

Speed



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Section 4: Speed

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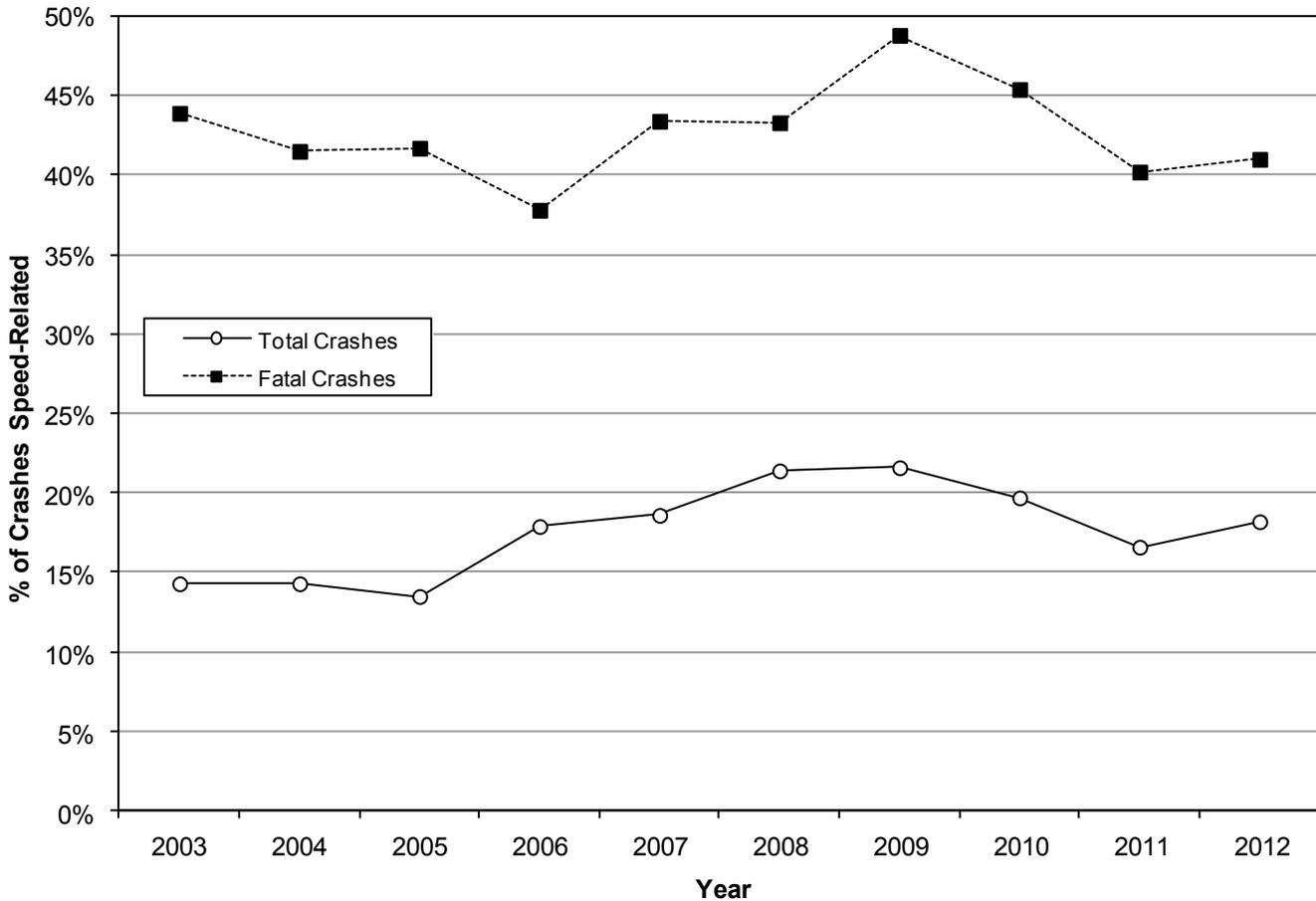
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Trends

Speed-Related Crashes (Utah 2003-2012)

Speed-Related Crashes												
Year	Property Damage Only			Injury			Fatal			Total		
	All	Speed		All	Speed		All	Speed		All	Speed	
	#	#	%	#	#	%	#	#	%	#	#	%
2003	31,842	4,498	14.1%	18,285	2,604	14.2%	262	115	43.9%	50,389	7,217	14.3%
2004	34,222	4,836	14.1%	19,423	2,764	14.2%	260	108	41.5%	53,905	7,708	14.3%
2005	35,158	4,676	13.3%	19,545	2,653	13.6%	235	98	41.7%	54,938	7,427	13.5%
2006	37,674	6,450	17.1%	18,264	3,539	19.4%	249	94	37.8%	56,187	10,083	17.9%
2007	42,368	7,612	18.0%	18,619	3,687	19.8%	258	112	43.4%	61,245	11,411	18.6%
2008	38,997	8,311	21.3%	17,125	3,622	21.2%	245	106	43.3%	56,367	12,039	21.4%
2009	35,398	7,607	21.5%	15,752	3,379	21.5%	217	106	48.8%	51,367	11,092	21.6%
2010	34,155	6,591	19.3%	14,995	3,026	20.2%	218	99	45.4%	49,368	9,716	19.7%
2011	36,418	5,724	15.7%	15,645	2,885	18.4%	224	90	40.2%	52,287	8,699	16.6%
2012	34,635	6,135	17.7%	15,765	2,970	18.8%	200	82	41.0%	50,600	9,187	18.2%
Total	360,867	62,440	17.3%	173,418	31,129	18.0%	2,368	1,010	42.7%	536,653	94,579	17.6%



- Speed-related crashes are a concern because of the increased potential for severe injury and death.
- The 10-year trend shows that 17.6% of total crashes and 42.7% of fatal crashes in Utah are speed-related.
- In 2012, a higher percentage of speed-related crashes were fatal (0.9%) compared to all motor vehicle crashes (0.4%).
- In 2012, speed-related crashes were 3.2 times more likely to be fatal than other motor vehicle crashes.

