

Clinical Practice Guidelines in Dentistry: Part I. Navigating New Waters

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A b s t r a c t

Clinical Practice Guidelines (CPGs) are tools, developed by and for practitioners, to assist in clinical decision making. They are designed to enhance, not replace, clinical judgement and expertise. Well-developed guidelines use the evidence-based approach. The research evidence related to a topic is assembled in a systematic, comprehensive and unbiased manner. Recommendations are made based on the evidence and practitioner feedback is sought prior to formulating the final practice guideline. There are many misperceptions about CPGs and some dentists are wary about their development and use. In this paper, we explore some of the reasons for these misperceptions, review the benefits of sound guidelines, and discuss some of the challenges for guideline development in dentistry in Canada.

MeSH Key Words: dental care/standards; evidence-based medicine; practice guidelines

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Clinical Practice Guidelines (CPGs) have been defined as “systematically developed statements to assist practitioners and patients in arriving at decisions on appropriate health care for specific clinical circumstances.”¹ Credible and useful guidelines employ the evidence-based process to assemble, organize and synthesize the best available evidence from clinical research. This evidence is then integrated with clinical expertise from a number of health care practitioners to develop clinical recommendations (i.e., CPGs). CPGs are thus used to *enhance* clinical judgement, not *replace* it.

Evidence-based guidelines are based on *systematic reviews* of the literature. Systematic reviews use rigorous and explicit methods to search for and critically appraise the entire body of clinical research evidence related to a question. By evaluating the scientific evidence in a rigorous and structured manner, it may be possible to begin to determine which interventions are beneficial and which are ineffective or even harmful, and to elucidate where the research evidence is weak, contradictory or lacking.

In contrast, parameters of care are usually based on *narrative reviews*. These are the types of reviews with which practitioners are most familiar. Narrative reviews are often

written by a single topic expert based on his or her understanding of the literature. The literature may be searched in a biased way to support the ideas of the reviewer. This is not done deliberately; nonetheless the process cannot be replicated and does not permit the reader to check the assumptions of the author. **Table 1** compares systematic and narrative reviews.

The development of CPGs in dentistry is in its infancy. Although a number of organizations have produced parameters of care and expert-derived or consensus-based guidelines and standards of care, there are very few published, peer-reviewed, evidence-based CPGs validated by practising dentists. In Canada, several guidelines have been developed using the methodology of the Canadian Task Force on Preventive Health Care.²⁻⁴ This process includes a comprehensive systematic literature review and input from a panel of experts and methodologists in the development of clinical recommendations. Building on these and other evidence-based methods, the North York Public Health Department and the Community Dental Health Services Research Unit of the University of Toronto developed a number of evidence-based reports and subsequent guidelines specific to children’s dental care in the

Table 1 Systematic versus narrative reviews

Systematic review	Narrative review
<ul style="list-style-type: none"> • systematic methods used to control bias and imprecision 	<ul style="list-style-type: none"> • subjective and may be biased
<ul style="list-style-type: none"> • uses rigorous scientific methodology to search literature and report results 	<ul style="list-style-type: none"> • no explicit methods for searching literature or reporting of results
<ul style="list-style-type: none"> • can be replicated 	<ul style="list-style-type: none"> • cannot be replicated

North York Dental Public Health Unit.⁵ In addition to using systematic reviews and expert opinion, this group sought feedback from representative stakeholders in the formulation of their clinical recommendations.

Recently, the Canadian Collaboration on CPGs in Dentistry (CCCD) was formed as the national, autonomous body responsible for the development of guidelines, using the principles of evidence-based practice: a rigorous, explicit methodology and an inclusive, consultative and transparent process.⁶ CPGs can be beneficial to both the dental profession and patients. They improve the quality of information available to practising dentists, assist in decision making, and thereby enhance the quality of care for patients. For these reasons, it is important to dispell some of the misperceptions about CPGs and ensure Canadian dentists understand the principles upon which CPGs are based.

