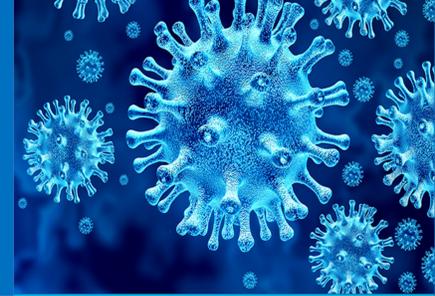


# COVID-19 and its Effect on Emergency Presentations to Hospital with Self-Harm in Ireland



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## Background

In December 2019, WHO reported a novel coronavirus, SARS-CoV-2. COVID-19 was declared a pandemic by the WHO on 11th March 2020. Coronavirus is a highly infectious disease with direct neuropsychiatric effects, along with the effects of the host immunologic response. However, there are also concerns regarding the secondary indirect effects on mental health, most notably in the quarantine and social distancing requirements. There were concerns that reduced face-to-face contact, closure of day hospitals, day centres, and treatment groups, along with hospital visiting restrictions may deter people from seeking help in a crisis.

In addition, it has been posited that increased alcohol consumption, domestic violence and economic sequelae of the Covid-19 related restrictions may contribute to a heightened risk of suicidal ideation and behaviours.

## Objective

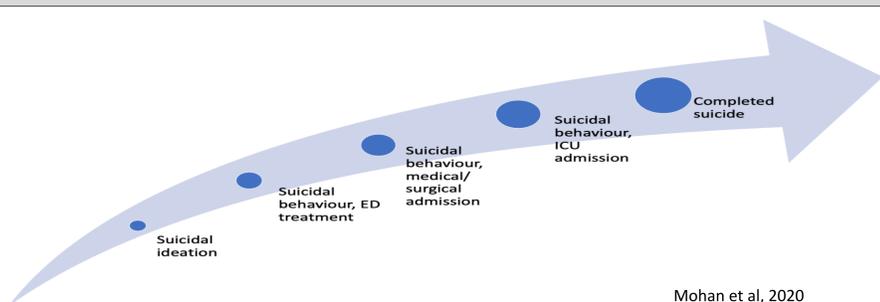
To assess the impact of COVID-19 and the associated social change on rates of self-harm at tertiary university hospital in Ireland by:

1. Comparing the levels of self-harm during the periods of the pandemic vs 2017, 2018 and 2019.
2. Examining the methods and severity of self-harm and suicidal behaviours, and the associated diagnoses and treatments.

## Methods

The liaison psychiatry team at UHG maintains an anonymised service database, which includes: patients referred from ED, ICU, medical and surgical wards, in addition to basic demographic and clinical information: age, gender, reason for referral, diagnosis, treatments, admission status. From this database, we extracted information on patients referred with self-harm or suicidal behaviours in the 3 months at height of pandemic: from March to May of 2020 and compared this data with presentations in same months in preceding 3 years (2017-2019).

Ethical approval was obtained from the Clinical Research Ethics Committee of the Saolta Hospital Group (no 2386).



- The range of presentations that people with self-harm may present with may be regarded as a spectrum of lethality - with suicidal ideation at one end and completed suicide at the other (Mohan et al).
- This suggests that patients who require ICU may be more similar to those who die by suicide, than those requiring brief review only.
- On this basis, we used source of referral as a surrogate marker for severity of self-harm or suicidal behaviour.
- We categorized those requiring ICU as the most severe; those requiring medical or surgical admission were moderately severe; and those who could be discharged home from the ED or equivalent were the least severe.

## Results

Self-harm presentations by month March-May over 4 years 2017-2020

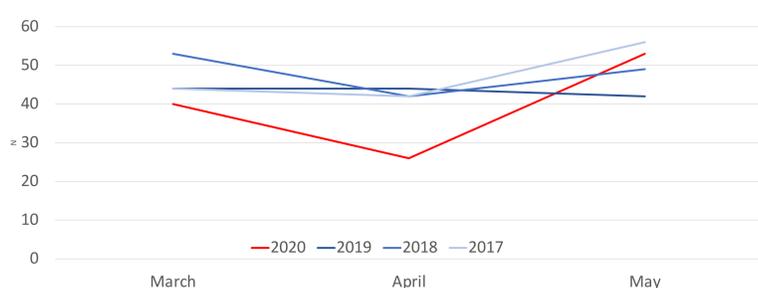


Figure 1

In 2020, the rate of presentation with self-harm dropped by 35% from March to April but rose by 104% from April to May (figure 1).

