



NHTSA

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Continuation of Research on Traffic Safety During the COVID-19 Public Health Emergency: January – June 2021

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Purpose of the Special Reports

To Gather early data from sources inside and outside of NHTSA and DOT

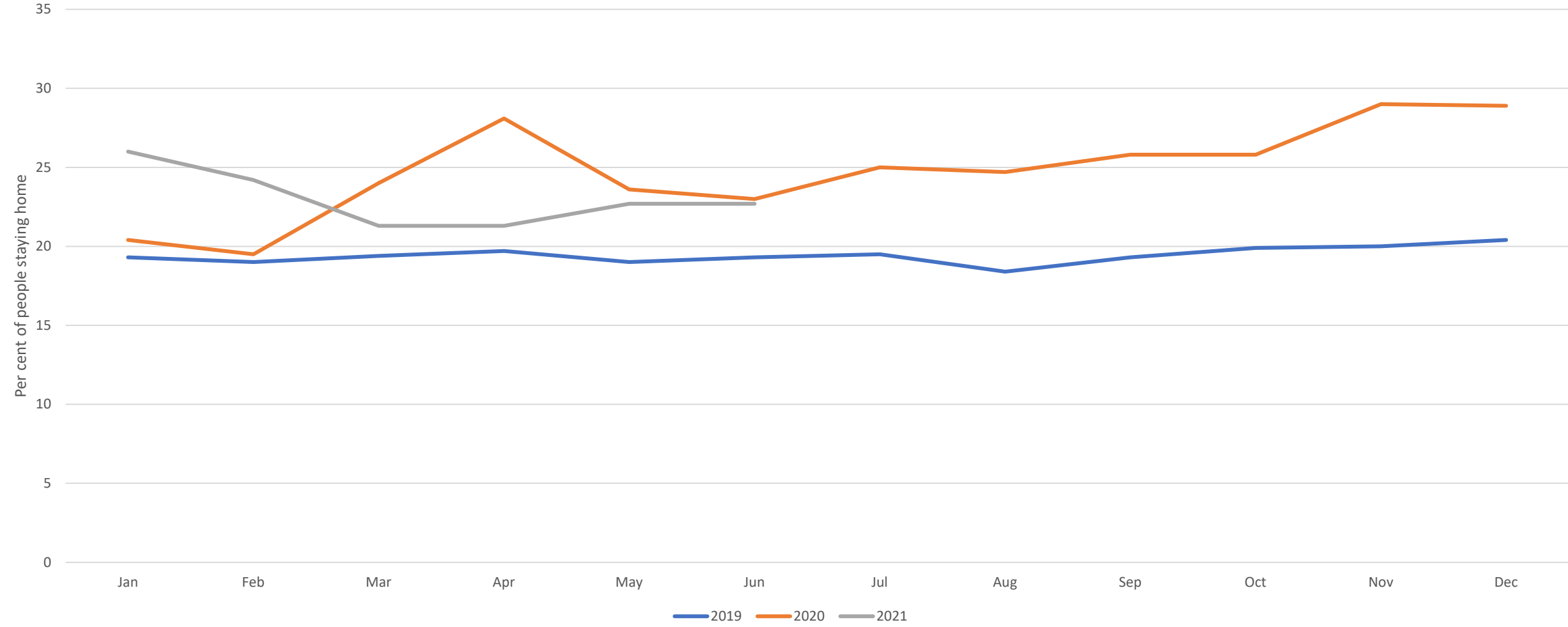
Synthesize these disparate data points

Analyze and document the findings





















Data sources

1. Past research
2. Bureau of Transportation Statistics (BTS) COVID dashboard
3. National EMS Information System (NEMSIS)
4. Study on prevalence of alcohol and other drugs among seriously or fatally injured road users (“the prevalence study”)
5. National Performance Management Research Dataset (NPMRD)
6. State dashboards
7. Contemporaneous peer-reviewed and gray literature

% of people staying home (daily) by month changed



Context

	VMT	Unemployment	Observed Behavioral Risks	Fatalities
“Normal” Recession				
Q2 (Apr-Jun) 2020				
Q3 (Jul-Sep) 2020				
Q4 (Oct-Dec) 2020				
1 st half 2021 (compared to 2019)				

Enforcement Changed

More than 1021 first responders have died from COVID-19 through December 6, 2021

- **Law Enforcement comprise two-thirds of first responder fatalities**

Through at least May 2020, many law enforcement agencies had policies limiting interactions with the public and arrests

- Reductions in stops, DWI arrests, speeding citations, belt citations
- Deterrence through highly visible enforcement was limited

In conversations with our Regions, States described reductions in traffic safety enforcement activity

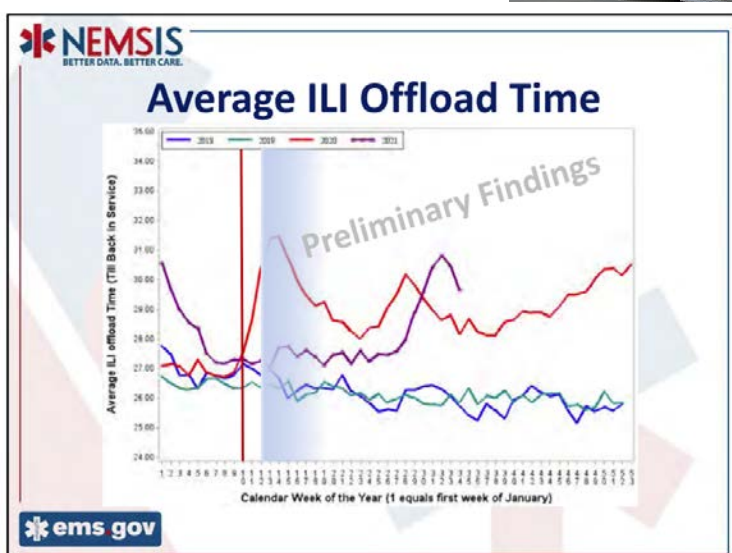
Presentations at Lifesavers, DAID, Distracted Driving Summit and other places (including our Trends in Risky Driving webinars), law enforcement professionals described reductions and changes in traffic safety enforcement activity



issues



- In general, stress among first responders
 - Associated with errors, worse patient outcomes
 - Affects retention and individual resilience
 - Affects system resilience
- Study documenting higher incidence of COVID+ among trauma patients = more exposure to first responders
- NEMESIS data show increased ED hand-off times (i.e., no beds available) and cleaning and restocking time after transporting patients with influenza-like illness
- Known effects of treatment delays on trauma outcomes
- Reports of EMS staff/equipment shortages resulting in treatment delays
- TBD: measurable effects of these on *traffic safety* outcomes during pandemic, but we are concerned



Risky Behavior – Known and Seen

Belt Use

Context: known characteristics of part-time belt users include: young, male, impulsive, have unfavorable views of seat belt laws / enforcement, engage in risky driving (speeding, alcohol-impaired driving)

Observed: **increases in ejections** (number and rate) – most commonly seen in younger (18-34), male, in rural locations

