TRAFFIC SAFETY FACTS
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NHTSA

Early Estimates of Motor Vehicle Traffic Fatalities And Fatality Rate by Sub-Categories in 2022

Introduction and Summary

NHTSA has released the 2022 early estimate report presenting the projections of traffic fatalities (42,795) and the fatality rate per 100 million vehicle miles traveled (VMT) (1.35) for 2022 (*Early Estimate of Motor Vehicle Traffic Fatalities in 2022*, DOT HS 813 428). That Crash*Stats shows a marginal decrease of about 0.3 percent as compared to 42,939 fatalities reported in 2021. The fatality rate is down from the 1.37 fatalities per 100 million VMT reported in 2021. This NHTSA report is being issued after conducting a special analysis of the fatalities and the fatality rates per 100 million VMT by key sub-categories in 2022. The analysis is based on ratio-adjusted estimates of 2022 fatal crash data coded thus far into NHTSA's Fatality Analysis Reporting System (FARS), as described in the Data and Methodology section.

There is a mixture of increases and decreases across the sub-categories. For instance, the total fatalities (fatality counts) on rural roads increased from 17,192 in 2021 to 18,478 in 2022, a 7-percent increase. However, the total estimated unrestrained passenger vehicle (PV) occupant fatalities decreased by 5 percent from 2021 to 2022. The trends of traffic fatalities in 2022 as compared to 2021 in the key sub-categories are summarized as follows.

- on rural interstates (up 5%), rural arterials (up 7%), rural collectors/local (up 8%), and urban arterials (down 6%), urban collectors/local (down 8%)
- at night (down 1%)
- during weekends (down 1%)
- during out-of-State travel (remained flat)
- in older (vehicle age ≥ 10 years) PVs (down 6%)
- in passenger vehicle rollover crashes (down 6%)
- ejected (down 6%)
- in single-vehicle crashes (up 1%)

- in roadway not departure crashes (up 4%)
- in speeding-related crashes (down 6%)
- in the <15 age group (down 5%), the 15-24 age group (down 4%), the 25-34 age group (down 3%), and the 65 and older age group (up 6%)
- males (up 1%) and females (down 3%)
- unrestrained occupants of PVs (down 5%)
- drivers (down 2%) and passengers (down 2%)
- passenger vehicle occupants (down 4%)
- motorcyclist fatalities (up 1%)
- pedestrian fatalities (down 1%)
- pedalcyclist fatalities (up 11%)
- in crashes each involving at least one large truck (up 2%)

Additionally, the trend of the total fatality rate per 100 million VMT in 2022 was strongly driven by the trends in the fatality rates per 100 million VMT on the rural arterials, rural local/collector/street roadways, and urban arterials.

Data and Methodology

NHTSA uses the Early Notification (EN) data and Monthly Fatality Counts (MFC) data for the early estimate of motor vehicle traffic fatalities every month. However, EN and MFCs do not include detailed crash characteristics and information necessary to compute fatality counts and fatality rates by sub-categories. NHTSA's FARS data includes such detailed information but is incomplete at this point since not every case has been entered into FARS. This analysis adjusts fatal crash cases currently coded for 2022 into NHTSA's FARS and scales it up to the most recent estimates of fatality counts

in 2022 (see cited 2022 early estimates report above, DOT HS 813 428).

The estimates of fatalities by sub-categories are carried out in two steps. The first step is to inflate current 2022 total cases coded into NHTSA's FARS data (*FARS_22)* to the estimated total fatalities (*F_Est_22*) that are from the early estimated fatalities based on latest EN and MFC data. In general, the inflation rate (*IR*) is calculated by the formula here.

$$IR = \frac{F\_Est\_22}{FARS\_22}$$

Inflation rates are computed for each month (*m*) and region (*r*) for a total of 120 inflation rates (12 months x 10 regions).

$$IR_{mr} = \frac{F\_Est\_22_{mr}}{FARS\_22_{mr}}$$

Generally, the earlier the crash month the smaller the inflation rate as the data has relatively stabilized. In the second step, the inflation rate (*IR_{mr}*) is then used as the *weight* in the frequency calculation for the estimate of fatalities by each sub-category variable. For instance, to compute the estimated male fatalities in month *m* and region *r*, the count of male fatalities in FARS, *FARS_22* (*Sex_{male}*) _{mr}, is weighted by the inflation rate *IR_{mr}* as follows, *F_Est_22 (Sex_{male}) _{mr} = FARS_22 (Sex_{male}) _{mr} × IR_{mr}*. For a different interpretation, the estimated number of male fatalities in month *m* and region *r* can also be seen as the estimated fatalities in month *m* and region *r* multiplied by the fraction of male fatalities in FARS data (*FARS_22*) for month *m* and region *r*.

$$F_{Est\_22(Sex_{male})mr} = F\_Est\_22_{mr} \times \left(\frac{FARS\_22(Sex_{male})_{mr}}{FARS\_22_{mr}} \right)$$

The two metrics NHTSA mainly examined are the relative proportion of fatalities in each level of the sub-category variables (i.e., the *percentage distribution* of fatalities) or the *percentage* of the total fatalities, and the actual yearly fatality counts (fatalities) and the percentage change in fatalities from 2021 to 2022 for each level of the sub-category variables.

