Identifying outcomes to evaluate the Canadian Opioid Guideline

Dr Norman Buckley, from McMaster University, Canada, led a team that identified priority outcomes for the evaluation of the Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain (COG). COG is a best practice guideline for safe and effective prescribing of opioids to treat chronic pain. The treatment of chronic pain has been complicated by misuse, abuse, and overdose of opioids in Canada, but access to best practice care is also a challenge. Since the COG publication, the rate of opioid prescription has decreased but opioid-related deaths and hospital visits have increased. Opioid prescribing may be a symptom of more complex challenges in provision of care for chronic pain.

Since the 1990s, opioid prescriptions were a common medical approach to treating chronic pain. Due to widespread marketing schemes from pharmaceutical companies to minimize the risks of opioids, the prescription of opioids to relieve chronic pain increased dramatically. High rates of prescribing persisted even though later evidence suggests that opioids are associated with harms including addiction, misuse, abuse, and dependence.

CHRONIC PAIN AND THE OPIOID EPIDEMIC

The rate of opioid misuse has increased substantially, which has led to both dependence and opioid overdose deaths. There are also concerns that prescription opioids are prescribed frequently and in large enough doses that they are being diverted for illicit or recreational markets. It has been recognised that the opioid prescription crisis arose due to the high presence of patients suffering from chronic pain in Canada – estimated at 20% of the population – and the lack of access to effective care including an interdisciplinary approach to tackle chronic pain. The latter includes integrating psychological and physical rehabilitation, which are not covered by provincial health care plans.

Canada has the second highest rate per-capita of opioid consumers globally, behind the United States. By 2010, approximately 15% of the Canadian population was receiving prescription opioids. The number of opioid-related hospital visits and deaths have also been increasing. In 2016, an opioid overdose public health emergency was declared in the province of British Columbia, as more than 5,800 lives were lost due to the presence of fentanyl and other synthetic opioid analogues in illicit drug supply. Opioid misuse has been called an epidemic and the "public health issue of our time". It affects both social and economic welfare, leading to increased healthcare costs to treat secondary morbidity, lost productivity, addiction treatment, and criminal justice involvement.

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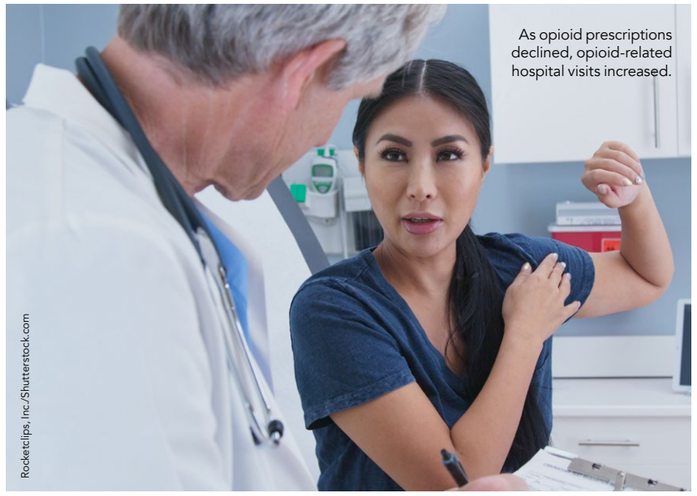

As opioid prescriptions declined, opioid-related hospital visits increased.

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Canada lacked an evidence-based prescribing guideline for healthcare professionals to reduce the harm of opioid overdose and addiction.

Post-2014 there was a decline in the prescription of opioids. However, surprisingly, the reduction in opioid prescriptions has been associated with a more dramatic increase in opioid-related hospital visits. The rate of opioid overdose deaths also increased dramatically with a change to the use of illicitly obtained synthetic opioids.

PUBLISHING COG

As a result of the increasing danger of the opioid epidemic associated with chronic pain treatment, the Federation of Medical Regulatory Authorities of Canada (FMRAC) – the national organisation of provincial medical regulatory bodies – undertook to create a guideline to improve best practice on chronic pain treatment. Based on a systematic literature review of the effectiveness and adverse effects of opioids, and a national consensus process involving experts in pain care, clinicians, addiction specialists, and primary care practitioners, a national guideline was produced. This is called the *Canadian Guideline for Safe and Effective Use of Opioids for Chronic Non-Cancer Pain* (COG). It was published in 2010 and updated in 2017, and is widely recognised by all regulatory bodies in Canada.

