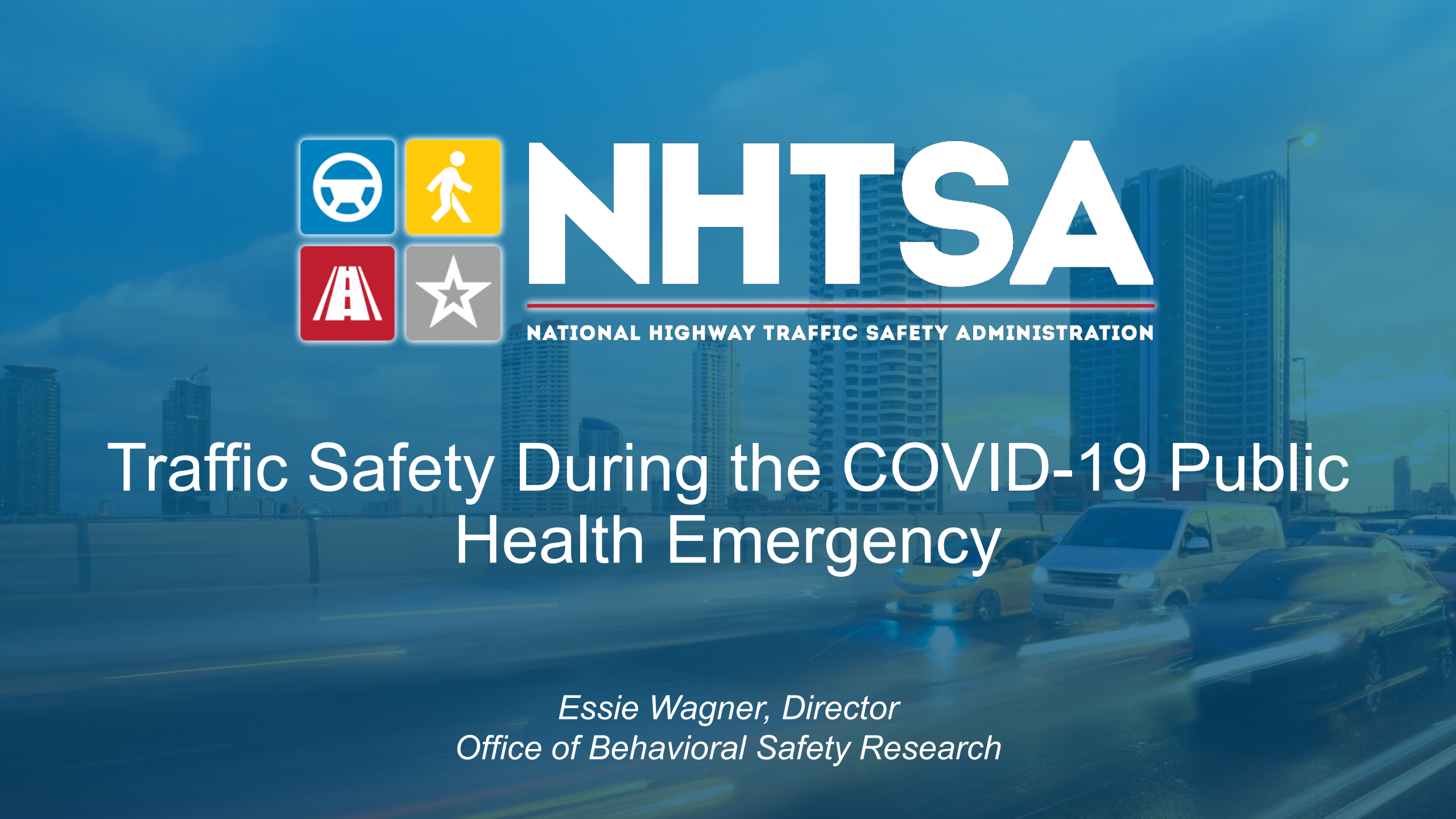


NHTSA

NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

Traffic Safety During the COVID-19 Public Health Emergency

Essie Wagner, Director
Office of Behavioral Safety Research

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

The Observed Environment in Q2 – Q4, 2020

Unemployment was up, then recovering

Household incomes were down

VMT was down, then recovering

- Passenger VMT down year-over-year; Truck VMT up year-over-year

Gasoline sales were down

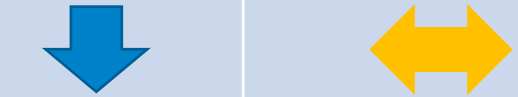
Transit use was down

