

An Introduction to Evidence-Informed Public Health and A Compendium of Critical Appraisal Tools for Public Health Practice

Donna Ciliska • Helen Thomas • M. Katherine Buffett

February, 2008
(links revised and updated **January, 2012**)



National Collaborating Centre
for Methods and Tools

Centre de collaboration nationale
des méthodes et outils

An Introduction to Evidence-Informed Public Health and A Compendium of Critical Appraisal Tools for Public Health Practice

Prepared for the National Collaborating Centre for Methods and Tools by

Donna Ciliska • Helen Thomas • M. Katherine Buffett

Acknowledgements: L. Buffett, K. Barnett

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National Collaborating Centre for Methods and Tools (NCCMT)

School of Nursing, McMaster University

Suite 302, 1685 Main Street West

Hamilton, Ontario L8S 1G5

Telephone: (905) 525-9140, ext. 20450

Fax: (905) 529-4184

Web: www.nccmt.ca

How to cite this resource:

Ciliska, D., Thomas, H., & Buffett, M.K. (2012). *An Introduction to Evidence-Informed Public Health and A Compendium of Critical Appraisal Tools for Public Health Practice (Revised)*. Hamilton, ON: National Collaborating Centre for Methods and Tools.

Funded by the Public Health Agency of Canada

Affiliated with McMaster University

Production of this paper has been made possible through a financial contribution from the Public Health Agency of Canada. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.

How to use this tool

Consider the type of question you are asking (first column); then consider the type of evidence you have found. That will lead you to what tool to use.

This is not an exhaustive list of critical appraisal tools; merely a listing of tools that are commonly used.

The status **Recommended** indicates that the tool 1) was judged as relevant for most studies in public health, and 2) includes an explanation of criteria within the tool, so the use of the criteria are self-explanatory.

<i>Type of Research</i>	<i>Website Link</i>	<i>Type of Study - Link to Tools</i>
Quantitative <ul style="list-style-type: none"> • What is the effectiveness of....? • What is the result of exposure to...? (causation or harm) • Guidelines for...? 	Critical Appraisal Skills Programme (CASP) (UK): <ul style="list-style-type: none"> • http://www.casp-uk.net/ <p style="color: #800000; font-weight: bold; margin-top: 10px;">Recommended</p>	randomized control trials: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_RCT_Appraisal_Checklist_14oct10.pdf cohort studies: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Cohort_Appraisal_Checklist_14oct10.pdf case control studies: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Case-Control_Appraisal_Checklist_14oct10.pdf diagnostic studies: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Diagnostic_Appraisal_Checklist_14oct10.pdf

Type of Research	Website Link	Type of Study - Link to Tools
	Scottish Intercollegiate Guidelines Network (SIGN): <ul style="list-style-type: none"> • http://www.sign.ac.uk/ 	randomized control trials tool and guidelines: <p>checklist:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/checklist2.html <p>notes on use:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/notes2.html cohort studies tool and guidelines: <p>checklist:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/checklist3.html <p>notes on use:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/notes3.html case-control studies tool and guidelines: <p>checklist:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/checklist4.html <p>notes on use:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/notes4.html diagnostic studies tool and guidelines: <p>checklist:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/checklist5.html <p>notes on use:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/notes5.html
Qualitative <ul style="list-style-type: none"> • What is the experience of or meaning of..? 	Critical Appraisal Skills Programme (CASP) (UK): <ul style="list-style-type: none"> • http://www.casp-uk.net/ <p>Recommended</p>	qualitative research studies: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf

Type of Research	Website Link	Type of Study - Link to Tools
	<p>Reading Qualitative Studies</p> <p>Sandelowski M., & Barroso J. (2002), Reading Qualitative Studies. <i>International Journal of Qualitative Methods</i> 2002, 1(1)</p> <p>Article link:</p> <ul style="list-style-type: none"> • http://ejournals.library.ualberta.ca/index.php/IJQM/article/view/4615/3764 <p>Evaluating non-randomised intervention studies</p> <p>Deeks J.J., Dinnes J., D'Amico R., Sowden A.J., Sakarovitch C., Song F., et al. (2003). Evaluating non-randomised intervention studies. <i>Health Technology Assess.</i> 7(27).</p> <p>Article link:</p> <ul style="list-style-type: none"> • http://www.hta.ac.uk/fullmono/mon727.pdf 	
<p>Systematic Reviews</p> <ul style="list-style-type: none"> • What is the effectiveness of...? 	<p>Critical Appraisal Skills Programme (CASP) (UK):</p> <ul style="list-style-type: none"> • http://www.casp-uk.net/ <p>Recommended for critical appraisal of systematic reviews</p> <hr/> <p>AMSTAR</p> <ul style="list-style-type: none"> • Shea, B.J., Grimshaw, J.M., Wells, G.A., Boers, M., Andersson, N., Hamel, C., & Bouter, L.M. (2007). Development of AMSTAR: A measurement tool to assess the methodological quality of systematic reviews. <i>BMC Medical Research Methodology</i>, 7(10). doi: 10.1186/1471-2288-7-10 • Article link: http://www.biomedcentral.com/1471-2288/7/10 <p>Recommended for critical appraisal of systematic reviews</p>	<p>systematic reviews:</p> <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Systematic_Review_Appraisal_Checklist_14oct10.pdf <hr/> <p>Systematic review and meta-analyses checklist.</p> <p>measurement tool to assess the methodological quality of systematic reviews</p> <ul style="list-style-type: none"> • http://www.biomedcentral.com/1471-2288/7/10

