

National Advisory Committee on Immunization (NACI)

Prioritization Guide for Assessing the Need for Economic Evidence

Version 1.0
February 2022

PROTECTING AND EMPOWERING CANADIANS TO IMPROVE THEIR HEALTH



Public Health
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Canada

**TO PROMOTE AND PROTECT THE HEALTH OF CANADIANS THROUGH LEADERSHIP, PARTNERSHIP,
INNOVATION AND ACTION IN PUBLIC HEALTH.**

—Public Health Agency of Canada

Également disponible en français sous le titre :

Guide sur l'établissement des priorités relatives aux données économiques

To obtain additional information, please contact:

Public Health Agency of Canada

Address Locator 0900C2

Ottawa, ON K1A 0K9

Tel.: 613-957-2991

Toll free: 1-866-225-0709

Fax: 613-941-5366

TTY: 1-800-465-7735

E-mail: publications-publications@hc-sc.gc.ca

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Publication date: July 2022

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Cat.: HP40-314/1-2022E-PDF

ISBN: 978-0-660-44361-4

Pub.: 220249

User Information

Date of deliberation	Click or tap to enter a date.
List of users and roles	Working Group chair/ Vice chair: Click or tap here to enter text. Secretariat health economist: Click or tap here to enter text. Secretariat epidemiologist/ medical specialist: Click or tap here to enter text. Others: Click or tap here to enter text.
Policy question of interest in PICO format	Population(s) – Identify equity-relevant groups if applicable: Click or tap here to enter text. Intervention(s): Click or tap here to enter text. Comparator(s): Click or tap here to enter text. Outcome(s): Click or tap here to enter text.

Prioritization Guide for Deliberation

Criteria	Sub criteria	Summary of Discussion	Assessment of need (Please check ✓)		
			Towards prioritizing economic evidence	Away from prioritizing economic evidence	Neither/ Uncertain/ No evidence
Burden of disease¹	a)	Incidence/prevalence (endemic levels), and potential for outbreaks (including clusters, epidemics, pandemics, etc.)	<input type="checkbox"/> (e.g., high incidence/prevalence)	<input type="checkbox"/>	<input type="checkbox"/>
	b)	Severity of disease and duration of disease (manifestations, complications, sequelae, quality of life, activities of daily living, independence)	<input type="checkbox"/> (e.g., high mortality or morbidity)	<input type="checkbox"/>	<input type="checkbox"/>
	c)	Cost of full course of vaccination: Use Canadian list price or international price(s) adjusted to Canadian dollars	<input type="checkbox"/> (e.g., over \$30 to \$100)	<input type="checkbox"/>	<input type="checkbox"/>
	d)	Potential budget impact: Qualitatively consider potential costs associated with disease (e.g., implementation, cost offsets due to reduced healthcare visits, reduced treatment costs, reduced morbidity/ mortality, outbreak management and control costs). Consider if costs are for endemic disease or outbreaks	<input type="checkbox"/> (e.g., larger potential budget impact)	<input type="checkbox"/>	<input type="checkbox"/>
Proposed benefit	a)	Direct effect of vaccination program: Consider vaccine efficacy or effectiveness against clinical events in vaccinated persons relative to <i>existing</i> alternatives, where possible. Without head-to-head data, consider indirect comparisons or comparisons to placebo	<input type="checkbox"/> (e.g., greater benefit)	<input type="checkbox"/>	<input type="checkbox"/>
	b)	Indirect effect of vaccination program: Consider impact on disease dynamics/indirect effects of the program (e.g., age-shifting, community immunity)	<input type="checkbox"/> (e.g., greater benefit)	<input type="checkbox"/>	<input type="checkbox"/>

	c)	Potential to reduce health or overall inequities: Consider inequities experienced by those vaccinated/ caregivers/ others indirectly affected by the program		<input type="checkbox"/> (e.g., greater benefit)	<input type="checkbox"/>	<input type="checkbox"/>
<p>Overall assessment of need for economic evidence (Please check ✓)</p> <input type="checkbox"/> Recommend policy question to be prioritized for economic evidence <input type="checkbox"/> Recommend policy question to be deferred for economic evidence <input type="checkbox"/> Do not recommend policy question to be prioritized for economic evidence <p>The main considerations for this decision were:</p> <ul style="list-style-type: none"> • • 						

¹ Burden of disease: impact of a health problem on a given population, and can be measured using a variety of indicators such as mortality, morbidity or financial cost

User Guide

Burden of disease

a. Incidence/prevalence (endemic levels), and potential for outbreaks (including clusters, epidemics, pandemics, etc.)

This criterion asks users to assess the epidemiology of the vaccine-preventable disease (VPD) and its potential for outbreaks in the population(s) of interest. Consider if the incidence or prevalence differs by biological risk factors (e.g., advanced age, pre-existing medical conditions), social risk factors (e.g., low socioeconomic status, belonging to a racialized population), or seasonality/ time frame. Consider the potential for clusters, epidemics, pandemics, etc. in the population(s) and setting(s) of interest.

