

# Identifying factors associated with reports of accidental opioid poisoning in dogs

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Dogs that are smaller, younger, non-neutered, or live in U.S. counties with high opioid prescription rates are at higher risk of being the subjects of phone calls about accidental opioid poisoning to a poison control center. Mohammad Howard-Azzeh and colleagues at the University of Guelph, Ontario, present these findings in the open-access journal *PLOS ONE* on January 29, 2020.

The recent increase in [opioid-related deaths](#) among people in the U.S. has raised concerns about related impacts on pet [dogs](#), but few studies have explored potential links. To address these concerns, Howard-Azzeh and colleagues analyzed data from 189,594 [phone calls](#) made between 2006 and 2014 to the American Society for the Prevention of Cruelty to Animals' Animal Poison Control Center (APCC). They also evaluated data on [opioid](#) prescriptions and opioid-related human deaths from the Centers for Disease Control and Prevention.

The analysis identified several factors associated with higher odds of a dog being the subject of an accidental opioid [poisoning](#) call. These included the dog being smaller, younger, non-neutered, or living in a county with a high prescription rate. Calls about opioid poisoning were more likely to be made by a veterinarian than by a member of the public. The overall likelihood of an APCC call being related to opioid poisoning declined significantly from 2008 to 2014.

The researchers suggest possible explanations for how each of these factors might influence the risk of accidental opioid poisonings in dogs.

For instance, perhaps neutered dogs have behavioral changes that make them less vulnerable to accidental poisoning. Or, owners who neuter their dogs may have different drug use habits than those who do not neuter. Further research could help clarify these relationships.

The new findings could increase public awareness of factors that put dogs at risk, potentially helping to lessen further harm. They also suggest that staying knowledgeable of trends in people's use of drugs could aid veterinarians who respond to accidental poisonings.

The authors add: "Based on our multi-level statistical analyses, it appears in US counties where there were more opioids prescribed per capita, there were higher odds of dog opioid poisonings being reported to an animal poison control center compared to other types of poisoning reports. This might suggest a possible "spill-over" effect of human opioid use on [pet dogs](#), but alternative hypotheses concerning pet owner reporting behaviour need to be considered."

**More information:** Howard-Azzeh M, Pearl DL, O'Sullivan TL, Berke O (2020) The identification of risk factors contributing to accidental opioid poisonings in companion dogs using data from a North American poison control center (2006-2014). *PLoS ONE* 15(1): e0227701. [doi.org/10.1371/journal.pone.0227701](https://doi.org/10.1371/journal.pone.0227701)

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