

As COVID-19 spread, children and teens were poisoned with hand sanitizer and alcoholic drinks

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During the early months of the COVID-19 pandemic, as false health information spread on social media, the number of children and teens poisoned with hand sanitizer or alcoholic beverages surged in Iran. These

poisonings resulted in hundreds of hospitalizations and 22 deaths. Misinformation circulating on social media included the false suggestion that consuming alcohol (methanol) or hand sanitizer (ethanol or isopropyl alcohol) protected against COVID-19 infection (it does not).

A major alcohol [poisoning](#) outbreak sickened nearly 6,000 Iranian adults, of whom 800 died. It was not known, however, to what extent children and adolescents were affected. For the study in *Alcoholism: Clinical & Experimental Research*, investigators compared pediatric hospitalizations for ethanol and methanol poisoning during the early COVID-19 pandemic in Iran with the same period the previous year. They also looked at types of exposure and how those were linked to the children's ages and clinical outcomes.

Investigators drew data from national mortality records and nine toxicology centers (hospitals) in five cities. The study period covered the initial four months of the pandemic in Iran (February to June 2020); the same period of 2019 served as reference. The researchers examined poisoning cases involving [hand sanitizer](#) or alcohol, diagnosed in the [hospital](#) or postmortem, in which the product had been used in an attempt to disinfect the body.

They also considered the means of exposure, time elapsed between exposure and hospital presentation, clinical manifestations, treatment, outcomes, and demographic characteristics. Researchers matched cases from the hospital records to the mortality database. They used statistical analysis to compare hospitalization and death rates in 2019 and 2020, and identify associations between key factors.

The number of ethanol and methanol poisoning cases of children and teens during the 2020 study period (375) was significantly higher than during the same months in 2019 (202). Among the 375 cases, researchers accessed full records for 172. Of these, 118 patients had

ingested alcoholic drinks and 54 had ingested hand [sanitizer](#). The patients' reported symptoms included nausea, vomiting, abdominal pain, and visual disturbances.

During the study period, 22 [pediatric patients](#) died from such poisonings nationally—21 from alcoholic drinks, one from hand sanitizer. Seventeen of those deaths were among teens aged 15–18. The nine participating hospitals treated 156 patients, six of whom died. Almost two in three poisonings involved children younger than 15, who had mostly ingested hand sanitizer. Among teens aged 15–18, alcohol poisoning, intentional consumption, and worse outcomes were far more common than among younger patients. The younger children's accidental poisonings may reflect households stockpiling hand sanitizers.

Patients aged under 15 were hospitalized much sooner after exposure than older teens were, presumably because of adult supervision; this likely contributed to their better outcomes. Two months into the pandemic, after widespread media coverage in Iran of methanol poisonings, the number of cases declined.

Although the US and Turkey also reported surges of methanol poisonings in this period, no pediatric cases are known outside Iran. The researchers recommend educating parents about the correct use of [hand sanitizer](#) and exploring options for monitoring [alcohol](#) products and early warning systems that might prevent outbreaks. The data used in this study is not representative of the entire country and likely undercounts hospital admissions.

More information: Seyed Amirhosein Mahdavi et al, COVID-19 pandemic and methanol poisoning outbreak in Iranian children and adolescents: A data linkage study, *Alcoholism: Clinical and Experimental Research* (2021). [DOI: 10.1111/acer.14680](https://doi.org/10.1111/acer.14680)

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