Dispelling Misperceptions About CPGs

The creation of evidence-based guidelines for dentists is considered by some to be long overdue. Unfortunately, there are misperceptions about the guideline development process. Some practitioners believe it to be an ineffective academic exercise at best, or at worst, an infringement on professional judgement and autonomy, with the potential for guidelines to be used against individual dentists in disciplinary cases or liability suits. Others feel guidelines may have unfair economic implications for dentists if recommendations (perhaps based on unsound evidence or questionable guideline methodology) are used by third-party payers to refuse or withdraw coverage for some dental services.

Clinical guidelines have, on occasion, been confused with standards of care, mandated by government legislation.⁷ The confusion can result in considerable apprehension about the whole process of guideline development.^{8,9} This anxiety is not restricted to dentists. Recently, a random survey of 3,000 Canadian family physicians was conducted to measure attitudes about guidelines. While respondents showed a high level of confidence in guidelines developed by clinicians, 51% to 77% were *not* confident about guidelines put out by federal or provincial health

ministries or by health insurance plans.¹⁰ Similarly, when internist members of the American College of Physicians (ACP) were surveyed about practice guidelines, 82% expressed confidence in those developed by the ACP. However, only 6% were confident about guidelines issued by Blue Cross and 68% thought guidelines would be used to discipline physicians.¹¹ These suspicions arise from financial and legal concerns, and perhaps most importantly, from a fear of external control of the clinician–patient relationship. Conversely, when guidelines are developed in an open, collaborative manner, with ample feedback from practitioners, they are well received and even welcomed by busy clinicians.¹⁰⁻¹³ A survey of Ontario dentists substantiates these notions: while a significant proportion of practitioners viewed guidelines in a positive light, 83% felt that a new guideline should be reviewed by practising dentists and shaped by their feedback before implementation.¹⁴

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One of the barriers to the acceptance of guideline programs is the feeling that guidelines may be used by decision makers, particularly third-party funders, with possible negative effects on clinical autonomy. For example, mandatory guidelines have been used to cut health care costs in France¹⁵ and as rigid protocols which American doctors in some managed care settings must follow for reimbursement.¹⁶ In the fee-for-service setting in which most Canadian dentists practice, there is a perception that recommendations against an intervention may lead to the withdrawal of coverage by dental insurers for some services without consideration of patients’ individual needs. The National Health Service (NHS) in Britain, which supports and funds the development of guidelines as tools to improve health care based on evidence of effectiveness, has stated that “NHS clinical guidelines will provide advice to assist practitioner and patient decisions. The guidelines will be decision-aids that will not have mandatory force.”¹⁷ The development of CPGs for dentistry in Canada will embrace this philosophy.¹⁸

The legal implications of the development of guidelines are twofold. First, what is the liability of those individuals and organizations that draft guidelines? If the methodology

is not rigorous and transparent, the resulting guidelines may be biased. In France, concerns about bias in the development of mandatory guidelines led to formal complaints of improper conduct by the guideline creators.¹⁹ If a guideline is inappropriate or causes harm, especially if it is rigid and constrains professional judgement — for example through financial or regulatory coercion — the potential for liability against the drafters exists.²⁰ Given this possibility, very few guidelines, even those issued by licensing bodies or other authorities, will probably ever attain compulsory status.

Second, what is the liability of practitioners? Some practitioners might think that guidelines could become standards of care used against them in malpractice cases. To date, this has not proven to be the case. Jutras²⁰ clearly states that guidelines in medicine will not 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, he says, guidelines would rarely be decisive, but would simply be considered as one opinion. Similarly, health policy lawyer Timothy Caulfield has stated that “no matter how well they are developed, CPGs will remain only evidence — evidence that can be refuted — and not a codification of the standard of care.”²¹ However, the issuance of rigid guidelines would not necessarily relieve a clinician of personal liability if a patient were harmed by implementation of a guideline that is unreasonable or inappropriate for that patient.²⁰

Another perceived disadvantage of guideline development is that they might promote “cookbook dentistry,” ignore clinical expertise and disregard patient values. Dentists may worry that guidelines will impose external control on clinical practice and inflexible rules that will apply to all patients regardless of their medical history or personal circumstances. The dentist–patient relationship and the decision-making process in determining a course of treatment are complex. In this regard, it has been suggested that guidelines should be used as “roadmaps” which prevent clinicians from getting too far off track, rather than “recipes” for which the “ingredients” are variable and often unpredictable.²²

