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

TRAFFIC SAFETY FACTS
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DOT HS 811 642 | A Brief Statistical Summary | July 2012

Early Estimate of Motor Vehicle Traffic Fatalities for the First Quarter (January–March) of 2012

Summary

A statistical projection of traffic fatalities for the first quarter of 2012 shows that an estimated 7,630 people died in motor vehicle traffic crashes. This represents a significant increase of about 13.5 percent as compared to the 6,720 fatalities that were projected to have occurred in the first quarter of 2011, as shown in Table 1. Preliminary data reported by the Federal Highway Administration (FHWA) shows that vehicle miles traveled (VMT) in the first three months of 2012 increased by about 9.7 billion miles, or about a 1.4-percent increase. Also shown in Table 1 are the fatality rates per 100 million VMT, by quarter. The fatality rate for the first three months of 2012 increased significantly to 1.10 fatalities per 100 million VMT, up from 0.98 fatalities per 100 million VMT in the first quarter of 2011. Previously, in 2011, fatalities are projected to have declined in all four quarters. If these projections for the first quarter of 2012 are realized, it will represent the second largest year-to-year quarterly increase in fatalities since NHTSA began recording traffic fatalities (1975). The largest recorded year-to-year quarterly increase by NHTSA was a 15.3-percent increase in fatalities during the first quarter of 1979.

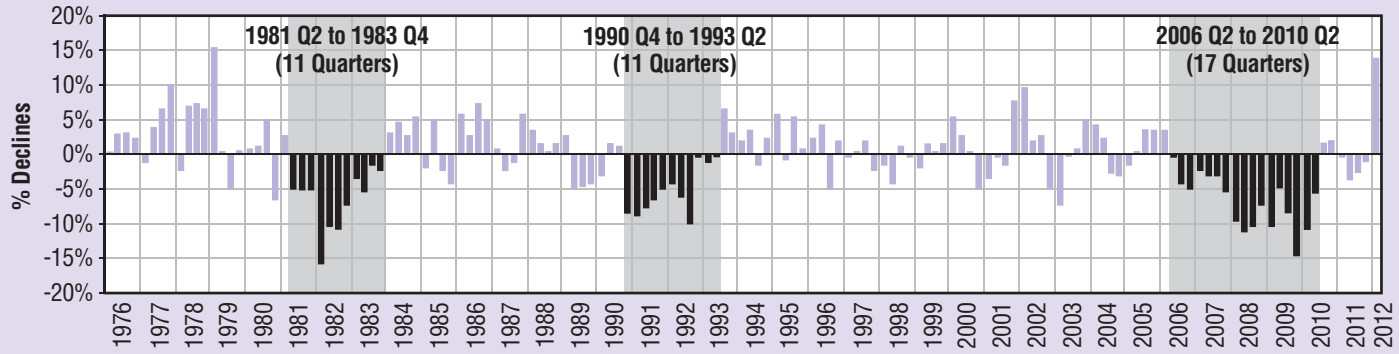
Table 1: Fatalities and Fatality Rate by Quarter and the Percentage Change From the Corresponding Quarter in the Previous Year

Quarter	1st Quarter (Jan–Mar)	2nd Quarter (Apr–Jun)	3rd Quarter (Jul–Sep)	4th Quarter (Oct–Dec)	Total (Full Year)
Fatalities and Percentage Change in Fatalities for the Corresponding Period From the Prior Year					
2005	9,239	11,005	11,897	11,369	43,510
2006	9,558 [+3.5%]	10,942 [-0.6%]	11,395 [-4.2%]	10,813 [-4.9%]	42,708 [-1.8%]
2007	9,354 [-2.1%]	10,611 [-3.0%]	11,056 [-3.0%]	10,238 [-5.3%]	41,259 [-3.4%]
2008	8,459 [-9.6%]	9,435 [-11.1%]	9,947 [-10.0%]	9,582 [-6.4%]	37,423 [-9.3%]
2009	7,552 [-10.7%]	8,975 [-4.9%]	9,104 [-8.5%]	8,252 [-13.9%]	33,883 [-9.5%]
2010	6,729 [-10.9%]	8,506 [-5.2%]	9,202 [+1.1%]	8,448 [+2.4%]	32,885 [-2.9%]
2011†	*6,720 [-0.1%]*	*8,230 [-3.2%]*	*8,970 [-2.5%]*	*8,390 [-0.7%]*	*32,310 [-1.7%]*
2012†*	*7,630 [+13.5%]*	–	–	–	–
Fatality Rate per 100 Million Vehicle Miles of Travel (VMT)					
2005	1.32	1.42	1.54	1.54	1.46
2006	1.35	1.41	1.47	1.44	1.42
2007	1.31	1.35	1.41	1.37	1.36
2008	1.22	1.25	1.33	1.32	1.26
2009	1.09	1.16	1.17	1.12	1.15
2010	0.98	1.09	1.17	1.13	1.11
2011†	*0.98*	*1.09*	*1.18*	*1.15*	*1.09*
2012†*	*1.10*	–	–	–	–

