

## A cross-sectional survey on buprenorphine–naloxone practice and attitudes in 22 Canadian emergency physician groups: a cross-sectional survey

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### Abstract

**Background:** Buprenorphine–naloxone (BUP) initiation in emergency departments improves follow-up and survival among patients with opioid use disorder. We aimed to assess self-reported BUP-related practices and attitudes among emergency physicians.

**Methods:** We designed a cross-sectional physician survey by adapting a validated questionnaire on opioid harm reduction practices, attitudes and barriers. We recruited physician leads from 6 Canadian provinces to administer surveys to the staff physicians in their emergency department groups between December 2018 and November 2019. We included academic and community non-locum emergency department staff physicians. We excluded responses from emergency department groups with response rates less than 50% to minimize nonresponse bias. Primary (BUP prescribing practices) and secondary (willingness and attitudes) outcomes were analyzed using descriptive statistics.

**Results:** After excluding 1 group for low response (9/26 physicians), 652 of 798 (81.7%) physicians responded from 22 groups serving 34 emergency departments. Among respondents, 64.1% (95% confidence interval [CI] 60.4%–67.8%, emergency department group range 7.1%–100.0%) had prescribed BUP at least once in their career, 38.4% had prescribed it for home initiation and 24.8% prescribed it at least once a month. Overall, 68.9% (95% CI 65.3%–72.4%, emergency department group range 24.1%–97.6%) were willing to administer BUP, 64.2% felt it was a major responsibility and 37.1% felt they understood people who use drugs. Respondents most frequently rated lack of adequate training (58.2%) and lack of time (55.2%) as very important barriers to BUP initiation.

**Interpretation:** Two-thirds of the emergency physicians surveyed prescribed BUP, although only one-quarter did so regularly and one-third prescribed it for home initiation; wide variation between emergency department groups existed. Strategies to increase BUP initiation must address physicians' lack of time and training for BUP initiation and improve their understanding of people who use drugs.

Emergency departments (EDs) play a critical role in delivering services to people with opioid use disorder (OUD).<sup>1,2</sup> Emergency department physicians have not always been uniformly willing and able to provide these services,<sup>3</sup> even though patients with OUD visit EDs frequently<sup>4</sup> and most people who die of opioid overdose have visited an ED in the year preceding death.<sup>5</sup> For those ED and emergency medical services patients who survive an overdose, the subsequent 1-year mortality rate is 5%–15%.<sup>6–8</sup> In both Canada and the United States, the numbers of ED visits and deaths from opioid overdoses have increased in the last 5 years,<sup>9–12</sup> and the number of deaths has increased further during the COVID-19 pan-

dem, perhaps as a result of decreased access to community resources.<sup>13,14</sup> Now more than ever, ED physicians have an opportunity and responsibility to offer life-sustaining OUD interventions, including opioid agonist therapy.

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Opioid agonist therapy, such as methadone and buprenorphine-naloxone (BUP), reduces overdose and all-cause mortality from OUD by more than 50%.<sup>15,16</sup> BUP has a favourable safety profile for ED initiation and improves retention in addiction care.<sup>17</sup> Although many EDs have implemented BUP programs,<sup>18–22</sup> many people with OUD do not receive opportunities to start opioid agonist therapy after overdose.<sup>23,24</sup> Although some studies have investigated ED physician attitudes toward BUP<sup>25–27</sup> and BUP prescribing,<sup>28,29</sup> the picture of current ED practice patterns in Canada remains incomplete because prior surveys included a limited number of sites or had low response rates. To investigate physician factors in BUP underutilization, we aimed to measure self-reported BUP prescribing frequency and related attitudes in a large, targeted sample of Canadian ED physicians.

## Methods

### Setting and design

The study was a cross-sectional survey of Canadian ED physicians. Between December 2018 and November 2019, we surveyed physicians from groups working in EDs ranging from small nonacademic community hospitals to large urban teaching referral centres. This investigation fell under a Canadian Research Initiative in Substance Misuse (CRISM; [crism.ca](http://crism.ca)) project to expand access to opioid agonist therapy in EDs.

