

CACHC | March – August 2020

Cool Aid Community Health Centre Report on Risk Mitigation Guidance Prescriptions

Providing “Safer Supply” in CAMICO Sheltering Sites,
Outreach and Primary Care Practice



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About the Cool Aid Community Health Centre

Victoria Cool Aid Society's (VCAS) Community Health Centre (CACHC) provides low-barrier health services to inner-city populations that are economically vulnerable, have complex medical needs, and face multiple barriers to accessing care. Clients of CACHC experience homelessness, mental health issues, infectious disease, problematic substance use, and chronic illnesses.

About This Report

The overall focus of this research is to explore the early implementation and impacts of British Columbia's Risk Mitigation Guidance (RMG) at the CACHC through a chart review and informal conversations with CACHC staff and community researchers. In this research, we are exploring the impacts of implementing RMG in the context of an illicit drug overdose emergency, exacerbated by COVID 19 restrictions and service closures in our inner-city health care clinic and outreach services in temporary housing settings in Victoria, British Columbia.

The primary aims of this report were to:

1. Describe the RMG program at the CACHC;
2. Describe the characteristics of clients participating in RMG through the CACHC;
3. Describe the RMG prescribing practices of physicians at the CACHC;
4. Describe early outcomes of the RMG program at the CACHC; and
5. Describe challenges faced by clinicians participating in RMG prescribing at CACHC.

Acknowledgements

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Methods

Data Collection. A chart review was conducted using the CACHC’s electronic medical record system. Clients who received prescription opioids, stimulants and benzodiazepines between March 2020 and August 2020 under the Risk Mitigation Guidance (RMG) were included. Clients were classified as having received stimulant RMG if they were prescribed Methylphenidate, Dexedrine and Adderal and classified as having received opioid RMG if they were prescribed hydromorphone, oxycodone or M-Eslon. Data were extracted from electronic medical records into an excel database. Detailed descriptions of each variable in this report are available in a separate supplemental file. As not all data is recorded in client electronic medical records, missing information was recorded as “unknown.” Given this limitation, all results from this report should be considered preliminary in nature and interpreted with due caution. All authors participated in the interpretation of results and findings. Significant differences of opinion were resolved through discussion and review of report findings. Except where otherwise noted, final interpretations were achieved through consensus. Where appropriate we have noted limitations, alternative explanations, and key considerations that characterize the different viewpoints on each issue. All interpretations should be regarded as preliminary given the nature of chart review data, the limited scope of correlational findings, and other limitations inherent in the methods described here. Where possible, results from the chart review have been synthesized with the observations of prescribing physicians and CACHC staff.

Data Analysis. Analyses of data were conducted in partnership with the Canadian Institute of Substance Use Research (CISUR). Results from these analyses form the basis of this report, with guidance provided by CACHC prescribers and staff to inform the interpretation of our results.

Ethics Approval. Ethical review for use of secondary data from this chart review was conducted by the University of Victoria’s Human Research Ethics Board.



Charting

CACHC Physicians and Nurses enter patient medical information into electronic charting systems.



Chart Review

Individual charts are reviewed to identify people receiving an RMG prescription and data is extracted from charts into an excel database.



Data Analysis

Data from the excel database is used to calculate descriptive and bivariable statistics using R studio.



Interpretation

Quantitative results are shared with physicians and researchers and discussed to understand what they might say about our program.



Executive Summary

The overall focus of this report is to explore the early implementation and impacts of British Columbia's Risk Mitigation Guidance (RMG) at the Cool Aid Community Health Centre (CACHC) through a case series design. In this research, we are exploring the impacts of implementing RMG in the context of an illicit drug overdose emergency, exacerbated by COVID 19 restrictions and service closures in our inner-city health care clinic and outreach services in temporary housing settings in Victoria, British Columbia (BC).

Key Findings

Multiple interventions occurred for the patient population that the CACHC serves within the timeframe of this study including: new supportive housing options for many patients, risk mitigation prescribing, outreach services, embedded health care services in supportive housing with increased access to primary care and addiction medicine services. No attempts were made to statistically adjust for the impact of these confounding variables on the findings stemming from the RMG work reviewed here. While we are not able to isolate the effects of RMG from these other interventions, our clinical work and data analyses highlight several key preliminary findings:

- Many recipients of RMG have complex health needs due to experiences of multiple reinforcing co-morbidities related to mental health, substance use, chronic pain, and infectious disease.
- Over half of clients self-reported reduced use of illicit drugs when continuing on RMG. Other positive outcomes reported by participants included improvements in health and mental health, reduced cravings and withdrawal symptoms, more money to spend in other ways, improved relationships including those with medical service providers, and an opportunity to focus on health issues like HCV treatment.
- Clients who regularly accessed OAT and RMG were more likely to stay on RMG.
- In opioid users, better outcomes were obtained for overdose prevention and illicit opioid use when recipients received both OAT and hydromorphone RMG prescriptions.
- Continuance of RMG may also be associated with higher quality care and engagement with wrap around supports (compared to patients who discontinue RMG), including mental health medications, HCV care, and temporary sheltering. These findings highlight the importance of providing clients with stabilizing and wrap-around supports as well as the benefits of positive relationship building between clients and providers.

- For stimulant RMG recipients, physicians noted clear benefits in clients with previously diagnosed or suspected ADHD. Absent this clinical spectrum or diagnosis, physicians observed little benefit and possible increased harms associated with stimulant RMG medications. Results from our chart review seem to possibly suggest that people with ADHD were nevertheless less likely to stay on RMG prescriptions. However, sub-analyses were not possible due to sample size constraints.
- Clinician concerns about RMG diversion by recipients, and its subsequent suspected population level harms is a significant program challenge which needs to be studied and addressed in future RMG guidance and clinical programs.
- Higher doses of hydromorphone were associated with continuance on RMG prescriptions. Further research is needed to understand better patient-specific needs and prescribing guidelines.
- People who experienced chronic pain were more likely to continue receiving RMG. Chronic and complex pain syndromes can play an important role in the evolution of severe opioid use disorder, highlighting the need for innovative pain management strategies which may include opioid RMG and OAT.
- Key populations – including younger, homeless, and polysubstance using clients – were less likely to continue on RMG.
- Ongoing evaluations of the role that physicians and nurses play in prescribing RMG is needed, especially considering the moral hazards inherent in the prescription of potentially dangerous substances, such as those prescribed under the RMG guidance whose affect at a population level when RMG is made widely accessible is yet unknown. For people who inject drugs, there is also a need to ensure that RMG and OAT prescriptions meet their needs in a way that does not give rise to increased harm.
- Further work is needed to identify optimal RMG prescribing practices (e.g., fentanyl patches, sufentanyl, powdered fentanyl, diacetylmorphine, injectable hydromorphone) and for whom these are appropriate. Exploring witnessed or individualized on demand dispensing in overdose prevention sites or novel methods may address the harms caused by diversion and help alleviate clinician hesitancy in RMG prescribing.
- Finally, it is important that policy makers work with communities to find non medicalized, nonprescription pathways for the provision of acceptable and effective safer drug supply. This is a necessary ongoing policy development process that will require the committed engagement of clients, front-line service providers, professional organizations, and policy makers at multiple levels of government. Feedback from RMG recipients and people with lived and living experience of drug use is urgently needed to inform best practices.