Benefits of CPGs

Guidelines can promote consistency of care within an acceptable framework of variation. Substantial variation in dentists’ treatment decisions has been demonstrated.^{23–25} Although the media have suggested that such variation reflects unethical practices, the reasons for this variation are multifactorial and complex.^{26,27} Practice variation may arise from the assessment of the patient as a unique individual, which involves a trade-off between risks and benefits. Considered in this light, some variation in decision making is not only acceptable, but desirable. At the same time, the reality — and dangers — of unconventional and dubious

practices is sobering.^{28,29} By giving dentists access to an up-to-date synthesis of the best available research information, along with recommendations which apply to the “average” patient in the “average” situation, well-developed guidelines promote appropriate levels of consistent care, without dictating practice.

Development of evidence-based CPGs should enhance the image of dentistry by demonstrating the profession’s commitment to evidence-based practice. There is a growing knowledge of and access to guidelines in other areas of health among consumers, and with this access will come an expectation for guidelines in general. According to a recent poll in the United States, more than 8 in 10 Americans under the age of 60 use a computer at home or at work.³⁹ Health information, including full access to databases of the National Library of Medicine such as MEDLINE, is freely available to patients on the Web. Patient versions of CPGs are increasingly common. Access to information empowers patients to make informed choices and to select the best available options. Sound guidelines in dentistry, accessible on the Internet, can provide patients with evaluated evidence in a useful format.

Finally, guidelines may be the stimulus needed for more clinically relevant research on questions of importance to both clinicians and patients. Guidelines may also identify flaws in existing studies and reveal the need for better methodology in dental clinical research.

The Challenges Ahead

Balancing the Needs of All Stakeholders

The development of CPGs in Canada has implications for a number of different stakeholder groups including:

- the dental regulatory authorities, whose mandate it is to protect the public and to ensure a high level of quality of care, but whose input may be perceived as threatening by clinicians;
- the dental associations, whose mandate it is to represent and support their members not only in the provision of quality care but also in the attainment of an economically viable practice;
- the faculties of dentistry, who are responsible for educating future dentists and who produce much of the available dental research, but whose input may be seen as too “academic” and insensitive to the needs of practising dentists;
- specialists, who bring expert knowledge to the process, but who may be perceived by general dentists as being biased and self-serving;
- general practitioners, who may be perceived by specialists as not having the needed expertise to provide input and whose decisions may unfavourably alter referral patterns for specialists;

- patients, who are the ones who ultimately benefit (or suffer) from the development of guidelines.

Developing Useful and Credible Guidelines

For a guideline to be useful, it should address a common clinical topic about which there is uncertainty. Resources should not be used to develop guidelines for obscure questions or for questions for which we already have well-known answers or reasonably consistent practice patterns. Guideline development is facilitated by high-quality research. However, it is often in areas where the evidence is weak or conflicting that guidance for clinicians is most needed. Choosing guideline topics based on the availability of “good evidence” should be avoided.

Credible guidelines are guidelines that are methodologically sound, use well-established procedures and are developed using a transparent and consultative process. Implementation of sound methods and an open, inclusive process necessitates a considerable investment in time, money and expertise.

Conclusion

If GPGs are developed in a credible manner using the best available clinical evidence, clinicians and patients alike will benefit from them. Recognizing the challenges involved in developing CPGs for the dental profession, the Canadian Dental Association, in collaboration with its corporate, specialty, regulatory and academic partners, has established the Canadian Collaboration on CPGs in Dentistry (CCCD). As the national, autonomous body responsible for evidence-based CPG development, the CCCD will have broad representation from the dental profession and will embrace the principles of evidence-based practice and sound guideline development. The next paper in this 2-part series will discuss how the CCCD will meet the challenges of developing useful, credible guidelines for dentists. ♦

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C D A R E S O U R C E C E N T R E

Interested in additional information on clinical practice guidelines? CDA members can borrow a copy of *Making use of guidelines in clinical practice*, edited by Allen Hutchinson and Richard Baker, by contacting the Resource Centre at tel.: **1-800-267-6354** or **(613) 523-1770**, ext. 2223; fax: **(613) 523-6574**; e-mail: info@cda-adc.ca. (Shipping charges and taxes apply on all loans.)

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?

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