Changed travel behavior

Changed enforcement

Changed travel speeds, seat belt use, and alcohol and drug use

Context

	VMT	Unemployment	Alcohol/Other Risks	Fatalities
"Normal" Recession				
Q2 (Apr-Jun) 2020				
Q3 (Jul-Sep) 2020				
Q4 (Oct-Dec) 2020				

Enforcement Changed

More than 670 first responders have died from COVID-19 through August 1, 2021

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

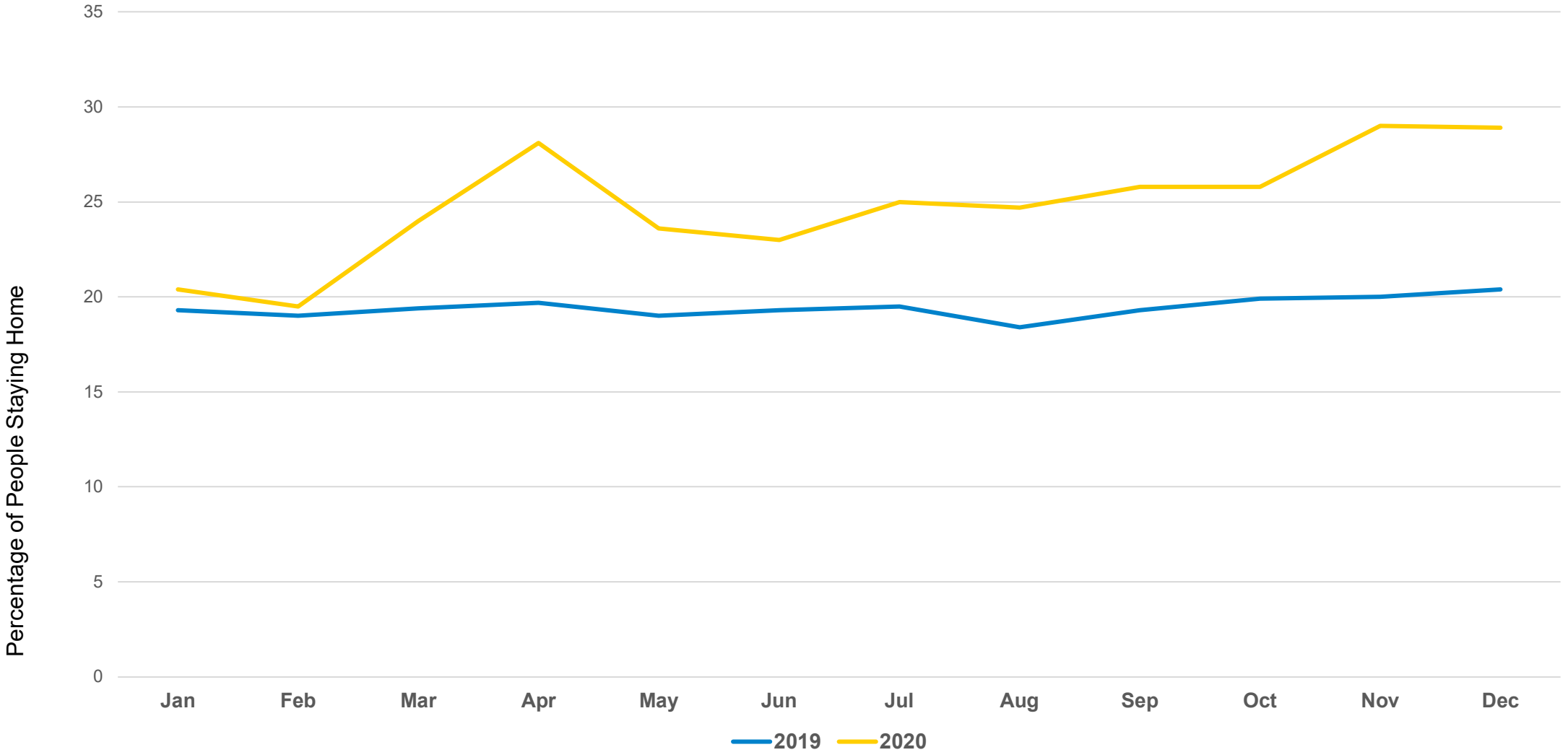
Through at least May 2020, many law enforcement agencies had policies limiting interactions with the public and arrests

