

Clinical Practice Guidelines in Dentistry: Part II. By Dentists, For Dentists

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A b s t r a c t

There is a growing interest in clinical practice guidelines (CPGs) for all health care providers. As discussed in the first paper of this 2-part series, there are many misperceptions about guidelines and their potential risks and benefits. The dental profession in Canada, cognizant of both the importance and the challenges of developing sound, credible and relevant guidelines for dentists, has created a unique, autonomous collaboration of multiple stakeholders, the Canadian Collaboration on CPGs in Dentistry (CCCD). This paper discusses the history, structure and processes of the CCCD and introduces the first guideline under development by and for Canadian dentists.

MeSH Key Words: Canada; dentistry; evidence-based medicine; practice guidelines

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Clinical practice guidelines (CPGs) are “systematically developed statements to assist practitioners and patients in arriving at decisions on appropriate health care for specific clinical circumstances”.¹ CPG documents summarize the best available evidence on a particular topic and provide guidance for clinicians and patients. They are not intended to replace clinical judgment, but rather aim to enhance clinical decision making.

There is worldwide interest in the development of CPGs in all areas of health care. Many groups, such as the U.S. Agency for Healthcare Research and Quality, the National Institutes of Health and the Canadian Medical Association, are involved in the development of practice guidelines for the medical profession. However, there are few organizations involved with the development of dental practice guidelines. The Canadian Collaboration on Clinical Practice Guidelines in Dentistry (CCCD) is the national, autonomous body responsible for the creation of evidence-based guidelines for dentistry in Canada. The CCCD is unique in that it is a self-directing organization composed of multiple stakeholders whose mandate is to involve practising dentists in the entire process of creating guidelines for Canadian dentists.

The CCCD was conceived and built by a diverse group of Canadian dentists, cognizant of the barriers, risks, chal-

lenges and, above all, potential benefits^{2,3} of the development of evidence-based CPGs. The organizational structure of the CCCD, as well as the guiding principles and methodological protocol for producing these guidelines, has been laid out in a living document — the CCCD Resource Manual.⁴

History of the CCCD

The CCCD had its conceptual beginnings at a workshop sponsored by the Canadian Dental Association (CDA) in 1997. The participants at the CDA national workshop included delegates from the Canadian faculties of dentistry, the provincial dental associations, specialist groups, provincial dental regulatory authorities (DRAs) and invited guests who had expertise and first-hand experience in the development of practice guidelines. As a result of that workshop, CDA's ad hoc committee on clinical practice guidelines obtained a mandate from the CDA board of governors to develop a national strategy for CPG development and implementation in dentistry. CDA would assume the role of coordinating and facilitating a national, collaborative approach to CPG development that would be inclusive of all interested stakeholders. In an environment that has health care under ever-increasing scrutiny by various outside interest groups, including governments, it was felt

that it was essential for the dental profession to play a lead role in defining high-quality, evidence-based dental care.

The inaugural meeting of the CCCD was held in Halifax in October 1999 and was attended by representatives of the Canadian and provincial dental associations, the DRAs, the national dental specialty organizations and the Association of Canadian Faculties of Dentistry. At that meeting, concerns were raised regarding a number of issues, including representation and involvement of all relevant stakeholders; funding and human resources; methodology; communication and information management; open, transparent processes; and autonomy of the CCCD. In spite of these concerns, key decisions were made regarding the purpose, duties, representation, overall structure and guiding principles of the CCCD.

A second meeting of the CCCD, held in Toronto in October 2000, led to the creation of a draft constitution, a structured protocol for generating guidelines and the formation of the first working group, tasked to produce the first CPG. The topic selected was "the emergency management of acute apical periodontitis in the permanent dentition."

Guiding Principles for the Development of CPGs

Principles were established to guide the methodology and processes by which evidence-based CPGs will be developed. These are outlined in Table 1.

Organizational Structure of the CCCD

CCCD Council

The CCCD council is made up of representatives from the dental associations, the dental specialty organizations, the DRAs and the faculties of dentistry (see Table 2). It is important to note, that while the DRAs are part of the stakeholder group, the dental guidelines being developed are *not* designed to be used for disciplinary purposes. Experts in health law^{5,6} have determined that health care guidelines cannot be considered as the legal standard of care by the courts unless they are widely accepted as reasonable and expected care by a substantial portion of the health care community. Even then, guidelines would rarely be decisive, but would simply be considered to be one opinion.

The council is responsible for formulating policy with respect to the guideline process, for selecting and prioritizing topic areas in consultation with the profession, and for overseeing the development and dissemination of guidelines.

