CAG Policy on the Application for, and Implementation of, Clinical Practice Guidelines

Disclaimer: Please note that this is the interim CPG development protocol and is currently being reviewed for any further revisions.

Grigorios Leontiadis, MD, McMaster University, VP CAG Clinical Affairs
Frances Tse, MD, McMaster University, Chair CAG Practice Affairs
Paul Moayyedi, MD, McMaster University, VP CAG Quality Affairs
Louis-Charles Rioux, MD, University of Montreal, Chair CAG Ethics Committee
David Mack, MD, University of Ottawa, Chair CAG Pediatrics Committee
Alan Barkun, MD, University of McGill
Harminder Singh, MD, University of Manitoba

BACKGROUND/SUMMARY ABSTRACT:

An important mandate of the Canadian Association of Gastroenterology (CAG), as documented in the Association's Governance Policies, is to optimize the care of patients with digestive disorders. Clinical Practice Guidelines (CPGs) are one means of achieving this goal. The benefits of timely, high quality and evidenced-based recommendations include:

- enhancing the professional development of clinical members through education and dissemination of synthesized clinical research;
- improving patient care provided by members by providing focus on quality and evidence;
- creating legislative environments that favour effective clinical practice;
- enhancing the clinical care provided to patients with digestive disease by non-gastroenterologists;
- identifying of areas which require further information or research to improve clinical care.

This document provides the foundation required to ensure that CPGs produced by the CAG are necessary, appropriate, credible and applicable. These recommendations should be adhered to as closely as possible in order to obtain CAG endorsement.

THE PROCESS FOR CPG DEVELOPMENT:

CPGs are defined as systematically developed recommendations with associated background summary of potential benefits and harms and quality of evidence to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances. Clinical Practice Guidelines should offer recommendations about the usefulness of screening strategies, specific diagnostic tests and/or treatments for a given disorder. The goal of the CPG is to optimize clinical practice, and includes avoiding unnecessary or inaccurate diagnostic tests as well as ineffective or harmful treatments. Therefore CPG should be particularly considered for areas with existing wide variations in clinical practice. The steps involved in the development and dissemination of CPGs, endorsed or developed by the CAG are discussed in the following sections.

1. **<u>Selecting a Topic</u>**
   a. The need for a particular CPGs will be determined by one, or more, of the following criteria:
      i. needs assessments from survey of the membership;

ii. proposals brought forward by one or more active CAG members or other CAG committees;
iii. patient need is identified (ie. through CDHF)
iv. updates to previous CPGs if new evidence warrants;
v. topics identified as priorities by the CAG Board and Clinical Affairs, particularly in topics for which new, important evidence has emerged.

b. CPGs will be considered if there is literature to support an evidence-based approach and if there is a clear clinical need.
c. Proposals will be made in writing to the CAG National Office where it will be determined if topic is to be considered for a Quality or Clinical Guideline. Determination is made by VP Quality Affairs, VP Clinical Affairs, GRADEr (Practice Affairs lead, not GRADErs) and QPG Lead. (see the Checklist for CPG Proposals; Appendix I). Submissions accepted through the CAG website or via email. Proposals will be accepted all year but will be subject to a cutoff deadline to be considered for a particular year. Proposals will be reviewed annually by Clinical Affairs with recommendations to be forwarded to the CAG Operations Committee for subsequent approval. Final approval of a CPG proposal will be made by the CAG Board. A scoping review of the literature may be required prior to submission of a CPG proposal to determine if the evidentiary base is sufficient to support the development of a CPG. If a CPG already exists in a given area, justification for an update initiative must be included in the proposal (particularly if the existing CPG is a CAG sponsored initiative).
d. All aspects of CAG-approved CPG initiative must be administered via the CAG National Office, including funding. If the CPG is being developed in partnership with another organization then clear lines of accountability and financial oversight must be provided with the proposal. Where possible, external sources of funding should be sought, such as the Canadian Institutes of Health Research (CIHR), Canadian Partnership Against Cancer (CPAC), etc.