### Participants

We recruited ED physicians using a group-driven strategy, targeting groups with qualifying physician leads and at least 30 000 annual visits at their largest ED (by group lead report). We developed this strategy to maximize response within participating groups, avoid the low participation rates that often occur in conventional online surveys disseminated to emergency physicians by professional associations,<sup>28</sup> and build on prior ED BUP surveys that had achieved adequate response rates using site-specific strategies.<sup>26,27,29</sup> The goal was to obtain a sample strongly representative of emergency physicians working at selected EDs across Canada, rather than a sample weakly representative of all Canadian emergency physicians.

Members of the CRISM network nominated then selected group leads on the basis of their interest in ED OUD interventions, their practice group location and type, their willingness to seek a 75% in-group survey response rate and their ability to act on group-specific survey results. On the basis of these selection criteria, we identified 26 eligible physician groups serving 38 EDs. Although response rates of at least 80% are considered ideal to minimize non-response bias, response rates below 60% have been deemed acceptable for physician surveys.<sup>30,31</sup> We decided a priori to target a 75% target response rate and to exclude participant responses from groups with less than 50% final participation. We excluded locum tenens and resident physicians because the attitudes and practices of such individuals might not reflect the attitudes and practices of the group, given the nature of these positions.

### Survey instrument

We used a validated questionnaire on physician attitudes and practices related to opioid harm reduction<sup>3</sup> that we adapted to specifically address ED BUP practice (Appendix 1, available at [www.cmajopen.ca/content/9/3/E864/suppl/DC1](http://www.cmajopen.ca/content/9/3/E864/suppl/DC1)) while maintaining similar survey domains. These domains included current ED BUP practice and ED BUP-related resources; willingness to perform ED-based OUD-related interventions, including ED BUP initiation, and confidence in performing these interventions; barriers and facilitators to ED BUP initiation; and physician attitudes related to the care of people who use drugs (PWUD). The latter domain included agreement with self-efficacy statements and with 3 components of a standard definition of addiction (i.e., chronic illness, changes in brain neurocircuitry, influence of psychological and environmental factors).<sup>32</sup> Self-efficacy, as defined and adapted by Samuels and colleagues from the Drug and Drug Problems Perceptions Questionnaire, includes physician job satisfaction, self-esteem and perception of PWUD.<sup>3,14,33</sup>

We pilot tested English, French (professionally translated), online and paper versions of the questionnaire with 7 physicians and 1 survey methodologist who were not involved in drafting the questionnaire. We subsequently made modifications for user friendliness, flow and comprehensibility.

### Data collection

Group leads administered the paper survey at regularly scheduled physician group meetings and followed up with online surveys for those not present. Group leads received a budget of up to Can\$10 per group member to fund incentives for participation. Incentives could be individual incentives such as a gift card for each participant or a group incentive such as a shared meal or raffle. Group leads chose the type of incentive and the combination of paper and online surveys best suited to their groups.

Paper and online (Qualtrics, University of British Columbia) surveys were anonymous and available in English and French. The emailed online survey links were “open” (i.e., not password protected), but they were not discoverable by Internet searches by the general public. Survey software cookies monitored completion and prevented completion more than once from the same IP address. If multiple partially complete online surveys existed for the same IP address and the responses indicated that the respondents had the same demographic characteristics (age, sex, years in practice and type of training), only the most complete version was retained for analysis. The 73 questionnaire items over 7 pages were always presented in the same order, without randomization or branching logic. Participants were not obligated to answer all questions and could backtrack to revise answers before they submitted the survey. Online and paper surveys were accompanied by a statement that participation was voluntary and that answering any question implied consent (the statement, available in Appendix 1, was on the opening page of the online survey and in a separate document that was stapled to the paper survey). Physicians declining to participate could turn in a blank paper questionnaire or not complete the online survey.

Because responses contained information that might identify the respondents, all data files were password protected and were transmitted only on secure file-sharing platforms.

### Outcomes

The primary outcome was the frequency with which ED physicians reported prescribing BUP in clinical practice. Secondary outcomes included willingness to provide BUP and confidence in doing so, barriers and facilitators to ED BUP provision and attitudes related to treating PWUD.

### Statistical analysis

We aimed to survey approximately 10% of the estimated 6600 Canadian emergency physicians<sup>34</sup> to capture a range of attitudes and practices across a sample that was diverse in terms of personal and practice setting characteristics. We calculated the group participation rate as the number of participants per group divided by the number of nonlocums staff physicians in each group. We excluded blank questionnaires and questionnaires with only demographic information.