Chapter 1

Program Description

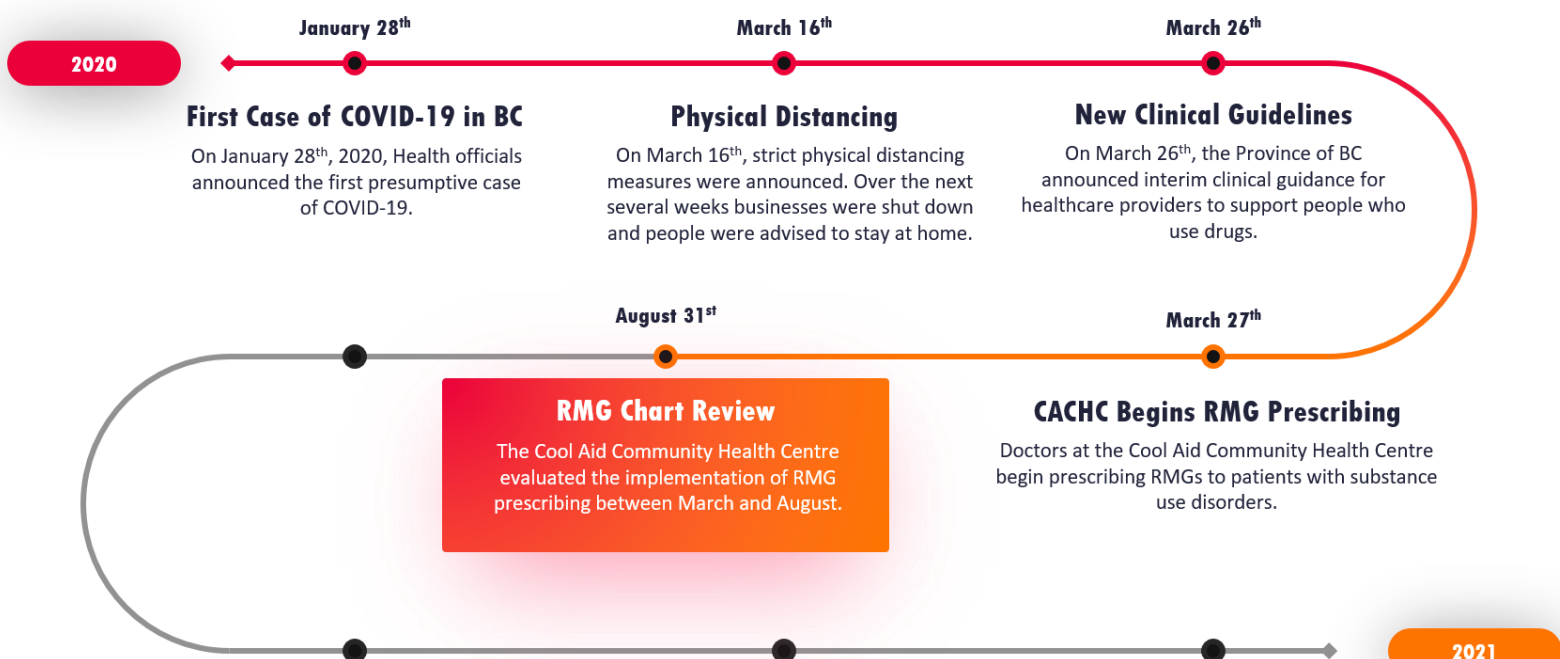
Background

On March 17th, 2020, a public health emergency was declared in British Columbia (BC) in response to the COVID-19 pandemic. This declaration was made in the context of the ongoing public health emergency declared four years earlier in response to rising overdose rates across the province. Each of these public health emergencies pose serious risks to the dignity and well-being of people who use drugs (PWUD). Together, their harmful effects have taken a devastating toll on communities across BC.

At the heart of these public health emergencies, the criminalization of substance use and the absence of appropriate regulation of illicit drug markets has produced inescapable dangers for people who access these markets. The COVID-19 pandemic contributes to these dangers by not only exposing PWUD to a deadly pathogen (coronavirus), but by also disrupting illicit drug supply chains and the provision of harm reduction, addiction treatment and other support services for PWUD.^{1,2,3}

Underscoring the impact of these risks, Victoria has had over 350 overdose deaths since the 2016 pronouncement of the opioid overdose public health emergency, and 99 new overdose deaths since COVID-19 was declared a public health emergency (i.e., April to November 2020)⁴.

Figure 1. Timeline of Events Leading to RMG prescribing at CACHC



In response to these dual public health emergencies, the province of British Columbia, in collaboration with the BC Centre on Substance Use, issued interim clinical guidance titled Risk Mitigation: in the Context of Dual Public Health Emergencies on March 26th, 2020 (See *Timeline in Figure 1*). For a full understanding of this document, please refer to the guidance itself. In brief, this guidance was developed to assist health care providers to support clients to mitigate competing risks and enable social distancing and self-isolation measures, where possible, to reduce and prevent the spread of COVID-19. Initially written with the intention of supporting people who needed to shelter in place due to COVID symptoms and positive cases, the guidance was quickly taken up in Vancouver's DTES and Victoria to prescribe more broadly to clients at risk of death from using street drugs, which resulted in nearly three thousand individuals accessing RMG prescriptions in the province. Physicians, in collaboration with outreach nurses, working through the Victoria Inner City COVID Response-Outreach (VICCR-O) team immediately started prescribing according to the guidance document, providing oral opioids (ie., hydromorphone) and/or stimulants (ie., Dexedrine and Methylphenidate), many times in conjunction with existing or new Opioid Agonist Therapies (OAT) such as methadone or extended release morphine (Kadian) and Suboxone to clients at risk.