Speeding

Context: regular speeders are younger, more likely have other risky behaviors

Observed: **increases in speeds** across most speed percentiles; more instances of extreme speeds reported across the country

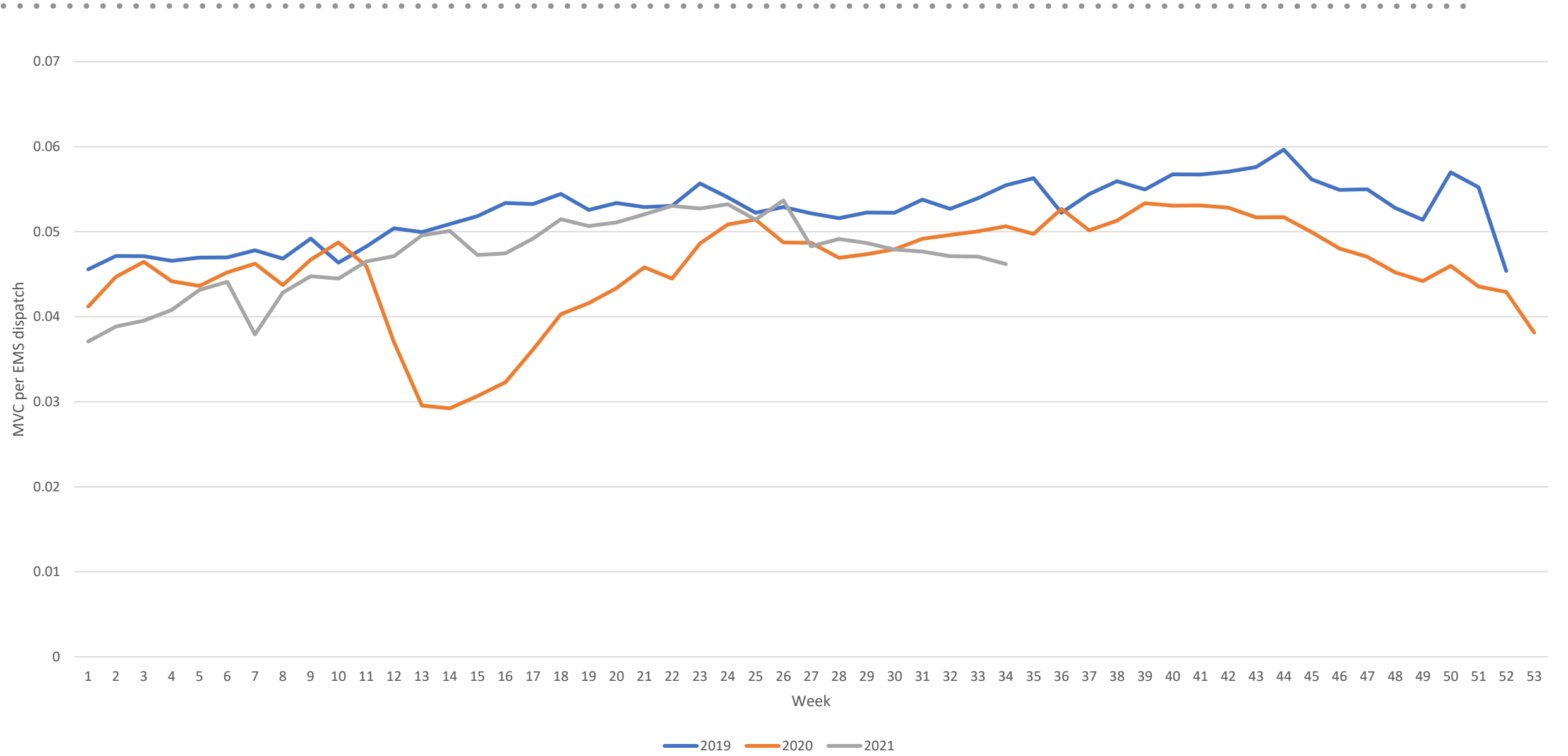
Drugs and Alcohol

Increase in opioid-related EMS calls and Naloxone administration – more pronounced in urban areas

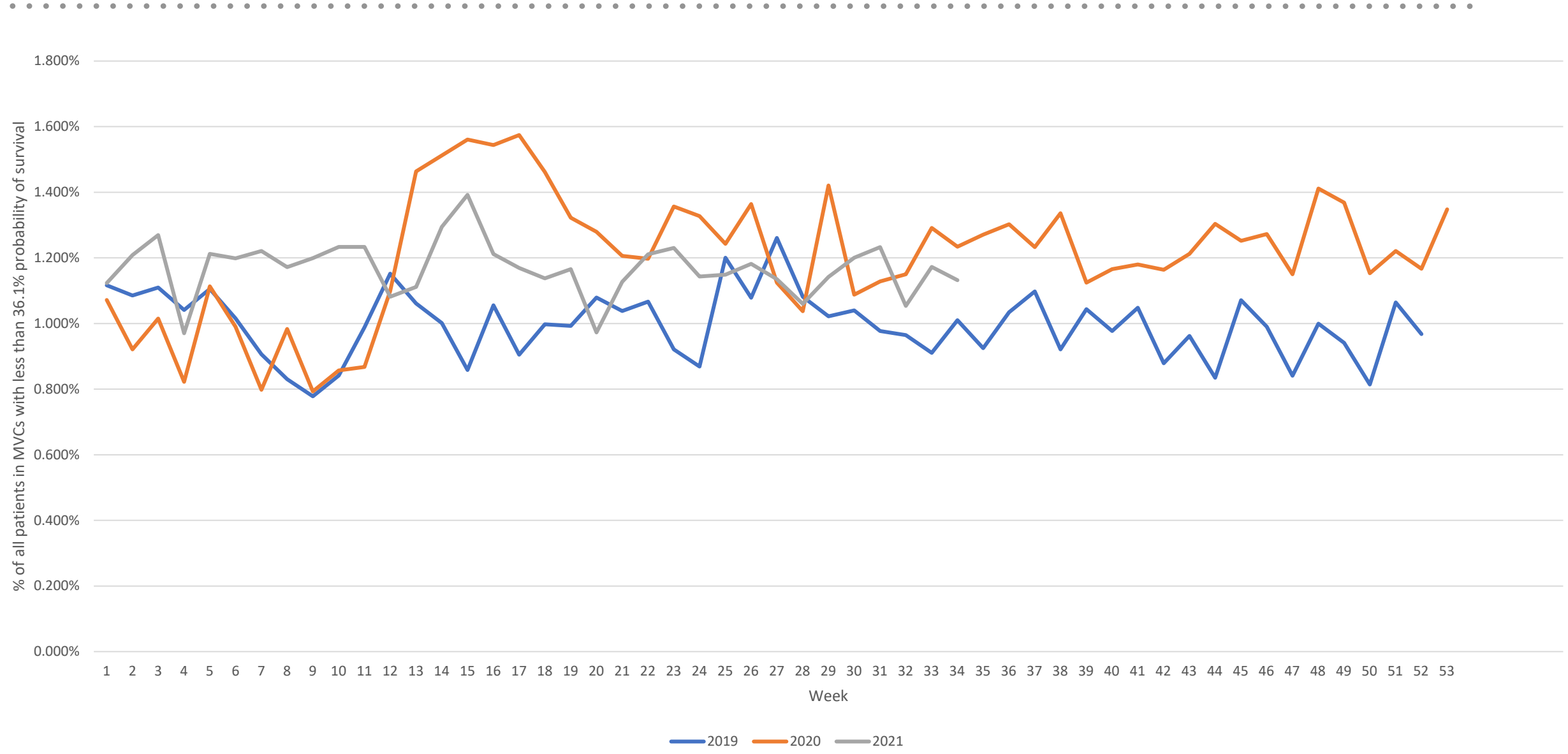
Increase in marijuana sales (taxes), alcohol sales, reported self-medication