We entered the responses from the completed paper questionnaires into the same secure platform as the online responses, then imported the data into Stata 11.0 (Stata Corp.) for analysis. We conducted descriptive analyses using proportions with ranges and with 95% confidence intervals without adjustment for clustering because we did not do traditional clustered sampling. As questions adapted from existing instruments used different scales with varying numeric ranges, ordinal data were dichotomized for ease of analysis: values above or below the midpoint were considered positive or negative responses, respectively. For 10-point scales, 5 and 6 were considered midpoint values. That is, values of 7–10 were considered to indicate that the respondent was willing and confident and felt major responsibility on the willingness, confidence and responsibility scales. Results are reported according to the Checklist for Reporting Results of Internet E-Surveys (CHERRIES) guidelines,<sup>35</sup> which were modified to apply to a primarily paper-based survey.

### Ethics approval

All groups obtained approvals or waivers from the relevant research ethics board (university-based or health authority-based) in their respective jurisdiction.

### Results

Twenty-six ED groups serving 38 EDs were approached to participate; 3 groups withdrew before survey administration because of group lead availability. One group with 9 out of 26 physicians responding online was excluded because of a low participation rate. Thirty of 291 online surveys and 1 paper survey were excluded for incompleteness or duplication. For the remaining 22 groups serving 34 EDs in 6 Canadian provinces, 652 of 798 (81.7%) physicians responded, with group participation ranging from 59.1% to 100.0% (Appendix 2, available at [www.cmajopen.ca/content/9/3/E864/suppl/DC1](http://www.cmajopen.ca/content/9/3/E864/suppl/DC1)). Most

respondents worked in EDs serving a population of more than 100 000 (86.4%) and completed the survey in English (84.8%). Over half had practised 10 or more years (50.6%) and were male (61.7%) (Table 1).

### ED BUP practice and BUP-related resources

Overall, 64.1% of respondents had provided BUP in clinical practice at least once in their career, while 38.4% had prescribed BUP for home initiation and 24.8% provided BUP (in the ED or for home initiation) at least once per month. For acute opioid withdrawal, 63.5% respondents indicated they would probably use ED BUP and, in the absence of withdrawal, 34.4% would probably prescribe BUP for home initiation. Most (79.8%) believed they had BUP available in the ED, 34.9% reported they had BUP to-go packs available for home initiation, 65.6% had timely access to addiction specialists, 75.3% had access to clinics for ongoing OUD care and 60.2% had a buprenorphine initiation pathway in their ED (Table 2). BUP practice and BUP resources varied among ED groups (Table 2).

### Willingness to initiate ED BUP and confidence

More than two-thirds (68.9%) of respondents were willing to start BUP in the ED and 54.4% were willing to prescribe it for home initiation; 63.5% felt confident in ED BUP initiation, while 47.7% felt confident prescribing BUP for home initiation. Respondents had higher levels of willingness to provide take-home naloxone (92.7%) and confidence in doing so (93.6%) (Table 3).

### Barriers and facilitators to ED BUP provision, and perceived efficacy

Respondents more frequently rated lack of adequate training for ED BUP initiation (58.2%) and lack of time during the ED visit (55.2%) as “very significant” barriers to ED BUP initiation than lack of adequate follow-up options (42.1%) and lack of hospital or ED administrative support (36.5%). Respondents felt that the presence of clinical pathways (91.8%) and specialized ED staff such as addiction nurses (93.5%) greatly increased the likelihood of ED BUP initiation (Table 4). Different ED groups ranked barriers differently.