- 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 and other places (including our Trends in Risky Driving webinars), law enforcement professionals described reductions and changes in traffic safety enforcement activity

People Staying Home, by Month, 2019 and 2020



Source: BTS COVID dashboard

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 in 2020 Q2; 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

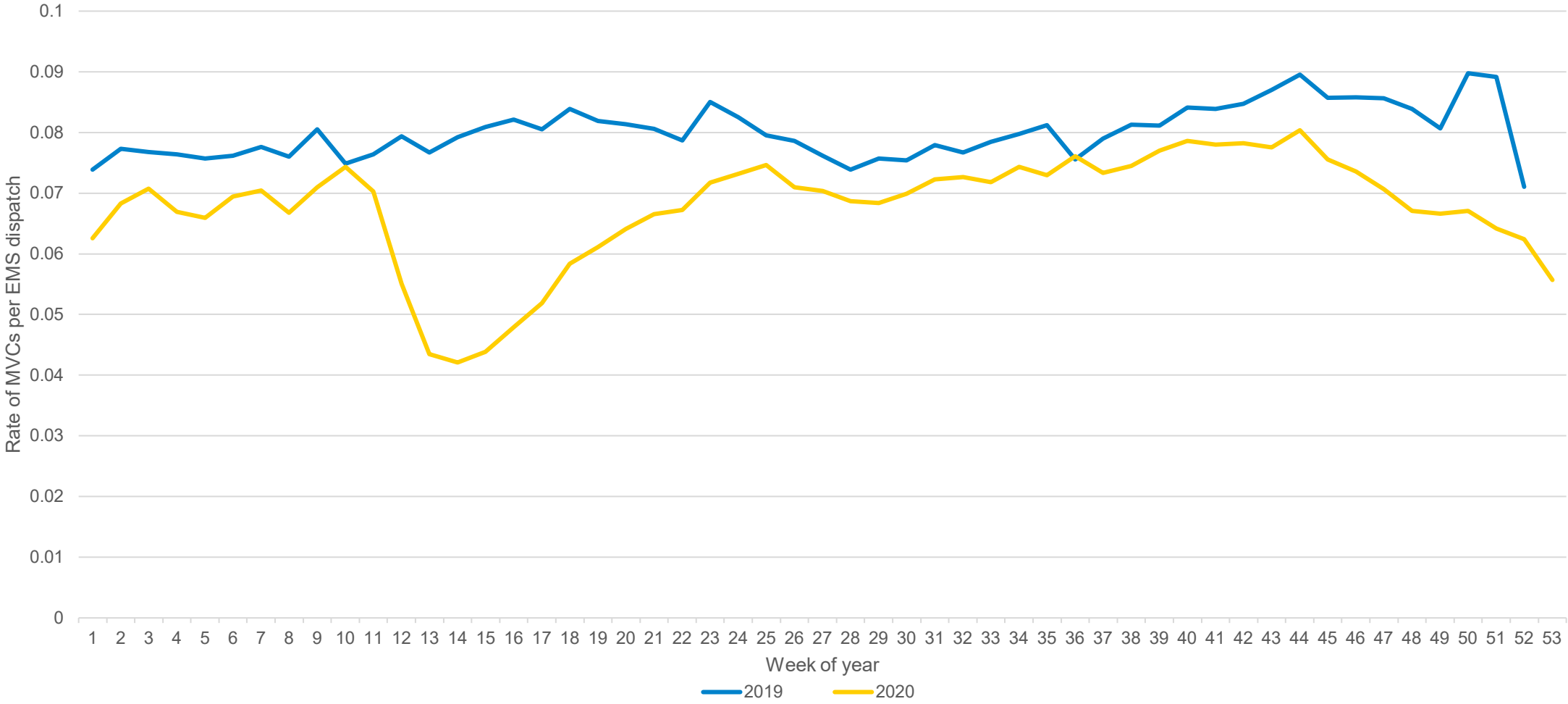
Increase in marijuana sales (taxes), alcohol sales, reported self-medication

