

RUHS - PUBLIC HEALTH SYNDROMIC SURVEILLANCE REPORT

2021

HIGHLIGHTS

- November and December had increased [asthma](#) related visits to the emergency department after two months of stable weekly activity (avg 367). [Week 51](#) (12/19 - 12/25) triggered a red-alert with 479 asthma related visits to the ED - the biggest weekly spike of 2021 (Page 4).
- Overall [firearm related injuries](#) remained consistent in December except for [firearm related assaults](#) in [Week 50](#) (12/12 - 12/18) and [firearm related self-harm](#) in [Week 51](#) (12/19 - 12/25) - both triggered red-alerts in December (Page 6).
- [Mechanical falls for seniors 65+](#) slightly declined in December after a major spike in November. [Weeks 45, 47 & 48](#) exceeded all previous red alerts for the entire calendar year (Page 7).
- Although [traffic related injuries](#) dropped in December, numbers were still elevated and comparable to spikes seen in June and October. With a weekly average of 313 traffic related injuries in 2021, [Week 51](#) (12/19 - 12/25), saw 361 traffic related injuries (Page 10).

BACKGROUND - This report leverages *near*-real time emergency department data from 15 of 17 Riverside County hospitals and medical centers. This report can be used as an enhancement to your current surveillance activities and can help improve situational awareness. Hospitals submit daily data batches to the CDC's BioSense Platform and is then made available to public health staff using the *Electronic System for the Early Notification of Community-based Epidemics* (ESSENCE). The following hospitals are currently submitting emergency department data to the BioSense Platform: Corona Regional Medical Center, Kaiser Permanente Riverside Medical Center, Kaiser Permanente Moreno Valley Hospital, Parkview Community Hospital, Riverside Community Hospital, RUHS - Medical Center, Inland Valley Medical Center, Menifee Valley Medical Center, Hemet Valley Medical Center, Rancho Springs Medical Center, Temecula Valley Medical Center, San Geronio Medical Center, Eisenhower Medical Center, Desert Valley Hospital and JFK Memorial Hospital. Loma Linda Murrieta and Palo Verde Hospitals do not currently submit data.

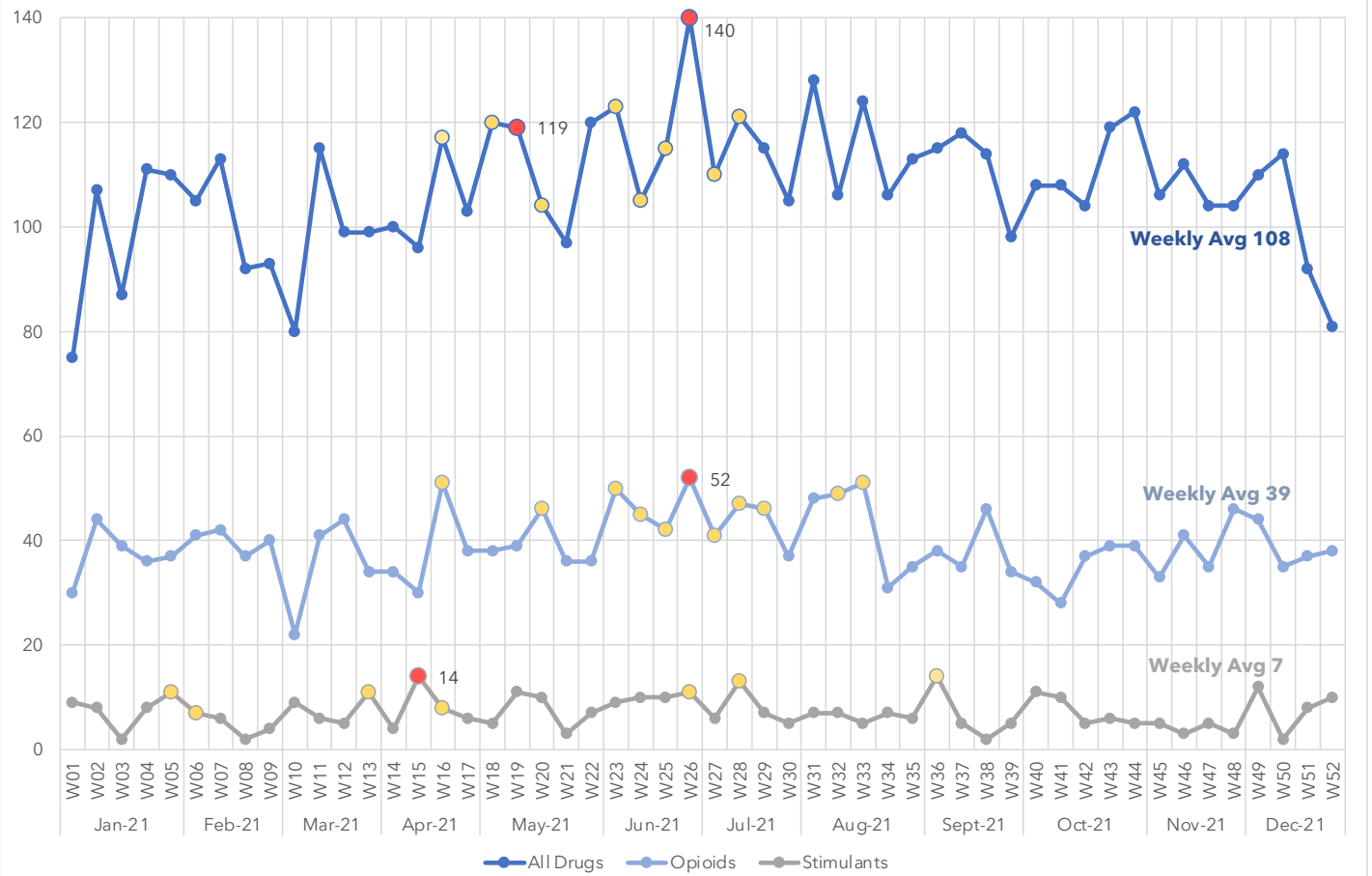
SYNDROMES & TRIGGER-ALERTS - Eight syndromes, or conditions, are actively surveilled in Riverside County and will be highlighted in this report: Drug Overdoses, Air Quality Related Illness, Alcohol Intoxications & Poisonings, Firearm Related Injuries, Mechanical Falls for Seniors 65+, Mental Health Related Visits to the ED, Suicidal Ideations & Attempts and Traffic Related Injuries. Tables at the top of each page will display a monthly count by syndrome, and sub-syndrome where applicable, and each monthly count as a percentage of overall emergency department volume. A breakdown by sex and age group for 2021 can also be accessed at the end of this report.