### Attitudes related to ED BUP provision and PWUD

Nearly two-thirds of respondents (64.2%) felt that initiating BUP for patients with OUD was a major responsibility of ED physicians, while 81.4% viewed dispensing take-home naloxone as a major responsibility. Two-thirds of respondents (66.0%) agreed with the statement “I feel that I am able to work with PWUD as well as other client groups,” while 37.1% agreed with the statement “I feel I can understand PWUD.” A minority of respondents agreed with the statements “I have less respect for PWUD than for most other patients I work with” (17.3%) and “I feel that there is little I can do to help PWUD” (37.0%). In a PWUD care self-efficacy composite based on these statements, 36.6% of respondents scored above the midpoint of the range. Most

**Table 1: Respondents' demographic characteristics**

Characteristic	No. (%) of respondents <i>n</i> = 652*
<b>Gender</b>	
Female	246 (37.7)
Male	402 (61.7)
Other	4 (0.6)
<b>Age, yr</b>	
< 40	260 (39.9)
40–50	219 (33.6)
> 50	173 (26.5)
<b>Province</b>	
British Columbia (10 ED groups working in 14 EDs)	290 (44.5)
Alberta (3 ED groups working in 4 EDs)	94 (14.4)
Saskatchewan (1 ED group working in 3 EDs)	41 (6.3)
Ontario (3 ED groups working in 4 EDs)	102 (15.6)
Quebec (4 ED groups working in 5 EDs)	100 (15.3)
New Brunswick (1 ED group working in 4 EDs)	25 (3.8)
<b>Practice setting population</b>	
> 100 000	563 (86.4)
< 100 000	89 (13.7)
<b>Practice setting type</b>	
Academic hospitals (emergency medicine residency host sites)	486 (74.2)
Community-based hospitals	169 (25.8)
<b>ED group size*</b>	
< 30 group members	182 (27.9)
31–49 group members	289 (44.3)
≥ 50 group members	181 (27.8)
<b>Years in practice</b>	
≤ 5	171 (26.2)
6–10	151 (23.2)
> 10	330 (50.6)
<b>Certification (<i>n</i> = 651)</b>	
CCFP (EM)	342 (52.5)
FRCPC	243 (37.3)
ABEM and other non-Canadian EM	51 (7.8)
CCFP and other FM	15 (2.3)
<b>Survey modality</b>	
Online	252 (38.7)
Paper	400 (61.4)
<b>Language</b>	
English	553 (84.8)
French	99 (15.2)
<p>Note: ABEM = American Board of Emergency Medicine certification, CCFP (EM) = Certification in the College of Family Physicians of Canada (Emergency Medicine), CCFP = Certification in the College of Family Physicians of Canada (without additional emergency certification), ED = emergency department, EM = emergency medicine, FRCPC = Fellow of the Royal College of Physicians of Canada, other FM = other family medicine certification. *Number of staff physicians not including locums (average group size 36.3, range 21–67).</p>	

**Table 2: Respondents' practice and resources for BUP provision**

Characteristic	No. of respondents	% of respondents (95% CI)	Range across physician groups, %*
Frequency of contact with patients who use opioids			
Treat patients who use illicit opioids at least once per shift ( <i>n</i> = 648)	384	59.3† (55.5–63.1)	0.0–95.7
Treat patients who use illicit opioids at least once per month ( <i>n</i> = 648)	595	91.8† (89.7–93.9)	24.1–100.0
BUP practice, past			
Initiate ED or home-based BUP at least once per month ( <i>n</i> = 649)	161	24.8‡ (21.5–28.1)	0.0–76.7
Initiate ED or home-based BUP at least once per year ( <i>n</i> = 649)	358	51.3‡ (55.2–59.0)	3.6–100.0
Initiated ED or home-based BUP at least once in career ( <i>n</i> = 649)	416	64.1‡ (60.4–67.8)	7.1–100.0
Prescribed BUP for home initiation at least once in career ( <i>n</i> = 606)	233	38.4 (34.6–42.3)	0.0–79.1
Ordered BUP for ED initiation at least once in career ( <i>n</i> = 649)	408	62.9 (59.1–66.6)	7.1–100.0
BUP practice, planned			
Would use ED BUP for opioid withdrawal ( <i>n</i> = 649)	412	63.5 (59.8–67.2)	3.4–100.0
Would prescribe BUP for home use ( <i>n</i> = 648)	223	34.4 (30.7–38.1)	0.0–72.1
Availability of resources			
Timely access to addictions specialist ( <i>n</i> = 646)	424	65.6 (62.0–69.3)	22.5–100.0
Clinical pathway for BUP initiation ( <i>n</i> = 646)	389	60.2 (56.4–64.0)	5.1–95.3
BUP available to order ( <i>n</i> = 640)	511	79.8 (76.7–83.0)	7.7–100.0
BUP to-go packages for home initiation ( <i>n</i> = 637)	222	34.9 (31.1–38.6)	0.0–95.5
Peer support workers for patients with opioid use disorder ( <i>n</i> = 639)	245	38.3 (34.6–32.1)	6.7–92.3
Low-barrier clinics for ongoing care ( <i>n</i> = 639)	481	75.3 (71.9–78.6)	11.1–100.0
<small>Note: BUP = buprenorphine–naloxone, CI = confidence interval, ED = emergency department.                      *Range from the ED group with the lowest positive response rate to the ED group with the highest positive response rate.                      †The sum of these percentages is &gt; 100% because at least once per month includes at least once per shift.                      ‡The sum of these percentages is &gt; 100% because at least once in career includes both at least once per year and at least once per month, and at least once per year includes at least once per month.</small>			

