



Mandated CSWB planning in Ontario: A welcome milepost on a continuing journey

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In January of this year, the Canadian province of Ontario enacted into law a mandate for all municipalities to develop and implement collaborative plans for community safety and well-being. The lever for compliance was anchored through a legislative update to the *Police Services Act* (1990), but the reach of this mandate extends well beyond the police. The requirements are set out to reflect collaborative ideals and to achieve a broad, *all-perils-and-all-strengths* scope in these plans by establishing base criteria for specific and multi-sector representation on the community advisory committees that will guide them (MCSCS, 2019a, p. 21).

This is no small thing, and it has been many years in the making.

The Early Steps

The potential to enhance public safety through direct municipal leadership came clearly into focus for Canadian policing about a decade ago, when a Canadian Association of Chiefs of Police (CACCP) global studies cohort entitled their summary research report *"Police Capacity in Canada: Scarce Resources or Infinite Potential"* (ISIS, 2008). Their work showcased examples from Western Europe, where the obligation upon city leaders to engage all relevant service providers in community safety planning was taking root. As that report's title implies, much of the early appeal for Canadian police leaders and governing bodies derived from growing concerns about the economics of policing. But the next year, while examining solutions to youth violence in a wider-ranging global study, it became increasingly evident to another CACCP team that collaborative community-led solutions were not just about alleviating strain on front-line police resources. They were also showing significant positive impact on a wide range of health and social outcomes in countries such as Scotland, the United Kingdom, The Netherlands, Colombia, and other South American countries (ISIS, 2009).

At the same time, the early work of the Canadian Municipal Network on Crime Prevention (CMNCP) was maturing into a formidable movement (CMNCP, 2018), with increasing calls for "strong political will" to embrace the concept of a "centre of municipal responsibilities." And, with many factors other than crime as their focus, public health, mental health,

addictions, social services, housing, and education sectors were each in their own way seeking more effective and sustainable ways to fulfill their mandates to greater effect, amid a common pressure to hold the line on public service budgets.

There was, as a result, a certain inevitability that each sector would begin to see both the necessity and new potential to engage others in a common cause. In recent years, that common cause has become widely recognized in Canada as community safety and well-being (CSWB) and, in other parts of the world, as the intersection among law enforcement and public health (LEPH) solutions for the benefit of individuals, families, and communities (GLEAPHA, 2017).

The Promise at this Milepost

Now, as the first of its kind in Canada, the Ontario CSWB planning mandate firmly anchors these collaborations as an essential role of local governments. The protective factors and supportive systems that are designed to keep people healthy are very often the same ones that keep them safe and free from victimization and harm. The compound risk factors that lead some people into lives of addiction and/or homelessness and/or crime are very often the same risks that lead to poor health, and those that weaken early childhood development and educational attainment. Now, in Ontario at least, every municipal council must find ways to have all of these factors examined through multiple and overlapping lenses and, further, to guide the crafting and mobilization of holistic solutions informed by the evidence to better meet the needs of all its citizens.

For a deeper understanding of the CSWB planning processes being recommended by the province, as well as the tools being provided to communities to fulfill their mandates, interested readers may wish to consult the guidebook recently published by the Ministry of Community Safety and Correctional Services (MCSCS, 2019b).

Some Continuing Challenges Ahead

While only one province to date has taken this step to mandate local CSWB planning, across Canada almost every province and territory is seeing a growing uptake of similar collaborative models, practices that are also extending into many First Nations communities, urban and reserve (note that

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under the new Ontario policy, First Nations are encouraged, but not mandated to comply). Several consistent challenges are emerging as this experience grows in Canada and abroad, and the priority attention may soon need to shift beyond the mobilizing phase and turn more intensely into three areas of common concern that will be essential to sustained impact and successful outcomes.

True and Sustained Change in the Collaborative Space

Consistent and effective collaboration does not happen automatically, whether mandated or enthusiastically embraced by local champions. It can be hampered by competitive funding frameworks that often lead to *boundary management* behaviours taking precedence over system alignment. Professionals who are heavily invested in single-sector or bilateral initiatives, and justifiably proud and protective of their demonstrated success, must find reassurance that broader collaborative ventures will not diminish but, rather, will seek to enhance and build on those efforts. In addition, mid-manager accountabilities for programs, budgets, and standard operating procedures often bring the staff members working at the front lines of innovation into friction with the conventional expectations and directions they receive from their organizational leads. It will continue to be imperative that executive system leaders take an *eyes wide open* posture as they seek to open those boundaries, attend to differences in workplace cultures, and permit and empower true collaboration across sectors. Training and support on the new *rules of engagement* may become important to the sustained effectiveness and professional satisfaction of all members who are expected to forge new solutions together with their partners.

Access to Data, Multi-sector Analytics, and Cautious Sharing of Information

No matter how well intentioned, even the most collaborative professionals cannot see in the dark. To bring real meaning and value to these plans, they must be informed by the realities and not merely by popular perceptions of community issues, or by single-silo indicators of need. What has been learned from several years of experience at hub and situation tables, as just one CSWB example, is that risk factors are often cumulative in the lives of those who most need the support of the system, and when these factors are understood in their composite nature, truly effective interventions and lasting care solutions become possible. Similarly, strength building at the individual, family, or neighbourhood level often calls for an accurate understanding of the operating conditions that only cross-sector data analysis can reveal. Collaborative planning and action will require sharing of information at the de-identified level and the consent level and, in acute situations, may require limited sharing at the level of implied consent. Community advisors will want clear and agreed-upon guidelines for their participation, they may need to explore emerging methods for protecting data while learning from it, and at all times, individual and family privacy rights must be carefully balanced with community safety and well-being imperatives.

Adequate investments in essential and equitable services

The ultimate challenge to community leaders may be best captured by these troubling questions: What if it actually

works? What will we do if we discover that our current investments are misdirected? What if the data reveals not just gaps, but chasms in our available supports to those who need them most? What if we discover that our system is so under-resourced in critical areas of composite need that the conditions on the street that worry us most are beyond our current abilities to respond?

One hopes that in a majority of cities, towns, and regions, many solutions will exist in the form of realignment and service innovation, as is the essential promise of collaborative CSWB plans. But, particularly in rural, remote, and many reserve environments, where essential services and infrastructure may be scarce or difficult to access, such plans may simply reveal what many in those communities already know. A commitment to community CSWB planning must be accompanied by open minds and a readiness to truly address service inequities and deficiencies where they can be addressed. Moreover, mandatory community planning must find its emphasis in the word *community*, with empowerment to decide and act locally, and with self-determination of community aspirations at its core.

With the Ontario mandate now calling for CSWB plans to be in place and implementation actions to be underway in all municipalities by January 2021, these continuing priority challenges take on a real and urgent nature. They also establish a natural and compelling agenda for researchers and evaluators, whose work continues to be essential to long-term measurable success, knowledge exchange, and continuous improvement supported by objective evidence.

