



Topic: Leaving the emergency department without being seen or against medical advice among people who overdosed from illegal drugs in B.C., 2015-2016

Date: July 16, 2018

Data Source: B.C. Provincial Overdose Cohort

Background:

- The B.C. Provincial Overdose Cohort is a set of linked datasets related to overdose events, including death, ambulance, emergency room, hospital, physician, and prescription records. The datasets were brought together to better understand factors associated with overdose in order to target provincial, regional, and local response activities.
- Overdose cases refer to people with at least one drug-related overdose that occurred between January 1st, 2015 and 30 November 30th, 2016. This group includes approximately 10,000 individuals, most of whom experienced a non-fatal overdose.
- Matched controls are a set of randomly selected B.C. residents of the same sex, age, and local health authority as those who overdosed. This group is used as a comparator when looking at patterns of health service utilization among overdose cases during the same calendar period. It includes approximately 50,000 individuals.
- In a previous [Knowledge Update](#) (March 8th, 2018), patterns of health care utilization among people who overdosed from illegal drugs were described. That work reported a large group of people who, prior to their first recorded overdose, left the emergency department (ED) without being seen by a doctor (LWBS) or left against medical advice (AMA).
- The focus of this update is to further understand the LWBS/AMA group. In particular, this update summarizes reasons for visiting the emergency department, short-term healthcare utilization, and risk of overdose death following a LWBS/AMA visit.
- The ED data originates from a National Ambulatory Care Reporting System (NACRS) extract in the Provincial Overdose Cohort. NARCS is mostly reflective of the Lower Mainland, with data from approximately 30 EDs (2 IHA, 12 FHA, 6 VCH, 7 VIHA, 1 NHA), and covers 70% of all ED visits in B.C. Based on available coding, visits where a patient left without seeing a physician cannot be completely separated from those where a physician was consulted, but the patient left against medical advice.

Key Findings:

Overall:

- Of the 10,458 individuals who experienced overdose in the Cohort, 5,594 (53%) had at least one visit to an emergency department (for any reason) in the year prior to first



recorded overdose. Among this group, 19% (1,063 individuals) had at least one LWBS/AMA visit (Figure 1).

- The majority of people who overdosed and had a LWBS/AMA visit were male (67%) and were between 20-29 (28%) or 30-39 (30%) years of age.
- The visit disposition in the majority (70%) of LWBS/AMA encounters was: “patient left the emergency department at his/her own risk following registration and triage. Further assessment by a service provider and treatment did not occur”.
- Among the 1,063 individuals, there were 1,707 LWBS/AMA encounters in the year before first recorded overdose.
 - 770 (72%) of these individuals had only one LWBS/AMA visit.
 - 293 (28%) had more than one LWBS/AMA visit.
- In comparison, 8,990 (17%) of matched controls had at least one emergency department visit (for any reason), but only 4% of these individuals had a LWBS/AMA visit (Fig.1).
- Among people who overdosed and had a LWBS/AMA visit, 97 (9%) died of a drug overdose over the course of the entire study period. All of those who died had only one LWBS/AMA visit prior to death, and the majority (75%, N=73) died from their first recorded overdose during the study period.
- While there is no discharge diagnosis associated with an LWBS/AMA visit, the patient’s presenting complaint (i.e., their stated reason for visit as recorded at triage) can be used to characterize the reason for visit. Among all LWBS/AMA visits in the year prior to first overdose, the top presenting complaints were related to (Fig. 2):
 - Substance misuse (10%);
 - Localized swelling/redness (6%);
 - Overdose ingestion (6%);
 - Abdominal pain (5%); and,
 - Prescription/medication request (5%).

In the week after the LWBS/AMA visit:

- 42% (n=442) of individuals had no subsequent healthcare encounters. However, of those individuals who did have a healthcare encounter (58%; n=621), the majority (80%) visited a community physician.
- 9% (n=91) of individuals experienced a drug overdose within a week of their LWBS/AMA visit, and seven of those events were fatal. Of the individuals that died of overdose, three had a healthcare encounter between their LWBS/AMA visit and death.

In the year prior to their first overdose:



- The vast majority (90%) of individuals with an LWBS/AMA visit also had at least one more ED visit, 48% (n=511) were admitted to hospital at least once, and 86% (n=919) visited a community physician at least once.
- After their LWBS/AMA visit, 72% (n=764) of individuals visited the ED at least once, 29% (n=309) were admitted to hospital at least once and 67% (n=714) visited a community physician at least once.

Key messages and next steps:

The interpretations and conclusions below are those of the B.C. Provincial Overdose Cohort analysis team and the BC Centre for Disease Control.

