Canadian Centre on Substance Use and Addiction

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Strategies for Addressing the Opioid Crisis in the United States and Canada: Cross-Border Knowledge Sharing

Introduction

Both Canada and the United States (U.S.) have been experiencing increasing rates of opioid related harms in recent years with overdose or poisoning deaths reaching staggering numbers. In 2017 alone, 3,998 Canadians were lost to opioid-related deaths, (Government of Canada, 2018a) and an overwhelming 47,600 lives were lost in the U.S (National Institute of Drug Abuse, 2019). These increases have prompted both countries to try to understand better how this crisis emerged — an exploration that has revealed complex and multifaceted precursors including social factors, physical conditions and gaps in the healthcare system, to name a few.

As Canada and the U.S. take action to respond to these factors, both countries acknowledge the need for comprehensive, collaborative and evidence-based approaches to address the crisis (U.S. Department of Health and Human Services, 2017; Government of Canada, 2018b). While harrowing, the situation presents an opportunity for both countries to learn from the expertise and strategies implemented on either side of the border.

Cross-Border Knowledge Sharing

To gain a more nuanced understanding of each countries' approaches to addressing this crisis and to foster learnings on both sides of the border, the Canadian Centre on Substance Use and Addiction (CCSA), with support from the U.S. embassy in Ottawa, invited U.S. experts to its Issues of Substance conference, hosted a one-day expert forum and a speaker series in six Canadian cities.

Issues of Substance Conference

In November of 2017, CCSA hosted its national conference, Issues of Substance, in Calgary, Alberta, with two U.S. experts invited to speak in plenary. Dr. Jane Maxwell (University of Texas) shared the importance of in-depth quality data to track trends in drug use and harms through monitoring and surveillance initiatives, and Dr. Robin Pollini (West Virginia University) discussed strategies to reduce these harms and promote public health.

The Expert Forum

The expert forum, *Pillars of Change: Priorities for Addressing the Opioid Crisis*, took place in Ottawa in March 2018. The event included representatives from the U.S. and Canada who spoke about their innovative responses and lessons learned related to various the pillars of Canada's Drug and Substances Strategy. (See Appendix A for panelists and their biographies.)

Following these presentations, leaders from across Canada working in opioid related fields reflected on the day's learnings and approaches from each country. Attendees prioritized and validated a list of actions that still need to take place within multiple domains to end the opioid crisis. (See Appendix B for the prioritized outstanding actions.)

Cross-Canada Speaker Series

Conversations were continued across six cities in Canada throughout the summer of 2018 with U.S. experts sharing their initiatives alongside a local expert comparing and contrasting the Canadian perspective. The first segments of the speaker series took place in Vancouver and Edmonton, focusing on harm reduction and data collection. The second series in Winnipeg and Toronto had experts share their knowledge related to pain management and mentorship of physicians. The third series in Montreal and Halifax focused on treatment in correctional services and prevention initiatives. (See Appendix C for panelists and their biographies.)

Lessons Learned

Take-Home Messages

Throughout these events, certain take-home messages were repeated by panelists from both counties.

1. **A better understanding of pain and access to collaborative, multidisciplinary treatment models is needed.**

- This understanding and access can prevent the use of opioids as first-line treatment and the harms that can come with use, prevent increased access to prescription opioids for non-medical use, and ultimately improve the lives of approximately 116 million American and 7.5 million Canadians living with chronic pain.
- Treatment should involve pharmacological, psychological and physical interventions.
- Capacity to address pain and substance use disorders can be increased through online mentoring programs, such as Project ECHO (Extensions for Community Healthcare Outcomes).

2. **The expertise of individuals with lived and living experience should be highly valued and incorporated into decisions making and service delivery.**

- This will ensure policy changes are having the intended effects without any negative outcomes.
- Peers provide the unique perspective of understanding the motivation and experiences of an individual experiencing harms from opioids, particularly if they are able to communicate in a developmentally appropriate manner with youth (e.g., Project Amp led by the Center for Social Innovation in Boston).
- Peers can be a critical conduit to services for individuals experiencing harms; these frontline workers can increase the capacity of the treatment system to respond to the number of individuals requiring support, but they need to be recognized and compensated appropriately.