(73.6%) agreed with all 3 components of the American Society of Addiction Medicine's definition of addiction (Table 5).

### Interpretation

Among the 22 sites with a participation rate of at least 50%, around two-thirds of ED physicians were willing to use ED-initiated BUP and had done so at some point in their career. Despite this willingness and practice experience, only one-quarter of respondents reported using BUP on a monthly basis and slightly more than one-third had ever written a prescription or provided to-go dosing for home initiation. Physicians rated lack of time and lack of training as the most important barriers to ED BUP provision, and locally developed care pathways and the presence of addictions-trained staff as the most important facilitators. A sizeable minority of ED physicians felt that there was little they could do to help PWUD and had less respect for PWUD than other patients, suggesting that stigma and perceived futility continue to influence attitudes. Barriers, attitudes and practices varied widely among ED groups.

Although a growing body of evidence supports ED BUP initiation, most physicians have yet to incorporate this tool

into routine practice. About one-third of respondents stated they are not willing to prescribe ED BUP or do not feel they have a major responsibility to do so, or both. The other two-thirds may be willing to initiate ED BUP but face multiple barriers, some individual, such as training and attitudes, and some institutional, such as OUD care resources in the ED, the hospital and the community. The frequency of many of the BUP-related barriers and facilitators identified varied among ED groups. The variability in attitudes, resources and barriers among the groups probably explains the observed variability in the willingness to use ED BUP and the self-reported use of ED BUP in practice. The prevalence of patients with OUD in a given ED population probably plays a lesser role in determining BUP practice because most respondents reported attending patients who use opioids every month.

Although many studies have reported on ED-specific or region-based BUP programs,<sup>17,19–22</sup> few studies have reported the practice patterns of individual ED physicians. Compared with a 2018 survey that found 7% of Canadian ED physicians prescribed BUP often or always,<sup>28</sup> a greater proportion of our respondents reported prescribing BUP once a month or more. This 2018 study had an 11% response rate and 19% of the



**Table 3: Respondents' willingness to administer interventions in the ED for patients with opioid use disorder and their confidence in doing so**

Characteristic	No. of respondents	% of respondents (95% CI)	Range across physician groups, %*
<b>Willingness† to provide the following ED interventions</b>			
Refer to detoxification program or addictions clinic ( <i>n</i> = 644)	617	95.8 (94.3–97.4)	82.7–100.0
Provide take-home naloxone kits ( <i>n</i> = 643)	596	92.7 (90.7–94.7)	69.0–100.0
Administer brief screening regarding unhealthy substance use ( <i>n</i> = 645)	517	80.2 (77.1–83.2)	62.1–93.0
Refer to needle exchange program ( <i>n</i> = 633)	500	79.0 (75.8–82.2)	58.6–91.7
Initiate ED-based BUP ( <i>n</i> = 636)	438	68.9 (65.3–72.4)	24.1–97.6
Prescribe or dispense BUP for home start ( <i>n</i> = 627)	341	54.4 (50.5–58.3)	15.8–90.7
<b>Confidence† in providing the following ED interventions</b>			
Refer to detoxification program or addictions clinic ( <i>n</i> = 643)	586	91.1 (89.9–93.3)	82.8–100.0
Provide take-home naloxone kits ( <i>n</i> = 643)	602	93.6 (91.7–95.5)	69.0–100.0
Administer brief screening regarding unhealthy substance use ( <i>n</i> = 640)	519	81.1 (78.1–84.1)	60.0–100.0
Refer to needle exchange program ( <i>n</i> = 630)	463	73.5 (70.0–76.9)	55.6–87.5
Initiate ED-based BUP ( <i>n</i> = 630)	400	63.5 (59.7–67.3)	31.0–97.7
Prescribe or dispense BUP for home start ( <i>n</i> = 623)	297	47.7 (43.7–51.6)	24.1–88.4
<b>Confidence† in the following aspects of ED BUP initiation</b>			
Screen patients ( <i>n</i> = 626)	327	52.2 (48.3–56.2)	20.7–86.0
Conduct discussion regarding ED initiation ( <i>n</i> = 627)	357	56.9 (53.1–60.8)	22.2–90.7
Assess withdrawal severity for appropriateness of initiation ( <i>n</i> = 625)	362	57.9 (54.0–61.8)	21.6–93.0
Administer BUP and provide ongoing prescription ( <i>n</i> = 621)	332	53.5 (49.5–57.4)	16.7–90.7
Discharge with prescription ( <i>n</i> = 614)	283	46.1 (42.1–50.0)	13.8–93.0
Arrange appropriate follow-up ( <i>n</i> = 616)	348	56.5 (52.6–60.4)	17.6–93.0

