and after long-term fentanyl dosing, the duration of action of an acute bolus of fentanyl is significantly shorter than that of heroin. Moreover, the length of observation could be most optimally based not on the half-life of the responsible opioid compound but on the half-life and duration of action of naloxone. Although we agree that the risk of death for patients discharged shortly after naloxone administration is as low as 0% to 0.13%,[2] this likely reflects that the majority of patients with apparent opioid overdose would survive without any treatment. Given the low incidence of death after naloxone administration,[3,4] the medical value of any period of observation for patients exposed to short-acting opioids remains uncertain.

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1. Scheuermeyer FX, DeWitt C, Christenson J, et al. Safety of a brief emergency department observation protocol for patients with presumed fentanyl overdose. *Ann Emerg Med*. 2018;72:1-8.e1.
2. Rudolph SS, Jehu G, Nielsen SL, et al. Prehospital treatment of opioid overdose in Copenhagen—is it safe to discharge on-scene? *Resuscitation*. 2011;82:1414-1418.
3. Weiner SG, Baker O, Bernson D, et al. One-year mortality of opioid overdose victims who received naloxone by emergency medical services. *Ann Emerg Med*. 2017;70:S158.
4. Willman MW, Liss DB, Schwarz ES. Do heroin overdose patients require observation after receiving naloxone? *Clin Toxicol (Phila)*. 2017;55:81-87.

In reply:

Our team thanks Santos et al[1] for their commentary in regard to the management of emergency department patients with presumed fentanyl overdose. They raise the important point that, because of the low postoverdose mortality risk, any observation window for such patients may be questionable. Boyer[2] suggested a 4- to 6-hour observation period after naloxone resuscitation, but this is not supported by clear evidence in patients with fentanyl overdose. In therapeutic doses, fentanyl has a short duration of action because it is quickly redistributed out of the central nervous system into peripheral tissues before being quickly eliminated. However, in large doses—as in illicit overdose—fentanyl in peripheral tissues can be remobilized into central circulation and resedate patients, a phenomenon described in the surgical literature.[3] Although the traditional duration of action of 0.4-mg intravenous naloxone is 45 minutes, it can vary, depending on dose and route of exposure.[4] Our patients had variable naloxone dosing, including bystander administration. Given these substantial uncertainties in this previously undescribed population, we felt justified in extending our observation protocol from 1 to 2 hours. Furthermore, this additional period gave our staff time to ensure that there was no potential underlying medical or psychiatric issue and gave patients an opportunity to access critical resources such as opioid agonist therapy, take-home naloxone, food, shelter, and detoxification opportunities.

With respect to drug testing in Vancouver, clients at the local nurse-supervised safe injection site volunteer to self-analyze their illicit drugs for fentanyl, using rapid testing strips. From July 3 to August 7, 2016, 173 clients checked their opioid samples, with 90% positive for fentanyl.[5] We acknowledge that injection-site clients may not be representative of all patients at risk of opioid overdose, but given that 84% of local overdose deaths involved fentanyl,[6] it is probable that a similar proportion of our patients had fentanyl as a cause of their opioid overdose.

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1. Santos C, Adam A, Calello D, et al. Safety of a brief emergency department observation protocol for patients with presumed fentanyl overdose. *Ann Emerg Med*. 2018;73:99-100.
2. Boyer EW. Management of opioid analgesic overdose. *N Engl J Med*. 2012;367:146-155.
3. Palmer RB. Fentanyl in postmortem forensic toxicology. *Clin Toxicol (Phila)*. 2010;48:771-784.
4. Glass PS, Jhaveri RM, Smith LR. Comparison of potency and duration of action of nalmefene and naloxone. *Anesth Analg*. 1994;78:536-541.
5. Vancouver Coastal Health. 86% Of drugs checked at Insite contain fentanyl. Available at: http://www.vch.ca/about-us/news/news-releases/86-of-drugs-checked-at-insite-contain-fentanyl. Accessed October 12, 2018.
6. Coroner's Service of British Columbia. Illicit drug overdose deaths in BC January 1 2008 to August 31 2018. Available at: https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicit-drug.pdf. Accessed October 12, 2018.