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Title

The Impact of COVID-19 on Violence Related Encounters in the Emergency Department

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Introduction

- The COVID-19 pandemic has caused Americans to adjust to a new normal of quarantines, remote learning, and working from home. With nearly 45 million cases and 719,000 deaths since January 2020, the direct effects of the virus are more commonly known (1).
- Previous research has showed a positive correlation between societal and economic stressors and intimate partner violence (2). Related research has also found that rates of domestic violence increased significantly after environmental disasters (3).
- Recent articles have shown a significant increase in National Domestic Violence Hotline calls, as well as increases in self-reported intimate partner violence on surveys during the COVID-19 pandemic (4-6).
- Many have hypothesized that the societal and economic pressures of the COVID-19 pandemic would result in secondary effects that are less researched such as crime, interpersonal violence, and domestic violence.
- This study aims to investigate the incidence of violent injury encounters at the Community Regional Medical Center (CRMC) emergency department.
- We hypothesize there has been an increase in the rate of violent injury encounters in the emergency department during the pandemic in comparison to prior years.

Methods

- We performed a retrospective chart review of violent emergency department encounters at Community Regional Medical Center (CRMC) in Fresno, CA from 2018-2021.
- We utilized the SlicerDicer™ feature within Epic to pull aggregate data on encounters by ICD codes that we considered violent encounters.
- These ICD codes included: gunshot wound, stab wound, alleged assault, sexual assault, and domestic violence.
- Aggregate data was exported into a chart (Figure 1) that compared data by year. Changes in the total number of encounters, encounters by sex, and changes in disposition were all reviewed.



The Impact of COVID-19 on Violence Related Encounters in the Emergency Department

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Results

	2018	2019	2020	2021
Total Violent ED Encounters	2,385	2,431	2,547	2,462
Total ED Encounters	183,910	188,853	164,796	164,177
% of total encounters	1.30%	1.29%	1.55%	1.50%
Sex				
Male	1659	1659	1771	1669
Female	725	771	776	793
% Male	70%	68%	70%	68%
ED Dispo				
Discharge	1713	1719	1728	1518
Admit	350	363	435	427
Eloped	150	161	110	137
Observation	44	72	124	100
AMA	37	35	42	48
Deceased	17	22	48	37
DC to Incarceration			1	115
LWBS at Triage	31	30	12	24
Transferred to another facility	18	9	22	23
Psych transfer	9	7	9	10
None of the above	13		16	23
% Deceased	0.71%	0.90%	1.88%	1.50%
% Admitted	17.27%	18.26%	22.81%	22.34%
% D/c or left	80.96%	80.01%	74.32%	74.82%
Age at Visit				
< 21	359	417	344	355
21 - 42 yrs old	1297	1332	1438	1408
42 - 64 yrs old	647	596	668	597
64 - 86 yrs old	84	84	90	97
> 86	4	2	7	5

