

Prescription for Life

This report provides key actions urgently needed to improve opioid safety and reduce accidental opioid overdose fatalities and injuries by expanding access to the emergency medicine naloxone.

Massive increases¹ in opioid prescribing have made Canada a world leader in per-capita prescription opioid consumption² and Ontario a leading province in opioid prescribing³ and high dose opioid dispensing.⁴ Ontario has witnessed 13 years of increasing and record-setting opioid overdose fatalities,^{5,6} which now rank as the third leading cause of accidental death,⁷ and more than double the number of drivers killed in motor vehicle collisions.⁸ More than 5000 Ontarians have died of an opioid overdose since 2000, the vast majority unintentionally.⁹ Non-fatal opioid overdoses have been estimated at 20-25 times the number of fatal overdoses and can be a significant contributor to morbidity¹⁰ however, data on prevalence and injury burden are limited.^{11,12} Opioid-related hospital emergency department (ED) visits in Ontario have increased significantly,¹³ and hospital stays across Canada are up 23%.¹⁴

It is critical to understand that people who are at-risk of an accidental overdose¹⁵ include individuals who are taking opioids as prescribed,¹⁶⁻²⁰ in addition to people using opioids non-medically.²¹ Effective opioid overdose prevention and intervention targets both opioid-using populations- and potential witnesses.

Naloxone is the opioid antagonist that has been used to effectively revive victims of opioid overdose for decades, in hospital emergency rooms and by select paramedics. A limited "take-home" naloxone program was recently launched in Ontario,²² however, barriers prevent dispensing to most Ontarians at risk of experiencing or witnessing an opioid overdose; an opioid overdose victim cannot save themselves. Considered as an essential part of the First Aid toolbox, expanded low-barrier naloxone access will reduce injuries, save lives,²³⁻³⁰ and begin to provide similar levels of care that are dedicated to reducing other preventable deaths.

We can do much better at responding to the thousands of opioid-related medical emergencies that are certain to occur. As Peterborough Police Chief Murray Rodd noted when speaking of opioid overdoses and naloxone, "It could be anybody's mother or father, anybody's brother or sister - we have to respond appropriately".³¹

Recommendations

The Municipal Drug Strategy Co-ordinator's Network of Ontario recommends the following actions to reduce accidental opioid overdose fatalities and injuries in our communities:

1. Add naloxone to Provincial, Federal and Veterans Affairs Formularies

- a. Ontario Formulary Ontario Drug Benefit Plan (ODB), General Benefits
- b. Federal Formulary and
- c. Veterans Affairs Canada Formulary

The emergency medicine naloxone is a post-patent, World Health Organization (WHO) recommended³² Essential Medicine³³ that (temporarily) reverses an opioid overdose. Naloxone should be on all government drug formularies for the same reason that epinephrine (e.g. EpiPen®, Allerject™) is: it is the emergency medicine of choice and a proven lifesaver. More than 150 opioid

formulations are on the Ontario Drug Formulary (ODB, General Benefits),³⁴ but not the essential lifesaver naloxone. The absence of Formulary standing is a barrier to patient safety and for physicians who wish to prescribe naloxone alone or with opioids for at-risk patients and potential Good Samaritans (witnesses).

2. Increase onsite naloxone access

a. **The Ministry of Health and Long Term Care to expand naloxone and kits beyond select Public Health Units and Hepatitis C programs**

Ontario has a ‘take home’ naloxone program with onsite access that is limited to participants of select HIV and HCV programs and has helped to successfully reverse opioid overdoses. The existing administrative arrangement precludes equitable and expanded access as per the Minister’s promise of 2012.³⁵ All Ontarians at risk for an opioid overdose, and potential Good Samaritans such as parents and friends, should have access to this essential lifesaver. For example, targeted onsite dispensing via medical staff, including Registered Nurses, as well as non-medical staff providing outreach, shelter, withdrawal management, and addiction treatment services, and in primary care settings are among the priority options.

b. **The Ministry of Health & Long-Term Care to provide naloxone and kits to patients receiving Opioid Substitution Therapy (OST)**

The MOHLTC should provide naloxone and kits to OST patients given that portions of the patient roster at OST clinics are considered high-risk for an accidental overdose.³⁶⁻⁴⁰ Methadone-related fatalities have been increasing for several years⁴¹ and physicians and other care providers are willing to dispense naloxone onsite to their patients.

c. **The Ministry of Health & Long-Term Care and area Local Health Integration Networks to ensure naloxone and kits are provided at Ontario hospitals**

Ontario hospitals treat thousands of overdose victims each year. A major predictor of an accidental opioid overdose is having experienced a non-fatal overdose in the past.^{42,43} Frequency of ED visits are a predictor of fatal overdose.⁴⁴ The Canadian Paediatric Society’s “Emergency Treatment of Anaphylaxis in Infants and Children”⁴⁵ provides a discharge protocol relevant for people at risk of experiencing or witnessing an overdose. Naloxone dispensing is a promising practice at select hospitals in the United States,⁴⁶⁻⁵⁰ and currently three Canadian hospitals dispense naloxone through inpatient and ED services.⁵¹

d. **The Ministry of Community Safety and Correctional Services, Corrections Canada, and Public Safety Canada to provide naloxone and kits to high-risk prisoners leaving correctional institutions**

