



Immunization guidance products: Different levels of detail for different uses

Desai S^{1*}, Tunis M¹, Stirling R¹, Jensen C¹, Ismail S¹, Baclic O¹, Lerch R¹

Abstract

The National Advisory Committee on Immunization (NACI) provides expert and evidence-based advice to the Public Health Agency of Canada (PHAC) on the use of human vaccines in Canada. This advice is presented in a variety of publications for different uses. A recent survey identified some confusion regarding the various NACI publication products. The objective of this article is to identify the level of detail and appropriate uses of the different NACI products.

NACI statements provide a synthesis of current evidence and expert opinion on new vaccines or new indications for vaccines to inform immunization practices, policies and programs. NACI literature reviews inform new NACI statements and are published after the statement to inform readers about current literature on a specific immunization topic. The *Canadian Immunization Guide* (CIG) is a practice-oriented guide that synthesizes all the NACI statements and is updated regularly. NACI statement summaries are published in the *Canada Communicable Disease Report* (CCDR) and provide a high level overview of these statements shortly after they are published. These products provide a variety of options for users to choose how in-depth they wish to explore the evidence base and process for producing recommendations for immunization in Canada.

Affiliation

¹ Centre for Immunization and Respiratory Infectious Diseases, Public Health Agency of Canada, Ottawa, ON

*Correspondence: naci-ccni@phac-aspc.gc.ca

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Introduction

New vaccines and recommendations on the best use of vaccines are being developed on an ongoing basis. Activities related to immunizations are a shared responsibility among the federal, provincial and territorial governments in Canada. The federal government is responsible for the regulation of vaccines, national vaccine safety monitoring, national disease surveillance and provision of expert led immunization advice. The National Advisory Committee on Immunization (NACI) is supported by the Public Health Agency of Canada (PHAC) and has been providing expert and evidence-based advice to the federal government since 1964.

NACI makes recommendations on the use of vaccines currently or newly approved for use in humans in Canada, including the identification of groups at risk for vaccine preventable diseases for whom vaccination should be targeted (1). The Committee reports to the Assistant Deputy Minister of Infectious Disease Prevention and Control Branch of the Public Health Agency of Canada and works with staff of the Centre for Immunization and Respiratory Infectious Diseases at PHAC to provide ongoing medical, scientific and public health advice.

As the field of vaccine research and evidence-based decision making has evolved, NACI's processes and methods have also evolved. For example, when developing new statements, NACI often conducts comprehensive literature reviews to guide the expert advice of the Committee (2).

NACI does more than issue NACI statements. A variety of products have been developed to serve the needs of different audiences, including frontline providers, policy staff and decision-makers at different levels of government and researchers. NACI products include NACI statements, literature reviews, the *Canadian Immunization Guide* (CIG) and NACI summaries in the *Canada Communicable Disease Report* (CCDR).

A recent survey of NACI stakeholders identified that some users find it difficult to identify which NACI product is for whom (*unpublished data*). The objective of this article is to identify the level of detail and appropriate uses of the different NACI products.

Detailed products

NACI statements

NACI statements provide a high level of detail. They are a written record of the evidence that was collated and analysed by the Committee and informed the final recommendations. Statements are written when a new product is introduced, when a new and significant indication is authorized, when new evidence on a vaccine becomes available, or when a new question about the use of a vaccine has been reviewed. For example, NACI was asked to review the use of Hepatitis A for pre exposure immunization. Following review of the data, NACI determined that pre exposure immunization could be safely offered for those six months of age and older (3). Additionally, a statement may be needed if there are significant changes in the



epidemiology of a particular disease or after a new safety signal is detected. For example, after Canadian researchers and others identified a slightly increased risk of febrile seizures following administration of the combined measles, mumps, rubella and varicella vaccine, NACI developed new recommendations to address this (4). Statements include details about the methods that were used to retrieve and review primary literature, as well as a detailed look at the studies and grading of the evidence that informed the recommendations of NACI (5).

The target audience for statements includes those interested in immunization decision making, those designing vaccine programs and other policy-makers. While certainly available to frontline providers and useful to read as a continuing medical education activity, NACI statements offer more detail than is needed to provide immunizations. The types of questions that can be answered from a statement include: What was the evidence that informed these recommendations? What was the quality of this evidence and what role did expert opinion play?

NACI literature reviews

When there is a large volume of evidence on a topic, NACI will often conduct or commission an evidence-based review to synthesize the evidence that will inform their recommendations. Once the research questions have been developed by NACI, literature is collected and appraised according to NACI's published methodology (2). This typically includes a detailed description of the methods used to identify appropriate literature along with an in-depth review and description of that literature. Publishing a literature review separately allows the corresponding statement to be streamlined and concise. These reviews do not provide vaccine recommendations or immunization guidance.

The target audience for these comprehensive reviews is individuals who wish to review all the relevant literature related to a specific question that informed a recommendation by NACI. For example, in 2016 a literature review was published on the topic of high dose seasonal influenza vaccine for adults 65 years and older (6). This review provided the evidence base for the 2016-17 Seasonal Influenza Statement on the use of high dose trivalent influenza vaccine in adults 65 years of age and older (7). Not all questions reviewed by NACI have a formal literature review published; it depends in part on the amount of evidence that must be reviewed. The decision to publish a literature review separately from the statement is made on a case by case basis.