3. **A comprehensive treatment system that responds to all needs of an individual in a coordinated manner and that is accessible is required.**

- Mobile clinic services, expanding treatment to correctional facilities, tele-practice programs, peer outreach and same-day, on-the-street access to buprenorphine are all mechanisms that have increased access to treatment and improved outcomes for individuals, families and communities.

- Hub and spoke models used in Canada and the U.S. increase the capacity of primary care providers, thereby extending the reach and quality of treatment for opioid use disorder (e.g., Opioid Treatment Program hubs with spokes to address other concerns in Vermont, the collaborative opioid prescribing (CoOP) model at Johns Hopkins University and the Regional Opioid Intervention Service (ROIS) in Ottawa.
- Integrating pharmacotherapy with counselling improved adherence to treatment, and mental and physical outcomes for individuals living with opioid use disorder.

4. **Enforcement efforts focused on incarceration do not reduce the harms of addiction; police officers can instead help connect individuals to community services and support the health and social needs of individuals using opioids.**

- Police in Canada and the U.S. carry naloxone as a harm reduction measure and can provide connections to treatment services (e.g., Project Angel in the U.S. and B.C. and Law Enforcement Assisted Diversion in the U.S.).
- Collaborations with public health agencies and sharing of data can provide an "early warning system" to indicate areas where efforts should be focused.

5. **Stigma remains a major barrier to quality care.**

- Language matters and can be stigmatizing even when unintended.
- Medication can address symptoms, but will not improve the social environment in which an individual is living.

Actions

Many concrete actions and collaborations are a direct result of these events.

1. **Implementation of Project Angel in British Columbia.** This program helps law enforcement professionals connect people experiencing harms from substance use with support services. It was developed in Massachusetts and Deputy Chief Mike Serr decided to implement it in Abbotsford, British Columbia, following his connections with U.S. representatives at the expert panel.
2. **A private guided tour of Insite**, a safe consumption site, and Onsite, a connected detoxification facility in Vancouver. Tom Hill, a strong supporter of harm reduction initiatives, was eager to see first hand how these services are offered in Canada, as none currently exist in the U.S.
3. **An onsite visit to Streetworks**, a needle exchange program in Edmonton. Mr. Hill was interested in the logistics of how this service operated, so that he could take lessons from it back to the U.S.
4. **An onsite visit to Ambrose Place**, a culturally sensitive, housing-first support service for Indigenous individuals in Edmonton. Mr. Hill stated that seeing services tailored to the needs of Canada's Indigenous population was extremely powerful.
5. **New collaborations within Canada.** Dr. Kim Corace connected with representatives from Alberta Health Services at the Expert Forum, resulting in collaboration on an opioid-focused grant.
6. Although not specific to opioid use or harms, several Americans commented on the importance CCSA moderators placed on **acknowledging the traditional territory** on which our events took place, and said they would adopt this practice in the future. Recognizing traditional lands acknowledges Indigenous culture and is intended to further efforts towards reconciliation. As cultural trauma can play a role in opioid-related harms, this is a small, but important act.

Impact

The more than 500 participants found attending the various events to be very valuable. They indicated that it increased their knowledge of U.S. and Canadian initiatives and, most importantly, that they would be able to apply the new knowledge in their work. Participants specifically reported that the statistics opened their eyes to the extent of the crisis, and that they learned of new evidence-based practices they could use in their professions.

Physicians and nurses commented on their improved knowledge and understanding of pain and addiction treatment. Others commented that they would use their learnings both in everyday practice and in mentoring.

Participants stated that the lessons shared by the American panelists from youth prevention programs would prevent them from having to use the same trial-and-error process, and would increase the efficiencies in their program.

Respondents also shared that it was reassuring to learn that Canada and the U.S. are in agreement about approaches to the opioid crisis, and that both countries have the same goals to reduce harms. Although there remains much work to be done to end the crisis, there are innovative solutions in both the U.S. and Canada that have now been broadly shared and that can be scaled and spread to improve health and quality of life in both countries.

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Appendix A: Pillars of Change Expert Forum Panelists

Prevention

A faculty member since 1988, **Dr. Norm Buckley** is currently Professor in the Department of Anesthesia, Michael G. DeGroote School of Medicine, McMaster University, Hamilton. Dr. Buckley's interests are pain, both acute and chronic. He led the development and organization of the acute post-operative pain service for adult and pediatric patients, and the pediatric sedation services, and was the Director of the Pain Management Centre at the Hamilton General Hospital from its opening in 2000 until 2014.