Increase in prevalence of drugs and alcohol among critically injured road users at five trauma centers

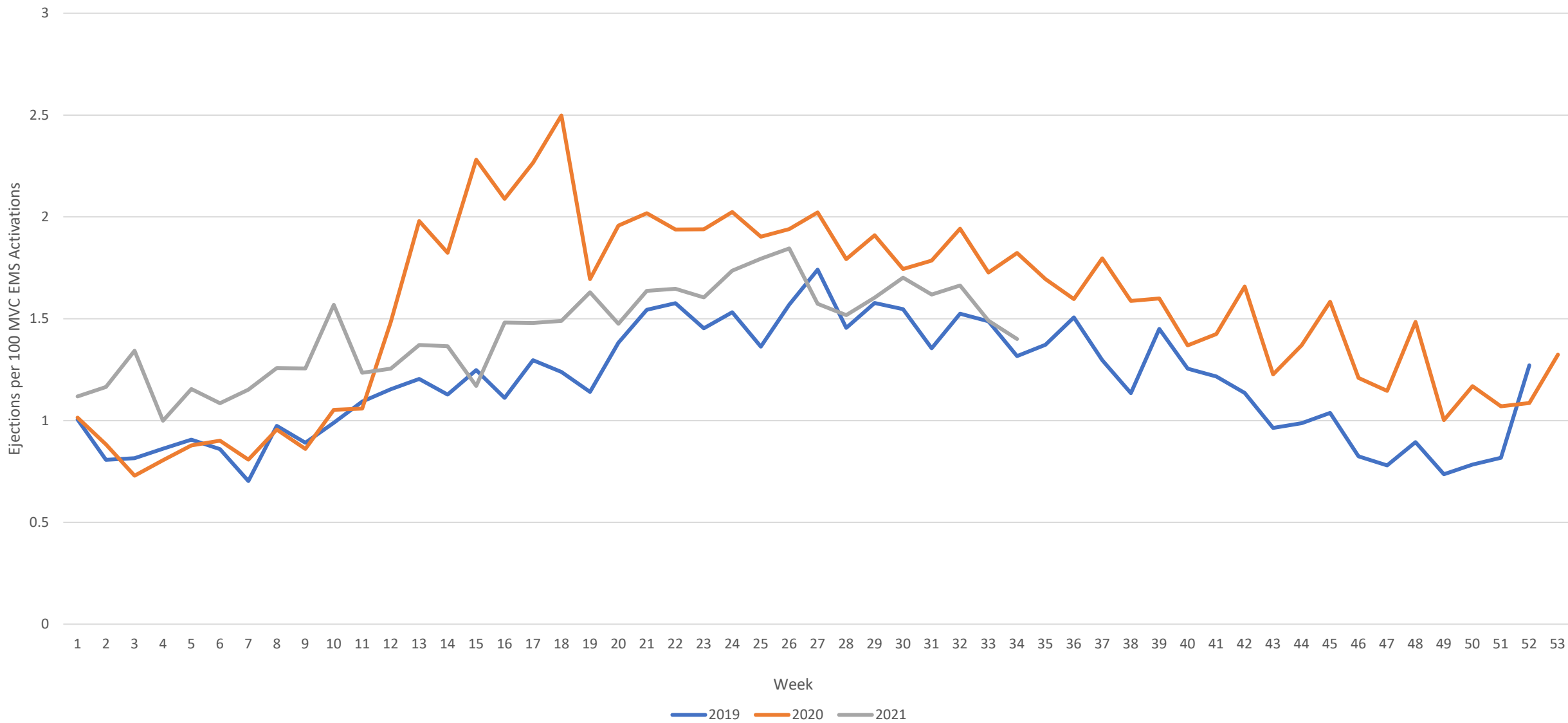
Rate of Motor Vehicle Crashes per EMS Dispatch by week of year



Percent of all patients in motor vehicle crashes with a probability of survival less than or equal to 36.1% (severely injured; transport to higher level trauma center recommended)