Trigger-alerts are generated using a combination of exponentially weighted moving averages and *p*-values. A weekly spike is considered significant when its *p*-value dips under 0.05 ([yellow warning](#)). Spikes with *p*-values under 0.01 ([red alerts](#)) are considered very significant and should be investigated. Rick Lopez, Syndromic Surveillance Coordinator for RUHS - Public Health, can be contacted for further information at (951) 358-5036 or emailed at: rlopez@ruhealth.org.

Drug Overdoses by Month

Month	All Drugs	% Tot ED Visits	Opioids	% Tot ED Visits	Stimulants	% Tot ED Visits
Jan-21	421	1.03%	162	0.40%	29	0.07%
Feb-21	415	1.11%	157	0.42%	24	0.06%
Mar-21	429	0.97%	161	0.36%	29	0.07%
Apr-21	447	0.92%	162	0.33%	37	0.08%
May-21	493	0.97%	176	0.35%	30	0.06%
Jun-21	506	0.98%	190	0.37%	44	0.08%
Jul-21	511	0.91%	195	0.35%	34	0.06%
Aug-21	506	0.86%	189	0.32%	29	0.05%
Sept-21	486	0.91%	166	0.31%	27	0.05%
Oct-21	486	0.92%	154	0.29%	35	0.07%
Nov-21	471	0.88%	163	0.31%	19	0.04%
Dec-21	456	0.86%	176	0.33%	33	0.06%

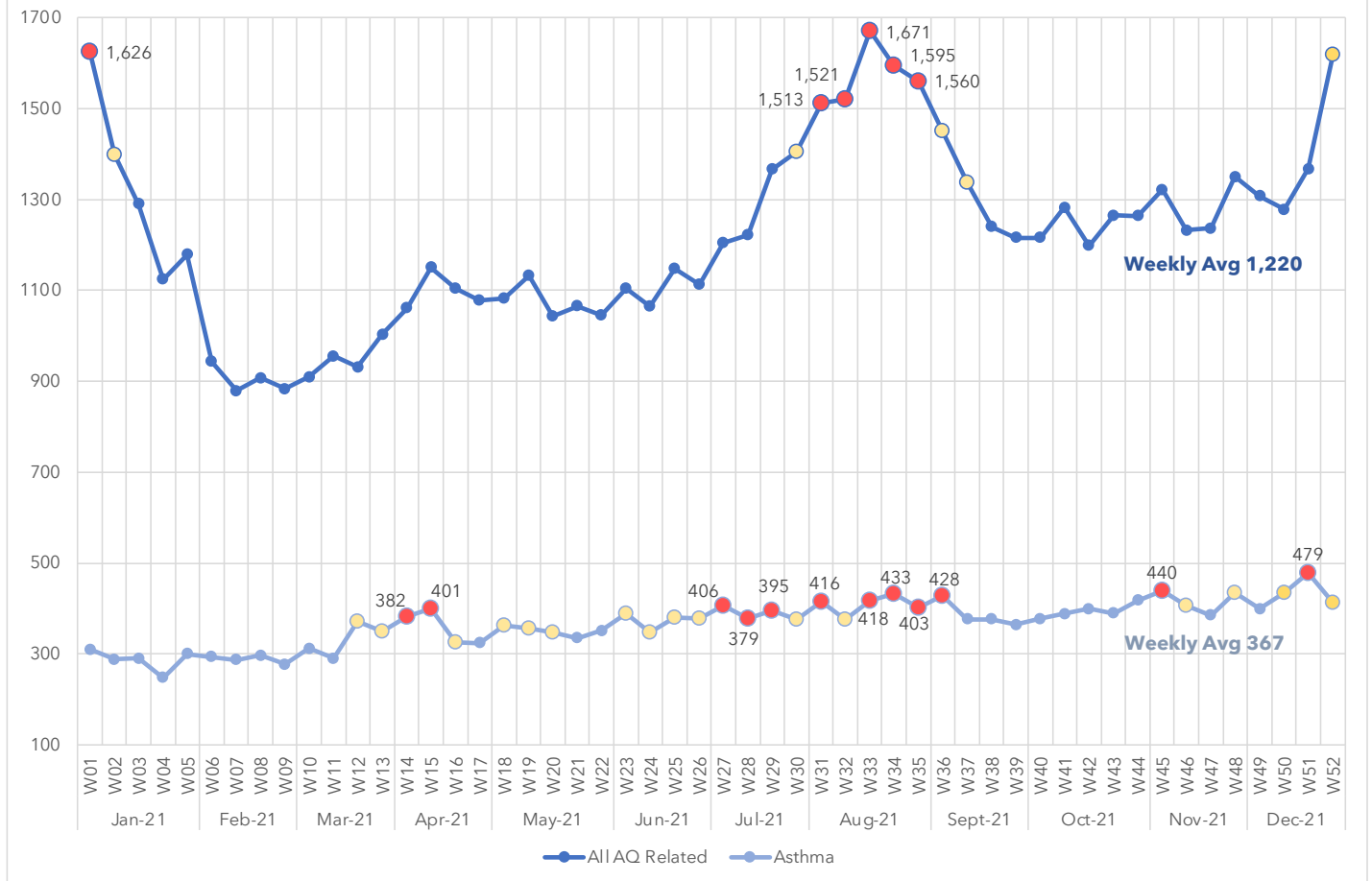
Drug Overdoses by Week / January - December 2021