His clinical practice focuses on chronic pain management at the DeGroote Pain Clinic at McMaster University Medical Centre. Within the Michael G. DeGroote Pain Institute, Dr. Buckley established the Michael G. DeGroote National Pain Centre, and is Scientific Director of the Michael G. DeGroote Institute for Pain Research and Care. The mission of the Institute is to improve the management of pain through dissemination of best practice information, use persistent post-surgical pain to explore chronic pain, and provide unique learning opportunities. Prior to his appointment as Chair, Dr. Buckley also held hospital administrative positions as Operating Room Director, Chief of Anesthesia (Chedoke-McMaster) and Deputy Chief (Hamilton Health Sciences Corporation). In 2017 Dr. Buckley completed 13 years as Chair of the Department of Anesthesia.

Dr. Roger Chou is a Professor in the Departments of Medicine, and Medical Informatics and Clinical Epidemiology at Oregon Health and Science University (OHSU) School of Medicine, and Staff Physician in the Internal Medicine Clinic at OHSU. He has served as Director of the Pacific Northwest Evidence-based Practice Center since 2012. He has led numerous systematic reviews and led or participated in clinical guideline development efforts in chronic pain and opioids, screening and prevention, cancer treatment, and other topics. His reviews have been used by the American College of Physicians, the U.S. Preventive Services Task Force, the American Pain Society, the American Urological Association, the Centers for Disease Control and Prevention and others to develop clinical practice guidelines.

As Director of Clinical Guidelines Development for the American Pain Society, he led the development of clinical practice guidelines on the use of opioids for chronic pain and evaluation and management of low back pain (in partnership with the American College of Physicians). He led a systematic review on benefits and harms of long-term use of opioids that was used to develop the 2016 Centers for Disease Control guideline on use of opioids for chronic pain, for which he was a lead author. He has also led reviews on models of care for medication-assisted treatment for opioid use disorder and use of naloxone to reverse opioid overdose. Dr. Chou has served as a methodologist for several World Health Organization guidelines and is a Coordinating Editor of the Cochrane Back and Neck Group.

Treatment

Dr. Kim Corace is the Director of Clinical Programming and Research in the Substance Use and Concurrent Disorders Program at the Royal Ottawa Mental Health Centre, an Associate Professor in the Department of Psychiatry at University of Ottawa, a Clinical Investigator with the Institute of Mental Health Research and a Clinical Health Psychologist. Working at regional, provincial and national levels, her work focuses on improving treatment access and outcomes for vulnerable populations struggling with substance use and mental health co-morbidities, with a focus on developing collaborative care models. In 2013, the Ontario Ministry of Health Innovation Fund awarded the "Best Innovation in Mental Health Care Delivery" to Dr. Corace and her colleague for their Regional Opioid Intervention Service.

Dr. Kenneth Stoller is a well-regarded expert on opioid addiction. He has developed, evaluated and disseminated models of care geared toward multi-morbid populations that are integrative and promote adherence. His most impactful focus has been on collaborative care models, treatment access, program building, health policy and healthcare utilization/cost. He developed and disseminated a collaborative opioid prescribing ("CoOP") model that has received high-level attention from the Substance Abuse and Mental Health Services Administration (SAMHSA), the Office of National Drug Control Policy, and professional societies, and has been instituted by programs and localities nationwide. Dr. Stoller is deeply engaged with local, state and national associations and governmental agencies engaged in addressing the opioid epidemic.

Enforcement

Deputy Chief Constable Mike Serr is currently heading the Operations Division of the Abbotsford Police Department. Prior to his appointment as Deputy Chief, Mike served as a member of the Vancouver Police Department for 26 years where he worked in a variety of challenging positions. The majority of Mike's operational experience is in gang and drug suppression. He has worked for the British Columbia Organized Crime Agency, Integrated Gang Task Force and British Columbia Municipal Undercover Program. Prior to moving to Abbotsford, Mike was the officer in charge of the Vancouver Police Department's Organized Crime Section.