†2011 and 2012 statistical projections and rates based on these projections.
*A marginal part of the increase is attributed to 2012 being a leap year.
Source: Fatalities: 2005-2009 FARS Final File, 2010 FARS Annual Report File VMT: FHWA Traffic Volume Trends, March 2012

Figure 1 shows the historical trend of the percentage change every quarter from the same quarter in the previous year, going back to 1976. NHTSA has fatality data going back to 1975, and the shading in the chart depicts the years during which there were significant consecutive quarters with declines as compared to the corresponding quarters of the previous years. The declines in the early 1980s and 1990s lasted 11 consecutive quarters, while the most recent decline occurred over 17 consecutive quarters ending in the second quarter of 2010.

Figure 1: Percentage Change in Fatalities in Every Quarter as Compared to the Fatalities in the Same Quarter During the Previous Year



Discussion

The National Highway Traffic Safety Administration is continuing to gather data on crash fatalities for 2012 using information from police accident reports and other sources. While it is too soon to speculate on the contributing factors or potential implications of any increase in deaths on our roadways, it should be noted that the historic downward trend in traffic fatalities in the past several years—a pattern which has continued through the early estimates for 2011 released recently that show deaths at a 60-year low—means any comparison will be to an unprecedented low baseline figure. In fact, fatalities during the first quarter of the year have declined by about 30 percent from 2006 to 2011 (from 9,558 fatalities in 2006 to a projected 6,720 fatalities in 2011). It should be noted that the rate for the first quarter each year is traditionally significantly lower than the rates for the other three quarters, potentially due to, but not restricted to, the effects of winter weather. However, the winter of 2012 was also unseasonably warmer than usual in most areas of the country. Consequently, the fatality rate for the first quarter should not be used to make inferences for the fatality rate for the whole of 2012.

An analysis of the recent decline in fatalities that began in 2008 revealed that a significant portion of the declines were driven by drops in crashes involving young drivers *(Analysis of the Significant Decline in Motor Vehicle Traffic Fatalities in 2008,* DOT HS 811 346).

Data

The data used in this analysis comes from several sources, such as the Fatality Analysis Reporting System (FARS), FastFARS (FF), and Monthly Fatality Counts (MFC). FARS is a census of fatal traffic crashes in the 50 States, the District of Columbia, and Puerto Rico. To be included in FARS, a crash must involve a motor vehicle traveling on a trafficway and result in the death of at least one person (occupant of a vehicle or a nonoccupant) within 30 days of the crash. FARS final files from January 2003 to December 2009 and FARS Annual Report file in 2010 are used. The FF program is designed as an Early Fatality Notification System to capture fatality counts from States more rapidly and in real time. It aims to provide near-real-time notification of fatality counts from all jurisdictions reporting to FARS by electronically transmitting the data. MFC data provides monthly fatality counts by State through sources that are independent from the FastFARS or FARS systems. MFCs from January 2003 up to April 2012 are used. MFCs are reported mid-month for all prior months of the year. The VMT data was reported by FHWA.

In order to estimate the traffic fatality counts for the first three months of 2012, time series cross-section regression (TSCSR) was applied to analyze the data with both cross-sectional values (by NHTSA Region) and time series (by month), to model the relationship among FARS, MFC and FF, the details of which are available in a companion Research Note *(Statistical Methodology to Make Early Estimates of Motor Vehicle Traffic Fatalities,* DOT HS 811 123). The methodology used to generate the estimates for the first quarter is the same as the one used by NHTSA to project the decline in the fatalities for the whole of 2011 as compared to 2010 *(Early Estimates of Motor Vehicle Traffic Fatalities in 2011,* DOT HS 811 604) as well as projections of fatalities for the first quarter of 2011 *(Early Estimates of Motor Vehicle Traffic Fatalities in the 1st Quarter of 2011,* DOT HS 811 490).

Actual fatality counts from FARS for 2011 will be reported during late fall of 2012, while fatality counts for 2012 will be reported late fall of 2013. Also, VMT estimates are revised by FHWA as more data becomes available and may change the fatality rates reported in this document. NHTSA will release projections for the first half of 2012 in early September.