Ontario Health
Cancer Care Ontario

pCPA pan-Canadian Pharmaceutical Alliance

APP Alliance pancanadienne pharmaceutique

pan-Canadian Biosimilars Initiative Evaluation Framework

Summary Report

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This report has been prepared by Ontario Health (Cancer Care Ontario) in engagement with the pan-Canadian Pharmaceutical Alliance. For questions pertaining to the content of this report, contact: OH-CCO_InfoPDRP@ontariohealth.ca.

Executive Summary

Biologic drugs are expensive and are a growing segment of the Canadian pharmaceutical market. In 2018, Canadian sales of biologics were $7.7 billion, representing 30.1% of the country's total pharmaceutical sales[1]. Biosimilar drugs are highly similar copies of existing (or reference) biologic drugs that may enter the market after patents on the reference biologic drug expire. There are no clinically meaningful differences between biosimilars and reference biologics. Biosimilars are less costly than brand originators and represent an important way for public payers to derive savings and invest in new therapies.

The pan-Canadian Pharmaceutical Alliance (pCPA) developed guiding principles for biosimilars and related reference biologics with the intent to guide policy, reimbursement practices and negotiations. pCPA jurisdictions have implemented approaches to support the uptake and appropriate use of biosimilars and reference biologics, thereby enhancing patient access to clinically relevant and cost-effective treatment options. In 2020, the pCPA engaged with Ontario Health (Cancer Care Ontario) to develop an evaluation framework and measurement plan that would equip the health care system to examine the impact of the approaches on drug utilization and uptake, cost savings, patient experiences and outcomes, as well as to assess education and resource needs, across both the oncology and non-oncology settings.

A pan-Canadian Evaluation Working Group (EWG) was established to identify priorities for evaluation and to provide input on how these data could be collected.

The evaluation focused on the following biosimilar implementation activities:

- Stakeholder engagement
- Development of jurisdictional funding policies and implementation strategies
- Local implementation of biosimilars, and
- Development and dissemination of educational products

The RE-AIM framework[2] was used to identify evaluation questions and indicators. It supports a comprehensive evaluation of a program by looking at the Reach, Effectiveness, Adoption, Implementation, and Maintenance of interventions. The RE-AIM framework was applied to the activities listed above. Feedback on the importance of the evaluation questions and indicators was sought from patients, clinicians, drug manufacturers, patient support program providers, policymakers, and both public and private payers.

[1] Patented Medicine Prices Review Board. (2020). *Biologics in Canada. Part 1: Market Trends, 2018.* https://www.canada.ca/content/dam/pmprb-cepmb/documents/reports-and-studies/chartbooks/biologics-part1-market-trends.pdf

[2] Glasgow RE, Vogt TM, Boles SM. (1999) *Evaluating the public health impact of health promotion interventions: the RE-AIM framework*. Am J Public Health. 89:1322–7. doi: 10.2105/AJPH.89.9.1322

The indicators deemed highest priority were:

- System sustainability and affordability
    - Biosimilar utilization
    - Cost savings
    - Distribution of market share
    - Use and impact of exception policies to remain on or switch back to the reference biologic
    - Time to drug funding availability
- Patient experience
    - Change in patient travel distance to treatment site
    - Change in patient out-of-pocket expenses
    - Patient knowledge on biosimilars
    - Available educational supports for patients
- Patient outcomes
    - Number of physician visits, hospitalizations, and emergency department visits compared to historical cohort
    - Drug discontinuation rates compared to historical cohort
    - Use of concomitant drugs compared to historical cohort
- Clinician and institution experience
    - Changes in prescribing patterns
    - Readiness of existing IT systems to enable data collection and clinical operations with biosimilars
    - Activities and resources associated with implementing biosimilars
    - Change in workload related to switching patients to a biosimilar
    - Clinician knowledge on biosimilars
    - Access to educational materials on biosimilars
- Stakeholder engagement
    - Stakeholders involved in the development of funding policies
    - Timeliness and frequency of engagement
    - Methods used for stakeholder engagement
    - Stakeholder perceptions of the engagement process

Stakeholders also expressed interest in:

- Real world evidence studies on patient outcomes
- International experience with biosimilar implementation policies on switching, interchangeability, extrapolation, and market share strategies
- Evidence-based educational materials for patients and clinicians specific to a disease
- Enablers and barriers to biosimilar implementation (e.g., resources, time, processes, information systems).

