

**A Methodology for Searching the Grey Literature for
Effectiveness Evidence Syntheses related to Public Health**

Project Report

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Executive Summary

A comprehensive review of the knowledge base related to the effectiveness of interventions is essential to making evidence-based practice, program and policy decisions in public health, health promotion, and population health. Evidence synthesis is the process of bringing together the results of individual research studies in order to summarize the current state of the evidence for public health decision makers (clinicians, managers, and policy makers) and identifying key evidence gaps relating to the clinical question. Evidence syntheses include systematic reviews, meta-analyses, narrative literature reviews, and clinical and best practice guidelines. These syntheses vary in their rigour and therefore the extent to which they should be used to guide practice, program, and policy decisions.

Many evidence syntheses do not include unpublished primary studies and some synthesis registries, such as www.health-evidence.ca, currently do not include reviews found in the grey literature. As well, while many syntheses are found in published peer-reviewed journals, according to Turner and colleagues (2005), evidence about effective public health interventions is a broad domain with diverse formats, content, and audiences that is largely unpublished or “grey” literature. Grey literature, therefore, can often be the first and only source of effectiveness evidence on a public health issue. While a formal publication may follow later, in many cases this evidence is never made available to the broad public health audience.

This project aimed to define “grey literature” and develop a methodology for identifying, retrieving, and selecting unpublished reviews evaluating the effectiveness of public health interventions. Project goals were accomplished through a wide variety of strategies so as to be as comprehensive as possible in locating all unpublished reviews evaluating the effectiveness of public health, health promotion, and population health interventions that exist within and external to Canada. A literature search and key informant interviews were conducted. A preliminary strategy was developed, tested, and refined.

PROCESS

Literature searches were conducted using PubMed, EMBASE, CINAHL, and keywords that included grey literature, gray literature, unpublished, literature searching, electronic searching, review literature, systematic review, data synthesis, meta-analysis, health promotion, and public health. Reference lists of retrieved papers were also scanned for relevant papers. Key journals were hand searched. Additionally, Internet searches were conducted using the same keywords as were used in the database search.

Over 100 key informants from information science, public health, and systematic review-producing organizations as well as relevant listservs were contacted by email, of which 65 responses were received. Telephone interviews were conducted with six interested respondents. Key informants included primary authors on key papers identified through the literature search, those individuals recommended by the research team, and those identified by other key informants.

FINDINGS

Grey literature is “that which is produced on all levels of government, academics, business, and industry in print and electronic formats but which is not controlled by commercial publishers” (Luxembourg Convention on Grey Literature, 1997). Essentially, grey literature includes documents that have not been formally published in a peer-reviewed format.

The pilot test of the proposed grey literature methodology yielded 68 synthesis documents (Appendix D). The greatest yield of unpublished synthesis documents were from key contacts (14) and other networking (11). It should be noted, however, that while these sources provided the greatest yield in general, the greatest yield of relevant synthesis documents, that is those that pertain to the synthesis of evidence regarding the effectiveness physical activity promotion strategies among children and youth came from searches of syntheses-producing organizations, especially systematic review producing or housing organizations. Searching the websites of these organizations was the most productive strategy, yielding 13 relevant unpublished reviews.

Only a small number of items were found through the internet and these were primarily those available through other databases. Searching the reference lists of published reviews available on one registry of systematic reviews of effectiveness evidence related to public health, health promotion, and population health (www.health-evidence.ca) revealed no unpublished reviews.

Fifteen documents were attained through content-related organizations, however many of these represented organizational guidelines and policy documents with supporting literature rather than a rigorous approach to evidence synthesis.

A methodology for searching the grey literature for systematic reviews and other synthesis evidence should involve a health librarian or another qualified information scientist and an advisory group to support the process. Searches should include:

- Published literature to find unpublished reviews
 - Search health sciences, social sciences, education, and other relevant databases
 - Scan reference lists
- Key contacts within and websites of relevant organizations
 - Synthesis producing organizations, such as
 - Centres for Disease Control and Prevention’s (CDC) Guide to Community Preventative Services www.thecommunityguide.org
 - Centre for Reviews and Dissemination
 - Database of Abstracts of Reviews of Effects (DARE) www.york.ac.uk/inst/crd/darehp.htm
 - HTA Database www.york.ac.uk/inst/crd/hta.htm
 - NHS Economic Evaluation Database (NEED) www.york.ac.uk/inst/crd/nhsdhp.htm
 - Cochrane Collaboration www.cochrane.org
 - Effective Public Health Practice Project (EPHPP) www.myhamilton.ca/myhamilton/CityandGovernment/HealthandSocialServices/Research/EPHPP
 - Content specific organizations in Canada, the US, the UK, and elsewhere, such as
 - Canadian Public Health Association www.cpha.ca

- International Society for Behavioural Nutrition and Physical Activity (ISBNPA) www.isbnpa.org
 - o Federal/Provincial Governments in Canada
 - o Relevant agencies within national government in US, UK, Australia, NZ
 - o Relevant funding organizations
- Other key individuals (authors of systematic reviews, knowledge brokers, and other content experts)
- Listservs and other networks
 - o Information Sciences
 - o Grey literature
 - GreyNet Listserv listserv@greynet.org
 - o Content-specific, for example
 - Chronic Disease Prevention Alliance of Canada (CDPAC) www.cdpac.ca
 - Health Promotion Listserv CLICK4HP@YORKU.CA
 - Leisure Information Network www.lin.ca
 - Physical Activity and Public Health On-Line Network PHYS-ACT@LISTSERV.SC.EDU
- Internet Search Engines
- Universities, University Departments (content), and other research organizations
 - o Research Centres (Canada)
 - o University (Faculties and Schools, Libraries, Research Centres)
 - o International Research Centres – US, UK, Aus, Other
- Regional Health Authorities and public health units (Canada)

A Methodology for Searching the Grey Literature for Effectiveness Evidence Syntheses related to Public Health

BACKGROUND

A comprehensive review of the knowledge base related to the effectiveness of interventions is essential to making evidence-based practice, program and policy decisions in public health, health promotion, and population health. Evidence synthesis is the process of bringing together the results of individual research studies in order to summarize the current state of the evidence for public health decision makers (clinicians, managers, and policy makers) and identifying key evidence gaps relating to the clinical question.

Systematic reviews are evidence syntheses that are developed using systematic approaches and are a valuable source of synthesized research evidence as they bring together all the primary research in one area using a rigorous approach to retrieving and appraising all of the available literature on a research topic to determine the overall effectiveness of a given intervention on specified outcomes, without calculating an overall effect size (Conn & Armer, 1996; Last, 1995). The use of systematic reviews is cost-effective and reduces the amount of time that must be spent accessing and appraising the literature on a health topic (Ciliska, Hayward, Underwood, & Dobbins, 1999); assesses consistency across studies; widens the generalizability of individual studies across populations and settings (Cook, Mulrow, & Haynes, 1997). By employing a clear and reproducible method for identifying the research, appraising its methodological quality, determining which evidence is of sufficient quality to incorporate into decision-making, and describing the manner in which the evidence is summarized or synthesized, the results and conclusions are less likely to be impacted by bias.

Other types of evidence synthesis include meta-analysis, meta-synthesis, and clinical and best practice guidelines. A meta-analysis is a type of systematic review that uses statistical methods to synthesize the results of similar primary studies into a single quantitative measure of effect size (Cook et al., 1997). Meta-syntheses use various methodological approaches to developing new knowledge based on rigorous analysis of existing qualitative research findings (Sandelowski & Barroso, 2001; Jensen & Allen, 1996). Narrative literature reviews are developed using less rigorous methods.

Many evidence syntheses do not include unpublished primary studies and some synthesis registries, such as www.health-evidence.ca, currently do not include reviews found in the grey literature. While many syntheses are found in published peer-reviewed journals, according to Turner and colleagues (2005), evidence about effective public health interventions is a broad domain with diverse formats, content, and audiences that is largely unpublished or "grey" literature. Grey literature, therefore, can often be the first and only source of effectiveness evidence on a public health issue. While a formal publication may follow later, in many cases this evidence is never made available to the broad public health audience.

This project aimed to define "grey literature" and develop a methodology for identifying, retrieving, and selecting unpublished reviews evaluating the effectiveness of public health interventions. For the purposes of this project, the portion of grey literature that was sought was limited to systematic reviews and

other synthesis documents of relevance to the field of public health, health promotion, and population health. The project goals were accomplished through the following:

- A review of the literature related to the identification of unpublished research evidence was conducted
- Key informants were identified and contacted
- The information obtained was synthesised to develop a general search strategy
- The strategy was assessed on a specific topic area, physical activity promotion among children and youth
- Key findings from this evaluation were identified
- Recommendations about a grey literature methodology and actions for the future were developed

PROCESS: DEVELOPMENT OF THE GREY LITERATURE SEARCH METHODOLOGY

To accomplish these goals the methodology included a wide variety of strategies so as to be as comprehensive as possible in locating all unpublished reviews evaluating the effectiveness of public health/health promotion interventions that exist within and external to Canada.