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

NEMSIS DATA

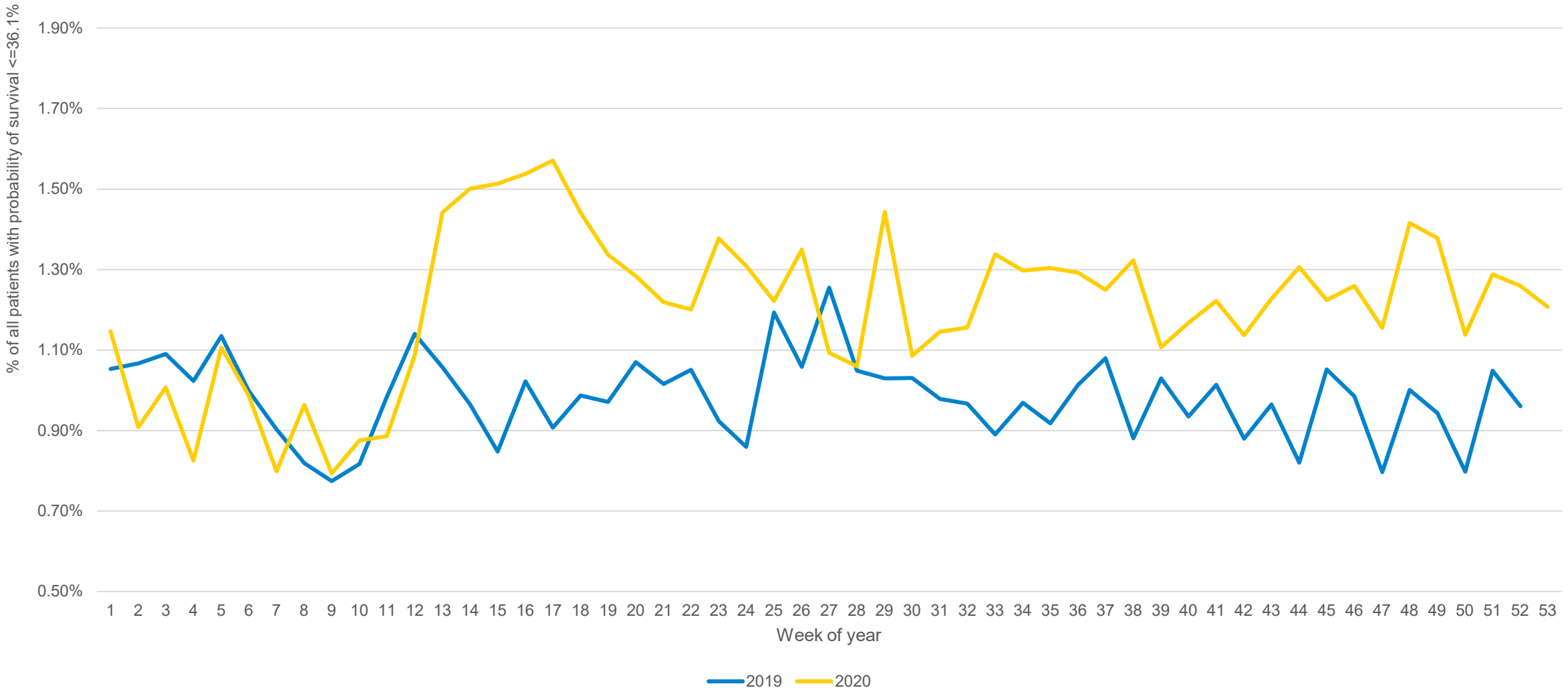
The next slides use data from the National EMS Information System