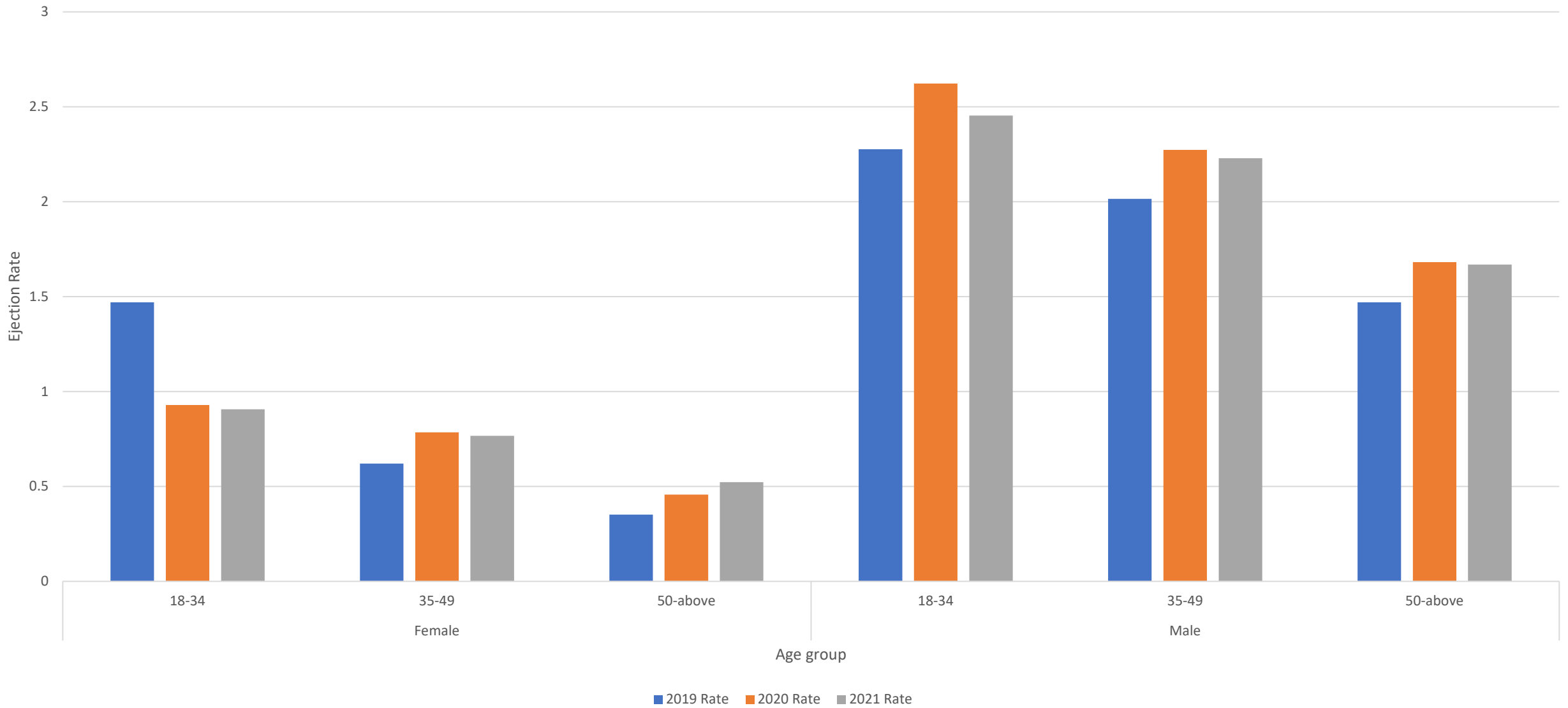


Ejections per 100 MVC EMS activations by week of year



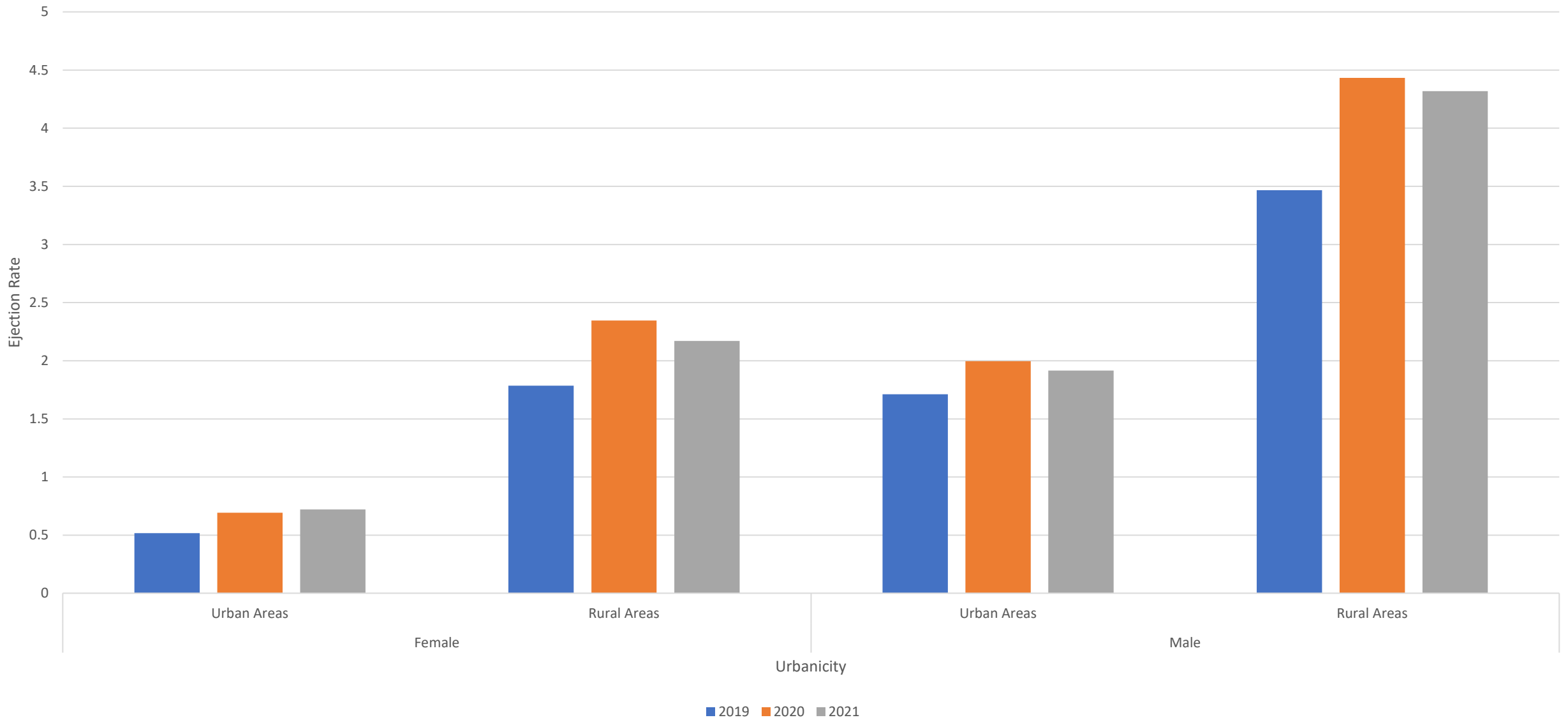
Source: NEMSIS

Ejection rate per 100 MVC activations by age group and sex



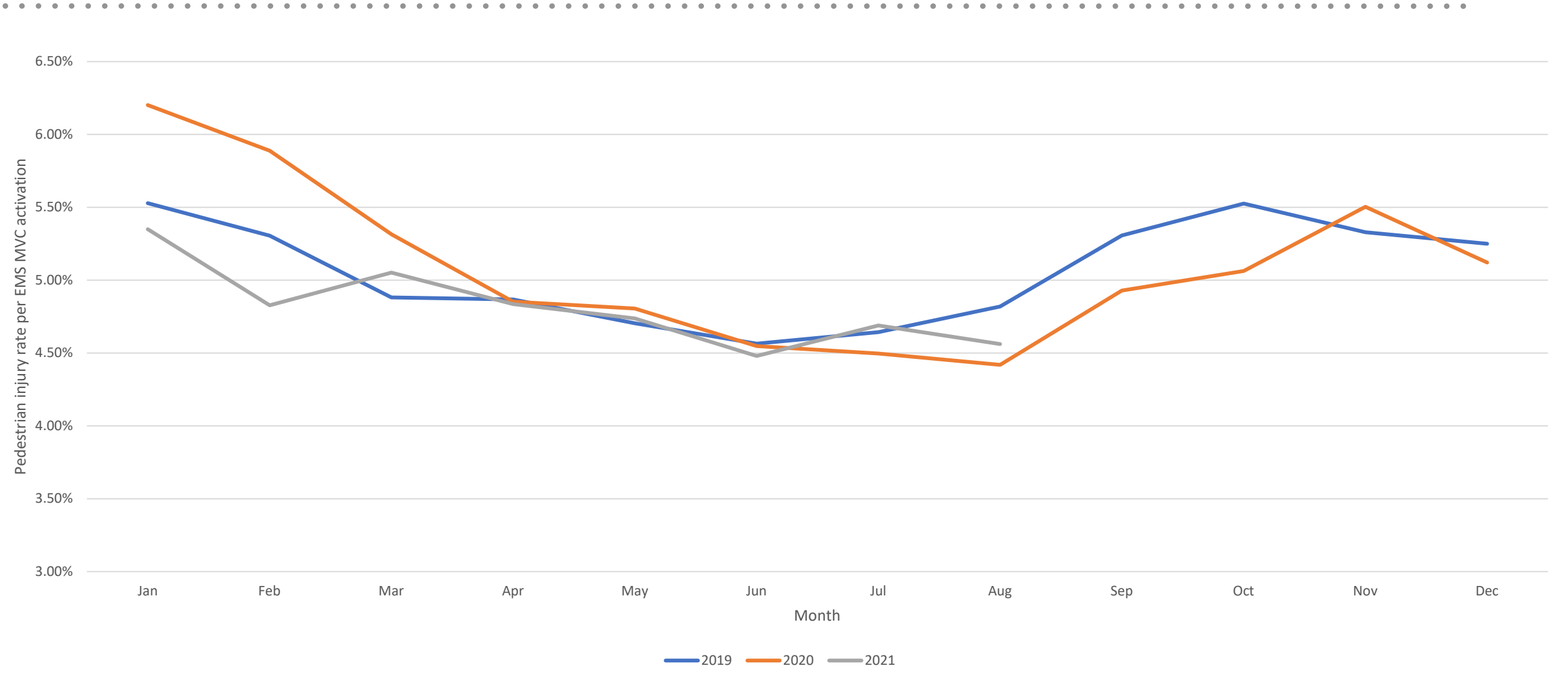
Source: NEMESIS

Ejection rate per 100 MVC activations by urbanicity and sex



Source: NEMESIS

Pedestrian injury rate per EMS motor vehicle crash activation by month



Pedestrians: Positive for Drug Category by Quarter

Pedestrians										
	Q4 2019 (N=106)		Q1 2020 (N=162)		Q2 2020 (N=105)		Q3 2020 (N=172)		Q4 2020 (N=144)	
	n	%	n	%	n	%	n	%	n	%