Mike is active nationally in committee work and is currently the Chairperson of the Drug Advisory Committee for the Canadian Association of Chiefs of Police, Co-chair of the British Columbia Drug Overdose Task Groups and Chairperson of the Abbotsford Opioid Working Group. Mike is also on the Advisory Council for Drug Free Kids Canada.

Mr. Chuck Wexler is Executive Director of the Police Executive Research Forum, an organization of law enforcement officials and others dedicated to increasing professionalism in policing. Wexler has led projects on police agencies' role in working with public health and social service agencies to reduce opioid overdose deaths, detailed in three major reports:

- The Unprecedented Opioid Epidemic: As Overdoses Become a Leading Cause of Death, Police, Sheriffs, and Health Agencies Must Step Up Their Response (2017)
- Building Successful Partnerships between Law Enforcement and Public Health Agencies to Address Opioid Use (2016)
- New Challenges for Police: A Heroin Epidemic and Changing Attitudes Toward Marijuana (2014).

Mr. Wexler earned an undergraduate degree from Boston University and a Ph.D. in urban studies and planning from the Massachusetts Institute of Technology (MIT). In 2006 he was awarded an OBE (Order of the British Empire) for his work with British and American police agencies.

Harm Reduction

Mr. Fred Wells Brason II is the Founding President/CEO of Project Lazarus, a community-based model for preventing overdose, presenting responsible pain management and promoting substance use treatment and support services. Project Lazarus serves various parts of the U.S., including military and tribal groups as others replicate the Project Lazarus Model. Project Lazarus is instrumental in reducing prescription medication and drug overdoses, and emergency department visits for substance use, and in enhancing substance use treatment and support services.

Mr. Brason has served on U.S. Food and Drug Administration scientific workshop committees for the role of naloxone in opioid overdose fatality prevention and assessment of analgesic treatment of chronic pain, presented and testified at numerous FDA Hearings, and co-chaired the Expert Committee for the formulation of the SAMHSA Overdose Toolkit. Project Lazarus has been highlighted in the White House Office of National Drug Control Policy Strategies. U.S. Department of Health and Human Services Healthy 2020 featured Project Lazarus as a community organization addressing the opioid crisis.

Mr. Brason has published articles in the *North Carolina Medical Journal*, Wiley Periodicals, the *American Journal of Lifestyle Medicine* and the *Journal of the North Carolina Medical Board*. He received the Robert Wood Johnson Foundation Community Health Leader Award 2012 and has been inducted into their Alumni Network.

Dr. Elaine Hyshka is an Assistant Professor of Health Policy and Management at the University of Alberta's School of Public Health, and Scientific Director of the Inner City Health and Wellness Program at the Royal Alexandra Hospital in Edmonton. In June 2017, she was appointed Co-chair of the Alberta Minister of Health's Opioid Emergency Response Commission.

Dr. Hyshka's program of applied health services and policy research focuses on advancing a public health approach to substance use in Canada, and her work is conducted in partnership with health service providers, advocacy organizations and policymakers at the local, provincial and national level. She is currently leading a national comparative analysis of harm reduction policy across the provinces and territories, and conducting a number of other projects examining the integration of evidence-based substance use services into acute care settings.

Appendix B: Priorities for a Continued Response to the Opioid Crisis

Before the panel took place, individuals who would be attending *Pillars of Change: Priorities for Addressing the Opioid Crisis* provided their ranked recommendations for the additional actions that need to occur to respond to the opioid crisis across the four pillars of Canada's drug strategy. These responses were collated and synthesized into key themes for each pillar.

Following the panel presentations on March 20, 2018, attendees considered the new knowledge they had gained throughout the day and determined whether the initial results were still valid, and if activities needed to be added, removed or ranked differently. These results will inform the work of all Opioid Response Partners as they continue their Joint Statement of Action commitments and other efforts to respond to the opioid crisis.

Order of Results

- Prevention activities were prioritized above those in the other three pillars, followed by treatment, harm reduction and enforcement.
- Addressing and reducing the root causes of stigma related to substance use was recommended as an action necessary across all pillars except enforcement.