In addition to the above, a comprehensive set of additional evaluation questions and indicators was identified to support the measurement and monitoring of different aspects of biosimilar implementation activities. These indicators can be used to support a more comprehensive evaluation, as required, based on the needs of program planners and evaluators.

Abbreviations and Common Terms

Biologic drug (or biologic) – A medicine derived from living organisms or from their cells, often made using biotechnology. Biologics are used to treat diseases and medical conditions including anemia, diabetes, inflammatory bowel disease, psoriasis, rheumatoid arthritis, hormone deficiency, and some forms of cancer. These medicines are generally larger and more complex than chemically produced pharmaceuticals.[3]

Biosimilar – is a drug demonstrated to be highly similar to a biologic drug that was already authorized for sale (known as the reference biologic drug). Biosimilars are approved based on a thorough comparison to a reference drug and may enter the market after the expiry of reference drug patents and data protection.

CADTH – Canadian Agency for Drugs and Technologies in Health

Clinician – A healthcare professional such as physician, pharmacist or nurse.

EWG – Evaluation Working Group

Indicators – Measurable information used to determine if a program is implementing their program as expected and achieving their outcomes.[4] Indicators may be classified as quantitative (output indicators) or qualitative (outcome or performance indicators).[5]

Interchangeability – Products that are so alike that the drug is expected to have the same clinical result as the reference drug in any given patient. Decisions about interchangeability are made by provinces and territories.

Jurisdiction – Refers to pCPA member jurisdiction; include public drug plan participation from: British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, Québec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland & Labrador, Yukon Territory, Northwest Territories, Nunavut, and Federal Drug Plans.

pCPA – pan-Canadian Pharmaceutical Alliance

RE-AIM Framework – A published framework to improve the sustainable adoption and implementation of effective, generalizable, evidence-based interventions. The five steps to translate research into action are: Reach, Effectiveness, Adoption, Implementation, and Maintenance.

[3] Government of Canada. (2019). *Biologic drugs and their uses.* https://www.canada.ca/en/health-canada/services/drugs-health-products/biologics-radiopharmaceuticals-genetic-therapies/applications-submissions/guidance-documents/fact-sheet-biosimilars.html

[4] Centers for Disease Control and Prevention – Program Performance and Evaluation Office. (2016). *Indicators*. https://www.cdc.gov/eval/indicators/index.htm

[5] M&E studies. (n.d.). *What are Indicators and Types of Indicators?* http://www.mnestudies.com/monitoring/what-indicators-and-types-indicators

Reference Biologic – The product to which a biosimilar is compared. It is the single source of the drug that was approved for sale in Canada, and for which there is a body of evidence regarding its safety and efficacy. A reference biologic may also be called originator biologic or innovator biologic.

Switching – Refers to a change from a reference biologic drug to a biosimilar (or vice-versa), or a change from a biosimilar to another biosimilar.

Background

Biologic drugs are expensive and are a growing segment of the Canadian pharmaceutical market. In 2018, Canadian sales of biologics were $7.7 billion, representing 30.1% of the country's total pharmaceutical sales.[6] Biosimilar drugs are highly similar copies of existing (or reference) biologic drugs that may enter the market after patents on the reference biologic drug expire. There are no clinically meaningful differences between biosimilars and reference biologics. Biosimilars are less costly than brand originators and represent an important way for public payers to derive savings and invest in new therapies.

The pCPA endorses a clear and consistent national approach that encourages appropriate use of biologics aligned with the pCPA mandate to enhance patient access to clinically relevant and cost-effective drug treatment options. Through in-depth consultations with the pharmaceutical industry, the pCPA developed guiding principles for biosimilars and related reference biologics with the intent to guide policy, reimbursement practices and negotiations.

- **2016** pCPA issued the First Principles for Subsequent Entry Biologics (SEBs) to guide negotiations and inform expectations for biologics and biosimilars.
- **2018** Biologics Policy Directions & pCPA Negotiations was created to further guide and define the process on how biologic and biosimilar products will be negotiated and considered for reimbursement by Canada's public drug plans.
- **2019** pCPA created the Review Process & pCPA Negotiations Update which outlines the pCPA's negotiation process for biosimilars in response to Health Technology Assessment (HTA) review changes.

pCPA partnered with Cancer Care Ontario (CCO) on a joint oncology biosimilars initiative that recognized the unique considerations in the implementation of oncology biosimilars. The arrival of therapeutic oncology biosimilars in Canada, which began in 2019, offered the potential to bring significant savings to provincial, territorial and federal public drug plans.