Alcohol	20	18.9	46	28.4	31	29.5	53	30.8	36	25.0
Cannabinoids	23	21.7	27	16.7	31	29.5	38	22.1	34	23.6
Stimulants	10	9.4	23	14.2	16	15.2	21	12.2	14	9.7
Sedatives	9	8.5	14	8.6	10	9.5	19	11.0	14	9.7
Opioids	9	8.5	10	6.2	13	12.4	23	13.4	25	17.4 ^B
Antidepressants	3	2.8	2	1.2	1	1.0	2	1.2	1	0.7
Over-the-Counter	2	1.9	6	3.7	4	3.8	4	2.3	2	1.4
Other Drugs	4	3.8	1	0.6	1	1.0	6	3.5	4	2.8
At Least 1 Category	52	49.1	86	53.1	68	64.8	108	62.8	88	61.1
Multiple Categories	16	15.1	35	21.6	29	27.6	44	25.6	34	23.6

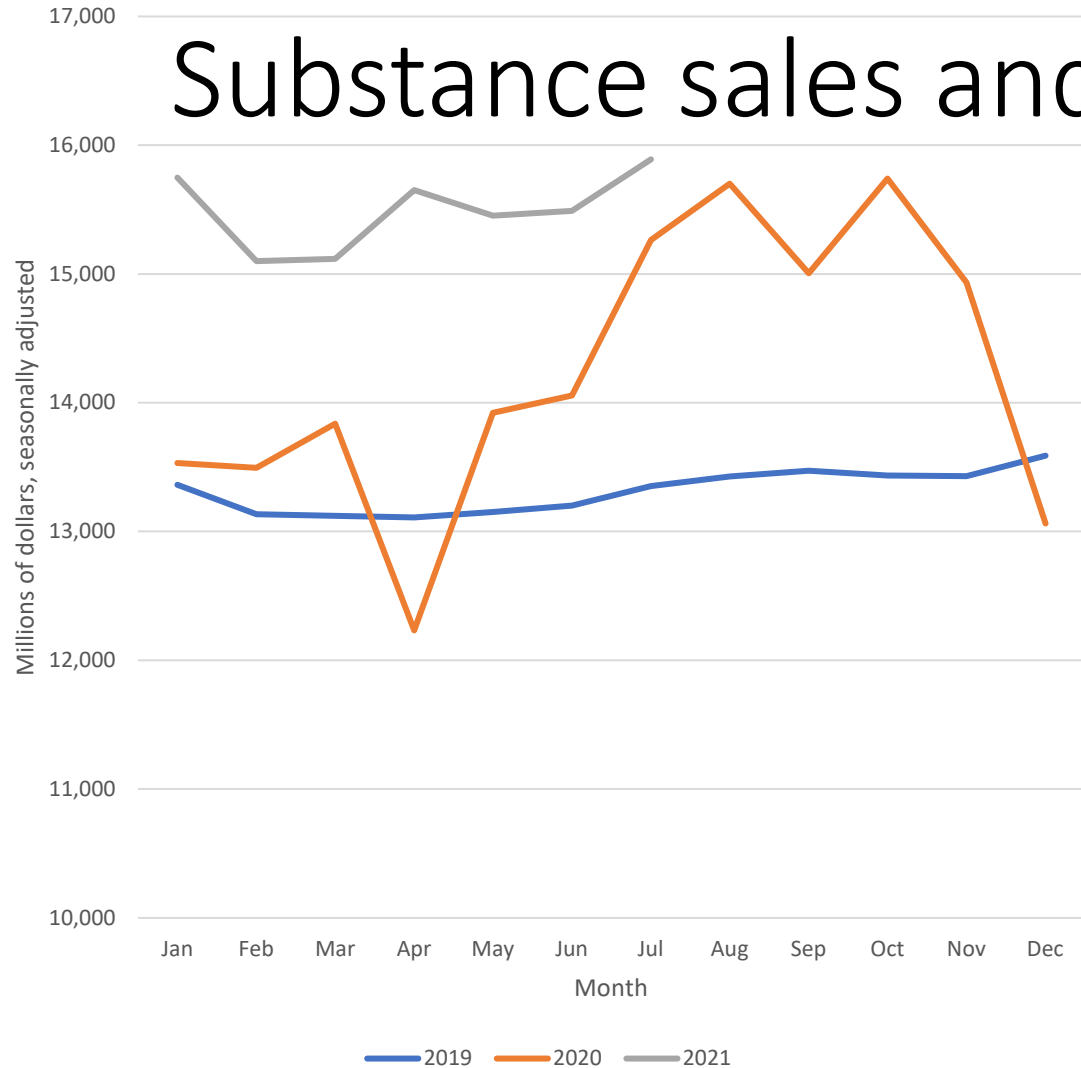
^B Significantly different ($p < .05$) compared to Q1 2020 period.