People released from correctional facilities are at an exceptionally elevated risk for accidental overdose death upon release.⁵²⁻⁵⁹ Forty-three percent of opioid-related deaths amongst Ontario inmates occurred within 7 days of release.⁶⁰ Scotland’s national naloxone program has cut the fatality rate by almost half in just a few years.⁶¹ England’s N-ALIVE program was a proven success for discharged inmates exiting 15 prisons.⁶² New York State’s Department of Corrections provides one example of a formal naloxone program in the U.S.A.⁶³ Correctional Services Canada noted the importance of naloxone access in discharge planning and transfer guidelines provided in 2014.⁶⁴

e. Health Canada to provide naloxone and kits to Aboriginal, Inuit and Metis nations as requested

In 2007, opioid per capita prescribing in Ontario's First Nations was over 52% higher than the rest of Ontario⁶⁵. In 2009, the Nishnawbe Aski Nation declared a State of Emergency due to an epidemic of opioid addiction and death in 49 northern communities,⁶⁶ as did Eabametoong and Cat Lake.⁶⁷ In 2014-15, Alberta's Blood Tribe witnessed a serious rise in fentanyl-related deaths⁶⁸, for which Health Canada, possibly for the first time, provided naloxone kits⁶⁹ that enabled the community to successfully reverse several overdoses.⁷⁰

3. Ensure health professionals and others can be lifesavers

a. The Ministry of Health & Long-Term Care work with the Ontario College of Pharmacists, the College of Nurses of Ontario, the Ontario Pharmacists Association and the Registered Nurses Association of Ontario to add naloxone to the list of medicines these health professionals can prescribe

Pharmacists and nurses have key roles in opioid safety. Pharmacists have unique pharmacological expertise, access to patient history, frequent interaction with physicians regarding opioids⁷¹ and a high level of patient trust.^{72,73} An Ontario study revealed that 56.1% of fatal opioid overdose victims had filled a prescription for opioids in the month preceding their death (66.4% had seen a physician).⁷⁴ Pharmacists, associations and legislators in several U.S. states are already providing patients with improved opioid safety via naloxone.⁷⁵⁻⁸¹ The Ontario pharmacists' Scope of Practice recently changed to include flu vaccines and tobacco cessation products⁸², and naloxone should be included in this expansion too. The Registered Nurses' Association of Ontario recently released best practice guidelines on engaging clients who use substances⁸³ and have advocated for expanded naloxone distribution.⁸⁴ In British Columbia, Registered Nurses and Nurse Practitioners are permitted to "*compound, dispense or administer Schedule 1 drugs autonomously for the purpose of treating opiate overdose*".⁸⁵ Naloxone should be added to the Scope(s) of Practice for nurses and pharmacists.

b. The Ministry of Community Safety and Correctional Services, Corrections Canada, Public Safety Canada, the Ontario Provincial Police and the Royal Canadian Mounted Police to provide naloxone and training to select jail, correctional centre, detention centre and policing staff

Federally, 80% of incarcerated males have an identified 'substance abuse disorder'.⁸⁶ No prison is 'drug-free'^{87,88} and officials from Public Safety, the Correctional Service and the Parole Board of Canada conclude drug-free prisons are "an aspirational goal, just as is achieving drug-free societies".⁸⁹ In Ontario, overdose deaths while in custody have been the subject of several (mandatory) Coroner's Inquests.⁹⁰ Twenty percent of opioid-related inmate deaths in Ontario (2006-2008) occurred while in custody.⁹¹ Risky drug use, specifically opioid use, is significant inside both provincial^{92,93} and federal^{94,95} facilities. Staff in correctional institutions, detention centres and other custodial facilities should be trained in overdose prevention generally, have naloxone in their first aid kit, and be trained to administer it. The U.S. National Commission on Correctional Health Care supports increased access to and use of naloxone in correctional facilities.⁹⁶ The College of Physicians and Surgeons of Ontario (CPSO) recommends naloxone on site.⁹⁷ Even the best response times from Emergency Medical Services can be too slow to avert injuries or death.

4. Develop Overdose Policies

a. **The Province of Ontario and the Government of Canada to Develop Real Time and Online Monitoring and Surveillance**

Throughout the United States data exists from surveillance and monitoring to inform policy and programming that is simply not collected and available in Canada, including Ontario. Health Canada cannot provide a national snapshot of drug-related deaths for any year; data from the Office of the Chief Coroner for Ontario is at least a year behind; the Ontario Ministry of Community Safety & Correctional Services does not track overdoses occurring in its correctional facilities; the Ontario Health Minister's promise of 2012 to implement "real-time surveillance of opiate overdose and withdrawal in 73 emergency departments"⁹⁸ has yet to be realized; the MOHLTC's Public Health Division has yet to implement monitoring and surveillance; and the Ontario Narcotics Monitoring System appears limited in functionality. There is no early warning system with evidence from real-time monitoring and surveillance – critical in a post-OxyContin era of non-pharmaceutical bootleg fentanyl^{99,100} and, in spite of clinical prescribing guidelines, increased high-dose opioid prescribing.¹⁰¹ These are persistent, systemic problems¹⁰² that limit efforts to understand, address and evaluate opioid-related harms.

b. **The Ministry of Health & Long-Term Care and the College of Physicians & Surgeons of Ontario to provide clear third-party liability guidance and eliminate any identified barriers**

An opioid overdose victim cannot save themselves. Potential third party liability concerns could arise when naloxone i) is administered by a bystander/Good Samaritan when the victim does not have a prescription, and/or ii) is prescribed to a person not using opioids (e.g. concerned parent). The concern for prescribers and administrators may be real or perceived. We request the MOHLTC and the CPSO to provide clear third-party liability guidance, and if necessary, to identify, communicate and eliminate any barriers that prevent third-party prescribing, dispensing and administration.