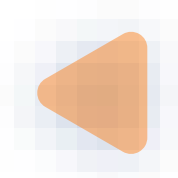
Program Description

The RMG guidance was implemented at the CACHC in late March 2020 by the clinical team at the CACHC, located at 713 Johnson Street, and at several COVID-19 Sheltering Sites established by the province.

The Clinical Team

The Clinical Team at the CACHC includes 10 General Practitioners (GP's), nurse practitioner, 3.2 FTE nurses trained in advanced practice in primary care and STI certified practice, as well as pharmacists, dieticians, counsellors, outreach workers, acupuncturist, physiotherapist, four medical office assistants, and a research coordinator. The team manages HIV care for over 200 clients and a large group of clients with substance use and mental health issues. In 2019/20 nearly half of CACHC clients (2294) (46%) had a billing code for a significant mental health diagnosis (depression, anxiety, bipolar and/or schizophrenia), 2511 (50%) had a billing code of a substance use disorder; 660 (14%) clients at CACHC had been on Opioid Agonist Therapy (OAT) in the last year. Three pharmacists work with 3 pharmacy techs to provide prescriptions to CACHC clients and others in the community. Clinicians often have other roles within the community that enhance expertise and support continuity of care including medical support to ICMT, Victoria Native Friendship Centre, Vancouver Island Correctional Centre, Portland Hotel Society, The Harbour supervised consumption site, Rapid Access Addiction Clinic, Pandora OAT clinic, Detox, PORT palliative outreach program, Foundry Youth Clinic, local hospitals and UBC family medicine program.

In early March 2020, COVID measures meant reduced in-person visits at 713 Johnson while phone, email, and virtual visits increased. Clients were still seen in-person for wound care, injections and other necessary visits.



COVID-19 Sheltering Sites

In late March 2020, sheltering sites were created for people who were under-housed or homeless (specifically those living in Topaz Park and on Pandora Avenue), at risk of COVID-19, and deeply impacted by social program closures in Victoria, BC. These sheltering sites included locations at Howard Johnson, Travelodge, Save-On Foods Arena, Capital City Centre, Paul's Motor Inn (Le Soleil) and Comfort Inn (Munsey Place). Several of these sheltering sites have on-site overdose prevention sites run by harm reduction agencies, including an inhalation space at the Comfort Inn. Island Health initially supported medical service delivery to encamped individuals through Victoria Inner City COVID Response Outreach (VICCR-O) which then evolved into a service contracted with CACHC to provide medical care for people sheltered in these sites.

CACHC created the Cool Aid Mobile Inner-City Outreach (CAMICO) team on May 11th, 2020. CAMICO consists of four clinics, each clinic is staffed by two nurses, 5 days/week. CAMICO also has five physician lines, on-call and in person, serving the sheltering sites five days a week with weekend on call coverage. These sheltering sites, now referred to as supportive housing sites and the primary care provided there, along with outreach services to encampments, have been instrumental in provision of RMG prescriptions beyond in-person clinic and telehealth visits.

Building Clinical Team Standards of Care

The Provincial Risk Mitigation Guidance provided the basis for prescribing RMG prescriptions at CACHC/CAMICO. However, the guidance is not prescriptive with regard to implementation. Throughout the COVID-19 pandemic, CACHC/CAMICO clinicians have met weekly to discuss issues related to COVID-19, sheltering sites, and RMG prescribing in order to share and explore case management strategies, working through the challenges of providing evidence-informed care in new prescribing territories. Issues of concern included diversion, the risk of psychosis associated with stimulant prescribing, and the connection between RMG and other OAT. This was an important process because CACHC/CAMICO clients are often seen by more than one prescriber, making consistency between clinicians vital to providing equitable care. Using the BCCSU guidance document as a foundation for prescribing practice, CACHC/CAMICO has also consulted with addiction medicine leaders in other health authorities in BC (Fraser and Vancouver Coast Health) to learn from their challenges and processes in establishing clinical care standards for RMG prescribing.

Inclusion/Exclusion Criteria for RMG Prescribing

Based on the Provincial Risk Mitigation Guidance and standards of care developed by the Clinical Team, RMG prescribing was made available to all clients with active, recent, and/or ongoing substance use disorders who are at risk of overdose, death, and harms associated with illicit substance use – specifically, opioids, alcohol, benzodiazapines, stimulants, nicotine. Individuals were not eligible if they were already stable on OAT, were connected with another OAT provider or whose medications are prescribed by a psychiatrist (unless consent has been obtained from the client's OAT prescriber or psychiatrist). If clients had a recent (within 1-2 months) OAT provider, clients were directed to see their OAT provider for RMG for discussion around whether or not RMG prescribing would be part of their ongoing care plan and if clients were contemplating

stimulant prescriptions and had a recent psychiatrist, physicians attempted to consult them before starting clients on RMG.

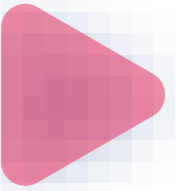
Initially, homeless encampments were targeted for RMG prescribing with the intent to reduce need to engage in street economy and illicit drug use and trade, thus reducing potential transmission of COVID-19. Other priority clients included clients moved into sheltering sites that would be in danger of overdosing by using alone in their rooms. CAMICO and CACHC have limited youth populations under medical care so all clients except two were 19 years or older.

Prescription details

Open communication between client and clinicians is vital to the RMG prescribing process. Efforts were made by prescribers to ensure that dose and medication were decided on collaboratively with each individual, in a shared decision-making process. These prescribing decisions depended on co-prescription of OAT, how much money they spend each day on illicit drugs, and patterns of substance use (i.e., daily or binge), as well as overdose history. The dose was able to be adjusted over time, with a goal of the person being comfortable and not needing to access the illicit drug market and to be able to adhere to public health measures such as physical distancing and staying home when sick.