Air Quality Related Illness by Month

Month	All AQ Related	% Tot ED Visits	Asthma	% Tot ED Visits
Jan-21	6,047	14.84%	1,273	3.12%
Feb-21	3,848	10.32%	1,172	3.14%
Mar-21	4,121	9.29%	1,402	3.16%
Apr-21	4,704	9.64%	1,538	3.15%
May-21	4,733	9.31%	1,541	3.03%
Jun-21	4,730	9.14%	1,599	3.09%
Jul-21	5,683	10.13%	1,714	3.06%
Aug-21	7,032	12.01%	1,837	3.14%
Sept-21	5,724	10.69%	1,650	3.08%
Oct-21	5,465	10.33%	1,707	3.23%
Nov-21	5,495	10.32%	1,797	3.37%
Dec-21	6,273	11.76%	2,040	3.83%

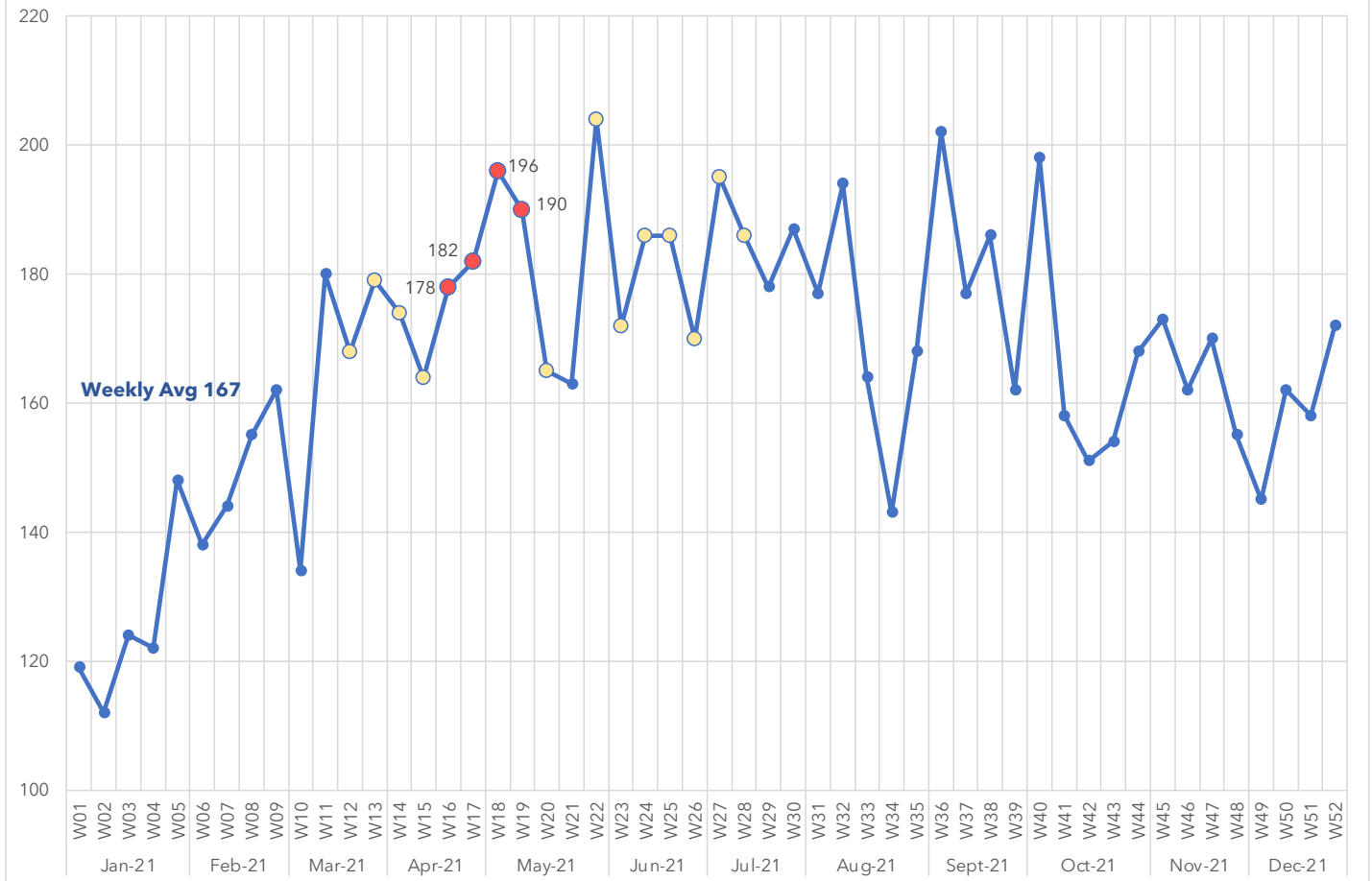
Air Quality Related Illness by Week / January - December 2021



