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# Interim Report

Addressing Appropriate Use of Prescription Medicines in Canada

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An Interim Report from The Appropriate Use Advisory Committee

**Health Canada**

The Canadian Drug Agency Transition Office

2023

## A Message from the Chair

I am pleased to serve as chair of the Appropriate Use Advisory Committee and to help tackle the long-standing priority of appropriate use of prescription medications. Every year, people in Canada receive millions of prescriptions and spend billions of dollars to fill them. Yet, we do not have a systematic approach to help ensure that the right medications are prescribed to the right people at the right time and in the right doses, while avoiding unintended harmful consequences. Nor do we know if patients are sufficiently supported to discuss medication appropriateness in their interactions with the health system. Appropriate use was first established as a shared health priority by federal, provincial, and territorial Ministers of Health in January 2016, when they each agreed to work individually and collectively to improve prescribing and appropriate use of drugs. Since then, Canada has made progress – a preliminary scan identified over 50 initiatives, programs and organizations dedicated to improving appropriate use across the country. At the same time, a patchwork of endeavours has limited the ability for these efforts to consistently benefit people coast to coast, deepening discrepancies in care delivery and intensifying health inequities. As Canada emerges from the COVID-19 global pandemic with new challenges (e.g., depleted health human resources) and existing ones (e.g., aging population), the need for a coordinated plan to enhance care quality and promote judicious and equitable use of health care resources becomes even more crucial. Addressing appropriate use on a national scale confronts these challenges by seeking to provide all patients with equitable access to appropriate prescribing and use that delivers the greatest possible health benefit at the lowest possible cost to individuals, their communities, the health system and the broader environment.

In March 2023, the Canadian Drug Agency Transition Office (CDATO) established the Appropriate Use Advisory Committee, after having repeatedly heard, throughout extensive consultations, the need for better support and coordination regarding the appropriate use of prescription drugs. The mandate of the Advisory Committee includes supporting the development of a pan-Canadian Strategy for appropriate use, advising and providing recommendations on the functions and activities of a corresponding

program for the future Canadian Drug Agency (CDA), and developing a forward agenda and identifying priority areas on appropriate use.

The Advisory Committee consists of experts from appropriate use organizations, as well as clinicians, patients, and the public. It is a forum to share information, support collaboration and provide advice to address appropriate use across the country.

The Advisory Committee has met monthly from March to June, characterizing barriers limiting uptake, identifying opportunities to expand appropriate use practices, setting parameters on elements of a pan-Canadian strategy, and deliberating the design of a CDA program to create added value to the existing landscape. This interim report represents the Advisory Committee's early advice to the CDATO.

As the Advisory Committee continues to meet and discuss our recommendations on advancing appropriate use, we would like to underscore the need for a plan that is designed by Canada and for Canada. We welcome input on the suggestions presented in this report as we work to build long-standing solutions on a matter that impacts all of us.

Stephen Samis

Chair, Appropriate Use Advisory Committee

## Glossary of Terms

**Appropriate Use** refers to patients receiving medications appropriate to their clinical needs, in doses that meet their individual requirements, for an adequate period of time, in order to provide the greatest possible benefit, and at the lowest cost to them, their community, the health system and the broader environment.<sup>1</sup>

**Adverse Drug Event** is a harmful and unintended consequence of, or response to, medication use. It includes drug interactions, dosing issues, allergies and issues around non-adherence.

**Health Equity** is the absence of unfair systems and policies that cause health inequalities. Health equity seeks to reduce inequalities and to increase access to opportunities and conditions conducive to health for all.

**Health Outcomes** refer to the health consequences brought about by the treatment of a health condition or as a result of an interaction with the healthcare system.

**Health System Sustainability** refers to a system that improves, maintains, or restores health, while minimizing negative impacts on the environment and leveraging opportunities to restore and improve it, to the benefit of the health and well-being of current and future generations.

**Polypharmacy** is commonly defined as the daily use of five or more medications by an individual.

**Prescribing Cascade** is a sequence of events in which an adverse drug event is misinterpreted as a new medical condition, leading to the addition of another, potentially unnecessary, medication.

**Resource Stewardship** is an approach which focuses on appropriate allocation of resources for patient care which considers benefits, harms, and overall costs.

**Scale** refers to the delivery of a health service innovation that allows for more people to benefit from it, while maintaining the original design and measures.

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<sup>1</sup> This working definition is aligned with that of [rational use of medicines](#) presented by the World Health Organization.

**Shared Decision-Making** is the process where health professionals and patients collaborate on medical decision-making with a structured process that considers the best evidence and patient values.

