

## INTRODUCTION

In 2017, 1.5 million Emergency Department (ED) visits were related to suicide attempt (SA) or ideation, of which **65% resulted in a hospital admission or transfer to another facility**. This is in stark contrast to the 81% of all other ED visits which resulted in discharges without admission or referral, and notably **less burden on the healthcare system**.<sup>1</sup> Despite the extensive literature about the presentation of SA in the ED, **little is known about the characteristics that predict revisits** for this issue.<sup>2,3</sup>

## OBJECTIVES

- To **describe the demographic and social profile** of patients who present for suicide attempts and intentional self-harm multiple times at a community hospital.
- To assess whether **certain groups are at increased risk** of returning to the ED for SA and intentional self-harm by assessing differences in revisits.

## HYPOTHESES

- The **demographic patterns** of patients presenting for subsequent suicide attempt and/or intentional self-harm visits will likely show **more revisits among those of a lower socioeconomic status** (captured through payer status or income level).<sup>4,5</sup>
- There will be a trend between psychiatric diagnoses and increased visits to the ED for SA and Intentional self-harm.<sup>6</sup>

## METHODS

- This **single-center retrospective study** identified patients who revisited the ED between 2019 and 2021 after an initial visit for either a suicide attempt (SA) or intentional self-harm. Event defined as SA or self-harm episode.
- Intentional self-harm captured as it is a SA risk factor.
- Variables gathered from medical records include social demographics, frequency of suicide-related ED use, and chief complaints for all visits.
- Income based on home zip code median income.
- Mann-Whitney U Test, Kruskal-Wallis Test, Chi-square, Spearman Correlation, and Pearson correlation coefficient analysis were performed.

## RESULTS

**Table 1. Basic demographics**

Age, years	N	138
Mean (SD)	34.47 (15.96)	
Median	31.5	
Range (max-min)	77 (81-4)	
Sex, n (%)		
Female	83 (60.1)	
Male	55 (39.9)	
Race, n (%)		
White	86 (62.3)	
Other	38 (27.5)	
Black or African American	11 (8.0)	
Unspecified	3 (2.2)	
Ethnicity, n (%)		
Not Hispanic or Latino	97 (70.3)	
Hispanic or Latino	40 (29.0)	
Unspecified	1 (0.72)	
Payer, n (%)		
Medicaid	77 (55.8)	
Private Insurance	30 (21.7)	
Medicare	25 (18.1)	
Self-Pay	4 (2.9)	
Other Category	2 (1.5)	
Income Level, n (%)		
Middle-income	60 (43.5)	
Moderate-income	31 (22.5)	
High-income	28 (20.3)	
Low-income	19 (13.8)	
Age Group, n (%)		
0-17	25 (18.1)	
18-34	37 (26.8)	
35-54	56 (40.6)	
55+	20 (14.5)	
Psychiatric Diagnosis, n (%)		
Depressive Disorder	77 (55.8)	
Anxiety Disorder	51 (37.0)	
Bipolar or Related Disorder	40 (29.0)	
ADHD	22 (15.9)	
Substance-Related Disorder	22 (15.9)	

**Table 2. Admission for events**

Admission, n (% of events)	117 (33.8)
Medical	87 (25.1)
Psychiatric	30 (8.7)

### Event Data:

**Pre-2019 Events:** 376 (71.3% SA)

Mean: 2.72/person

**2019-2021 Events:** 346 (77.5% SA)

Mean 2.51/person

- Pearson Correlation** 0.188,  $p=0.028$
- Chi-Square** 239.81,  $p=2.41 \times 10^{-15}$

### Common Mechanism:

- SA: 53.2% events poison (78.8% Oral Meds)
- Self-harm: 16.5% events cutting

### Substance Use:

- 122 events** associated with substance use
- Current Use: smoking (41%), alcohol (25%), opioid and non-opioid drug use (27%)

### Psychiatric Comorbidities:

- 0 diagnosis: 1.80 revisits
- 1 diagnosis: 2.10 revisits
- 2-3 diagnoses: 2.26 revisits
- 4+ diagnoses: 2.77 revisits

### Stressors Prior to Events:

- Acute Stressors** (% events): **Social** (48.6%), Psychiatric (26.9%), Substance-Related (12.1%)
- Chronic Stressors** (% events): **Psychiatric** (76.0%), Social (23.4%), Substance-Related (18.2%)