Estimated fatalities by sub-categories may vary due to the continuous updating of 2022 FARS data (*FARS_22_{mr}*), especially for several sub-category variables (e.g., speeding, roadway departure, and rollover[1]) that may take extra time to report and code (see Limitations section). However since the results (the percentage distribution of fatalities or the percentage of the total fatalities) have been nearly identical in each of the 3 months prior to publication, the estimates are considered to be relatively stable.

Results

This report examines the same major factors that NHTSA previously reviewed and investigated in 2021 and the results were published in *Early Estimates of Motor Vehicle Traffic Fatalities and Fatality Rate by Sub-Categories in 2021* (DOT HS 813 298). These key factors may be linked to changes in driving and travel pattern and transportation options owing to COVID-19 emergency measures.

The 2022 study results and the comparisons with the ones in 2021 are presented below. The data results for 2021 are from the FARS 2021 annual report file (ARF). Note that beginning in 2021, NHTSA has changed to vPIC-based vehicle classifications for data analysis and reporting, and this report used the vPIC-based vehicle classifications for 2021 and 2022 data extractions and projections.

Fatalities

The findings for the trends of sub-category variables are based on the comparison of two metrics.

- The *percentage distribution* of fatalities or the *percentage* of total fatalities, between the same month of 2021 and 2022 (labeled by [21] and [22] in the comparison of 2-year results).

- The estimated fatality counts (fatalities) and the percentage change in fatalities from 2021 to 2022 for each sub-category variable.

They are summarized as follows (see Tables 1 and 2 and Figure 1 for details).

Roadway and Environmental Factors

- The proportion of estimated fatalities in *rural* areas increased from February to December (Figure 1). The greatest increase occurred in October (46% [22] *versus* 41% [21]) and December (43% [22] *versus* 37% [21]). Total estimated fatalities increased by 8 percent in *rural* areas from 2021 to 2022.

  Specifically, as shown in Table 1, the share of estimated fatalities increased on *rural arterials* from September to December, and *rural collector/local roads* from April to December. Total estimated fatalities increased on rural interstates (up 5%), *rural arterials* (up 7%), and *rural collector/local roads* (up 8%) from 2021 to 2022. Conversely, the estimated fatalities on *urban arterials* and *urban collector/local roads* decreased by 6% and 8%, respectively, from 2021 to 2022.

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[1] Further adjustments of these three factors for the later months have been made.

- The proportion of estimated fatalities during *night-time* (6 p.m. to 5:59 a.m.) decreased in January and from April to June (Figure 1). The greatest decrease occurred in May (54% [22] *versus* 52% [21]). Total estimated fatalities during *nighttime* decreased by 1 percent from 2021 to 2022. Note that the total estimated fatalities during *daytime* remained flat from 2021 to 2022.

- As displayed in Figure 1, the proportion of estimated fatalities that occurred during *weekends* (6 p.m. Friday to 5:59 a.m. Monday) greatly increased in April (45% [22] *versus* 40% [21]). In addition, the proportion of estimated fatalities that occurred on *weekdays* (6 a.m. Monday to 5:59 p.m. Friday) greatly increased in May (58% [22] *versus* 54% [21]). Total estimated fatalities increased and decreased by less than 1 and 1 percent during the *weekdays* and the *weekends*, respectively, from 2021 to 2022.

- The proportion of estimated passenger vehicle (PV) occupant fatalities that occurred during *out-of-State* travel decreased in January and June, but increased in July and from October to December (Figure 1) - potentially indicating that more people traveled long distances by car during the 2022 holiday season compared to the 2021 holiday period. Total estimated passenger vehicle occupant fatalities that occurred during *out-of-State* travel remained flat from 2021 to 2022.

Vehicle-Related Characteristics

- The estimated PV occupant fatalities decreased by 6 percent in *older vehicles* (vehicle age ≥ 10 years) from 2021 to 2022 (Figure 1). Note that the estimated PV occupant fatalities in *newer vehicles* (vehicle age < 10 years) decreased by 1 percent.

- The estimated PV occupant fatalities in *rollover* crashes decreased by 6 percent from 2021 to 2022 (Table 2).

- As displayed in Figure 1, the estimated fatally injured PV occupants *who were ejected*, as a proportion of all fatalities, decreased in most months from January to December. Total estimated fatalities for PV occupants *who were ejected* decreased by 6 percent from 2021 to 2022. This might be largely due to a similar decrease in estimated *unrestrained* PV occupant fatalities, as described in the person-related characteristics section.