Crash Conditions

Speed-Related Crashes by County (Utah 2012)

Speed-Related Crashes								
County	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
Rich	20	40.7	11	22.4	1	2.03	32	65.0
Utah	1,004	26.2	572	14.9	6	0.16	1,582	41.3
Salt Lake	2,500	28.6	1,047	12.0	24	0.27	3,571	40.8
Sevier	88	27.5	38	11.9	2	0.63	128	40.0
Wasatch	76	22.7	54	16.1	2	0.60	132	39.4
Beaver	74	29.4	22	8.7	1	0.40	97	38.5
Millard	117	25.7	49	10.8	6	1.32	172	37.8
Iron	157	22.4	97	13.8	0	0.00	254	36.2
Morgan	36	27.1	12	9.0	0	0.00	48	36.1
Uintah	84	20.3	50	12.1	5	1.21	139	33.6
Summit	179	24.6	59	8.1	5	0.69	243	33.4
Weber	359	22.3	173	10.7	2	0.12	534	33.1
Daggett	6	19.7	3	9.9	1	3.29	10	32.9
Davis	513	20.3	237	9.4	6	0.24	756	29.9
Wayne	10	21.1	3	6.3	1	2.11	14	29.6
Sanpete	42	20.4	17	8.3	0	0.00	59	28.7
Box Elder	169	19.2	80	9.1	2	0.23	251	28.6
Cache	164	18.7	83	9.5	3	0.34	250	28.5
Carbon	54	17.7	29	9.5	0	0.00	83	27.2
Duchesne	42	15.2	32	11.6	0	0.00	74	26.8
Garfield	18	16.2	9	8.1	0	0.00	27	24.4
Tooele	122	14.8	69	8.4	6	0.73	197	23.9
Juab	63	16.4	23	6.0	0	0.00	86	22.4
Washington	145	10.5	142	10.3	3	0.22	290	21.0
Piute	3	10.6	2	7.0	0	0.00	5	17.6
Kane	16	9.3	9	5.3	2	1.17	27	15.8
San Juan	24	7.8	14	4.6	3	0.98	41	13.4
Emery	32	8.4	15	3.9	0	0.00	47	12.3
Grand	18	5.6	19	5.9	1	0.31	38	11.9
Statewide	6,135	23.0	2,970	11.1	82	0.31	9,187	34.5

- Rich (65.0), Utah (41.3), Salt Lake (40.8), and Sevier (40.0) counties had the highest rates of speed-related total crashes per 100 million vehicle miles traveled.
- Daggett (3.29), Wayne (2.11), and Rich (2.03) counties had the highest rates of fatal speed-related crashes per 100 million vehicle miles traveled.
- Grand (11.9), Emery (12.3), and San Juan (13.4) counties had the lowest rates of speed-related total crashes per 100 million vehicle miles traveled.

Speed-Related Crashes by Urban/Rural Location (Utah 2012)

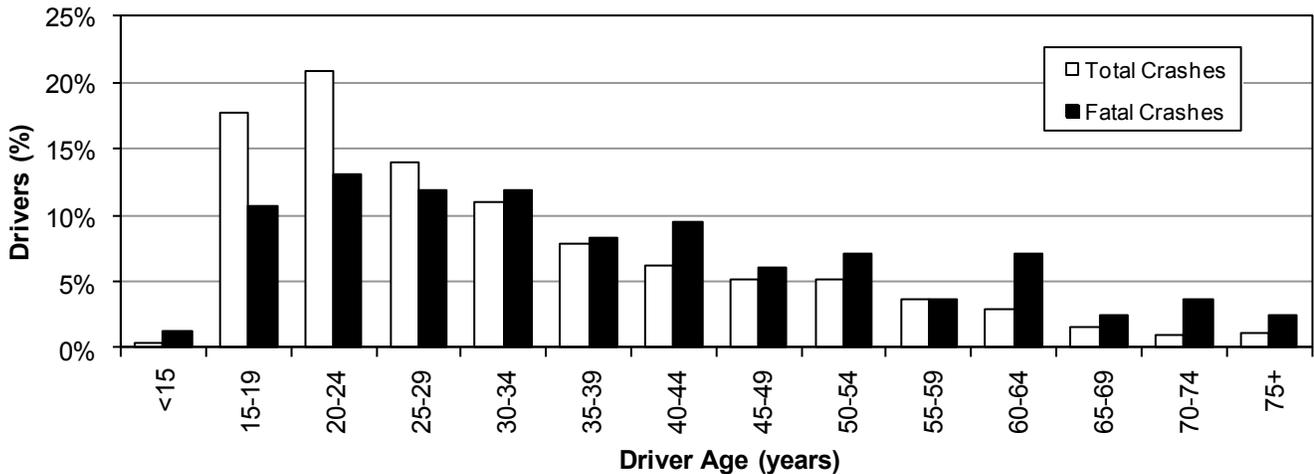
- While urban areas had a higher rate of total speed-related crashes per vmt, rural areas had a higher rate for fatal speed crashes.
- Speed-related crashes occurring in rural areas were 2.8 times more likely to result in a death than speed-related crashes in urban areas.

