

## Research Article

# Change in Police Attendance at Overdose Events following Implementation of a Police Non-Notification Policy in British Columbia

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Received 1 June 2022; Accepted 23 August 2022; Published 10 October 2022

Academic Editor: Bijaya Padhi

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**Introduction.** Bystanders at overdose events often hesitate to call 911 due to fear of police involvement. To address this, in 2016, British Columbia Emergency Health Services (BCEHS) introduced a policy to not routinely inform police of overdose events. This study explores change in police attended overdose events after the policy was implemented. **Methods.** Data on police attended overdose events were derived from naloxone administration forms in BC's Take-Home Naloxone (THN) kits returned before and after the policy change. Segmented regression was conducted to quantify change in police attended overdose events. **Results.** The average proportion of police attended overdose events pre-policy was 55.6% compared to 37.9% post-policy. The segmented regression model demonstrated a 0.98% (95% CI: (-1.70 to -0.26)) decline ( $p = 0.01$ ) in police attended overdose events each month following the policy. **Conclusion.** Our findings suggest that the BCEHS policy contributed to a decrease in police attended overdose events.

## 1. Introduction

The province of British Columbia (BC) (Canada's westernmost and third most populous province) declared a public health emergency in April 2016 due to a significant increase in the number of drug toxicity (overdose) deaths [1]. As a result, many harm reduction and treatment initiatives were introduced and scaled-up in BC, which included increasing distribution of naloxone kits, expanding opioid agonist treatment, and opening supervised consumption sites or overdose prevention sites (i.e., safe, hygienic sites where people are provided with sterile supplies to use preobtained drugs under the supervision of staff to have access to a timely response in the event of an overdose) [2–4]. Although these harm reduction and treatment initiatives have been effective at reducing overdose deaths

[3, 4], fatal and nonfatal overdose in BC remain elevated compared to prior years and compared to the national average [5, 6].

While, in BC, naloxone is provided free of charge as a tool for reversing opioid overdoses to anyone at risk of witnessing an overdose, naloxone is not effective at responding to overdoses involving substances other than opioids (e.g., stimulants and benzodiazepines) or for overdoses resulting in medical complications. Furthermore, once naloxone wears off (typically within 30–90 minutes), there is a risk of an overdose reoccurring [7–9]. Appropriate medical intervention following an overdose can be implemented to avoid severe consequences such as anoxic brain injury or death [7]. Calling emergency health services (EHS) (i.e., 911) in the case of overdose is therefore a critical and potentially life-saving intervention [10]. Furthermore, EHS provide a

critical response in cases of complications (e.g., overdoses complicated by benzodiazepines in the illicit supply), which are increasingly common in BC [5, 11]. Nevertheless, prior studies identified that concerns about police presence and arrests represent a significant barrier to calling 911 in the event of an overdose [10, 12–14]. For example, fear of police presence at overdose events was reported as the reason for not calling 911 among 29.9% of people who accessed BC Take-Home Naloxone (BCTHN) kits and completed an administration form in 2016 [15].

In order to reduce the fear of police involvement and improve bystanders' willingness to call 911, two policies have been introduced in BC. In June 2016, the BC Emergency Health Services (BCEHS) introduced a provincial policy to not routinely notify police in the event of an overdose [16]. In May 2017, the Government of Canada introduced the *Good Samaritan Drug Overdose Act* (GSDOA), an amendment to the federal Controlled Drugs and Substances Act, which provides legal protection for the simple possession of illicit substances at overdose events [17].

The provincial BCEHS non-notification policy was a novel approach for emergency responders and dispatch protocols for jurisdictions across the province, with the exception of the City of Vancouver, where a policy was implemented by the Vancouver Police Department in 2006 encouraging police not to attend overdose events unless requested by BCEHS [18]. Non-notification policies encourage dispatch call centres that receive 911 calls to avoid invariably alerting police, fire services, and paramedics but rather promote only alerting fire services and paramedics to reduce police presence at overdose events. There remain selected cases where police may be informed of overdose events, including in cases of death, attempted suicide, or where there are safety concerns for the public and first responders. Additionally, police officers may come across overdose events during their patrolling duties and may be requested to attend by paramedics and/or fire services, outside of dispatch alerting systems [19, 20].