The adoption of biosimilars into the oncology setting required multiple considerations to ensure maximal uptake and optimal pricing while maintaining high quality care and patient outcomes. Recognizing these unique considerations, the pCPA and CCO partnered to implement the pan-Canadian Oncology Biosimilars Initiative (pCOBI). The pCOBI was a cancer-specific strategy that aimed to drive the use and acceptance of oncology biosimilars while considering the different environments in which biologics are used to treat cancer.

On November 16, 2018, the pCPA and CCO co-hosted the pan-Canadian Oncology Biosimilars Summit, bringing together patients, patient advocates, clinicians, agencies and other stakeholders from across the country to discuss the use of oncology biosimilars in Canada. The feedback from the participants informed the development of an action plan, which addressed six priority areas: education, clinical operations, clinical guidance, reimbursement, evaluation and reinvestment.

Pan-Canadian working groups were established for two major priority areas, education and clinical operations. The working groups included clinicians, health administrators and patient representatives

[6] Patented Medicine Prices Review Board. (2020). *Biologics in Canada. Part 1: Market Trends, 2018.* https://www.canada.ca/content/dam/pmprb-cepmb/documents/reports-and-studies/chartbooks/biologics-part1-market-trends.pdf

from across Canada. The Education Working Group guided the development of comprehensive educational resources for both patients and clinicians. The Clinical Operations Working Group developed a position statement to assist hospitals and cancer centers appropriately prepare for the implementation of oncology biosimilars. The resources developed by both working groups are accessible on the pCOBI webpage.

The other four priority areas, clinical guidance, reimbursement, evaluation and reinvestment, are being addressed by jurisdictions as they gain more experience treating patients with oncology biosimilars. The pCOBI's work has paved the way for an emerging oncology biosimilar market in Canada by preparing patients, clinicians and hospitals for biosimilar implementation, and supporting pCPA's overall biosimilar strategy. The savings achieved through the implementation of therapeutic oncology biosimilars in Canada will support cancer system sustainability and enhance access to innovative treatments for patients.

pCPA engaged with the Canadian Agency for Drugs and Technologies in Health (CADTH) in November 2019, to conduct an extensive stakeholder consultation and engagement exercise on the subject of implementation and expanded use of biosimilars in Canada across all relevant diseases. This consultation process provided an opportunity to understand how stakeholders including clinicians, patient group leaders, private payers, group purchasing organizations, and industry representatives view the opportunity presented by biosimilars. It also allowed stakeholders to provide jurisdictions with input as they consider policy options to ensure a competitive and sustainable market for both biosimilar and innovator drugs, encourage appropriate use of biosimilar treatments, and reduce the overall cost burden to enable savings to be redirected into the healthcare system. The final report, National Consultation on the Use and Implementation of Biosimilars[7], was released in February 2020 which summarizes the key themes and feedback pCPA received from its stakeholder consultation.

Purpose of the Evaluation Framework

A variety of approaches (e.g., stakeholder engagement, educational resources, funding policies, practice changes) have been implemented to support the appropriate use of biosimilars and related reference biologics, and enhance patient access to clinically relevant and cost-effective treatment options. This evaluation framework and measurement plan was developed to examine drug utilization and uptake, cost savings, patient experiences and outcomes, as well as assess education and resource needs, across both the oncology and non-oncology settings.

A pan-Canadian Evaluation Working Group (EWG) was established to identify priorities for evaluation and provide input on how these data could be collected. Members were selected through a nomination process through CADTH's Pharmaceutical Advisory Committee, Provincial Advisory Group, and Formulary Working Group, as well as the pCPA Biologics and Biosimilars Working Group. Representation included clinicians, health economists, policy advisors, and drug formulary managers.