Clinical Advisory Group

The clinical advisory group (CAG) is a multidisciplinary team of volunteer dentists who have a particular interest or expertise in the *content* area of the guideline topic under development. The CAG is chaired by a person knowledgeable about the methods of guideline development. The

Table 1 Guiding principles for the development of CPGs

Inclusive	CPGs will be developed by dental practitioners and supported by a methodology resource group and administrative staff.
Evidence-based	Rigorous scientific methods will be used to assemble, organize and synthesize the <i>best available</i> evidence.
Transparent	All processes will be open, transparent and thoroughly documented.
Valid	To ensure that CPGs are useful in clinical situations, feedback will be sought from relevant stakeholders, including practitioners and supporting organizations, at defined points throughout the development cycle. This feedback, which will shape the CPG, will be integrated into the final guideline.
Accessible	CPGs will be widely disseminated so that they are available to practitioners, patients and the public.
Current	CPGs will be updated on a regular, scheduled basis to incorporate new evidence.

Table 2 Canadian Collaboration on Clinical Practice Guidelines in Dentistry Council

Stakeholders	Current Representatives
Provincial dental associations	2 representatives*
Canadian Dental Association	2 representatives*
Canadian dental specialty organizations	2 representatives
Provincial dental regulatory authorities	4 representatives*
Association of Canadian Faculties of Dentistry	2 representatives

* At least 4 of these 8 are to be general practitioners.

group may consist of 2-3 specialists (no more than one of whom should be a full-time academic) and 4-5 general dentists (no more than one of whom should be a full-time academic). This group will not be required to have expertise in the methodology of systematic reviews; it will be made up of practising dentists who have been recommended to the CCCD by their provincial dental associations, specialty organizations or DRAs. The responsibilities of the CAG will be to coordinate the development and production of an individual guideline.

Methodology Resource Group

The methodology resource group (MRG) consists of individuals with expertise and methodological skills in the retrieval and evaluation of scientific evidence, or with training and experience in clinical epidemiology or a related discipline. This group will include one or more salaried research assistants, who will assist with the systematic

reviews and in the formatting and editing of reports. The group will be chaired by a person knowledgeable about the methodology of systematic reviews. The MRG has 3 primary functions. The first is to provide the methodological support needed by the CAG, enabling the clinicians of the CAG to use sound methodology in the guideline process. The second is to oversee and advise the research assistant(s) who will carry out the technical systematic review and draft evidence-based recommendations, guidelines and reports. Finally, the MRG will provide educational opportunities in methodology for interested participating practitioners and others, at the discretion of the council.

CPG Coordinator

The CPG coordinator is a paid administrator who will assume a variety of administrative functions and will report to the CCCD council. Once the process of CPG development is underway, it is anticipated that up to a dozen guidelines will be at some stage of development at any given time. The primary responsibilities of the coordinator will be to liaise with both the CAG and MRG through the respective chairs; to assist each CAG chair with the development of the budget and timeline for that CPG; to oversee each CPG, ensuring that resources are used efficiently and that targeted timelines are met; to aid in the preparation and dissemination of reports; and to schedule and organize the updating activities for each CPG.

Steps in the CPG Process

Identifying the Need for a CPG

The first stage in planning the development of a CPG is to establish the need for one. Guidelines are most useful when there is uncertainty in the dental community regarding the potential risks or benefits of a therapy or an intervention or when considerable variation in practice exists.

The topic or question for a CPG may come to the CCCD from a number of sources, including Canadian dentists, provincial regulatory authorities, dental educators, dental researchers or members of the general public. Topics may be solicited by the CCCD, or submitted by stakeholders to the CCCD.

Topics will be prioritized and selected by the CCCD council, in consultation with stakeholder groups. The following criteria⁷ will be considered in the decision-making process:

- prevalence of the clinical condition
- burden of illness
- amount of variation in practice patterns in managing the condition
- relevance to local practice patterns
- likelihood to influence change in clinical practice
- availability of high-quality evidence to support practice
- cost of managing the condition.

Planning Stage

Once a topic has been selected, the CCCD council will appoint the chair of the CAG and of the MRG. A literature review will be conducted to identify and evaluate any existing CPGs. Budget and timelines will be determined and the CAG assembled.

Developing the CPG

The formation of evidence-based guidelines contains many steps⁷⁻¹⁰ that incorporate the best available external evidence from clinical research with clinical expertise. The foundation of the approach is the systematic literature review. The following outlines the protocol adopted by the CCCD.

Framing the Clinical Question

The CAG will frame the problem by developing a question that focuses on the target population, the exposure or intervention and its comparison, and the specific outcomes of interest.

Conducting a Systematic Review of the Evidence

At the direction of the CAG a systematic review of the literature, following a structured protocol, will be done by the research assistant, with methodological support provided by the MRG.