More

*Substance Sales, Speed, and
Distraction*



Substance sales and consumption

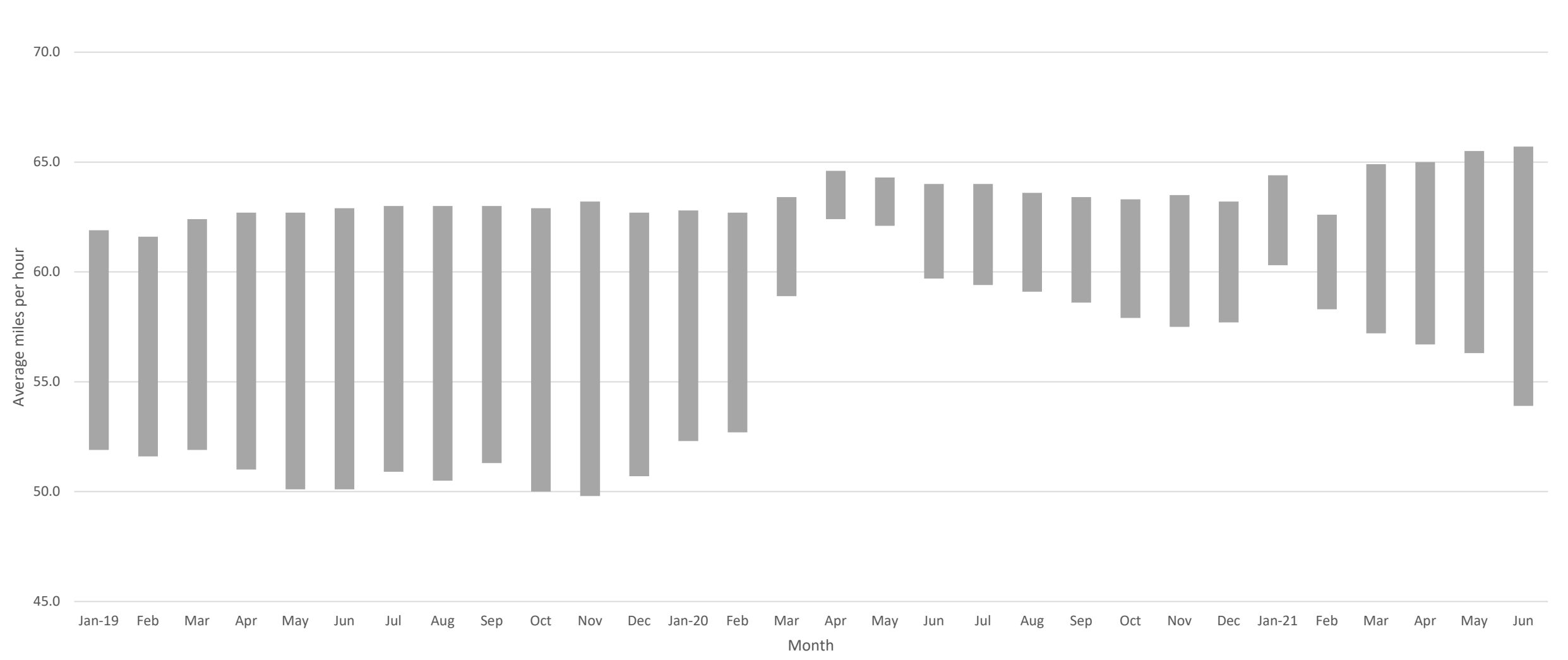


- No new *Prevalence* study data for 2021
- Sustained increases in alcohol sales in 2021
- Increases in marijuana sales (derived from State reported revenues) in 2020 and into 2021*
- Changes in self-reported likelihood of consumption of alcohol & likelihood of driving while impaired during pandemic

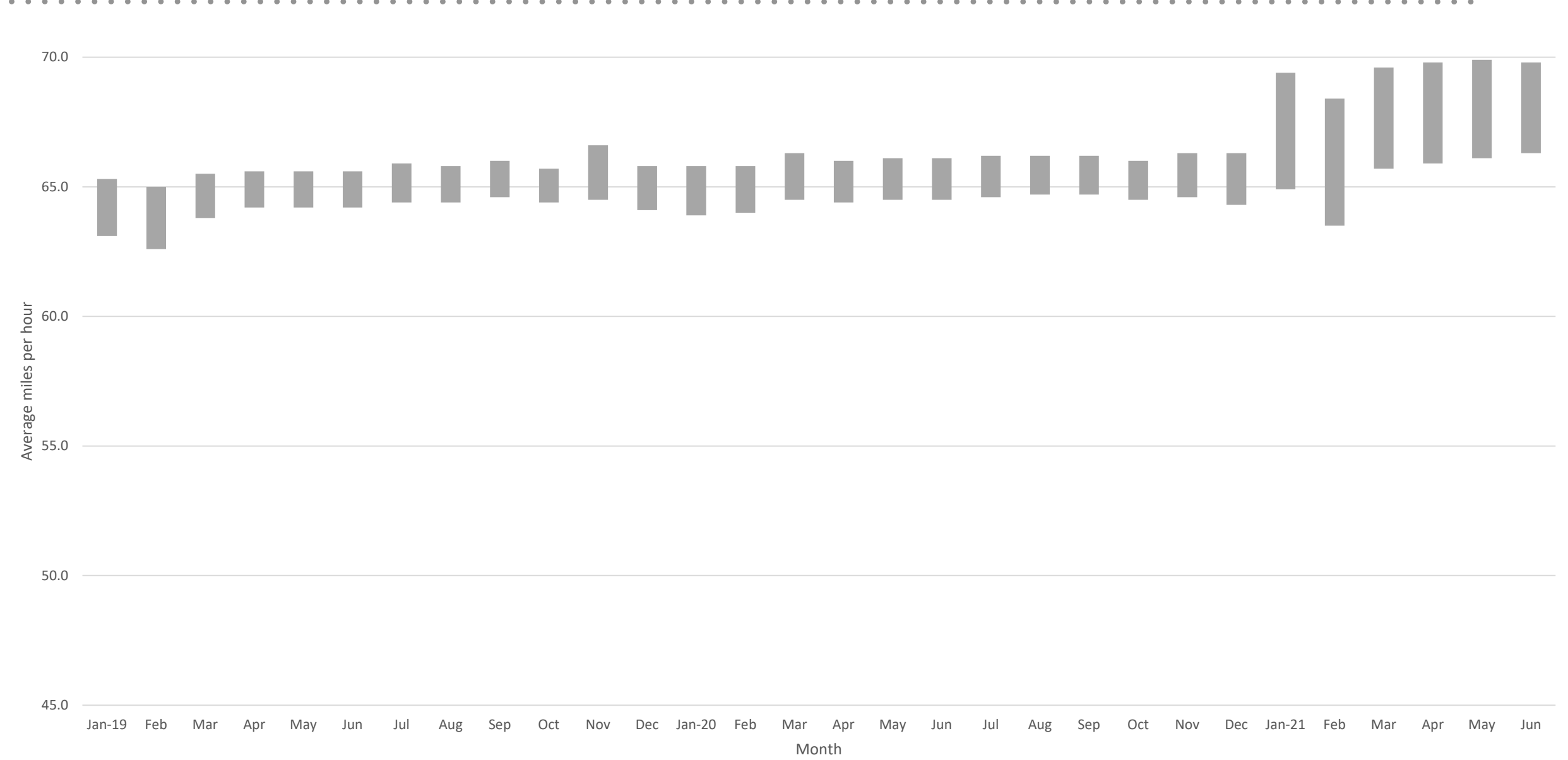
● * might not be pandemic-related

Merchant wholesalers, except manufacturers' sales branches and offices:
 Nondurable goods: Beer, wine, and distilled alcoholic beverage sales, millions of dollars, monthly, seasonally adjusted. Source: U.S. Census Bureau

