Limit the conclusions we can draw, it appears that higher initial doses and in some cases, higher cumulative naloxone doses were used and may be necessary to reverse toxicity due to fentanyl/UPO compared to other opioids. High-quality prospective studies assessing effectiveness and safety are needed.

Keywords: fentanyl, naloxone, opioid-related disorders

LO21
One-year mortality of patients treated in the emergency department for an opioid overdose: a single-centre retrospective cohort study

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Introduction: Opioid overdoses (OODs) have become a public health emergency, yet little is known about their long-term outcomes following an OD. We determined the one-year all-cause mortality and associated risk factors in a cohort of patients treated in an urban emergency department (ED) for an OOD. Methods: We reviewed records of all patients who visited St. Paul's Hospital ED from January 2013 to August 2017 and had a discharge diagnosis of OOD or had received naloxone in the ED as per pharmacy records. Patients with a suspected OOD were identified on structured chart review. A patient’s first visit for an OOD during the study period was used as the index visit, with subsequent visits excluded. The primary outcome was mortality during the year after the index visit. Mortality was assessed by linking patient electronic medical records with Vital Statistics data. Deaths that occurred in the ED on the index visit were excluded. Patients admitted to hospital following ED treatment were included in this study. We described patient characteristics, calculated mortality rates, and used Cox regression to identify risk factors. Results: A total of 2239 patients visited the ED for an OOD during the study period, with a median patient age of 37 years (IQR 29, 49). Males comprised 73% of patients, while 28% had no fixed address, and 21% received take-home naloxone at the index visit. In total, 137 patients (6.1%) died within 1 year of the index visit. Eighty-one deaths (3.6%) occurred within 6 months, including 24 deaths (1.1%) that occurred within 1 month. The highest mortality rate occurred in 2017, with 8.0% of patients entering the cohort that year dying within 1 year. Gender did not significantly impact mortality risk. A Cox regression analysis controlled for gender, housing status, and whether take-home naloxone was provided at the index visit indicated that advancing age (adjusted hazards ratio [AHR] 1.03; 95%CI: 1.01-1.04 for each year increase in age) and the index visit calendar year (AHR 1.30; 95%CI: 1.10-1.54 for each yearly increase in the study period) were significant factors for mortality within 1 year. Conclusion: The mortality rate following an opioid OD treated in the ED is high, with over 6% of patients in our study dying within 1 year. The rising mortality risk with increasing calendar year may reflect the growing harms of fentanyl-related OODs. Patients visiting the ED for an OOD should be considered high risk and offered preventative treatment and referrals prior to discharge.

Keywords: mortality, opioid, overdose