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



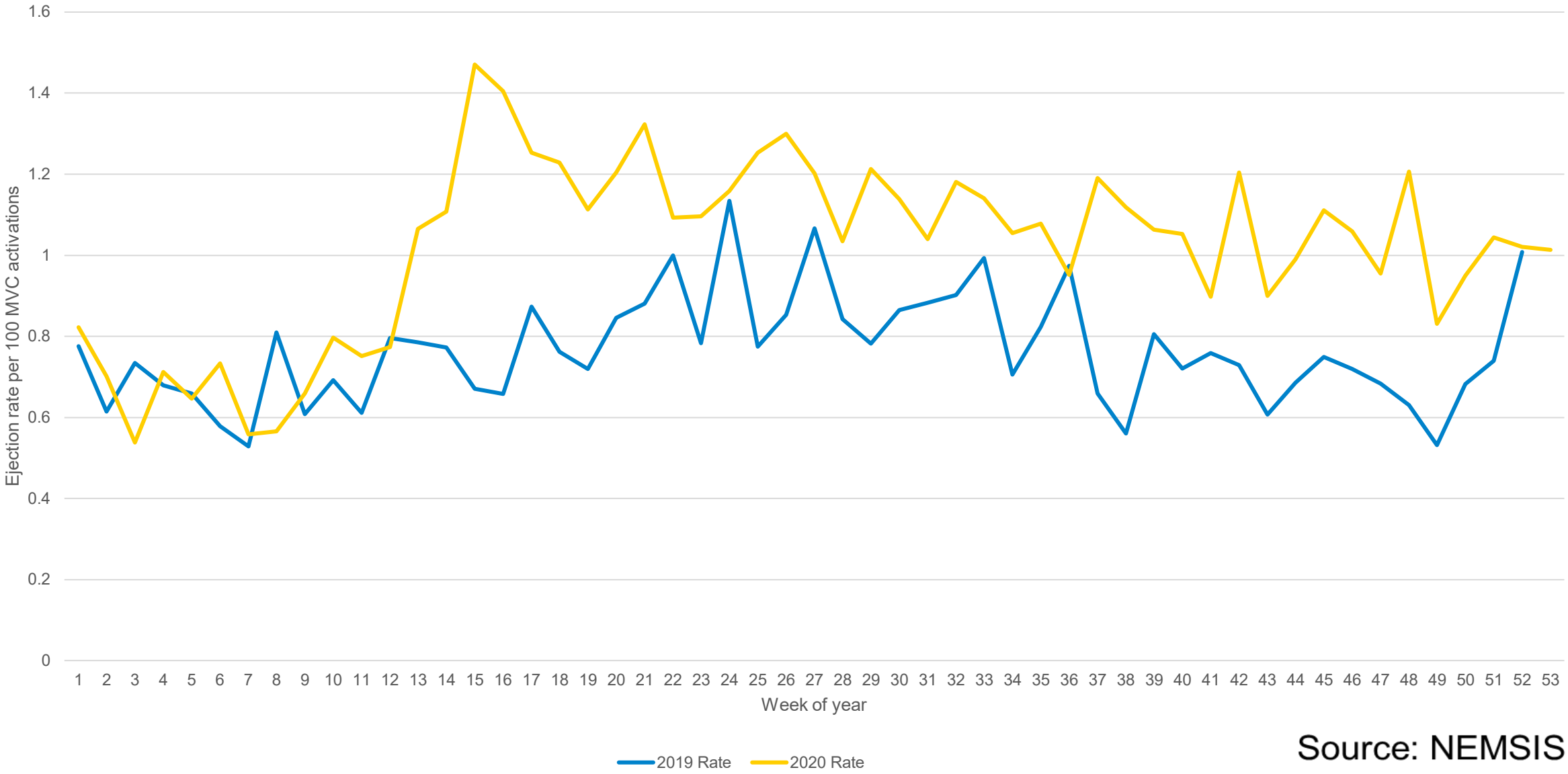
Source: NEMSIS

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)