Speed-Related Crashes								
Location	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
Urban	4,685	24.7	2,254	11.9	44	0.23	6,983	36.8
Rural	1,450	18.9	716	9.4	38	0.50	2,204	28.8
Total	6,135	23.0	2,970	11.1	82	0.31	9,187	34.5

Crash Conditions

Age of Drivers in Speed-Related Crashes (Utah 2012)

Speed-Related Drivers								
Age	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
<15	7	0.1%	18	0.6%	1	1.2%	26	0.3%
15-19	1,173	18.1%	532	17.0%	9	10.7%	1,714	17.7%
20-24	1,394	21.6%	606	19.4%	11	13.1%	2,011	20.8%
25-29	892	13.8%	457	14.6%	10	11.9%	1,359	14.0%
30-34	733	11.3%	324	10.4%	10	11.9%	1,067	11.0%
35-39	491	7.6%	263	8.4%	7	8.3%	761	7.9%
40-44	384	5.9%	209	6.7%	8	9.5%	601	6.2%
45-49	326	5.0%	159	5.1%	5	6.0%	490	5.1%
50-54	328	5.1%	159	5.1%	6	7.1%	493	5.1%
55-59	216	3.3%	128	4.1%	3	3.6%	347	3.6%
60-64	192	3.0%	80	2.6%	6	7.1%	278	2.9%
65-69	93	1.4%	58	1.9%	2	2.4%	153	1.6%
70-74	51	0.8%	33	1.1%	3	3.6%	87	0.9%
75+	54	0.8%	47	1.5%	2	2.4%	103	1.1%
Unknown	133	2.1%	56	1.8%	1	1.2%	190	2.0%
Total	6,467	100.0%	3,129	100.0%	84	100.0%	9,680	100.0%



- Younger drivers had the highest percentage of total speed-related crashes and fatal crashes.

Gender of Drivers in Speed-Related Crashes (Utah 2012)

Speed-Related Drivers								
Gender	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Male	4,035	62.4%	1,919	61.3%	58	69.0%	6,012	62.1%
Female	2,309	35.7%	1,169	37.4%	26	31.0%	3,504	36.2%
Unknown	123	1.9%	41	1.3%	0	0.0%	164	1.7%
Total	6,467	100.0%	3,129	100.0%	84	100.0%	9,680	100.0%



- Male drivers represented 62.1% of the drivers in speed-related total crashes and 69.0% of the drivers in speed-related fatal crashes.

Crash Conditions

Speed-Related Crashes by Vehicle Type (Utah 2012)

- For total speed-related crashes, passenger car and SUV were the leading vehicle types.
- For fatal speed-related crashes, passenger car and SUV were the leading vehicle types.
- Motorcycle was overrepresented and van was underrepresented in speed-related crashes compared to other vehicle types in all crashes.

Speed-Related Vehicles								
Vehicle Type	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Passenger Car	3,662	56.6%	1,576	50.4%	34	40.5%	5,272	54.4%
SUV	1,225	18.9%	625	20.0%	18	21.4%	1,868	19.3%
Pickup Truck	1,095	16.9%	491	15.7%	12	14.3%	1,598	16.5%
Van	244	3.8%	128	4.1%	1	1.2%	373	3.9%
Heavy Truck	185	2.9%	86	2.7%	2	2.4%	273	2.8%
Motorcycle	19	0.3%	156	5.0%	14	16.7%	189	2.0%
Bus	2	0.0%	3	0.1%	0	0.0%	5	0.1%
Other	3	0.0%	59	1.9%	3	3.6%	65	0.7%
Unknown	36	0.6%	5	0.2%	0	0.0%	41	0.4%
Total	6,471	100.0%	3,129	100.0%	84	100.0%	9,684	100.0%

Speed-Related Crashes by Month (Utah 2012)

Speed-Related Crashes								
Month	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per Day	#	Rate per Day	#	Rate per Day	#	Rate per Day
	January	735	23.7	253	8.2	3	0.10	991
February	493	17.0	240	8.3	5	0.17	738	25.4
March	566	18.3	260	8.4	10	0.32	836	27.0
April	314	10.5	187	6.2	3	0.10	504	16.8
May	272	8.8	195	6.3	10	0.32	477	15.4
June	322	10.7	201	6.7	8	0.27	531	17.7
July	324	10.5	222	7.2	7	0.23	553	17.8
August	311	10.0	251	8.1	8	0.26	570	18.4
September	335	11.2	218	7.3	4	0.13	557	18.6
October	415	13.4	222	7.2	11	0.35	648	20.9
November	599	20.0	237	7.9	9	0.30	845	28.2
December	1,449	46.7	484	15.6	4	0.13	1,937	62.5
Total	6,135	16.8	2,970	8.1	82	0.22	9,187	25.1

- Overall, December (62.5), January (32.0), and November (28.2) had the highest rates of speed-related crashes per day.
- October (0.35), March (0.32), and May (0.32) had the highest rates per day of fatal speed-related crashes.