Table 1: Aggregate data exported from SlicerDicer

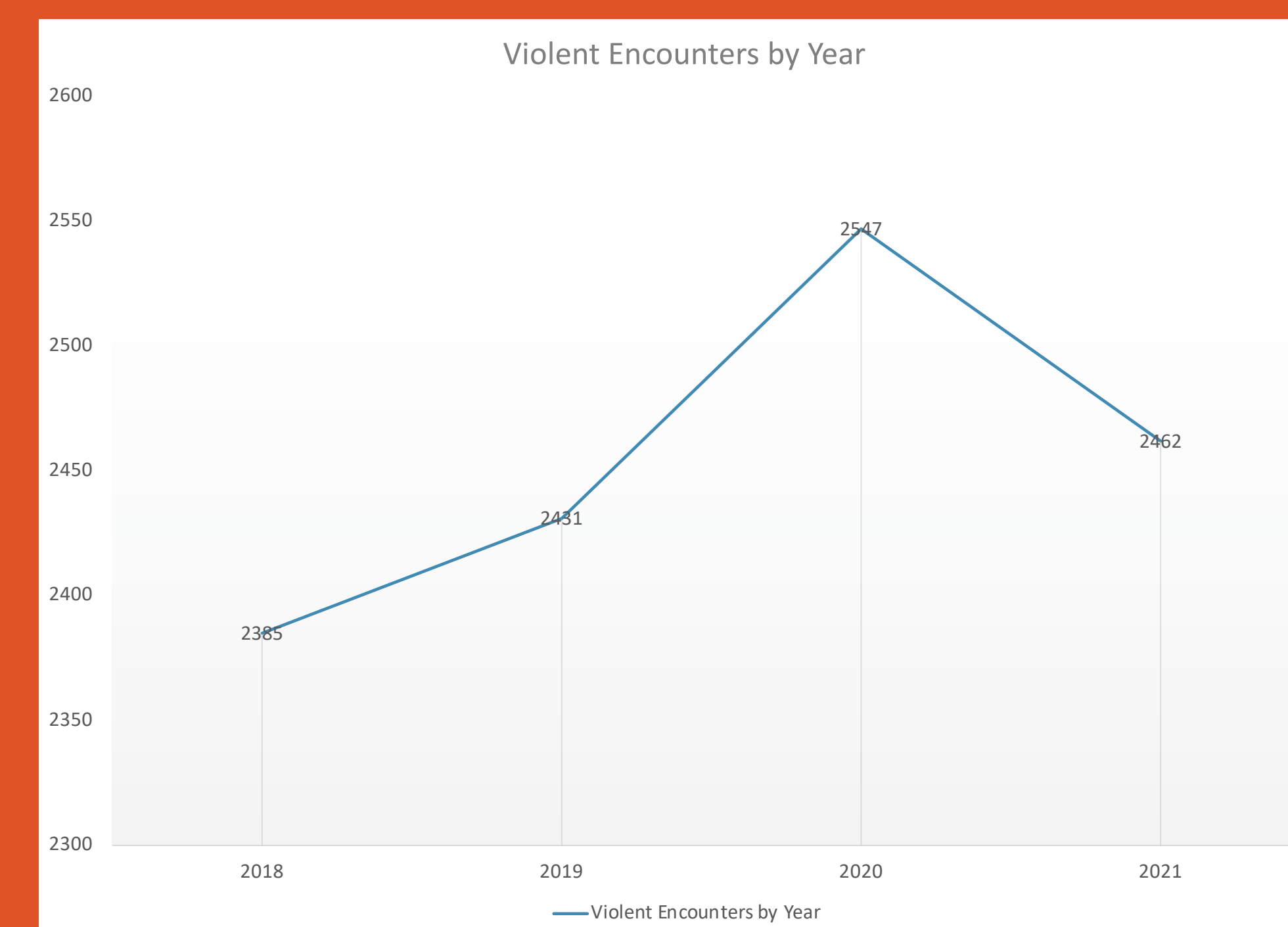


Figure 1 (above): Violent Encounters by Year

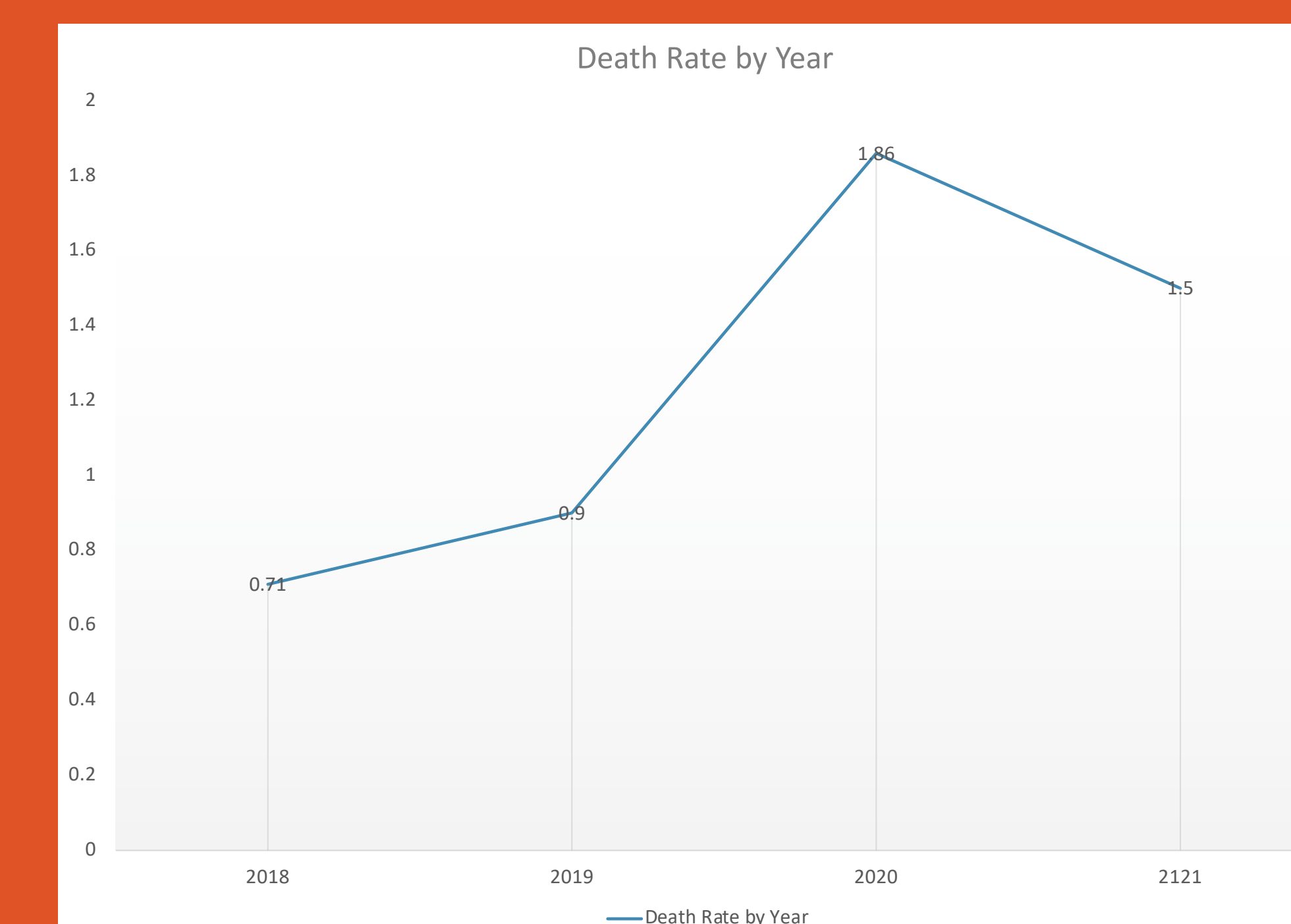


Figure 2 (above): Death Rate by Year

Conclusion

- Although COVID-19 reached the US in 2019, containment measures and other societal stressors such as quarantines didn't begin until 2020.
- Violent encounters in our emergency department increased by a total of 116 in 2020 over 2019 (Figure 1).
- Interestingly, the percentage of these encounters that resulted in death increased from 0.90% in 2019 to 1.88% in 2020 (Figure 2).
- The percentage of these encounters requiring hospital admission also increased from 18.26% in 2019 to 22.81% in 2020.
- Whether the severity of these encounters increased, or if the toll that COVID-19 placed on healthcare systems plays a role is unknown and should be further explored.
- Study limitations include being a single-center study and restricted to only aggregate data.
- Next steps include further data analysis to assess for statistical significance and correlation.