Source: NEMSIS

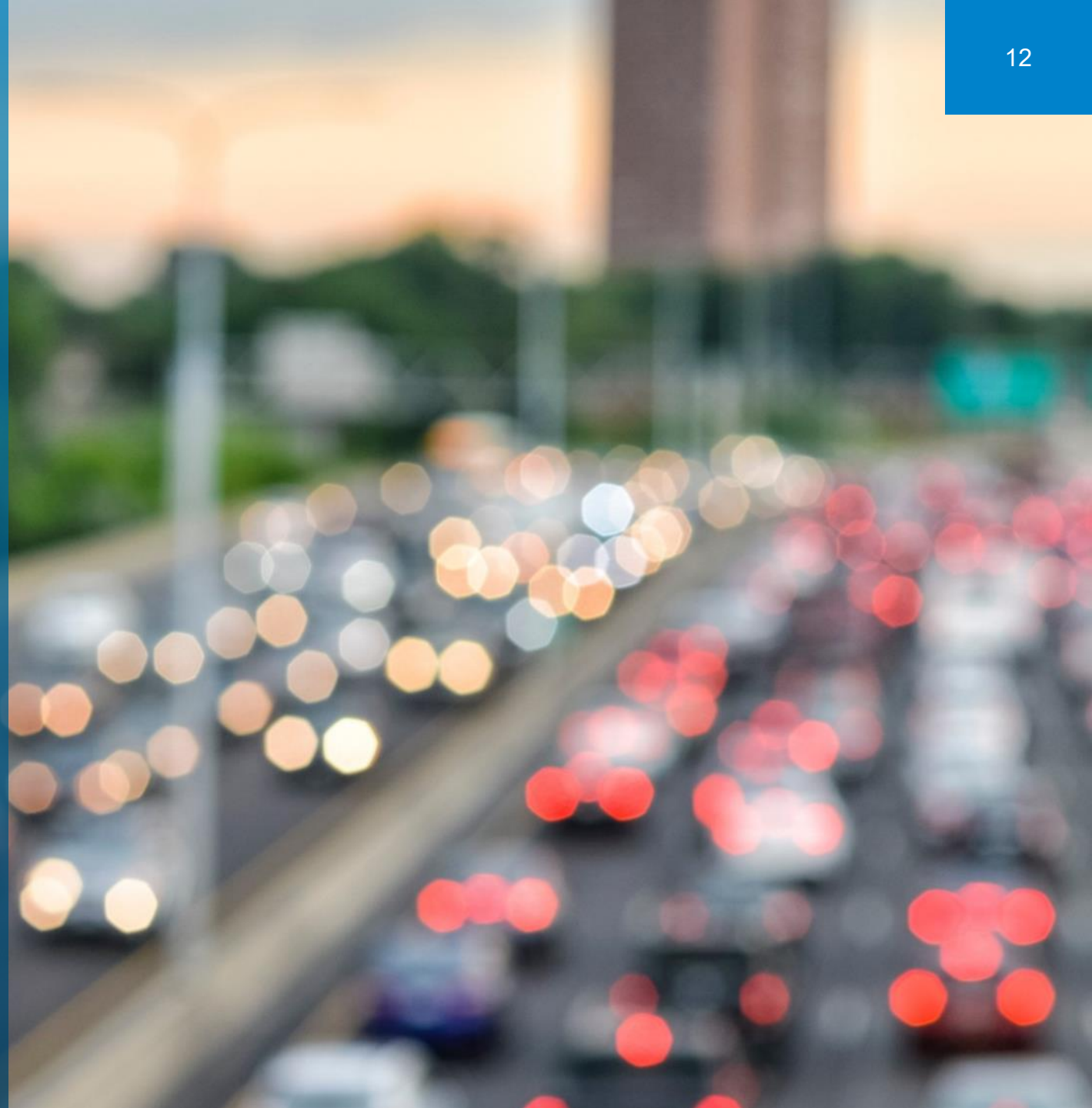
Ejections per 100 MVC EMS activations by week of year