**Spread** in the context of health innovations occurs when an innovation is disseminated consistently across an area, and the innovation is adopted by others, typically replacing existing practices or procedures.

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## Introduction

Prescription drugs play a critical role in the day-to-day lives of people in Canada. These products are largely used to promote health, to prevent, treat or cure disease, and generally help to manage health conditions and improve a person's quality of life. With an estimated 55% of adults (age 18 to 79) and 23% of children and youth (age 3 to 19 years) in Canada having used at least one prescription medication in the past month<sup>12</sup>, medication is an integral part of modern-day healthcare.

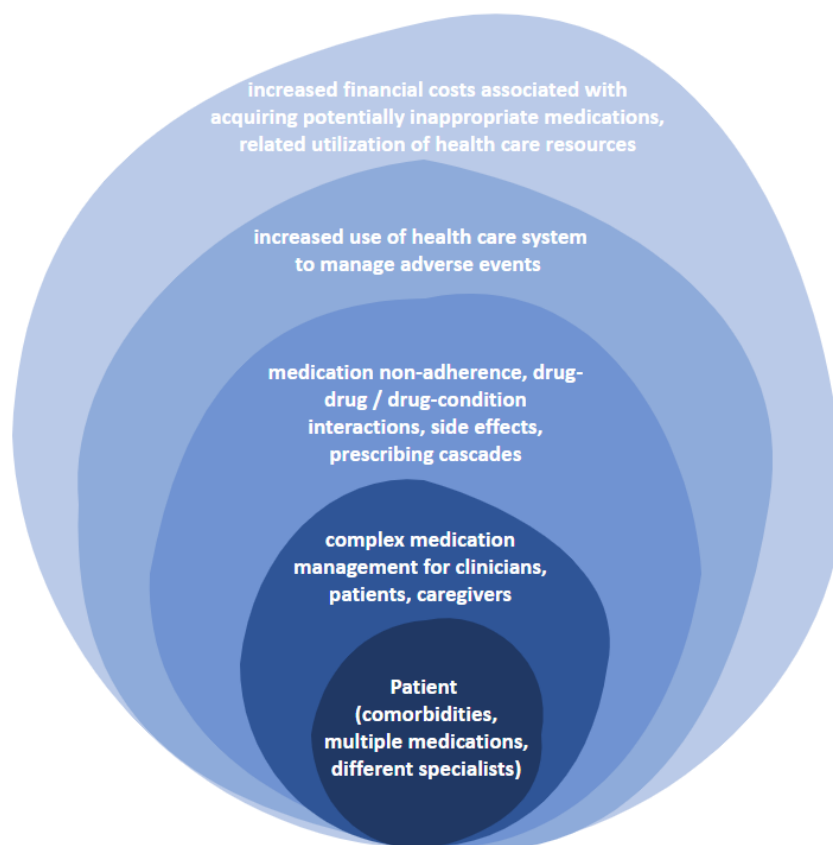
The right medicine, at the right time, for the right person can be life changing. Whether it's a child receiving a timely prescription of anti-epileptic medication to treat seizures that are impacting the child's overall well-being, or a patient with chronic obstructive pulmonary disease (COPD) receiving medication to help improve breathing — prescription medicines have the power to help patients gain relief from debilitating symptoms, allowing them to focus on activities that are important to them. By the same token, the wrong medicine, at the wrong time, for the wrong person can cause unintended harm and have a life-altering impact. In fact, adverse drug events are a leading cause of unplanned hospital visits, contributing to over 2 million emergency department visits and 700,000 hospital admissions in Canada annually.<sup>34</sup> What if we were to optimize the use of prescription medicines, to better circumvent injury or illness and ultimately improve health outcomes? What would that mean for people in Canada?

A growing body of evidence tells us that prescribing is often suboptimal in Canada, which can lead to significant negative health, social and financial impacts. A case example based on real-life events is illustrated below which shows how suboptimal prescribing can contribute to a ripple effect of issues.

## Addressing Polypharmacy – a case example

Consider the case of an 81-year-old man with a clinical history of diabetes, high blood pressure, osteoarthritis, cardiovascular complications, anxiety, depression and other comorbidities. Despite taking 11 different drugs daily to manage his health and living a relatively healthy lifestyle, he experiences cognitive deficits, loss of concentration, insomnia and walking deficits. In addition to his deteriorating health, his decline creates worry for his family, who eventually admit him into care with cognitive impairment and dementia. Upon further clinical evaluation, a change in therapeutic regimen is recommended, which includes discontinuation of potentially inappropriate medications and initiation of new appropriate medications, coupled with a home rehabilitation program. A follow-up examination three months later found that the change in regimen resulted in improvements to mood and cognitive tests, as well as in walking ability.

