, 2009), which describes in detail the methodology of estimating lives saved by seat belts and frontal air bags.

Results

Table 1 shows that the estimated number of lives saved by seat belt use among occupants 5 and older increased from 14,067 in 2015 to 14,668 in 2016. Use of motorcycle helmets contributed to an increase in lives saved from 1,800 in 2015 to 1,859 in 2016. The estimated number of lives saved by child restraints among children 4 and younger, by frontal air bags among occupants 13 and older, and by the minimum-drinking-age laws all increased from 2015 to 2016 (Table 1).

Table 1: Lives Saved by Restraint Use, Minimum-Drinking-Age Laws, and Additional Lives Who Would Have Been Saved at 100-Percent Seat Belt and Motorcycle Helmet Use, 2012–2016

Year	Lives Saved, 4 and Younger	Lives Saved, 5 and Older	Lives Saved, 13 and Older	Lives Saved, All Ages	Lives Saved	Additional Lives Who Would Have Been Saved at 100-Percent Use	
	Child Restraints	Seat Belts	Frontal Air Bags	Motorcycle Helmets	Minimum-Drinking-Age Law	Seat Belts*	Motorcycle Helmets
2012	285	12,386	2,422	1,715	537	3,030	782
2013	263	12,644	2,398	1,640	507	2,771	717
2014	253	12,801	2,400	1,673	486	2,877	661
2015	272	14,067	2,596	1,800	542	2,716	742
2016	328	14,668	2,756	1,859	552	2,456	802

Source: 2012–2015 Fatality Analysis Reporting System (FARS) Final Files and FARS 2016 Annual Report Files

*Marginally revised from prior estimates to incorporate increased precision in observed seat belt use

Table 2 shows the estimated total number of lives saved in 2016 for all 50 States, the District of Columbia, and Puerto Rico. In this table, the second column from far left contains estimates of lives saved by child restraints. The next three columns contain estimates of lives saved by seat belts, lives saved by frontal air bags, and lives saved

by motorcycle helmets, respectively. The numbers in the two far right columns represent the additional lives savable with 100-percent seat belt use and 100-percent helmet use, respectively. Due to rounding, the sum of the State totals may not equal the national total.

Table 2: Lives Saved in 2016 by Child Restraints, Seat Belts, Frontal Air Bags, and Motorcycle Helmets

State	Lives Saved by Child Restraints, 4 and Younger	Lives Saved by Seat Belts, 5 and Older	Lives Saved by Frontal Air Bags, 13 and Older	Lives Saved by Motorcycle Helmets, All Ages	Additional Lives Savable at 100-Percent Restraint Use	
					Seat Belts*	Motorcycle Helmets
Alabama	10	381	87	55	58	4
Alaska	0	26	6	2	6	1
Arizona	8	261	55	33	57	34
Arkansas	0	234	46	14	96	22
California	37	1,476	214	308	74	10
Colorado	3	209	41	25	58	31
Connecticut	4	102	20	8	18	14
Delaware	0	50	9	6	7	2
District of Columbia	0	1	2	4	0	0
Florida	21	1,038	200	174	178	109
Georgia	20	623	125	96	31	4
Hawaii	0	35	8	5	3	6
Idaho	1	91	21	4	31	5
Illinois	10	475	85	23	52	44
Indiana	5	354	69	15	45	29
Iowa	3	210	30	8	21	18
Kansas	1	189	36	13	42	11
Kentucky	12	321	70	21	75	28
Louisiana	8	301	57	49	60	4
Maine	2	75	15	4	17	4
Maryland	6	181	36	38	26	4
Massachusetts	0	115	31	24	45	1
Michigan	7	518	76	40	42	31
Minnesota	3	204	30	11	20	14
Mississippi	16	294	65	25	114	3
Missouri	13	301	81	66	109	6
Montana	1	65	15	3	32	4
Nebraska	5	83	19	9	26	2
Nevada	2	88	18	36	16	5
New Hampshire	0	29	13	6	22	3
New Jersey	2	214	42	40	22	1
New Mexico	11	152	28	15	20	8
New York	5	395	61	74	47	4
North Carolina	8	665	117	101	86	5
North Dakota	1	29	9	1	12	4
Ohio	3	409	94	32	113	55
Oklahoma	11	273	54	14	65	24
Oregon	4	302	34	30	16	1
Pennsylvania	12	325	94	54	96	38
Rhode Island	0	16	4	0	4	1
South Carolina	4	355	76	31	39	50
South Dakota	1	27	8	4	18	6
Tennessee	9	450	86	79	81	5
Texas	32	1,688	266	129	222	102
Utah	2	108	18	11	23	8
Vermont	0	32	6	5	8	1
Virginia	11	246	63	44	94	1
Washington	6	232	35	46	19	1
West Virginia	1	109	21	11	25	4
Wisconsin	5	277	52	10	50	25
Wyoming	0	32	7	5	13	6
National*	328	14,668	2,756	1,859	2,456	802
Puerto Rico	1	53	15	12	7	9

*Estimates for States may not add up to national total due to independent rounding.

These figures and recent trends can also be found in the State Traffic Safety Information website: www-nrd.nhtsa.dot.gov/departments/nrd-30/nca/stsi/usa%20web%20report.htm

*Marginally revised from prior estimates to incorporate increased precision in observed seat belt use

References

Glassbrenner, D., & Starnes, M. (2009, December). *Lives saved calculations for seat belts and frontal air bags* (Report No. DOT HS 811 206). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/811206.pdf

National Center for Statistics and Analysis. (2009, December). *Lives saved FAQs* (Report No. DOT HS 811 105). Washington, DC: National Highway Traffic Safety Administration. Available at www-nrd.nhtsa.dot.gov/Pubs/811105.pdf

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