Within the constraints of established standards of care and client needs, The Provincial Risk Mitigation Guidance guided the prescribing practices of CAMICO/CACHC physicians, as described below:

- **Opioid RMG.** Hydromorphone 8mg oral tablets were offered, starting at 4-6 tablets /day and a plan to reassess frequently. OAT was offered at the same time as RMG and if declined, the client prescribing history of OAT was documented, including the reason for declining. For some clients, other available opioids were considered on a case-by-case basis as per client preference, an inability to tolerate or treatment failure with hydromorphone (ie. codeine, short acting morphine, oxycodone, as an alternative to hydromorphone). OAT continued to be offered at each follow-up visit. In cases where physicians prescribed beyond the suggested maximum daily dose of 14 tablets per day in the BCCSU guidance document, it was recommended that a second physician be consulted on the case and clear documentation provided. Clinicians were cautious to not prescribe above 20 tablets per day. Prescriptions are generally for 14 days, with considerable variation around this depending on client readiness and needs.
- **Stimulant RMG.** Stimulant RMGs were prescribed with caution, particularly for clients at risk for psychosis. If psychosis was a concern, physicians sought to clarify whether the client had a psychiatrist and called the psychiatrist before initiating. Per the BCCSU Guidance, Methylphenidate and Dexedrine were treated as the first line RMG medications. The suggested prescribing was up to 60 mg/day. Consideration was given for both short and long-acting stimulants and clients were monitored for adverse events (e.g., new or increase in existing psychotic or manic symptoms, insomnia, aggression,



palpitations, tachycardia, hypertension, seizures). Contraindications for stimulant RMG included marked anxiety, agitation, glaucoma, seizure, severe hypertension, motor tics, a personal or family history of Tourette's. CAD, structural heart disease, cardiomyopathy, cardiac arrhythmias, or other serious cardiac conditions in which prescription stimulants could be harmful. If prescribing to a client with a cardiac condition, ongoing documentation that the benefits continue to outweigh any risks was expected.

- **Benzodiazapine PPRM.** Significant caution was used in prescribing benzodiazapines, especially if the client also consumed opioids and/or alcohol. Low doses, documenting alcohol and opioid use carefully, weekly assessments and the intent to stabilize and wean were expected.

Delivery Support

For some clients, clinicians were able to identify local pharmacies that have delivery services and the capacity to transport medication to the client's place of residence. Prescriptions were sent to those pharmacies and medications were delivered directly to clients by the pharmacy under their appropriate regulations. There has been an increased level of communication and case management with pharmacists and pharmacy techs who are actually seeing clients daily for dispensation.

Client engagement

During the first three months of RMG prescribing, clinical staff expected to see clients weekly, although this degree of follow up was often difficult to achieve. During these meetings, clinical staff documented the impact of RMG, client engagement, intoxication, sedation, cognition, and overall presentation. This included assessments of withdrawal symptoms, overdose events, benefits of PPRM, and reason for dosage changes. Urine Drug Screens (UDS) were used based on standard practices for OAT and overdose prevention. Clients typically saw multiple prescribers, particularly if their regular prescriber was not available. Nurses within clinics established at sheltering sites took on a large role in assessing and documenting these clinical indicators and encouraging UDS.

Primary care has been extensive, especially for those who have engaged in care within sheltering sites and becomes increasingly important as patients begin to stabilize and settle within their housing situation. Primary care has included HCV testing and treatment, advocacy and support for pregnancy, HIV medication support and adherence monitoring, eye glasses, other mobility needs addressed, counselling, referrals for diagnostic investigations, wound care, laboratory diagnostics collected onsite for evaluation of chronic health issues, chronic medical and psychiatric disorders, transportation to and from diagnostic imaging, onsite assessment by an occupational therapist for determining appropriate mobility aids and room modifications, safety and mobility aids; and Persons with Disability (PWD) application for financial support and access to associated services.

About RMG Recipients

(N = 313)

Current Client

53.4%

Past Client

13.4%

New Client

28.3%

Non-Clients

3.2%

63.9%

Male

39.5 years

Mean age

82.7%

Homeless at time of prescription

32.8%

Has or recently applied for PWD status

16.9%

Asthma/Bronchitis/COPD

17.9%

FAST/TBI/OBS/Stroke

37.1%

Chronic Pain

12.5%

Dental Pain/Issues

42.5%

Cellulitis

15.7%

ADD/ADHD

33.9%

Anxiety

32.6%

Depression

4.5%

Bipolar

25.2%

PTSD

4.2%

HIV

39.6%

Hepatitis C Antibody Positive

Chapter 2

Participant Characteristics

Who is Accessing RMG Prescriptions?

During the reporting period (March-August 2020), 313 clients were identified within the CACHC EMR as having been prescribed alternatives to illicit drug supply under RMG. A significant number of clients (53.4%, n=167/313) were previously under the care of CACHC clinicians while 94 clients (28.3%) were new to CACHC or had rarely or not been seen for years (13.4%, n=42/313). Some clients within the cohort were started by non CACHC/CAMICO prescribers or accessing prescribers for Opioid Agonist Treatment (OAT) such as suboxone, methadone, or Kadian at the Pandora OAT Clinic. The majority of the RMG clients are aged 30-49 (59.5%, n=196/313) and 63.9% (n=200/313) were identified as male in the EMR.



Homelessness

Over 82% (n=259/313) of clients were homeless when first accessing RMG Rx or before entering the temporary sheltering sites. While many were not documented, it is clear that a number of unhoused persons at Topaz, Pandora and Beacon Hill Park had contact with RMG prescribing clinicians, and at least 25% (n=79/313) started their RMG Rx in an encampment. Over 60% (n=194/313) of clients seen were offered temporary accommodations in the hotel sites and The Save on Foods Memorial Arena. This population has been fluid, making it difficult to continue prescribing. At least 18 people have been evicted from sites and others have moved after giving birth, leaving town or becoming incarcerated.

Construct	N	%
Homeless at time of RMG Rx		
Yes	259	82.7
No	51	16.3
Unknown	3	1.0
Started RMG Rx in encampment		
Yes	79	25.2
No	216	69.0
Unknown	18	5.8
Have spent time sheltering at		
Topaz	58	18.5
Pandora	4	1.3
Rock Bay Landing encampment	4	1.3
Crystal Pool encampment	2	0.6
Cecilia ravine	2	0.6
Centennial Square	2	0.6
Beacon Hill Park	9	2.9
Admitted to a CAMICO temporary shelter		
Yes	194	62.0
No	119	38.0
Which Site		
Arena	24	7.7
Capital City	29	9.3
Comfort Inn	41	13.1
Howard Johnson	37	11.8
Paul's Motor Inn	5	1.6
Travel Lodge	55	17.6

Health - Co-Morbidities Within Population

Many clients were living with chronic conditions that are exacerbated by homelessness and substance use such as asthma/COPD/bronchitis (16.9%, n=53/313) and soft tissue abscesses and cellulitis (42.5%, n=133/313). Many clients experience chronic pain (116 or 37.1%), as well as

acute dental pain or infections (12.5%, n=39/313). A total of 56 (17.9%) had impaired cognition resulting from traumatic brain injuries, including those resulting from hypoxia related to overdose.