In Closing

This milestone achievement calls for due credit to the Government of Ontario and, in particular, to the leadership and funding supports provided through MCSCS to many early-adopter and experimenting communities over the past several years. It also calls for courage on the part of the local planners and implementers who must now implement more formality and structure to augment, and in some cases refocus, their many individual and collaborative efforts and innovative local programs under a somewhat prescribed framework. One hopes that such existing initiatives will be both respected and fully harnessed under this new process.

Finally, while the hard work is just beginning under this bold new public policy, it already carries new hope to those whose daily quality of life too often depends upon a well-integrated system that is genuinely committed to understanding and meeting their true needs for health, safety, and well-being. Here's hoping it proves to be a model of success for other jurisdictions to follow.

CONFLICT OF INTEREST DISCLOSURES

The author has continuing business interests that include providing advisory services to communities, police services and related human service agencies.

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The British Columbia Drug Overdose and Alert Partnership: Interpreting and sharing timely illicit drug information to reduce harms

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ABSTRACT

Illicit drug overdose is a public health issue that leads to significant morbidity and mortality. In order to reduce the harm associated with substance use, emergent issues related to substances and substance use must be addressed in a timely manner, which requires inter-sectoral collaboration. We describe the British Columbia Drug Overdose and Alert Partnership, an innovative collaborative model of stakeholders who work in prevention, harm reduction, treatment and enforcement related to psychoactive substance use. We describe the formation, purpose, stakeholders, and operation of the partnership and resultant public health surveillance system. We use the example of fentanyl-associated overdoses and deaths to describe the attributes that make the system effective. These include timeliness, flexibility, acceptability and costs. This model of inter-sectoral collaboration and surveillance can be applied to other organizations involved in assessing and responding to drug-related harms.

Key Words Harm reduction; inter-sectoral collaboration; substance use.

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BACKGROUND

Overdose due to psychoactive substance use is a public health issue that results in significant morbidity and mortality. Death and other severe health outcomes can be prevented by comprehensive harm-reduction and treatment strategies, such as provision of harm-reduction supplies, education about safer drug use techniques, take-home naloxone programs (Irvine et al., 2018), supervised consumption and overdose prevention sites (Marshall et al., 2011; Wallace, Pagan, & Pauly, 2019) and oral and injectable opioid agonist treatment (Eibl et al., 2017). While these efforts play important roles in addressing the known harms associated with illicit substances, the unregulated nature of the illicit drug market produces emerging risks that require urgent responses to prevent further harms.

The aim of this paper is to describe the formation and purpose of the Drug Overdose and Alert Partnership (DOAP), a multi-sectoral partnership that collaboratively monitors emerging risks in the illicit drug supply in British Columbia, Canada. We review the member organizations (stakeholders),

data sources, and operations of the partnership. We then provide a case example of fentanyl-associated overdoses to illustrate the ability of DOAP to detect and respond to “an outbreak” and then describe some of the attributes that make the system effective, including timeliness, flexibility, acceptability, and cost (Buehler et al., 2004).

Formation and Purpose of the Drug Overdose and Alert Partnership

Prior to 2011, the Vancouver chapter of the Canadian Community Epidemiology Network on Drug Use had developed informal partnerships to monitor local trends of illicit drug use (Canadian Centre on Substance Use and Addiction, 2019). Previous responses to drug-related harms in British Columbia involved the collaboration of public health, enforcement, and other health partners. For example, two outbreaks of leukoencephalopathy linked to heroin inhalation were investigated in British Columbia between 2001 and 2006; although the etiologic agent was not identified, the distribution of cases in time and place and the identification of two case-couples

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suggested the risk factors were substance-related rather than due to genetic predisposition (Buxton *et al.*, 2012). In 2008, public health officials in western Canada issued public health advisories when severe neutropenia was determined to be associated with levamisole-tainted cocaine (Knowles *et al.*, 2009). A case-control study with genotyping confirmed that the severe neutropenia was genetically determined (Buxton *et al.*, 2015).

In May 2011, the B.C. Coroners Service identified an increase in illicit overdose deaths due to an increase in the purity of heroin. The British Columbia Centre for Disease Control (BCCDC) led an effort to meet with representatives from various sectors (including health, emergency health services, and enforcement) to exchange knowledge and discuss how the issue could have been identified sooner. Concerns were also expressed about the Coroners Service's public safety warning that "higher potency heroin" was circulating in the province. Assumptions were made by people who use drugs (PWUD) and other stakeholders that the heroin was in Vancouver, when it was in fact circulating in another region. Concerns were expressed that the warning may encourage people to seek the potent heroin. This highlighted the need for an effective, ongoing, province-wide partnership for routine surveillance activities and alerting in order to ensure delivery of communications with timely, accurate, and appropriate messaging (Soukup-Baljak *et al.*, 2015).

Responding to emerging risks in the drug supply requires inter-sectoral collaboration between public health officials, toxicology laboratories, law enforcement officials, health-care workers, and people who use drugs, who are often the first to identify an issue and provide insights on how and with whom to communicate. Thus, the British Columbia DOAP was formed in 2011. The goal of DOAP developed by members was "To coordinate stakeholder communication and actions to enable timely alerting and responses to illicit drug use issues."

Membership, Data Sources, and Operation

The B.C. DOAP is an inter-sectoral multi-level collaborative partnership of stakeholders who work in prevention, treatment, harm reduction, and enforcement related to psychoactive substance use at the local, regional, provincial, and federal levels. The partnership's members are shown in Figure 1; members routinely share information and emerging concerns from their agency/organization, which contributes to a provincial surveillance and alerting system. "Public health surveillance is the ongoing, systematic collection, analysis, interpretation and dissemination of data about a health-related event for use in public health action to reduce morbidity and mortality and to improve health" (German, 2001). The surveillance system developed through DOAP can provide an early warning for, and inform timely response to, emerging issues related to psychoactive substance use.

The source, description, and frequency of posting of ongoing, systematic drug overdose-related data are described in Table 1. Data is shared with DOAP members and their organizations on a password-protected website. Members are informed by e-mail when new data or alerts are posted. The website also serves as a communication forum between members. It has evolved over time to support the needs of the partnership and now includes a message board to post

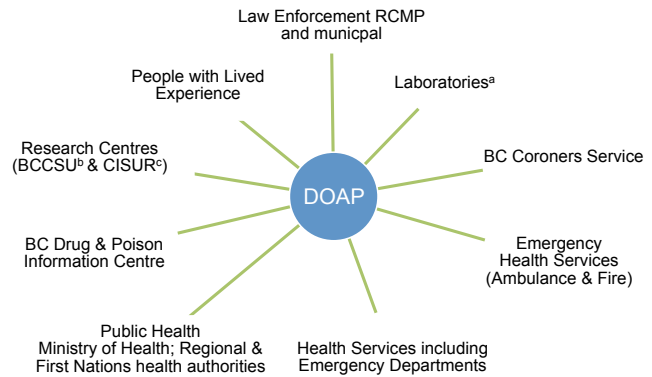


FIGURE 1 Drug Overdose and Alert Partnership (DOAP) member agencies. ^a Testing Laboratories include Health Canada Drug Analysis Service – enforcement samples (for prosecution or urgent samples as requested by health); Provincial Toxicology Laboratory – decedent samples for BC Coroners Service and drug checking; Hospital and private laboratories – patient samples, e.g., urinalysis of people on opioid agonist treatment for health services. DOAP = Drug Overdose and Alert Partnership; BCCSU = B.C. Centre for Substance Use; includes cohort studies and drug checking; CISUR = Canadian Institute for Substance Use Research.

immediate concerns and questions for other DOAP members, a section with alerts and news, and emergency contacts and protocols for responses to unusual events.