c. **The Province of Ontario and the Government of Canada to develop Overdose Prevention and Intervention Plans**

U.S. governments and agencies at all levels have shown leadership on reducing opioid-related deaths via strategic plans with defined overdose reduction targets, dedicated funding and regulatory-legislative changes as required.¹⁰³⁻¹⁰⁵ In Canada, no provincial or federal plan exists despite similar opioid consumption rates and opioid overdose rates at record levels. A "leading public health and safety concern"¹⁰⁶ and a "public health crisis"¹⁰⁷ merits a strategic plan not unlike what is in place for other significant causes of accidental death and injury such as motor vehicle collisions and infectious diseases.

d. **The Government of Canada to create Good Samaritan Legislation**

At most accidental overdose emergencies involving illicit substance use, a witness is present.¹⁰⁸⁻¹¹³ In an Ontario study of barriers to calling 911 during an (illicit) overdose emergency, respondents reported that 911 was called just 46% of the time at the last witnessed overdose,¹¹⁴ the primary barrier cited being fear of police presence and the potential for criminal charges.¹¹⁵ By contrast, call rates for cardiac arrest are above 90%.¹¹⁶ Good Samaritan Laws that provide limited immunity from prosecution for witnesses and victims and have been passed or are pending in more than 27 U.S. states,¹¹⁷ often with bi-partisan support and alongside bills that expedite improved naloxone access. In Canada, a Good Samaritan Law is a federal responsibility.

e. Health Canada to reschedule naloxone

Naloxone should be rescheduled in Regulations under Canada's Food and Drugs Act to ensure that health care professionals other than physicians can provide naloxone for clients without a physician's prescription. For example, pharmacist-prescribed naloxone is an increasingly common practice in several U.S. states¹¹⁸ and entirely appropriate in the Canadian context for reasons outlined in recommendation 3b.

f. Health Canada to encourage additional naloxone formulations

The sole format approved in Canada is intra-muscular, requiring an injection. Although typically more expensive, auto-injectors similar to an EpiPen®, and intra-nasal devices are available in the USA and Europe but not in Canada.

Conclusion

The Municipal Drug Strategy Co-ordinator's Network of Ontario calls on the Province of Ontario, the Government of Canada, and others with a critical role in these recommendations to take action now to prevent deaths due to accidental opioid overdose. Expanded naloxone access can be quick to implement and is a WHO Essential Medicine because it is the "safest, most efficacious and cost effective medicine for priority conditions".¹¹⁹

Members of the Municipal Drug Strategy Co-ordinator's Network of Ontario (MDSCNO) work in more than 155 municipalities, counties, townships and First Nations communities across the province. These multi-sectoral initiatives aim to reduce the harms of alcohol and other drugs, including prescription medications. Strategies are tailored to each community, and based on the integrated components of prevention, harm reduction, treatment and enforcement/justice.

The MDSCNO has no conflicts to declare and receives no funding.

The MDSCNO endorsed these recommendations in May 2015 (2 abstentions).

For more information:

