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## Health Management

(Abstracts and Case Report/Series)

# Healthcare Encounters before Opioid Overdose: A Missed Opportunity

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## Introduction:

Canada is amid a national opioid overdose crisis with unrelenting consequences. British Columbia (BC) has been disproportionately affected by this crisis and declared a public health emergency in 2016. In 2020, the COVID-19 pandemic drew Public Health attention and resources away from the opioid overdose epidemic. However, BC reported 1534 overdose deaths in the first 9 months of 2021, the largest number recorded (BC Coroners Service 2021).

Many people who die of an opioid overdose have frequently interacted with the healthcare system. In one analysis, 77% had contact with the health system in the year before they died (Daly 2019), and another study suggests that nearly 40% had contact in the last month before they died (Otterstatter et al. 2018). These data indicate that there is an opportunity to intervene with those at risk for subsequent opioid overdose during these interactions with our health system.

## Methods:

This retrospective, observational cohort study included all patients who presented to two hospital emergency departments with an opioid overdose over a 12-month period (July 1, 2018, to June 30, 2019). We excluded non-opioid related overdoses, presentations for substance use and/or misuse not resulting in overdose. Opioid overdose event was defined as a coded chart diagnosis of: "Heroin Overdose/Intoxication," "Other Opioid Overdose/Intoxication" or "Recreational Drug Overdose Not Otherwise Specified". Overdose events were further confirmed by the presence of any of the following in the chart notes: "opioid overdose" or "use of naloxone (resulting in reversal of overdose)". If a patient had multiple overdoses in this time frame, the most recent event was used.

We extracted demographic data and history of prior overdoses from electronic medical records. We identified health system encounters for pain (defined as one in which the primary reason for visit included "pain" or pain was listed as a primary reason for the visit in the nursing notes or physician assessment, other than for chest pain) or surgery. These were stratified by time prior to overdose (12 months prior or 24 months prior). Data were described using percentage, mean, standard deviation (SD), median and interquartile range (IQR).

## Results:

We identified 1104 patients who presented to the participating centres with an opioid overdose event between in the study period. Ninety-one percent of the population was between the ages of 20 and 49 years and 77% were male. Over half (57%) had presented to one of the centres with a previous overdose in the past 10 years.

Within the 24 months prior to opioid overdose event, 556/1104 (50%) had a healthcare encounter for either pain (547/1104; 50%) or surgery (56/1104; 5%).

Among patients who had surgery, most surgeries were either endoscopies or orthopedic procedures and most were minor.

Of the patients who came to the hospital with pain, 39% percent (215/547) had more than one pain visit in this period. Almost half (45%) of patients who had a health encounter for pain prior to their overdose, presented with pain due to cellulitis, swelling and redness, or arm or leg infection.

**Discussion:**

The opioid overdose crisis has resulted in a serious public health emergency and substantial loss of life. British Columbia has reported the most fatal and non-fatal opioid overdoses in Canada (PHAC 2021). Our study results provide a novel description of this vulnerable population presenting to emergency departments with an opioid overdose. We identified that a substantial number of patients undergo surgery or visit the hospital with pain in the 24 months prior to their overdose. This demonstrates an opportunity to intervene, and future research should focus on what interventions are most effective.

**References:**

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