Appendix: Protocol for Development of Knowledge Translation (KT) Tools

KT Team Initial Tool Preparation (1+ weeks)

1. Once guideline topic has been selected, KT Team conducts an environmental scan of existing tools developed by other groups. (1 week)

Guideline Working Group, evidence review and synthesis centre (ERSC), and Science Team Initial Tool Preparation (timing dependent on guideline development process)

2. The Working Group Chair, working group members, and Science Team Lead will determine the outcomes of interest for the guideline topic and begin outcome table preparation.

3. Once the list of outcomes is determined, the Working Group Chair will collaborate with the ERSCs and Science Team Lead to complete the outcome table during the evidence review process.

4. Once the outcome table is completed by the Working Group Chair, ERSC, and the Science Team Lead, they will send the completed table and the evidence review to the KT Team tool development specialist. The KT Team tool development specialist will review the evidence review and outcome tables to ensure that the outcomes can provide a basis for a KT tool.

    Note: If during the evidence review process the Working Group chair, ERSC, and Science Lead do not identify any data for outcomes of interest, then they do not have to complete the outcome table. An alternate KT Tool will be strategized in collaboration with the KT Team tool development specialist.
    Note: Once draft guideline recommendations have been developed, the KT Team tool development specialist may need to consult with the guideline ERSC or the Science Team Lead if the information extracted from the evidence review does not entirely align with the recommendations (e.g., age group corresponding to outcome numbers does not match age group corresponding to a recommendation)

Planning (4.5 weeks)

5. Science Team Lead shares guideline and external review comments (if available) with the KT Team once guideline is almost ready for submission to journal (e.g., 1-2 weeks before submission). (0.5 week)

6. KT Team tool development specialist reviews guideline, evidence review, and external review comments (if available). (1 week)

7.   KT Team tool development specialist prepares KT tool planning table for guideline working group, which includes suggestions about tool type and content. (1 week)

8.   KT Team tool development specialist circulates KT tool planning table to guideline working group for feedback. (2 weeks)

- Guideline working group reviews and signs off on KT tool planning table.

Tool Development (14.5-17.5 weeks)

9.   KT Team tool development specialist reviews KT tool planning table approved by guideline working group and drafts first version of tools (v1). These versions will include all content and preliminary graphics. (1-2 weeks depending on number of tools to be created)

Information from the following sources may be included in tools:
   a. Section of the guideline that provides a summary of recommendations for clinicians and policy makers

   b. Section of the guideline that provides the key points

   c. Section of the guideline that provides the key messages for the public

   d. Section of the guideline that provides an overview

   e. Methods section of guideline

   f. Recommendations section of guideline

   g. Section of the guideline that provides the benefits and harms

   h. Section of the guideline that provides the considerations for implementation of recommendations

   i. Section of the guideline that provides information on other guidelines

   j. Key absolute effects on harms and benefits from the GRADE table reported in evidence review

   k. Results from patient engagement process for guideline

   l. Key questions or concerns raised during early stakeholder presentations (if applicable)

   m. Any additional sections deemed appropriate by the guideline Working Group Chair and Science Team Lead.

Note: the KT Team tool development specialist may need to consult with the Science Team Lead to clarify information contained in the guideline or evidence review (e.g., if the working group wants to include information on the harms of screening colonoscopy but the guideline appears to contain information on diagnostic colonoscopy only).

10. KT Team tool development specialist circulates v1 tools to the KT Team for internal feedback. (0.5 week)

    - KT Team provides initial feedback on format and content

11. KT Team tool development specialist creates second version of tools (v2) based on KT Team feedback. (0.5 week)

12. KT Team tool development specialist circulates v2 tools to guideline working group, KT Working Group, and Science Team Lead. (0.5 week)

    - Guideline working group, ERSC and KT Working Group review tools for appropriateness and content accuracy

    - Science Team Lead reviews tools for consistency with guideline

    - If there are any discrepancies in feedback, guideline working group chair makes final decision on what is/is not included.

13. KT Team tool development specialist creates third version of tools (v3) based on feedback from guideline working group, KT Working Group, ERSC and Science Team Lead. Initial graphics formatting is completed at this stage. (0.5 week)

14. KT Team tool development specialist circulates v3 tools to guideline working group and KT Working Group. (0.5 week)

    - Guideline working group and KT Working Group review tools for appropriateness and content accuracy

    - Science Team Lead provides KT Team with a copy of the CMAJ peer review comments, working group's response to CMAJ comments, and revised guideline with changes tracked. *Note: these materials may be sent to the KT Team as soon as they are ready.*

15. KT Team tool development specialist creates fourth version of tools (v4) based on feedback from guideline working group and KT Working Group. Graphics formatting is completed at this stage. (0.5 week)

- KT Team tool development specialist sends tools to graphic designer for additional formatting, if necessary

16. KT Team conducts usability testing with v4 tools. (2–4 weeks depending on whether patients are recruited)

    - 5-8 participants recruited from population(s) targeted by tools (i.e., PCPs and/or patients to whom the guideline applies)

    - Participants are recruited through the Task Force's recruitment list which consists of primary care providers and patients who have consented to being contacted for future studies through conferences and previous Task Force initiatives (e.g., annual evaluations). Participants are also recruited through the College of Family Physicians of Canada. Depending on the guideline topic, a portion of participants are recruited through other partner organizations.