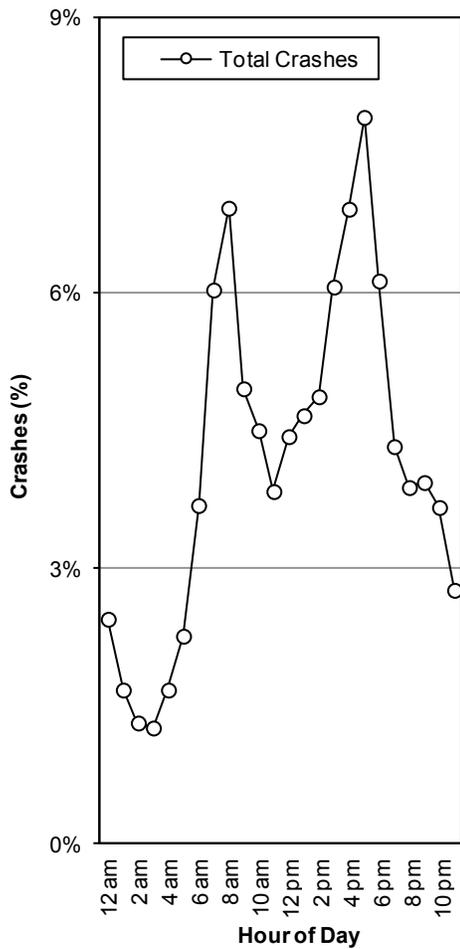
Speed-Related Crashes by Day of Week (Utah 2012)

- The highest percentage of speed-related total crashes occurred on Monday while the highest percentage of fatal crashes occurred on Saturday.
- The lowest percentage of speed-related total crashes occurred on Sunday while the lowest percentage of fatal crashes occurred on Monday and Thursday.

Speed-Related Crashes								
Day of Week	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Sunday	653	10.6%	370	12.5%	14	17.1%	1,037	11.3%
Monday	1,101	17.9%	475	16.0%	8	9.8%	1,584	17.2%
Tuesday	735	12.0%	360	12.1%	10	12.2%	1,105	12.0%
Wednesday	860	14.0%	414	13.9%	12	14.6%	1,286	14.0%
Thursday	894	14.6%	396	13.3%	8	9.8%	1,298	14.1%
Friday	900	14.7%	483	16.3%	11	13.4%	1,394	15.2%
Saturday	992	16.2%	472	15.9%	19	23.2%	1,483	16.1%
Total	6,135	100.0%	2,970	100.0%	82	100.0%	9,187	100.0%

Crash Conditions

Speed-Related Crashes by Hour (Utah 2012)



Speed-Related Crashes								
Hour	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Midnight	151	2.5%	72	2.4%	1	1.2%	224	2.4%
1 a.m.	100	1.6%	50	1.7%	3	3.7%	153	1.7%
2 a.m.	72	1.2%	47	1.6%	1	1.2%	120	1.3%
3 a.m.	63	1.0%	49	1.6%	3	3.7%	115	1.3%
4 a.m.	107	1.7%	45	1.5%	1	1.2%	153	1.7%
5 a.m.	146	2.4%	60	2.0%	1	1.2%	207	2.3%
6 a.m.	240	3.9%	96	3.2%	2	2.4%	338	3.7%
7 a.m.	407	6.6%	145	4.9%	2	2.4%	554	6.0%
8 a.m.	467	7.6%	166	5.6%	3	3.7%	636	6.9%
9 a.m.	319	5.2%	134	4.5%	2	2.4%	455	5.0%
10 a.m.	272	4.4%	137	4.6%	4	4.9%	413	4.5%
11 a.m.	229	3.7%	122	4.1%	1	1.2%	352	3.8%
Noon	259	4.2%	143	4.8%	5	6.1%	407	4.4%
1 p.m.	269	4.4%	155	5.2%	4	4.9%	428	4.7%
2 p.m.	304	5.0%	137	4.6%	6	7.3%	447	4.9%
3 p.m.	336	5.5%	216	7.3%	5	6.1%	557	6.1%
4 p.m.	427	7.0%	201	6.8%	7	8.5%	635	6.9%
5 p.m.	480	7.8%	240	8.1%	7	8.5%	727	7.9%
6 p.m.	372	6.1%	189	6.4%	2	2.4%	563	6.1%
7 p.m.	256	4.2%	138	4.6%	3	3.7%	397	4.3%
8 p.m.	219	3.6%	126	4.2%	11	13.4%	356	3.9%
9 p.m.	236	3.8%	124	4.2%	1	1.2%	361	3.9%
10 p.m.	242	3.9%	89	3.0%	5	6.1%	336	3.7%
11 p.m.	162	2.6%	89	3.0%	2	2.4%	253	2.8%
Total	6,135	100.0%	2,970	100.0%	82	100.0%	9,187	100.0%

- Total speed-related crashes peaked in the morning (7:00 a.m. to 9:59 a.m.), with another peak in the late afternoon/evening (3:00 p.m. to 6:59 p.m.).
- Fatal speed-related crashes varied by hour and were highest during the 8:00 p.m. hour.