Alcohol Intoxications & Poisonings by Month

Month	Intoxications & Poisonings	% Tot ED Visits
Jan-21	564	1.38%
Feb-21	587	1.57%
Mar-21	718	1.62%
Apr-21	733	1.50%
May-21	815	1.60%
Jun-21	777	1.50%
Jul-21	824	1.47%
Aug-21	745	1.27%
Sept-21	765	1.43%
Oct-21	757	1.43%
Nov-21	705	1.32%
Dec-21	689	1.29%

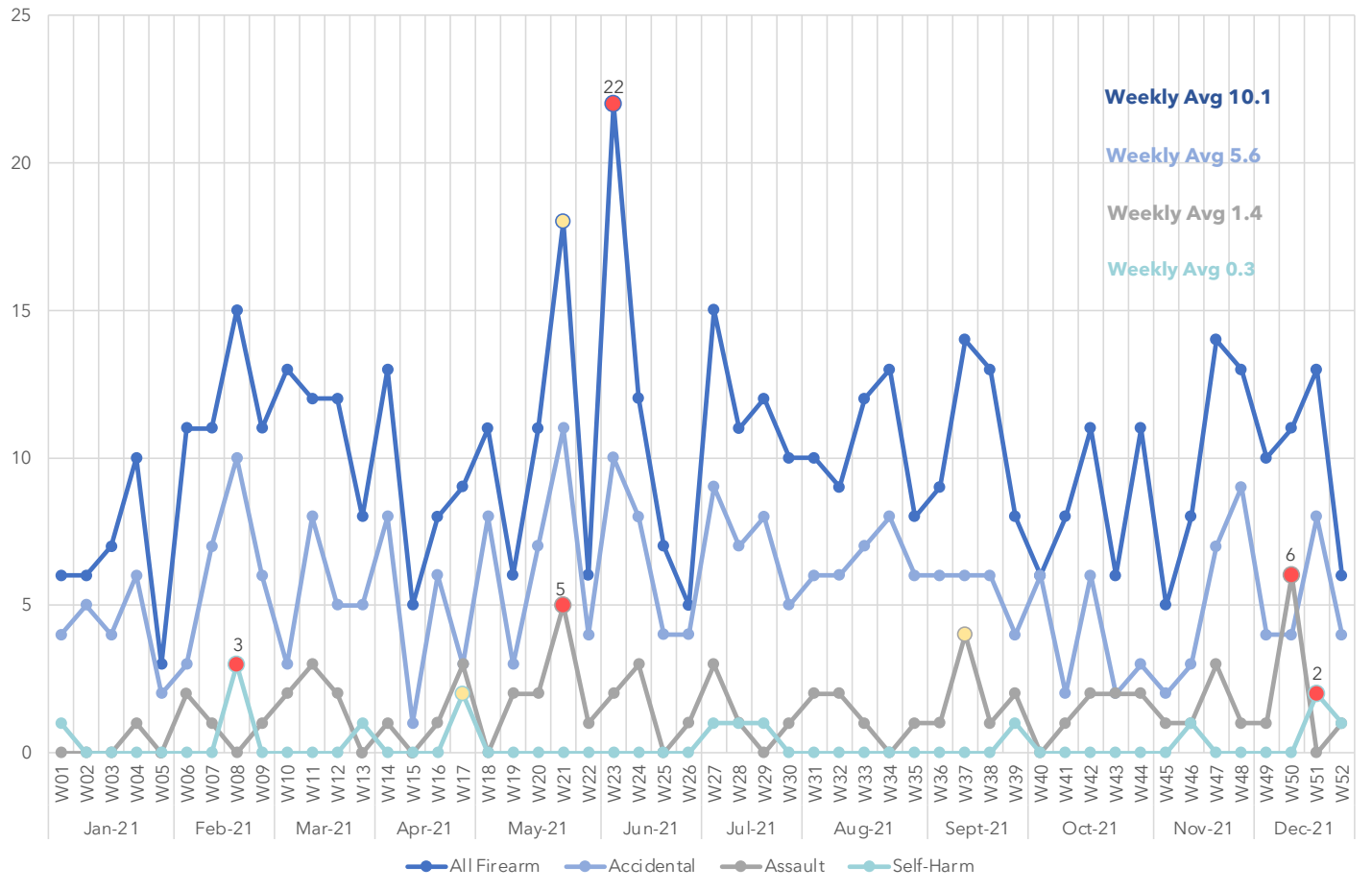
Alcohol Intoxications & Poisonings by Week / Jan - Dec 2021