Note: BUP = buprenorphine–naloxone, CI = confidence interval, ED = emergency department.  
 \*Range from the ED group with the lowest positive response rate to the ED group with the highest positive response rate.  
 †At least 7 on a 1–10 scale.

respondents worked in EDs with fewer than 30 000 visits per year. Our study's self-reported BUP prescribing frequency more closely approximates that found among 84 ED physicians in a single metropolitan area in the United States, where one-third reported prescribing BUP in the last 3 months.<sup>29</sup> Overall, our respondents' willingness to prescribe BUP, their confidence in doing so and the likelihood that they would prescribe BUP were all higher than the finding from a study of 268 clinicians at 4 US EDs in different geographic areas in which 21% of respondents expressed "readiness" to initiate ED BUP.<sup>26</sup> It is worth noting that most Canadian physicians face fewer restrictions in prescribing BUP than their US counterparts and that our study had only 1 group in a province (Saskatchewan) that requires special BUP prescribing authorization.

The gap between willingness to use ED BUP and regular practice probably stems from both identified barriers and underlying stigma toward PWUD. Nevertheless, the apparent increase over previously reported data<sup>3</sup> in ED physician comfort in providing take-home naloxone — an intervention that has been in place for relatively longer and may require fewer resources and less training — provides hope that comfort in providing BUP

will likewise increase. Our respondents identified lack of time and lack of training as the key barriers to BUP initiation, consistent with prior findings among ED physicians<sup>25–27,29,36,37</sup> and primary care physicians.<sup>38,39</sup> Similar issues had previously arisen during implementation of take-home naloxone programs.<sup>3</sup> The majority of our study respondents did not feel that linkage to follow-up care was a substantial problem, although it was an important barrier in some ED groups, as it is in the US.<sup>26,27,29</sup> Our finding that physicians valued addictions-trained ancillary staff and locally developed pathways is consistent with the findings of other North American studies.<sup>25–27,29</sup>

Although our study physicians' self-efficacy score in treating PWUD was higher than previously reported elsewhere,<sup>3</sup> the low proportion of physicians scoring highly is discouraging and may reflect the lack of PWUD treatment resources identified by some of our ED groups, frustration with ED care of PWUD,<sup>40</sup> lower clinical regard for PWUD than for people with other conditions<sup>41</sup> and persistent stigma toward people with OUD and OUD-related medications.<sup>20</sup>

Time constraints in the ED may be alleviated by easy-to-use, locally appropriate clinical pathways and the availability

**Table 4: Barriers, facilitators and perceived impact of initiation of buprenorphine–naloxone in the emergency department**