2. <u>Selecting CAG Steering Committee and the CPG Panel (working group)</u>

a. Upon Board approval of a CPG, CAG Clinical Affairs will approve two individuals to serve as Co-chairs of the CPG steering committee. These Co-chairs may or may not be involved in the original submission of the CPG application to the CAG. It is critical that the Co-chairs have experience, and are familiar with CAG's guideline development process and with PICO question format, as their role is to drive the project forward and need the tools to do so.
b. CAG Clinical Affairs may also make recommendations for membership of the steering committee, though will also consider/approve suggestions made by the co-chairs.
c. The CPG Steering Committee Co-chairs will be responsible for the selection of members who have both/either clinical interests and content expertise in the topic at hand.
d. CPG Panel Membership: Membership of the panel will include CAG members but may also require representation from other fields (e.g. surgery, family practice, international experts). Representation from other medical disciplines, nursing and patient advocates

should be considered. Where patient advocates are included, the committee will need to determine how their involvement will take place. Selection of the Canadian members on the CPG Panel should also consider variables such as regional distribution, gender, pediatric, ethical expertise, academic *versus* community-based practice. Although inclusion of at least one CPG methodology expert is required it is also essential all CPG Panel members become familiar with the current methodology and grading system (GRADE; see below) used by the CAG, prior to the start of the CPG Panel deliberations.

e. It is highly recommended to keep the overall committee size from becoming too large as it can be counterproductive if too large. Methodologically, the ideal committee size is approximately 8-10, dependent upon CPG topic and scope.
f. Prior to finalization of panel membership, each individual must complete a Conflict of Interest declaration statement, which includes non-financial aspects. These statements will be reviewed by the Ethics Committee (see section 9; *Framework for the management of conflict of interest*).
g. All committee members will also be sent a CAG Memorandum of Understanding (MOU) to acknowledge with their signature. This will outline the roles, expectations, and policy/process information for all involved in the CPG, as well as the commitment to maintaining their CAG membership (if applicable) all the way through the process until publication.
h. In certain situations, joint CPGs with other specialty societies may be advantageous, both nationally and internationally. The CAG would work in partnership with other organizations to appoint members to a CPG development panel when collaboration with these organizations to develop joint recommendations is deemed beneficial. For each collaborative guideline panel, the CAG will develop an *a priori* agreement with partner organizations on how key guideline elements (such as conflict of interest and disagreement on final recommendations) will be handled in the event of disagreement between the organizations.
i. In certain situations, key foundations/stakeholders will be welcomed to observe the consensus conference, as deemed relevant by the steering committee, and in accordance with the observers policy.

3. Identifying Key Questions and Scope of the CPG Recommendations

a. Key questions should focus on critical outcomes (benefits and harms) important to patients and could reflect areas of controversy or uncertainty which will benefit from a systematic evidence-based review.
b. CPG Panel members are urged to limit the scope of the initiative to issues which can be resolved with available clinical literature, questions which are relevant to practitioners of gastrointestinal medicine, and topics which can be addressed within the time and energy constraints of the CPG process. Authors should also note that long CPG documents, and those with excessive numbers of recommendations, can be difficult to publish in peer reviewed journals and may have limited impact.

c. The CPG Panel should also focus on, and define, the following factors in order to produce a focused, coherent and readable document:
   i. which patient or practice settings will be examined? (e.g. inclusion and exclusion criteria)
   ii. which aspects of care will be addressed? (e.g. screening, therapy, diagnosis, prognosis)
   iii. what outcomes will be influenced by the CPG? (e.g. morbidity, mortality, quality of life, organizational outcomes, economics).
   iv. who are the target users of the CPG?
d. For adult topics, it should be discussed if there is a Pediatric perspective to be addressed or if that would be better left as a separate CPG to be proposed.

The Canadian Association of Gastroenterology (CAG) has endorsed GRADE (Grading of Recommendations, Assessment, Development and Evaluations) methodology as a transparent and systematic framework for grading the quality (or certainty) of evidence and strength of recommendations to support policy-making informed by the best available research evidence.

4. <u>Systematic Literature Review:</u>

a. The purpose of the systematic review of the literature is to determine whether:
   i. CPG(s) on a particular topic already exist, and
   ii. medical evidence exists which will impact on the formulation of the CPG.

   When possible, it may be preferable to adapt an existing CPG on a particular topic rather than to develop one *de novo*. Retrieved guidelines should be assessed for their quality using a recognized guideline appraisal system such as the AGREE (www.agreecolaboration.org) instrument. Guidelines of sufficient quality can then be assessed for their acceptability and applicability to the topic at hand. Some, or all, of the specific recommendations in a particular guideline could be adapted by the working group. The ADAPTE (www.adapte.org) Collaboration provides a useful and validated framework to guide this process.

b. If a decision is made to proceed with a systematic review, it to be carried out with the aid of a medical information specialist. The CAG has engaged the Upper GI Cochrane group (McMaster University) to carry out systematic searches for CAG CPGs (See Appendix II and III).