Firearm Related Injuries by Month

Month	All Firearm Related	% Tot ED Visits	Accidental	% Tot ED Visits	Assault	% Tot ED Visits	Self-Harm	% Tot ED Visits
Jan-21	34	0.08%	22	0.05%	2	0.00%	1	0.00%
Feb-21	43	0.12%	24	0.06%	4	0.01%	3	0.01%
Mar-21	52	0.12%	24	0.05%	7	0.02%	1	0.00%
Apr-21	33	0.07%	19	0.04%	4	0.01%	1	0.00%
May-21	49	0.10%	29	0.06%	10	0.02%	1	0.00%
Jun-21	50	0.10%	28	0.05%	7	0.01%	0	0.00%
Jul-21	50	0.09%	31	0.06%	5	0.01%	3	0.01%
Aug-21	45	0.08%	28	0.05%	5	0.01%	0	0.00%
Sept-21	47	0.09%	25	0.05%	8	0.01%	0	0.00%
Oct-21	36	0.07%	18	0.03%	6	0.01%	1	0.00%
Nov-21	43	0.08%	19	0.04%	7	0.01%	1	0.00%
Dec-21	46	0.09%	25	0.05%	9	0.02%	4	0.01%

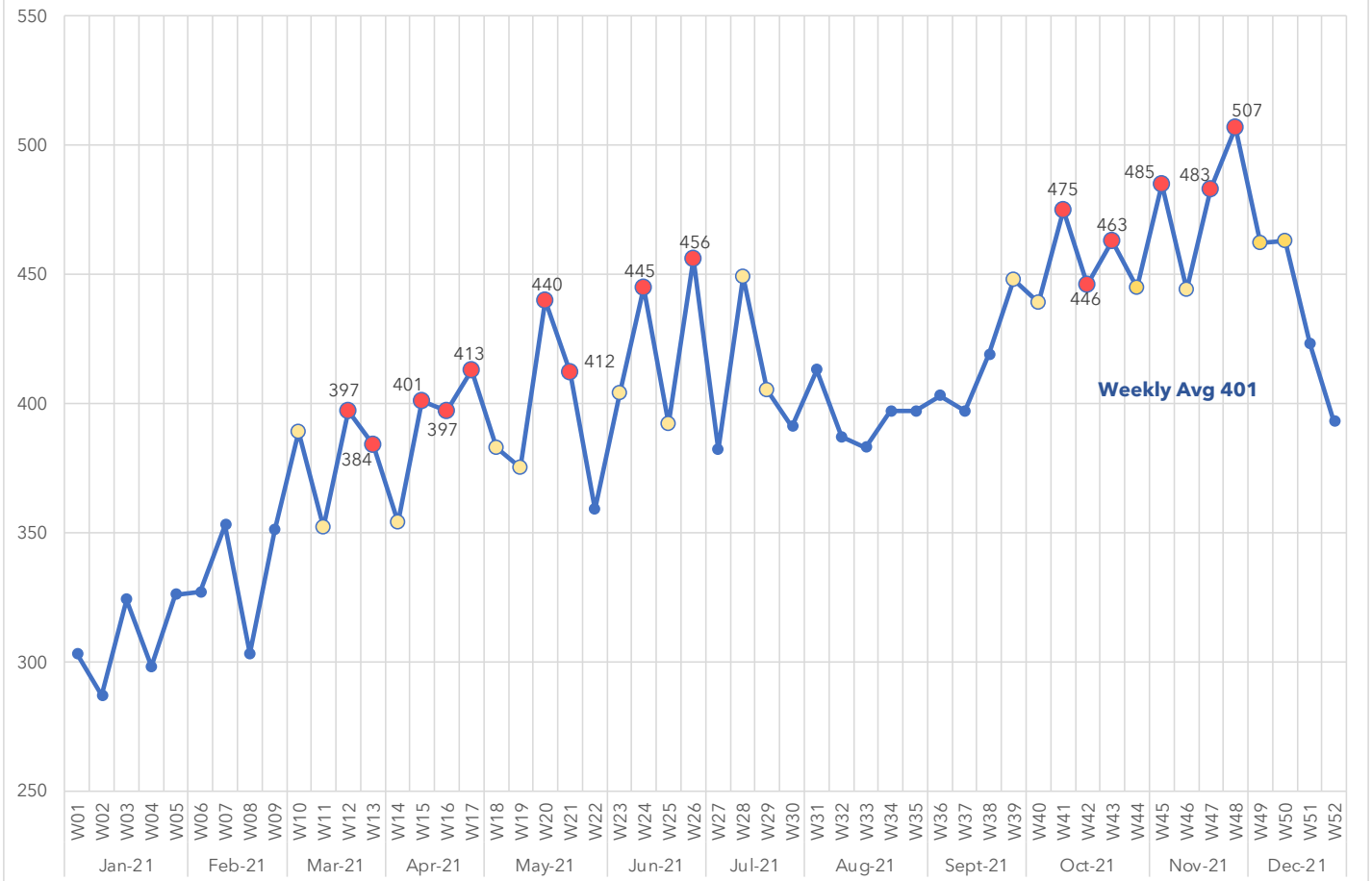
Firearm Related Injuries by Week / January - December 2021