- For individuals seen in the emergency department who may be at risk of overdose, the window of opportunity to engage those individuals with care in the emergency department is narrow.
- Interventions that may help reduce LWBS/AMA and widen that window of opportunity for engagement with care include:
 - i. the provision of harm reduction services in hospitals;
 - ii. improving responses to symptoms such as pain and withdrawal; and,
 - iii. initiatives to assess perceptions of care among patients in acute care settings.^{1,2}
- In response to the overdose crisis, a growing number of B.C. hospitals have implemented a suite of harm reduction services, including overdose outreach teams and Take Home Naloxone kit distribution³ in emergency departments. Furthermore, in 2016 and 2017, addiction nursing/addiction medicine teams were integrated into some B.C. emergency departments and inpatient units.
 - The current Provincial Overdose Cohort covers the period January 2015 to November 2016. An upcoming refresh of this cohort will feature 2017 data and in turn offer insight into LWBS/AMA trends after these harm reduction interventions were implemented.
- Next steps include engagement with professionals in the emergency medicine community to discuss the implications of LWBS/AMA visits among people at risk of overdose.

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BC Centre for Disease Control An agency of the Provincial Health Services Authority **Provincial OD Cohort: ED diagnoses**

19% of overdose cases vs 4% of controls left EDs without being seen or against medical advice (P < 0.001)

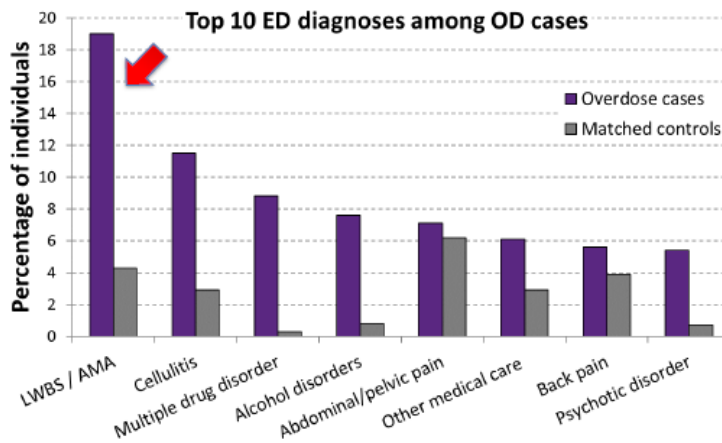


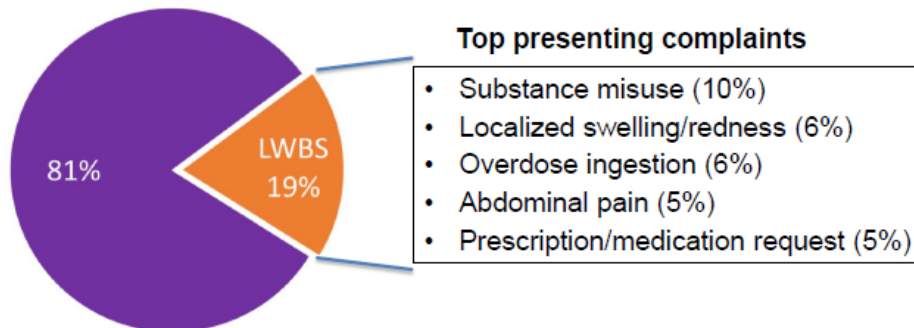
Figure 1. Ten most common emergency department diagnoses in the year prior to first recorded overdose.

Technical note: Ranking order is based on occurrence of diagnoses in individuals with a fatal drug overdose and excludes visits for which no diagnosis code was recorded. The comparison considers only the primary diagnosis, and values represent the percentage of all primary diagnoses. Diagnosis groups are based on the first three digits of ICD-10 codes originating from National Ambulatory Care Reporting System (NACRS) records in the BC Provincial Overdose Cohort.

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Leaving without being seen

Among people who overdosed, a variety of presenting complaints were recorded during LWBS/AMA visits



Within a week of their LWBS/AMA visit: 58% had another healthcare encounter (mostly to community physicians), 42% had no healthcare encounters, and 7 died of illegal drug overdose

Figure 2. Top presenting complaints among people who had a LWBS/AMA visit in year prior to overdose.

References

- 1 McNeil, R., Small, W., Wood, E. & Kerr, T. Hospitals as a 'risk environment': An ethno-epidemiological study of voluntary and involuntary discharge from hospital against medical advice among people who inject drugs. *Social Science and Medicine*, doi:10.1016/j.socscimed.2014.01.010 (2014).
- 2 McNeil, R., Kerr, T., Pauly, B. & Wood, E. Advancing patient-centered care for structurally vulnerable drug-using populations: a qualitative study of the perspectives of people who use drugs regarding the potential integration of harm reduction interventions into hospitals. *Addiction (Abingdon, England)* **111**, 685-694, doi:10.1111/add.13214 (2016).
- 3 Toward the Heart. *THN in BC Infograph*, <<http://towardtheheart.com/thn-in-bc-infograph>> (2018).