Addressing polypharmacy through appropriate use resulted in positive outcomes for this patient, his family and care providers. Perpetuating suboptimal prescribing, however, would have continued the ripple effect of negative health, social and financial impacts.

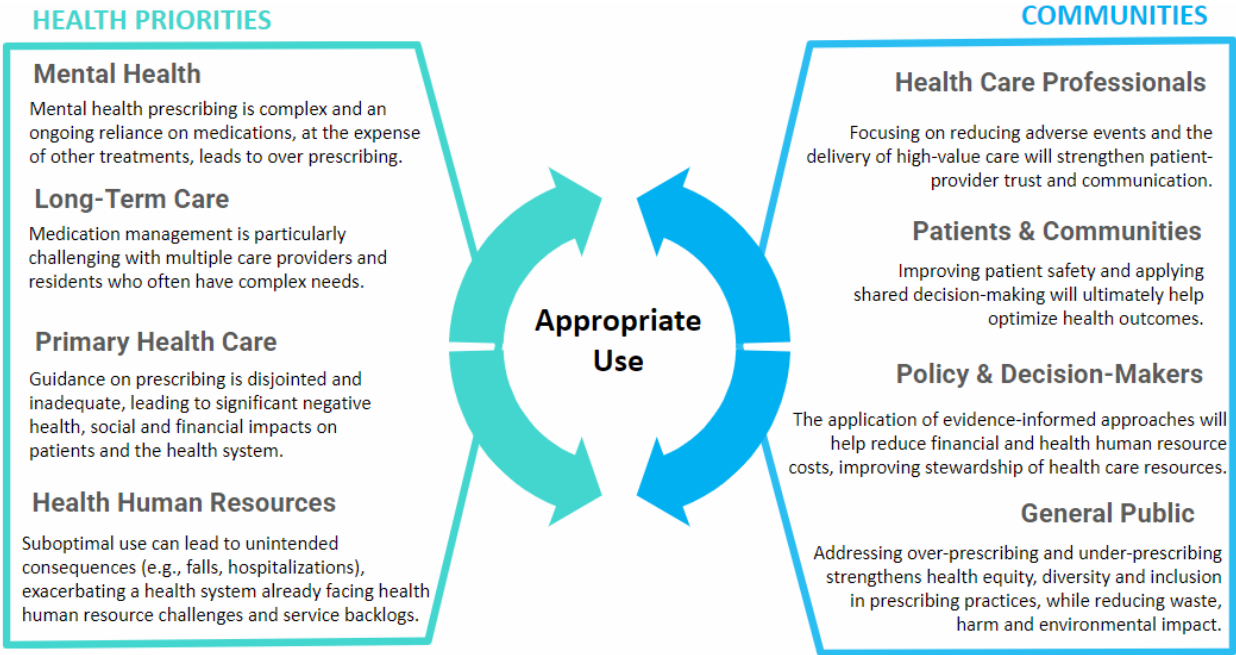


**Figure 1.** Negative health, social and financial impacts associated with suboptimal prescribing



Appropriate use is centred on the right medicines for each person based on best available evidence and individual goals and values, regardless of race, ethnicity, sexual orientation, gender identity, disability, class or other axes of inequality and intersectionality. It encompasses both over-prescribing and under-prescribing / under-use. The overall goal in addressing appropriate use is to improve quality of care and to help optimize health outcomes for anyone in Canada.

Appropriate prescribing and use also supports several health priorities, signaling opportunities to address a range of current concerns in Canada.



**Figure 2.** Addressing appropriate use of prescription medications helps advance key health priorities, bringing benefits to all communities

Addressing the appropriate use of prescription drugs in Canada means that patients and their care providers have effective options of care and are better able to support one another in shared decision-making; policy and decision-makers are assured that interventions are impactful and that provision of health services is optimized; and people in Canada have equitable access to appropriate prescribing and use that will drive better health outcomes for them and their loved ones.

## Why we need a pan-Canadian strategy

Though appropriate use was established as a shared priority among federal, provincial and territorial governments in 2016<sup>5</sup>, a collective approach has not been realized. In the absence of broader coordination, jurisdictions, pan-Canadian health organizations and non-governmental organizations have implemented a variety of independent projects (e.g., educational outreach, public awareness campaigns, clinical research, guidance tools), most of which are led by and delivered at the regional or local level. This distribution has led to the creation of multiple pockets of excellence across Canada with persisting gaps and challenges. Inconsistent reach, overlap of efforts and even duplication has resulted in limitations to scale up and spread promising approaches across the health care system, hampering the ability for advancements to benefit people across the country.