The more people affected by the policy question, the more likely the policy question should be prioritized for economic evidence. The greater the likelihood for outbreaks, the more likely the policy question should be prioritized for economic evidence.

b. Severity of disease and duration of disease (manifestations, sequelae, quality of life, activities of daily living, independence)

This criterion refers to both short and long-term consequences of disease. Consider the full spectrum of effects (e.g., disease manifestations, complications, sequelae, quality of life, activities of daily living, independence). Consider the duration of these consequences.

The more severe and the longer the consequences of disease are, the more likely the policy question should be prioritized for economic evidence.

c. Cost of full course of vaccination

Prior to deliberation, the Secretariat should obtain the cost of the full course of vaccination. Document the number of doses required. Note if costs obtained are by dose or by weight; for single or multi-dose vials; etc.

Use Canadian list prices of the vaccine product or of similar vaccines, if available. If they are unavailable, contact manufacturers or use international list prices from developed countries. Note that new vaccine products may be available in the US or European market prior to Canada, so refer to these countries. Adjust to Canadian dollars using purchasing power parities from the Organisation for Economic Co-operation and Development (OECD).

The cost obtained from international sources will be an approximation for Canada, as vaccine prices from other countries can differ due to different procurement mechanisms, scale of procurement, methodology and contractual terms. The cost obtained from Canadian sources will also be an approximation, as prices may differ from bulk buying and other contractual terms.

The higher the vaccine costs are, the more likely the policy question should be prioritized for economic evidence.

d. Potential budget impact

Users should list potential cost items including direct costs to the healthcare system (e.g., costs associated with disease). Qualitatively assess how substantial the costs may be and over what time frame the costs are being incurred. Note which items are cost offsets (e.g., due to reduced healthcare visits, reduced treatment costs, reduced morbidity/ mortality from implementing the vaccination program). The costs may differ for endemic disease versus for outbreaks (e.g., outbreak management and control costs).

Impacts outside the healthcare system (e.g., social services, education, environment, legal, criminal, housing), and productivity (e.g., paid and unpaid work of vaccinated individuals, caregivers, and other affected populations; macroeconomic consequences) are generally not included in budget impact analyses. Users may acknowledge them in the deliberation, but the assessment for this sub criterion should be driven by direct costs to the budget holder.

The larger the potential budget impact of the vaccination program, the more likely the policy question should be prioritized for economic evidence.

Proposed benefit

a. Direct effect of vaccination program

Consider vaccine efficacy or effectiveness against clinical events (e.g., infection, symptomatic disease, hospitalizations, deaths). Note any geographic variation and host factors from the data source to ensure applicability to the Canadian context. Note whether the vaccine provides protection against certain variations of the pathogen, and whether there is cross-protection.

Preferably, the estimate used will compare the vaccine against existing alternative(s) of interest. If such head-to-head data are not available, consider indirect comparisons (e.g., network meta-analyses) or comparisons to placebo. If the data available do not measure clinical events, ensure the immune biomarkers used as surrogate outcomes meet the criteria for correlates of protection.

The greater the direct benefit, the more likely the policy question should be prioritized for economic evidence.

b. Indirect effect of vaccination program

Consider the impact of the program on populations beyond those intended for vaccination. They include the population at risk for the disease of interest, and any populations that may be indirectly affected through externalities (e.g., age-shifting of disease, community immunity, also known as herd immunity), or spillover effects (e.g., caregivers).

The greater the indirect benefit, the more likely the policy question should be prioritized for economic evidence.

c. Potential to reduce health or overall inequities

Consider both health inequities and overall inequities (i.e., health and non-health related). Consider whether there are key groups of individuals experiencing health inequities and barriers to health that could be reduced or addressed by the vaccination program. Examples of groups that may experience health inequity in Canada include First Nations, Inuit, and Métis Peoples, individuals of low socioeconomic status, people who are part of ethnic, sexual, or gender minority groups, populations living in certain geographic locations (urban vs. rural vs. remote and isolated), and individuals with disabilities and vulnerable groups such as children, seniors or institutionalized persons.

Note that there may be instances where cost-effectiveness is less relevant to populations vulnerable to historical harms and socially constructed barriers. For the purposes of this prioritization exercise, the greater the potential benefit (e.g., reducing inequities), the more likely the policy question should be prioritized for economic evidence.

Overall assessment of need for economic evidence

There is no quantitative rating scale or explicit weighting of the criteria. The qualitative nature allows for context-specific assessments for each VPD. Some criteria/ sub criteria may be more important in certain VPDs than others. Do not make an overall assessment based on the number of checkmarks in each column. The table is intended to be a guide for deliberation. Users should provide a rationale for their assessment. For instance, was the assessment driven by certain sub criteria?

Abbreviations

VPD Vaccine-preventable disease

Version History

Version	Date	Changes made
V0.0	Apr 2018	First draft
V0.1	Sep 2018	Feedback incorporated from the Canadian Immunization Committee and from pilot testing
V0.2	Dec 2018	Feedback incorporated from the NACI Economics Task Group
V0.3	Feb 2019	Approved for initial use by NACI
V0.4	Jul 2021	Feedback incorporated from public consultation (March – May 2021)
V0.5	Dec 2021	Feedback incorporated from second round of consultations with PTs (September – December 2021)
V0.6	Dec 2021	Feedback incorporated from the NACI Economics Task Group
V1.0	Feb 2022	Approved for use by NACI