Speed-Related Crashes by Speed Limit (Utah 2012)

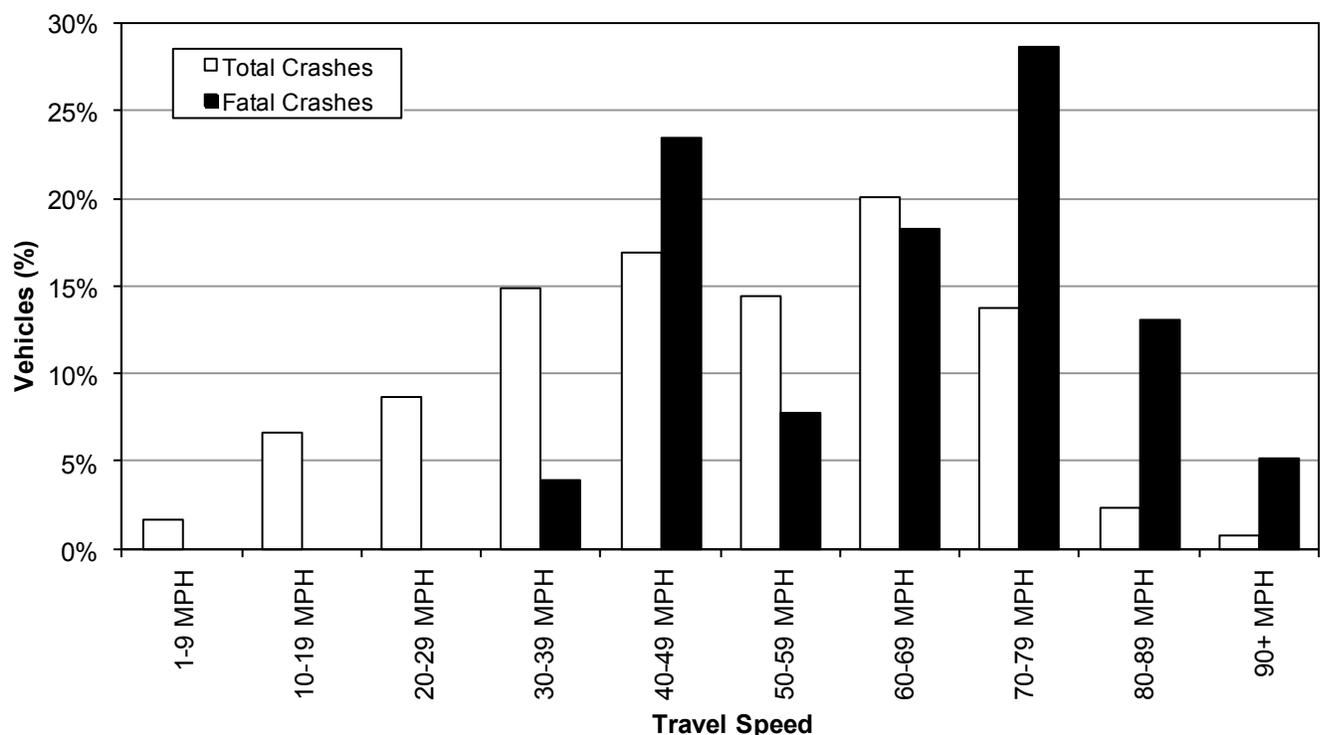
Speed-Related Vehicles								
Speed Limit	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
5-15 MPH	150	2.3%	52	1.7%	1	1.2%	203	2.1%
20-25 MPH	727	11.2%	399	12.8%	9	10.7%	1,135	11.7%
30-35 MPH	662	10.2%	508	16.2%	11	13.1%	1,181	12.2%
40-45 MPH	611	9.4%	393	12.6%	11	13.1%	1,015	10.5%
50-55 MPH	786	12.1%	415	13.3%	16	19.0%	1,217	12.6%
60-65 MPH	2,597	40.1%	939	30.0%	20	23.8%	3,556	36.7%
70-75 MPH	506	7.8%	188	6.0%	10	11.9%	704	7.3%
80 MPH	67	1.0%	32	1.0%	3	3.6%	102	1.1%
Unknown	365	5.6%	203	6.5%	3	3.6%	571	5.9%
Total	6,471	100.0%	3,129	100.0%	84	100.0%	9,684	100.0%

- When compared to all crashes, speed-related crashes were more likely to occur on roads with higher speed limits.
- Nearly one-half (47.9% of known) of total speed-related crashes occurred where the speed limit was 60 MPH or higher.

Crash Conditions

Speed-Related Crashes by Travel Speed (Utah 2012)

Speed-Related Vehicles								
Travel Speed	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
1-9 MPH	121	1.9%	31	1.0%	0	0.0%	152	1.6%
10-19 MPH	472	7.3%	110	3.5%	0	0.0%	582	6.0%
20-29 MPH	566	8.7%	194	6.2%	0	0.0%	760	7.8%
30-39 MPH	848	13.1%	461	14.7%	3	3.6%	1,312	13.5%
40-49 MPH	904	14.0%	563	18.0%	18	21.4%	1,485	15.3%
50-59 MPH	847	13.1%	415	13.3%	6	7.1%	1,268	13.1%
60-69 MPH	1,206	18.6%	547	17.5%	14	16.7%	1,767	18.2%
70-79 MPH	817	12.6%	367	11.7%	22	26.2%	1,206	12.5%
80-89 MPH	94	1.5%	97	3.1%	10	11.9%	201	2.1%
90+ MPH	18	0.3%	42	1.3%	4	4.8%	64	0.7%
Unknown	578	8.9%	302	9.7%	7	8.3%	887	9.2%
Total	6,471	100.0%	3,129	100.0%	84	100.0%	9,684	100.0%