Contact: mdscno@gmail.com

Visit: www.drugstrategy.ca

Follow: @mdscno

References

- ¹ Dhalla, I., Mamdani, M., Sivilotti, M., Kopp, A., Qureshi, O., & Juurlink, D. (2009). Prescribing of opioid analgesics and related mortality before and after the introduction of long-acting oxycodone. *CMAJ*, 181(12), 891-896.
- ² United Nations Office on Drugs and Crime (2014). *World Drug Report 2014*. Vienna, Austria.
- ³ Fischer, B., Jones, W., Urbanoski, K., Skinner, R., & Rehm, J. (2014). Correlations between prescription opioid analgesic dispensing levels and related mortality and morbidity in Ontario, Canada, 2005–2011. *Drug and Alcohol Review*, 33(1), 19-26.
- ⁴ Gomes, T., Mamdani, M., Paterson, J., Dhalla, I., & Juurlink, D. (2014). Trends in high-dose opioid prescribing in Canada. *Canadian Family Physician*, 60(9), 826-832.
- ⁵ Gomes, T., Mamdani, M., Dhalla, I., Cornish, S., Paterson, J., & Juurlink, D. (2014). The burden of premature opioid-related mortality. *Addiction*, 109(9), 1482-8.
- ⁶ Office of the Chief Coroner for Ontario (2015). Unpublished, Data for opioid-detected deaths among Ontarians, 2009-2013, Personal communication, February 2015.
- ⁷ Office of the Chief Coroner for Ontario (2015). Unpublished, Data for opioid-detected deaths among Ontarians, 2009-2013, Personal communication, February 2015.
- ⁸ Paperny A.M. (March 24, 2013). *OxyContin's gone, but Canada's pill-popping problem is worse than ever*. Global News. Retrieved April 10, 2015: <http://globalnews.ca/news/406186/oxycontin-gone-but-canadas-pill-popping-problem-is-worse-than-ever/>.
- ⁹ Office of the Chief Coroner for Ontario (2015). Unpublished, Data for opioid-detected deaths among Ontarians, 2000-2013, Personal communication, May 2015.
- ¹⁰ Warner-Smith, M., Darke, S., & Day, C. (2002). Morbidity associated with non-fatal heroin overdose. *Addiction*, 97(8), 963-967.
- ¹¹ Stoové, M.A., Dietze, P.M., & Jolley, D. (2009). Overdose deaths following previous non-fatal heroin overdose: record linkage of ambulance attendance and death registry data. *Drug and Alcohol Review*, 28(4), 347–52.
- ¹² European Monitoring Centre for Drugs and Drug Addiction (2010). *2010 Annual Report on the State of the Drugs Problem in Europe*. Lisbon, Portugal.
- ¹³ Expert Working Group on Narcotic Addiction (October 2012). *The Way Forward: Stewardship for Prescription Narcotics in Ontario*, Report to the Minister of Health and Long-Term Care from the Expert Working Group on Narcotic Addiction.
- ¹⁴ Young, M.M., & Jesseman, R.J. (2014). *The impact of substance use disorders on hospital use*, Technical report. Canadian Centre on Substance Abuse, Ottawa, Ontario.
- ¹⁵ Orkin, A.M., Bingham, K., Klaiman, M., Leece, P., Buick, J.E., Kouyoumdjian, F., Morrison, L.J., & Hu, H. (2015). An Agenda for Naloxone Distribution, Research and Practice: Meeting Report of the Surviving Opioid Overdose with Naloxone (SOON) International Working Group. *Journal of Addiction Research and Therapy*, 6: 212, doi:10.4172/2155-6105.1000212.
- ¹⁶ Barss, P., Corneil, T., Larder, A., Parker, R., Pollock, S. (October 9, 2012). *Prescription Opioid Overdose Deaths of Persons with Chronic Pain in the Interior Health Region: Alert for Physicians/Pharmacists*. @Interior Health. Medical Officers of Health, Interior Health Authority, British Columbia.
- ¹⁷ Kolodny, A., Courtwright, D.T., Hwang, C.S., Kreiner, P., Eadie, J.L., Clark, T.W. & Alexander, G.C. (2015). The prescription opioid and heroin crisis: a public health approach to an epidemic of addiction. *Annual Review of Public Health*. 36:559-74, DOI: 10.1146/annurev-publhealth-031914-122957.
- ¹⁸ Johnson, E.M., Lanier, W.A., Merrill, R.M., Crook, J., Porucznik, C.A., Rolfs, R.T., & Sauer, B. (2013). Unintentional prescription opioid-related overdose deaths: description of decedents by next of kin or best contact, Utah 2008-2009. *Journal of General Internal Medicine*, 28(4), 522–29.
- ¹⁹ Dunn, K.M., Saunders, K.W., Rutter, C.M., Banta-Green C.J., Merrill J.O., Sullivan, M.D., Weisner, C.M., Silverberg, M.J., Campbell, C.I., Psaty, B.M., & Von Korff, M. (2010). Opioid prescriptions for chronic pain and overdose: A cohort study. *Annals of Internal Medicine*, 152(2), 85-92.
- ²⁰ Madadi, P., Hildebrandt, D., Lauwers, A., & Koren, G. (2013). Characteristics of opioid users whose death was related to opioid toxicity: a population-based study in Ontario, Canada. *PLOS One*, 8(4), DOI: 10.1371/journal.pone.0060600.
- ²¹ Madadi, P. et al (2013).
- ²² Ontario Ministry of Health and Long-Term Care, AIDS and Hepatitis C Programs (2013). *Provincial Naloxone Distribution Program Guidelines*. Queen's Printer for Ontario, 4901-97E (2013/08).
- ²³ Centers for Disease Control and Prevention (2012). *Community-based opioid overdose prevention programs providing naloxone — United States, 2010*. *MMWR Morbidity and Mortality Weekly Report*: February 17, 2012. 61(6):101–111, ND72-ND85.
- ²⁴ American Public Health Association (November 2013). *Reducing opioid overdose through education and naloxone distribution*. Policy Statement LB-12-02, Policy Number 20133.