Temporary sheltering of Victoria’s homeless population, combined with daily dispense RMG Rx, has created a unique opportunity to engage clients in hepatitis C (HCV) care. Clients lost to follow up from CACHC or who were too unstable to treat were provided with an opportunity to access 8-week (3 pill a day) or 12-week (1 pill a day) HCV treatments. Within RMG clients, a total of 124 clients have been identified as HCV antibody positive. Of these, 38 (30.6%) are currently living with HCV, 18 (14.5%) had spontaneously cleared HCV, and 32 (25.9%) had been previously treated successfully. Clinic nurses have started 22 (17.8%) RMG clients on treatment. Currently, 28 (22.5% of) clients are either on treatment or have finished and require SVR bloodwork to determine treatment success.

At least 69 (22.0%) of clients are funded by Person’s with Disability (PWD) applications and to date, 34 PWD applications have been recently submitted on behalf of clients, in order to increase their income and level of benefits for eyeglasses, transportation, dental care, mobility devices, and medication coverage.

Construct	N	%
Comorbidities		
Asthma/COPD/Bronchitis	53	16.9
FASD/Traumatic Brain Injury/OBS/stroke	56	17.9
Chronic Pain	116	37.1
Dental Pain/issues	39	12.5
Cellulitis	133	42.5
Living with HIV	13	4.2
Hepatitis C (HCV) status		
No HCV	148	47.3
Unknown	41	13.1
HCV antibody positive (AB+)	124	39.6
HCV Treatment status		
		/124
AB+ Unknown RNA	8	6.5
Cleared	18	14.5
On treatment	22	17.8
Treated - no Sustained Viral Load (SVR)	6	4.9
Treated SVR	32	25.9
Untreated	38	30.6
PWD Status		
Has PWD	69	22.0
Applied recently	34	10.8
No	33	10.5
Unknown	177	56.5

People with Mental Health and Substance Use Needs

RMG clients experience extremely high levels of mental health and substance use challenges, as well as insecure housing and low-income levels. Investigation within chart review and consultations reveal that over 71% had mental health diagnoses and queries identified in their EMR with anxiety (33.9%), depression (42.6%), bipolar (4.5%), PTSD (25.2%), ADHD (15.7%) commonly documented and 25.9% had diagnoses or encounters related to complex mental health including psychosis (including drug-induced), Borderline Personality Disorder, delusional and conduct disorder. More than 28% were currently prescribed medications related to their mental health. Almost all (98.4%, n=308/313) of clients endorsed recent illicit substance use (*opioids (91.1%), stimulants such as crystal meth (68.1%) or crack cocaine, GHB, or non-prescription benzodiazepines*), with many using multiple substances (70.9%). A large percentage of clients use inhalation methods to ingest substances (71.9%). Comparatively, 61.0% reported recent injection drug use (IDU) while 72.8% have a history of IDU. At least 79 (25.2%) had recently overdosed in the past six months while many more had overdosed in the past.

Construct	N	%
Mental Health (MH)		
Documented mental health issue	223	71.2
No	21	6.7
Unknown	69	22.0
Common MH issues		
ADD/ADHD	49	15.7
Anxiety	106	33.9
Depression	102	32.6
Bipolar	14	4.5
PTSD	79	25.2
Complex MH (Psychosis (including drug-induced), Borderline PD, delusional, conduct disorder)	81	25.9
Psychiatric Medication		
Yes	88	28.1
No	207	66.1
Unknown	18	5.8
Recent Substance Use (excluding cannabis, alcohol, tobacco) last 6 months		
Yes	308	98.4
No	4	1.3
Unknown	1	0.3
History Injection Drug Use		
Yes	228	72.8
No	15	4.8
Unknown	70	22.4
Recent Substance Use		
Opioid	285	91.1
Crystal Meth	213	68.1
Multiple substance use	222	70.9

Chapter 3

Prescribing Practices

Opioid Agonist Therapy (OAT) Prescribing

Close to half of clients (45.0%, n=141/313) were already on OAT, while 128 (40.9%) were started on OAT in conjunction with RMG. The most common OAT is Kadian (47.9%, n=128/267), followed by methadone (44.2%, n=118/267) with smaller numbers on suboxone (3.3%, 9) or M-Eslon (that was prescribed alongside hydromorphone) (3.3%, n=9/267). Of the 267 who were either already on OAT or recently started, just over half (52.8%, n=141/267) have continued to regularly access (at least 5/7 days per week) OAT in the past 60 days. Participants who were already on OAT were more likely to stay on OAT ($p < 0.001$).

Construct	N	%
Prescribed Opioid Agonist Therapy (OAT)		
Yes – already regularly prescribed	139	44.4
Started	128	40.9
No	46	14.7
Current OAT		
		/267
Morphine (Kadian)	128	47.9
Methadone	118	44.2
Buprenorphine/naloxone (suboxone)	9	3.3
M-Eslon	9	3.3
Hydromorphone Contin-controlled	1	0.3
Active OAT within past 60 days		
		/267
Yes	141	52.8
No	126	47.2

RMG Prescribing

The vast majority of RMG prescriptions have been for opioids (91.4%, n=286/313 of individuals), most for tablet hydromorphone (95.8%, n=274/286), oxycodone (4.8%, n=9/286), and just 2 (3.3%) using M-Eslon alongside another OAT. While oxycodone is not listed in the BCCSU guidance for opioid RMG, several clients were initially prescribed this medication through other prescribers or as an alternative as described above. Eighty-seven (27.8%) of clients have been prescribed stimulants with either Dexedrine (72.4%, n=63/87) or Methylphenidate (25.2%, n=22/87) most commonly. Some clients have been prescribed both opioid and stimulant (19.5%, n=61/313) prescriptions.

Daily dosing for opioids often started more moderately with smaller maximum daily doses; the final review of charts revealed an increase over time. Hydromorphone prescribing ranges from max daily doses of ≤ 32 mg/day (19.3%, n=53/274), 33-48mg/day (26.6%, n=73/274), 49-64mg/day (16.4%, n=45/274), 65-96mg/day (19.7%, n=54/274), to 97-128mg/day (15.6%, n=43/274) with 9 (3.3%) prescribed over 128mg/day.