Summative products

The Canadian Immunization Guide

The CIG is the authoritative guide on current NACI immunization recommendations. It began as a small paperback in 1979 (8) and its scope has expanded over time. In 2012-13, the CIG was transformed into an online tool that is now updated regularly to reflect the current state of vaccine knowledge and summarizes the most up-to-date NACI recommendations as well as travel vaccine recommendations from the Committee to Advise on Tropical Medicine and Travel (CATMAT). It includes sections on key immunization information, vaccine safety, vaccination of specific populations, active vaccines and passive immunizations.

Each section of the CIG is reviewed at least once every four years. Alternatively, when a new NACI or CATMAT statement is published with recommendations, changes to the content in the relevant CIG chapters are also made to ensure that the CIG contains the most up-to-date immunization guidance from NACI and CATMAT. These changes are highlighted in the Table of Updates on the CIG website (9) and published annually as a summary in CCCR (10). It is particularly useful when multiple statements have been made on a vaccine. For example, there have been many NACI statements on HPV vaccines over the past decade as the vaccine products and evidence have evolved. The CIG brings together all the current HPV vaccine recommendations and information into one place (11).

The CIG is written in the form of a quick reference guide for frontline immunization providers in Canada. Although routine vaccine schedules may vary among provinces and territories, the CIG provides definitive advice about special populations, travel vaccines, vaccine administration, storage and handling, co-administration of vaccines, passive immunizing agents and more.

NACI summaries in the CCCR

Summaries of NACI statements are published in the CCCR shortly after a new statement is published. They are directed to front line vaccine providers and identify new recommendations and provide a link to the full statement. For example, see the summary in this issue on the interim NACI recommendations for pneumococcal vaccine (12).

Information on all these NACI products is summarized in **Table 1**.

Table 1: An overview of key features of PHAC publications on NACI advice

Product	Features	Details
NACI statements	Designed for	<ul style="list-style-type: none"> Informing provincial/territorial vaccine program discussions and decisions. Providing a synthesis of the evidence informing recommendations and their rationale. Finding key references to research studies that vaccine recommendations are based on.
	Not designed for	<ul style="list-style-type: none"> Finding key information quickly (such as preparation of the vaccine, safety details etc.) to help make decisions when giving vaccines to patients. Background information about vaccines, vaccine administration and immunological concepts.
	Timelines	<ul style="list-style-type: none"> Statements may be updated if: <ul style="list-style-type: none"> There is a new product/indication, There has been a significant change in epidemiology, New evidence on a vaccine becomes available, A new question about the use of a vaccine needs to be reviewed, A new safety question has been identified, OR There is a vaccine supply issue
	Where to find them	National Advisory Committee on Immunization (NACI) Recommendations, Statements and Updates (http://www.phac-aspc.gc.ca/naci-ccni/index-eng.php)



Table 1 continued

Product	Features	Details
NACI literature reviews	Designed for	<ul style="list-style-type: none"> Informing readers about all research on a specific immunization topic that was used in developing recommendations. Informing provincial/territorial vaccine program discussions and decisions. Providing a detailed review on a specific research question related to vaccine use.
	Not designed for	<ul style="list-style-type: none"> Finding recommendations for a specific vaccine. Finding information quickly to help make decisions when giving vaccines to patients. Finding general background information about vaccines, vaccine administration and immunological concepts.
	Timelines	<ul style="list-style-type: none"> Not updated. New reviews may be done to inform new statements.
	Where to find them	<p>National Advisory Committee on Immunization (NACI) Recommendations, Statements and Updates (http://www.phac-aspc.gc.ca/naci-ccni/index-eng.php)</p>
Canadian Immunization Guide	Designed for	<ul style="list-style-type: none"> Finding key up-to-date information on immunization recommendations for specific vaccine preventable diseases to help make decisions when advising individuals on vaccinations. Background information about immunology, immunization practices and principles and vaccine administration.
	Not designed for	<ul style="list-style-type: none"> Detailed information related to the rationale for recommendations. Finding references to the research studies that vaccine recommendations are based on. Epidemiologic reviews of vaccine preventable diseases.
	Timelines	<ul style="list-style-type: none"> Each chapter is reviewed <ul style="list-style-type: none"> - every four years, OR - When a new statement is written.
	Where to find it	<p>Canadian Immunization Guide (http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php)</p>
NACI summaries in the <i>Canada Communicable Disease Report (CCDR)</i>	Designed for	<ul style="list-style-type: none"> Finding out about new NACI recommendations.
	Not designed for	<ul style="list-style-type: none"> Knowing all the evidence base and rationale for the recommendations.
	Timelines	<ul style="list-style-type: none"> Available shortly after a new NACI statement is published.
	Where to find them	<p>Canadian Communicable Disease Report (CCDR) (http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/)</p>

Conclusion

New vaccines, research and immunization strategies are being developed all the time to prevent and minimize the effects of infectious diseases, as well as to optimize safety and efficiency of vaccine administration. NACI continues to develop immunization information and guidance products to meet the needs of a diverse readership. Understanding the purpose and content of each product will help public health professionals and clinicians choose the most appropriate product.

Those who are interested can receive ongoing updates of NACI related products by joining [the NACI list serve](#) (13). Any questions or comments related to NACI statements, evidence-based reviews and the Canadian Immunization Guide, can be sent through the [Contact Us feature on the PHAC website](#) (14).

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Conflict of interest

None.

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