- ²⁵ Banjo, O., Tzemis, D., Al-Qutub, D., Amlani, A., Kesselring, S., & Buxton, J. A. (2014). A quantitative and qualitative evaluation of the British Columbia Take Home Naloxone program. *CMAJ Open*, 2(3), E153-E161.
- ²⁶ McAuley, A., Best, D., Taylor, A., Hunter, C., & Robertson, R. (2012). From evidence to policy: The Scottish national naloxone programme. *Drugs: Education, Prevention and Policy*, 19(4), 309-319.
- ²⁷ Sporer, K. A., & Kral, A. H. (2007). Prescription naloxone: a novel approach to heroin overdose prevention. *Annals of Emergency Medicine*, 49(2), 172-177.
- ²⁸ Walley, A.Y., Xuan, Z., Hackman, H.H., Quinn, E., Doe-Simkins, M., Sorensen-Alawad, A., Ruiz, S., & Ozonoff, A. (2013). Opioid overdose rates and implementation of overdose education and nasal naloxone distribution in Massachusetts: interrupted time series analysis. *BMJ*, 346:f174.
- ²⁹ Leece, P. N., Hopkins, S., Marshall, C., Orkin, A., Gassanov, M. A., & Shahin, R. M. (2013). Development and implementation of an opioid overdose prevention and response program in Toronto, Ontario. *Canadian Journal of Public Health*, 104(3), e200-e204.
- ³⁰ Dong, K. A., Taylor, M., Wild, C.T., Villa-Roel, C., & Rose, M., Salvaggio, G. & Rowe, B.A. (2012). Community-based naloxone: a Canadian pilot program. *Canadian Journal of Addiction Medicine*, 3(2), 4-9.
- ³¹ Peterborough Drug Strategy & Waterloo Region Crime Prevention Council (2013). *911 Naloxone* (film). Retrieved March 22, 2015 from www.overdoseprevention.ca.
- ³² World Health Organization (2014). Community management of opioid overdose. Geneva.
- ³³ World Health Organization (2013). WHO Model List of Essential Medicines: 18th List, April 2013.
- ³⁴ Ontario Ministry of Health and Long-Term Care (2015). Ontario Drug Benefit Formulary/Comparative Drug Index effective from April 1, 2015. Retrieved April 10, 2015 from: <https://www.healthinfo.moh.gov.on.ca/formulary/>.
- ³⁵ Ontario Ministry of Health and Long-Term Care (2012). *Update On OxyContin Partnership Strategy*. Health Bulletins, April 4, 2012. Retrieved March 25, 2015 from: http://www.health.gov.on.ca/en/news/bulletin/2012/hb_20120404_1.aspx
- ³⁶ Centre for Addiction and Mental Health (2008). *Methadone Maintenance Treatment: Client Handbook, Revised*. Toronto.
- ³⁷ Kurdyak, P., Gomes, T., Yao, Z., Mamdani, M.M., & Helling, C. et al (2012). Use of other opioids during methadone therapy: a population-based study. *Addiction*, 107(4), 776-780.
- ³⁸ Modesto-Lowe, V., Brook, D., & Petry, N. (2010). Methadone deaths: risk factors in pain and addicted populations. *Journal of General Internal Medicine*, 25(4), 305-309.
- ³⁹ Caplehorn, J.R., & Drummer, O.H. (1999). Mortality associated with New South Wales methadone programs in 1994: lives lost and saved. *Medical Journal of Australia*, 170(3), 104-109.
- ⁴⁰ Cairns, J. (2000). Methadone-related deaths in Ontario. Office of the Chief Coroner for Ontario, Toronto.
- ⁴¹ Office of the Chief Coroner for Ontario (2015). Unpublished, Data for opioid-detected deaths among Ontarians, 2009-2013, Personal communication, February 2015.
- ⁴² Stoové, M.A., Dietze, P.M., & Jolley, D. (2009).
- ⁴³ Coffin, P.O., Tracy, M., Bucciarelli, A., Ompad, D., Vlahov, D., & Galea, S. (2007). Identifying injection drug users at risk of nonfatal overdose. *Academic Emergency Medicine*, 14(7), 616-623.
- ⁴⁴ Brady, J.E., DiMaggio, C.J., Keyes, K.M., Doyle, J.J., Richardson, L.D., & Li G. (2015). Emergency department utilization and subsequent prescription drug overdose death. *Annals of Epidemiology*, Article in-press, DOI: <http://dx.doi.org/10.1016/j.annepidem.2015.03.018>.
- ⁴⁵ Cheng, A. (2011). Emergency treatment of anaphylaxis in infants and children. *Paediatrics and Child Health*, 16(1), 35-40.
- ⁴⁶ New York State Department of Health (August 2013). *Important Health Advisory: Emergency Department Interventions to Prevent Opioid Overdose*. Retrieved March 26, 2015 from: https://www.health.ny.gov/diseases/aids/providers/prevention/harm_reduction/opioidprevention/health_advisory_ed_interventions_preventing_overdose.htm.
- ⁴⁷ Dwyer, K.H., Walley, A.Y., Langlois, B.K., Mitchell, P.M., Nelson, K.P., Cromwell, J., & Bernstein, E. (2015). Opioid education and nasal naloxone rescue kits in the Emergency Department. *Western Journal of Emergency Medicine*, 16(3), 381-384.
- ⁴⁸ Samuels, E. (2014). Emergency department naloxone distribution: a Rhode Island Department of Health, recovery community, and emergency department partnership to reduce opioid overdose deaths. *Rhode Island Medical Journal*, 97(10), 38-39.
- ⁴⁹ Dwyer, K., & Bernstein E. (2014). *Nasal Naloxone Distribution in the Emergency Department*. Public and Global Health Newsletter, Boston University School of Medicine, Spring 2014, Retrieved from <http://www.bumc.bu.edu/emergencymedicine/files/2014/08/Final-2014-Spring-P-GH-Newsletter.pdf>
- ⁵⁰ Dwyer, K.H., Walley, A.Y., Sorensen-Alawad, A., Langlois, B.K., Mitchell, P.M., Lin, S.C., Cromwell, J.H., Strobel, S.D., & Bernstein, E. (2013). Opioid Education and Nasal Naloxone Rescue Kit Distribution in the Emergency Department. *Annals of Emergency Medicine*, 62 (4): S123.
- ⁵¹ Amlani, A. (October 15, 2014). *The Take Home Naloxone Program saves lives*. Hospital News. Retrieved May 25, 2015 from: <http://hospitalnews.com/take-home-naloxone-program-saves-lives/>.