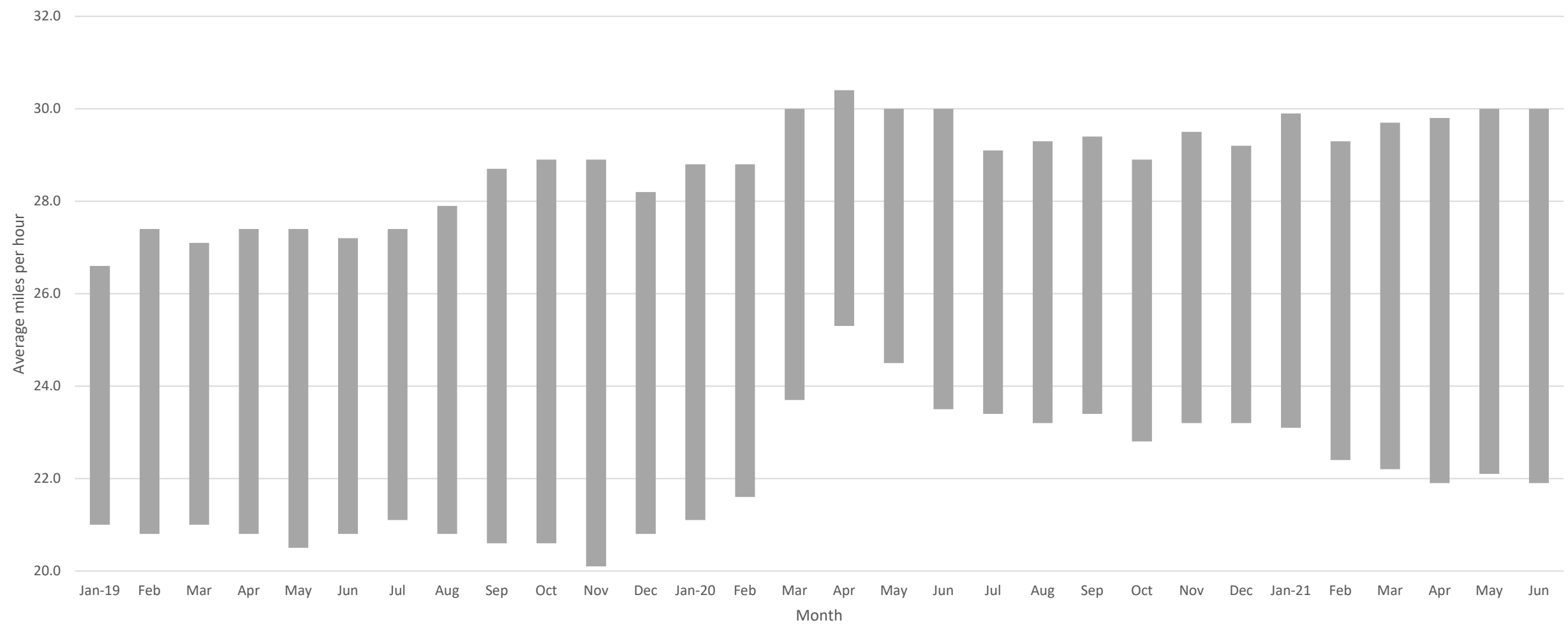
Urban Interstates – Gap between Fastest and Slowest Average Speeds by Month



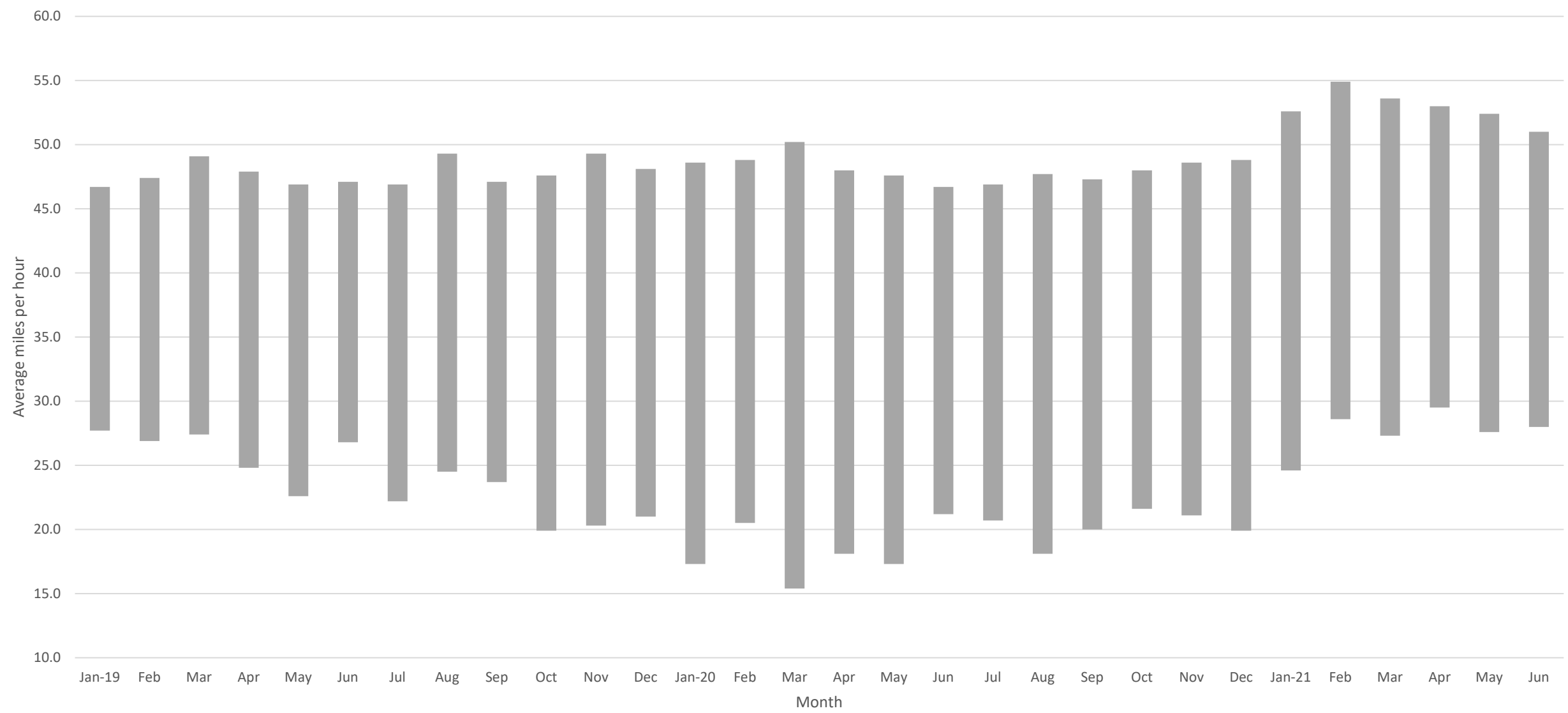
Rural Interstates – Gap between Fastest and Slowest Average Speeds by Month