Prevention Recommendations

1. Broaden the spectrum of pain management options

Suggested activities:

- Formal practice protocols and pain management pathways to facilitate referral to non-pharmacological alternatives
- Funding for multidisciplinary teams to manage complex cases and to prioritize marginalized, vulnerable and at-risk populations
- Coverage of massage therapy, physiotherapy, occupational therapy, chiropractic care, cognitive behavioural therapy, etc., in healthcare plans and support from employers to attend these treatments
- Additional research into effective pain management strategies:
    - comparison of alternative treatments with opioids
    - comparison among alternative treatments
    - program evaluations
    - overcoming barriers to access and availability

2. Increase education among prescribers

Suggested activities:

- Increase education for prescribers about opioid prescribing and potential opioid-related harms
- Increase promotion of *The 2017 Canadian Guideline for Opioids for Chronic Non-Cancer Pain*
- Develop practice support tools to help transform best evidence into practice to manage patients living with acute and chronic pain

- Universally implement "safe prescribing" standard for drugs with high-risk profiles
- Systematic use of opioid risk screening tools before prescribing
- Mandatory minimum hours on pain and addiction in health professional curricula

3. Increase knowledge about opioids and potential harms among patients

Suggested activities:

- Prescribers to provide appropriate information to clients and discuss recommended treatment option in-depth
- Public educational campaigns can be designed to improve and sustain optimal patient adherence to prescriptions, can educate about the potential harms and early signs of addiction and withdrawal, and can provide actions people should take if they recognize they are dependent
- Promote safe storage of opioids in the home

4. Implement patient prescription monitoring programs

Suggested activities:

- Prescribers and dispensers should have access to a nation-wide, real-time, point-of-care prescription monitoring program for patients
- Develop social norms for using a prescription database to support informed prescribing practices

Treatment Recommendations

1. Increase access

Suggested activities:

- Make access to treatment available from every primary care clinic, emergency department and safe consumption site
- Improve access for rural and remote communities
- Ensure transitions between services are seamless
- Reduce wait-times and ensure adequate space in services

2. Provide integrated, multidisciplinary care

Suggested activities:

- Treatment should address all needs of a individual (i.e., mental and physical health)
- Incorporate the social determinants of health into treatment (e.g., housing, education, income security)

3. Increase the range of treatment options available

Suggested activities:

- Review the evidence related to injectable and implant formulations of agonist treatments
- Consider depot formulations of naltrexone as an alternative to opioid agonist treatment (OAT)
- Expand hydromorphone and diacetylmorphine programs

4. Increase the capacity of primary care providers to manage opioid use disorder (OUD)

Suggested activities:

- Provide knowledge translation to increase primary care providers understanding of pain and addiction
- Increase primary care providers' skills to implement and manage treatment of opioid use disorders

Harm Reduction Recommendations

1. Increase access to safe consumption sites

Suggested activities:

- Remove barriers to obtaining exemptions for safe consumption sites and scale them up across the country
- Ensure sites offer gateways to primary care, substance use treatment and social supports
- Provide pharmaceutical grade opioids
- Conduct evaluations of sites, including data on overdose or poisoning events

2. Ensure naloxone availability and provide overdose prevention education

Suggested activities:

- Ensure naloxone is available to individuals who use opioids and their family, friends, social networks, etc.
- Provide free education about recognizing an overdose and administering various forms of naloxone

3. Address the social determinants of health

Suggested activities:

- Harm reduction strategies should address homelessness, mental health, trauma, employment, social supports, etc.

Enforcement Recommendations

1. Decriminalization of illicit substances for personal use

Suggested activities:

- Decriminalize personal drug use while maintaining trafficking offenses

2. Take a public health approach

Suggested activities:

- Facilitate connections between the justice system and healthcare services

3. Reduce or eliminate the supply of substances coming from other countries

Appendix C: Speaker Series Panelists

Tom Hill began at the U.S. National Council for Behavioral Health in March 2017 and is currently serving as Vice-President of Practice Improvement. He previously served as a Presidential Appointee in the position of Senior Advisor on Addiction and Recovery to the Substance Abuse and Mental Health Services (SAMHSA) Administrator. As part of this post, Mr. Hill initially served as Acting Director of the Center for Substance Abuse Treatment. Prior to his appointment, he was a Senior Associate at the Altarum Institute, serving as Technical Assistance Director for a number of SAMHSA treatment and recovery support grant initiatives. He also served for four years as director of programs at Faces and Voices of Recovery.