Regular meetings serve as a platform for stakeholders to share, review, and interpret information from different geographic regions of British Columbia and from different perspectives. Meetings initially were held quarterly, but in the light of the overdose crisis, members requested more frequent meetings, which now occur every eight weeks. Additional ad hoc communication and meetings occur as needed. In addition to surveillance data being reviewed, research findings and reports from the community are presented and discussed.

While all organizations are committed to the partnership, the level of engagement of individual members may vary based on the immediate priorities, interests, and needs of the member organizations and the populations they serve. However, meeting attendance reflects the members' commitment and the perceived usefulness of the partnership, with more than 30 members attending the past three meetings.

DOAP AS A SURVEILLANCE SYSTEM

Case Example: Fentanyl-Associated Overdoses

Fentanyl is a synthetic opioid that is used to relieve severe pain. It is prescribed for pain management in the community only as a transdermal sustained release patch (Young, 2015). Fentanyl is 50 to 100 times more potent than morphine, and some fentanyl analogues may be even more potent, greatly increasing the risk of accidental overdose (Higashikawa & Suzuki, 2008). Life-threatening respiratory depression occurs more rapidly with fentanyl than with other opioids (Green & Gilbert, 2016).

In 2012, the B.C. Coroners Service reported fentanyl was detected in 4% of total unintentional illicit overdose deaths ($n=12$); this increased to 15% ($n=50$) in 2013 (Ministry of

TABLE 1 Source and description of data shared by the B.C. Drug Overdose and Alert Partnership members

Data Source	Data Description	Frequency
B.C. Emergency Health Services	911 calls coded by dispatch as ingestion poisoning by week and location. An algorithm identifies alerts ^a	Weekly
B.C. Centre for Disease Control	Dashboard: i) deaths by health region ii) Illegal drug overdoses attended by B.C. Emergency Health Services by health region and city and percentage transported to hospital; iii) dispatch data is used to derive severity and to project illegal drug overdoses	Weekly
	Take Home Naloxone and Facility Overdose Response Box program distribution and administrations	Monthly
B.C. Centre for Substance Use	Drug checking reports	Monthly
BC Coroners Service	Provisional Illicit Drug Overdose Deaths by health region and city, age group, sex, place of injury, and fentanyl detected	Monthly received 2–3 days prior to public release
	Other reports, e.g., drug type summary reports, mapping by local health area and detailed reports	As available or requested
B.C. Drug and Poison Information Centre (DPIC)	Calls to DPIC for exposures to six substance classes (alcohol, benzodiazepines, hallucinogens, opioids, sedative hypnotics, and stimulants) by health region	Weekly
Health Canada Drug Analysis Service	Line list of drug seizure sample testing results by province	Monthly
	Drug situation summary report for Canada and by province	Quarterly
	Alert when new substance found in a region for the first time, with date substance received	As occurs
Vancouver Coastal Health	Overdose visits by substance type (heroin, other known drug, medication, unknown, alcohol) to Vancouver Coastal Health emergency departments (9/13 acute care facilities)	Weekly
	Overdoses at Vancouver's supervised consumption site by reported substance used (heroin, other unknown drug) and intervention (+/- naloxone) and visits and overdoses at overdose prevention services in Vancouver Coastal Health	

^aIngestion poisoning = any toxic substance including prescribed and over the counter medication, street drugs, and chemicals. Public Health Intelligence for Disease Outbreaks (PHIDO) alerts are reported as low, medium, and high by B.C. geographic areas: local health area (45), health service delivery area (16), and health authority (5) for the last 7, 14, 21, and 28 days.

Public Safety and Solicitor General, 2018). The Royal Canadian Mounted Police (RCMP) and municipal police forces in British Columbia identified fentanyl, both as a white powder mixed with heroin and also in tablet form, as counterfeit oxycodone (fake oxy) tablets containing variable amounts of fentanyl (Canadian Centre on Substance Abuse, 2013; Canadian Centre on Substance Abuse, 2014). Individuals using these tablets would not be aware that they contained fentanyl and were therefore at high risk of accidental overdose. In June 2014, the B.C. Coroners Service warned of increased deaths related to illicit fentanyl use in the Fraser region over the first four months of the year (BC Coroners Service, 2014).

A sudden increase in overdoses at Insite, a supervised consumption site in Vancouver, during a long weekend in October 2014 resulted in a notification to the Vancouver Police Department, who then issued a media release (Vancouver Police Department, 2014a). The police were in contact with local public health officials, who immediately informed the B.C. Emergency Health Service and local emergency departments. Posters informing people who use drugs of the issue

were distributed in the community. Those who overdosed reported using “heroin”; however, Health Canada Drug Analysis Service laboratory testing identified only fentanyl and caffeine in samples of the potentially implicated drug obtained by police. Police then released an update stating, “Drug samples taken after a recent rash of suspected heroin overdoses have come back from Health Canada labs as straight Fentanyl” (Vancouver Police Department, 2014b). Following the increase in overdoses, the demand for overdose prevention, recognition, and response training and take-home naloxone (THN) kit distribution doubled compared with the previous month (Toward the Heart, 2019).

All agencies and partners involved in the emergency response to fentanyl-associated overdoses were active DOAP members and were aware of the increasing contamination of drugs with fentanyl through information sharing facilitated by DOAP meetings and resources. Participation in DOAP also enabled comfort and familiarity between members, ensuring commitment to information sharing during such events. This example illustrates how a public health surveillance system

that combines quality population-level data and strong community collaborations enables a flexible, timely response to reduce harm and improve health outcomes.

Evaluation of DOAP as a Surveillance System

We use the U.S. Centers for Disease Control framework for evaluating public health surveillance systems for early detection of outbreaks to describe the DOAP surveillance system and the key attributes that contribute to its effectiveness (Buehler et al., 2004).