Without a devoted strategy to dismantle silos and improve collaboration, we risk creating greater barriers to high-quality patient care and further exacerbating limited health system resources; however, most importantly, we miss the opportunity to serve patients to the fullest possible potential.

International experience suggests that solutions that are multifaceted, engage a diverse set of partners (e.g., prescribers, patients and the public), and are implemented with national-regional coordination, can effectively improve prescribing and use behaviours and reduce the human health and health system costs of inappropriate care<sup>6</sup>.

Developing and implementing a pan-Canadian strategy with these principles in mind will help expand the reach of appropriate use, to better serve the diverse communities across the nation.

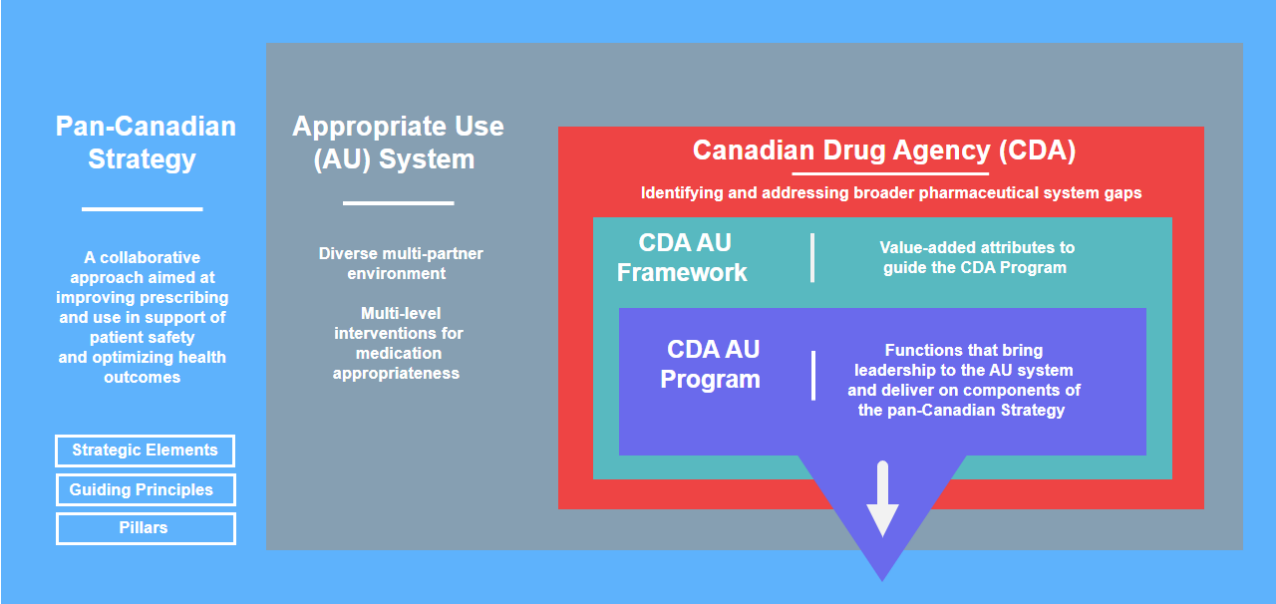
# Development of a pan-Canadian Appropriate Use Strategy

## What we want to achieve

The Advisory Committee is undertaking to create a unified appropriate use strategy — one that is co-designed with partners in the appropriate use space and focused on person-centred care. Such a strategy will provide coordination and consistency to the patchwork of existing programs and account for priorities and objectives of different jurisdictions. It will also achieve a common vision in the design, implementation, and evaluation of current and future initiatives, which will enable the scale and spread of effective initiatives and meaningful practices. Ultimately, it will provide much needed support for patients and prescribers, while improving patient safety and outcomes and safeguarding stewardship of health care resources.

## Proposed Future State

A pan-Canadian strategy with vision, mission, goals, objectives, guiding principles and pillars connects partners to maximize reach and influence. The future CDA would serve under the strategy to identify gaps and opportunities in the pharmaceutical landscape and work with partners to effect change. The CDA would house an appropriate use program, with complementary roles and responsibilities, guided by a framework fully aligned with the pan-Canadian strategy.



**Figure 3.** Proposed future state of Canada’s appropriate use landscape

## Partners to engage

Improving appropriate prescribing and use involves multi-level interventions and approaches and requires the concerted effort of diverse partners. An effective pan-Canadian strategy thus values the contributions of each partner and seeks to convene and coordinate efforts to build synergies that drive success.