- ⁵² Somers, J.M., Cartar, L., Russo, J. (2008). *Corrections, Health and Human Services: Evidence Based Planning and Evaluation*. Simon Fraser University Faculty of Health Sciences, Centre for Applied Research in Mental Health and Addiction, Vancouver, British Columbia.
- ⁵³ Merrall, E.L.C., Kariminia, A., Binswanger, I.A., Hobbs, M.S., Farrell, M., Marsden, J., Hutchinson, S.J., & Bird, S.M. (2010). Meta-analysis of drug-related deaths soon after release from prison. *Addiction*, 105(9), 1545-1554.
- ⁵⁴ Binswanger, I.A., Stern, M.F., Deyo, R.A., Heagerty, P.J., Cheadle, A., Elmore, J.G., & Koepsell, T.D. (2007). Release from prison - a high risk of death for former inmates. *New England Journal of Medicine*, 356(2), 157-165.
- ⁵⁵ Binswanger, I.A., Blatchford, P.J., Lindsay, R.G., & Stern, M.F. (2011). Risk factors for all-cause, overdose and early deaths after release from prison in Washington state. *Drug and Alcohol Dependence*, 117(1), 1-6.
- ⁵⁶ Binswanger, I.A., Blatchford, P.J., Mueller, S.R., & Stern, M.F. (2013). Mortality after prison release: opioid overdose and other causes of death, risk factors, and time trends from 1999 to 2009. *Annals of Internal Medicine*, 159(9), 592-600.
- ⁵⁷ Bird, S.M., & Hutchinson, S.J. (2003). Male drugs-related deaths in the fortnight after release from prison: Scotland, 1996-99. *Addiction*, 98(2): 185-190.
- ⁵⁸ Wakeman, S.E., Bowman, S.E., McKenzie, M., Jeronimo, A., & Rich J.D. (2009). Preventing death among the recently incarcerated: an argument for naloxone prescription before release. *Journal of Addictive Diseases*, 28(2), 124-129.
- ⁵⁹ Frank, J.W., Andrews, C.M., Green, T.C., Samuels, A.M., Trinh, T.T., & Friedmann, P.D. (2013). Emergency department utilization among recently released prisoners: a retrospective cohort study. *BMC Emergency Medicine*, 13(1), 16.
- ⁶⁰ Madadi, P. et al (2013).
- ⁶¹ National Health Services Scotland (October 28, 2014). *National Naloxone Programme Scotland – naloxone kits issued in 2013/14 and trends in opioid-related deaths*. Publication Report. Information Services Division, NHS National Services Scotland.
- ⁶² Bird, S (December 10, 2014). *Take-home naloxone (THN) & naloxone-on-release (NOR) reduce opioid-related deaths: from evidence of high risk soon after prison-release through science-led evaluations of THN/NOR to the monitoring of national naloxone policies*. Insight on Research. MRC Biostatistics Unit, Cambridge, UK. Retrieved from: <http://www.mrc-bsu.cam.ac.uk/take-home-naloxone-and-naloxone-on-release-reduce-opioid-related-deaths/>.
- ⁶³ New York State Corrections and Community Supervision & New York State Department of Health (February 6, 2015). *DOCCS, DOH, and HRC Announce New Opioid Program to Address Growing Opioid Crisis: Pilot Program trains inmates to use naloxone*. News Release. Retrieved May 6, 2015 from www.doccs.ny.gov/PressRel/2015/Opioid_Training_2_6_15.pdf.
- ⁶⁴ British Columbia Centre for Disease Control, Toward the Heart Take Home Naloxone (November 10, 2014). Reducing opioid overdose deaths among recently released prisoners. Retrieved April 17, 2015 from: http://towardtheheart.com/assets/naloxone/thn-to-reduce-opioid-od-deaths-onrelease-from-prison-final_126.pdf
- ⁶⁵ Health Canada (2010). NIHB Ontario Region, Prescription Drug Trends: A Ten-Year Analysis. Retrieved May 13, 2015 from: http://www.chiefs-of-ontario.org/sites/default/files/files/NIHB%20Ontario%20Region%20Prescription%20Drug%20Trends%20A%20Ten-Year%20Analysis_0.pdf.
- ⁶⁶ Nishnawbe Aski Nation (NAN) Chiefs (November 2009). Untitled statement re: State of Emergency on opioid use. Retrieved March 22, 2015 from : <http://www.nan.on.ca/upload/documents/pda---wendy.pdf>
- ⁶⁷ Bell, S. (October 25, 2012). *Prescription drug abuse funding includes money for remote First Nations*. Wawatay News. Retrieved May 13, 2015: http://wawataynews.ca/archive/all/2012/10/25/prescription-drug-abuse-funding-includes-money-remote-first-nations_23637
- ⁶⁸ CBC News (March 18, 2015). *Killer drug linked to 100 Alberta deaths last year: RCMP*. Retrieved April 10, 2015 from: <http://www.cbc.ca/news/canada/edmonton/killer-drug-linked-to-100-alberta-deaths-last-year-rcmp-1.3000642>
- ⁶⁹ Southwick, R. (March 26, 2015). *Blood Tribe members shown how to prevent overdoses as reserve battles fentanyl crisis*. Calgary Herald. Retrieved April 10, 2015 from: <http://calgaryherald.com/news/local-news/blood-tribe-members-shown-how-to-prevent-overdoses-as-reserve-battles-fentanyl-crisis>.
- ⁷⁰ Southwick, R. (April 9, 2015). *Fentanyl brings tragedy to Blood Tribe*. Calgary Herald. Retrieved April 9, 2015 from: <http://calgaryherald.com/news/local-news/fentanyl-brings-tragedy-to-blood-tribe>
- ⁷¹ Kahan, M., Wilson, L., Wenghofer, E.F., Srivastava, A., Resnick, A., Janecek, E., & Sheehan, C. (2011). Pharmacists' experiences with dispensing opioids: provincial survey. *Canadian Family Physician*, 57(11), e448-54.
- ⁷² Canadian Pharmacists' Association (March 9, 2015). *Canadians Trust Pharmacists to Deliver High-Quality Care and Services*. News Release. Retrieved from: <http://www.pharmacists.ca/index.cfm/news-events/news/canadians-trust-pharmacists-to-deliver-high-quality-care-and-services/>.
- ⁷³ Ipsos Reid (January 11, 2011). *A Matter of Trust*. News Release. Retrieved from: <http://www.skpharmacists.ca/media/31154/trusted%20professionals%20pharmacists%20number%201%20jan%202011.pdf>
- ⁷⁴ Dhalla, I. et al (2009).