Literature Search

Literature searches were conducted using PubMed, EMBASE, CINAHL, and keywords that included *grey literature*, *gray literature*, *unpublished*, *literature searching*, *electronic searching*, *review literature*, *systematic review*, *data synthesis*, *meta-analysis*, *health promotion*, and *public health*. Reference lists of retrieved papers were also scanned for relevant papers. Key journals, such as the Grey Lit Journal, the International Journal on Grey Literature, Behavioural and Social sciences Librarian, Collection Management, Collection Building, the Journal of the Canadian Libraries Association, and the Journal of Information Science were hand-searched. Proceedings from related conferences, such as the International Conference on Grey Literature, were reviewed. Additionally, Internet searches were conducted using the same keywords as were used in the database search.

Key Informant Interviews

Over 100 key informants from information science, public health, and systematic review-producing organizations as well as relevant listservs were contacted by email, of which 65 responses were received. Telephone interviews were conducted with six interested respondents. Key informants included primary authors on key papers identified through the literature search, those individuals recommended by the research team, and those identified by other key informants

Key informants were provided a description of the project and requested to contact the project lead with their own grey literature search strategy, information about existing published or unpublished search strategies for accessing the grey or unpublished literature to find systematic reviews and other evidence-based synthesis documents (e.g., best practices, clinical guidelines), other key contacts in the field, and recommendations for inclusion in a grey literature search strategy for systematic reviews and other evidence syntheses relevant to public health, health promotion, and/or population health.

Testing

Based on the results of the literature search and key informant interviews, a broad checklist of databases, organizations, individuals, and networks were assembled to guide the initial grey literature search (see Appendix A). This initial scan produced more than 500 organizations, individuals, and networks. Criteria were developed to assess the relevance and appropriateness of this list for the public health setting. Criteria included: relevance to public health, reports were systematic reviews, meta-analyses, practice guidelines, better practice reports, or narrative literature reviews etc. The comprehensiveness of this search methodology was then evaluated by applying the strategy to one specific priority area; physical activity promotion interventions among children and youth.

FINDINGS

Grey literature

Grey literature, according to one frequently cited definition established at the Luxembourg Convention on Grey Literature (1997), is “that which is produced on all levels of government, academics, business, and industry in print and electronic formats but which is not controlled by commercial publishers”. Building upon several existing definitions, this one lists all potential producers of grey literature and includes electronic grey literature among the various forms. Grey literature has also been referred to as “unpublished”, “invisible”, “ephemeral”, “underground”, “difficult to find”, “semi-published”, and “fugitive” literature (Alberani, Pietrangeli, & Mazza, 1990; Helmer, Savoie, & Green, 1999). Essentially, grey literature includes documents that have not been formally published in a peer-reviewed format. This category of literature includes: unpublished research or reviews; research proposals; government and organizational reports and documents; research and technical reports; policy briefs; census, economic, and other data; theses and dissertations; non-commercial translations; databases of on-going systematic reviews; conference proceedings and meeting abstracts; technical specifications and standards; bibliographies; listserv, newsletter, and newsgroup archives (and other electronic networks); personal webpages; correspondence; and e-prints (Gelfand, 1998; Haig & Dozier, 2003; Helmer, Savoie, Green, & Kazanjian, 2001).

Public health organizations and professionals produce grey literature and use it to inform decision making at practice, program, and policy levels (Turner, Liddy, Bradley, & Wheatly, 2005). The grey literature may enable the public health sector to learn from and build upon the activities of others working in the field and provides examples of effective, feasible, and practical interventions from which to build community-relevant approaches to public health issues. In public health, grey literature may be the only source of information about certain interventions and approaches as it is often not published in traditional peer-reviewed journals (Turner et al.).

Challenges with inclusion of grey literature

Despite the reliance on the grey literature within the public health field, concerns have been raised and debated regarding its lack of peer review, quality, and validity, and hence, its use in policy and program decision making (Egger, Juni, Bartlett, Holenstein, & Sterne, 2003; Goodman, 1993).

Other potential barriers to the use of the grey literature include the instability of the information accessible on the Internet and issues regarding intellectual property and copyright (Luzi, 2000). However, to overcome the transient nature of the web various technologies have been developed to enable access to older versions of

websites and those no longer available (e.g. Google's Cache function and "The Way Back Machine" found at <http://www.archive.org/web/web.php>).

Further, grey literature can be difficult to locate and accessing it requires considerable time, human, and financial resources due to the proliferation of this form of information, inadequate referencing and associated bibliographic issues, concerns with website navigation and indexing, imperfections in Internet and website search engines, and difficulties and costs associated with various distribution and marketing practices, cataloguing, and collection management (Helmer et al., 2001). The many varied producers of grey literature adopt different approaches to the production, dissemination, cataloguing, and archiving of the grey literature they produce. There are multiple technologies that can be employed to store and access these documents.

Use of grey literature in public health

There is some debate as to whether or not grey literature should be included in an evidence synthesis as it has often not undergone peer review (Cook 1993) and may be of poorer methodological quality (Egger et al., 2003). Language bias is also a consideration as most reviews are based on English-only studies (Egger et al., 2003; Howes, 2003). However, a few recent studies have examined the impact of the inclusion of the grey literature in meta-analyses and systematic reviews and concluded that both grey and published evidence should be included to reduce bias and provide a credible estimate of the effectiveness of interventions (Conn, Valentine, Cooper, & Rantz, 2003; Helmer, Savoie, Green, & Kazanjian, 2001; Hopewell, McDonald, Clarke, & Egger, 2002; McAuley, Pham, Tugwell, & Moher, 2000). Yet, Howes (2003) points out that the impact of including or excluding grey literature in reviews specifically dealing with public health and health promotion interventions has not been determined. No study was found regarding the quality of public health reviews or the impact of grey literature synthesis on evidence-based recommendations for public health decision making.

There has been considerable interest within the health sector to improve access to the grey literature which has resulted in a number of *centralized documentation centers* that focus on collecting, preserving, appraising, and disseminating grey literature (Alberani & De Castro, 2001). Examples of these initiatives include: the New York Academy of Medicine's Grey Literature Report (a health-related grey literature database) and the health-related Cabot database which is no longer accessible and whose service is under review due to issues with funding. Similar databases exist in other, potentially relevant sectors as well (e.g., the National Technical Information Service [NTIS] and the GreyLit Network). Additionally, there is a growing list of databases that contain grey literature together with published documents. Yet, organizations such as the National Library of Medicine recognize the impossibility of collecting all of the grey literature with potential relevance to health. Thus, it has focused its collections efforts on the publications of major national and international associations, institutes, and agencies. Publications of other organizations (such as regional, state and local associations) are collected more selectively, with emphasis on publications of broad interest to U.S. health professionals, those representing unique viewpoints, and others likely to be of historical interest.

Grey literature search strategies

Search strategies vary in process, precision, and outcomes. Search strategies for published research and research syntheses traditionally involve bibliographic

databases such as MEDLINE and CINAHL. Other strategies include ancestry searching, or checking the reference list of studies included in published reviews; citation-index searching, that is checking the reference lists of published reviews; searching review and other research registries for existing reviews and those planned or in process; journal hand searching; key informant contacts; searching conference proceedings; internet searching. Employing strategies beyond searching the traditional databases can increase the yield of published and unpublished systematic reviews and other studies (Conn Valentine, Cooper, & Rantz, 2003; Helmer et al., 2001; Zacks & Hersh, 1998; Howes, 2003). Search strategies based on methodological terms found in high quality reviews can be identified and used to enhance retrieval of high quality review documents as well as those with a specific focus from various hypertext sources of grey literature.

Search protocols have been developed to improve access to the grey literature (Bidwell, 2000; Booth, 1998; Goodman, 1998; Helmer et al., 2001; Helmer, Savoie, & Green, 1999). Existing protocols and guidelines suggest that effective search strategies may include: examination of multiple diverse computerized databases, citation index searches, examination of research registries, journal hand searches, contact with the key experts, examination of presentation abstracts, Internet searches, and contact with sources of evidence syntheses (Conn et al., 2003; Gillespie & Gillespie, 2003; Haig & Dozier, 2003). However, the majority of these strategies relate to searches for primary studies for inclusion in systematic reviews and generally focused on searches for the published literature.