Type of Research	Website Link	Type of Study - Link to Tools
	Scottish Intercollegiate Guidelines Network (SIGN): <ul style="list-style-type: none"> • http://www.sign.ac.uk/ 	Systematic reviews and meta-analysis tools and guidelines: <p>checklist:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/checklist1.html <p>notes on use:</p> <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/notes1.html
	Cochrane Handbook for Systematic Reviews of Interventions <ul style="list-style-type: none"> • http://www.cochrane.org/ 	Handbook link: <ul style="list-style-type: none"> • http://www.cochrane-handbook.org/
	Centre for Reviews and Dissemination (CRD) University of York (UK): <p>Undertaking systematic reviews of research on effectiveness, CRD's guidance for those carrying out or commissioning reviews</p> <p>Systematic reviews, CRD's guidance for undertaking reviews in health care</p> <ul style="list-style-type: none"> • http://www.york.ac.uk/inst/crd/ 	Handbook link <ul style="list-style-type: none"> • http://www.york.ac.uk/inst/crd/SysRev/SSL/WebHelp/SysRev3.htm
	Evidence for Policy and Practice Information and Coordinating Centre (EPPI-centre) (University of London, UK): <ul style="list-style-type: none"> • http://eppi.ioe.ac.uk/cms/ 	Methods: Stages of a Systematic review link: <ul style="list-style-type: none"> • http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=89 Quality Assessment and Relevance of evidence: <ul style="list-style-type: none"> • http://eppi.ioe.ac.uk/cms/Default.aspx?tabid=177
	PHRED Effective Public Health Practice Project <ul style="list-style-type: none"> • http://www.phred-redsp.on.ca/ http://oldhamilton.ca/phcs/ephpp/Reviews-Portal.asp <p style="text-align: center; color: #800080;">Recommended for conduct of systematic reviews</p>	
	Campbell Collaboration C2-SPECTR Database <ul style="list-style-type: none"> • www.campbellcollaboration.org/ 	

Type of Research	Website Link	Type of Study - Link to Tools
Health Services Research <ul style="list-style-type: none"> • What is the cost-effectiveness? • Cost-benefit? • Cost-utility? 	Critical Appraisal Skills Programme (CASP) (UK): <ul style="list-style-type: none"> • http://www.casp-uk.net/ <p style="text-align: center;">Recommended</p>	Economic evaluation studies: <ul style="list-style-type: none"> • http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Economic_Evaluation_Checklist_14oct10.pdf
	National Health Services Economic Database	http://www.crd.york.ac.uk/crdweb/
	The Guide to Community Preventive Services. The Task Force on Community Preventive Services (US): <ul style="list-style-type: none"> • http://www.thecommunityguide.org/library/book/index.html 	Chapter 11 "Understanding and Using the Economic Evidence" (tool): <ul style="list-style-type: none"> • http://www.thecommunityguide.org/library/economics.pdf
Clinical Practice Guidelines <ul style="list-style-type: none"> • What is the best intervention/management of? (considers the best evidence, context and expert opinion) 	Scottish Intercollegiate Guidelines Network (SIGN): <ul style="list-style-type: none"> • http://www.sign.ac.uk/ 	SIGN 50: A Guideline Developers' Handbook: <ul style="list-style-type: none"> • http://sign.ac.uk/guidelines/fulltext/50/index.html
	AGREE II (Appraisal of Guidelines Research and Evaluation) Collaboration <ul style="list-style-type: none"> • http://www.agreetrust.org/home/ <p style="text-align: center;">Recommended</p>	Critical appraisal tool for Guidelines – AGREE II Tool <ul style="list-style-type: none"> • http://www.agreetrust.org/resource-centre/agree-ii/
	National Institutes for Health and Clinical Excellence <ul style="list-style-type: none"> • http://www.nice.org.uk/ 	

Type of Research	Website Link	Type of Study - Link to Tools
Overviews of Critical Appraisal Methods/ Tools/Processes <ul style="list-style-type: none"> • What is the level of evidence? 	The NIHR Health Technology Assessment Programme (NHS) <ul style="list-style-type: none"> • http://www.hta.ac.uk/1117 Article: Evaluating non-randomised intervention studies Deeks J.J., Dinnes J., D'Amico R., Sowden A.J., Sakarovitch C., Song F., et al. (2003). Evaluating non-randomised intervention studies. <i>Health Technology Assess.</i> 7(27). Article link: <ul style="list-style-type: none"> • http://www.hta.ac.uk/fullmono/mon727.pdf 	
	BioMed Central Systems article on grading the quality of evidence and the strength of recommendations II: Pilot study of a new system: Article link: <ul style="list-style-type: none"> • http://www.biomedcentral.com/content/pdf/1472-6963-5-25.pdf 	
	Agency for Healthcare Research and Quality (AHRQ) (US): <ul style="list-style-type: none"> • http://www.ahrq.gov/ 	
	The Guide to Community Preventive Services: The Task Force on Community Preventive Services (US): <ul style="list-style-type: none"> • http://www.thecommunityguide.org/library/book/index.html 	Chapter 10 "Methods Used for Reviewing Evidence and Linking Evidence to Recommendations" (tool): <ul style="list-style-type: none"> • http://www.thecommunityguide.org/methods/methods.pdf
	The Canadian Task Force on Preventive Health Care: <ul style="list-style-type: none"> • http://www.ctfphc.org/ 	