- ⁷⁵ California Legislative Assembly (2014). *Assembly Bill-1535, Pharmacists: naloxone hydrochloride. An act to add Section 4052.01 to the Business and Professions Code, relating to pharmacists.*
- ⁷⁶ College of Psychiatric and Neurologic Pharmacists (February 20, 2015). Naloxone Access: A Practical Guideline for Pharmacists.
- ⁷⁷ California State Board of Pharmacy (April 10, 2015). *Overdose Rescue Drug Now Available Without Prescription.* News Release. Retrieved April 13, 2015 from: <http://media.campaigner.com/media/33/333080/CA%20News%20Release%20-%20Overdose%20rescue%20drug%20now%20ava.pdf>
- ⁷⁸ Bailey, A.M., & Wermeling, D.P. (2014). Naloxone for Opioid Overdose Prevention: Pharmacists' Role in Community-Based Practice Settings. *Annals of Pharmacotherapy*, 48: 601-606, DOI: 10.1177/1060028014523730.
- ⁷⁹ Massachusetts Technical Assistance Partnership for Prevention. Prescription and Pharmacy Access to Naloxone Rescue Kits. Retrieved April 12, 2015 from: <http://masstapp.edc.org/prescription-and-pharmacy-access-naloxone-rescue-kits>
- ⁸⁰ Wolf, Governor of Pennsylvania T., (April 5, 2015). *Expand use of medication that can counteract drug overdoses.* The Morning Call. Retrieved from: <http://touch.mcall.com/#section/-1/article/p2p-83223291/>
- ⁸¹ American Pharmacists' Association (April 1, 2015). *Old drug, new life: Naloxone access expands to community pharmacies.* Pharmacy Today. Retrieved April 2, 2015 from: <http://www.pharmacist.com/old-drug-new-life-naloxone-access-expands-community-pharmacies>.
- ⁸² Ontario Pharmacists Association (March 12, 2014). *The Pharmacist Is In! Celebrating the Services, Expanded Role, and Dedication of Ontario Pharmacists During Pharmacist Awareness Month.* News Release. Retrieved April 2, 2015 from: <https://www.opatoday.com/professional/news/PAM-news-release>.
- ⁸³ Registered Nurses' Association of Ontario (2015). Engaging clients who use substances. Clinical Best Practice Guidelines, March 2015, Toronto, Ontario.
- ⁸⁴ Registered Nurses' Association of Ontario (March 10, 2015). *Submission to Health Canada: Tamper Resistance under the Controlled Drugs and Substances Act.* Toronto, Ontario.
- ⁸⁵ British Columbia Centre for Disease Control (April 2015). *Dispensing naloxone kits to clients at risk of opioid overdose; BCCDC Non-certified Practice Decision Support Tool Dispensing naloxone.* Health Decision Support Tool – Non-certified practice. Vancouver, British Columbia.
- ⁸⁶ Office of the Correctional Investigator (2014). Annual Report of the Office of the Correctional Investigator 2013-2014. Ottawa, Ontario.
- ⁸⁷ Plourde, C., & Brochu, S. (2002). Drugs in prison: A break in the pathway. *Substance Use and Misuse*, 37(1), 47-63.
- ⁸⁸ Bronskill, J. (June 28, 2012). *Study claims Tory goal of drug-free prisons will be hard to achieve.* Globe and Mail. Retrieved April 28, 2015 from: <http://www.theglobeandmail.com/news/national/study-claims-tory-goal-of-drug-free-prisons-will-be-hard-to-achieve/article4377972/>
- ⁸⁹ Bronskill, J. (June 28, 2012).
- ⁹⁰ O'Reilly, N (February 18, 2015). *Barton jail inmates are overdosing: Who's watching?* Hamilton Spectator. Retrieved May 26, 2015 from <http://www.thespec.com/news-story/5343112-barton-jail-inmates-are-overdosing-who-s-watching/>.
- ⁹¹ Madadi, P (2009).
- ⁹² Calzavara, L.M., Burchell, A.N., Schlossberg, J., Myers, T., Escobar, M., Wallace, E., Major, C., Strike, C., & Millson, M. (2003). Prior opiate injection and incarceration history predict injection drug use among inmates. *Addiction*, 98(9): 1257-1265.
- ⁹³ Kouyoumdjian, F.G., Calzavara, L.M., Kiefer, L., Main, C., & Bondy, S.J. (2014). Drug use prior to incarceration and associated socio-behavioural factors among males in a provincial correctional facility in Ontario, Canada. *Canadian Journal of Public Health*, 105(3), e198-e202.
- ⁹⁴ Johnson, S., MacDonald, S.F., Cheverie, M., Myrick, C., & Fischer, B. (2012). Prevalence and trends of non-medical opioid and other drug use histories among federal correctional inmates in methadone maintenance treatment in Canada. *Drug and Alcohol Dependence*, 124(1-2), 172-176.
- ⁹⁵ Zakaria, D., Thompson, J., Jarvis A., & Borgatta F. (2010). Summary of emerging findings from the 2007 national inmate infectious diseases and risk-behaviours survey. Correctional Service Canada. Research Report R-211, Ottawa, Ontario.
- ⁹⁶ National Commission on Correctional Health Care Board of Directors (April 12, 2015). *Naloxone in Correctional Facilities for the Prevention of Opioid Overdose Deaths.* Position Statement. Retrieved May 25, 2015 from: <http://www.ncchc.org/naloxone-for-the-prevention-of-opioid-overdose-deaths>.
- ⁹⁷ College of Physicians and Surgeons of Ontario (February 2011). *Methadone Maintenance Treatment Program Standards and Clinical Guidelines*, 4th Edition. Methadone Program, Toronto.
- ⁹⁸ Ontario Ministry of Health and Long-Term Care (2012).
- ⁹⁹ Waterloo Region Crime Prevention Council & Peterborough Lakefield Community Police Service (June 12, 2013). *Serious Risks from Emerging Opioid: Fentanyl Analogues.* Community Advisory. Retrieved March 26, 2015 from: http://www.preventingcrime.ca/userContent/documents/Fentanyl-Community_Advisory_June_12_2013.pdf