While existing protocols may focus on searches for primary studies for inclusion in systematic reviews, they provide direction regarding resources for searching specifically for research syntheses. Several systematic review producing organizations have protocols to guide literature searches, which include the grey literature, for primary studies to include in evidence syntheses (Clarke & Oxman, 2003; Centre for Reviews and Dissemination, 2001; Evidence for Policy and Practice Information and Co-ordinating Centre Review Group, 2001; Higgins & Green, 2005; Rothstein, Turner, & Lavenberg, 2004). Through the Cochrane Health Promotion and Public Health Field, a strategy is being developed for the identification of all relevant public health and health promotion-related intervention studies for inclusion in systematic reviews (Howes et al., 2004). Greenhalgh and Peacock (2005) suggest that formal protocol-based search strategies such as those employed by systematic review-producing organizations are insufficient in identifying the breadth of systematic reviews of public health effectiveness. These authors advocate that to further strengthen the search methods and thereby maximize yield key experts should be contacted, further networking strategies employed, and reference lists checked for unpublished papers. Eysenbach and Diepgen (1999) recommend that Internet searches be routinely included in search strategies for finding studies for inclusion in systematic reviews.

Gillespie and Gillespie (2003) suggest that the most efficient approach to finding systematic reviews is to search one or more of the available evidence-based resources for health. These resources include synthesis-producing organizations and secondary journals. They argue that because these sites contain critically appraised systematic reviews, the search process is simplified greatly. A list of such organizations that produce systematic reviews and practice guidelines can be found in Appendix B.

Honest, Bachman, and Khan (2003), in a study involving the development of a search strategy for systematic reviews related to screening and preterm births, suggest that complex searches for systematic reviews are possible with a comprehensive coordinated search strategy involving various sources of published and unpublished literature. The comprehensive strategy employed in this study involved a broad and thorough search for evidence across multiple related topic areas and clinical questions by checking organizational producers of systematic reviews and multiple relevant databases without language restrictions. Given the complex nature of many public health interventions, this finding holds promise.

A recent Robert Wood Johnson Foundation sponsored project resulted in the development of a model for describing the content of the grey literature related to public health interventions (Turner, Liddy, Bradley, & Wheatley, 2005). Such a model would facilitate the cataloguing of and access to grey literature. This model is being tested and further developed through the National Library of Medicine (Liddy and Turner, personal communication, January 23, 2006).

In recent years, technological developments, such as the expanded use of the Internet and personal computers and the advent of desktop and open access publishing, have resulted in increased interest in the grey literature and its impact in health sector decision making. Technological advances involving personal publishing software programs, such as Adobe Acrobat Writer, and open access publishing on the Internet are changing the types of grey literature produced (Helmer, 2002). As well, the creation of various on-line grey literature repositories and other projects and products are facilitating access to this unpublished evidence.

Libraries and other organizations face considerable challenges in developing collections of grey literature due to the amount of digital grey literature being created and a lack of collection policies and formal processes related to the grey literature (Lehman & Webster, 2005). Further, as Siegel (2004) notes, "not all grey literature is worth collecting, but much that is worth collecting is still falling through the crack of standard library acquisition practice". As a result of such difficulties public health experts have called for a more systematic approach to the collection of and access to the grey literature in public health (Lasker, 1998). Information specialists, governments, and/or other organizations can further enhance public health practitioners' access to systematic reviews found in the grey literature by determining what users need, actively seeking out and retrieving it, assessing its methodological rigor, summarizing its findings and providing relevant implications for practice, and compiling it in one centralized, easily accessible location (Dobbins, Cockerill, Barnsley, & Ciliska, 2001). Haig and Dozier (2003) recommend the establishment and maintenance of a central authority that would store the grey literature and make it accessible to users.

While several studies have published results related to the studies found in attempts to search the grey literature for primary studies for inclusion in systematic reviews, Howes and colleagues (2004) call for additional research to determine the quality and quantity of intervention studies in public health, health promotion, and population health found in the grey literature that could be included in systematic reviews. No research study was found that examines the yield of specific search strategies related to systematic reviews of the effectiveness of public health interventions.

Key informant interviews

Several common themes emerged from the key informant responses: a) the importance of the grey literature to public health, health promotion and population health decision making; b) interest in the development of an efficient, effective comprehensive methodology for accessing public health grey literature; c) technological and human resource implications; and d) an apparent lack of understanding regarding synthesis evidence and its role in public health decision making.

Several respondents noted the importance of searching the grey literature for quality evidence to inform practice, program development, and policy. According to one respondent, "Material gained through grey literature searching is invaluable and can be used for all aspects of the [synthesis] write-up. This type of searching should be done whether or not material is being returned through traditional sources - grey literature makes for a more complete picture of the subject under review and can provide critical evidence for any research synthesis." Another stated, "The inclusion of evidence from the grey literature along with published evidence aims to broaden the knowledge base, and minimize the effect of publication bias. As well, much of the public health knowledge base may not be found in any other form."

There is a great deal of interest in Canada, the US, and elsewhere in the development of a comprehensive strategy for searching the grey literature for systematic reviews, other evidence syntheses, and primary research studies. Several respondents expressed interest in collaborating on the development of this methodology. According to one respondent, "There's a growing network of people who are interested in the very same questions you pose, especially in the UK where the Blair Government is investing billions of pounds in such interventions, and in Europe where there are strong sport-for-all policies" with several groups seeking to summarize and synthesize the available research for a range of audiences, including researchers, policy makers, and practitioners. Examples of initiatives with possible linkages to this project include: a) Getting Evidence into Practice; b) Chapter on Grey Literature to be developed for an upcoming revision of Campbell's Handbook of Research Synthesis; c) The EPPI-Centre's DoPHER, (Database of Promoting Health Effectiveness Reviews; d) Public Health Information Access projects by co-collaborators Elizabeth Liddy and Anne Turner; e) Towards Evidence Informed Practice (TIEP); f) Institute for Work and Health's pilot project to find and conduct reviews regarding the effectiveness of prevention interventions.

The Getting Evidence into Practice Project, a collaboration among key national agencies and international networks for health promotion in the form of a European Evidence Consortium, has been focussing on health promotion, public health and prevention interventions. Getting Evidence into Practice aims include the development of a consensus review protocol for finding, collecting, defining and describing evidence. This protocol would see the development of a coherent and unified way of collection and judging information for European review protocol for health promotion and public health practice, and the widening of the evidence base from purely research information to practice and expert opinion to meet the needs of the health promotion and public health policy makers in different contexts. Much of the practice and expert opinion will be contained within the grey literature.

DoPHER is a database of health promotion and public health reviews. This database is updated with references located as a result of carrying out comprehensive searches for systematic reviews in the EPPI-Centre. More recently DoPHER is being

updated with reviews identified through regular searching of a variety of sources, which includes unpublished literature.

Ontario's Heart Health Resource Centre's (HHRC) is in the process of launching the "Towards Evidence Informed Practice" (TEIP) initiative database. The TEIP Project resulted from the redevelopment of Best and Promising Practices database. The 3 main goals of TEIP are to increase the use of evidence in practice; to evaluate current program initiatives at the community level; and to increase linkages between public health and the clinical health sector. HHRC is piloting this initiative in five Ontario communities including reviewing current community-based, population-wide, chronic disease and stroke prevention programs. HHRC developed the TEIP tool based on, but highly evolved from one developed by Dr. Roy Cameron. To support this program a manual is being developed for wide distribution that will describe how to use evidence at the community level, identify learnings from the pilot communities, and describe the use of the TEIP database as well as other evidence-based research tools.

No specific search strategy is universally employed to search for grey literature. Many respondents stated that they do not use a specific search strategy, instead simply developed their own processes. The strategies they employ are often specific to the research or clinical question about which reviews are being sought. Generally, these strategies are limited to a checklist of potentially relevant sites to search. Search terms used for such sites are typically those employed in bibliographic database search strategies but, as one respondent stated, these terms are used "in combination and using truncation and "... where possible". To be comprehensive, search strategies need to go beyond "where to find" the information and determine the most efficient search strategies, search terms to use, and methods for cataloguing public health evidence to facilitate cataloguing and retrieval. Many papers and key informants provided information related to the search of the grey literature for primary studies for inclusion in systematic reviews rather than for reviews themselves.

Several respondents described the key to a successful search of the grey literature involves the use of many different strategies. Those strategies cited include:

- Manually scanning the websites of all the organizations of which the researcher is aware
- Using various technologies such as
 - website change detection software (e.g., WebsiteWatcher or Change Detection)
 - RSS (Really Simple Syndication) - a well-established XML-based format providing a means by which users can be brought to the latest updates to selected websites
 - e-alerts
 - SDI (Selective Dissemination of information) which provides users with current information on selected topics through which they are regularly sent bibliographic records, including abstracts on those topics
 - Discussion forums and listservs
- Networking activities such as contact principle authors or content experts
- Employing qualitative methodologies such as
 - focus groups
 - snowballing technique
 - interviews

Collection methods were often described as resource-intensive. Hopewell, McDonald, Clarke, and Egger (2002) describe the considerable costs, human resource and financial, associated with grey literature searching and retrieval. As one key informant noted, while there are many avenues to search the grey literature, "The gains must be weighed against the returns after a point when searching the grey literature. That point is if the amount of material being returned is diminishing or if repetition in returns is occurring." Another stated, "My experience with doing more aggressive searches for grey literature have identified less usable grey material than I would have guessed a priori". That same respondent noted that "We've also had no experiences of which I'm aware in which we've heard from the field that we missed large amounts of important stuff." However, since a lot of the grey literature is obscure, then most people won't even know it exists so wouldn't identify a grey literature review as missing.

