



Early Look at Jan-June 2020 Traffic Fatality Rates

Presented to:

MWCOG Transportation
Safety Sub-Committee

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Background

- COVID has significantly altered travel activity and travel patterns.
- Concerns have been raised about excessive speeding on empty roads; many anecdotal examples of speeding and speed-related fatal crashes.
- Data analysis needed to understand effects of COVID on fatality numbers and fatality rates.

Police: Teen driver was speeding 100 mph before fiery crash in Southfield that claimed 2 lives

By Aileen Wingblad awingblad@medianewsgroup.com; [@awingblad](#) on Twitter Sep 21, 2020 Comments

Method

- Limited (volunteer) effort – not conducted for a client or supported by funding.
- Extracted 2019 and 2020 fatality counts for Jan-June from 22 states + District of Columbia that publicly report such data.
- Obtained VMT data from FHWA for these 23 jurisdictions.
- Computed fatality rates for Jan-June 2020; compared with same period in 2019.

Jurisdictions Included in Data Analysis

Colorado

DC

Florida

Hawaii

Iowa

Illinois

Kentucky

Massachusetts

Michigan

Minnesota

Montana

North Dakota

Nebraska

New Jersey

Ohio

Oklahoma

Oregon

South Carolina

Tennessee

Virginia

Vermont

Wisconsin

Wyoming

Findings

- Absolute number of traffic deaths in 23 states (combined) declined about 6% during first six months of 2020 compared with same period in 2019.
- VMT, however, declined by 16.6%.
- Based on reduced VMT, **fatality rate increased 12.7%**.
- Had fatality rate for first six months of 2020 remained at 2019 level, expected number of traffic deaths for Jan-June 2020 would be about 5,636, versus 6,357 reported. Represents estimated 719 more deaths than expected based on VMT in 2020 (for 22 states + DC).

Data & Computations (23 states)

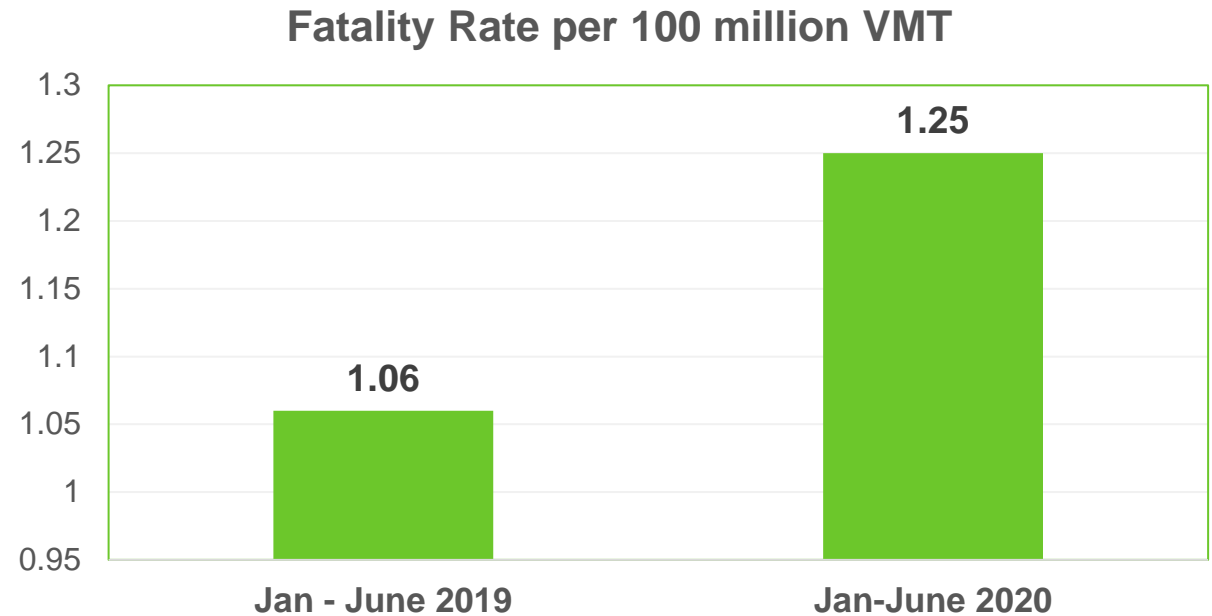
- Jan-June 2019 Fatality Rate = 1.02 per 100 MVMT
- Jan-June 2020 VMT = 551,227 (million)
- Jan-June 2020 Expected # Fatalities = 2019 Fatality Rate x 2020 VMT:
 - $1.02 \times 551,227$ (million) = 5,638
- Jan-June 2020 Reported # Fatalities = 6,357
- Jan-June 2020 Excess Fatalities = Reported minus Expected:
 - $6,357 - 5,638 = 719$

Extrapolating Results

- Based on nationwide fatality data from 2014-2018, 23 states included in analysis represent 40% of all U.S. traffic deaths.
- Extrapolating results, estimated number of additional deaths could be as high as 1,800 nationwide due to higher fatality rates, assuming other 28 states followed similar patterns of changes in numbers of traffic deaths and VMT.
- FHWA reported 16.6% reduction in nationwide VMT; identical to reduction in 22 states + DC.

Recently Released NHTSA Analysis

- Statistical projection for first half of 2020 shows 2% percent decrease in number of traffic fatalities.
- Fatality rate for first half of 2020 increased 18%, from 1.06 fatalities per 100 million VMT for first half of 2019 to 1.25 in 2020.



Notes

- Fatality data for first six months of 2020 was preliminary and likely undercounts deaths; results of this analysis, therefore, likely underestimates excess fatalities in 2020.
- 2020 analysis period included January (pre-COVID), and therefore further underestimates additional fatalities attributed to COVID.
- Analysis does not identify underlying causes for increased fatality rate in 2020; higher travel speeds likely factor given emptier roads and greater opportunity for speeding.
- This was a simple mathematical exercise and did not attempt to account for other potential factors such as population growth, changes in vehicle mix, increased alcohol sales, etc.

Conclusions

- 6% decline in deaths for 22 states & DC during first six months of 2020 vs. same period in 2019. Coincides with 16.6% increase in VMT.
- Had fatality rate for first six months of 2020 remained at 2019 level, expected number of deaths for Jan-June 2020 (based on VMT) 719 lower than reported.
- Estimated number of excess deaths for first six months of 2020 could be as high as 1,800 nationwide (equal to about 1% of 180,000 COVID deaths for that period, so not grabbing public attention).
- While good to see decline in number of fatalities during COVID era, overall picture remains bleak due to increased fatality rates. Should have seen large reductions in deaths due to large reductions in VMT; we did not.

DC and Virginia Data

	Reported # Fatalities				VMT			Fatality Rate per 100MVMT		
	2019	2020	Change	% Change	2019	2020	% Change	2019	2020	% Change
DC	12	17	5	42%	1,834	1,626	-11%	0.7	1.0	60%
VA	395	379	-16	-4%	41,734	33,502	-20%	0.9	1.1	20%

	2019 Fatality Rate	2020 VMT (Millions)	Expected # Fatalities	Reported # Fatalities	Excess # Fatalities
DC	0.7	1,626	11	17	6
VA	0.9	33,502	317	379	62