1. *Timeliness* is measured by the lapse of time from exposure to the *disease agent* to the initiation of a public health intervention. Within hours of the overdose events, through established DOAP member communication networks and protocols, supervised consumption site staff notified the Vancouver Police Department, who informed local public health officials and issued a media release. Public health officials in turn communicated with emergency services, and staff and user-groups in the area collaboratively developed warning posters and posted them.
2. *Flexibility* of a surveillance system refers to the system's ability to adapt to needs. The B.C. DOAP has been effective in communicating different types of substance-related warnings. Alerts include those regarding content of particular substances such as counterfeit Xanax containing fentanyl, lean, or drank (a red or purple liquid which was confirmed to contain cyclopropylfentanyl), and a cluster of overdoses related to fentanyl in crack cocaine (Klar et al., 2016).
3. *Acceptability* is reflected in the willingness of participants and stakeholders, including health authorities, the B.C. Coroners Service, the Drug and Poison Information Centre (DPIC), Health Canada Drug Analysis Service laboratory, and emergency health services, to contribute to the data collection and analysis as shown in Table 1. Partners have shared urgent and emergent issues through the website and report regularly consulting the website as a place to access the most recent data.
4. *Costs*. DOAP is not funded independently; rather, each member organization involved contributes by designating a member to sit on the committee and regularly share data collated by the organization. The BCCDC, within its mandated provincial surveillance activities, chairs and hosts the meetings, provides administrative support, manages the website, and is the central point of contact for members.

Other DOAP Activities

Shared Data

To ensure messages and numbers shared publicly are consistent between partners, the latest data is available on the website; a PowerPoint presentation on the website includes slides with the latest numbers and trends for members to use publicly and is updated every two months prior to the DOAP meeting.

Public Safety Campaign

The proportion of fentanyl-detected deaths in 2014 increased to 25%, from 4% in 2012. Review of B.C. Coroner Service data identified deaths occurring in young adults who did not inject

drugs. This led to an emergency teleconference in January 2015 with DOAP members. Here, the B.C. Coroners Service shared key insights from case investigations, and municipal and federal law enforcement officials shared intelligence regarding the sources of illicitly produced fentanyl. A key decision was made for stakeholders to work together towards developing a targeted public safety campaign using social marketing tools and resources. A working group was struck to identify the target audience, develop and test messages, and plan marketing.

Posters were printed and distributed to partners to post in public settings. A website was developed to provide factual information on fentanyl, including tips on prevention, harm reduction and treatment. DOAP members launched the *Know Your Source? Be Drug Smart* campaign with a press conference that captured the interest of all major B.C. print, TV, and radio news outlets (*Know your source*, 2019). The intent of the campaign was to encourage people to reflect whether they really knew where their drugs came from. The campaign has now been replicated in other provinces and territories.

DOAP Opioid Overdose Response Strategy

On February 4, 2016, the partnership released the DOAP Opioid Overdose Response Strategy (BCCDC, 2016a). The strategy provided recommendations for action that included increased access to naloxone through changes in practice and policy, improving overdose prevention education, training, and services, and enhancing surveillance and utilization of overdose data. On April 14, 2016, the B.C. Provincial Health Officer declared a Public Health Emergency due to opioid overdoses, which facilitated information sharing and enabled further interventions to be implemented (BC Gov News, 2016).

DOAP developed response protocols for unusual drug-related events, for reporting pharmacy break-ins, and for communicating drug alerts to service providers and the public (BCCDC, 2016b). These protocols have been developed over time in response to identified issues, with expertise and input from stakeholders, including people who use drugs, and building on the group's experiences from each situation. As drug-related issues emerge, DOAP members identify new avenues of surveillance and research to address gaps and improve the evidence base for making informed decisions. New substances identified are discussed with DPIC and toxicologists, and a subgroup reviews toxicology data from various sources to determine co-occurrence of substances and determine whether further action is needed. Collaborations also include emergency medicine physicians who have developed an independent working group.

DISCUSSION

The time between identification of an illicit substance-related issue and sharing with partners has been reduced dramatically since DOAP was created, such that communication between partners often occurs the same day the event is identified, allowing for more timely responses.

Any inter-sectoral collaboration requires certain conditions to successfully improve health outcomes. These conditions include a shared vision, strong relationships among partners, an effective mix of partners, leadership, adequate resources, efficient structures, and responsive processes

(Danaher, 2011). We believe DOAP has evolved over the years to harness these enabling conditions. For instance, each DOAP member agency has a different individual mandate around substance use, but the core unifying principle is keeping people, families, and communities safe from drug harms. This powerful shared vision, combined with the inclusiveness and transformational leadership style used in facilitating DOAP, attracts a diverse group of stakeholders, from peers to law enforcement. The ground rules of respectful engagement and strong facilitation skills are needed to balance the power dynamics between partners and foster meaningful discussions.

The expansion and evolution of DOAP has faced challenges. As roles and representatives from participating agencies change regularly, it is necessary to maintain engagement by meeting and reorienting new members. Additionally, as the partnership expanded, peers became less well-integrated in the process. To ensure meaningful participation of peers, a peer consultation group was created. The group meets weekly and can be solicited for input regarding issues that emerge from DOAP as well as providing their own concerns to be raised at DOAP meetings (Greer et al., 2016). Engaging peers in the decision-making process and overdose response ensures proposed interventions and harm-reduction services are relevant and acceptable.

Although law enforcement and public health agencies both have public safety mandates, their approaches to protecting the public from harms associated with illicit drugs may differ. The former focuses on enforcing drug laws and supply reduction, while the latter attempts to engage with marginalized populations through a variety of harm-reduction and addiction-treatment services and peer-based education. Thus, one might expect a collaboration that includes law enforcement officials, public health, health-care workers, and people who use drugs to be challenging. However, given the sustained interest, active participation from members, and expansion of surveillance efforts since DOAP was developed, we conclude that DOAP is highly acceptable and fills a unique niche for monitoring and responding to emerging issues related to psychoactive substance use.

Reports from the front line serve as motivators for members who are removed from the reality on the ground, while presentation of new research, often before publication, helps those engaged in the front line to contextualize their experiences and keep up to date with the latest evidence. Using tools like the DOAP webpage and having administrative support through the BCCDC allows partner agencies to stay informed and engaged without large amounts of e-mail communication or delays seeking permission to share data. Posting of the latest data and presentations with the emerging information in one place ensures the partners share the most recent and consistent data. Finally, having people with lived experience at the table helps identify the most important issues to the community, helps dispel myths, and promotes a learning environment, all of which encourages collaborators to be open-minded and challenges their assumptions.

CONCLUSION

DOAP provides a forum for multi-level collaboration between actors in the health and law enforcement sectors, ensuring timely communication and interventions for emerging risks

arising from illicit drugs. The partnership works collaboratively to monitor trends in substances and substance use and to respond to life-threatening concerns, as illustrated in the case example of fentanyl-associated overdoses. This model of inter-sectoral collaboration and surveillance can be applied to other organizations involved in assessing and responding to drug-related harms. Future evaluations should include qualitative interviews and focus groups with partners, which may help to improve the effectiveness of the DOAP collaboration.

CONFLICT OF INTEREST DISCLOSURES

The author declares there are no conflicts of interest.

