Process for guideline development by the reconstituted Canadian Task Force on Preventive Health Care

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The Canadian Task Force on Preventive Health Care, formerly known as the Canadian Task Force on the Periodic Health Examination, was established in 1976. In 1994, the task force published 81 of its recommendations in a compilation called *The Canadian Guide to Clinical Preventive Health Care*.[1] By the mid-1990s, the task force was internationally known for its rigorous, high-quality methods and for producing outstanding guidance for practitioners. Its reports were used by many other agencies around the world, including the US Preventive Services Task Force (which developed its approach based on the methods of the Canadian task force) with the 2 groups collaborating for several years. Originally, funding was provided by a partnership of federal, provincial and territorial governments. When funding ended in 2005, the task force was disbanded. In April 2010, it was reconstituted as an independent guideline producer with funding from the Public Health Agency of Canada and the Canadian Institutes of Health Research.

This article outlines the task force's current methods and procedures, including topic selection, literature search, selection and synthesis of evidence, and the procedure for formulating and implementing recommendations. It outlines the rationale for the selection of specific methods and compares the methods used by the task force with those of other international guideline producers.

Organization

The reconstituted task force has 14 members drawn from multiple health professions who collectively have expertise in primary care, clinical prevention, guideline development, critical appraisal, research synthesis and economic analysis. The task force is supported by the independent Evidence Review and Synthesis Centre based at McMaster University and by the task force office based at the Public Health Agency of Canada in Ottawa, Ontario. The task force is an independent body whose mandate is to develop and disseminate clinical practice guidelines for preventive care (primary and secondary prevention), based on systematic analysis of scientific evidence. Although it receives funding from and must communicate its findings to the Public Health Agency of Canada, government does not influence the selection of topics, the content or nature of recommendations, the dissemination and implementation strategy, or the knowledge translation products.

Members are appointed by the Chief Public Health Officer based on an open nomination process and the recommendations of an autonomous selection committee. To be considered for appointment to the task force, appointees must be recognized experts in their field and be free of important financial and intellectual conflicts.

The guideline development process

The steps in the task force's process for guideline development[2] are summarized in Box 1 and in the following sections.

Step 1: Topic selection

The process of topic selection is done in multiple stages and involves input from both practitioners and the public. The task force solicits input on potential topics for future guidelines through an electronic form available on its website (www.canadiantaskforce.ca/topics_eng.html). Topic nominations are also solicited from members of The College of Family Physicians of Canada,

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KEY POINTS

- The Canadian Task Force on Preventive Health Care has been re-established with a sustainable funding model.
- We outline methods of the reconstituted task force, including processes for selecting priority topics, methods for determining quality and strength of evidence, processes for stakeholder engagement and plans for knowledge translation.
- Comparisons between the methods of the Canadian Task Force on Preventive Health Care and other guideline-producing bodies are presented.

other stakeholders (e.g., national governmental, nongovernmental and professional associations) and through a review of recently published preventive health care literature and of guidelines produced by other organizations. Stakeholders are asked to comment on the disease burden, the expected efficacy of an intervention to decrease the burden, the potential importance of new or revised guidance on the topic, whether there is relevant new evidence that should be considered and whether they are aware of other guidelines on the same topic.

A topic prioritization work group reviews all proposed topics to ensure that they fall within the scope of the task force. The selected topics must be related to primary or secondary prevention in the primary care setting and address a condition with a substantial health burden.

A list of proposed topics that meet these initial criteria is provided to all members of the topic prioritization work group. Using the Delphi method, members of the work group select a short list of candidate topics according to the criteria outlined in stage 1 (Table 1). The list of selected topics is collated and sent back to members for reconsideration, until a consensus is reached on the top 20–30 topics. Summaries are then prepared for each topic on the short list, outlining relevant clinical considerations and addressing each of the items listed in stage 2 (Table 1). Feedback from stakeholder consultations is also summarized in the topic briefs. Topics on the short list are then ranked according to the criteria outlined in stage 2 (Table 1); participants are asked to consider all criteria equally, without weighting. Care is also taken to ensure that the topics for each year cover a range of disease types, populations and types of service (e.g., screening, prevention).