To advance a strategy with lasting impact, active participation from the following partners is needed:

- Clinicians
- Patients
- Caregivers
- Researchers
- Appropriate use organizations
- Health charities
- Health care accreditation bodies
- Patient organizations
- Insurance providers
- Pharmaceutical manufacturers
- Electronic Medical Record vendors
- Indigenous organizations

- pan-Canadian health organizations
- Health foundations and associations
- Health professional associations and colleges / regulatory bodies
- Marginalized communities
- Regional and local health authorities
- Federal/Provincial/Territorial/Municipal governments

## **The starting point – strategic elements and guiding principles**

Centering the pan-Canadian Appropriate Use Strategy on partnership and collaboration is intended to create broader benefits for all audiences, such as patients, caregivers, health practitioners, decision makers, insurance providers etc. The proposed strategic elements presented below were developed with the needs of these audiences in mind.

Beginning with a broad vision statement, each subsequent strategic element introduced is designed to outline the pathway to realizing that vision. The proposed guiding principles will steer the approach and promote consistency among partners in its overall adoption.

## Vision: What we strive to achieve

All people in Canada have equitable access to the appropriate use of prescription medicines.

## Mission: What the strategy exists to accomplish

Support partners to enable everyone to be optimally informed about and have access to prescription medicines or alternative therapies that deliver the greatest possible health benefit at the lowest possible cost to individuals, their communities, the health system and the broader environment.

## Goals: How the strategy will fulfill the vision & mission

- 1) Support patients and their caregivers to make informed choices that are developed with them and prioritise their personal goals and values
- 2) Equip clinicians with evidence-informed tools to support appropriate prescribing in their standards of practice
- 3) Support policy and decision-makers in implementing appropriate use programs and policies based on best available evidence, patient perspectives and leveraging leading edge technologies
- 4) Strengthen health system sustainability through collaborative efforts to incentivize appropriate use practices that optimize provision of health services
- 5) Collaborate with private sector partners (including insurers, pharmaceutical manufacturers) to foster an environment that promotes appropriate use

## Objectives: Tactics to promote the desired goals

- Facilitate **improvements in prescribing and use** of medications by health professionals and patients, using the best available evidence on interventions and implementation approaches generated from a variety of contexts.
- Enhance **reach and relevance** of appropriate use programs, through targeted communication to, and adoption of digital technologies by, multiple partners including patients.
- Strengthen **pan-Canadian coordination** of appropriate use programs and initiatives to facilitate sharing of best practices, reduce duplication of efforts and improve system performance and sustainability.
- Foster collective **buy-in and ownership** of appropriate use decision making and programs amongst all system partners.

## Guiding Principles: Fundamental values underlining the strategy



### PERSON-CENTRED

Focuses on the care and priorities of persons and promotes shared decision-making



### COLLABORATIVE

Values collaboration and shared accountability with all partners in the health system and those along the care continuum



### EQUITABLE

Seeks to reduce social, cultural and environmental barriers to appropriate use which hamper opportunities for patients to achieve their full health potential



### EVIDENCE-INFORMED

Applies the best available evidence on interventions and implementation approaches to guide effective change



### CONTINUOUS

Leverages existing efforts to improve appropriate use and supports their coordination, advancement and success