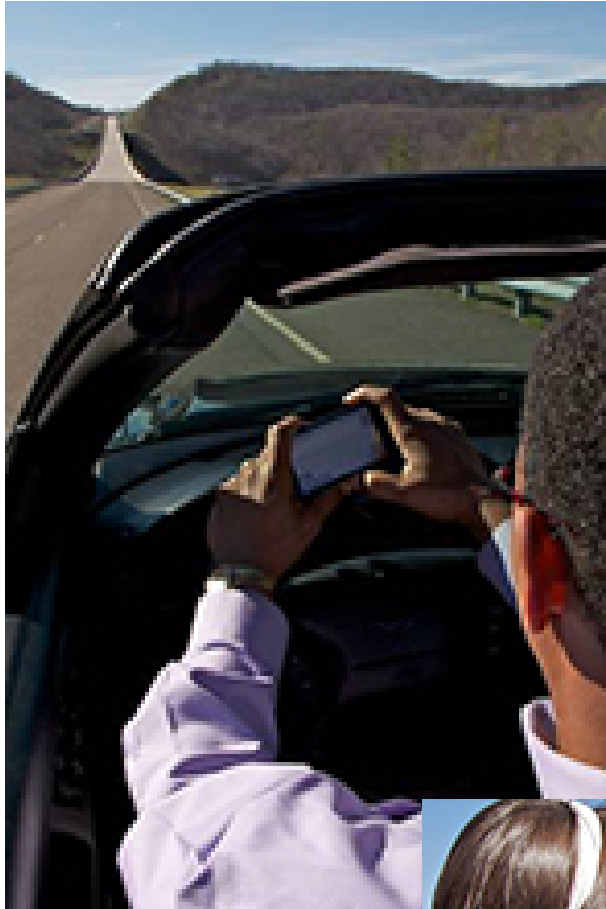


Urban Major Collector – Gap between Fastest and Slowest Average Speeds by Month



Rural Major Collector – Gap between Fastest and Slowest Average Speeds by Month





- Telemetry companies report increases in phone manipulation while driving during the pandemic
- One telemetry company reports that the 10% of most-distracted drivers have an insurance loss frequency that is 2.2 times the 10% of least-distracted drivers
- Self-reported data indicates increased willingness to drive while using cell phone during pandemic

Summary of Findings

- Risky driving behaviors seen in 2020 continued in 2021.
- People took fewer trips / more people stayed home compared to 2019.
- 3 consistent concerns:
 - Seat belt use
 - Impaired driving and increase in drug prevalence
 - Speeding
- Concerns raised regarding distraction and pedestrian safety
- Overlap between “traditional” risk-taking groups and those who were more likely to take trips
- Deterrence requires enforcement + social norming
- Need for strong data to understand other risks

Limitations



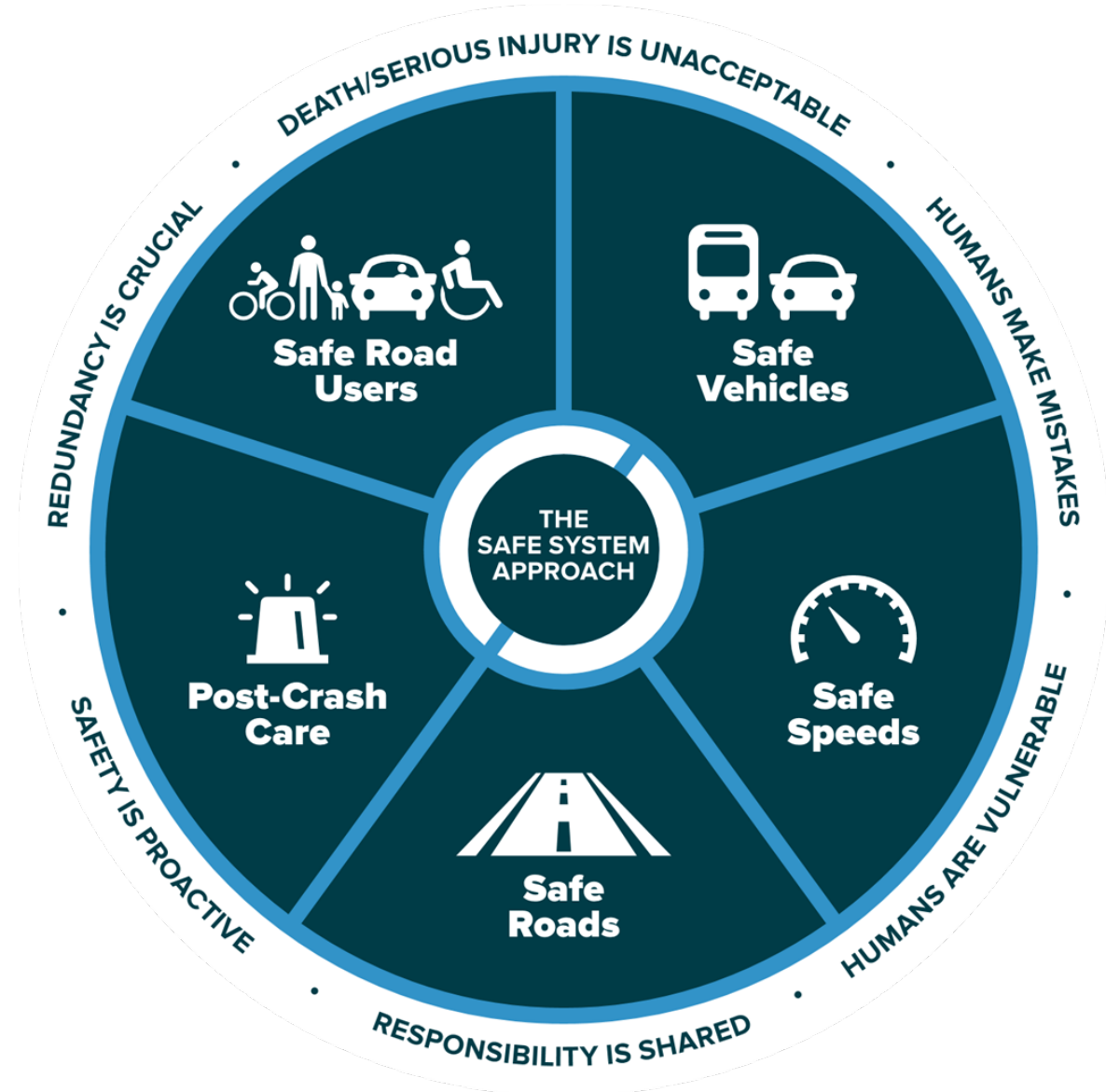
Addressing Risky Driving

Convening Partners

- *Leverage and adapt proven initiatives to address prevalent risky behaviors*

Engaging NHTSA Regional Partnerships

- *Cross-regional virtual events*
- *NHTSA-facilitated forums*
- *Outreach to new partners*





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