Box 1: The guideline development process of the Canadian Task Force on Preventive Health Care

- Step 1: Topic selection
- Step 2: Formation of a topic work group
- Step 3: Scoping to develop key questions and analytical framework
- Step 4: Development of a review protocol
- Step 5: Systematic review
- Step 6: Assessment of the quality of evidence
- Step 7: Formulation of the recommendations
- Step 8: Engagement of stakeholders*
- Step 9: Implementation of guidelines

*Stakeholders include national organizations relevant to primary care providers in Canada as well as federal, provincial and territorial organizations that provide input on all guidelines. Stakeholder engagement happens throughout the process.

An iterative process, in which topics are ranked, results are fed back to members and topics are reranked, is used to help members of the work group reach consensus on the leading topics to recommend to the task force for approval. Although the results of this formal process generally drive the timing of guideline development, the task force occasionally reprioritizes certain topics to take advantage of new scientific developments or timely opportunities for partnerships.

Step 2: Formation of a topic work group

For every topic selected by the task force, a topic work group is formed. This work group consists of at least 3 task force members (one of whom is selected as chair), a scientific manager from the Public Health Agency of Canada and members from the Evidence Review and Synthesis Centre, as well as from partner organizations, if any such organizations are involved for the particular topic. For instance, to avoid duplication of efforts, the task force partnered with the Canadian Hypertension Education Program to produce guidance on screening for hypertension.

Step 3: Scoping to develop key questions and analytical framework

After a guideline topic is selected, the Evidence Review and Synthesis Centre conducts a review of the literature to provide an overview of the evidence (including areas where evidence is lacking) and to identify key literature that the work group is expected to read and understand to formulate the key questions for the review. The review provides a general framework from which to establish what the guideline will include and what will not be covered. The output from the scoping exercise is a summary of the evidence, a list of key studies and guidelines, and a comparative analysis of relevant guidelines.

Based on the results of the scoping process, the topic work group develops the analytic framework and key questions, which define the scope and focus of the review and influence the associated workload. The task force, as a whole, and partner organizations (if applicable) review and approve these documents. At this point, the topic work group determines if the guideline will be based on a new review, an update of previously published work, or an endorsement or adaptation of the work of another guideline development group.

Step 4: Development of a review protocol

The Evidence Review and Synthesis Centre and its clinical experts develop a protocol for the systematic review based on information received from the work group. The protocol contains

information about the literature search, the analytic framework and the research questions.

All task force reviews include both key and contextual questions. Key questions serve to focus and guide the systematic review. They specify the population, interventions and important patient outcomes for the topic under consideration, and are critical to conducting the literature search and the systematic review, and to developing the recommendations. Contextual questions provide context to the recommendations and are not addressed through formal systematic reviews. Instead, they are addressed by targeted literature searches of existing systematic reviews or key studies published in the last 5 years. Contextual questions address issues of equity, cost-effectiveness, comorbidities and patient preferences.

The protocol is approved first by the topic work group and then by all members of the task force. It is subsequently peer-reviewed by experts and stakeholders in the topic area. Final protocols are posted on the task force website and registered with PROSPERO (www.crd.york.ac.uk/prospero/).

Step 5: Systematic review

The Evidence Review and Synthesis Centre independently conducts a systematic review of the available evidence based on the final approved protocol, according to accepted standards.[3] Once the key and contextual questions have been developed, the topic work group determines (with input from the centre's technical experts) which study designs would be most appropriate to answer each of the research questions. A librarian from the Evidence Review and Synthesis Centre, with input from the topic work group, develops the search strategy to identify systematic reviews, meta-analyses and primary studies on the topic. The search begins with the Cochrane Database of Systematic Reviews and MEDLINE. Other databases, such as Embase and topic-specific databases, are also searched as required. Decisions about the search time frame are made on a topic-by-topic basis, unless the review is an update, in which case the search is limited to 3 months before the final date of searching for the previous review. Languages are limited to English and French.