    - In order to ensure diversity, participants are selected from different provinces and primary care providers are selected to encompass a wide range of years in practice. *Note: This does depend on the number of participants who express interest to participate in the usability testing interviews at a given time.*

17. KT Team compiles interview and/or focus group notes from usability testing to provide immediate feedback to KT Team tool development specialist. (0.5 week)

18. KT Team tool development specialist creates fifth version of tools (v5) based on usability testing feedback. Tool development specialist incorporates minor feedback into tools and flags more substantial comments and concerns for guideline working group review. (0.5 week)

19. KT Team prepares usability testing report (occurs simultaneously with Steps 18–19; 1 week)

20. KT Team circulates v5 tools and usability testing report to guideline Working Group chair, KT Working Group, and Science Team Lead. (1 week)

    - Guideline working group and KT Working Group review usability testing report

    - Guideline working group and KT Working Group review tools for appropriateness and content accuracy

    - Science Team Lead reviews tools for consistency with guideline

- Guideline working group provides guidance on how to address usability testing feedback flagged by tool development specialist for working group input

21. KT Team tool development specialist creates sixth version of tools (v6) based on feedback from guideline working group, KT Working Group, and Science Team Lead. (0.5 week)

   Note: 6 rounds are planned for, but this number can be reduced depending on feedback.

22. KT Team tool development specialist circulates v6 tools to guideline working group, KT Working Group, and Science Team Lead for final review and approval. (0.5 week)

   - Guideline working group and KT Working Group provide final comments

   - Science Team Lead reviews tools for consistency with guideline

23. KT Team tool development specialist creates final version of tools (v7) based on feedback from guideline working group, KT Working Group, and Science Team Lead (0.5 week)

24. KT Team sends tool to Science Team to review any final numbers in algorithm/1000 person diagram tools to make sure all numbers are accurate

25. If necessary for final guidance on feedback, KT Team tool development specialist sends v7 tools to guideline working group chair for final sign off. (0.5 week)

   Note: Rounds of review and revision may continue beyond v7 until the Working Group Chair and the Science Team Lead approve the content. However, this may delay tool development timelines.

26. KT Team arranges for tool copyediting. (1 week)

27. KT Team arranges for French translation according to Task Force translation lexicon. (1 week)

28. KT Team arranges for French translation verification. (1 week)

29. KT Team tool development specialist creates black-and-white versions of tools. (0.5 week)

Note: At the discretion of the guideline working group, the KT Team may seek feedback on KT tools from external parties (e.g., clinical experts, stakeholders) throughout development process. Additionally, the KT Team may receive feedback when KT tools are disseminated to early release stakeholders (approximately 1 week prior to the guideline release date). If this happens, the KT Team will discuss the feedback with the guideline working group and make any necessary changes either before or after the guideline release (depending on timelines).

Dissemination (1.5 weeks)
30.   KT Team creates a web page for each tool on the TF website. Each tool is available in two languages (i.e., English and French) and two colour formats (i.e., colour and black and white) and will appear online once embargo period ends. (1 week)

31.   KT team also disseminates final versions of the tools along with the guideline to guideline specific stakeholders from the stakeholder list.

Evaluation
The KT Team will evaluate the reach and uptake of the KT tools as part of the Task Force annual evaluation. In particular, the KT Team will conduct surveys and interviews with primary care providers to assess their awareness and use of the tools. The KT Team will also examine the reach of the tools by measuring the number of tools disseminated to stakeholders, viewed on the Task Force website, and displayed during stakeholder presentations. The tools assessed during the annual evaluation will be all tools developed since the previous annual evaluation and all tools associated with guidelines that recommend a major change to current practice (e.g., breast cancer, cervical cancer, and prostate cancer screening). The KT Working Group will use the findings from the evaluation to identify the strengths and limitations of the Task Force's KT strategy. They will also use the findings to inform methods for improving future KT tools.

File Naming Conventions:

All KT tool documents will be named according to the following convention:

"Task Force_GuidelineTopic_Tool Name"
        E.g., "Task Force_ProstateCancer_Clinician FAQ"

French documents will include "Fr" after the version number.
        E.g., "Task Force_ProstateCancer_Clinician FAQ_Fr"

For the final version of a document, "FINAL" will appear at the end of the file name.
        E.g., "Task Force_ProstateCancer_Clinician FAQ FINAL".

Documents should not be labelled "FINAL" until
- all content has been finalized by the guideline Working Group Chair and Science Team Lead
- all content has been copyedited