   Past reviews, meta-analysis and previous guidelines may be considered to summarize historical data. Literature searches should cover at least 10 years, unless representing an update on a prior CPG. Literature addressing economics and/or quality of care should also be included where available. In general, medical evidence should be restricted to peer-reviewed sources. Data presented in abstract form only should, as a rule, not be considered. However pivotal studies in abstract form could be included provided that the source is designated as non-peer reviewed and deemed critical for an adequate appraisal of the topic. Three good resources for learning more about how to

do a systematic review include: http://www.shef.ac.uk/scharr/sections/ir/links, http://www.york.ac.uk/inst/crd/index.htm, and http://www.cochrane.org/index0.htm.

Guidelines, like primary studies, may be retrieved using systematic search techniques, but since some (e.g. NICE guidelines) are only published by organizations and not in journals, other search strategies may be required. The National Guidelines Clearinghouse (www.guidelines.gov) is considered the most comprehensive website on which to find guidelines on a given topic.

c. It is critical that the GRADE methodology is followed to develop the CPGs and rate the:
   i. quality of the evidence, and
   ii. strength of the recommendation(s).

75% or more of the CPG Panel members must agree with the grading of the evidence and recommendations. A summary description of GRADE for ***therapeutic interventions*** is shown in Table 1.

All CPG Panel members are expected to be familiar with the basic concepts of GRADE methodology as described in publications from the GRADE working group (e.g. the 2008 BMJ series [1-6]) and the GRADE website http://www.gradeworkinggroup.org/index.htm). The committee will be provided with information to ensure this is the case.

Note that CPGs which include recommendations on diagnostic tests or diagnostic strategies should also follow the GRADE methodology, but present unique challenges[3]. A summary description of GRADE for ***diagnostic*** tests/ strategies is shown in Table 2.

5. Development of recommendations:

a. The CPG Co-chairs and Steering Committee will begin by generating a set of questions in PICO format. It is anticipated that the wording of each question will require multiple iterative revisions, including voting and comments from the entire CPG Panel until consensus among the Panel is achieved, following a modified Delphi process, similar to that used in prior CAG CPGs[7-9]. A formal consensus conference is planned, and it is suggested that the proposed questions be circulated to the entire CPG Panel for at least two rounds of iterative revisions ***prior*** to the consensus conference.

b. Questions should be in PICO format and worded to provide clear and unambiguous guidance to the practitioner. This can be done by specifying the patients to whom the recommendation applies, the intervention, and the outcome expected to change. Active verbs such as "do", "offer", "give" and "counsel to" provide clearer guidance than passive verbs such as "should be considered". If there is uncertainty regarding the robustness of the statement, it should be reflected in the *Strength of the Recommendation grading*. Authors should avoid using obtuse, and/or evasive, language in an attempt to improve apparent statement grading at the cost of making the recommendations less guiding.

c. Where evidence exists, recommendations/questions should include reference to the pediatric population.

d. Each individual recommendation/question will be accompanied by a grading matrix which will include:

i. grading of the *quality of medical evidence*, and

ii. grading of the *strength of the recommendation.*

e. Face-to-face meetings are preferred when feasible. However, communication by email, teleconference, and videoconference may also be appropriate leading to a final consensus conference.

f. In most cases it is advisable that a formal consensus process (such as a modified Delphi technique) be adopted by the CPG Panel.

g. At the consensus meeting, the PICO questions are to be converted to recommendation statements for the final voting process with the aim to achieve consensus.

Where consensus has been obtained, those members rejecting the statement or accepting with major reservations, should be allowed to voice their dissenting position and have it recorded in the meeting minutes for insertion in the final manuscript. Evidence-based recommendations should be based on integrating individual clinical expertise with the best available external clinical evidence from systematic research. If committee members vote against the evidence presented, all efforts will be made to clarify the rationale of the opinions / viewpoints during the consensus meeting. If no consensus can be reached and the recommendations made by the committee members are in conflict with the best available research evidence, the statement (recommendation) along with the supporting GRADE evidence profile will be sent to the GRADE working group for arbitration.

h. Voting should be reported in an anonymous aggregate fashion using technology such as electronic touch pads or online voting.

i. It should be decided at the beginning of the CPG if there are committee members (non-CAG specialists from other fields) who will not be mandated to vote on certain recommendations that fall outside their field of expertise.

j. 2 moderators (one of which to be a GRADE methodologist) are to guide the discussion at the consensus conference and are to be non-voting positions.

k. Each initiative should include a discussion about how the CPG will be updated in the future to maintain its clinical relevance.

l. At the close of the consensus meeting, target journals should be discussed for publication (including the question of co-publication, treatment algorithms etc)

m. Consensus meetings are to be recorded.

