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

By Alison Knop

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.

The researchers note that limitations include the small sample size, the lack of a placebo or treatment as usual control, the allowance of co-medications, the overall low response rates, the high dropout rates, and the restriction of the protocol to medication without using any other clinical intervention to improve outcomes.

Some authors disclosed conflicts of interest with associations with pharmaceutical companies.

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.

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Ray JG, Austin PC, Aflaki 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.

From the FDA

FDA warns of potential risks associated with compounded ketamine nasal spray

On February 16, the U.S. Food and Drug Administration (FDA) announced that it had become aware of safety reports involving compounded intranasal ketamine to treat psychiatric disorders which may be putting patients at risk.

Compounded drugs are not FDA-approved, which means FDA has not evaluated their safety, effectiveness, or quality prior to marketing.

Ketamine hydrochloride (tradename: Ketalar) is a Schedule III controlled substance that was approved by the FDA in 2019 as a nasal spray for treatment-resistant depression in adults and depressive symptoms in adults with major depressive disorder with acute suicidal ideation or behavior, in conjunction with an oral antidepressant.

Because of the potential risks associated with Spravato, including sedation, dissociation, and abuse or misuse, its label contains Boxed Warnings, and Spravato is subject to strict safety controls on dispensing and administration under a safety program called a Risk Evaluation and Mitigation Strategy (REMS). The Spravato REMS program requires Spravato to be dispensed and administered in health care settings that are certified in the REMS. Spravato cannot be dispensed for use outside the certified health care setting. Patients must be monitored inside the health care setting after administration for a minimum of 2 hours until patients are safe to leave.

Though esketamine is derived from racemic ketamine, they are not the same drug. Animal studies have shown that racemic ketamine can cause lesions in the brains of rodents; the relevance of this finding to humans is unknown. Animal studies with esketamine do not show these brain lesions.

The FDA is aware that some pharmacies compound nasal spray formulations of ketamine either alone or in combination with other ingredients, and there have been a concerning number of cases reports of adverse events in recent years. Given these reports and the lack of standardized safety measures associated with the use of compounded ketamine nasal sprays, patients may be at risk of serious adverse events and potential misuse and abuse. The FDA is issuing this alert due to the increased awareness of adverse events reported, the seriousness of these adverse events, and the likelihood that adverse events related to compounded drug products are under-reported, given that pharmacies that compound drugs under Section 503A generally do not report them.

Case findings and discussion

The FDA searched the FDA Adverse Event Reporting System (FAERS) database and the medical literature from April 2011 through January 2022 and identified five cases, reported between 2016 and 2021, associated with psychiatric events such as delusion, dissociation, visual hallucination, and panic attack as well as abuse and misuse following the use of compounded ketamine nasal spray. The reported concentrations of compounded ketamine nasal spray ranged 125–200 mg/mL. Frequency of use varied from three sprays three times a day to six sprays eight times a day. The amount of medication administered to the patients with each spray is unknown. In most case reports, the patients self-administered the product at home, and it is unknown whether they were observed or monitored by a health care professional.

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