This study investigates changes in police attendance at overdose events in BC after the implementation of the BCEHS policy.

## 2. Methods

**2.1. Data Sources.** Data were derived from BCTHN administration forms. People who administer naloxone using a BCTHN kit are requested to complete a naloxone administration form (available in the kit or online) and return it to the BC Centre for Disease Control (BCCDC) either through the THN distribution sites, via email or fax. The form collects information regarding overdose events, including if 911 was called and if police attended. While the BCTHN program began in August 2012, this analysis only includes responses from overdoses occurring between November 1, 2015 (due to low number of valid responses prior to this date), and May 31, 2018.

**2.2. Study Variables.** Police attendance at overdose events was determined from the BCTHN administration form.

Between November 2015 and November 2016, the question was posed as “What order did first responders arrive” (Table S1). Any answer regarding police arrival was considered affirmation of police attendance. Between December 2016 and May 2018, the question was posed as “Did police come to the overdose?” A response of “Yes” was considered affirmation of police attendance (Table S1).

**2.3. Statistical Analysis.** Descriptive analysis was conducted to assess the proportion of overdose events where police attended each month before and after implementation of the BCEHS policy. Next, segmented (piecewise) regression models were used to estimate the intercept and slope for the proportion of police attended overdose events seven months prior to the implementation of the BCEHS policy (November 1, 2015–May 31, 2016) and 24 months after implementation of the BCEHS policy (June 1, 2016–May 31, 2018).

**2.4. Ethical Consideration.** The study was approved by Office of Behavioural Research from University of British Columbia (Ethics# H12-02557).

## 3. Results

There were 2791 administration forms returned to the BCCDC during the study period. Of these, 41.6% ( $n = 1160$ ) were excluded because 911 was reportedly not called. An additional 2.8% of forms were excluded ( $n = 79$ ) due to missing responses and 2.6% ( $n = 73$ ) due to a response of “prefer not to say” to the question of whether 911 was called. Of the respondents who reported 911 was called ( $n = 1479$ ), 20.1% ( $n = 298$ ) and 3.1% ( $n = 46$ ) were excluded due to missing data and “prefer not to say,” respectively, on the question of whether police attended.

The final study sample included 1135 respondents (Figure 1). Of these 1135 respondents, 153 responses (13.5%) were from the prepolicy period and 982 (86.5%) responses were from the postpolicy period. The overall average proportion of overdose events where police attended in the prepolicy period was 55.6% compared to 37.9% in the postpolicy period. The local police department in Vancouver had a nonattendance policy for overdose events since 2006 and therefore had a lower reported proportion of police attended overdose events in the period before the policy change (33.3%) compared to the rest of the province (71.1%) (Table S2).

The segmented regression analysis presents estimates of the intercept and slope of police attendance at overdose events in both the prepolicy and postpolicy periods. The intercept estimates reveal that the predicted proportion of police attended overdose events at time zero in the prepolicy period (November 1, 2015) was 47.93% (95% CI: 29.79, to 66.07) and was 48.06% (95% CI: 38.42 to 57.71) at time zero in the postpolicy period (June 1, 2016) (Figure 2). The slope estimates find that with every one-month increase in time in the postpolicy period, there was a statistically significant ( $p = 0.010$ ) decline in the proportion of overdose events attended by police  $-0.98\%$  (95%  $-1.70$  to  $-0.26$ ) (Table S3).