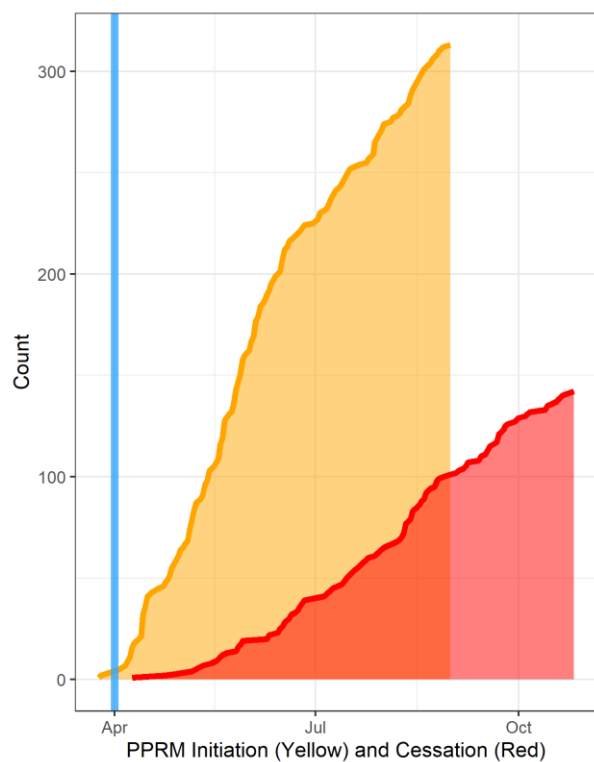
Construct	N	%
RMG Opioids prescribed		
Yes	286	91.4
No	27	11.8
RMG Opioids		
Hydromorphone	274	95.8
Oxycodone	9	4.8
Hydromorphone and fentanyl patch	1	3.5
M-Eslon	2	0.7
RMG Stimulants prescribed		
Yes	87	27.8
No	226	72.2
RMG Stimulants		
Dexedrine	63	72.4
Methylphenidate	22	25.3
Strattera	1	1.1
Adderall	1	1.1
RMG both Opioids and Stimulants		
RMG Other		
RMG Benzodiazepines	1	0.3
Maximum daily dose Hydromorphone		
≤ 32 mg/day	53	19.3
33 – 48 mg/day	73	26.6
49 – 64 mg/day	45	16.4
65 – 96 mg/day	54	19.7
97 – 128 mg/day	43	15.6
>129 mg/day	9	3.3
Maximum daily dose Stimulants		
<15 mg/day	11	12.6
16 - 20 mg/day	36	41.4
21 – 40 mg/day	26	30.0
>41 mg/day	14	16.1

Chapter 4

RMG Outcomes

RMG Initiation and Cessation

While two clients started RMG in March 2020, the majority of starts were in April (18.8%, n=59/313), May (31.9%, n=100/313) and June (20.8%, n=65/313), slowing down by July (15.0%, n=47/313) and August 2020 (13.4%, n=42/313), the end of this analysis.



Just over half (53.7%, n=168/313) have continued with RMG, while 139 (44.4%) have stopped and six (1.9%) never started. 136 (43.5%) were dispensed RMG without interruption, receiving from pharmacy at least 4/7 doses per week. 53 (16.9%) clients stopped their prescriptions within the first 30 days and another 24 ended within the next month for a total of 76 (24.2%) clients who stayed on for under 60 days. This is the cut off for analysis as those prescribed in August have been on for a maximum of 60 days.

Reasons noted in the EMR for cessations include hydromorphone-negative urine drug screens, physician concern related to diversion, clients did not find the RMG helpful or effective, their lives were chaotic or they had mental health challenges (including psychosis) that made managing difficult, or were hard to track down,

they were disengaged, declined to see clinician, or irritated by clinical care at follow up (including being upset at the process for missed days of OAT which meant they would have to restart OAT at a lower dose). Several clients were evicted from shelter/housing or moved to prison, substance use treatment facilities or had delivered their baby and had moved on. Five clients have died since initiation of RMG: three from overdoses (two while still prescribed RMG), one from liver issues, and one from a motor vehicle collision. Given ongoing provincial evaluations on overdoses and RMG use, it is unlikely these deaths are correlated with use of RMG. Indeed, these evaluations seem to indicate that the mortality rate is higher among similar individuals not accessing RMG.

Construct	N	%
RMG dispensed without interruption		
Yes	136	43.5
No	171	54.6
Never started	6	1.9
RMG Stopped		
Yes	139	44.4
No	168	53.7
Never started	6	1.9
Days on RMG 60 days		/313
Less than 60 days	76	24.3
60 days or more	237	75.7
Opioids less than 60 days	66	21.1
Opioids 60 days or more	220	70.3
Stimulants less than 60 days	31	9.9
Stimulants 60 days or more	56	17.9

Factors associated with continuing on RMG

Bivariate analysis was completed to assess what factors were correlated to clients staying on RMG prescriptions for 60 days as well as RMG continuance; some clients have now had RMG prescriptions for six months. All clients in this case series have been assessed for at least 60 days.

Connections to Health Care, Pharmacy and OAT

Ongoing connection to health care was demonstrated to be important to RMG continued use in several ways. Clients who were **already clients of the CACHC were more likely to continue on RMG** ($p=0.015$) (60 days ($p=0.003$)). Having a **prescription for mental health medication** was also significant for both 60 days or ongoing continuance (both $p=0.001$). Some significance is found with OAT, where those who were already on OAT were more likely to be on OAT at 60 days ($p=0.016$). Clients who **continued to regularly access OAT at least 5/7 days were significantly more likely to stay on RMG** for all indicators of RMG continuance (days on, 30, 60 days, regular RMG adherence) ($p<0.001$). Regular adherence to RMG also supported RMG continuance ($p=0.001$). This may suggest that regular connection to health services supported RMG continuance, but could also be attributable to other factors that might be correlated with OAT adherence – particularly among those who had accessed OAT for a long period of time prior to the implementation of RMG guidelines.

HCV Treatment

Clients living with HCV antibodies were also **more likely to use RMG for 60 days** ($P=0.005$) and to **continue on RMG** ($p=0.002$). Known HCV antibody status may suggest more client health information was available to clinicians and a longer connection to CACHC. Temporary sheltering



sites, combined with daily dispense RMG Rx have created a unique opportunity to engage clients in HCV care, with concentrated case management and support.

Meeting Chronic Pain Needs

Clients with a diagnosis of chronic pain were more likely to continue on RMG ($p < 0.001$). This may be due to the functional use of opioids among people with chronic pain. Further study of the relationship between chronic pain and utilization of RMG prescriptions is needed.

Meeting Opioid Needs

For clients prescribed opioid RMG, **higher maximum daily doses of hydromorphone were more likely to stay on** for 60 days ($p = 0.001$) or to continue ($p < 0.001$). Further research is needed to understand optimal prescribing strategies that support adherence and deter continued access of illicit markets.