6. <u>Reporting:</u>

a. A final draft of the CPG manuscript must be prepared in a timely fashion following the conclusion of the consensus process. Ideally, this should be accomplished within 6 months.

b. The Steering Committee is responsible for the content of the final draft. All CPG Panel members should be given ample opportunity for input into the final wording of the report.

c. In exceptional circumstances, changes to statements may be allowed when the Co-chairs feel strongly that re-wording it would substantially improve the guideline. However, the re-wording cannot alter the underlying PICO questions which was discussed and voted on during the consensus meeting. This process should be as transparent as possible with the following steps:

i. The Co-chairs will prepare a commentary explaining the rationale for re-wording the statement.

ii. The commentary will be shared with all members of the consensus group and they will be encouraged to conduct a discussion via email.

iii. The committee votes electronically and anonymously on their level of agreement with the statement. Once voting is complete, they will vote electronically and anonymously again on the strength of recommendation.

iv. It is to be reported in the manuscript that the statement was re-worded, re-discussed, and re-voted electronically after the consensus meeting. It is not necessary to mention exactly what was changed.

d. The final draft of the report will be posted on a members only section of the CAG website for a period of 2 weeks for membership review and input (note: only feedback that identifies grave errors, or is factual and supported by published evidence will be considered by the Steering Committee).

e. In generating the CPG report, the developers should consider developing tools that will enhance the use of the report (e.g. decision aids, algorithms, patient and physician educational material and practice tools).

f. It is suggested that the report writers adhere to the check-list developed by the Conference on Guideline Standardization (COGS - http://gem.med.yale.edu/cogs/) or incorporated in the AGREE tool. The purpose of this statement is to define a standard for guideline reporting that will promote guideline quality and facilitate implementation.

g. The Steering Committee should maintain reasonable expectations for publication and consider submitting their manuscript to appropriate journals due to the CAGs limited time and financial resources.

h. Developers should consider co-publication of CAG supported CPGs in the Journal of the *Canadian Association of Gastroenterology*, along with any other journal of choice.

7. Dissemination:

a. The CPG report must be submitted to a peer review process with the intent of publication.

b. Request for dissemination will not be entertained from parties who are not sponsors of the CPG initiative.

c. The CAG will simultaneously contact all sponsors of a CPG initiative to advise on publication and to gauge interest in further dissemination initiatives. The CAG must be involved in any dissemination projects of the CPG (beyond original publication), in whole or in part, which include any reference to the CAG.

d. Interested parties should contact the CAG directly with a proposal, inclusive of project details, time lines, and budget.

e. Other potential tools for dissemination include:

i. posting on the CAG website and e-Portal;

ii. making the CPG available to the National Guideline Clearinghouse;

iii. presentation at CDDW and regional meetings;

iv. other initiatives such as collaboration with other specialty societies, presentations at national/international meetings and research trials should also be considered.

8. Funding:

The CAG is not in a financial position to continuously fund the development and update of multiple CPGs on its own. If industry support is required, multi-sponsorship is advantageous and will be sought out, ideally in a "blind trust" fashion. Only in extra-ordinary circumstances will single industry sponsorship be allowed with prior approval from the CAG Board. Funding sources for any CPG will be disclosed during the process and in any publication arising as a result of process. Funding sources will not influence the CPG process in any way. All funding obtained for a particular CPG will be handled as a "grant-in-kind" through the CAG office. In situations where there is an excess of funds, these will be either applied to the publication costs and dissemination of the CPG or towards the development of other CPGs identified as a priority. Clinical Practice Guideline organizers are strongly encouraged to seek funding from federal and provincial granting bodies that offer programs to support consensus endeavors (e.g. CIHR, CPAC). Funding of CPG Panel members will be in keeping with CAG Guidelines for visiting speakers (economy airfare, modest setting and hotels).

9. Framework for the Management of Conflict of Interest:

Preamble: Collaboration between physicians, medical researchers and pharmaceutical/biotechnology companies can enhance patient care by promoting the discovery and development of new treatments. However, relationships between individual physicians and the industry may create conflicts of interest, potentially resulting in undue influence on professional judgment, particularly in the CPG development process. [10, 11]

As CPG reports are intended to guide current standards of care, it is essential that potential conflicts of interest (COI) be handled in a consistent fashion. The purpose of this framework is to outline steps required to identify and manage potential COIs.

