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## Introduction

- Suicide is one of the leading causes of death worldwide, (Centiti *et al.* 2020).
- Presentations to the emergency department (ED) with suicidal ideation (SI) /deliberate self-harm (DSH), and admissions following same, are a major part of unscheduled adult mental health service activity.
- An Irish study based found a 21% fall in suicidal presentations to ED during the initial COVID-19 lockdown of March 2020 (McAndrew *et al.* 2020).

## Aims

- To examine the frequency of suicidal presentations to the ED and subsequent mental health unit admission rates over the first 12 months of the COVID pandemic.
- To examine the effect of the following key variables on mental health admission rate during the COVID pandemic ie 1) whether a patient presented with SI or DSH; 2) whether or not intoxicated at the time of presentation; 3) whether or not known to mental health service
- To compare suicidal presentations, mental health admission rates and factors associated with it, before and during the COVID pandemic.

## Methods

- Permission given for clinical audit by local audit committee, Acute Mental Health Unit, Cork University Hospital.
- Adults (18 or older) presenting with DSH or SI to Cork University Hospital ED. Anonymised data routinely collected for the National Clinical Programme.
- Count of: annual number of presentations with DSH or SI (2016-2020).
- Count of: number of presentations with DSH or SI; number admitted to the AMHU, number known to mental health services, number intoxicated on presentation for two 12 month time periods: March 2020-February 2021 (COVID); March 2019-February 2020 (pre-COVID).
- Chi square analysis was used to examine whether the COVID era was associated with a significant change in admission rate compared to the pre-COVID era.

## Results

1. Annual trends in suicidal presentations from 2016-2020 (n=3919) are shown for reference (Figure 1). Monthly presentations and admissions are shown in Figures 5. Compared to the pre-COVID year, there was an initial fall in presentations for the first two months (March/April) of the COVID era with a return to pre-COVID numbers monthly thereafter.
2. Numbers of presentations were similar in the pre-COVID (n=819) and COVID era (n=823), throughout all subgroups (Figure 2).
3. Number of admissions rose from 139 during the pre-Covid era to 177 during the COVID era. Admission rate rose from 17% to 22% overall (Chi square=3.68, p=.0551.) (Figures 3 & 4).
4. This increase in admission rate was accounted for entirely by SI (22% compared to 13% (pre-COVID) (Chi square=19.49, p<.0001) whereas admission following DSH did not change. Chi-Square=0.001, p=.9902. (Figure 3 & 4)
5. Admission rate was also higher during the COVID era among those in whom alcohol was not involved on presentation compared to the pre-COVID era (29% and 18%) Chi-Square=17.43, p<.0001. (Figures 3 & 4)

Table 1: Patient Characteristics

Socio-Demographic Information	Pre-COVID	COVID era
<b>Total</b>	819	823
<b>Gender</b>		
Female	403 (49%)	421 (51%)
Male	416 (51%)	402 (49%)
<b>Age</b>		
18-19	66 (8%)	69 (8%)
20-25	180 (22%)	212 (26%)
26-29	98 (12%)	98 (12%)
30-39	179 (22%)	161 (20%)
40-49	139 (17%)	129 (16%)
50-59	93 (11%)	81 (10%)
60-64	21 (3%)	39 (5%)
65 or older	43 (5%)	34 (4%)

Figure 1 Increase in SI and Annual Presentations 2016-2019, not 2020

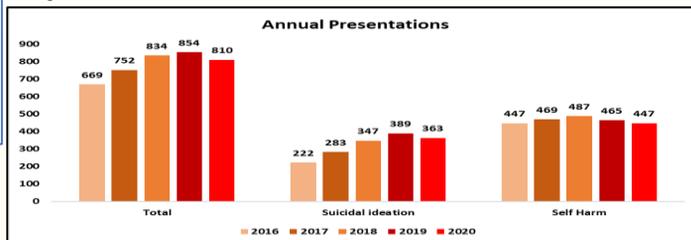


Figure 2 No difference in Presentations (incl. subgroups)

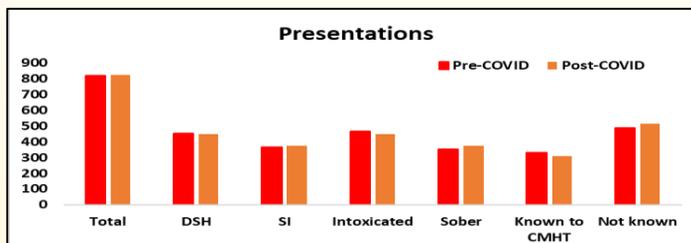


Figure 3 Rise in Admissions during COVID era (esp. SI, Sober)

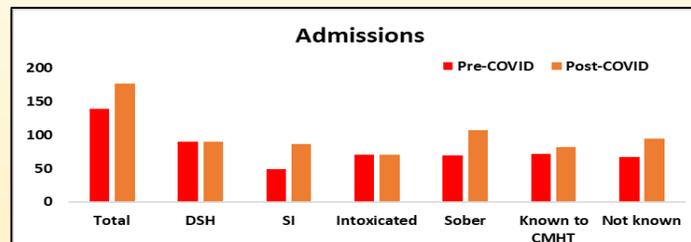


Figure 4 Admission Rate higher in COVID era (esp. SI, Sober)

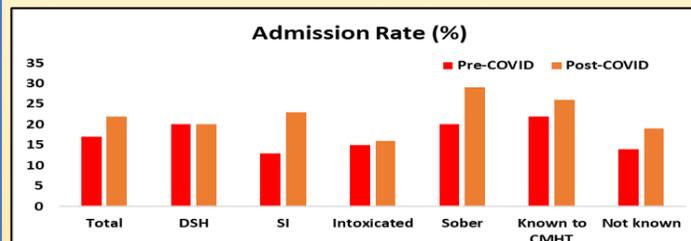
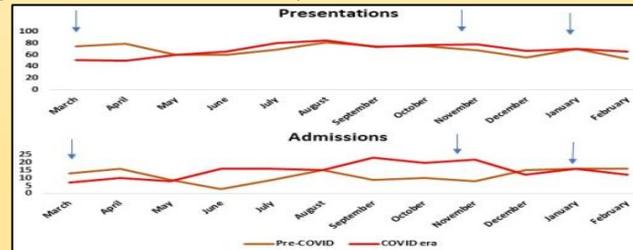


Figure 5 Presentations and Admissions by month



## Conclusion

- Admission rate following suicidal presentations to the ED has risen by 27% in the COVID era overall.
- No change in DSH presentations or admission rates
- No change in SI presentation numbers but increase in admission rate 13% to 23%
- Limitations of service provision in the community due to COVID era restrictions may explain these findings.
- This may be due to more severe presentations in terms of risk or increased psychiatric morbidity requiring admission.
- Admission rates were also particularly higher in those presenting sober (18%, to 29%) during the COVID era.

## References