Instability Reduces RMG Continuance

Those that were admitted to temporary shelter were more likely to be accessing a delivery program and prescribed both stimulant and opioid RMG ($p < 0.001$). Conversely, people who are more likely to experience instability in their life may have had difficulty accessing and adhering to RMG requirements. For example, those who were homeless during the pandemic ($p = 0.009$), younger people ($p < 0.001$) (mean age 36 for stopped, 42 for continued), poly substance use ($p = 0.009$), people who smoke their illicit substances ($p = 0.019$) and those diagnosed with ADHD were more likely to have stopped RMG (both opioid and stimulant combined) ($p = 0.005$). Although over 70% of clients smoke the illicit substances they are using, clients are unable to smoke hydromorphone prescribed for RMG, as hydromorphone tablets are not smokable, making it a less useful medication for harm reduction for many of the clients in our data set compared to an opioid that could be used via inhalation. These variables speak to instability as a factor in not continuing with RMG and highlight the need for stabilizing supports and services for people accessing RMG (e.g., safe, supportive housing on a continuum of intensity depending on where people are at in their substance use; nutritious food; stress reduction; integrated, accessible, low-barrier peer driven harm reduction supports; lower-barrier detox and stabilization options).

Client Outcomes

In our program RMG was provided to many participants along with a variety of other psychosocial supports as outlined above. For example, over 60% of clients accessing RMG were also provided placement in temporary sheltering sites with direct access to medical care and other supports. We are therefore cautious to comment how much change reported was specifically because of RMG, rather than receipt of these other programs.

That said, roughly half of those who received RMG exhibited discernable impacts, as demonstrated by the nearly half who have stopped or never started their RMG prescription. Others have had some adverse effects noted by clinicians in the charting done around patient

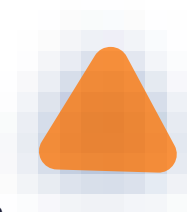
care. These adverse effects were generally anecdotal and they were not necessarily linked with RMG. Adverse events included constipation, decreased appetite, increased anxiety or mood swings, sedation, depression, and overdose while on RMG. While limited, concern of psychosis or delusional parasitosis was noted for some patients. Again, connections with RMG are difficult to establish.

The most common issue reported in patient charts was that the RMG “doesn’t have legs” (doesn’t last in the same way heroin does), “not helping greatly” or “can barely feel” with little or no effect when using entire dose at once. The strength of the illicit drug supply, especially with the increase in the concentration of fentanyl and fentanyl analogues in opioids and stimulants has meant that clients have concerns that RMG does not provide adequate coverage for their opioid use and they continue to have cravings and withdrawal symptoms.

RMG has already been linked to a variety of positive impacts both at an individual level as well as at a system’s level. Indeed, more than one third of clients (113 or 36.1%) who accessed RMG report a decrease in their illicit drug use. For the 237 clients who stayed on for over 60 days, 106 (44.7%) report a decrease and for those who have stayed on RMG, 86 of the 168 (51.2%) report a decrease in illicit drug use. For example, as documented in one chart note, one participant commented that *"My use is the lowest it has ever been. Thank you very much for this hugely needed and powerful program."* Other positive outcomes reported by clients included improvements in health and mental health, improved concentration, eating regular meals, gaining weight, engagement in stable OAT, decreased cravings, decreased in IDU, better pain control, sleeping better, increased emotional stability, no or reduced overdoses, using for pleasure, not for need. Reduced money spent on drugs has meant some clients reduce illegal activities to get money, or have been able to save money or buy needed items such as a bicycle. Several clients commented on increased trust and improved relationships, with both friends and family ("people willing to help me out more") or starting to volunteer, work or do odd jobs.

Additionally, according to clinicians, RMG-based interactions have, for some, facilitated the development of communicative and trusting relationships between clients and providers. This increased engagement in medical care included blood work, HCV treatment and case management, healed wounds through consistent wound care, complex care for pregnancy, mental health support, counselling, dental care and numerous PWD applications. Many clients reported being "very satisfied" with the program, that they were "doing better", or that they were "very determined to use this opportunity."

An important finding with our RMG work is that despite onsite embedded health services in the supportive housing sites, a majority of the clients continued to experience barriers to engagement in ongoing primary care. Multiple factors contribute to this and will continue to be explored as the work continues. The hope of clinicians is that by the next reporting timepoint, improved client provider relationships will be established and the numbers of individuals declining to engage in offered RMG, addictions care and primary health care services will be reduced.




Many clinical outcomes associated with the RMG program continue to be unknown and require more detail in charting to identify this outcome. Ongoing evaluations across the province, especially those that directly speak with people who use drugs will undoubtedly provide greater detail regarding the benefits and limitations of RMG.

Urine Drug Screens Since RMG Initiation

As continued receipt of RMG prescription does not guarantee consistent, patient-specific consumption of the medications, CACHC/CAMICO clinicians conducted urine drug screens (UDS) to confirm the ingestion of OAT or RMG and to assess if clients have been able to move away from illicit drug use. For this report, urine drug screens were analyzed by VIHA Labs and LifeLabs. Island Health uses mass spectrometry that can detect 21 different substances for their opioid and opioid drug screens. If any of these substances are detected, which include fentanyl and norfentanyl, they will be clearly reported. However, LifeLabs only states if the UDS is positive for opioids and does not differentiate between hydromorphone, fentanyl, or norfentanyl without a request for confirmation of hydromorphone and fentanyl. With this limitation in mind, early lab results were often ambiguous around opioids found and physicians and nurses learned to specifically request mass spectrometry confirmatory testing for hydromorphone and fentanyl in order to assess if these substances were present. A negative hydromorphone screen could possibly suggest clients were not taking the prescription – drawing attention to possible episodic use of RMG and concerns around diversion or non-receipt of prescriptions. A negative fentanyl demonstrates one goal of RMG prescribing – that clients had been able to stop accessing the poisoned drug supply for both stimulant and opioid use and have decreased their risk for overdose. For the entire cohort of 313, only 143 or 45.7% have a documented UDS in their chart. A portion of clients also see providers in other clinics and these UDS would not be captured in the chart.