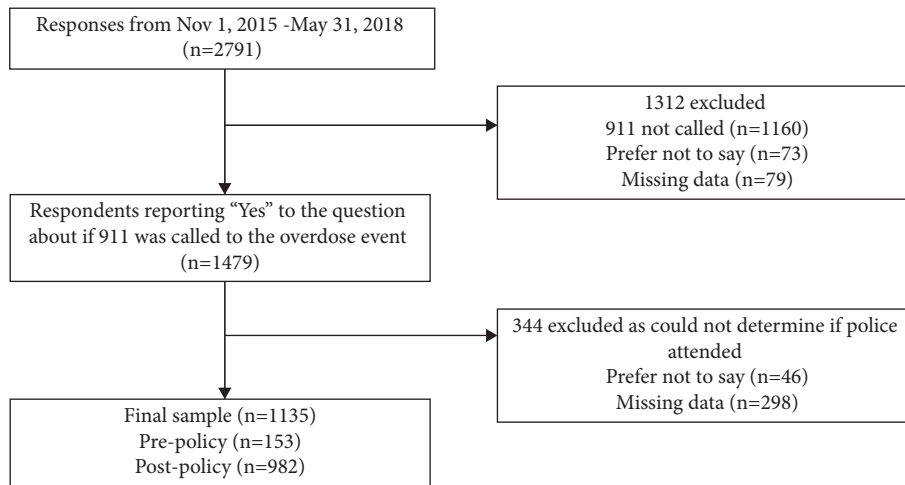


FIGURE 1: Flowchart of analytical sample selection.

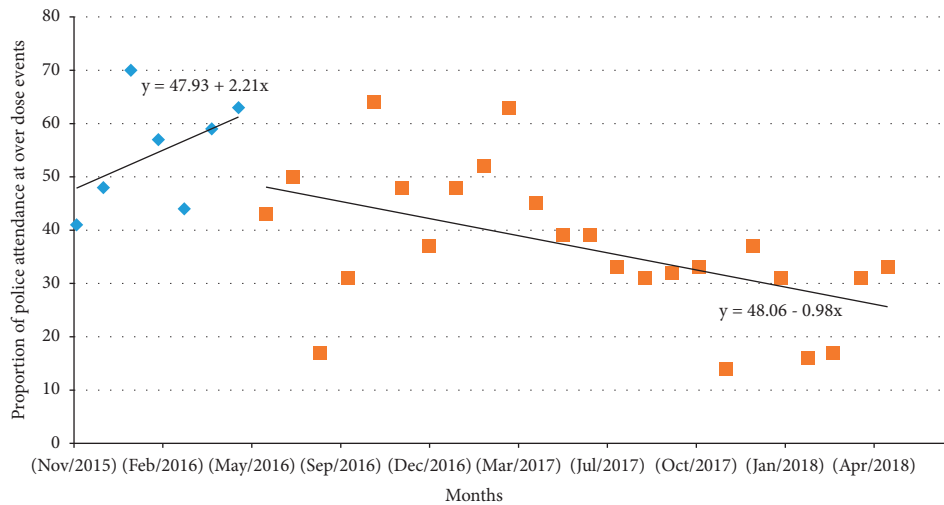


FIGURE 2: Segmented regression to model police attendance before and after BCEHS police nonnotification policy periods. In the prepolicy period, with every month increase in time, there is a 2.21% increase in police attendance at overdose events (95% CI: -2.82, 7.25). In the postpolicy period, with every month increase in time, there is a 0.98% decrease in police attendance at overdose events (95% CI: -1.70, -0.26).

#### 4. Discussion

Findings reveal a significant decline in police attendance at overdose events in the period following the BCEHS policy change. To our knowledge, this is the first study in Canada to demonstrate the contribution of such a policy to decreasing police attendance at overdose events.

Our results are consistent with BCEHS dispatch data, where the proportion of Card 23 (overdose) calls where police were notified also decreased following the policy change [21].