Given the difficulties in accessing the grey literature several key informants recommended the involvement of an Information Specialist with a background in public health for effective expert searching. Several authors also suggest that, in order to provide the most reliable access to relevant unpublished documents, grey literature searching requires the support of a professional with knowledge of health informatics and grey literature resources and an ability to search deeply for resources via the Internet, among organizational documents, and through other sources (Alberani & De-Castro, 2001; Alpi, 2005; Conn et al., 2003; Gillespie & Gillespie, 2003). Regardless of title, enhancing evidence based decision making through access to published and unpublished literature requires the support of personnel with knowledge and skill in: a) using multiple sources of information; b) sourcing and searching internet-based databases and across various disciplines within and outside of the health sector; c) public health practices; d) networking with others in the field; and e) the use of various technologies to support knowledge transfer and exchange.

An unexpected finding from this project, was the realization that there is little consensus among public health professionals about what constitutes a research synthesis. Many respondents provided examples of individual programs (which may or may not have been evaluated) and cited examples of "best practices" (again with varying levels of effectiveness evidence) rather than recommendations that have been drawn from a synthesized body of effectiveness evidence. For example, one key informant from a Canadian public health unit provided, in response to the request for syntheses documents, organizational planning documents stating that as these had been informed by a few studies and the practices of other health units, they were evidence syntheses. Another informant, also from a public health unit, sent a program that was described as a best practice, yet had not undergone any outcome evaluation. Again, because this program was developed as a best practice having been informed, to some extent, by the literature, it was considered to be a synthesis document. If practice documents were to be included in collections of grey literature, it will be important to clarify the term research synthesis. Otherwise significant time, money, and human resources could be spent accessing and reviewing irrelevant material. Further, public health decision makers could be erroneously basing decisions on lower quality evidence and other information when thinking that their decision making is based on a broader body of quality research, thus potentially developing programs or policies with limited or no effectiveness.

The literature review and key informant survey provided guidance in the development of a broad checklist of sources of systematic reviews of effectiveness

evidence in public health, health promotion, and population health found in the grey literature. Based on these activities, the following sources of grey literature were to be searched:

- Databases
 - Bibliographic
 - Systematic review producing organizations
 - Guideline producing organizations
 - Best practice producing organizations
 - Other relevant grey literature producing organizations
- Reference lists
 - Published reviews
 - Published studies found in published reviews
- Internet (e.g., Google)
- Public health organizations
- Governments (Canada, US, UK, Australia)
- Key Informants
 - Primary authors
 - Content experts

Testing

Testing the protocol to search for effectiveness evidence related to the promotion of physical activity among children and youth involved a number of steps. The reference lists of published reviews accessed through the search strategy noted in Appendix C were searched for unpublished reviews. Searches were conducted on:

- Organizational websites
 - Syntheses producing organizations (e.g., systematic reviews, best practice documents, and practice guidelines) These organizations were contacted to determine if additional reviews existed or were in development (Appendix B).
 - Research organizations from Canada, the US, the UK, and Australia.
 - National governments (including publications and health, sport and social services departments) from Canada, the US, the UK, and Australia.
 - Provincial and territorial governments of Canada (including publications, health, sport, and social services departments)
 - Selected regional health authorities and health units in Canada. These organizations were contacted by email as well.
 - Key funding organizations
- Key databases
 - Grey literature sources such as dissertations and abstracts (e.g., Theses Canada Portal, Index to Theses of Great Britain and Ireland, World Cat, and the TRIP database)
 - Bibliographic Databases
 - Health-related clearinghouses from Canada and the US. These organizations were also contacted via email.
- Internet searches were conducted on Google, Yahoo, and Dogpile
- International key experts in the field of physical activity were contacted by
 - Email
 - Listserv postings (Listserv archives were also searched.)

The yield and quality of synthesis documents differed between these various grey literature sources. As well, there was some overlap among sources. Numerous sources provided no data. This is not surprising as many of the original sources were identified for their yield on primary studies for inclusion in systematic reviews as

opposed to reviews themselves. Overall 68 synthesis documents were retrieved (Appendix D). The greatest yield of unpublished synthesis documents were from key contacts (14) and other networking (11). This networking category involved resources that were gathered by a knowledge broker working with Dr. Dobbins from January 2005 until December 2005 on a randomised controlled trial related to the effectiveness of various knowledge transfer strategies. The focus of the evidence being transferred in this trial was on the promotion of physical activity among children and youth. The identification of knowledge brokers could facilitate the retrieval of relevant synthesis documents. Key contacts were also a valuable source for information about reviews that are in progress or those for whom the publication is in press.

It should be noted, however, that while these sources provided the greatest yield in general, the greatest yield of relevant synthesis documents, that is those that pertain to the synthesis of evidence regarding the effectiveness physical activity promotion strategies among children and youth came from searches of syntheses-producing organizations, especially systematic review producing or housing organizations. Such systematic review organizations yielded 13 relevant unpublished reviews. These reviews include but are not limited to the following Canadian documents:

Thomas, H., Ciliska, D., Micucci, S., Wilson-Abra, J. & Dobbins, M. (2004). Effectiveness of physical activity enhancement and obesity prevention programs in children and youth. Hamilton, Ontario: Public Health Research Education and Development Program. Effective Public Health Practice Project.

Micucci S, Thomas H, and Vohra J. (2002). The effectiveness of school-based strategies for the primary prevention of obesity and for promoting physical activity and/or nutrition, the major modifiable risk factors for type 2 diabetes: a review of reviews. The Effective Public Health Practice Project.

Dobbins, M., Lockett, D., Michel, I., Beyers, J., Fledman, L., Vohra, J., & Micucci, S. (2001). The Effectiveness of School-Based Interventions in Promoting Physical Activity and Fitness Among Children and Youth: A Systematic Review. Hamilton, Ontario: Effective Public Health Practice Project.

Registered Nurses' Association of Ontario (2005). Primary Prevention of Childhood Obesity. Toronto, Canada: Registered Nurses' Association of Ontario.

Systematic review producing organizations were most likely to have or know of unpublished reviews. Searching the websites of these organizations was the most productive strategy, as was the case found by Helmer (2001) who reported that systematic review producing organizations are the most effective means of locating evidence-based synthesis documents followed by networking and direct communication with researchers working in the field of interest. Only a small number of items were found through the internet and these were primarily those available through other databases. To maximize yield, key contacts can also be made with specific professionals from these organizations.

Searching the reference lists of published reviews available on one registry of systematic reviews of effectiveness evidence related to public health, health

promotion, and population health (www.health-evidence.ca) revealed no unpublished reviews.

Fifteen documents were attained through content-related organizations, however many of these represented organizational guidelines and policy documents with supporting literature rather than a rigorous approach to evidence synthesis. For example, these documents included:

Knowledge Exchange Network. (2005-2006). Information Package for Evidence-Informed Interventions: Effective School-Based Interventions in Physical Activity. Winnipeg, MB: Canadian Cancer Society – MB Division. Available at: http://www.cancer.ca/vgn/images/portal/cit_86751114/8/23/567321677mb_children-schoolphysicalactivity_en.pdf

Koplan, J.P., Liverman, C.T., & Kraak, V.A. (Eds). (2005). Preventing Childhood Obesity: Health in the Balance. Committee on Prevention of Obesity in Children and Youth. Washington: IOM. Available at: <http://www.iom.edu/report.asp?id=22596>

National Association for Sport & Physical Education. (2002). Physical Activity Guidelines for Infants & Toddlers. Available at: <http://www.aahperd.org/NASPE/template.cfm?template=toddlers.html>

Other than those also attained by searching other sources, the Internet search engines revealed four additional documents:

Corti, B., Egger, G., Bull, F., Donovan, R., Swinburn, B. (1999). Background Paper 3: Increasing participation in physical activity – A review of published interventions. In Egger, G., Donovan, R., Swinburn, B., Giles-Corti, B., & Bull, F. (1999). Physical Activity Guidelines for Australians – Scientific Background Report. A report by the University of Western Australia and The Centre for Health Promotion and Research Sydney for the Commonwealth Department of Health and Aged Care. Sydney, AU: The University of Western Australia and The Centre for Health Promotion and Research. Available at: [http://www.dhac.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-active-who.htm-copy3/\\$FILE/scientific.pdf](http://www.dhac.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-active-who.htm-copy3/$FILE/scientific.pdf)

Kaufman, N., Brown, E.R., Babey, S.H., Sallis, J.F., Gonzalez, E., Yancey, A., Garcia, R., Slusser, W., & Yang, K. (2005). Evidence-based Programs to Promote Physical Activity among Youth. UCLA Center for Health Policy Research. Available at: <http://www.clipi.org/ourwork/documents/Evidence-basedprogramstopromotephysicalactivity.pdf>

New Zealand National Advisory Committee on Health and Disability (National Health Committee – NHC). (1998). Active For life: A call for action: The health benefits of physical activity. Available at: <http://www.nhc.govt.nz/publications/activeforlife/index.html>

Washington State Department of Health (2002). Best Practices to Promote Physical Activity. Available at: <http://www3.doh.wa.gov/here/howto/images/BPPhys.html>

Two documents were retrieved from research organizations. This relatively low yield is not surprising as many of the publications from such organizations are found within the published literature.