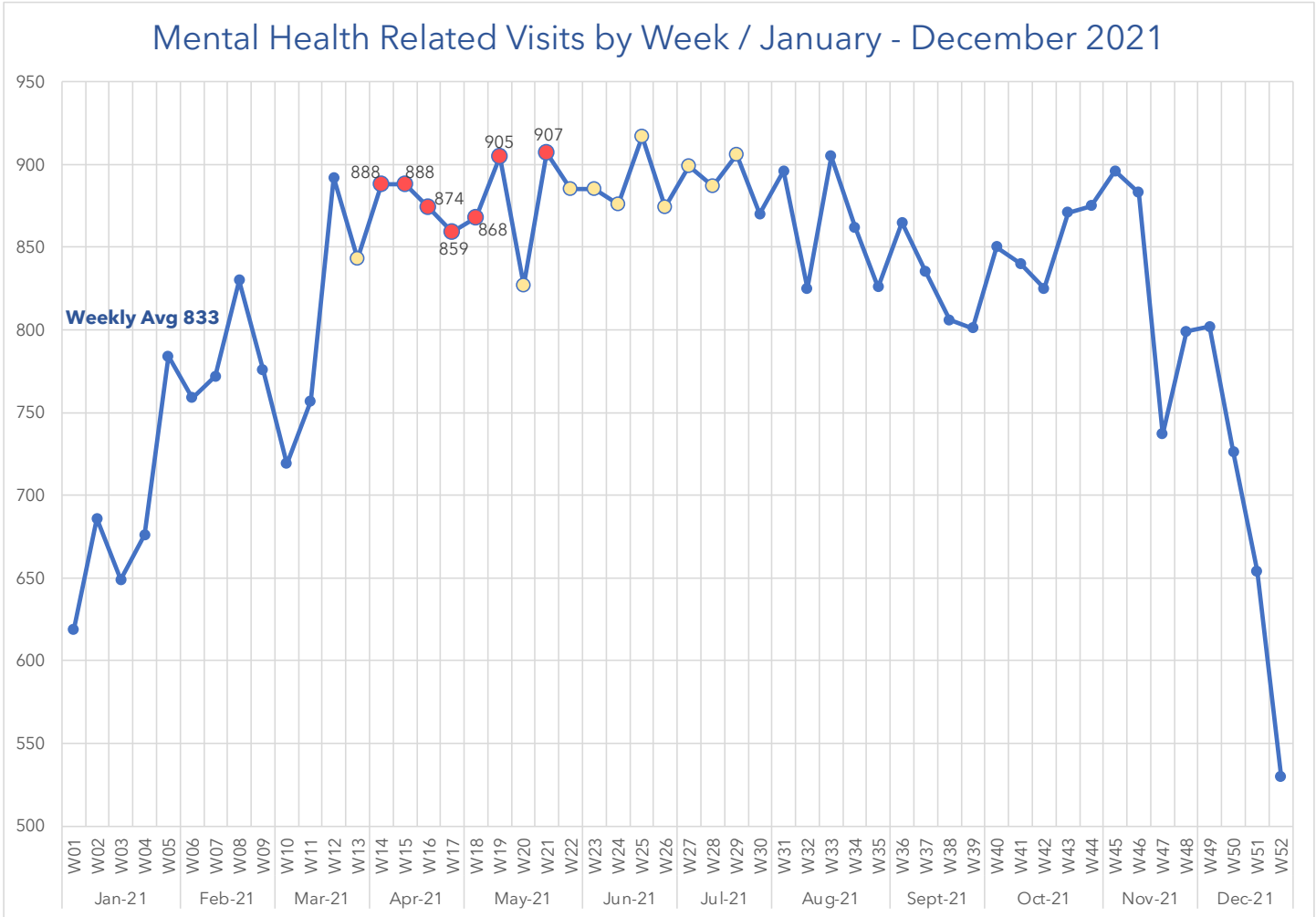
Mechanical Falls by Month (Seniors 65+)

Month	Mechanical Falls	% Tot ED Visits
Jan-21	1,349	3.31%
Feb-21	1,334	3.58%
Mar-21	1,647	3.71%
Apr-21	1,679	3.44%
May-21	1,758	3.46%
Jun-21	1,764	3.41%
Jul-21	1,829	3.26%
Aug-21	1,739	2.97%
Sept-21	1,781	3.33%
Oct-21	2,004	3.79%
Nov-21	2,024	3.80%
Dec-21	2,003	3.76%