- As shown in Table 1, total estimated fatalities in *single-vehicle* and *multi-vehicle* crashes increased and decreased by 1 and 2 percent, respectively, from 2021 to 2022.

- Total estimated fatalities in roadway departure/not departure crashes decreased and increased by 4 and 4 percent, respectively, from 2021 to 2022, as shown in Table 1.

- The *speeding-related* fatalities decreased by 6 percent from 2021 to 2022 (Table 2).

Person-Related Characteristics

- As shown in Table 1, total estimated traffic fatalities among *young people* (<35 years old) decreased from 2021 to 2022. However, total estimated fatalities increased by 6 percent for people *65 and older* from 2021 to 2022.

- As displayed in Table 1, the total estimated *male and female* fatalities increased and decreased by 1 and 3 percent, respectively, from 2021 to 2022.

- As shown in Figure 1, total estimated *unrestrained* PV occupant fatalities decreased by 5 percent from 2021 to 2022.

Fatalities by Person Type and in Crashes Involving Large Trucks

As shown in Table 2, the following results for the percentage change of estimated fatalities from 2021 to 2022 are observed:

- The total estimated *driver* fatalities decreased by 2 percent.

- The total estimated *passenger* fatalities decreased by 2 percent.

- The total estimated *PV occupant* fatalities decreased by 4 percent.

- Fatalities among *motorcyclists*, as a percentage of total fatalities, increased in February, and April to July. The total estimated *motorcyclist* fatalities increased by 1 percent.

- Total estimated *pedestrian* fatalities decreased by 1 percent.

- Total estimated *pedalcyclist* fatalities increased by 11 percent.

- Fatalities in crashes *involving at least one large truck* (gross vehicle weight rating of more than 10,000 lb), as a percentage of total fatalities, increased from January to March, and in May and October. Total estimated fatalities in crashes *involving at least one large truck*, increased by 2 percent. This estimate is based on involvement of large trucks, both in commercial and non-commercial use at the time of the crash.

Table 1: Relative Proportion of Fatalities by Roadway Function Class, Age Group, Sex, and Crash Type for 2021-2022

Fatalities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% change
2021		3,099	2,561	3,214	3,557	3,768	3,789	3,879	4,013	3,861	4,101	3,599	3,498	42,939	
2022		3,230	3,045	3,370	3,230	3,680	3,635	3,860	3,900	3,930	4,015	3,450	3,450	42,795	-0.3%
Roadway Function Class															
Rural Interstate	2021	4%	4%	4%	5%	4%	5%	5%	5%	5%	4%	5%	6%	2,046	
	2022	5%	5%	6%	4%	5%	5%	6%	5%	4%	5%	4%	6%	2,153	5%
Urban Interstate	2021	9%	9%	9%	8%	8%	8%	8%	9%	8%	8%	9%	9%	3,632	
	2022	10%	9%	9%	8%	8%	9%	8%	8%	8%	7%	9%	9%	3,637	0%
Rural Arterial	2021	19%	19%	18%	19%	19%	18%	18%	19%	19%	18%	17%	17%	7,845	
	2022	18%	19%	17%	20%	19%	19%	18%	19%	22%	22%	21%	21%	8,411	7%
Urban Arterial	2021	40%	39%	41%	38%	38%	38%	35%	37%	38%	38%	40%	41%	16,506	
	2022	39%	40%	40%	39%	37%	33%	34%	34%	34%	34%	36%	37%	15,508	-6%
Rural Collector/Local	2021	15%	16%	16%	16%	18%	18%	20%	18%	18%	18%	16%	15%	7,301	
	2022	15%	16%	16%	17%	19%	21%	22%	21%	19%	19%	17%	17%	7,913	8%
Urban Collector/Local	2021	13%	12%	13%	14%	13%	13%	14%	13%	12%	13%	12%	14%	5,609	
	2022	13%	11%	13%	12%	12%	12%	12%	13%	12%	12%	12%	11%	5,172	-8%
Age Group															
<15	2021	2%	3%	3%	3%	4%	3%	3%	2%	2%	2%	3%	3%	1,190	
	2022	2%	3%	3%	3%	3%	3%	4%	3%	3%	3%	2%	2%	1,132	-5%
15–24	2021	17%	19%	17%	16%	18%	18%	16%	16%	15%	16%	16%	16%	7,117	
	2022	15%	15%	17%	16%	16%	16%	16%	16%	15%	17%	17%	15%	6,847	-4%
25–34	2021	20%	19%	20%	20%	21%	21%	21%	20%	19%	19%	19%	18%	8,493	
	2022	19%	21%	19%	19%	20%	20%	20%	19%	19%	18%	19%	18%	8,231	-3%
35–44	2021	15%	14%	17%	16%	15%	16%	15%	17%	16%	16%	15%	16%	6,752	
	2022	18%	16%	16%	16%	15%	15%	17%	16%	16%	16%	15%	16%	6,810	1%
45–54	2021	13%	14%	14%	14%	13%	13%	14%	13%	15%	13%	14%	13%	5,820	
	2022	14%	14%	14%	13%	14%	12%	14%	13%	14%	13%	13%	12%	5,779	-1%
55–64	2021	15%	15%	13%	14%	13%	13%	15%	14%	15%	14%	14%	14%	6,037	
	2022	14%	14%	13%	15%	15%	16%	13%	14%	14%	13%	13%	14%	5,997	-1%
65+	2021	17%	17%	16%	17%	16%	17%	16%	18%	17%	19%	20%	21%	7,529	
	2022	18%	18%	19%	18%	18%	17%	17%	19%	19%	20%	20%	23%	8,000	6%
Sex															
Male	2021	69%	71%	71%	72%	72%	73%	73%	72%	73%	72%	72%	71%	30,848	
	2022	71%	72%	71%	73%	72%	74%	73%	73%	73%	73%	72%	72%	31,034	1%
Female	2021	30%	28%	29%	28%	27%	27%	27%	27%	27%	29%	29%	31%	12,091	
	2022	29%	28%	29%	27%	28%	26%	27%	27%	27%	27%	28%	28%	11,760	-3%
Crash Type 1: Single- vs. Multi-Vehicle															
Multi-Vehicle	2021	43%	45%	46%	47%	48%	47%	47%	47%	45%	44%	47%	45%	19,810	
	2022	44%	45%	46%	47%	48%	46%	46%	45%	47%	45%	44%	44%	19,510	-2%
Single-Vehicle	2021	57%	55%	54%	53%	52%	53%	53%	53%	55%	56%	53%	55%	23,129	
	2022	56%	55%	54%	53%	52%	54%	54%	55%	53%	55%	56%	56%	23,285	1%
Crash Type 2: Roadway-Departure-Related															
Yes	2021	51%	51%	50%	51%	52%	50%	51%	50%	49%	49%	46%	47%	21,326	
	2022	49%	49%	47%	50%	47%	49%	47%	47%	47%	47%	47%	48%	20,423	-4%
No	2021	49%	49%	50%	49%	48%	50%	49%	50%	51%	51%	54%	53%	21,613	
	2022	51%	51%	53%	50%	53%	51%	53%	53%	53%	53%	53%	52%	22,372	4%