Nine documents were recovered through searches of government websites, primarily from the US and Australia. No Canadian documents were found by searching government websites that were not found via systematic review organizations.

The search of select public health units revealed the most limited yield of synthesis documents. While 4 documents were provided, none met the criteria of the synthesis of effectiveness evidence related to the promotion of physical activity among children and youth. The lack of synthesis documents from public health units can be explained by the comments of a few respondents.

As a small health region we have very limited resources to direct at the health promotion issues/needs you have referenced. Instead our staff and other resources are focussed and directed on direct service delivery.

While we use this sort of information in program planning we are not mandated to produce this type of document. At [the health unit] we are involved in service delivery not research.

Several health unit respondents did state that they would be very interested in the results of the search for synthesis evidence related to physical activity promotion among children and youth.

While these resources were assessed to determine their relevance to the project with regard to the effectiveness of physical activity promotion interventions among children and youth, the quality of these documents have not been formally assessed using valid critical appraisal tools. Regardless of source, a systematic approach to critical appraisal is an essential step in the evidence-based decision making process. One tool for the critical appraisal of review evidence related to public health, health promotion, and population health can be found at www.health-evidence.ca. To conduct such an appraisal was beyond the scope of this project.

Whether the quality of the “evidence” uncovered through the systematic search is such that it would impact evidence-based practice, policy, and/or program decisions is unknown. This has yet to be assessed and will ultimately determine the value of searching the grey literature for synthesis evidence. As well, the search strategy employed in this project has not been formally evaluated and a more thorough strategy using different search terms may have resulted in the retrieval of additional resources. Further, it may be possible to refine the search strategy to one that is more efficient and effective search protocols requiring less time, human and financial resources.

Developing this strategy and accessing the relevant grey literature was a very time consuming process with difficulty encountered in determining relevant sources of grey literature, a feasible search strategy, accessing relevant sources, and maintaining current awareness. Similar challenges have been reported in the literature (Hopewell, McDonald, Clarke, & Egger, 2002; McAuley, Pham, Tugwell, & Moher, 2000; Sigel, 2004). In addition to the cost of this time and the associated human resources, additional costs include telephone and internet charges, the cost of expert searching, printing, and document retrieval. Given these problems

accessing the grey literature, the yield obtained may still represent an underestimation of the potential effectiveness of such searches. This might result from the indexing methods used in the specialized databases, which could make it difficult to distinguish between systematic reviews and other grey synthesis documents (Helmer et al., 2001; Hopewell et al., McAuley et al).

The lack of Canadian grey literature databases (e.g., the Canadian Association for Health Services and Policy Research's Cabot database is no longer in service) and limited number of organizations producing systematic reviews with a Canadian focus (e.g., EPHPP) was noted throughout this project. Such Canadian sources are important in order to provide public health decision makers with the best available research evidence in such a way as to be relevant to the Canadian context and local realities (Kieffer et al., 2005). The lack of relevant research-based information has been noted as a barrier to evidence-based decision making among public health professionals in Canadian studies (Ciliska et al., 1999; Dobbins et al., 2001). A Canadian grey literature database could contribute to the development of a national knowledge transfer system based on the best available research evidence, identified at the National Forum on Health (1997) as a priority for Canada. At the time of this project there is one single, reliable, easily accessible information source for systematic reviews evaluating the effectiveness of public health interventions in Canada, health-evidence.ca. However, this on-line registry only includes systematic reviews, published since 1985, evaluating the effectiveness of public health interventions.

SUMMARY AND IMPLICATIONS

Main lessons learned

The identification of systematic reviews from the published and grey literature is an important process in the provision of the best available research evidence to guide decision making in public health, health promotion, and population health. There is considerable international interest in the development of an effective feasible strategy in this regard. However, despite this interest and the many organizations and individuals involved in evidence synthesis in public health there have been limited writings related to the development of a comprehensive methodology for searching the grey literature and a lack of research related to the evaluation of such a methodology.

The methodology for retrieving grey literature was developed through a comprehensive synthesis of the limited published literature in this field as well as input from experts in this field around the world. The methodology was then evaluated on a specific public health topic.

The evaluation of the methodology determined that very few unpublished reviews were found related to the effectiveness of interventions regarding chronic disease prevention in general and physical activity promotion among children and youth in particular. It is important to note that the quality of the grey reviews found was not determined. It is quite possible that the yield of quality reviews, once critically appraised, will be even lower.

Technology may make the search process (particularly over time) easier, less labour intensive, and possibly more economical. The use of change detection software, RSS feeds, SDI, and other technologies can limit the financial and human resource costs associated with maintaining current databases of grey literature. As well, many of

these technologies can be employed to enhance the dissemination of the evidence and summaries to relevant users. Networking services such as webinars and discussion forums may facilitate the linkages between producers and users of systematic reviews. Given the yield through key informants and other networks, these technologies may further enhance access to and use of quality grey synthesis evidence in public health decision making.

Based on the nature of the documents received from regional health authorities, health units, and content-specific organizations, there appears to be a great need for knowledge and skill development regarding synthesis documents, their critical appraisal, and use in informing practice, policy, and program decisions.

Depending on the available time, human and financial resources, the key steps to accessing the grey literature for public health synthesis evidence include (in order of priority):

- Involve a health librarian or other qualified information scientist
- Convene an advisory group to support the process
- Search the published literature for unpublished reviews
 - Search health sciences, social sciences, education, and other relevant databases
 - Scan Reference lists
- Search databases of organizations that produce systematic reviews and other evidence syntheses for existing, in process, and planned reviews
- Contact key individuals (systematic review, knowledge brokers, and other content experts)
- Contact Listservs and other networks
 - Information Sciences
 - grey literature
 - content-specific
- Contact content specific and relevant funding organizations in Canada, the US, the UK, and elsewhere
- Contact Federal/Provincial Governments in Canada
- Contact relevant agencies within national government in US, UK, Australia, NZ
- Search the web using various search engines
- Contact Universities, University Departments (content), and other research organizations
 - Research Centres (Canada)
 - University (Faculties and Schools, Libraries, Research Centres)
 - International Research Centres – US, UK, Aus, Other
- Contact Regional Health Authorities and public health units (Canada)

It is likely that the public health sector will see the development of increasing amounts of grey literature. Maintaining a network and links with the research and practice communities may be a viable option to securing quality grey literature over time.

References

Alberani, V., & De-Castro, P. (2001). Grey literature from the York Seminar (UK) of 1978 to the year 2000. *INSPEL*, 35 (4), 236-247.

Alberani, V., Pietrangeli, P.DC, & Mazza, A.M.R. (1990). The use of grey literature in health sciences: A preliminary survey. *Bulletin of the Medical Library Association*, 78(4), 358-363.

Alpi, K.M. (2005). Expert searching in public health. *Journal of the Medical Library Association*, 93(1), 97-103.

Bidwell, S. (2000). Database selection and search strategy optimization: the COSI search protocol [abstract]. In: 16th Annual Meeting of the International Society of Technology Assessment in Health Care; June 19-21, 2000; The Hague.

Booth, A. (1998). Seeking the evidence: A protocol. Sheffield, UK: The University of Sheffield. School of Health and Related Research (SchHARR). Available at: <http://www.shef.ac.uk/~scharr/ir/proto.html>

Clarke, M., & Oxman, A.D., editors. *Cochrane Reviewers' Handbook 4.2.0* [updated March 2003]. <http://www.cochrane.org/resources/handbook/index.htm>

Centre for Reviews and Dissemination [CRD] (2001). Undertaking Systematic Reviews of Research on Effectiveness. CRD's Guidance for those Carrying Out or Commissioning Reviews. CRD Report Number 4 (2nd Edition). NHS Centre for Reviews and Dissemination, University of York. Available at: <http://www.york.ac.uk/inst/crd/report4.htm>

Ciliska, D., Hayward, S., Underwood, J., Dobbins, M. (1999). Transferring public health nursing research to health system planning: Assessing the relevance and accessibility of systematic overviews. *Canadian Journal of Nursing Research*, 31, 23-36.