Characteristic	No. of respondents	% of respondents (95% CI)	Range across physician groups, %*
<b>Barriers rated as “very significant”†</b>			
Lack of adequate training ( <i>n</i> = 631)	367	58.2 (54.3–62.0)	14.0–95.2
Lack of time during clinical encounter ( <i>n</i> = 625)	345	55.2 (51.2–59.1)	37.7–79.3
Lack of physical care space for initiation ( <i>n</i> = 601)	298	49.6 (45.6–53.6)	0.0–69.4
Lack of adequate outpatient follow-up options ( <i>n</i> = 598)	252	42.1 (38.2–46.1)	0.0–96.6
Lack of hospital or ED administrative support ( <i>n</i> = 602)	220	36.5 (32.7–40.4)	0.0–89.3
Limited knowledge of research ( <i>n</i> = 607)	207	34.1 (30.3–37.9)	4.7–58.3
<b>Facilitators rated as having “strong impact”‡</b>			
Availability of specialized staff ( <i>n</i> = 630)	589	93.5 (91.6–95.4)	75.0–100.0
Availability of clinical pathways ( <i>n</i> = 624)	573	91.8 (89.7–94.0)	75.0–95.5
ED BUP initiation is common local practice ( <i>n</i> = 628)	541	86.1 (83.4–88.9)	58.8–100.0
Evidence that BUP decreases overdose mortality ( <i>n</i> = 623)	535	85.9 (83.1–88.6)	64.3–100.0
Timely access to addictions specialist ( <i>n</i> = 627)	532	84.9 (82.0–87.7)	64.3–100.0
Supportive recommendations from professional organization ( <i>n</i> = 626)	507	81.0 (77.9–84.1)	53.3–100.0
Support from ED nursing staff ( <i>n</i> = 628)	511	81.4 (78.3–84.4)	58.3–100.0
Local leaders who recommend ED BUP initiation ( <i>n</i> = 616)	456	74.0 (70.6–77.5)	41.7–96.2
<b>Perceived public health effect of ED BUP initiation§</b>			
Decrease in deaths from opioid overdose ( <i>n</i> = 634)	506	79.8 (76.7–82.9)	56.3–96.3
Decrease in 911 calls for opioid overdose ( <i>n</i> = 632)	387	61.2 (57.4–65.0)	36.8–85.0
Decrease in ED visits for opioid overdose ( <i>n</i> = 634)	379	59.8 (56.0–63.6)	36.0–92.3
Decrease in overall opioid use ( <i>n</i> = 632)	324	51.3 (47.4–55.2)	21.7–69.2

Note: BUP = buprenorphine–naloxone, CI = confidence interval, ED = emergency department.  
 \*Range from the ED group with the lowest positive response rate to the ED group with the highest positive response rate.  
 †“Very significant” is a score of at least 4 on a 1–5 scale.  
 ‡“Strong impact” is a score of at least 7 on a 1–10 scale.  
 §“Decrease” is a score of at least 4 on a 1–5 scale.

of ED-based specialized staff to help with ED BUP. Gaps in physician training for ED BUP, particularly for home initiation, and gaps in physicians’ confidence in treating PWUD may be remedied with persistent knowledge translation and continuing education for practising physicians and more curricular content on OUD treatment for ED physicians in training, as advocated by resident leaders.<sup>42</sup> The variability in the frequency of ED BUP use may be put to use: high-utilizer EDs may be able to coach low-utilizer EDs in their region to increase clinicians’ BUP-related confidence. Bias in caring for PWUD may be mitigated with training in trauma-informed care and the roots of addiction.<sup>43</sup>

As centres apply different approaches to reducing the barriers to ED BUP, rigorous program evaluations will help identify the most effective strategies, although these will probably vary among regions. Moving forward, it is essential to engage ED leaders, physicians, nurses and a wide range of ED support staff. PWUD themselves should have the opportunity to share their opinions on ED BUP programs and to participate in the design and implementation of these programs.

**Limitations**

The withdrawal of 3 groups before survey administration and 1 group’s exclusion because of low participation (for a total of 4 out of 26 possible ED groups) is unlikely to have affected the overall results of the study. Because EDs with fewer than 30 000 annual visits were not approached, our results may not be generalizable to smaller EDs in rural settings where family doctors without emergency training represent more than the 2% of providers in our sample.<sup>34</sup>

Although group selection based on the presence of a lead physician may preferentially include groups more supportive of ED BUP, this bias, if anything, would amplify our finding that few emergency physicians start buprenorphine routinely and that many are still unwilling to do so. We minimized the risk of social desirability bias and possible group lead coercion by keeping responses anonymous and separating survey responses from incentive programs requiring identification. Although self-reported BUP prescribing could be subject to recall error or recall reflecting a respondent’s experience at a prior site of practice, this potential bias is unlikely because most questions addressed current practice and because ED

