

## Opioids, benzodiazepines, and COVID-19: A recipe for risk

Opioids and benzodiazepines are two of the leading causes of adverse drug events (ADEs), both during hospitalization and in the posthospitalization period.<sup>1,2</sup> While they have clear indications for management of severe pain and anxiety, these medications have significant risks, including side effects, dependence, and overdose.<sup>3,4</sup> Pre-existing respiratory illness is a well-known risk factor for opioid- and benzodiazepine-related ADEs.<sup>5,6</sup> In this issue of the *Journal of Hospital Medicine*, Delaney et al.<sup>7</sup> report the results of a retrospective observational study investigating the rates of opioid and benzodiazepine prescribing among opioid- and benzodiazepine-naïve patients hospitalized for COVID-19 across 39 Michigan hospitals. Although the rates of opioid and benzodiazepine prescribing on discharge have been quantified previously, this is the first study to identify prescribing patterns among hospitalized patients with COVID-19. This study provides critical insights into the prescribing patterns of two drugs that have a high risk of adverse events, especially in patients with respiratory illness.

First, they found that among patients admitted with COVID-19, almost 1 in 4 receives an opioid and more than 1 in 10 receive a benzodiazepine during hospitalization. Although the rates of discharge prescriptions for these medications were lower (8% and 3%, respectively), these rates are nontrivial when considering that over 30 million adults are hospitalized in the United States each year. On a positive note, these rates of prescribing, both during hospitalization and on discharge, are notably lower than that which has been demonstrated for non-COVID-19 hospitalizations,<sup>8,9</sup> suggesting that physicians may be appropriately wary of prescribing these medications in this population. It is also possible, however, that patients hospitalized with COVID-19 simply have less pain and anxiety than those hospitalized with non-COVID-19-related illness. Intense focus on opioid prescribing in the context of the ongoing opioid crisis may also have contributed to the lower rates of prescribing observed in this analysis compared to prior analyses. Lack of comparison to a concurrently hospitalized non-COVID-19 population, or a population with other respiratory illness, would have provided important information on how these rates of prescribing compare to more current opioid and benzodiazepine prescribing for non-COVID-19 illness.

Several additional limitations must be considered when extrapolating the results of this study. First, this is a single-state study. As the authors note, Michigan has specific legislations in place that limit the duration of opioid prescriptions. The sample size is also relatively small (<200) for both opioid and benzodiazepine groups. Additionally, the authors defined naïve as not having received opioids or benzodiazepines in the 30 days prior to hospitalization. Since these medications are often prescribed on an

as-needed basis, this could have resulted in inclusion of patients who were not truly opioid- or benzodiazepine-naïve, which could have falsely elevated the rate of “new” initiation. Perhaps most importantly, the authors were unable to evaluate the indication or appropriateness of prescribing due to the nature of the data set and study design. Some patients admitted with COVID-19 might also have had other conditions for which receipt of opioids would have been clinically appropriate.




In conclusion, the study provides insight into the surprisingly high prevalence of opioid and benzodiazepine exposure in hospitalized patients with COVID-19. Although these rates are concerning, they are lower than the rates in pre-COVID-19 hospitalized patients, providing some glimmer of hope that physicians are more judicious in this population than otherwise. Further studies examining the reasons for use of these medications in this patient population are necessary, however, to truly understand whether there are opportunities to reduce inappropriate use of these high-risk medications in patients with respiratory illness.

### ACKNOWLEDGMENTS

Dr. Herzig was funded by grant number R01HS026215 from the Agency for Healthcare Research and Quality. Dr. Kasanagottu was funded by grant number T32HP32715 from the Health Resources and Services Administration.

### CONFLICTS OF INTEREST

The authors declare no conflict of interest.


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**How to cite this article:** Kasanagottu K, Herzig SJ. Opioids, benzodiazepines, and COVID-19: A recipe for risk. *J Hosp Med*. 2022;17:580-581. doi:10.1002/jhm.12889