The last two columns contain fatalities and percentage change from 2021 to 2022. Unknown cases are proportionally distributed. Numbers in red/blue indicate the increase/decrease in the month of 2022 as compared to the same month of 2021 (in black). Source: 2021 FARS ARF and 2022 statistical projection.

Table 2: Fatalities by Person Type, in Large Truck/Speeding-Related/PV Occupant in Rollover Crashes, as a Percentage of Total Fatalities for 2021-2022

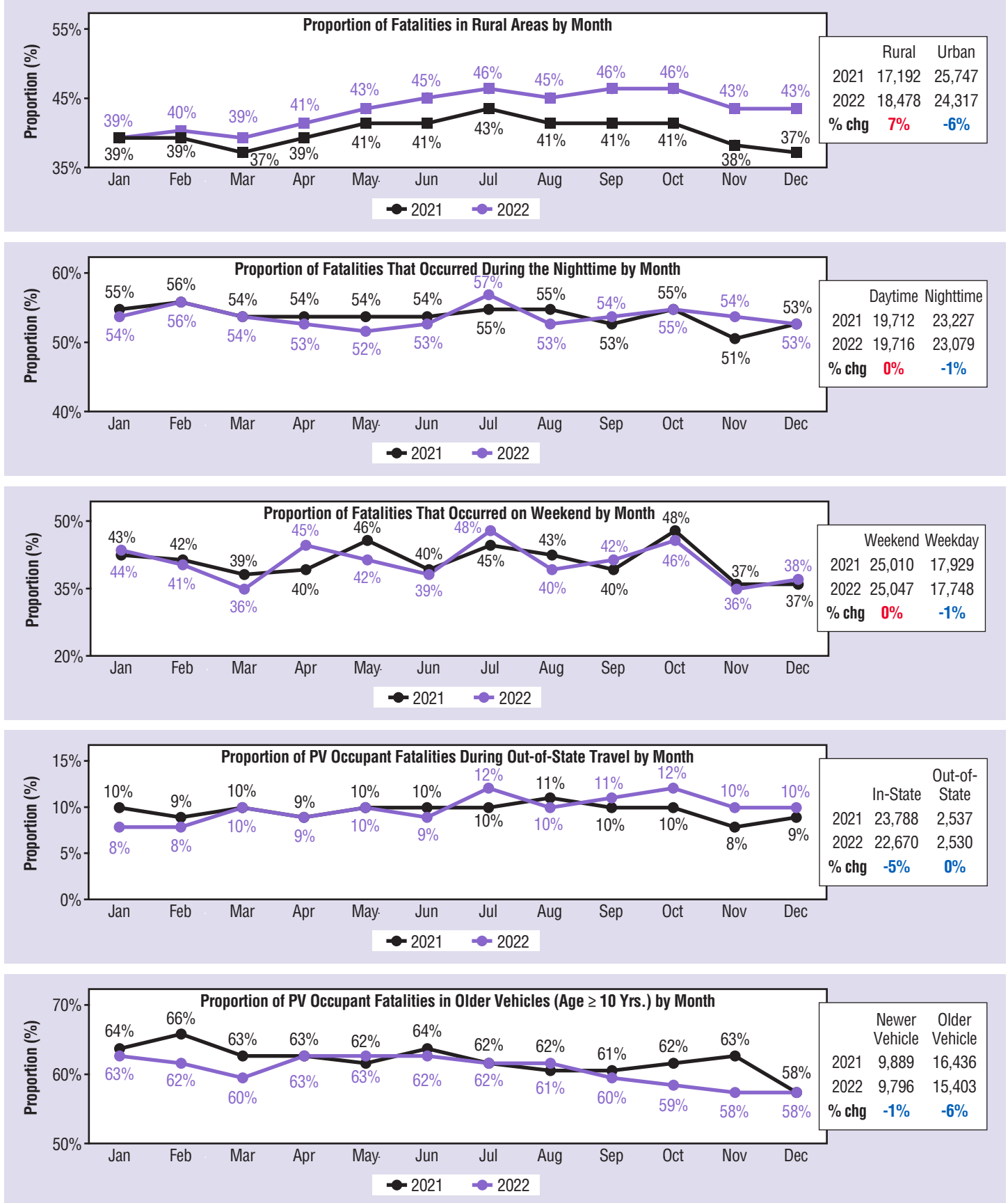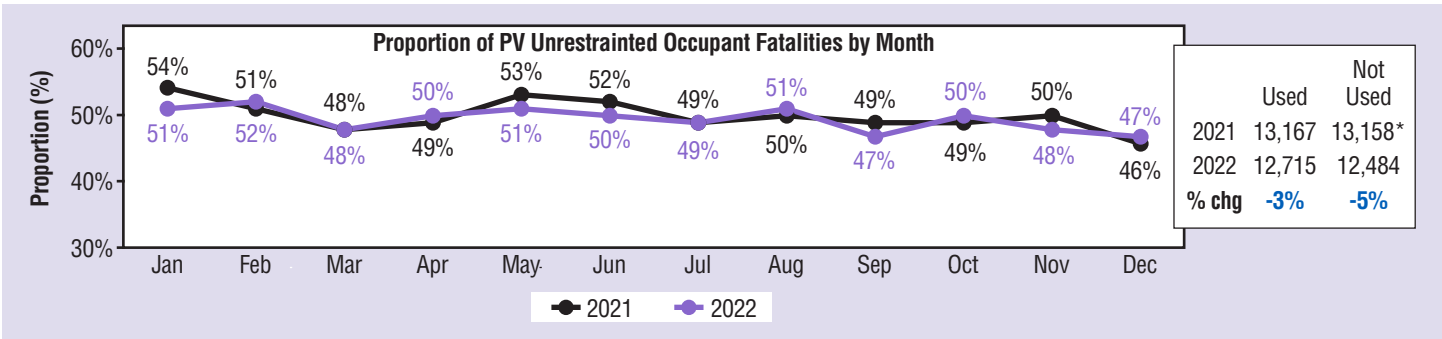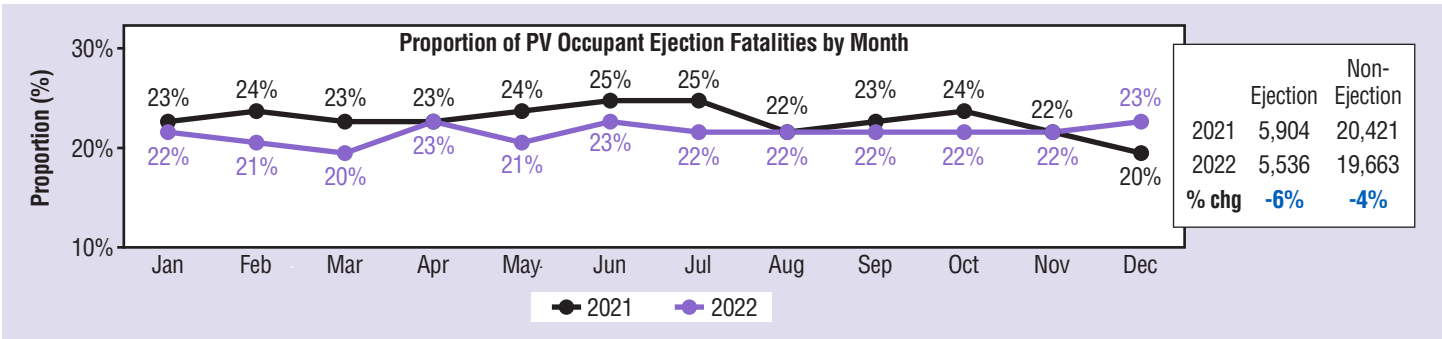| Fatalities		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% change
2021		3,099	2,561	3,214	3,557	3,768	3,789	3,879	4,013	3,861	4,101	3,599	3,498	**42,939**	
2022		**3,230**	**3,045**	**3,370**	**3,230**	**3,680**	**3,635**	**3,860**	**3,900**	**3,930**	**4,015**	**3,450**	**3,450**	**42,795**	**-0.3%**
Driver	2021	55%	55%	51%	51%	50%	49%	48%	49%	48%	50%	53%	53%	**21,786**	
	2022	55%	**52%**	51%	**50%**	**47%**	**48%**	**47%**	**47%**	**47%**	50%	**52%**	**55%**	**21,388**	**-2%**
Passenger	2021	15%	16%	16%	16%	16%	16%	16%	15%	14%	14%	15%	15%	**6,527**	
	2022	15%	**15%**	**14%**	**14%**	16%	**14%**	**17%**	**14%**	14%	14%	15%	15%	**6,371**	**-2%**