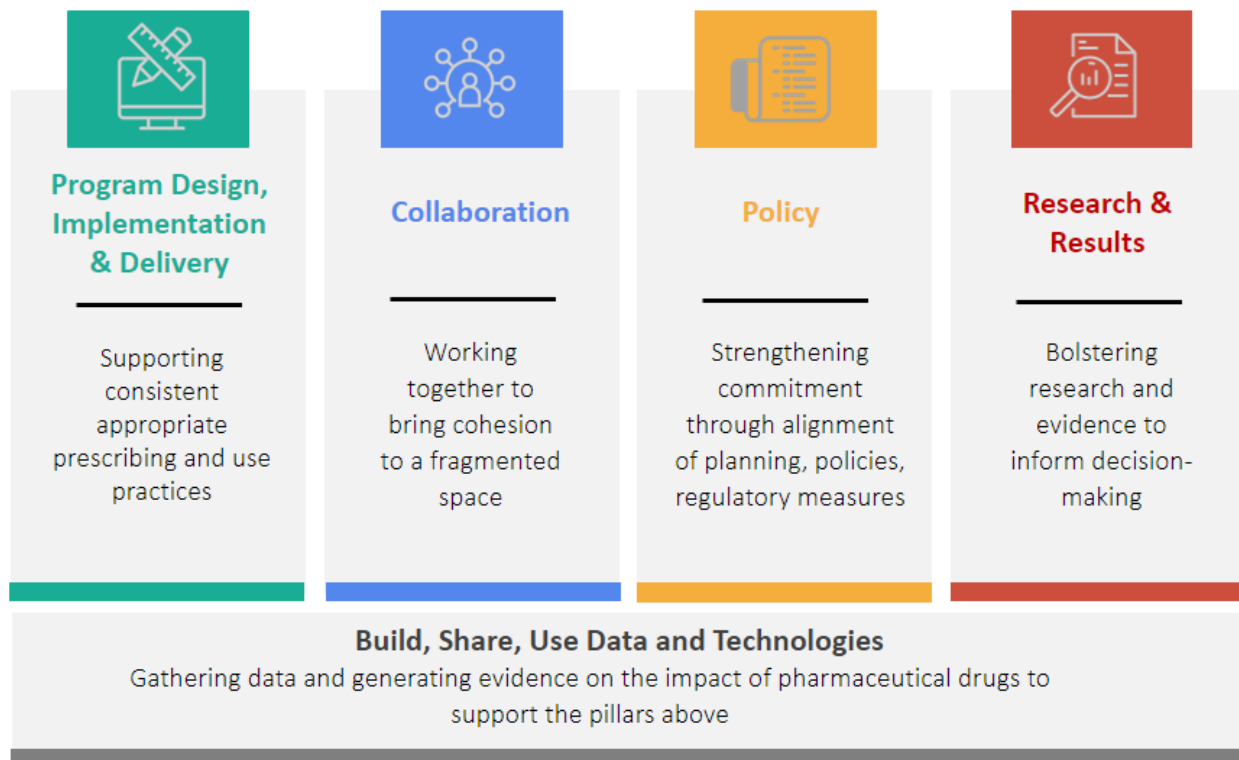


### SUSTAINABLE

Strives for solutions that improve resource stewardship and enhance health system and environmental sustainability

## Proposed pillars and activity areas

Four pillars are envisioned for the pan-Canadian Appropriate Use strategy — Program Design Implementation & Delivery, Collaboration, Policy, and Research & Results — supported by the cross-cutting theme of Build, Share, and Use Data and Technologies to help gather data and generate evidence to support the overlying pillars.



**Figure 4.** Pillars of a pan-Canadian Appropriate Use Strategy

### *Program Design, Implementation & Delivery*

The aim of this pillar is to support nation-wide consistency in appropriate prescribing and use practices. Examples of how this could be achieved include:

- promoting evidence-informed interventions and implementation approaches
- delivering targeted education for key implicated audiences
- prioritizing initiatives targeting areas of high need, safety risk, and/or inequity
- building local capacity and supporting implementation.

### *Collaboration*

Collaboration and partnerships form the backbone of the pan-Canadian strategy. To do this effectively involves making deliberate connections and grounding our work in common principles. The coordination and cohesion generated can ultimately drive synergies that will help improve care delivery to enhance patient outcomes. Addressing this need can include:

- establishing strategic linkages/connections between key partners and initiatives/programs to improve coordination
- dedicating tables and establishing networking mechanisms to support ongoing dialogue and collaboration
- integrating patient and provider perspectives, lived and living experiences to inform system change.

### *Policy*

Policy and decision makers can play an integral role through aligning strategic initiatives, policies and regulatory measures to promote appropriate use. This can be accomplished through:

- championing appropriate use in health care improvement initiatives, strategic planning and policies
- aligning existing practices, policies and regulatory measures to ensure they promote appropriate use (e.g., provider remuneration)
- enhancing support for policy development and implementation related to the adoption of appropriate therapies, including non-pharmacological options.

### *Research & Results*

Research, evidence generation and performance measurement are key to inform decision-making on approaches and interventions. A robust approach to bolster work in this area can include:



- building local research and evaluation capacity to enhance the evidence base on approaches and interventions
- developing a standardized evaluation framework
- conducting a broad-scale national-level evaluation
- disseminating findings to inform necessary improvements and modifications.

### *Build, Share, Use Data and Technologies*

Data and technologies help gather information underpinning the four identified pillars. Some priorities with respect to data and technologies to help advance appropriate prescribing and use include:

- enhancing collection of and access to prescribing and utilization data that informs frontline prescribing decisions
- leveraging technologies to support data-driven care
- using existing data and surveillance activities to create linkages and monitor trends and progress
- sharing data/findings to inform and enable robust research and evaluation of initiatives, activities and approaches to improve individual and system performance and outcomes.

# Framework for a CDA Program

A CDA program should lead changes that will bring value to partners in the appropriate use landscape and, most importantly, benefit to patients. In doing so, a CDA would not only address the identified gaps and barriers limiting uptake but exert its influence to bring attention to promote appropriate use broadly. Eight key attributes form the recommended CDA program framework presented below.