Table 1: Criteria for selecting topics for recommendations of the Canadian Task Force on Preventive Health Care

Criteria	Explanation	Source of information*
Stage 1: Developing a short list of potential topics		
Timing of most recent review	Priority is given to topics that have not been examined by the task force within the past 5 years.	
Availability of new evidence	Priority is given to topics for which new or controversial evidence, which might lead to a change in existing recommendations, has emerged since the last time the topic was reviewed by the task force.	
Input from primary care practitioners	Priority is given to topics that will address the needs of primary care practitioners.	
Stage 2: Ranking the final leading topics		
Disease burden	Prevalence, mortality, comorbidity, quality of life and expected effectiveness of the preventive service in decreasing that burden are assessed.	Summaries of literature reviews and stakeholder consultations are developed and provided.
Potential impact of recommendations in clinical practice	Rating is done of whether there is the potential of a recommendation in a field to improve clinical practice and patient outcomes.	Summary of stakeholder consultations is developed and provided.
Interest of the public or care providers	Priority is given to topics that have been recommended by practitioners or stakeholders.	Summary of stakeholder consultations is developed and provided.
Variation in care	Priority is given to preventive services that have the potential to decrease variations in care.	Summaries of literature reviews and stakeholder consultations are developed and provided.
Sufficiency of evidence	A preliminary scan is conducted to determine whether there is evidence to answer key research questions.	Summary of literature reviews is developed and provided.
New evidence	Priority is given especially to high-quality evidence in a stable field.	Summaries of literature reviews and stakeholder consultations are developed and provided.

*This information is developed by the task force scientific officers with assistance from the Evidence Review and Synthesis Centre, and is provided to the topic prioritization work group.

The databases of ClinicalTrials.gov and the National Institutes of Health's Computer Retrieval of Information on Scientific Projects may also be searched to identify trials in progress that may be relevant to the topic. A search of the "grey literature" (i.e., data not published in the peer-reviewed literature) is also conducted to identify relevant Canadian and international data that has been disseminated from high-quality governmental and nongovernmental organizations such as the Public Health Agency of Canada, the Canadian Institutes for Health Research, Statistics Canada and the World Health Organization (WHO). This type of literature is incorporated into the review as contextual information.

The search may also identify any relevant modelling or cost-effectiveness studies if deemed relevant by the topic work group. The Evidence Review and Synthesis Centre applies the a priori inclusion and exclusion criteria to the results of the literature search to identify articles suitable for the evidence review. Two reviewers screen all studies.

When data are sufficiently homogeneous to permit quantitative synthesis, the results are pooled using fixed- or random-effects meta-analysis as appropriate. Narrative summaries are provided when meta-analysis is not appropriate. More details about the systematic review process are available on the task force website.[2]

Step 6: Assessment of the quality of evidence

All recommendations are framed using the Grading of Recommendations Assessment, Development and Evaluation (GRADE) method to focus on outcomes important to patients and to enhance transparency.[4] The GRADE method provides a systematic and explicit approach to rate the quality of evidence and the strength of recommendations that are subsequently generated. The quality of evidence relating to important prespecified outcomes for patients, both desirable (benefits) and undesirable (harms), is graded as high, moderate, low or very low, and reflects the task force's certainty in the estimates of effect.

Evidence from randomized controlled studies begins as high-quality evidence, whereas evidence from observational studies begins as low-quality evidence. Evidence can then be downgraded or upgraded depending on several factors. Evidence is downgraded based on consideration of the risk of bias, inconsistency across studies, indirectness of evidence, imprecision of evidence and publication bias. Evidence may be upgraded based on 3 factors: large effect size, a clear dose–response relation and the perception that substantial confounding is unlikely. GRADE evidence profile tables are used to summarize evidence and present results. A detailed discussion of the GRADE system can be found at www.gradeworkinggroup.org.

Step 7: Formulation of the recommendations

The topic work group develops the recommendations, which are then presented to the task force for consideration and approval. Recommendations are graded as either strong or weak. The strength of the recommendations is based not only on the quality of the supporting evidence, but also on the degree of certainty about the balance between desirable and undesirable effects, variability in patient values and preferences, and uncertainty about whether the intervention represents a wise use of resources.