PV Occupant	2021	67%	66%	63%	62%	61%	59%	59%	58%	56%	59%	64%	64%	**26,325**	
	2022	**68%**	**64%**	**61%**	**60%**	**58%**	**56%**	**57%**	**54%**	**55%**	**57%**	**60%**	**61%**	**25,199**	**-4%**
PV Occupant Rollover	2021	19%	18%	19%	18%	18%	18%	18%	16%	17%	17%	18%	16%	**7,561**	
	2022	**18%**	**17%**	**15%**	18%	**17%**	**17%**	**16%**	**17%**	**16%**	**16%**	**16%**	**17%**	**7,133**	**-6%**
Motorcyclist	2021	6%	7%	13%	15%	18%	19%	18%	18%	18%	13%	9%	7%	**5,932**	
	2022	6%	**9%**	**12%**	**16%**	**20%**	**21%**	**19%**	18%	18%	13%	9%	**5%**	**6,000**	**1%**
Pedestrian	2021	21%	20%	17%	16%	14%	14%	14%	16%	16%	19%	20%	22%	**7,388**	
	2022	21%	20%	**19%**	16%	14%	**13%**	**13%**	16%	**17%**	19%	20%	**20%**	**7,345**	**-1%**
Pedalcyclist	2021	2%	2%	2%	2%	2%	2%	3%	2%	3%	3%	2%	2%	**966**	
	2022	2%	**3%**	2%	2%	2%	2%	3%	**3%**	3%	3%	2%	2%	**1,068**	**11%**
Involving Large Trucks	2021	12%	13%	13%	14%	12%	14%	14%	14%	15%	13%	14%	14%	**5,788**	
	2022	**14%**	**14%**	**15%**	14%	**13%**	14%	**12%**	14%	**14%**	**14%**	**13%**	**13%**	**5,887**	**2%**
Speeding Related	2021	30%	29%	29%	29%	30%	30%	30%	29%	27%	27%	26%	28%	**12,330**	
	2022	**29%**	**28%**	**28%**	**28%**	**28%**	**28%**	**26%**	**26%**	27%	**26%**	**27%**	**27%**	**11,649**	**-6%**