Prior analyses of BCTHN data suggest that awareness of the BCEHS policy change and/or the GSDOA may be reaching people in a position to call 911 in the event of an overdose. For example, fear of police presence at overdose events was reported as a reason for not calling 911 among 29.9% of BCTHN respondents in 2016 and only among 8.3%

in 2018, after the implementation of the GSDOA [15]. Given longstanding and warranted mistrust among people who use drugs toward medical and legal systems [22–24], there is much work to do with respect to shifting expectations of the outcome of calling 911, which could serve as an important focus of future research and implementation efforts. Future research is also needed to determine the influence of the BCEHS policy on quality of care and particularly first responder attendance timeliness. Prior to the BCEHS policy, in rural and remote areas in particular, police officers in some cases were able to respond first if fire services and paramedics were delayed [19]. Future research examining impacts of the BCEHS policy on first responders may highlight barriers to successful implementation and resource allocation needs.

While the present study uses data from 2016 to 2018, it provides an important and timely contribution to the

literature as BC is experiencing record levels of overdose deaths [5]. BCEHS is playing an increasingly central role in BC's overdose response, with calls reaching an all-time high in May 2021 [25]. Given police attendance is a known barrier to calling 911, this policy change represents an important policy step in efforts to decrease bystander hesitancy to call 911 in the event of overdose. This is particularly relevant in BC, as the illicit drug supply has become increasingly toxic, putting people who use drugs at elevated risk of fatal and nonfatal overdose [5].

There are some limitations associated with the present study that must be considered in interpreting findings. BCTHN administration forms are not returned by all people who administer BCTHN kits, and these data represent a small proportion of overdose events. The study findings cannot be generalized beyond people who have accessed a BCTHN kit and completed the BCTHN form. While this study reports on changes in police attendance at overdose events, an important next step will be to investigate how the policy has affected bystander willingness to call 911. Finally, during BCTHN training, calling 911 is emphasized as a critical component of an overdose response. Therefore, responses may be subject to social desirability bias, as respondents may feel they should report having called 911. This bias may be mitigated, as the BCTHN forms are anonymous and do not collect respondents' identifying information.

## 5. Conclusion

This analysis is the first and only analysis to report on the impact of a province-wide policy change to reduce police attendance at overdose events. Our findings suggest that the policy has contributed to a decrease in police attendance at overdose events. More research studies are needed to measure additional outcomes related to the effectiveness of nonnotification policies at overdose events, including impact on bystander concerns around police presence and willingness to call 911. As well, research is needed to examine quality of care at overdose events and potential changes in first responder capacity and resource distribution, in relation to this policy. If future research demonstrates that nonnotification policies are effective at increasing willingness to call 911 at overdose events, findings can be used to support the adoption of a similar policy in other regions with the aim of reducing police attendance at overdose and ultimately ensuring that people who experience overdose are connected to critical medical care required to reduce overdose-related morbidity and mortality.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Disclosure

The funders had no input into the study design, analysis, or report development.

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## Acknowledgments

The authors would like to thank harm reduction staff from Take-Home Naloxone (THN) distribution sites for providing THN training and distributing naloxone kits as well as express gratitude for peers who provide overdose response training and respond to overdoses themselves—saving the lives of many. The authors would like to acknowledge Harm Reduction and Take-Home Naloxone (THN) program team members at BC Centre for Disease Control (BCCDC) including Sierra Williams, Kristi Papanihali, Laura Moore, and Sara Young for their help with collection of the THN administration forms. The authors respectfully acknowledge that they live and work on the unceded traditional territory of the Coast Salish Peoples, including the traditional territories of x<sup>w</sup>məθkwəy̓ əm (Musqueam), Sk̓wxwu7mesh (Squamish), and Səli lwətaʔ (Tsleil-Waututh) Nations. The BCTHN program was funded by the BC Ministry of Health.

## Supplementary Materials

Table S1: Take Home Naloxone form questions assessing if 911 was called and police attended. Table S2: Reported police attendance at overdose events pre and post BCEHS police notification policy. Table S3: Segmented regression model estimates of proportion of police attended overdose events pre and post BCEHS police notification policy. (*Supplementary Materials*)

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