Source: NEMSIS

Prevalence Study Data

The next slides use data from NHTSA's ongoing study of the prevalence of drugs and alcohol among seriously or fatally injured road users



Prevalence Study Background

- NHTSA conducted a study on the prevalence of drugs and alcohol among people who were killed or seriously injured in motor vehicle crashes.
- We collaborated with five trauma centers.
- Public health emergency: Study was also used to help NIH examine prevalence of COVID-19 among trauma patients.
- Research is continuing (now seven trauma centers).

Drivers (excluding motorcyclists): Positive for Drug Category by Quarter

	Q4 2019 (N=409)		Q1 2020 (N=536)		Q2 2020 (N=404)		Q3 2020 (N=603)		Q4 2020 (N=474)	
Drug Category	n	%	n	%	n	%	n	%	n	%
Alcohol	90	22.0	137	25.6	102	25.2	166	27.5	127	26.8
Cannabinoids	78	19.1	118	22.0	133	32.9[A,B]	155	25.7	130	27.4[A]
Stimulants	36	8.8	60	11.2	41	10.1	64	10.6	42	8.9
Sedatives	42	10.3	35	6.5	34	8.4	48	8.0	33	7.0
Opioids	28	6.8	52	9.7	60	14.9[A]	88	14.6[A]	44	9.3
Antidepressants	11	2.7	12	2.2	1	0.2[A]	4	0.7	4	0.8
Over-the-Counter	4	1.0	22	4.1	6	1.5	10	1.7	8	1.7
Other Drugs	7	1.7	9	1.7	3	0.7	17	2.8	10	2.1
At Least 1 Category	211	51.6	292	54.5	260	64.4[A,B]	366	60.7[A]	266	56.1
Multiple Categories	69	16.9	120	22.4	92	22.8	150	24.9[A]	108	22.8

[A] Significantly different ($p < .05$) compared to Q4 2019 period.
[B] Significantly different ($p < .05$) compared to Q1 2020 period.

Motorcyclists: Positive for Drug Category by Quarter

Drug Category	Q4 2019 (N=61)		Q1 2020 (N=111)		Q2 2020 (N=137)		Q3 2020 (N=213)		Q4 2020 (N=125)	
	n	%	n	%	n	%	n	%	n	%
Alcohol	11	18.0	21	18.9	42	30.7	63	29.6	31	24.8
Cannabinoids	14	23.0	30	27.0	50	36.5	61	28.6	35	28.0
Opioids	2	3.3	4	3.6	7	5.1	19	8.9	7	5.6
Stimulants	6	9.8	5	4.5	8	5.8	19	8.9	11	8.8
Sedatives	2	3.3	7	6.3	7	5.1	22	10.3	6	4.8
Antidepressants	0	0.0	0	0.0	1	0.7	3	1.4	1	0.8
Over-the-Counter	0	0.0	1	0.9	0	0.0	0	0.0	0	0.0
Other Drugs	2	3.3	0	0.0	4	2.9	8	3.8	5	4.0
At Least 1 Category	27	44.3	51	45.9	85	62.0	135	63.4[B]	72	57.6
Multiple Categories	7	11.5	15	13.5	28	20.4	49	23.0	18	14.4

[B] Significantly different ($p < .05$) compared to Q1 2020.

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.