Ethics and Conference Funding:

To minimize the risk of COI, bias or undue influence, funding for any CAG sponsored CPG will adhere to the following principles:

i. no direct industry funding of participants;

ii. underwriting of the CPG through unrestricted, pooled industry funds from multiple sponsors where possible; and,

iii. financial transparency (see section 8)

iv. industry events/meetings/advisory boards should not be scheduled in close proximity to CAG consensus meetings

The Conflict of Interest (COI) management Process:

A. Identification of COI

1. Each proposed member of the CPG Panel must provide full disclosure of all potential sources of conflicts of interest by completing and submitting a declaration of COI form for the 24-month period prior to the start date of the consensus process (Appendix IV). Disclosures will pertain to proposed members, their spouse and close family members.
2. Potential competing interests will include both financial and non-financial interests.

Financial interests with industry could include:

- Declared Research Funding or Support
- Stock (Investments)
- Honoraria
- Consultant
- Speakers Bureau
- Employment
- Corporate Board Positions

Non-financial interests could include:

- Volunteerism
- Intellectual Property (patents, copyrights)
- Prior provision of Public Positions/Statement/Expert Testimony
- Employee/contractor relationships with government agencies , Health Ministries, Cancer Boards, third party drug benefit plans, government lobby groups, public advocacy agencies and foundations

B. Assessment of Disclosures :

1. The CPG Steering Committee will decide on the most appropriate option for COI assessment and management from the following options :

a. All CPG participants disclose their potential COI in writing, and these disclosures are reviewed by the CAG Ethics Committee Lead

b. A formal Conflict of Interest Sub-committee may be formed to guide assessment and management of COI.

i. Chair: The COI Sub-committee will be chaired by the CAG Ethics Committee Lead.
ii. Membership : Committee membership will include the CPG Co-Chairs, VP-Clinical Affairs, Practice Affairs Lead, and the CAG Executive Director (ex officio)
iii. Mandate and Tasks: The CAG Ethics Committee Lead will advise on the identification and management of COI issues involving CPG Panel members and will report as needed to the other members of COI Advisory Sub-committee.
iv. Role of the Chair: Review, clarify and advise on the precise role(s) of industry sponsors, if any,
    - Review, identify and rank items likely to implicate commercial or financial consequences,
    - Review, comment and advise on the aggregate results of the COI Disclosure Forms, to understand the nature and extent of the declared conflicts of CPG Panel members,
    - Identify and advise on other likely « hot spots » for the CPG process.
v. Process :
    - The COI subcommittee will review participants' disclosures and classify them as minimal, moderate, or significant COI
    - Launching of the CPG initiative will be conditional on COI committee approval of the proposed membership. This process should occur within a reasonable time frame (20 days) so as to not delay the CPG development unduly.

2. Review of the disclosure statements will be carried out by one of the processes outlined above, prior to the finalization of the CPG Panel members.
    a. Each member's COI declaration statement will be classified as:
    b. Minimal COI: (Advisory board participation, speakers honoraria, member of public advocacy group or foundation, government or governmental agency employee or contractor, research funding provided by government)
    c. Moderate COI (Consultant, speaker's Bureau)
3. Significant COI : (Research funding provided by industry, stockholder, employee of pharmaceutical firm, holder of intellectual property,Members of the CPG Panel may report concerns regarding potential COI of another member in writing to the CAG Ethics Committee Lead for reassessment
4. Disclosure information for each member, and the process of assessment and management of actual or potential COI, must be part of the final CPG report and related publications

C. Framework for Managing Declared COI:

Management of declared COIs must balance the need for unbiased opinion and discussion with the potential loss of valuable or critical information through the exclusion of content experts who have disclosed an actual or potential COI. As such, a COI should not necessarily preclude participation in a CPG provided that the COI framework is adhered to.