The last two columns contain fatalities and percentage change from 2021 to 2022. Unknown cases are proportionally distributed. Numbers in red/blue indicate the increase/decrease in the month of 2022 as compared to the same month of 2021 (in black). Source: 2021 FARS ARF and 2022 statistical projection.

Figure 1: Relative Proportion of Total Fatalities by Land Use, Time of Day, Day of the Week, and PV Occupant Fatalities by Vehicle Travel Pattern, Vehicle Age, Ejection Status, and Restraint Use For 2021-2022

Proportion of Fatalities in Rural Areas by Month

2021 values: Jan 39%, Feb 39%, Mar 37%, Apr 39%, May 41%, Jun 41%, Jul 43%, Aug 41%, Sep 41%, Oct 41%, Nov 38%, Dec 37%
2022 values: Jan 39%, Feb 40%, Mar 39%, Apr 41%, May 43%, Jun 45%, Jul 46%, Aug 45%, Sep 46%, Oct 46%, Nov 43%, Dec 43%

	Rural	Urban
2021	17,192	25,747
2022	18,478	24,317
% chg	7%	-6%

Proportion of Fatalities That Occurred During the Nighttime by Month

2021 values: Jan 55%, Feb 56%, Mar 54%, Apr 54%, May 54%, Jun 54%, Jul 55%, Aug 55%, Sep 53%, Oct 55%, Nov 51%, Dec 53%
2022 values: Jan 54%, Feb 56%, Mar 54%, Apr 53%, May 52%, Jun 53%, Jul 57%, Aug 53%, Sep 54%, Oct 55%, Nov 54%, Dec 53%