Prior to its publication, Canada lacked an evidence-based prescribing guideline for healthcare professionals to reduce the harm of opioid overdose and addiction. The guideline included recommendations on opioid selection for different chronic pain diseases, titration, precautions, and the monitoring of patients to avoid misuse. The guideline was transferred in 2010 to the Michael G. DeGroote National Pain Centre, at McMaster University, for its evaluation, updating, and dissemination to the wider public.

EVALUATING COG

Dr Norman Buckley and a working group aimed to identify measurable ways to assess the impact of the COG on healthcare practice and patient care. The 2020 paper was published in *BMC Anesthesiology*. Five outcomes were selected as priorities for the evaluation of COG after a review by the National Faculty for the Guidelines and a National Advisory Group from an initial list of 29 outcomes.

The diverse selection of individuals in the review process included pain and addiction practitioners, clinicians, pharmacists, research scientists, epidemiologists, and nurses to ensure a multi-disciplinary perspective. The selected outcomes were:

1. Effects of chronic non-cancer pain (CNCP) and taking opioids for CNCP on quality of life.
2. Assessment of patient's risk of addiction before starting opioid therapy.
3. Monitoring patients on opioid therapy for aberrant drug-related behaviours.
4. Mortality rates associated with prescription opioid overdose.

The high presence of patients suffering from chronic pain contributed to the opioid prescription crisis.

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The review process ensured a multidisciplinary perspective when it came to evaluating patient care.

5. Use of treatment agreements with patients before initiating opioid therapy for CNCP.

The outcomes were ranked by members in the review process based on feasibility, comparability across geographic areas and time, understandability, and credibility of potential data sources, such as patients' medical charts, Opioid Manager (a point-of-care tool for providers to manage opioid prescriptions for patients across Canada), other prescription monitoring programs, and administrative databases. The five highest scoring outcomes were then chosen.

The outcomes were categorised based on Moore's 'expanded outcomes' model to identify priority outcomes (Moore identified learning outcomes to assess continuing medical education interventions). Outcome 1 is at Level 6 (individual patient health outcomes), outcomes 2, 3, and 5 are at level 5 (clinicians' application of knowledge in practice setting or competency), and outcome 4 is at level 7 (community health outcome). This ensures a holistic evaluation of the COG on patient, clinician, and community levels.

To date, there have been a lack of studies that evaluate the impact of medical guidelines on clinical practice and patient outcomes in Canada, including COG. This paper marks the first time such an effort was conducted on the area of opioid treatment for CNCP. The goal of the five priority outcomes is to widely inform researchers and organisations to consider them in future study designs or funding calls. This ensures that a wider breadth of information is produced, so healthcare professionals can safely and effectively administer opioids for the management of CNCP. This paper also exemplified a systematic approach to identify outcomes for guideline evaluation, which can be applicable to other areas aside from opioid guidelines.

This paper marks the first time such effort was conducted in the area of opioid treatment for CNCP.

Prior to the publication of COG, Canada lacked an evidence-based prescribing guideline.

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The next step for Dr Buckley and his colleagues at McMaster University and across Canada is to evaluate the five priority outcomes, which requires international collaboration from organisations that may have existing data to support analysis or practical ideas on effective measurement.

Behind the Research

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Research Objectives

Dr Norman Buckley has identified priority outcomes in order to evaluate the Canadian Opioid Guideline (COG).

Detail

Bio
Professor Emeritus, Department of Anesthesia, Michael G DeGroote School of Medicine, McMaster University; Founding Director of the Michael G DeGroote National Pain Centre dedicated to best practice pain care; Scientific Director of the Michael G DeGroote Institute for Pain Research and Care; and Nominated Principal Investigator for the CIHR-SPOR Chronic Pain Network.

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- Victoria Borg DeBono

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Personal Response

What organisations do you intend to work with to further evaluate the identified outcomes?

"The disconnect between reduced opioid prescribing and increased deaths due to opioid related causes suggests that prescribing is not the only issue in play. A superficial understanding of the COG recommendations combined with social pressure on physicians to minimize use of opioids led some physicians to inappropriately restrict their opioid prescribing. Especially in the absence of ready access to alternative care and supports, this may be dangerous. Opioid related deaths have accelerated during the social isolation associated with the Covid-19 pandemic. We are engaging with patient advocacy groups, policy makers and clinicians to promote and support optimal pain care."

Michael G. DeGroote NATIONAL PAIN CENTRE

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