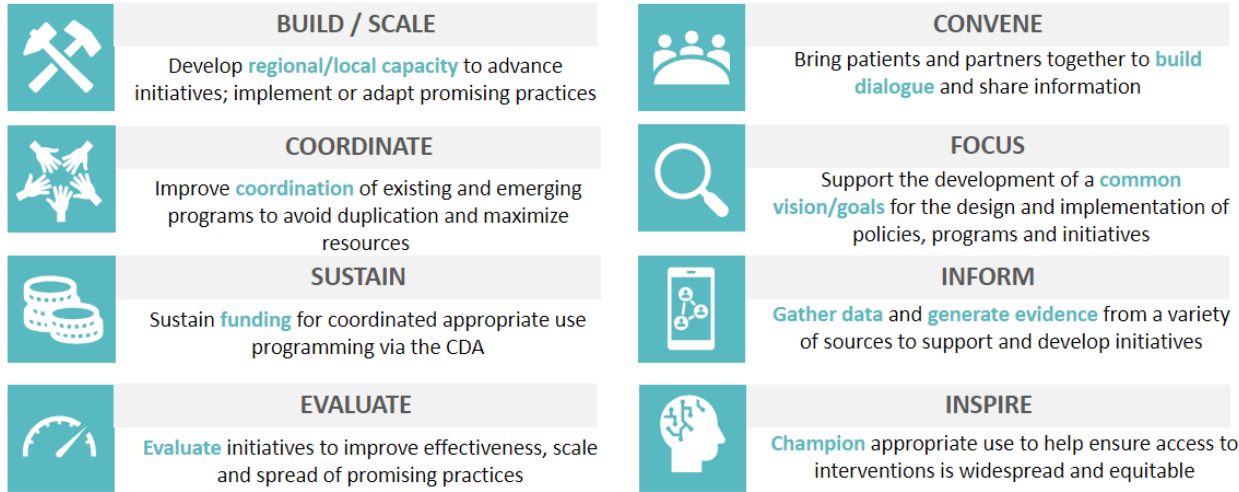
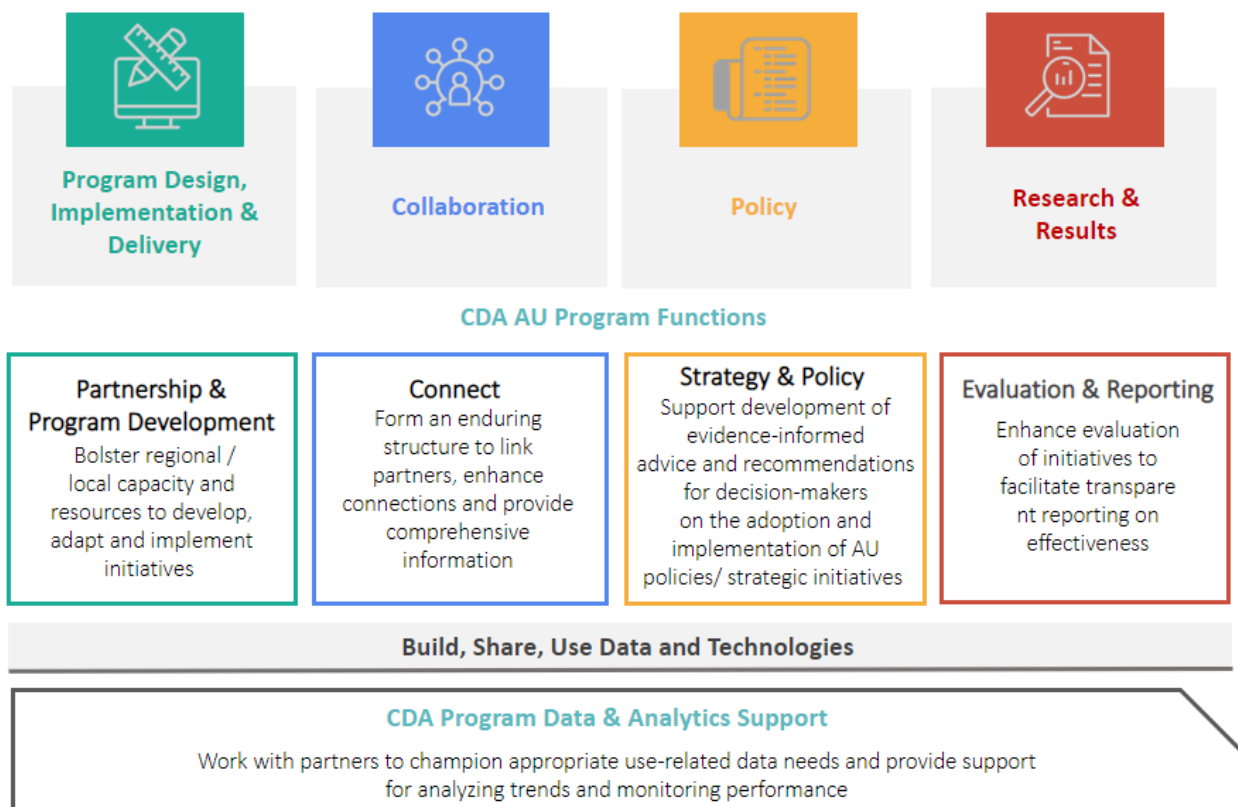