Strong recommendations indicate that most patients should receive the intervention in question, whereas weak recommendations are used to recognize situations where appropriate choices may differ among individuals — and where clinicians should help patients to make management decisions that are consistent with their values and preferences. The breast cancer recommendations of the Canadian Task Force on Preventive Health Care provide an example of how the GRADE system is used to frame the guidelines.[5]

Step 8: Engagement of stakeholders

The task force engages stakeholders in all aspects of its guideline development process. Stakeholders include about 15 national organizations relevant to primary care providers in Canada as well as federal, provincial and territorial organizations that provide input on all guidelines, including The College of Family Physicians of Canada, the Council of Chief Medical Officers of Health and the Canadian Medical Association. These groups are offered the opportunity to provide reviews of protocols, evidence syntheses and draft guidelines as well as to feed into knowledge translation tools and to partner in the dissemination of the guidelines.

Additional topic-specific stakeholders, which vary in number depending on the guideline topic, assist in the review and dissemination process for each guideline, while academic and clinical experts provide peer reviews of all documents. The public is invited to provide input on future topics. Additionally, the public as well as clinicians participate in focus groups aimed at refining the knowledge translation tools used to disseminate the completed guidelines. As the methods of the task force further evolve, we

hope to be able to provide more opportunities for public, provider and patient engagement.

Step 9: Implementation of guidelines

A detailed recommendation statement and a 1-page clinical summary are published for each guideline, and a knowledge translation strategy is developed to outline the dissemination and implementation plans. This includes the dissemination and evaluation of tools designed for clinicians and other health professionals, such as paper and electronic guideline summaries, electronic applications and continuing medical education modules. For example, 2 continuing medical education modules are being developed for the recent breast cancer screening recommendations.[5]

Depending on the guideline and the needs of stakeholders, additional resources are developed. With the breast cancer guidelines,[5] for example, additional tools were provided to provincial screening programs so that the recommendations could be understood within the context of the current provincial recommendations. Decision aids and other plain-language summaries, such as downloadable presentations and videos, are also being developed for each guideline.

All guidelines explicitly take a Canadian perspective, including discussion of how the recommendations apply to unique Canadian populations (e.g., people living in remote areas and Aboriginal people) and the importance of equity in health care delivery. For instance, the requirement for easy access to high-quality breast screening facilities among people residing outside major centres was highlighted in the recent task force guidelines as a special consideration for provincial and regional decision-makers.[5] In addition, racial and ethnic differences in participation in mammography have been observed across Canada. Asian women are less likely than other Canadian women to receive mammography,[6] and therefore, research with task force partners is currently underway to develop a decision aid for breast cancer screening for Cantonese-speaking women.

Moreover, as part of each guideline, a summary of recommended evidence-based performance indicators is provided to help practitioners and policy-makers gauge the extent to which recommendations are being used in clinical practice and evaluate the resulting impact that the implementation of the guidelines has on the quality of patient care and outcomes of patients receiving that care. At least 1 study is currently underway to analyze rates of breast cancer screening before and after the implementation of the recent breast cancer guideline,[5] and the task force hopes to encourage additional research by providing evidence-based metrics for researchers.

Other guideline developers

Since the previous incarnation of the task force was disbanded in 2005, there have been dramatic changes in the nature of guideline production, including a proliferation of guideline producers, which often produce overlapping or contradictory guidance. The Institute of Medicine recently published a series of standards that should be met to develop trustworthy clinical practice guidelines.[7] These include transparency of process, disclosure of conflicts of interest, guidelines for group composition, clear links between evidence and recommendations, clear articulation of recommendations, and procedures for external review and updating of documents. The Canadian Task Force on Preventive Health Care and many other guideline-producing bodies such as the US Preventive Services Task Force,[8] WHO[9] and the National Institute for Health and Clinical Excellence[10] all meet most of these criteria, although there are small differences between the methods of the Canadian task force and those of other guideline-producing organizations, which are highlighted in Table 2.

The US Preventive Services Task Force and the Canadian Task Force on Preventive Health Care have a consistent group of task force members from which a small work group is selected to develop each guideline. The World Health Organization and the National Institute for Health and Clinical Excellence have adopted a different approach and create new work groups with new members for every guideline produced. For example, the clinical members differ for each guideline from the National Institute for Health and Clinical Excellence, whereas the technical members (who perform searching, research, synthesis and editing) come from a core of stable staff from their national collaborating centres. All of these organizations have procedures for ensuring that conflicts of interest are disclosed and recusing members from participation as required.