1. The Chair of COI Sub-committee or CAG Ethics Committee Lead may consider excluding from the CPG Panel any member who is felt to have a real COI which may seriously impact the actual or perceived integrity and validity of the consensus process. This will be assessed on a case-by-case basis, and justified in writing to the CPG Steering Committee and VP-Clinical Affairs.
2. The group consultation process of the CPG will be considered to be in-camera. Industry partners will not be present at the consensus conference or in any part of the process.
3. The options for management of a declared COI are:
   a. A *priori* stratification of each participant according to their declared significant COI and its relevance to a particular issue
   b. If a member of the panel is felt to have a significant COI that could impact the actual or perceived integrity and validity of the consensus process, this COI will be reported by the CAG Ethics Committee Lead or COI Subcommittee Chair, as applicable. The member will be contacted by the chair of COI sub-committee to review the possibility of their stepping down from the discussion and voting process.
   c. Otherwise, for any participant who would present minimal or moderate COI, a reporting approach by which all participants are permitted to discuss and vote but the degree of conflict for each voter is reported in the manuscript will be followed.

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Table 1: GRADE rating of Evidence and Strength of Recommendations for therapeutic interventions[1]

Rate	
Quality of Evidence*	
High	Further research is very unlikely to change confidence in the estimate of effect.
Moderate	Further research is likely to have an important impact on the confidence in the estimate of effect and may change the estimate
Low	Further research is very likely to have an important impact on the confidence in the estimate of effect and is likely to change the estimate.
Very Low	Any estimate of effect is very uncertain
Strength of Recommendations**	
Strong	Desirable effects of an intervention outweigh its undesirable effects (strong recommendation for an intervention) or the undesirable effects of an intervention outweigh its desirable effects (strong recommendation against an intervention). A strong recommendation implies that most people will be best served by the recommended course of action. Adherence to such recommendations can be readily used as a performance indicator to judge the quality of the clinical care
Conditional	Conditional recommendations are those for which the desirable effects probably outweigh the undesirable effects (conditional recommendation for an intervention) or undesirable effects probably outweigh the desirable effects (conditional recommendation against an intervention) but appreciable uncertainty exists. A conditional recommendation implies that the guideline developers believe most individuals would be best served by the recommended course of action, but some would not be. For clinicians, the implication is that they must recognize that different choices are appropriate and they must help each person arrive at a management decision consistent with their own values and preferences i.e. shared decision making is important. Policy-making will require substantial debate and involvement of various stakeholders. Conditional recommendations result when the balance between desirable and undesirable effects is small, the quality of evidence is lower, and there is more variability in the values and preferences of patients.

1. Modified from references 3 to 7 and http://canadiantaskforce.ca/methods/methods-manual/

*GRADE considers several factors in the determination of the quality of the evidence. As a starting point, evidence from randomized controlled studies begins as high quality, while evidence from observational studies begins as low quality evidence. Evidence can then be downgraded depending on several factors: evidence is downgraded based on consideration of risk of bias, inconsistency, indirectness, imprecision and publication bias. Evidence is upgraded based on large effect, dose response and if all possible confounding and biases would have reduced the demonstrated effect.

**For determining the strength of recommendations, the quality of evidence, the balance between the benefits and harms, the values and preferences of patients, and the resource implications of an intervention should be considered. The quality of evidence and the balance between the benefits and harms are the most important considerations. Strong recommendations are made when there is a large difference between the benefits and harms and certainty around that difference, greater certainty or similarity in patient values and preferences and the quality of the evidence is higher. Conditional recommendations are made when there is some uncertainty.

Table 2: GRADE for diagnostic tests/strategies; differences from GRADE for therapeutic interventions*

Factors that can influence and decrease quality of evidence	Differences from quality of evidence for therapeutic interventions
Study design	• When randomized controlled trials or observational studies have compared two or more diagnostic tests or strategies and have reported their effect on patient-important clinical outcomes (such as mortality, morbidity, or quality of life), then the GRADE approach is similar to the classic approach for therapeutic interventions. However, such studies are yet uncommon. • To date, most of the diagnostic studies compare two or more diagnostic test/ strategies and only report diagnostic accuracy outcomes (such as sensitivity and specificity). Such outcomes are surrogates for patient-important clinical outcomes; the CPG Panel has to make inferences about the likely impact of the use of a diagnostic test/strategy on patient-important clinical outcomes. Evidence from cross sectional or cohort studies that report diagnostic accuracy starts as high quality evidence. However, such studies are very vulnerable to high risk of bias and indirectness of outcomes, and typically end providing low quality evidence.
Risk of bias	A valid tool for assessment of the risk of bias for diagnostic accuracy studies should be used, such as the QUADAS-II tool (*Ann Intern Med* 2011;155:529).
Indirectness	Criteria similar to GRADE for therapeutic interventions
Inconsistency	Criteria similar to GRADE for therapeutic interventions
Imprecision	Criteria similar to GRADE for therapeutic interventions
Publication bias	Criteria similar to GRADE for therapeutic interventions

* Modified from Schünemann et al. BMJ 2008;336:1106-10 [5]

Note, for determining the **strength of recommendations** for diagnostic tests/strategies, the CPG panel should consider the same criteria as for the recommendations for therapeutic interventions, that is the quality of evidence, the balance between the benefits (reported patient-important clinical outcomes or presumed patient-important clinical outcomes resulting from the accuracy of the test) and harms (complications of the test), the values and preferences of patients, and the resource implications of an intervention.