Mr. Hill is frequently sought out as a national thought leader in the addiction and recovery field; his personal experience of recovery from addiction spans over 25 years. Reflecting his commitment to the goal of long-term recovery for individuals, families and communities, Mr. Hill has also served on numerous boards of directors, advisory boards, committees, task forces and working groups. Mr. Hill received his Master of Social Work in community organizing from Hunter College at City University of New York. He is the recipient of numerous awards, including the Johnson Institute America Honors Recovery Award, the National Association of Lesbian and Gay Addiction Professionals Advocacy Award, and a Robert Wood Johnson Fellowship in the Developing Leadership in Reducing Substance Abuse initiative.

Dr. Phillip Coffin is the Director of Substance Use Research at the San Francisco Department of Public Health and faculty in the HIV, Infectious Diseases, and Global Medicine division at the University of California San Francisco. He is a board-certified and practicing internist and infectious disease specialist. His research includes pharmacotherapy and behavioural intervention trials for, as well as observational research of, substance use disorders and related medical sequelae such as HIV, hepatitis C and overdose. He has been involved in opioid overdose research and interventions since the 1990s, including the expansion of naloxone access and efforts to safely improve opioid stewardship.

Margot Kuo is an epidemiologist in overdose and harm reduction surveillance at the British Columbia Centre for Disease Control in Vancouver. She is part of the team supporting British Columbia's response to the opioid overdose public health emergency. This work focuses on the acquisition, visualization and analysis of timely data on overdose and substance-related harms for public health action. Over the last 13 years, she has been involved in monitoring, research and interventions in the areas of hepatitis C, HIV, sexually transmitted infections and substance-related harms. Margot is part of the provincial harm reduction team responsible for the B.C. Take-Home Naloxone Program. Previously, she was a Canadian field epidemiologist with the Public Health Agency of Canada.

Barry Andres is the Executive Director for Addiction and Mental Health with Alberta Health Services. He is responsible for leading the coordination of addiction and mental health treatment and prevention services, including supporting operational services through the development of policy and standards, care quality improvement, professional development and service reporting. He has been involved in the development, delivery and evaluation of substance use treatment and prevention services throughout Alberta and has led initiatives advancing the integration of mental health and addiction services. Mr. Andres is president of the Canadian Executive Council on Addictions, a national body that advances substance use treatment. Mr. Andres holds a Master of Science in Health Promotion from the University of Alberta along with bachelors degrees in Education and Psychology.

Dr. Jane C. Ballantyne received her medical degree from the Royal Free Hospital School of Medicine in London, England. She trained in anaesthesia at the John Radcliffe Hospital, Oxford, England, before moving to the Massachusetts General Hospital (MGH), Harvard University, Boston, in 1990. She began her research career working with statisticians at Harvard School of Public Health and Tufts Center for Evidence-based Medicine, developing an evidence base for the Agency for Healthcare Policy and Research's pain guidelines. She became Chief of the Division of Pain Medicine in MGH in 1999. She moved to the University of Washington in 2011 as Medicine Professor of Education and Research. She has editorial roles in several leading journals and textbooks, is a widely published author and is involved in the development of online educational programs. She was a board member of the International Association for the Study of Pain from 2000–2016, was concurrently chair of its Education Endorsement Committee, and is currently chair of its Opioid Position Statement Task Force. In 2014 she was appointed president of Physicians for Responsible Opioid Prescribing, a group of physicians that promotes rational opioid prescribing through advocacy, research and education.

Dr. Miriam Komaromy is an Associate Professor of Medicine and Associate Director of the ECHO Institute, which is a program based at the University of New Mexico Health Sciences Center that is aimed at expanding access to treatment for traditionally underserved populations. She is director for ECHO's behavioural health initiatives, which engage and support primary care teams in treating addiction and mental health disorders. Through this program she has trained more than 500 U.S. physicians to provide buprenorphine treatment for opioid use disorder, and directs a program that offers opioid ECHO programs from five different hubs across the U.S. She is board certified in Addiction Medicine and serves on the national Board of Directors of the American Society of Addiction Medicine. She practices addiction medicine in a primary care outpatient setting and has served as medical director for the New Mexico State Addiction Treatment Hospital. She lectures nationally on clinical and health policy issues related to integration of addiction treatment into the primary care setting, and on the use of the ECHO model to train primary care providers to treat common, complex diseases such as mental health and substance use disorders.