### Outpatient Care:

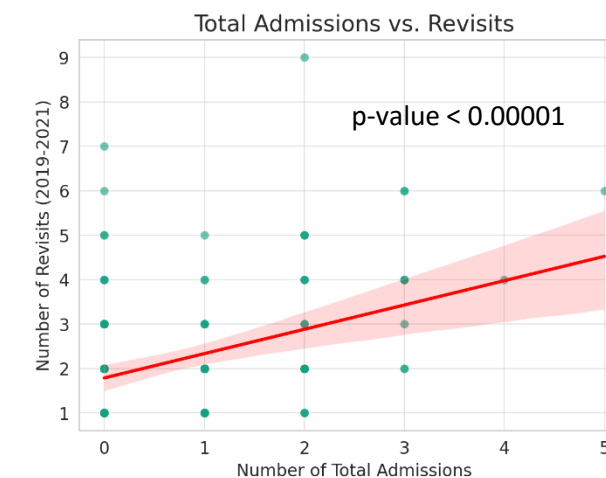
**48 patients (34.8%)** had PCP, Psychiatrist, and/or Therapist visits pre-2019

- 40 patients** had PCP visits which were associated with a **decreased average number of events** (2.15 vs 2.64;  $p=0.088$ )

### Post-discharge Care:

**20.2% of discharges had scheduled provider visits** after; the average was 9.22 days post-discharge.

- 50 patients recorded to go to follow-up visit



## DISCUSSION

### Findings

- There was a significant correlation between pre-2019 events and 2019-2021 events.
- 85.5% of people had a psychiatric diagnosis: Depression (55%), Anxiety (36.2%), and Bipolar Disorder (29%)
- There was a near significant relationship between Psychiatric Comorbidities and revisits to the ED for Suicide Attempts and Intentional Self-Harm. ( $p=0.082$ )
- There was a significant relationship between admissions and the number of revisits, suggesting that the more people revisit for an event, the more likely they will be admitted.
- 77% of visits (265 visits) had a Columbia-Suicide Severity Rating Scale score, most of which scored 5 out of 5 (75%).
- There was a minority of patients who had follow-up visits within this healthcare system post-discharge.
- PCP visits may be protective regarding SA visits as seen by the trend toward significance.

### Limitations

- Low number of patients limits the power of the study.
- Subjectivity and recall error for past events/stressors.
- Events outside this healthcare system not captured.
- Patient income extrapolated from home median income.

## CONCLUSION

We believe our preliminary findings reflect the current understanding of the demographic risk factors that contribute to increased suicide-related revisits to the hospital. To reduce revisit rates, our results suggest that **more interventions should be implemented and focused on patients with multiple psychiatric diagnoses, social stressors, and multiple admissions** when initially or subsequently presenting to the ED with suicide-related complaints; along with encouraging follow-up with their PCP.

## REFERENCES

- Statistical Brief #263. Healthcare Cost and Utilization Project (HCUP). (2020, September 8, 2020). Retrieved from [www.hcup-us.ahrq.gov/reports/statbriefs/sb263-Suicide-ED-Visits-2008-2017.jsp](http://www.hcup-us.ahrq.gov/reports/statbriefs/sb263-Suicide-ED-Visits-2008-2017.jsp)
- Cepeda, M. S., Schuemie, M., Kern, D. M., Reips, J., & Canuso, C. (2020). Frequency of rehospitalization after hospitalization for suicidal ideation or suicidal behavior in patients with depression. *Psychiatry Res*, 285, 112810. doi:10.1016/j.psychres.2020.112810
- Christiansen, E., & Jensen, B. F. (2007). Risk of repetition of suicide attempt, suicide or all deaths after an episode of attempted suicide: a register-based survival analysis. *Aust N Z J Psychiatry*, 41(3), 257-265. doi:10.1080/00048670601172749
- Madigan, A., & Daly, M. (2023). Socioeconomic status and depressive symptoms and suicidality: The role of subjective social status. *Journal of Affective Disorders*, 326, 36-43. <https://doi.org/10.1016/j.jad.2023.01.078>
- O'Connell, K. L., Jacobson, S. V., Ton, A. T., & Law, K. C. (2022). Association between race and socioeconomic factors and suicide-related 911 call rate. *Social Science & Medicine*, 306, 115106. <https://doi.org/10.1016/j.socscimed.2022.115106>
- Tsirigotis, K., Gruszczynski, W., Tsirigotis, M. Gender differentiation in methods of suicide attempts. *Med Sci Monit*. 2011 Aug;17(8):PH65-70. doi: 10.12659/msm.881887. PMID: 21804473; PMCID: PMC3539603.