Drivers' BAC Ranges

	Before (N= 1,157)			During 1 (N=699)			During 2 (N= 640)		
BAC Range (in g/dL)	n	%	95% CI	n	%	95% CI	n	%	95% CI
.00 (No Alcohol)	905	78.2	[75.8, 80.5]	501	71.7[A]	[68.2, 74.9]	453	70.8[A]	[67.2, 74.2]
.02 - .049	9	0.8	[0.4, 1.4]	14	2.0	[1.2, 3.2]	16	2.5[A]	[1.5, 3.9]
.05 - .079	22	1.9	[1.2, 2.8]	13	1.8	[1.0, 3.1]	7	1.1	[0.5, 2.1]
.08 - .149	64	5.5	[4.3, 7.0]	44	6.3	[4.7, 8.3]	45	7.0	[5.2, 9.2]
.15 +	157	13.6	[11.7, 15.6]	127	18.2[A]	[15.4, 21.2]	119	18.6[A]	[15.7, 21.7]

[A] Significantly different from "Before" period, $p < .05$.

Before = 09/10/19 – 03/16/20 During 1 = 03/17/20 – 07/18/20 During 2 = 07/19/20 – 09/30/20

*from the Q3 Report

Driver Seat Belt Use by Drug-Positive Category*

		Drug and Alcohol Negative	Alcohol	Cannabinoids	Stimulants	Sedatives	Opioids	Anti-depressants	Over-the-Counter	Other Drugs	At Least One Category	Multiple Categories
Belt Use		(N=680)	(N=370)	(N=375)	(N=155)	(N=131)	(N=181)	(N=27)	(N=31)	(N=21)	(N=873)	(N=335)
Belted	N	587	226	248	106	94	124	21	20	7	589	208
	%	86.3	61.1[A]	66.1[A]	68.4[A]	71.8[A]	68.5[A]	77.8	64.5[A]	33.3[A]	67.5[A]	62.3[A]
Unbelted	N	93	144	127	49	37	57	6	11	14	284	126
	%	13.7	38.9[A]	33.9[A]	31.6[A]	28.2[A]	31.5[A]	22.2	35.5[A]	66.7[A]	32.5[A]	37.7[A]

[A] Significantly different ($p < .05$) seat belt use rate compared to drug- and alcohol-negative drivers.

*from the Q3 Report

All Road Users: Drug-Positive Categories by Sex

	Male							Female						
	Before (N=1,234)		During 1 (N=793)		During 2 (N=676)			Before (N=636)		During 1 (N=294)		During 2 (N=308)		
Drug Category	n	%	n	%	n	%		n	%	n	%	n	%	
Alcohol	305	24.7	231	29.1	220	32.5[A]		91	14.3	60	20.4	55	17.9	
Cannabinoids	285	23.1	262	33.0[A]	196	29.0[A]		113	17.8	74	25.2[A]	64	20.8	
Stimulants	141	11.4	80	10.1	68	10.1		48	7.5	34	11.6	36	11.7	
Sedatives	104	8.4	57	7.2	46	6.8		52	8.2	33	11.2	32	10.4	
Opioids	96	7.8	109	13.7[A]	93	13.8[A]		45	7.1	32	10.9	37	12.0[A]	
Antidepressants	17	1.4	3	0.4	4	0.6		20	3.1	2	0.7	3	1.0	
Over-the-Counter	22	1.8	9	1.1	6	0.9		21	3.3	9	3.1	8	2.6	
Other Drugs	17	1.4	16	2.0	24	3.6[A]		10	1.6	4	1.4	7	2.3	
At Least 1 Category	675	54.7	519	65.4[A]	436	64.5[A]		277	43.6	169	57.5[A]	159	51.6	
Multiple Categories	241	19.5	197	24.8[A]	177	26.2[A]		96	15.1	62	21.1	62	20.1	

A Significantly different than Before period, $p < .05$.

Before = 09/10/19 – 03/16/20 During 1 = 03/17/20 – 07/18/20 During 2 = 07/19/20 – 09/30/20

*from the Q3 Report

Summary of Findings

- Risky driving behaviors seen in Q2 continued in Q3 & Q4.
- 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
- 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

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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