Conn, V. S. & Armer, J.M. (1996). Meta-analysis and public policy: Opportunity for nursing impact. *Nursing Outlook*, 44, 112-116.

Conn, V.S., Valentine, J.C., Cooper, H.M., & Rantz, M.J. (2003). Gray literature in meta-analyses. *Nursing Research*, 52 (4), 256-61.

Conn, V.s., Isaramalai, S., Rath, S., Jantarakupt, P., Wadhawan, R., & Dash, Y. (2003). Beyond MEDLINE for literature searches. *Journal of Nursing Scholarship*, 35(2), 177-182.

Cook, D.J., Mulrow, C.D., & Haynes, R.B. (1997). Systematic reviews: Synthesis of best evidence for clinical decisions. *Annals of Internal Medicine*, 126, 376-380.

Di Cesare, R., & Lazzari, G. (2000). Towards integration of information sources on grey literature: A case study. *The International Journal on Grey Literature*, 1 (4), 167-173.

Dobbins, M., Cockerill, R., Barnsley, J., & Ciliska, D. (2001). Factors of the innovation, organization, environment, and individual that predict the influence five

systematic reviews had on public health decisions. *International Journal of Technology Assessment in Health Care*, 17 (4), 467-478.

Egger, M., Juni, P., Bartlett, C., Holenstein, F., Sterne, J. (2003). How important are comprehensive literature searches and the assessment of trial quality in systematic reviews? Empirical study. *Health Technology Assessment*, 7(1).

Evidence for Policy and Practice Information and Co-ordinating Centre [EPPI] Review Group]. (2001). EPPI Review Group Manual. Version 1.1, Social Science Research Unit, Institute of Education, University of London. Available at: http://eppi.ioe.ac.uk/EPPIWebContent/downloads/RG_manual_version_1_1.pdf

Eysenbach, G., & Diepgen, T.L. (1999). Use of the World-Wide-Web to identify unpublished evidence for systematic reviews. *Journal of Medical Internet Research*, 1 (suppl1).

Gelfand, J. (1998). Teaching and exposing grey literature: What the information profession needs to know – examples from the sciences. *Collection Building*, 17 (4), 159-166.

Gillespie, L.D., & Gillespie, W.J. (2003). Finding current evidence: Search strategies and common databases. *Clinical Orthopaedics and Related Research*, 413, 133-145

Goodman, C. (1993). Literature searching and evidence interpretation for assessing health care practices. Stockholm: The Swedish Council on Technology Assessment in Health Care.

Goodman, C.S. (1998). TA101: Introduction to health care technology assessment. [Bethesda (MD)]: National Library of Medicine. National Information Center on Health Services Research & Health Care Technology. Available at: http://www.nlm.nih.gov/nichsr/ta101/ta101_c1.htm

Greenhalgh, T., & Peacock, R. (2005). Effectiveness and efficiency of search methods in systematic reviews of complex evidence: Audit of primary sources. *BMJ*, 331, 1064-5.

Haig, A., & Dozier, M. (2003). BEME Guide No3: Systematic searching for evidence in medical education – Part 1: Sources of information. *Medical Teacher*, 25 (4), 352-363.

Hedin, A., & Kallestal, C. (2004). Knowledge-based public health work. Part 2: Handbook for compilation of reviews on interventions in the field of public health. National Institute of Public Health. Available at: http://www.fhi.se/shop/material_pdf/r200410Knowledgebased2.pdf

Helmer, D. (2002). Chapter 10: Grey literature. In: Auston, Ione; Topfer, Leigh-Ann, editors. *Etext on health technology assessment (HTA) information resources* [Internet]. Bethesda (MD): National Library of Medicine. Available at: <http://www.nlm.nih.gov/nichsr/ehta/chapter10.html>

Helmer, D., Savoie, I., & Green, C. (1999). How do various fugitive literature searching methods impact the comprehensiveness of literature uncovered for systematic review? British Columbia Office of Health Technology Assessment

Presentation at the 4th International Conference on Grey Literature Washington DC, October 4-5 1999

Helmer, D., Savoie, I, Green, C., & Kazanjian, A. (2001). Evidence-based practice: extending the search to find material for the systematic review. *Bulletin of the Medical Library Association*, 89 (4), 346–52.

Higgins, J.P.T., & Green, S. (editors). *Locating and Selecting Studies*. Cochrane Handbook for Systematic Reviews of Interventions 4.2.5 [updated May 2005]; Section 4. In: *The Cochrane Library*, Issue 3, 2005. Chichester, UK: John Wiley & Sons.

Honest, H., Bachmann, L.M., Khan, K. (2003). Electronic searching of the literature for systematic reviews of screening and diagnostic tests for preterm birth. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 107, 19-23.

Hopewell, S., McDonald, S., Clarke, M., & Egger, M. (2002). Grey literature in meta-analyses of randomized trials of health care interventions. *The Cochrane Database of Methodology Reviews*, Issue 4. Art. No.: MR000010. DOI: 10.1002/14651858.MR000010.

Howes, F. (2003). Issues Paper: Minimising publication and publication-related biases in systematic reviews: Locating “difficult to find” public health and health promotion intervention studies.

Howes, F., Doyle, J., Jackson, N., Waters, E. (2004). Cochrane Update: Evidence-based public health: The Importance of finding ‘difficult to locate’ public health and health promotion intervention studies for systematic reviews. *Journal of Public Health*, 26 (1), 101-104.

Hunt, D.L., & McKibbin, A. (1997). Locating and appraising systematic reviews. *Annals of Internal Medicine*, 126 (7), 532-538.

Jensen, L.A., & Allen, M.N. (1996). Meta-synthesis of qualitative findings. *Qualitative Health Research*, 6, 553-560.

Lasker, R.D. (1998). Challenges to accessing useful information in health policy and public health: an introduction to a national forum held at the New York Academy of Medicine. *Journal of Urban Health*, 75 (4), 779–784.

Lasker, R.D. (1998). Strategies for addressing priority information problems in health policy and public health. *Journal of Urban Health*, 75 (4), 888–895.

Last J.M. (1995). *A Dictionary of Epidemiology*, 3rd Edition. Oxford University Press.

Lehman, H., & Webster, J. (2005). Describing grey literature again: A survey of collection policies. *Publishing Research Quarterly*, 21 (1), 64-72.

Luxembourg Convention on Grey Literature. (1997). *Perspectives on the Design and Transfer of Scientific and Technical Information*. Third International Conference on Grey Literature. Luxembourg, 13-14 November 1997.

Luzi, D. (2000). Trends and evolution in the development of grey literature: A review. *The International Journal on Grey Literature*, 1 (3), 106-116.

Kiefer, L., Frank, J., Di Ruggiero, E., Dobbins, M., Manuel, D., Gully, P.R., & Mowat, D. (2005). Fostering evidence-based decision-making in Canada: Examining the need for a Canadian Population and Public Health Evidence Centre and Research Network. *Canadian Journal of Public Health*, 96 (3), I1-I19.

McAuley, L., Pham, B., Tugwell, P., Moher, D. (2000). Does the inclusion of grey literature influence estimates of intervention effectiveness reported in meta-analyses? *Lancet*, 356, 1228-31.

Methodology Working Group (2005). *Methodology Working Group for a Canadian Best Practices System for Chronic Disease Prevention and Control: Terms of Reference*. Ottawa, ON: Public Health Agency of Canada.

National Forum on Health (1997). *Canada health action: Building on the legacy*, Vol. 5. Sainte-Foy, Quebec: Editions MultiMondes.

Rothstein, H.R., Turner, H.M., & Lavenberg, J.G (2004). *The Campbell Collaboration Information Retrieval Policy Brief Prepared*. Campbell Collaboration Steering Committee. Available at: <http://www.campbellcollaboration.org/MG/IRMGPolicyBriefRevised.pdf>

Sandelowski, M., & Barroso, J. (2001). Toward a metasynthesis of qualitative findings on motherhood in HIV-positive women. *Research in Nursing and Health*, 26 (2), 153-170.

Siegel, G. (2004). Capturing academic grey literature: Starting at home. *Publishing Research Quarterly*, 20 (1), 62-69.