Figure 5. CDA Program Framework

## CDA Program Functions

As the leading partner of the pan-Canadian strategy, a CDA would seek to serve the strategy’s pillars by driving collaboration, strengthening evidence generation, developing regional and local capacity, and enhancing evaluation of appropriate use initiatives and practices. Four functional program areas are proposed for the CDA, corresponding to the activities envisioned under the four pillars of the pan-Canadian strategy. The CDA’s broader work in establishing data linkages and bolstering analytics in the pharmaceutical data ecosystem will similarly underpin its appropriate use program functions, in alignment with the need for improved access to data and technologies as delineated in the strategy.



**Figure 6.** Mapping of the CDA AU Program Functions to the pan-Canadian Appropriate Use Strategy Pillars

Together, the CDA’s program functions would facilitate a future state where the system is streamlined and deliberate, knowledge is shared and mobilized, sustainable and dependable support is available, and learning is transparent and iterative.

**Connect**

In alignment with priorities described under the *Collaboration* pillar of the pan-Canadian strategy, the CDA should form an enduring structure that links partners, enhances connections and centralizes information on appropriate use. This could involve strengthening coordination through the establishment of dedicated forums/tables, convening patients and partners to promote active engagement and inclusive dialogue, and establishing a resource center to provide comprehensive information and encourage knowledge sharing.

### *Strategy and Policy*

To enhance support for policy development and implementation highlighted under the *Policy* pillar, a CDA program should focus on gathering and building evidence to support the development of advice and recommendations on the adoption and implementation of policies and strategic initiatives. Providing capacity support for implementation could help scale and spread promising policies/initiatives, further contributing to enhancement of the evidence base.

### *Partnerships and Program Development*

Collaboration is key to bolstering regional/local capacity and resources to develop, adapt and implement appropriate use initiatives. In advancing work under the *Collaboration* pillar, a CDA program should facilitate partnerships through its role as a system convenor, leading collaborative initiatives/programs where the need arises. At the same time, the CDA could establish, on a more permanent basis, internal capacity to develop program areas it is best positioned to lead (e.g., development of knowledge mobilization materials) in addition to providing resources externally (e.g., funding) to advance and maintain programs, initiatives and research.

### *Evaluation and Reporting*

Under the *Research & Results* pillar, enhancing evaluation of initiatives/programs and ensuring transparency around reporting on their effectiveness is an area where the CDA could provide leadership. This should include providing oversight and capacity support (including for research and data collection) to build and implement evaluation frameworks that can be applied both locally and broadly, and the development of progress reports to share advancements of the broader state of appropriate use as well as the pan-Canadian strategy.

### *Data and Analytics Support*

The CDATO is actively laying the groundwork to improve standardization and access to drug and health data and analysis. In championing appropriate use, the future CDA should continue working with partners to enhance the availability and accessibility of

prescribing and utilization data. This will facilitate the building of linkages and analyses of trends as referenced in the strategy's cross-cutting theme of *Build, Share, Use Data and Technologies*, and provide the underpinnings to support each of the four proposed CDA program functions.

## Next steps – We Want to Hear from You

It is critical that voices of people in Canada are heard at this stage of the development of a pan-Canadian Appropriate Use Strategy and corresponding CDA program.

Questions for consideration:

- 1) How does the concept of appropriate use meet or not meet your priorities and expectations?
- 2) Is anything missing from the overall approach outlined in this report?
- 3) What role(s) do you think you or your organization will play in the strategy?
- 4) Are there other partners to include in the dialogue?
- 5) How should the proposed pillars from the strategy be prioritized?
- 6) Based on the program functions presented, what advice would you offer to a CDA looking to launch and implement an appropriate use program?

From July to September 2023, the CDATO will be consulting to seek views on the Advisory Committee's interim report. CDATO will continue to work closely with representatives from the provinces and territories to build solutions that will benefit all of Canada while respecting the role of jurisdictions in health care delivery.

The collected input from the targeted consultation will be used to inform the completion of the Advisory Committee's final report, targeting completion Winter 2024.

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