Mechanical Falls (Seniors 65+) by Week / Jan - Dec 2021



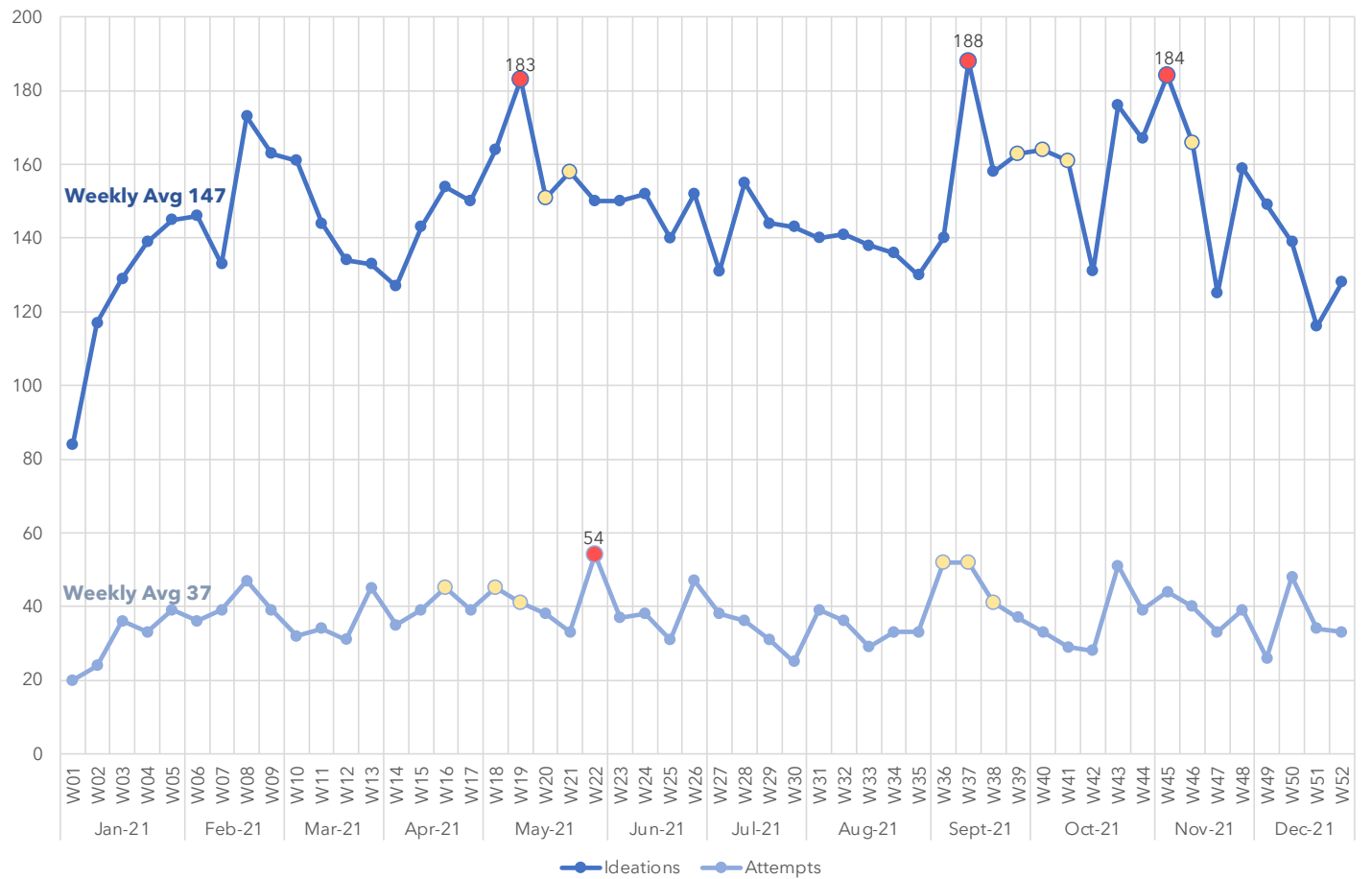
Mental Health Related Visits by Month		
Month	Mental Health Related	% Tot ED Visits
Jan-21	2,909	7.14%
Feb-21	3,135	8.41%
Mar-21	3,533	7.96%
Apr-21	3,746	7.68%
May-21	3,853	7.58%
Jun-21	3,853	7.44%
Jul-21	3,922	6.99%
Aug-21	3,844	6.57%
Sept-21	3,543	6.62%
Oct-21	3,733	7.05%
Nov-21	3,638	6.83%
Dec-21	3,226	6.05%



Suicidal Ideations & Attempts by Month

Month	Ideations	% Tot ED Visits	Attempts	% Tot ED Visits
Jan-21	508	1.25%	126	0.31%
Feb-21	593	1.59%	160	0.43%
Mar-21	659	1.49%	166	0.37%
Apr-21	615	1.26%	162	0.33%
May-21	722	1.42%	180	0.35%
Jun-21	639	1.23%	174	0.34%
Jul-21	633	1.13%	150	0.27%
Aug-21	606	1.03%	149	0.25%
Sept-21	683	1.28%	192	0.36%
Oct-21	701	1.32%	155	0.29%
Nov-21	689	1.29%	171	0.32%
Dec-21	595	1.12%	161	0.30%