	Daytime	Nighttime
2021	19,712	23,227
2022	19,716	23,079
% chg	0%	-1%

Proportion of Fatalities That Occurred on Weekend by Month

2021 values: Jan 43%, Feb 42%, Mar 39%, Apr 40%, May 46%, Jun 40%, Jul 45%, Aug 43%, Sep 40%, Oct 48%, Nov 37%, Dec 37%
2022 values: Jan 44%, Feb 41%, Mar 36%, Apr 45%, May 42%, Jun 39%, Jul 48%, Aug 40%, Sep 42%, Oct 46%, Nov 36%, Dec 38%

	Weekend	Weekday
2021	25,010	17,929
2022	25,047	17,748
% chg	0%	-1%

Proportion of PV Occupant Fatalities During Out-of-State Travel by Month

2021 values: Jan 10%, Feb 9%, Mar 10%, Apr 9%, May 10%, Jun 10%, Jul 10%, Aug 11%, Sep 10%, Oct 10%, Nov 8%, Dec 9%
2022 values: Jan 8%, Feb 8%, Mar 10%, Apr 9%, May 10%, Jun 9%, Jul 12%, Aug 10%, Sep 11%, Oct 12%, Nov 10%, Dec 10%

	In-State	Out-of-State
2021	23,788	2,537
2022	22,670	2,530
% chg	-5%	0%

Proportion of PV Occupant Fatalities in Older Vehicles (Age ≥ 10 Yrs.) by Month

2021 values: Jan 64%, Feb 66%, Mar 63%, Apr 63%, May 62%, Jun 64%, Jul 62%, Aug 62%, Sep 61%, Oct 62%, Nov 63%, Dec 58%
2022 values: Jan 63%, Feb 62%, Mar 60%, Apr 63%, May 63%, Jun 62%, Jul 62%, Aug 61%, Sep 60%, Oct 59%, Nov 58%, Dec 58%

	Newer Vehicle	Older Vehicle
2021	9,889	16,436
2022	9,796	15,403
% chg	-1%	-6%

Proportion of PV Occupant Ejection Fatalities by Month

	Ejection	Non-Ejection
2021	5,904	20,421
2022	5,536	19,663
% chg	-6%	-4%

2021 values (black): Jan 23%, Feb 24%, Mar 23%, Apr 23%, May 24%, Jun 25%, Jul 25%, Aug 22%, Sep 23%, Oct 24%, Nov 22%, Dec 20%

2022 values (purple): Jan 22%, Feb 21%, Mar 20%, Apr 23%, May 21%, Jun 23%, Jul 22%, Aug 22%, Sep 22%, Oct 22%, Nov 22%, Dec 23%

Legend: ● 2021 ● 2022

Proportion of PV Unrestrained Occupant Fatalities by Month

	Used	Not Used
2021	13,167	13,158*
2022	12,715	12,484
% chg	-3%	-5%

2021 values (black): Jan 54%, Feb 51%, Mar 48%, Apr 49%, May 53%, Jun 52%, Jul 49%, Aug 50%, Sep 49%, Oct 49%, Nov 50%, Dec 46%

2022 values (purple): Jan 51%, Feb 52%, Mar 48%, Apr 50%, May 51%, Jun 50%, Jul 49%, Aug 51%, Sep 47%, Oct 50%, Nov 48%, Dec 47%

Legend: ● 2021 ● 2022

Notes: The text box in the chart contains fatality counts and the percentage change from 2021 to 2022. Unknown cases are proportionally distributed.
*After distributing the unknown cases, this number is higher than the reported one (*Overview of Motor Vehicle Traffic Crashes in 2021*, April 2023, DOT HS 813 435).
Source: 2021 FARS ARF and 2022 statistical projection.

Fatality Rate

The total fatality rate per 100 million VMT is broken down by roadway function class: rural versus urban interstates, arterials, local/collector/streets. The results shown in Figure 2 indicate that the trend of the total fatality rate per 100 million VMT from January to December 2022, is mainly driven by the fatality rate per 100 million VMT on the rural *arterials*, rural *local/collector/street* roadways, and urban *arterials*, based on the magnitude of the fatality rate by roadway function class. Overall, the estimated fatality rate for 2022 was 1.35 fatalities per 100 million VMT, down from the projected 1.37 fatalities per 100 million VMT in 2021.