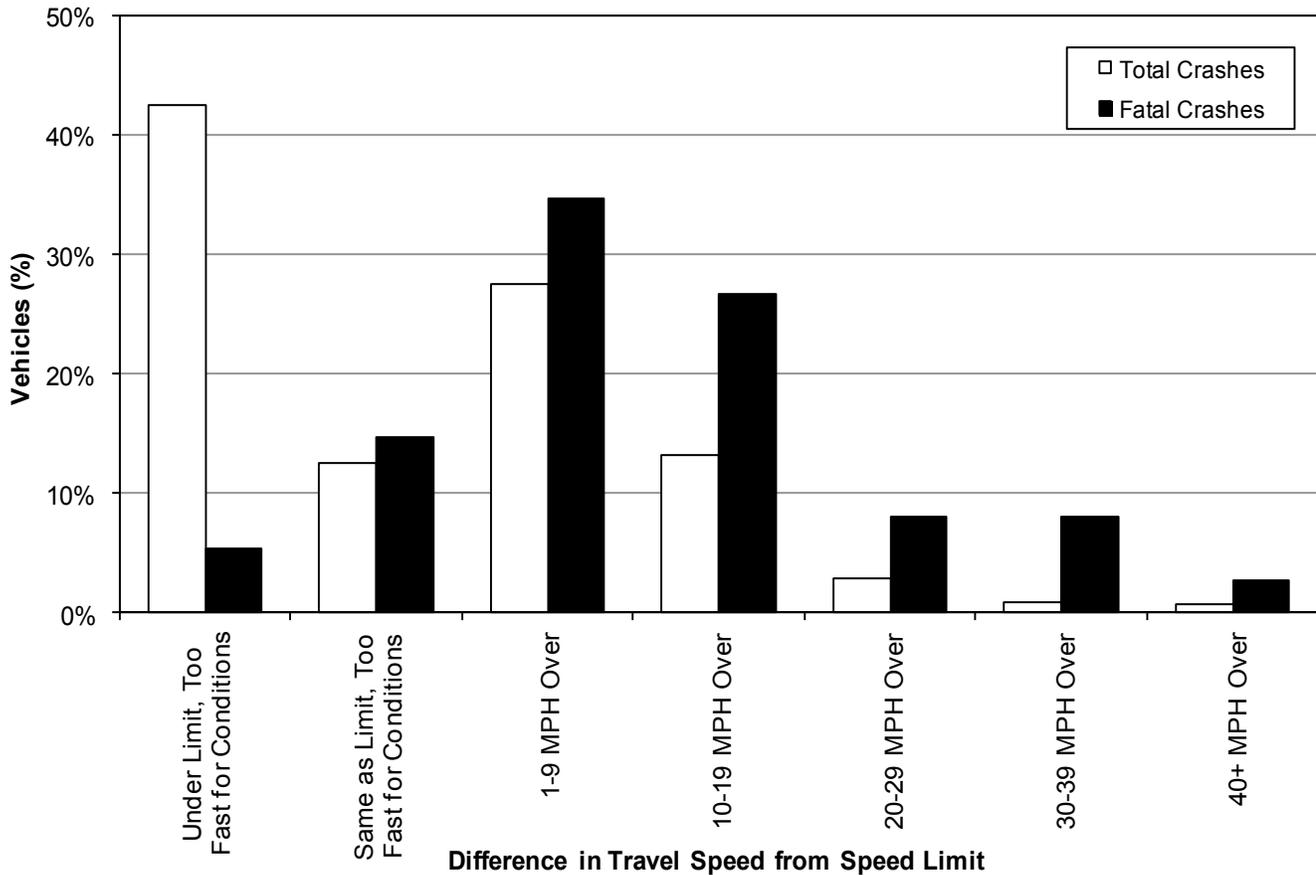


- 60-69 MPH (20.1% of known) and 40-49 MPH (16.9% of known) were the leading travel speeds of vehicles in total speed-related crashes.
- Nearly two-thirds (64.9% of known) of vehicles in fatal speed-related crashes were traveling 60+ MPH.
- Speed-related vehicles in fatal crashes were more likely to be traveling at higher speeds. The higher the speed the greater the amount of energy that must be absorbed in a crash, hence there is more likelihood of serious injury and death.
- Drivers become increased risks to themselves and other people on the highway due to higher speeds.
- The risk of death and severe injury is a direct exponential function of speed.
- Studies show that a 5% increase in average speed leads to a 10% increase in injury crashes and a 20% increase in fatal crashes. A 5% decrease in speed leads to a 10% decrease in injury crashes and a 20% decrease in fatal crashes.