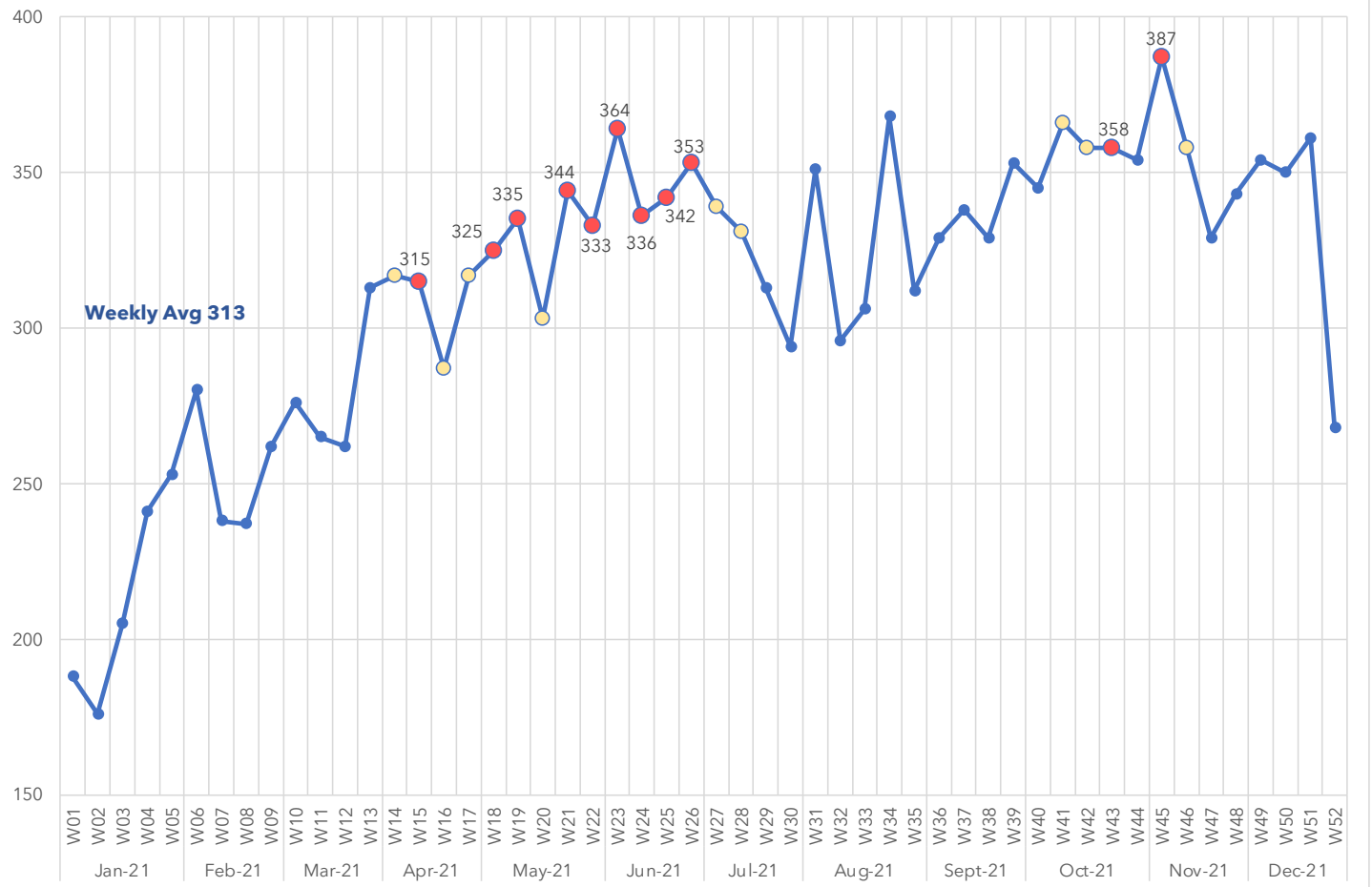
Suicidal Ideations & Attempts by Week / Jan - Dec 2021



Traffic Related Injuries by Month

Month	Traffic Related Injuries	% Tot ED Visits
Jan-21	901	2.21%
Feb-21	1,000	2.68%
Mar-21	1,192	2.69%
Apr-21	1,321	2.71%
May-21	1,468	2.89%
Jun-21	1,476	2.85%
Jul-21	1,432	2.55%
Aug-21	1,455	2.48%
Sept-21	1,428	2.67%
Oct-21	1,580	2.99%
Nov-21	1,516	2.85%
Dec-21	1,509	2.83%

Traffic Related Injuries by Week / January - December 2021



Syndrome by Sex & Age Group Year-End 2021

Total Emergency Department Visits = 601,534

Syndrome by Sex & Age Group	Male						Female						Total	% of Total ED Visits
	0-4	5-17	18-44	45-64	65+	Unk	0-4	5-17	18-44	45-64	65+	Unk		
All Drug Overdoses	109	171	1,986	579	284	10	111	402	1,058	524	392	1	5,627	0.94%
<i>Opioids (incl Heroin & Fentanyl)</i>	6	39	977	259	98	5	2	26	309	195	134	1	2,051	0.34%
<i>Stimulants (incl Cocaine & Amphetamines)</i>	3	5	204	55	2	1	3	4	65	27	1	0	370	0.06%
Air Quality Related Respiratory Illness	1,844	2,974	9,198	7,895	6,252	1	971	2,252	14,212	10,008	8,248	0	63,855	10.62%
<i>Asthma</i>	665	1,948	3,232	1,301	409	0	249	1,197	6,233	2,846	1,190	0	19,270	3.20%
Alcohol Intoxication & Poisoning	15	100	3,214	1,786	557	12	19	102	1,650	923	301	0	8,679	1.44%
Firearm Injuries	0	37	329	53	33	1	2	4	55	9	5	0	528	0.09%
<i>Accidental</i>	0	27	191	31	9	1	1	4	27	1	0	0	292	0.05%
<i>Assault</i>	0	2	49	4	1	0	0	2	14	1	1	0	74	0.01%
<i>Self-Harm</i>	0	0	5	5	3	0	1	0	1	1	0	0	16	0.00%
Mechanical Falls (Seniors 65+)	0	0	0	0	7,732	0	0	0	0	0	13,179	0	20,911	3.48%
Mental Health Related Visits to ED	13	1,376	11,146	4,430	1,469	0	18	2,418	12,213	6,313	3,538	1	42,935	7.14%
Suicidal Ideations	1	457	2,272	789	211	0	2	1,359	1,827	541	184	0	7,643	1.27%
<i>Suicide Attempts</i>	0	113	444	107	38	0	1	558	527	100	58	0	1,946	0.32%
Traffic Related Injuries	208	853	5,003	1,749	601	5	181	784	4,653	1,576	665	0	16,278	2.71%

Source: Electronic System for the Early Notification of Community-based Epidemics (ESSENCE)

Compiled: Rick Lopez, Epidemiology & Program Evaluation, RUHS-Public Health

Date: February 1, 2022 (Final)