Figure 2: Total Fatality Rate per 100 Million VMT and the Fatality Rate per 100 Million VMT by Roadway Function Class for 2021-2022
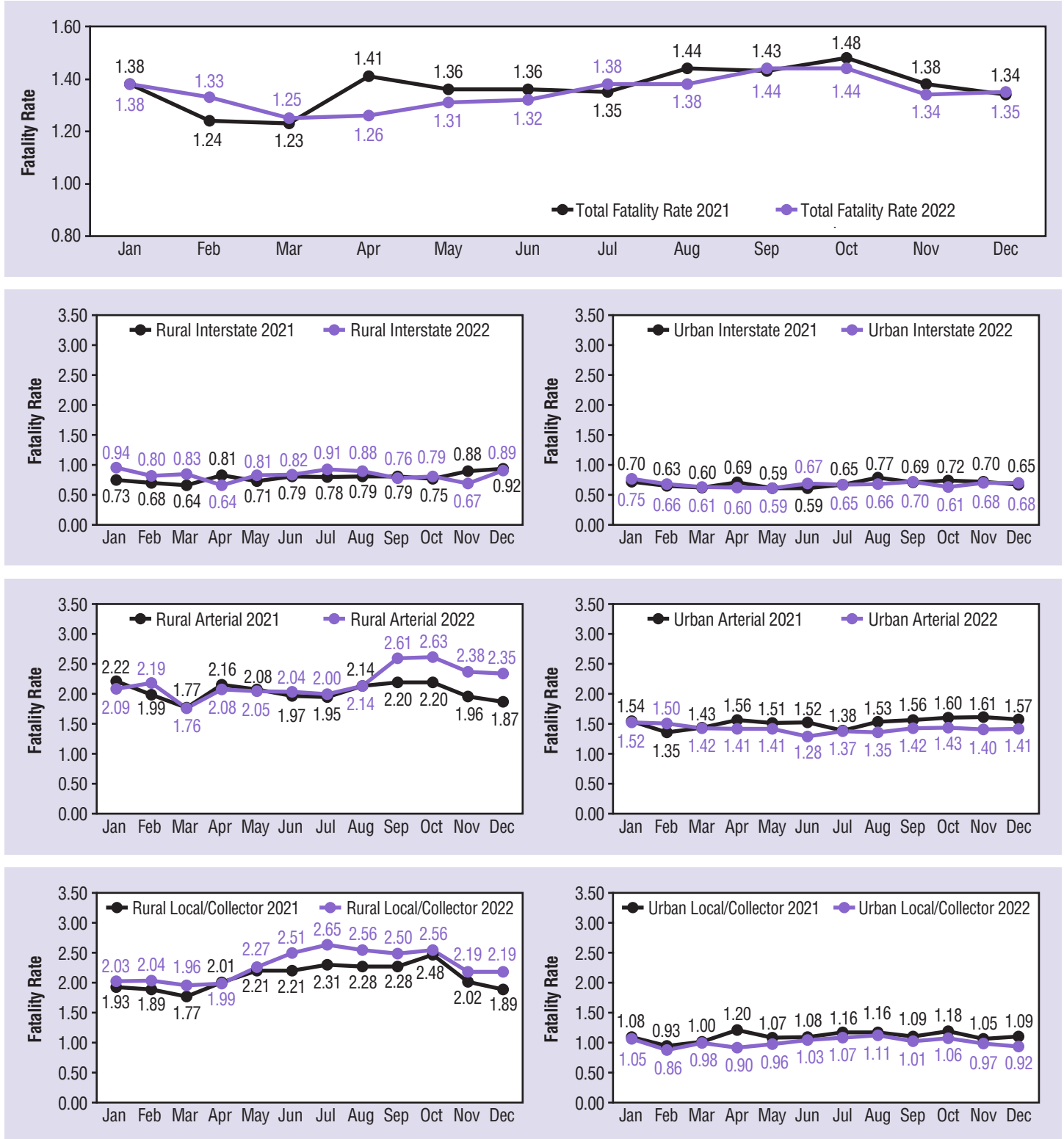
Unknown cases are proportionally distributed.
Source: 2021 FARS ARF and 2022 statistical projection. FHWA December 2022 TVT for 2021 and 2022 VMT.

Limitations

In this study the fatal crashes currently coded for 2022 into NHTSA's FARS are used as a basis for constructing the gross estimates of traffic fatalities by sub-categories. The results from this analysis can be affected by two factors. First, any post-COVID-19 pandemic-related lag to the fatal crash investigation and reporting are unknown and not captured in these projections. Second, the traditional FARS identification and reporting lag issue could also affect these estimates (e.g., the speeding-related, the roadway departure, and rollover crashes reporting and coding). The estimates for the month and the sub-categories for particular regions with higher inflation rate (IR_{mr}) are more likely to affect the sensitivity of the overall projections. Also, these calculations assume that the cases not yet coded into 2022 FARS are similar in the sub-categories to those that are already in the 2022 FARS. In short, the estimated results are subject to change as more information gets coded into these cases as well as when more cases are entered into 2022 FARS ($FARS\_22_{mr}$). These results may also change as the annual report file for 2022 (replace $F\_Est\_22_{mr}$) are available later this year.

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For questions regarding the information presented in this report, please contact NCSARequests@dot.gov. This Crash•Stats and other general information on traffic safety can be found at https://crashstats.nhtsa.dot.gov/