Crash Conditions

Speed-Related Crashes by Difference in Travel Speed From Speed Limit (Utah 2012)

Speed-Related Vehicles								
Travel Speed vs. Speed Limit	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Under Limit, Too Fast for Conditions	2,775	42.9%	895	28.6%	4	4.8%	3,674	37.9%
Same as Limit, Too Fast for Conditions	732	11.3%	336	10.7%	11	13.1%	1,079	11.1%
1-9 MPH Over Speed Limit	1,518	23.5%	840	26.8%	26	31.0%	2,384	24.6%
10-19 MPH Over Speed Limit	605	9.3%	506	16.2%	20	23.8%	1,131	11.7%
20-29 MPH Over Speed Limit	122	1.9%	124	4.0%	6	7.1%	252	2.6%
30-39 MPH Over Speed Limit	22	0.3%	39	1.2%	6	7.1%	67	0.7%
40+ MPH Over Speed Limit	13	0.2%	38	1.2%	2	2.4%	53	0.5%
Unknown	684	10.6%	351	11.2%	9	10.7%	1,044	10.8%
Total	6,471	100.0%	3,129	100.0%	84	100.0%	9,684	100.0%



- It is troubling to see that 3,887 vehicles in crashes were known to be traveling over the posted speed limit.
- Speed-related vehicles in fatal crashes were more likely to be exceeding the posted speed limit by greater amounts.
- Speed-related vehicles in total crashes were more likely to be traveling too fast for conditions.
- Four out of every five speed-related vehicles (80.0% where speed was known) in fatal crashes were traveling over the posted speed limit.
- Speed increases the crash energy by the square of the speeds. When impact speed increases from 40 to 60 MPH (a 50% increase), the energy that needs to be managed increases by 125%.

2012 Utah Crash Facts

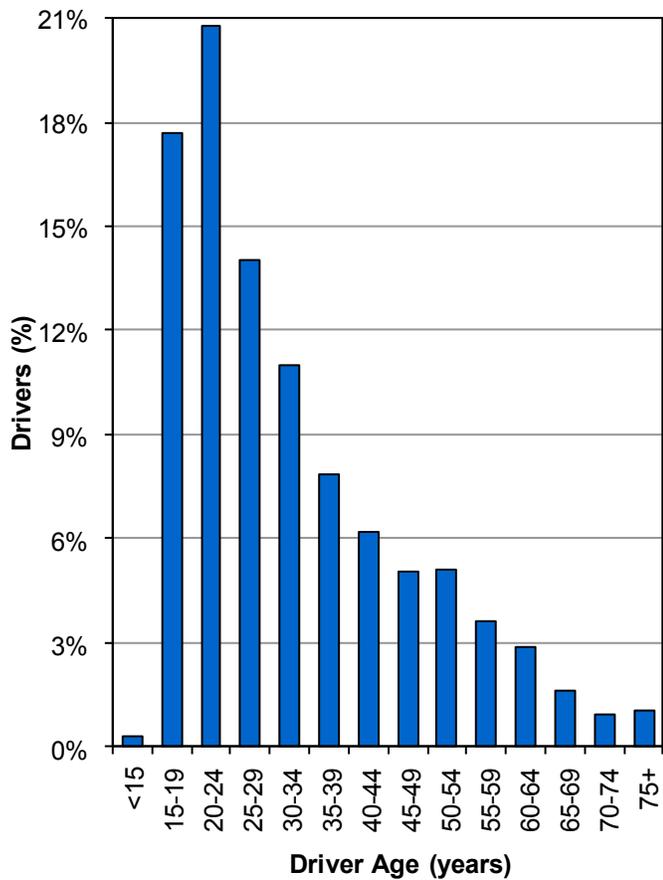
Speed is the leading unsafe driving behavior that contributes to deaths.

Speed

Did you know in 2012:

- 9,187 speed-related crashes occurred in Utah which resulted in 4,413 injured persons and 91 deaths.
- Speed was a factor in 41% of fatal crashes in 2012.
- Speed-related crashes were 3.2 times more likely to be fatal than other motor vehicle crashes.

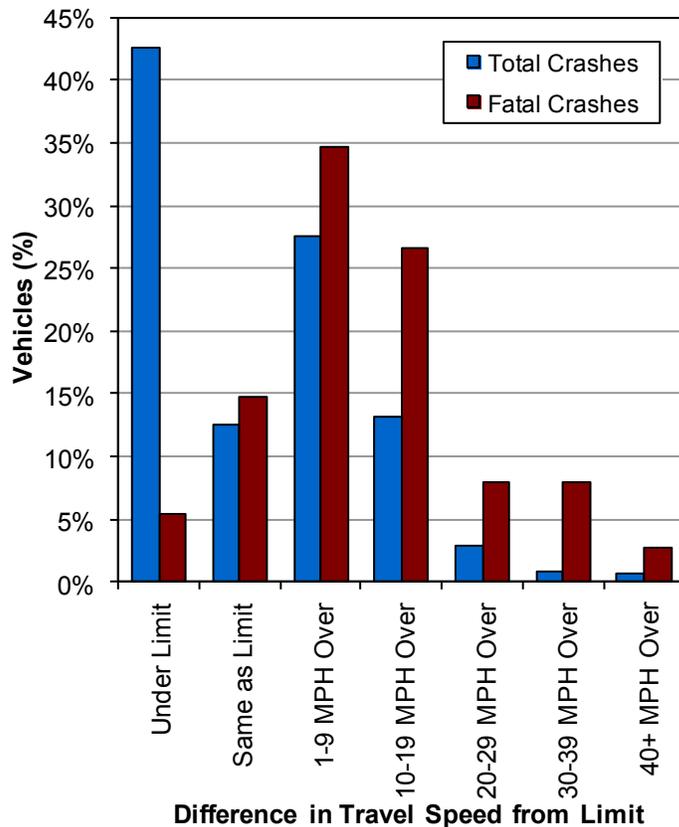
Age of Drivers in Speed-Related Crashes (Utah 2012)



- Drivers aged 15-29 years had the highest percentage of total speed-related crashes.