[7] CADTH. (2020). *National Consultation on the Use and Implementation of Biosimilars – Online Consultation Summary Report.* https://static1.squarespace.com/static/5da618511347f511977ea918/t/5e384f9d0c38b93e14772756/1580748701993/biosimilar-online-consultation-summary-report-final-jan30.pdf

Methods

The scope of the evaluation framework included biosimilar implementation activities conducted across the country related to:

- Stakeholder engagement
- Development of jurisdictional funding policies and implementation strategies
- Local implementation of biosimilars, and
- Development and dissemination of educational products

The RE-AIM framework[8] was used to identify evaluation questions and indicators. It supports a comprehensive evaluation of a program by looking at the Reach, Effectiveness, Adoption, Implementation, and Maintenance of interventions. The RE-AIM framework was applied to the activities listed above.

Feedback on the importance of the evaluation questions and indicators was sought from patients, clinicians, drug manufacturers, patient support program providers, policymakers, and both public and private payers. Organizations were invited to participate in one of nine focus group sessions. Invited organizations were identified based on prior engagement in pan-Canadian biosimilar implementation activities, and through additional recommendations from the EWG. Invitations were extended to 26 patient organizations, 13 clinician groups, 4 pharmaceutical industry groups, 3 patient support program providers with private infusion clinics, 1 organization representing private payers, and the pCPA Biologics and Biosimilars Working Group. Focus group participants were asked whether the evaluation questions and indicators captured the priorities of their communities with respect to the implementation of biosimilar drugs. They were also asked to comment on the feasibility of data collection and analysis.

A survey was distributed to participants after their focus group session to supplement information gathered during the session. The survey enabled participants to provide additional comments on the indicators, suggest new indicators, and include viewpoints from colleagues who did not participate in the focus group sessions. All feedback, including focus group discussions and survey responses, was synthesized and thematically analyzed to inform the final list of indicators and evaluation questions.

Results

An indicator was selected as a priority if it was identified as “very important” to multiple stakeholder groups in the focus group sessions and survey responses. Feasibility of data collection and reporting was also considered.

The indicators deemed highest priority were related to:

- System sustainability and affordability
    - Biosimilar utilization

[8] Glasgow RE, Vogt TM, Boles SM. (1999) *Evaluating the public health impact of health promotion interventions: the RE-AIM framework*. Am J Public Health. 89:1322–7. doi: 10.2105/AJPH.89.9.1322

    - Cost savings
    - Distribution of market share
    - Use and impact of exception policies to remain on or switch back to the reference biologic
    - Time to drug funding availability
- Patient experience
    - Change in patient travel distance to treatment site
    - Change in patient out-of-pocket expenses
    - Patient knowledge on biosimilars
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- Patient outcomes
    - Number of physician visits, hospitalizations, and emergency department visits compared to historical cohort
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    - Changes in prescribing patterns
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    - Activities and resources associated with implementing biosimilars
    - Change in workload related to switching patients to a biosimilar
    - Clinician knowledge on biosimilars
    - Access to educational materials on biosimilars
- Stakeholder engagement
    - Stakeholders involved in the development of funding policies
    - Timeliness and frequency of engagement
    - Methods used for stakeholder engagement
    - Stakeholder perceptions of the engagement process

Indicators may be stratified by disease, jurisdiction or other attributes to provide more detailed data.

Stakeholders also expressed interest in:

- Real world evidence studies on patient outcomes
- International experience with biosimilar implementation policies on switching, interchangeability, extrapolation, and market share strategies
- Evidence-based educational materials for patients and clinicians specific to a disease
- Enablers and barriers to biosimilar implementation (e.g., resources, time, processes, information systems).

In addition to the above, the "pan-Canadian Biosimilars Initiative Evaluation Framework - A Toolkit" is available to support the measurement and monitoring of biosimilar implementation activities. The Toolkit is a set of indicators (and supporting questions, to be used to address the qualitative experiential indicators) that would allow for a comprehensive evaluation of biosimilar implementation activities, focusing on the stakeholder engagement process, funding policies, local implementation effects, and educational resources. These indicators can be used to support a more comprehensive evaluation, as required, based on the needs of program planners and evaluators.

Conclusion

Through engagement with stakeholders (including patient groups, clinicians, drug manufacturers, public and private payers) a priority set of indicators was identified. Stakeholders now have a tool to use to support the evaluation of biosimilar implementations.

Supporting documents available upon request

- Biosimilars logic model
- Application of RE-AIM framework to biosimilars logic model
- Organizations that participated in the focus group sessions
- Interview guide for focus group sessions
- Post-focus group survey