- ¹⁰⁰ Canadian Community Epidemiological Network on Drug Use, Canadian Centre on Substance Abuse (February 6, 2015). *Fentanyl-related Overdoses*, CCENDU Drug Alert. Retrieved March 25, 2015 from: <http://www.ccsa.ca/Resource%20Library/CCSA-CCENDU-Drug-Alert-Fentanyl-related-Overdoses-2015-en.pdf>
- ¹⁰¹ Gomes, T., Mamdani, M., Paterson, J., Dhalla, I., & Juurlink D. (2014).
- ¹⁰² Fischer, B., Gooch, J., Goldman, B., Kurdyak, P., & Rehm, J. (2014). Non-medical prescription opioid use, prescription opioid-related harms and public health in Canada: An update 5 years later. *Canadian Journal of Public Health*, 105(2), e146-e149.
- ¹⁰³ Office of National Drug Control Policy (2010). *National Drug Control Strategy, 2010*. The White House, Washington, D.C.
- ¹⁰⁴ Maryland Department of Health and Mental Hygiene (February 3, 2015). *Overdose Prevention in Maryland*. Retrieved May 26, 2015 from: http://bha.dhmh.maryland.gov/OVERDOSE_PREVENTION/SitePages/Home.aspx.
- ¹⁰⁵ Massachusetts Department of Public Health Bureau of Substance Abuse Services (2014). *Opioid Overdose Response Strategies in Massachusetts*, April 2014.
- ¹⁰⁶ National Advisory Council on Prescription Drug Misuse (2013). *First Do No Harm: Responding to Canada's Prescription Drug Crisis*. Canadian Centre on Substance Abuse, Ottawa.
- ¹⁰⁷ College of Physicians and Surgeons of Ontario (2010). *Avoiding Abuse, Achieving a Balance: Tackling the Opioid Public Health Crisis*. Toronto, Ontario.
- ¹⁰⁸ Bohnert, A.S., Tracy, M., & Galea, S. (2012). Characteristics of drug users who witness many overdoses: Implications for overdose prevention. *Drug and Alcohol Dependence*, 120(1-3), 168-173.
- ¹⁰⁹ Davidson, P.J., Ochoa, K.C., Hahn, J.A., Evans, J.L., & Moss, A.R. (2002). Witnessing heroin-related overdoses: The experiences of young injectors in San Francisco. *Addiction*, 97(12), 1511-1516.
- ¹¹⁰ Hickman, M., Carrivick, S., Paterson, S., Hunt, N., & Zador, D. (2006). London audit of drug-related overdose deaths: Characteristics and typology, and implications for prevention and monitoring. *Addiction*, 102 (2), 317-323.
- ¹¹¹ Tracy, M., Piper, T.M., Ompad, D., Bucciarelli, A., & Coffin, P.O. (2005). Circumstances of witnessed drug overdose in New York City: Implications for intervention. *Drug and Alcohol Dependence*, 79(2), 181-190.
- ¹¹² Strang, J., Best, D., Man, L.H., Noble, A., & Gossop, M. (2000). Peer-initiated overdose resuscitation: Fellow drug users could be mobilized to implement resuscitation. *International Journal of Drug Policy*, 11(6), 437-445.
- ¹¹³ Powis, B., Strang, J., Griffiths, P., Taylor, C., Williamson, S., Fountain, J., & Gossop, M. (1999). Self reported overdose among injecting drug users in London: Extent and nature of the problem. *Addiction*, 94(4), 471-478.
- ¹¹⁴ Follett, K., Piscitelli, A., Munger, F., & Parkinson, M. (2012). *Between Life and Death: The Barriers to Calling 911 During an Overdose Emergency*. Waterloo Region Crime Prevention Council.
- ¹¹⁵ Follett, K., Piscitelli, A., Munger, F., & Parkinson, M. (2014). *Barriers to Calling 9-1-1 during Overdose Emergencies in a Canadian Context*. *Critical Social Work*, 15(1), 18-28.
- ¹¹⁶ Brown, A.L., Mann, N.C., Daya, M., Goldberg, M.R., Meischke, H., Taylor, J., Smith, K., Osganian, S., & Cooper, L. (2000). Demographic, belief, and situational factors influencing the decision to utilize emergency medical services among chest pain patients, Rapid Early Action for Coronary Treatment (REACT) Study. *Circulation*, 102(2), 173-178.
- ¹¹⁷ Network for Public Health Law (May 2015). *Legal Interventions to Reduce Overdose Mortality: Naloxone Access and Overdose Good Samaritan Laws*. Retrieved May 28, 2015 from: https://www.networkforphl.org/_asset/qz5pvn/network-naloxone-10-4.pdf
- ¹¹⁸ American Pharmacists' Association (April 1, 2015).
- ¹¹⁹ World Health Organization (2013).