**Table 5: Respondents' attitudes toward interventions for patients with opioid use disorder**

Characteristic	No. of respondents	% of respondents (95% CI)	Range across physician groups, %*
Respondent agreement that emergency physicians have a "major" level of responsibility† to perform the following interventions in the ED			
Referral to detoxification programs or addictions services (n = 629)	513	81.6 (78.5–84.6)	60.0–100.0
Provision of take-home naloxone kits (n = 629)	512	81.4 (78.3–84.4)	52.0–100.0
Screening and counselling for interpersonal violence (n = 626)	431	68.9 (65.2–72.5)	47.6–90.0
Screening and education regarding substance use (n = 626)	429	68.5 (64.9–72.2)	58.6–83.7
BUP initiation for opioid use disorder (n = 626)	402	64.2 (60.5–68.0)	31.0–90.7
Referral to needle exchange program (n = 618)	359	58.1 (54.2–62.0)	35.7–76.9
Counselling for smoking cessation (n = 622)	262	42.1 (38.2–46.0)	20.0–61.8
Screening for human immunodeficiency virus (n = 619)	239	38.6 (34.8–42.5)	13.0–74.4
Respondent agreement‡ with the following statements			
I feel that I am able to work with PWUD as well as other client groups (n = 627)	414	66.0 (62.3–69.7)	20.7–88.9
One can get satisfaction from working with PWUD (n = 626)	400	63.9 (60.1–67.7)	35.0–76.3
It is rewarding to work with PWUD (n = 628)	233	37.1 (33.3–40.9)	13.8–60.9
I feel I can understand PWUD (n = 623)	231	37.1 (33.3–40.9)	11.8–60.0
I feel that there is little I can do to help PWUD (n = 625)	231	37.0 (33.2–40.8)	14.0–82.8
I feel that I am a failure with PWUD (n = 615)	159	25.9 (22.4–29.3)	5.0–79.3
I often feel uncomfortable working with PWUD (n = 595)	105	17.6 (14.6–20.7)	0.0–42.9
I have less respect for PWUD than other patients (n = 602)	104	17.3 (14.2–20.3)	4.9–25.9
Composite self-efficacy at least 4 on 1–5 scale (n = 576)	211	36.6 (32.7–40.6)	0.0–66.7
Respondent agreement§ with the following ASAM statements			
Addiction is influenced by psychological and environmental factors (n = 632)	615	97.3 (96.0–98.6)	88.0–100.0
Addiction is a chronic medical illness similar to asthma, diabetes and hypertension (n = 629)	526	83.6 (80.7–86.5)	69.6–100.0
Addiction is the result of changes in brain neurocircuitry (n = 624)	506	81.1 (78.0–84.2)	54.3–95.2
Agreement with all 3 statements (n = 621)	457	73.6 (70.1–77.1)	48.6–85.7

Note: ASAM = American Society of Addiction Medicine, BUP = buprenorphine–naloxone, CI = confidence interval, ED = emergency department, PWUD = people who use drugs.  
 \*Range from the ED group with the lowest positive response to the ED group with the highest positive response.  
 †Score of at least 7 on a 1–10 scale.  
 ‡Score of at least 5 on a 1–7 scale.  
 §Score of at least 4 on a 1–5 scale.

BUP is a recent practice, first described in 2015.<sup>17</sup> The questionnaire did not inquire about provincial regulations that may affect BUP practice patterns.

All groups did not conduct the survey at the same time and there may have been changes in education, attitudes or regulations throughout the survey administration period. The questionnaire was lengthy and probably contributed to a trend to slightly lower completion of later questions. The questionnaire's French translation may have failed to capture subtle language nuances.

**Conclusion**

A minority of Canadian ED physicians prescribe BUP on a routine basis. However, our results highlight ED physicians'

willingness to provide BUP, addressable barriers and modifiable attitudes that should provide optimism for the incorporation of ED BUP into practice, as some ED groups have already accomplished. A variety of ED-specific measures to address study-identified barriers may help ED physicians to initiate this life-saving treatment more frequently.

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