Dr. Ginette Poulin, originally from Thompson, Manitoba, is a registered dietitian and family physician who specializes in addictions medicine. After having ventured to various provinces and countries to pursue her studies, she has returned to her home province where she is currently practicing medicine in a variety of settings. Experienced in both rural and urban health care, she delivers health services through emergency, hospital, clinic and inner city house calls. She has a special interest and international certification in addictions medicine, offering services in opiate replacement therapy and residential programs. She serves vulnerable populations, including those that reside in the inner city, and marginalized populations provincial-wide, along with those suffering from mental health and addictions. Ginette has taken on leadership roles in medicine serving as medical director at the Addictions Foundation of Manitoba and also as the director of the Mentorship and Clinical Enhancement Program for International Medical Graduates at the College of Medicine, University of Manitoba. She serves on numerous committees including physician examination and qualification standards with the College of Family Physicians of Canada and the Medical Council of Canada. She is the clinical lead (Prairie Node for Canadian Research Initiative in Substance Misuse) for the development of the National Clinical Practice Guidelines on management of opioid use disorders. She advocates for the vulnerable and her patients' needs with positions such as co-chair of the Manitoba Provincial Opiate Replacement Committee and as a board member of the Main Street Project. She strives to contribute to the improvement of health care — its delivery and access, as well as its quality, for all Manitobans.

Dr. Andrew J. Smith is Staff Physician, Pain and Addiction Medicine, Centre for Addiction and Mental Health. He comes from McGill Medicine, University of Washington Neurology and UCLA Medical Genetics, initially focusing on neurodevelopmental medicine. Frustrated by how many of his young patients with learning disabilities would fall into substance use problems despite early successes, he retooled in the emerging field of addiction medicine, and became the first clinical fellow in Canada to do a combined training program in pain and addictions at CAMH and Mount Sinai Hospital. He now leads an inter-professional team at the Pain and Chemical Dependency Clinic at CAMH. Andrew is passionate about improving access to better care for patients with chronic pain and addiction, educating patients, families and clinicians about pain and addiction, and reducing stigma. He is an executive and hub member of ECHO Ontario Chronic Pain — a telementoring resource for primary care clinicians to enhance their skills and confidence in managing more of their own patients who have complex pain and opioid issues.

Dr. Jennifer Clarke is an Associate Professor of Medicine at the Alpert Medical School, Brown University. She has been working as an internist at the Rhode Island Department of Corrections since 1998 and became the department's medical programs director in November 2015. Her research interests include incarcerated populations, women's health, substance abuse and reproductive health.

Kristen Paquette, CEO at the Center for Social Innovation (C4), has over a decade of experience directing C4 programs and operations. Her primary areas of expertise include substance use prevention and recovery supports for youth and adults. As principal investigator of a Conrad N. Hilton Foundation initiative to reduce substance use among adolescents, she directed development and testing of a young adult peer-delivered intervention using a screening, brief intervention, and referral to treatment (SBIRT) framework. She also led development of a National Institute for Drug Abuse (NIDA) funded mobile application to engage clients — along with their counsellors — in early recovery from substance use disorders.

Dr. Robert Strang is Chief Medical Officer of Health (CMOH) in Nova Scotia appointed in August 2007. He received his medical degree from University of British Columbia and completed Family Practice and Community Medicine residencies at UBC. Dr. Strang was an Associate Medical Officer for Health in South Fraser Health, B.C., from 1997 to 1999, and in 1999, he moved to Halifax to become Medical Officer of Health for Capital District Health Authority. He was acting provincial Deputy Chief Medical Officer of Health prior to his CMOH appointment. As CMOH, he has provided leadership around the renewal of the public health system in Nova Scotia, as well as raised awareness around the importance of creating policies and environments that support better health for Nova Scotian families and communities. He is passionate about public health and has worked with non-government organizations such as Smoke Free Nova Scotia, the Heart and Stroke Foundation and the Public Health Association of Nova Scotia. Dr. Strang has an adjunct appointment with Dalhousie University, Department of Community Health and Epidemiology.

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Canadian Centre on Substance Use and Addiction

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