

## Development and Characteristics of the Provincial Overdose Cohort in British Columbia, Canada

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### Introduction

British Columbia has the highest rate of opioid overdose in Canada, driven by the use of illegal opioids such as fentanyl. In addition to ongoing surveillance, there is a need for more comprehensive data to identify risk factors, inform the development of interventions, and evaluate the public health emergency response.

### Objectives and Approach

The Provincial Overdose Cohort is a linked administrative dataset based on information from hospital admissions, physician visits, prescription dispensations, poison centre calls, ambulance, emergency department, coroner's data, and First Nations Client File. Overdoses in the province were identified for the period January 2015–November 2016. Overdoses occurring within a 24 hour period across data sources were grouped as a single episode. For identified cases and for a control population (a 20% random sample of the BC residents), health care and prescribing history was appended dating back to 2010. Initial analyses were conducted based on a prioritization process with knowledge users.

### Results

Integration of distinct data sources about overdose events provided a more complete understanding of the extent of the opioid crisis than use of a single dataset alone. Between January 1, 2015 and November 30, 2016 10,456 overdoses occurred in BC. Overdose deaths represented only 13% of individuals overdosing; 54% of all overdoses were captured through ambulance records and 46% through emergency and hospital records, with some overlap between the datasets. Most cases had contact with the health care system in the year before overdose suggesting opportunities for intervention. Some demographic differences were noted when comparing fatal and non-fatal overdoses, but few differences in health or prescribing histories were identifiable using administrative data.

### Conclusion/Implications

The Provincial Overdose Cohort is a uniquely comprehensive dataset in a jurisdiction at the forefront of the opioid overdose response. Jurisdictions developing surveillance systems should consider the inclusion of ambulance, emergency room and hospital data in order to more completely characterize the population at risk.