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The Hub model: It's time for an independent summative evaluation

Cal Corley* and Gary Teare†

ABSTRACT

Over the past decade, governments and the non-profit, private, academic, and philanthropic sectors have begun thinking differently about how human and social services are organized and delivered. Across Canada, a range of integrated health and social care practices are being developed, adapted, and implemented to meet local needs. The Hub (or Situation Table as it is more commonly known in Ontario) model is one such approach. The Hub model is a multi-sector, collaborative, risk-driven intervention that mobilizes multi-sectoral human services for the purpose of rapid risk mitigation focused on the immediate needs of persons experiencing acutely elevated risk of harmful safety or well-being outcomes. Over the past eight years, the model has been adopted in over 115 communities across Canada.

While the model has benefited from developmental and formative evaluations, it is now timely to undertake a systematic multi-site evaluation of the generalizable impacts (e.g., clients, system, costs) and lessons learned about what works, in which context, and why. This body of work will serve to inform policymakers, funders, practitioners and others as to the way forward with the Hub model. The Community Safety Knowledge Alliance (CSKA) is moving forward on a plan to see such independent evaluation undertaken.

Key Words Summative evaluation; Hub model; situation table; formative evaluation; community safety and well-being; impact outcomes.

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The Hub model (or Situation Table as it is more commonly known in Ontario) is a multi-sector, collaborative, risk-driven intervention approach to mobilizing multi-sectoral human services for the purpose of rapid risk mitigation focused on the immediate needs of clients experiencing *acutely elevated risk* of deleterious safety or well-being outcomes. This model of practice, which has undergone rapid, widespread adoption, comprises a disciplined process of risk detection, sharing of limited/need-to-know information, and deployment of rapid, risk-mitigating intervention(s). Other individual or multi-sector service approaches can be used to address client needs with lower or chronic risks or to address broader systemic issues.

The Hub model makes practical sense on a number of levels. It has strong intuitive and anecdotal appeal and, in less than eight years, has been adopted by over 115 communities across Canada as well as a few in the Northeast United States. And at first blush, what's not to like? A growing number of police and other community leaders are realizing that the more traditional and siloed approaches of the past are largely inadequate. More than one professional has proclaimed something to the effect that, *My biggest ah-ha*

moments have not always been about the crises averted, but rather that I have worked with some of these clients for many years and it has only been since we adopted the Hub approach that I have a fuller understanding of the individual's situation. That wasn't possible when we operated in silos.

Another positive aspect in our view is that the significant uptake of the Hub model since its inception has not stemmed from government efforts to scale up or expand. Rather, its replication has been driven by local human service professionals who are seeking pragmatic inter-disciplinary opportunities to improve access to help for at-risk clients before harm occurs.

Informing many communities throughout the replication process over the past eight years has been conceptual understandings laid out by developmental evaluators (Nilson, 2014) and key lessons captured by formative evaluators (Babayan, Landry-Thompson, & Stevens, 2015; Brown & Newberry, 2015; Lansdowne Consulting Group, 2016; Litchmore, 2014; Ng & Nerad, 2015; Nilson, 2014; Nilson 2016a; Nilson 2016b). As the Hub model continues to gain momentum, it is important to continue to build capacity and interest for further evaluation. Since the model itself is designed to merely mobilize services in situations of acutely elevated risk, building specific enough

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indicators to measure changes in risk will become increasingly important.

We advocate that, notwithstanding a number of formative evaluations undertaken to date and the inherent benefits to be gained by conducting more of those, it is also now time for an independent summative evaluation of the Hub model.

The Hub Model and the Field of Community Safety and Well-Being

Over the past decade, governments and the non-profit, private, academic, and philanthropic sectors have begun thinking differently about how human and social services are organized and delivered. Across Canada, a range of integrated health and social care practices are being developed, adapted, and implemented to meet local needs as these sectors coalesce to help solve complex social issues and improve community safety and well-being (CSWB). These innovations include collaborative risk-driven intervention (CRDI), multi-sector coordinated support, systems-focused solution building, bi-sector response teams, and problem-solving courts (Nilson, 2018).

Under a framework of CSWB, these different collaborative social innovation models can help one another improve and strengthen. Moving forward, we should explore opportunities for shared measurement, outcome tracking, and new indicator development. Many of the measurement indicators we are accustomed to using in our various silos (e.g., crime reduction, school truancy, employment) may not be relevant in a multi-sector collaborative context. Under a consolidated CSWB framework, we can begin examining outcomes for what they are—not for what our traditional siloed disciplines tell us they should be! By building capacity for measuring the impact of the Hub Model, multi-sector coordinated support, systemic solution building, bi-sector response teams, or problem-solving courts, etc., we will enhance our capacities to improve community safety outcomes.

Current State of the Evidence Base Concerning the Hub Model

Several of the current Hubs/Situation Tables have undertaken some level of evaluation of their implementation of the approach, and some work has been done to consolidate learnings from these evaluations and standardize key evaluation metrics for CRDI and related CSWB initiatives (e.g., Russell & Taylor, 2014; Nilson, 2015; Nilson, 2017).

Overall, most evaluations have been formative in nature—assessments of the development and application of the CRDI processes. This has largely been due to the importance of establishing consistent implementation of a model that is required for proper impact evaluation. Methodologies of these formative evaluations have included qualitative feedback from representatives of participating service agencies; output data on service/intervention activity; pre/post service demand analysis; and some limited assessments of client and system impacts. Most evaluations have been conducted by evaluators contracted by local organizations who are part of a Hub/Situation Table (Brown & Newberry, 2015; Lansdowne Consulting Group, 2016; Ng & Nerad, 2015; Nilson, 2016b).

The Hub model has demonstrated utility in establishing multi-sectoral collaborations in human services, with a sharp

focus on urgent client issues. Various impacts/effects of the approach have been reported from past evaluations, including quicker access to services (Nilson, 2014), improved cross-sectoral communication and working relationships (Ng & Nerad, 2015), and self-reports by workers and clients of more effective, supportive services (Babayan, Landry-Thompson, & Stevens, 2015; Brown & Newberry, 2015; Lansdowne Consulting Group, 2016; Nilson, 2016b). Collectively, this evaluation experience has strengthened fidelity to the model, improved efficiency of Hub/Situation Tables, and informed community stakeholders of the short-term outcomes of collaborative risk-driven intervention.

However, evaluations to date have not been sufficiently resourced and designed to ensure rigorous assessment of impacts. That goes for both clients and the human services system. Past efforts—including a January 2017 national symposium held in Toronto—to facilitate broad dialogue regarding further assessment of the Hub model have revealed considerable interest and opportunity among evaluators, policy, and practitioner stakeholders to explore such options (Nilson, 2017).