APPENDIX I: Required Components for a CPG Proposal to the CAG

- ✓ Provide the **rationale** that supports the need for this CPG (needs assessment, scientific advancement, changing clinical/epidemiological parameters).

- ✓ Identify the **scope** of the project (for example, do you expect to include a Pediatric component?)

- ✓ Provide a list of **proposed CPG Committee members and Chair(s)**, as well as **Moderators** for the face-to-face meeting. List the rationale for each candidate (CAG Committee representative, regional representation, expertise, etc.).
    - Do you propose to include any specialists outside of GI?

- ✓ Provide a **proposed timeline** for development of this CPG and listed the anticipated output and publication(s).

- ✓ Ensure there is **literature available** to support an evidence-based approach.

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- ❖ *The CAG will appoint a Moderator (who will not be one of the organizers/Chairs) for this CPG after discussion with the CPG organizers/Chairs - you have provided a list of proposed individuals for this role.*

- ❖ *ALL funding related to this initiative will be administered by the CAG, or where funds will not be administered by the CAG, please provide justification for this.*

- ❖ *The CAG will source multi-sponsorship for this initiative. Where sponsorship is already available, or interest has been indicated, please provide a list of the sponsor(s) and their commitment.*

- ❖ *The CAG will administrate this initiative unless a rationale is otherwise provided for it to be administered beyond the CAG.*

- ❖ *This CPG will follow the process outlined by the CAG Policy on the Application for, and Implementation of, Clinical Practice Guidelines. Any modification of these guidelines, with respect to this initiative, will be explained thoroughly.*

- ❖ *You are required to abide by the ethical principles and requirements, as outlined in these guidelines.*

Appendix II: Search Process for Guidelines

The following details the steps to be taken for the drafting and delivery of literature searches. The sequential steps will take, at minimum, three days to complete entirely, with a realistic expectation of five to seven days to complete without delays in communication.

Dividing the scope of the review to manageable proportions	We will draft a single, large literature search to identify all potentially relevant papers to the entire guideline. If there are greater than 5000 citations from all the databases, we will subdivide the search strategy into several smaller strategies such as Screening, Diagnosis, Treatment, etc. Alternatively, the search could be divided into up to 10 specific questions (e.g. Barium for dysphagia diagnosis).
Determining what needs to be searched	We will liaise with a selected person from the guideline development team to determine what specific terms should be included in the search. For example, you may decide it is unnecessary to search definitions if you have already established that a standard one will be used (e.g. Rome III for functional dyspepsia).
Defining the type of evidence to be sought	The guideline development group will provide guidance on the type of papers to be sought (i.e. primary studies, editorials, letters).
The iterative nature of the search process	The search strategy will be drafted and the terms agreed with the contact person from the guideline development team. This part of the search process usually involves testing terms to examine their effects on the search results. Several communications between the searcher and guideline contact person will likely be required.
Confirming resources to be searched	We will run literature searches on Medline, EMBASE and the Cochrane Register of Controlled Clinical trials databases. We would not normally search the grey literature. The guideline development group should inform us whether additional databases need to be searched.
Delivery of search results	We will edit the search results to remove duplicate citations, and any in vitro or vivo (animal) studies. We will download the subject headings associated with each citation for inclusion in the Reference Manager database to facilitate searching. The results of the literature searches will be collated and emailed to the guideline group as either a Word document or a text file compatible with a Bibliographic Management software format (e.g. Reference Manager, Endnote) for importing, or both.
Selecting papers	We will select, and include only studies relevant to the guideline topic. If requested, results will be divided into subgroups (e.g. studies of adults, children and mixed groups). It is the responsibility of the guideline development group to add the appropriate paper to the appropriate statement within the guideline.
Document delivery	The guideline group is responsible for obtaining copies of papers. However we are happy to attempt to obtain any papers that may be difficult to find.