Turner, A.M., Liddy, E. D., Bradley, J., & Wheatley, J.A. (2005). Modeling public health interventions for improved access to the gray literature. *Journal of the Medical Library Association*, 93 (4), 487-

Zacks, M.P., & Hersh, W.R. (1998). Developing search strategies for detecting high quality reviews in a hypertext collection. *Proceedings of the American Medical Informatics Association Annual Symposium '98*. Available at: <http://medicine.ucsd.edu/F98/E001111.htm>

Appendix A: Original Methodology

Involve Information Specialist(s) from outset of search

Assemble an Advisory Group to support the process

Search health sciences, social sciences, education, and other relevant databases

- Medline
- CINAHL
- Cochrane Library
- Embase
- Sociological Abstracts
- BIOSIS (electronic version of Biological Abstracts)
- PsycInfo
- ERIC (Education Resources Information Center)
- Health Star

Scan Reference lists for unpublished reviews

Review Book Chapters

Search other organizations that produce systematic review and best practice guidelines

Search other Organizational databases that include grey literature

- American Public Health Association <http://www.apha.org>
- Association of College and Research Libraries
<http://www.ala.org/ala/acrl/acrlpubs/crlnews/backissues2004/march04/graylit.htm>
- Campbell Collaboration (C2) www.campbellcollaboration.org
- Centres for Disease Control and Prevention (CDC)
- Task Force on Guide to Community Preventative Services
<http://www.thecommunityguide.org>
- Centre for Reviews and Dissemination
- Database of Abstracts of Reviews of Effects (DARE)
<http://www.york.ac.uk/inst/crd/darehp.htm>
- HTA Database <http://www.york.ac.uk/inst/crd/hta.htm>
- NHS Economic Evaluation Database (NEED)
<http://www.york.ac.uk/inst/crd/nhsdhp.htm>
- Clinical Improvements Project (CLIP) database
http://www.eguidelines.co.uk/clip/clip_main.htm
- Clinical Trials.gov <http://www.clinicaltrials.gov>
- Cochrane Collaboration www.cochrane.org
- Cochrane Effective Practice and Organisation of Care Group (EPOC)
<http://www.epoc.uottawa.ca>
- Cochrane Health Promotion and Public Health Field
<http://www.vichealth.vic.gov.au/cochrane/welcome/index.htm>
- Digital Dissertation Abstracts
- Directory Database of Research and Development Activities (ReaD)
<http://read.jst.go.jp/EN>
- Dissertation Abstracts Online <http://www.lib.umi.com/dissertations/search>
- Dissertations and theses <http://www.dissertationsandtheses.com>

- Effective Public Health Practice Project (EPHPP) <http://www.myhamilton.ca/myhamilton/CityandGovernment/HealthandSocialServices/Research/EPHPP>
- Evidence Based Practice for Public Health Project <http://library.umassmed.edu/ebpph/allpbs.pdf>
- Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) <http://eppi.ioe.ac.uk>
- GreyNet <http://www.grey.net.org/pages/3/index.htm>
- Guidelines International Network <http://www.g-i-n.net>
- Guideline Resources of BMJ <http://bmj.bmjournals.com/cgi/collection/guidelines>
- Health Development Agency Evidence database (now with NICE <http://www.nice.org.uk>)
- Health-evidence <http://health-evidence.ca>
- HealthPromis database <http://healthpromis.hda.nhs.uk> (decommissioned – redirected to NICE)
- Index to Theses <http://www.theses.com>
- Index to Theses in Great Britain and Ireland <http://www.theses.com.libaccess.lib.mcmaster.ca>
 - Institute of Medicine of the National Academies (IOM) <http://www.iom.edu>
 - ISI Web of Knowledge
- Current Contents Connect
 - Joanna Briggs Institute <http://www.joannabriggs.edu.au>
 - Librarian's Index to the Internet <http://www.lii.org>
 - Medical Library Association (MLANET) <http://www.mlanet.org>
- Public health/Health administration Section of the Medical Library Association www.phha.mlanet.org
 - National Criminal Justice Reference Service (NCJRS) <http://www.ncjrs.org>
 - National Guidelines Clearinghouse (NGC) <http://www.guideline.gov>
 - National Institute for Health and Clinical Evidence <http://www.nice.org.uk>
- Centre for Public Health Excellence at NICE www.publichealth.nice.org.uk
 - National Library of Medicine
- Health Services/Technology Assessment Text <http://hstat.nlm.nih.gov>
 - National Research Register www.doh.gov.uk/research/nrr.htm
 - National Technical information Service www.ntis.gov
 - Networked Digital Library of Theses and Dissertations <http://www.ndltd.org>
 - New York Academy of Medicine Library (Grey Lit Report) <http://www.nyam.org/library/grey.shtml>
 - New Zealand Health Technology Assessment (NZHTA) <http://nzhta.chmeds.ac.nz/publications.htm#review>
 - Open Archives Initiative <http://www.openarchives.org>
 - Open University- <http://library.open.ac.uk/resources/reports.html>
 - Partners in Information Access for the Public Health Workforce <http://phpartners.org>
- Healthy People 2010 Information Access Project <http://phpartners.org/hp>
 - Policy Information Exchange (Missouri Institute of Mental Health) <http://mimh200.mimh.edu/mimhweb/pie>
 - Public Health Electronic Library <http://www.phel.gov.uk>
 - Public Health Informatics Institute <http://www.phii.org>
 - Registered Nurses Association of Ontario Best Practice Guidelines <http://www.rnao.org/bestpractices/index.asp>
 - Sara Cole Hirsch Institute for Best Nursing Practices Based on Evidence <http://fpb.cwru.edu/HirshInstitute>

- Scottish Intercollegiate Guidelines Network <http://www.sign.ac.uk>
- Scout Report <http://scout.wisc.edu/Reports/ScoutReport>
- Search Adobe pdf Online <http://searchpdf.adobe.com>
- System for Information on Grey Literature in Europe (SIGLE)
- TESEO: Doctoral Theses of the Spanish Universities
- Theses Canada portal <http://www.collectionscanada.ca/thesescanada/index-e.html>
- Thomas C Chalmers Center for Systematic Reviews <http://www.chalmersresearch.com>
- Trip Database
- World Health Organization Library Database (WHOLIS) <http://www.who.int/library/database/index.en.shtml>
- Worldcat Online Union Catalogue of the Online Computer Library Centre (OCLC) <http://www.oclc.org/worldcat>
- ZETOC (British Library's Electronic ToC) <http://zetoc.mimas.ac.uk>

Search the Internet using specific search engines

- All the Web <http://alltheweb.com>
- Dogpile
- Google
- Omni
- Yahoo! Search

Contact Federal/Provincial Governments

- Canada
- Health Canada http://chp-pcs.gc.ca/CHP/index_e.jsp?pageid=10042
- Public Health Agency of Canada
- Canada Institute for Scientific and Technical Information
- Canadian Health Network <http://www.canadian-health-network.ca>
 - BC <http://www.gov.bc.ca>
 - Directory <http://www.dir.gov.bc.ca>
 - Civic Info <http://www.civicinfo.bc.ca/11.asp>
 - Population Health and Wellness <http://www.healthservices.gov.bc.ca>
 - Alberta <http://www.gov.ab.ca>
 - Directory <http://www2.gov.ab.ca/home/index.cfm?page=5>
 - Service Alberta <http://www.servicealberta.gov.ab.ca/cps/rde/xchg/sa/hs.xsl/dynamic.html?topnav=living&topic=125&subtopic=594&facet=&audience=>
 - Alberta Health and Wellness <http://www.health.gov.ab.ca>
 - Healthy U <http://www.healthyalberta.com>
 - Health in Action <http://www.health-in-action.org>
 - Saskatchewan <http://www.gov.sk.ca>
 - Directory <http://gt ds.gov.sk.ca>
 - Manitoba <http://www.gov.mb.ca>
 - Directory <http://www.gov.mb.ca/departments.html>
 - Manitoba Healthy Living www.gov.mb.ca/healthyliving/index.html
 - Ontario <http://www.gov.on.ca>
 - Directory http://www.pace.gov.on.ca/paceweb/owa/intergtd_en.min_list?IN_GTD_SERVICE=GTD
 - Quebec <http://www.gouv.qc.ca>