Validating the CPG

Guideline-in-Progress

Based on the findings of the systematic review, an evidence-based report (guideline-in-progress) that explicitly documents the strategy and results of the systematic review will be generated. This report is an interpretative summary of the evidence. It will be reviewed by the CAG, and evidence-based recommendations will be developed by consensus within that group.

A final draft of this report, along with a structured questionnaire, will be sent to a representative sample of practicing Canadian dentists from a database of potential reviewers for whom the guideline may be relevant. Their input will be sought regarding the quality and completeness of the literature search, the interpretation of the evidence, and the importance, usefulness and implications of the draft recommendations for practice. The information from this first external review will be used to modify the clinical recommendations as necessary.

The modified guideline-in-progress (now a draft CPG) will be sent for comment to the CCCD council and for a second external review to all interested stakeholders, including the national and provincial dental associations, dental specialty organizations, the Association of Canadian Faculties of Dentistry and the Canadian DRAs. The draft CPG will also be sent to other relevant stakeholder groups whose opinion or "buy-in" to the guideline may be important.

CPG Document

Following the second external review, the CPG will be sent to the CCCD council for final approval, then edited and formatted for publication. The format of the CPG will include a structured abstract; a statement of the question and the rationale for the choice of topic; a comprehensive methods section; results of the literature search and of relevant outcomes; an interpretative summary; a description of the CAG consensus process; draft recommendations; and the methods, results and modifications generated by the practitioner feedback survey and other external reviews. The subsequent publication of the CPG in the peer-reviewed dental literature will constitute a third external review.

Disseminating the CPG

The final CPG will be disseminated widely following a predefined dissemination plan, which is currently being developed. This will likely include a variety of methods¹¹ such as paper publication in the peer-reviewed dental literature, electronic publication on a Web site (full version for practitioners and patient synopsis for consumers), and "academic detailing," whereby respected peers will present the guideline to colleagues at study clubs and local dental society meetings.

On a pre-defined schedule, the systematic review for each CPG will be updated and new evidence evaluated. If indicated by the presence of new strong evidence, the CPG will re-enter the guideline cycle.

What if the Evidence Is Weak or Lacking?

For some clinical topics, the conclusions of the systematic review may highlight very weak or uncertain evidence. The members of the CAG may decide that there is insufficient evidence on which to make clinical recommendations from which a guideline could be developed. The resulting report will then be an evidence summary, which is intended to provide information on the available evidence in a comprehensive, organized manner. The format will include the components described for the CPG document, but will exclude draft recommendations. It may also include optional sections such as:

- opinions of the guideline working group
- treatment alternatives
- technical considerations
- implications for practice.

An evidence summary, like a CPG, will be updated on a regular basis. However, if additional information, found through the updated systematic review, indicates that there is sufficient new evidence to warrant clinical recommendations, a guideline-in-progress will be drafted, which will enter the CPG cycle as outlined previously.

Conclusion

We have presented the organizational structure and the methodological protocol adopted by the CCCD for the creation of CPGs for the dental profession in Canada. It is anticipated that guidelines will be produced that are relevant, credible and useful. At the time of this writing, the first guideline on the topic of emergency management of acute apical periodontitis in the permanent dentition is in the beginning stages of development. Completion is expected to take 12 to 18 months. We look forward to reporting the results of this first endeavour to the dental profession at that time. ♦

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 Dr. Dorothy McComb
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THE CCCD NEEDS YOU!!

The Canadian Collaboration on Clinical Practice Guidelines in Dentistry (CCCD) is the national, autonomous body responsible for the creation of evidence-based guidelines for dentistry in Canada. Clinical practice guidelines (CPGs) summarize the best available research evidence on a particular topic to provide guidance for dentists and patients. One of the key principles of the CCCD is that CPGs in Canada will be developed BY dentists, FOR dentists.

Who can be involved?

All dentists practising in Canada are eligible to be entered into the database of potential reviewers. An academic, research or specialty background is NOT necessary.

What does a reviewer have to do?

For each guideline, a random sample of reviewers will be drawn from the database. Each reviewer will be sent a preliminary draft of the guideline under development and a structured questionnaire. Feedback will be sought regarding the methods used to create the guideline and the importance, usefulness and implications of the draft recommendations for practice. The information from this feedback will be used to modify the clinical recommendations as necessary.

What about confidentiality?

Your privacy in registering for the database will be assured. The information you provide will ONLY be used to contact volunteers for this initiative. Confidentiality of the reviewers will be maintained. No individuals will be identified in any report or publication of the CCCD.

How do I register for the CCCD database?

Please contact: Monica Farrag, CCCD Research Assistant, c/o Department of Dental Clinical Sciences, Dalhousie University, 5981 University Avenue, Halifax NS B3H 3J5
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