The Need to Strengthen the Evidence Base Concerning the Hub Model

As noted above, the widespread adoption of the Hub model suggests it is an approach to multi-sectoral human services with intuitive and anecdotal appeal. However, like any intervention, the model entails both costs and benefits/effects. The suitability of sustained commitment to, and further spread of, the approach can only be assessed based on rigorous impact evaluation. Further, a more systematic evaluation of the Hub model at this juncture is important to continuous learning, improvement, and standardization of the model itself.

Why now? Until now, the measurement community lacked strong enough samples of Hub/Situation Tables with sufficient years of experience applying the model to allow for proper impact measurement. However, with improvements in the model's fidelity at local levels, together with lessons learned from past formative and developmental evaluations, we believe that the time is now right for a summative evaluation of the Hub model.

A multi-site evaluation of the generalizable impacts (e.g., client, system, costs) and lessons learned about what works in which contexts, and why, will go a long way to informing policymakers, funders, practitioners, and other stakeholders as to the way forward with the model. Increasingly, governments and other funders want to invest in social and human service interventions that measurably contribute to improved outcomes and have impact.

The widespread adoption and sustained use of the Hub model in numerous jurisdictions suggests that the approach has practical merit. Now it is time for an independent summative evaluation to determine the model's impacts on those it strives to help. To that end, the Community Safety Knowledge Alliance is now socializing a three-phase evaluation approach with potential funders and key stakeholders.

- Phase 1 will centre on a review of the existing body of relevant evaluative work and will produce a consolidated knowledge base that will be maintained and widely accessible for other research.

- Phase 2 will assess the evaluability of current Hubs/Situation Tables to determine which are suitable for a rigorous summative evaluation. Such criteria as model fidelity, organizational maturity, sufficient client flow-through, and of course, local interest in participating in an evaluation will be considered.
- Phase 3 will entail a multi-site, multi-jurisdiction independent evaluation. Through a request for proposals, an evaluation team will be selected to design and implement a rigorous evaluation of impacts on providers, clients, and human services systems and to elucidate important elements of context and the mechanisms that drive the impacts.

Work towards Phases 1 and 2 has already begun. Once the Community Safety Knowledge Alliance (CSKA) secures funding support for Phase 3, a call for expressions of interest in taking on this important evaluation will go out to the evaluation and research community.

CONFLICT OF INTEREST DISCLOSURES

The authors state that there are no conflicts of interest. Cal Corley is the Chief Executive Officer of the Community Safety Knowledge Alliance (CSKA). Dr. Gary Teare is a Senior Scientist with Alberta Health Services. He is a former member of the CSKA Board of Directors.

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The dangers of non-powder firearms

Brandi A. Christmas* and Jack Powles*

ABSTRACT

Non-powder weapons have become a persistent threat in today's society. They are found outside of competitive sports at an increasing rate, being misused among young individuals, and have emerged in Canadian criminal activity. In some cases, misuse of these weapons has led to death or serious injuries. Individual and community safety are at risk when fake firearms are in the hands of criminals, as they can be altered to look and perform like real firearms. They are a particular challenge for law enforcement, who cannot be expected to distinguish fake firearms from real ones under stress. This research found fake firearms to be easily accessible and the regulations around their security and control sorely lacking and often resisted. Education regarding non-powder firearms was also found to be inadequate, when it exists at all. Awareness, education and further regulation are needed to help focus on these issues. This research concludes that it would be beneficial to treat non-powder weapons like real firearms in every aspect: storage, transportation, and handling.

Key Words Guns; replica firearms; air-powered weapons; firearms safety; community safety.

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INTRODUCTION

Non-powder weapons gained media attention and started to enter the public consciousness in our home province of Manitoba, Canada, in 2008, following the death of 13-year-old Cody Shuya. A non-powder firearm was accidentally discharged, and the projectile pierced his eye, entering his brain. He later succumbed to his injuries ("Man charged," 2010). Since this incident, the Winnipeg Police Service (WPS) has announced that they were encountering more of these weapons on the street, a pattern found to be consistently increasing. *Non-powder* firearms are defined as "dangerous weapons that can inflict serious or lethal injuries and any barrelled device that does not require gun powder to launch a projectile; instead, they employ compressed air or other gases, spring or electricity to fire (includes BB guns, paintball guns, airsoft guns and pellet guns)" (WPS, 2015, p. 4). *Replica* firearms are "designed to resemble a real firearm" with near precision and are prohibited devices within Canada due to the danger they pose. Replica firearms can include imitation firearms (WPS, 2015, p. 5; Canada, RCMP, 2012b).

Originally created for recreation, as well as for competitive sport, these non-powder weapons are present in criminal activity, as they have been manufactured as exact replicas that look and feel real. They are described as having been modified to fire bullets, while looking identical to an actual firearm, and they can be purchased directly from a shelf display in stores. A member of law enforcement may be unable to discern between a non-powder firearm and a real firearm, and

if a non-powder firearm is drawn and looks identical to an actual firearm, repercussions have the potential to be lethal.

RESEARCH METHODS

This research was first addressed in a practicum course through the University of Manitoba in the fall of 2016, where the authors partnered with the WPS for a research project that would last around six months. The WPS had already begun research on non-powder firearms, and we were engaged to undertake exploratory research, with the goal of determining the extent of issues related to non-powder firearms in Canada and future routes for research and education, as well as regulation.

Our research methodology included a literature review, scanning news, and examining policies in several police agencies. We also conducted limited primary research using both qualitative and quantitative measures. We interviewed individuals from several different law enforcement agencies, including the WPS, the Edmonton Police Service, and the Royal Canadian Mounted Police (RCMP). These individuals had first-hand experience with and expertise in non-powder weapons within their careers.

To gain the fullest picture possible, we asked both open and closed-ended questions, including:

- How frequently do you come across non-powder weapons?
- Has the frequency increased?
- Do you believe that it is difficult to distinguish a non-powder firearm from a real firearm?

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- Have you mistaken a non-powder firearm for a real firearm in the past?
- When responding to an incident involving a non-powder firearm, how would you handle the call compared with incidents involving real firearms?
- What is your opinion on the accessibility of these weapons?
- Do non-powder weapons affect community and individual safety, and if so, in what way?
- Are you aware of injuries that have occurred using non-powder firearms, and have you been injured when encountering a non-powder firearm?
- What would need to change in order for there to be regulation of these weapons?
- What else could be done to prevent further misuse of non-powder weapons?

We collected quantitative data from the same three law enforcement agencies regarding their policies and the number of incidents they have experienced with non-powder firearms. We also analyzed existing data, such as archival documents and news reports, to gain historical and current insight into the issue. Reports regarding injury and past use of non-powder weapons were further used to provide context. Due to limited resources because this was a class project, our findings are also limited; however, we were able to form some definitive conclusions and observations that will hopefully point the way forward for continuing research in this area.