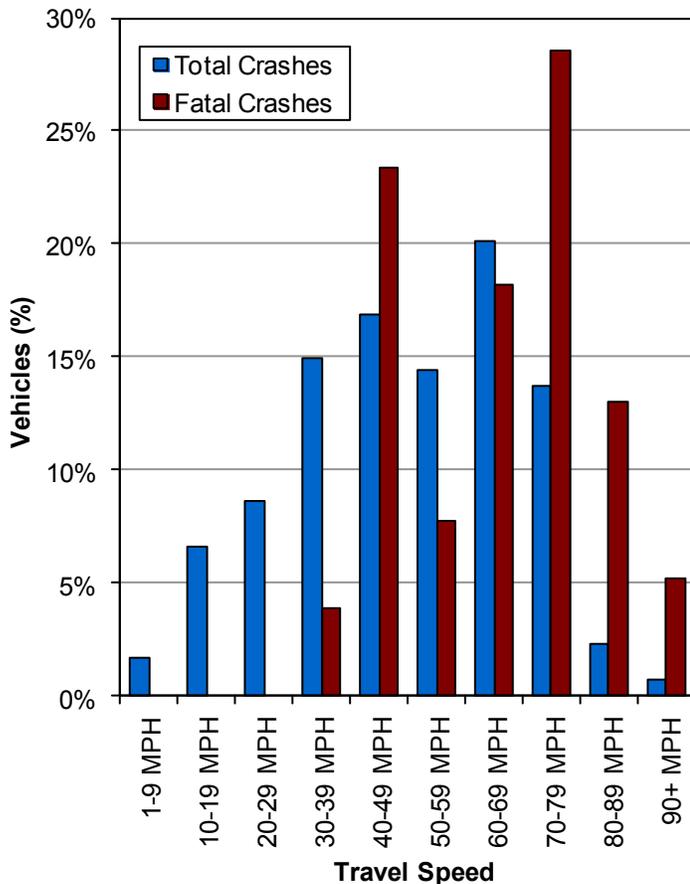


Speed-Related Crashes by Difference in Travel Speed From Speed Limit (Utah 2012)



- Speed-related vehicles in fatal crashes were more likely to be exceeding the posted speed limit by greater amounts.
- Drivers become increased risks to themselves and other people on the roadway due to higher speeds.

Speed-Related Crashes by Travel Speed (Utah 2012)

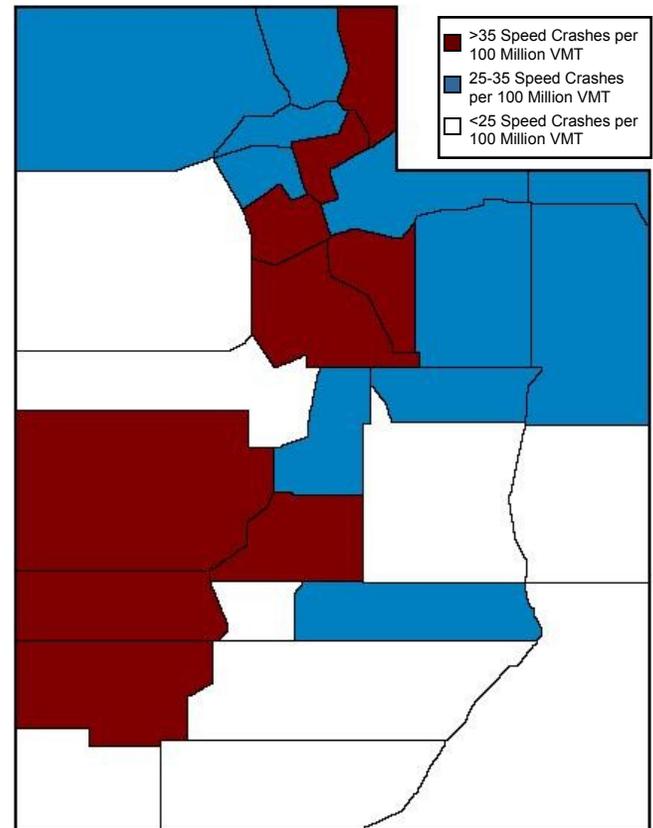


- Speed-related vehicles in fatal crashes were more likely to be traveling at higher speeds.
- The higher the speed the greater the amount of energy that must be absorbed in a crash, hence there is more chance of serious injury or death.

Speed



Speed-Related Crash Rates by County (Utah 2012)



- Rich, Utah, and Salt Lake Counties had the highest speed-related crash rates per miles traveled.

Speeding is one of the leading factors contributing to traffic crashes. Speeding is dangerous because it:

- Magnifies drivers' errors;
- Extends the distance necessary to stop a vehicle;
- Increases the distance a vehicle travels while the driver reacts to a situation;
- Reduces a driver's ability to steer safely around curves or objects in the road;
- Decreases the effectiveness of vehicle design features, such as seat belts;
- Reduces the stability of the vehicle structure;
- Increases the number of crashes;
- Increases the severity of crashes. For every 10 MPH over 50 MPH, the risk of death in a crash is doubled.

Drivers need to remember there is a reason for speed limits. The roadways are a dangerous place and the speed limits are designed to protect everyone—drivers, passengers, and pedestrians. The posted speed limit is the law. Slow down and obey speed limits.