Construct	N	%
Urine Drug Screens since RMG initiation		/313
Yes	143	45.7
Urine Drugs Screens Opioids (60 Days RMG)		/216
Yes	130	60.2
Urine Drug Screens Opioids (still on RMG)		/157
Yes	108	68.8

The UDS percentage improves when refined. Of the 216 clients that have both stayed on RMG for over 60 days and are prescribed an opioid 130 or 60.2% have a documented UDS. Of the 157 clients have stayed on RMG and are prescribed an opioid, 108/157 (68.8%) have had a UDS. Those with higher doses of hydromorphone ($p > 0.001$) or those who were staying in a temporary shelter were more likely to have had a UDS ($p = 0.011$) where regular follow up is facilitated with on-site care (or where bathrooms are available). UDS was significantly correlated to staying on RMG ($p < 0.001$). UDS is an expectation of the RMG program now and those who have been longer in the program have had more time for collection. Within the 108 UDS screens, 88 (81.5%) tested positive for hydromorphone. Further, among all clients who received a UDS, 114 (79.7%) tested



positive for fentanyl – this might suggest that the pharmaceutical options offered in the program may not be sufficient to eliminate the use of fentanyl or unintended exposure to fentanyl in stimulants.

We recognize that requiring UDS is a complex decision with considerable ramifications for the client-provider relationship. Furthermore, a UDS cannot tell us how much of a client's RMG prescription is being ingested and how much, if any, is being diverted. It is an imperfect tool for clinicians to utilize within the context of this ongoing prescribing. Finally, we recognize that a portion of RMG clients have experienced some form of trauma related to the non-voluntary use of UDS such as needing to complete UDS to have visitation with children through Ministry of Children and Family Development (MCFD) or to be in a treatment program. Communicating and engaging with clients with honesty and integrity regarding the monitoring requirements for accessing RMG has been vital, letting them know that everyone who is receiving RMG is required to provide a UDS at regular intervals.

Clinician Concerns Regarding Diversion

As noted above, the fact that opioids could only be detected in 81.5% of urine drug screens, may suggest that some client may not be consuming the RMG prescriptions they receive. Further, presence of a drug in a UDS may only indicate episodic ingestion of RMG. Based on these results and their own clinical judgement, clinicians in our program have differing levels and types of concern about diversion and its impacts, and numerous conversations have taken place to discuss these issues. Diversion for some demonstrates that clients have not been provided alternatives that actually meet their current opioid needs, and continues to expose them to potentially contaminated drugs. Anecdotal discussions with clients and service providers describe how local diversion of RMG prescriptions has facilitated a marked lowering of the street value of hydromorphone tablets (from \$10-\$20/tablet prior to RMG to 50 cents to \$2/tab). There is a concern that this increased street-level availability of hydromorphone may be facilitating experimental use in opioid naïve clients (youth, individuals with other substance use disorders such as alcohol and people in remote communities) leading to new onset opioid use disorder. Clinicians are also concerned that this may result in the destabilization of clients who were previously stable on OAT.

On the other hand, advocates for people who use drugs, as well as some clinicians, feel that RMG prescriptions provide a safer product for anyone who accesses the prescription and reduces the need for PWUD to engage in street level economy, which is often criminalized and increases their risk for acquiring or transmitting COVID-19. It is necessary to identify strategies that can limit diversion without negatively affecting client care and outcomes. For example, broader socio-structural interventions (such as stable housing and poverty reduction strategies) can help PWUD meet their needs without participating in illicit markets. Prescriptions alone are not likely to solve all the crises experienced by clients.

Chapter 5

Conclusion

RMG prescribing was rapidly initiated through our clinicians as a response to the unprecedented public health crises arising from the overdose epidemic and COVID-19 pandemic. The intensity of care provided at CACHC, in CAMICO sites and through outreach to unsheltered clients in parks demonstrates ongoing challenges presented by the overdose crisis, the lack of affordable housing, and COVID-19. It is clear that providing prescriptions for RMG provides many opportunities to support the health and well-being of people with complex substance use and mental health needs. Close to half of those who were prescribed RMG have continued to access this safer supply and many have continued to access the illicit toxic drug market. Clinicians still have many questions about the efficacy and best practices for actually reducing harms related to substance use and COVID-19 with this initiative. Concerns about population level harms related to the RMG guidance are of pressing concern.

As such, there is a need for ongoing evaluations of RMG prescribing – both within the context of COVID-19, but also in what forms it will take in the post-COVID era. Refinement of policies and thoughtful direction to providers is desperately needed to ensure that clients receive the best possible care. Ongoing evaluations of the role that physicians and nurses play in prescribing RMG is also needed, especially considering the difficult moral, ethical, clinical, and professional pressures placed on prescribers and patients as they provide largely untested interventions to vulnerable populations. A community of practice with various options for ongoing education and discussion with clinicians is necessary to mitigate these hazards. This community of practice should include feedback from RMG recipients and people with lived and living experience of drug use.

Most importantly, it is now more important than ever to combine RMG with structural and social supports that can help clients to achieve their personal health goals such as adequate housing, income support, accessible mental health services, counselling and a continuum of recover and treatment options. Clearly, reducing barriers to initiation of alternatives to the illicit drug supply and adherence is a critical aim moving forward, but clinical interventions alone are difficult without the repeal of prohibition era policies, such as criminalization.



Endnotes

1. See, for example: A. Nguyen, “Supervised consumption sites scrambling to handle two public health crises at once,” Ricochet Media, March 25, 2020, available at <https://ricochet.media/en/3005/supervised-consumption-sites-scrambling-to-handle-two-public-health-crises-at-once>, A. Harris, “Halt drug possession charges during pandemic to stem spike in overdose deaths, advocates say”, May 14, 2020, available at: <https://www.cbc.ca/news/politics/drug-possession-covid19-1.5568631>, or Woo, A. (2020). Virus measures may be hurting overdose prevention in Vancouver, official says. The Globe and Mail. <https://www.theglobeandmail.com/canada/british-columbia/article-virus-measures-may-be-hurting-overdose-prevention-in-vancouver/>.
2. See, for example: Canadian Centre on Substance Use and Addiction, Impacts of the COVID-19 Pandemic on People Who Use Substances: What We Heard, 2020. CTV Vancouver Island, March 17, 2020, available at: <https://vancouverisland.ctvnews.ca/victoria-s-our-place-closes-some-facilities-due-to-covid-19-1.4856992>
3. CCENDU. Changes Related to COVID-19 in the Illegal Drug Supply and Access to Services
4. and Resulting Health Harms (2020). Retrieved from <https://ccsa.ca/sites/default/files/2020-05/CCSA-COVID-19-CCENDU-Illegal-Drug-Supply-Alert-2020-en.pdf>.
5. British Columbia Coroners Service. Illicit drug toxicity deaths in BC: January 1, 2010–October 31, 2020. Available at: <https://www2.gov.bc.ca/assets/gov/birth-adoption-death-marriage-and-divorce/deaths/coroners-service/statistical/illicit-drug.pdf>

Supplemental Materials

A supplemental file providing detailed descriptions of each variable in this report is available upon request.



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