The themes that arose throughout this research were a result of broad exploratory research to gain insight into an existing problem in Canada. This research includes insight from the perspective of law enforcement agencies and existing documentation. The framework follows a logical flow, with the introductory chapter outlining the scope and focus of the study, subsequent information gathered throughout the research, and a conclusion of the research. The themes that emerged from the interview data, specific challenges, and recommendations are identified as follows:

- Characteristics of non-powder weapons
- Replications of or alterations to non-powder weapons
- Distinguishing velocity
- Law enforcement incident response
- Increased frequency of non-powder weapons
- Safety and injury
- Retailers and accessibility
- Youth and non-powder weapons

Characteristics of Non-Powder Weapons

Non-powder firearms come in all shapes and sizes and in a multitude of colours, with a variety of ammunition, including BB-sized lead shotgun shot (aka BB's), lead pellets, gelatine paint balls, and plastic pellets. Pellet guns use small pellets of several different designs with different purposes, for example, wad cutters, sharp pointed, and round nosed. Hollow-point rounds are used for hunting and may cause maximum damage due to their increased diameter upon impact (Laraque, 2004). Laraque points out that larger calibre pellets can penetrate body mass at lower velocities due to their increased mass, and this can cause serious harm to the individual using the weapon or to the public.

Non-powder firearms include three driving force mechanisms: the spring piston (spring-air), the carbon dioxide mechanism, and the pneumatic system (air). Non-powder firearms are further defined by their "muzzle velocity" (the speed of a projectile as it leaves the muzzle of the firearm) and the "muzzle energy" (the energy of the projectile as it leaves the muzzle of the firearm) (Canada, RCMP, 2012a). Traditional firearms and non-powder firearms can have similar velocities, and Laraque (2004) explains that "the range of muzzle velocities for non-powder firearms overlaps velocities reached by traditional firearms." Rifled non-powder firearms have a higher velocity, as "the longer the gun barrel is, the higher the velocity" (Laraque, 2004).

Replications of or Alterations to Non-Powder Weapons

Non-powder firearms can be altered in various ways. For example, "dieseling of the barrel" involves oil placed in the barrel providing increased projectile speed, as well as an explosion when the projectile is launched out of the barrel (Laraque, 2004). A member of the National Weapons Enforcement Support Team (NWEST) explained that non-powder firearms can have the same "functions, safeties, everything" as a real firearm, and there are kits available to make them look more realistic (personal communication, March 15, 2017).

Offenders usually opt for non-powder firearms that are similar looking to real firearms. However, Constable Roemer of the Firearms Investigative Analysis Section (FIAS) of the WPS explains that criminals frequently opt to buy the cheaper non-powder firearms that are often clear plastic and then paint them black in order to make them look similar to a real firearm (personal communication, March 30, 2017). Conversely, a real firearm may also be painted in a high-lighter colour or with an orange tip in order to make it look like a non-powder firearm; this could pose a danger to police officers who may hesitate to react in lethal encounters, thinking they are facing a toy gun. A member from NWEST stated that most non-powder handguns are made of materials that are similar to real firearms, such as metal, and to the exact specifications, allowing them to be modified to fire bullets (personal communication, March 15, 2017).

Distinguishing Velocity

A member of NWEST stated that the velocity at which non-powder firearms shoot is increasingly becoming a concern (personal communication, March 15, 2017). In 2014, the *three-tier approach* was created for non-powder firearms. The second tier in this approach is *medium velocity*, where a firearm shoots a projectile at a speed anywhere from 249 feet per second up to 499 feet per second. These weapons are able to cause injury due to increased projectile speed. The NWEST member explained that medium-velocity weapons are of importance in regard to marking and identification, since they do not require a firearms license, and, in order to identify the velocity, a chronograph would have to be used to test them or a round would have to be fired (personal communication, March 15, 2017).

Law Enforcement Incident Response

The FIAS section of the WPS is responsible for various departments, including test firing for functional examination and classification of firearms and non-powder firearms

for court purposes. Members of FIAS reported that many of these law enforcement experts could not distinguish a non-powder firearm from a real firearm at first (personal communication, March 30, 2017). A member of NWEST explains that, just because an individual is Municipal Police or RCMP “does not mean they have extensive gun knowledge; all that you can be guaranteed of is they can use their gun that they were trained on” (personal communication, March 15, 2017). Members from the NWEST division and individuals from FIAS have explained that they have not personally mistaken a non-powder firearm for a real firearm or vice versa. However, both of these divisions described that this distinction is dependent on individual circumstances and officer experience (personal communication, March 15, 2017, and March 30, 2017).

Police are trained to treat all firearms as though they were real and loaded and not to consider whether the firearm is an airsoft gun, BB gun, pellet gun, other non-powder gun, or a real firearm. Constable Marshall from the Edmonton Police Service (EPS) explains that it is “against the grain of firearms training” to distinguish a non-powder firearm from a real firearm, as law enforcement individuals must treat all firearms as “loaded and ready to fire.” He further explains that “this is done regardless of the projectile being fired and whether that is a known fact or not” (personal communication, April 2017).

Constable Ogwal of FIAS states that, by its very nature, an incident response to a firearm can occur quickly, with a perpetrator being able to draw, aim, and fire in a very short period of time (personal communication, March 30, 2017). An officer needs to formulate a response to a potentially deadly force threat; if they believe it is a firearm, the officer will respond to it like a firearm. If it is confirmed to be a non-powder firearm and the perpetrator is presenting it in a threatening manner, then police officers will also treat the situation as though that firearm were potentially a real firearm.

A member of NWEST explains that an offender may want to influence “the reaction of the officer to shoot him.” This could be a reason individuals might alter the appearance of weapons, whether “[it] slows the officer down, gives him a pause, [the officer] does not pull the trigger, [it] gives [the individual] more time to engage” (personal communication, March 15, 2017). This is what is known as “suicide by cop” (WPS, 2015), where an offender will pull a non-powder weapon, or even a weapon that does not function at all, in order to get killed by law enforcement. Ontario Provincial Police forensic psychiatrist Dr. Peter Collins has found that over “one-third of all police deadly force encounters could be classified as suicide by cop,” further explaining that “approximately 20 per cent would feign having a weapon in order to fool the police into shooting them,” meaning that non-powder weapons or replica weapons may have been involved (2019).

Increased Frequency of Non-Powder Weapons

According to a search done with the EPS using the Edmonton Police Reporting and Occurrence System (EPROS) with the keywords “imitation gun” OR “replica gun” OR “imitation firearm” or “replica firearm” OR “BB” or “airsoft” OR “pellet” OR “paintball” OR “cap gun” OR “starter pistol” OR “toy gun,” there was an increase of 438 occurrences or 37.7% from 2014 to 2015 (EPS Analysts, April 2017). Calls trend up in the summer/warmer months, generally.

It is estimated by FIAS members that about 35% to 40% of firearms they come into contact with are non-powder (personal communication, March 30, 2017). They explain that the frequency of offences related to non-powder firearms is “pretty consistent”; however, in general, firearm-related offences are increasing by a small amount, including both real firearms and non-powder firearms (personal communication, March 30, 2017). Constable Marshall from the EPS explains that he regularly encounters non-powder weapons through the course of his duties, on average about once per week (personal communication, April 2017).