Appendix III: Search Strategy Formulation

The following details the steps to be taken for the drafting and delivery of literature searches to support the development of guidelines.

Drafting a concise strategy begins with formulating a precise question. EBM convention recommends following the "PICO(S)" format. This includes identifying all synonyms for terms related to your specific:

1. Patient population
2. Intervention(s)
3. Comparison intervention(s)
4. Outcomes
5. Setting

Searching a simple question, a search string would combine each of the above groups with the "AND" operator. Depending on the nature of the question, it may be necessary to use the "OR" operator to combine intervention(s) with comparison intervention(s). The Centre for Evidence Based Medicine (UK)[1], offers good guidance on asking focused questions and formulating search strategies.

Consider using both text words and controlled vocabulary to ensure the strategy is as thorough as possible. Text words appear in the titles and/or abstracts of a publication. Controlled vocabulary or subject headings are pre-defined terms that are applied by the database indexers to describe the topics mentioned in the record. Include all the ways your relevant concepts can be expressed (i.e. truncation, adjacency operators, variation in spelling).

The "NOT" operator is then applied to exclude particular results. This is commonly done to exclude solely animal studies from search results. In EMBASE (through OVID) this is done combining the search results with "NOT (animal$ not human$).sh,hw."

If necessary, further limits can be applied to the search results to restrict to age of subjects, gender, publication type and language of publication.

[1] CEBM. Asking focused questions. Available from http://www.cebm.net/index.aspx?o=1036. Accessed 17 June 2012.

Appendix IV - CPG CONFLICT OF INTEREST DISCLOSURE FORM

The Canadian Association of Gastroenterology (CAG) requires that all speakers and clinical practice guideline (CPG) members complete this Conflict of Interest Disclosure form.

The 2007 CMA Guidelines for Physicians in Interaction with Industry, Section 24, states that physicians "*are responsible for ensuring the scientific validity, objectivity and completeness of CME/CPD activities.*"[1] This serves as the basis for the CAG's Conflict of Interest policies. The intent of this policy is to confirm any perceivable bias.

Royal College Definition of Conflict of Interest:
A Conflict of Interest may occur in situations where the personal and professional interests of individuals may have **actual, potential or apparent influence** over their judgment and actions.

1. All financial or 'in kind' relationships (not only those relevant to the subject being discussed) encompassing the previous two (2) years must be disclosed. **Disclosure must be made if you have a relationship with a commercial entity or non-profit organization (NPO).**

2. The attached form must be completed and submitted to the CAG National office.

3. Examples of relationships that must be disclosed include but are not limited to the following:
    - Any direct financial interest in a commercial entity such as a pharmaceutical organization, medical devices company or communications firm (" the Organization")
    - Investments held in the Organization
    - Membership on the Organization's Advisory Board or similar committee
    - Current or recent participation in a clinical trial sponsored by the Organization
    - Member of a Speakers Bureau
    - Holding a patent for a product referred to in the CME/CPD activity or that is marketed by a commercial organization
    - Non-profit organization committee involvement

4. Failure to disclose or false disclosure may require replacement from the activity.

☐ I do **not** have an affiliation (financial or otherwise) with a pharmaceutical, medical device or communications organization or non-profit organization. Members who have no involvement with industry or NPO should inform the audience that they cannot identify any conflict of interest.

☐ I **have/had** an affiliation (financial or otherwise) with a pharmaceutical, medical device, communications organization or non-profit organization. Complete the section below as it applies to you during the past two calendar years. Please indicate the commercial or non-profit organization(s) with which you have/had affiliations, and briefly explain what connection you have/had with the organization.
You must disclose this information.

Reference:[1] CMA Policy: Guidelines for Physicians in Interactions with Industry. Approved 2007-Dec-01. CMA Policy

Company or Organization^	Nature of relevant financial relationship		
	For what role?[#]	What was received?[+]	Year

Samples of information requested:
^A company or organization could be a pharmaceutical firm; a third-party drug benefits provider or a governmental agency
[+] Honoraria, consultant's fees, stock holdings, contractual agreements, research grants.
[#] Membership on speaker's bureaus or ad boards, consultant, employee or stockholder.

*If there is not enough space please attach a listing

Acknowledgment: *I, _____acknowledge that the above information is accurate and I understand that this information will be publicly available.*

CPG Event:_____

Signature: _____ **Date**:_____

This COI form is adopted by CAG from the Royal College of Physicians and Surgeons of Canada website