Before each quarterly meeting, members of the Canadian Task Force on Preventive Health Care must disclose financial, intellectual, business or professional conflicts. Based on these declarations, decisions are made about whether members may participate in the discussions on a particular topic or whether they will be recused from all participation, including voting on final recommendations. Potential conflicts are noted in all publications. Outside experts and peer and stakeholder reviewers who are asked to comment on the recommendations and associated documents are also required to declare conflicts, which are reviewed in a similar manner. This

helps to ensure that the task force receives objective scientific input that is not biased by external interests.

There are small differences in how these organizations incorporate input from consumers (i.e., people who use, are affected by or are entitled to use a health care–related service, who are generally not health professionals) and the public. The National Institute for Health and Clinical Excellence includes consumers and patients in guideline work groups, and WHO recommends the inclusion of consumers when feasible. The US Preventive Services Task Force and the Canadian Task Force on Preventive Health Care do not include consumers in their guideline work groups. However, in recognition of the potentially important and unique perspective that consumers can provide, the US Preventive Services Task Force has recently begun soliciting public comment on its research plan and draft recommendation statements, and is planning to also seek comments on its evidence reviews in the

Table 2: Comparison of methods currently used by major international guideline-producing bodies

Guideline group	Topic selection	Conflicts of interest	Members	Stakeholder involvement	Review process	Method for summarizing evidence
WHO[9]	Topics recommended internally by WHO departments	Declared and published	Different group for each guideline Groups are multidisciplinary and include content experts, methodologists and end users; consumer involvement is encouraged	Review documents and participate in guideline work group	Research questions (experts and end users) Systematic review protocol and evidence tables (experts) Guidelines (experts and organizational reviewers)	GRADE
US Preventive Services Task Force[8]	Topics nominated by the public, task force members and stakeholders	Declared, not published	Multidisciplinary panel of 16 health-related disciplines, nominated for 4-year term No consumers in the guideline work group	Review and disseminate documents Briefing webinars offered on all guidelines New methods of stakeholder involvement are being tested	Public comment on research plans, evidence review, guidelines	Recommendations graded as A, B, C or D reflecting whether the service is recommended "I" statements used if evidence is insufficient to make a recommendation
National Institute for Health and Clinical Excellence[10]	Topics selected by Department of Health but based on input from clinicians and public	Declared and published	Clinical group differs for each guideline; technical members (search, research, synthesis) are constant Groups include health professionals, patient and caregiver representatives and registered stakeholders	Involved in all steps throughout the process and as members of guideline work group Dissemination	Public consultation, peer review	Modified GRADE Recommendations are not rated as strong or weak
Canadian Task Force on Preventive Health Care	Topics nominated by public, task force members, stakeholders, literature review	Declared and posted on website	Multidisciplinary panel of 14 methodologic, primary care and guideline experts, nominated for 3-year term Subset of a minimum of 3 task force members in each guideline work group No consumers in guideline work group	Topic selection, review of documents	Research question Systematic review protocol Evidence report and guidelines reviewed by experts, and subject-matter and generalist organizations	GRADE

Note: GRADE = Grading of Recommendations Assessment, Development and Evaluation, WHO = World Health Organization.

near future. The Canadian task force is currently considering similar proposals.

The methods of the reconstituted Canadian Task Force on Preventive Health Care are slightly different from those used by the previous incarnation of the task force. For example, to take advantage of the interim progress in the methods for developing guidelines, the reconstituted task force has decided to use the GRADE system and format key questions in PICO (patient, intervention, comparison, outcome) format with enhanced focus on important patient outcomes and thereby limit the consideration of surrogate and intermediate outcomes.

Conclusion

The revitalized Canadian Task Force on Preventive Health Care is supported by a sustainable funding initiative and will strive to be the leading source of screening and clinical prevention advice for Canadian primary care practitioners. Its guidance will also serve as a source of information for Canadians who are seeking information about the timing and effectiveness of preventive services. The task force's aim is to update all new guidelines about 5 years after publication or sooner if new literature becomes available. The task force is currently developing guidelines for screening for hypertension, type 2 diabetes, cervical cancer and depression in primary care, and for the prevention and screening of obesity in pediatric and adult populations.

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