## Results

- When we examined the trends over a four-year period, there was a significantly higher lethality of attempt ( $p < 0.001$ ), and significant differences in diagnosis ( $p = 0.001$ ) in 2020 in comparison with the three previous years.
- The increased lethality of presentations remained significant after age and gender were controlled for ( $p = 0.037$ ).
- There were also significant differences in the underlying psychiatric diagnoses, notably with a significant increase in substance misuse disorders presenting during the 2020 study period.

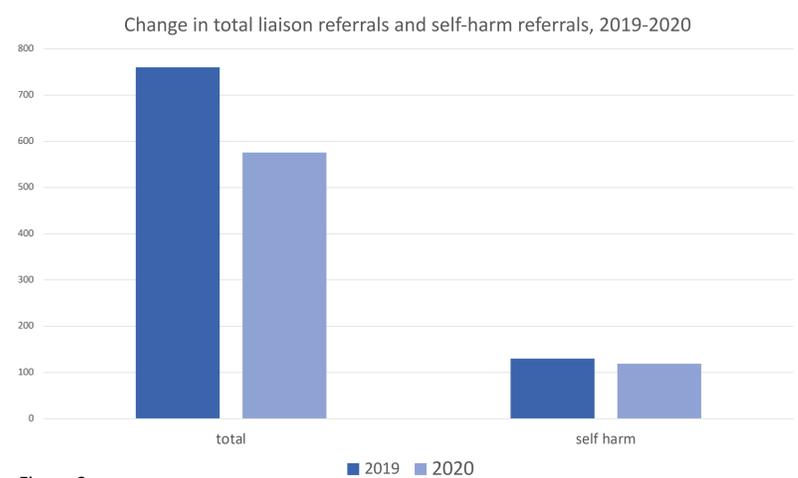


Figure 2

- In the months March to May 2020, there were 576 referrals to psychiatry compared with 760 in the same months in 2019: an overall reduction of 31.9%.
- In the months March -May 2020, there were 119 referrals with self-harm compared with 130 in the same months in 2019 (reduction of 8.5%): the decrease in presentations with self-harm was less than the decrease in attendances for other psychiatric indications.

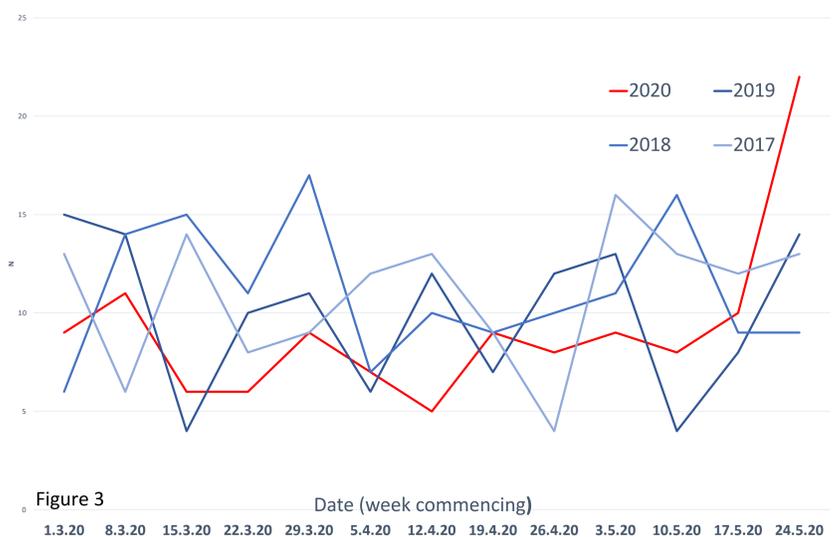


Figure 3

When examined by week, there was considerable degree of variability week to week but throughout the time of COVID-19, the rates remained constant (range 5-11/week) with a precipitous increase from mid-May (figure 3).

## Discussion

There was a small reduction in self-harm (8.5%) in March-May 2020 vs 2019. However, there was a significant increase in lethality of attempt ( $p < 0.001$ ). There were significant differences in diagnoses ( $p = 0.001$ ). The low levels of self-harm in April coincides with the peak of the first wave of the pandemic. It is possible that people who were at-risk or may have self-harmed may not have sought medical attention in the hospital setting, due to the severity of the pandemic in the country at that time. In May, the steep increase in self-harm coincides with the easing of the restrictions. As people become more relaxed, they may have been more willing to present, along with the effects of the aftermath of a national lockdown.

## Conclusion

COVID-19 showed a reduction in self-harm presentations initially, followed by sharp increase in May 2020. Should a period of economic instability follow as is predicted, this may further impact on the mental health of the population. There is a need for further research into longer-term effect of the COVID-19 restrictions and a need for mitigation measures to safeguard vulnerable populations.