A member of NWEST stated that non-powder firearms are discussed almost daily, whether it be a call about identifying a weapon as real or not or a call about the offences regarding a non-powder firearm that was encountered. They stated that, as more people are prohibited from gun ownership by the courts, the frequency of encounters involving these firearms is increasing. Their assumption may be that if a person is in possession of a non-powder firearm, they cannot be charged for simple possession. However, a person who is prohibited, of which there is an increasing number, who is in possession of a non-powder firearm will be charged (personal communication, March 15, 2017).

Safety and Injury

Constable Marshall, from the EPS, states that “anytime any weapon is seen in public, it increases the fear of its use” (personal communication, April 2017). Members of FIAS explain that, in the hands of criminals, non-powder firearms are a threat to community and individual safety. It was further explained that offenders who use non-powder weapons use them as an intimidation factor and may not actually want to fire them because that would give away the fact that they are not real firearms (personal communication, March 30, 2017).

There have been several police shootings resulting in injury that include non-powder weapons. According to a member of NWEST, 70 injuries occurred over the last two years resulting from non-powder weapons, although the extent of the injuries is unknown. Over five years, 165 injuries resulted from non-powder weapons, although the extent of the injuries is again unknown (personal communication, March 15, 2017). There have been recent instances of events where police shootings involving non-powder firearms have resulted in death. The Ontario Human Rights Commission’s report from November 2018 identifies examples of death resulting from an altercation with police where the deceased were using non-powder firearms. In 2014, Daniel Clause was killed by a Toronto Police officer after the officer testified that Clause had reached and pointed a gun in the officer’s direction. The weapon was later discovered to be a non-powder firearm, a pellet gun (Ontario Human Rights Commission, 2018). In 2016, Alexander Wetlaufer was shot and killed by Toronto Police officers after he did not respond to their request to lower his gun. In this case as well, the weapon was later discovered to be a non-powder firearm, a BB gun (Ontario Human Rights Commission, 2018).

Retailers and Accessibility

Non-powder weapons are easily accessible, as they can be ordered through the mail. A member of NWEST explains, “the retailer isn’t assuming that they are selling a gun for

an illegal purpose”; however, “the firearms industry aims to sell guns, and they don’t care to whom” (personal communication, March 15, 2017). There are some restrictions, such as producing an ID and being 18 years of age, imposed in order to purchase a non-powder weapon, and if these requirements are not met, the store can be charged or fined or lose its business license.

A member of NWEST explains the respect for standards in the industry as inconsistent, stating, “one manufacturer may do it and the other may not” in regard to restrictions and what kind of non-powder weapons they are selling (personal communication, March 15, 2017). An operations manager with the Canadian Firearms Office, a division of the RCMP, describes a situation where retailers were selling non-powder weapons with silencers on them, which would make those prohibited weapons (personal communication, April 10, 2017). Marking regulations are now in effect as of June 2017 to put standards in place for all manufactures to comply with. This includes requiring firearms that are imported to or manufactured in Canada to be clearly engraved with information about the velocity, year of production, manufacturer name, and serial number on the firearm and not a sticker that is easily removable.

Officer Mowatt, from the Canadian Firearms Office, explains that officers should place an emphasis on understanding the different types of firearms and which models are regulated (personal communication, April 10, 2017). There are non-powder firearms, which are not regulated and can be sold to anyone over the age of 18, and these consist of pellet guns, airsoft guns, and BB guns. The Canadian Firearms Office does not regulate these, but they do regulate replica firearms, which are made to look and feel the same as real firearms but do not discharge a projectile. Officer Mowatt stated that understanding this difference is important, as they had an issue where “blue guns,” that look and feel like real guns and are used for law enforcement training, were being sold to the general public illegally (personal communication, April 10, 2017). They reiterated that these definitions are important to regulate what retailers can and cannot sell.

Youth and Non-Powder Weapons

Constable Marshall, from EPS, explains that youth are more likely than any other group to be in possession of non-powder firearms (personal communication, April 2017). A member of FIAS explains that youth with criminal backgrounds are a concern as “they try to acquire whatever they can get” (personal communication, March 30, 2017). Members of both NWEST and FIAS expressed concern about adolescents and the fact that there is the potential for them to bring non-powder weapons to school.

CONCLUSION

This research highlights the dangers posed by non-powder firearms to law enforcement personnel and society at large. In the many cases of misuse, injury, or even death, these weapons have proven to be a problem to individuals, communities, and law enforcement. We found that, with increasing frequency, these weapons are being used improperly, for criminal purposes. The misuse of these weapons has a ripple effect throughout the community: ordinary citizens fear them, law enforcement encounter them and have to treat them

as real firearms until proven otherwise, and the healthcare system must deal with the resulting injuries or deaths. Perhaps the most direct threat we found was the common use of these easily obtained weapons by criminals, who use them as real firearms to scare and rob people. The data we gathered indicates that non-powder firearms in recent years have been built and sold to look increasingly similar to real firearms; hence they are posing greater threats to law enforcement, who must treat them as real. The economics are simple: there is a market for them and manufacturers will continue producing and selling them for profit as long as they are allowed to. Government has a responsibility to regulate things that pose a threat to public safety, and this is clearly one of them. There is currently a lack of standards and regulations governing these weapons, making them easily accessible to everyone, even minors or youths.

The marking regulations that were put in effect as of June 2017 do little to reduce the high level of accessibility, and this contributes to the potentially lethal force that law enforcement personnel may have to use in response to a non-powder firearm encounter. The ready accessibility of these firearms causes a chain reaction of sorts, as there is a duality of increased trauma that is experienced when these firearms are involved in a lethal force situation. Affected communities, as well as front-line officers, are already placed in grievous situations when a response to a firearm escalates into a lethal force event. Officers involved in these situations may encounter additional trauma upon learning that the firearm was not in fact real, whether they were forced to use lethal force or not. Victims of robberies suffer similar trauma.

All of the responding officers from NWEST, WPS, and EPS suggested that non-powder weapons should be treated as real firearms in many respects. These include safe handling and storage, transportation, education, and awareness. They also expressed that implementing a safety course regarding non-powder weapons could potentially lessen misuse of them. This safety course could be a deterrent in itself, as it would be a day-long course, and individuals would have to weigh the costs and benefits of buying a non-powder weapon and what is required of them in order to do so.

Areas for future study could include Canada-wide research into the issues surrounding non-powder weapons. Recommendations could potentially include programs for public awareness and education, deeper regulation of the sale of non-powder firearms, and stiffer penalties when they are used in crimes. The public awareness campaign that the EPS organized was well received by the public and could be a potential template to be used nationwide.

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CONFLICT OF INTEREST DISCLOSURES

The authors declare there are no conflicts of interest. The views expressed in this paper are those of Christmas and Powles and not the Winnipeg Police Service.

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