Self-harm, ODs

COVID-19 linked to decreases in ED or hospital encounters for self-harm or overdose

By Alison Knopf

The initial 15 months of COVID-19 were associated with a decline in hospital care for overdose or self-harm in adolescents and young adults, according to a study conducted in Ontario.

Before the pandemic, the rate of self-harm or overdose was 51.0 per 10,000 person-years, compared to 39.7 per 10,000 person-years during the pandemic, the study found.

Based on a cohort of 1,690,733 adolescents and young adults in Ontario, Canada, the study focused on the risk of self-harm, overdose, and all-cause mortality among adolescents and young adults. Self-harm and deaths in this age group are related to drug poisonings and suicide, and there have been projections that there would be a greater likelihood of such events during the pandemic.

However, the study found that, in fact, self-harm and overdoses treated in the hospital or ED went down during the pandemic.

Self-harm and deaths for young people aged 14 to 24 years are often related to drug poisoning and suicide, with the risk particularly high among young males, rural residents, and those with persistently high “despair scores,” according to the authors of the study, published in the current issue of JAMA Network Open.

Because the COVID-19 pandemic and quarantine were associated with a high rate of suicidal thoughts, severe depression, and anxiety among students, some projected an increase in suicide and “deaths of despair” in young people. However, there is little data, especially for adolescents and young adults.

This study compared data from before the pandemic with similar data during the pandemic, and found that, in fact, these events decreased, rather than increased.

Study details

In Ontario, Canada, a universal health care system captures all emergency department (ED) visits, hospitalizations, and deaths. For this study, participants included all adolescents and young adults born in Ontario between 1990 and 2006, who were aged 14 to 24 years between March 1, 2018, and June 30, 2021.

The main outcomes and measures were ED encounters or hospitalizations for self-harm or overdose. Self-harm, overdose, or all-cause mortality was a secondary outcome.

Results

In this study, 1,690,733 adolescents and young adults were included in the final cohort. Median age at the start of follow-up was 17.7 years; at the end of follow-up it was 21.0 years. The cohort was evenly divided between male and female. More than one-third lived in the fifth lowest income neighborhoods, 10.4% were rural residents, and 1.6% had a history of self-harm or overdose at baseline.

Pre-pandemic rates of self-harm or overdose were 51.0 per 10,000 person-years; during the pandemic, the rates were 39.7 per 10,000 person-years.

The risk of self-harm or overdose requiring admission to the hospital was also lower during than before the pandemic.

The risk of the secondary outcome of self-harm, overdose, or death was also lower than before the pandemic. During the pandemic, self-harm was the most common component outcome (28.1 per 10,000 person-years), followed by overdose (15.9 per 10,000 person-years), and then death (3.9 per 10,000 person-years). Of the individual component outcomes, only the risk of death did not change from before to during the pandemic.

Absolute event rates were higher for females, low-income residents, and rural residents.

Implications

At least until the middle of 2021, COVID-19 did not lead to an increase in intentional injury among adolescents and young adults, contrary to expectations of many. Why would this be?

The authors admit that some fatal or nonfatal cases of self-harm or overdose may not have ended up in the ED or hospital during the pandemic — or before it. Ongoing surveillance might provide a different answer for various jurisdictions, the authors conclude. But they don’t have an answer to why the decrease.

Perhaps the chief limitation of the study — its inability to capture events that occurred without a hospital or ED encounter — is the explanation. Hospital admission itself — for anything (except for COVID-19) — was less frequent during the pandemic.

However, while the study lacked details about completed suicides occurring out-of-hospital, it did capture all-cause death, which was relatively uncommon. “Mortality did not change from before to during the pandemic, because most self-harm events among adolescents and young adults tend to be nonfatal, while the case-fatality rate from COVID-19 in this age group has been very low,” the researchers concluded. “The overall large number of cases recorded within a universal health care system enabled us to generate stable and precise risk estimates, including sociodemographic factors related to intentional injury or mortality.”

The chief conclusion of the study was this: Find out if the phenomenon of reduced overdoses and self-harm continued to go down during the pandemic, or if in fact the decrease is due to events occurring outside of a hospital setting.

This study was funded by a grant from the Ontario Academic Health Sciences Centre AFP Innovation Fund. This study was also supported by ICES, which is funded by an annual grant from the Ontario Ministry of Health (MOH) and the Ministry of Long-Term Care (MLTC). This study also received funding from the Canadian Institutes of Health Research (CIHR). Dr Austin is supported by a Mid-Career Investigator Award from the Heart and Stroke Foundation.

Ray JG, Austin PC, Afkaki K, et al. Comparison of self-harm or overdose among adolescents and young adults before vs during the COVID-19 pandemic in Ontario. JAMA Netw Open 2022; 5(1):e2143144. doi:10.1001/jamanetworkopen.2021.43144. Email: joel.ray@unityhealth.to.

New NAS definition released amid concerns that diagnosis can still be misused

By Alison Knopf

The federal Department of Health and Human Services (HHS) in February released a definition of neonatal abstinence syndrome/neonatal opioid withdrawal syndrome (NAS/NOWS).