- Directory <http://www.gouv.qc.ca/wps/portal/pgs/commun/gouv/minorg?lang=en>
 - New Brunswick <http://www.gnb.ca>
 - Directory <http://app.infoaa.7700.gnb.ca/gnb/pub/search1.aspx>
 - Departments and Agencies <http://www.gnb.ca/dept-e.asp>
 - Nova Scotia <http://www.gov.ns.ca>
 - Directory <http://www.gov.ns.ca/psc/services/geds;>
http://www.gov.ns.ca/gov_index.asp
 - Departments http://www.gov.ns.ca/gov_index.asp#depts
 - Agencies http://www.gov.ns.ca/gov_index.asp#agencies
 - Nova Scotia Health Promotion <http://www.gov.ns.ca/ohp/about.html>
 - Policy Watch <http://www.gov.ns.ca/health/policywatch/index.html>
 - Prince Edward Island <http://www.gov.pe.ca>
 - Directory <http://www.gov.pe.ca/phone/index.php3>
 - Departments and Agencies <http://www.gov.pe.ca/government/governmentindex.php3>
 - Newfoundland and Labrador <http://www.gov.nf.ca>
 - Directory <http://www.tw.gov.nl.ca/TelephoneDirectory>
 - Departments and Agencies <http://www.gov.nf.ca/deptnew.html>
 - Yukon <http://www.gov.yk.ca>
 - Directory <http://www.gov.yk.ca/phone/index.cfm>
 - Departments and Agencies <http://www.gov.yk.ca/depts>
 - North West Territories <http://www.gov.nt.ca>
 - Directory <http://www.gov.nt.ca/utility/directory/index.html>
 - Departments and Agencies <http://www.gov.nt.ca/research/departments/index.html>
 - Nunavut <http://www.gov.nu.ca/Nunavut>
 - Directory <http://www.gov.nu.ca/Nunavut/English/phone>
 - Departments <http://www.gov.nu.ca/deptlisting.htm>
 - Health and Social Services <http://www.nunavut.com/health/english/index.html>
- US
- Catalogue of US Government Publications <http://www.gpoaccess.gov/cgp/>
 - Department of Health and Human Services <http://www.os.dhhs.gov>
 - Agency for Health Research Quality (AHRQ) <http://www.ahrq.gov>
 - Healthy People 2010 <http://www.healthypeople.gov>
 - National Association of County and City Health Officials (NACCHO) <http://www.naccho.org>
 - National Institutes of Health (NIH) <http://www.nih.gov>
 - Science.gov <http://science.gov>
- UK
- Catalogue of UK Official Publications <http://www.ukop.co.uk/>
 - NHS Department of Health (DoH) www.doh.gov.uk
 - NHS Boards and local authorities
 - Local Health Councils
- Australia
- Australian Department of Health and Aged Care www.health.gov.au
 - National Health and Medical Research Council <http://www7.health.gov.au/nhmrc>

- Australian State/Territorial Governments
 - Other
 - New Zealand Ministry of Health
<http://www.moh.govt.nz/moh.nsf?OpenDatabase>
 - Danish Ministry for Social Affairs
- International
 - World Health Organization (WHO) <http://www.who.int>
 - Pan American Health Organization (PAHO)
 - European Union (EU)
 - National Research and Development Centre for Welfare and Health (STAKES)
<http://www.stakes.fi/english/index.html>

Contact Regional Health Authorities (Canada)

- Newfoundland and Labrador
 - Eastern Regional Integrated Health Authority <http://www.easternhealth.ca>
 - Central Regional Integrated Health Authority
<http://www.cwhc.nf.ca/CRIHA%20Cover.htm>
 - Western Regional Integrated Health Authority www.healthwest.nf.ca
 - Labrador-Grenfell Regional Integrated Health Authority
- Nova Scotia
 - Cape Breton District Health Authority <http://www.cbdha.nshealth.ca>
 - Pictou County Health Authority <http://www.pcha.nshealth.ca>
 - Guysborough Antigonish Strait Health Authority (GASHA)
<http://www.erhb.ns.ca>
 - South Shore District Health Authority <http://www.ssdha.nshealth.ca>
 - South West Nova District Health Authority <http://www.swndha.nshealth.ca>
 - Annapolis Valley District Health Authority <http://www.avdha.nshealth.ca>
 - Capital District Health Authority <http://www.cdha.nshealth.ca>
 - Colchester East Hants District Health Authority
<http://www.cehha.nshealth.ca>
 - Cumberland Health Authority <http://www.cha.nshealth.ca>
- Prince Edward Island
- New Brunswick
 - Beauséjour Regional Health Authority <http://www.beausejour-nb.ca>
 - South-East Regional Health Authority <http://www.serha.ca>
 - Atlantic Health Sciences Corporation <http://www.ahsc.health.nb.ca>
 - River Valley Health <http://www.rivervalleyhealth.nb.ca>
 - Regional Health Authority Four <http://www.rrs4-rha4.nb.ca>
 - Restigouche Health Authority <http://www.santerestigouchehealth.com>
 - Acadie-Bathurst Health Authority <http://www.santeacadie-bathursthealth.ca>
 - Miramichi Regional Health Authority <http://www.region7.health.nb.ca>
- Quebec
 - RRSSS de Chaudière-Appalaches (12)
 - RRSSS de l'Abitibi-Tamiscamingue (08)
 - RRSSS de l'Estrie (05)
 - RRSSS de l'Outaouais (07)
 - RRSSS de la Baie-James (Conseil Cri)(18)
 - RRSSS de la Baie-James (Nord-du-Québec) (10)

- RRSSS de la Cote-Nord (09)
- RRSSS de la Gaspesie-Iles-de-la-Madeleine (11)
- RRSSS de la Mauricie et du Centre-du-Quebec (04)
- RRSSS de la Monteregie (16)
- RRSSS de Lanaudiure (14)
- RRSSS de Laval (13)
- RRSSS de Montreal-Centre (06)
- RRSSS de Quebec (03)
- RRSSS des Laurentides (15)
- RRSSS du Bas-Saint-Laurent (01)
- RRSSS du Nunavik (17)
- RRSSS du Saguenay-Lac-Saint-Jean (02)

- Ontario
- Algoma Health Unit <http://www.ahu.on.ca>
- Brant County Health Unit <http://www.bchu.org>
- Chatham-Kent Public Health Services <http://www.chatham-kent.ca>
- Durham Region Health Department <http://www.region.durham.on.ca>
- Eastern Ontario Health Unit <http://www.eohu-bseo.on.ca>
- Elgin-St. Thomas Health Unit <http://www.elginhealth.on.ca>
- Grey Bruce Health Unit <http://www.publichealthgreybruce.on.ca>
- Haldimand-Norfolk Health Unit <http://www.haldimand-norfolk.org>
- Haliburton, Kawartha, Pine Ridge District Health Unit <http://www.hkpr.on.ca>
- Halton Region Health Department <http://www.region.halton.on.ca/health>
- City of Hamilton - Public Health & Community Services Department <http://www.hamilton.ca/phcs>
- Hastings & Prince Edward Counties Health Unit <http://www.hpechu.on.ca>
- Huron County Health Unit <http://www.huroncounty.ca>
- Kingston, Frontenac and Lennox & Addington Health Unit <http://www.healthunit.on.ca>
- County of Lambton, Community Health Services Dept. <http://www.lambtonhealth.on.ca>
- Leeds, Grenville and Lanark District Health Unit <http://www.healthunit.org>
- Middlesex-London Health Unit <http://www.healthunit.com>
- Regional Niagara Public Health Department <http://www.regional.niagara.on.ca/government/health/default.aspx>
- North Bay Parry Sound District Health Unit <http://www.nbdhu.on.ca>
- Northwestern Health Unit <http://www.nwhu.on.ca>
- Ottawa Public Health <http://www.ottawa.ca>
- County of Oxford - Dept. of Public Health & Emergency Services <http://www.county.oxford.on.ca/healthservices/ocbh>
- Regional Municipality of Peel Health Department <http://www.region.peel.on.ca>
- Perth District Health Unit <http://www.pdhu.on.ca>
- Peterborough County-City Health Unit <http://www.pcchu.ca>
- Porcupine Health Unit <http://www.porcupinehu.on.ca>
- Renfrew County & District Health Unit <http://www.rcdhu.com>
- Simcoe Muskoka District Health Unit <http://www.simcoemuskokahealth.org>
- Sudbury & District Health Unit <http://www.sdhu.com>
- Thunder Bay District Health Unit <http://www.tbdhu.com>
- Timiskaming Health Unit <http://www.timiskaminghu.com>
- Toronto Public Health <http://www.city.toronto.on.ca/health/index>
- Region of Waterloo, Public Health <http://chd.region.waterloo.on.ca>
- Wellington-Dufferin-Guelph Public Health <http://www.wdghu.org>

- Windsor-Essex County Health Unit <http://www.wechealthunit.org>
- York Region Health Services Department <http://www.region.york.on.ca>
- Manitoba
 - Brandon Regional Health Authority www.brandonrha.mb.ca
 - Burntwood Regional Health Authority www.brha.mb.ca
 - Churchill Regional Health Authority Inc. www.churchillrha.mb.ca
 - Interlake Regional Health Authority www.irha.mb.ca
 - Assiniboine Regional Health Authority www.assiniboine-rha.ca
 - Assiniboine Regional Health Authority www.assiniboine-rha.ca
 - North Eastman Health Authority www.neha.mb.ca
 - Parkland Regional Health Authority www.prha.mb.ca
 - Regional Health Authority - Central Manitoba Inc. www.rha-central.mb.ca
 - South Eastman Health/Santé Sud-Est Inc. www.sehealth.mb.ca
 - NOR-MAN Regional Health Authority www.norman-rha.mb.ca
 - Winnipeg Regional Health Authority www.wrha.mb.ca
- Saskatchewan
 - Athabasca Health Authority <http://www.athabascahealth.ca>
 - Cypress Regional Health Authority <http://www.cypressrha.ca>
 - Five Hills Health Region <http://www.fhr.ca>
 - Heartland Health Authority <http://www.hrha.sk.ca>
 - Keewatin Yatthé Health Authority <http://www.kyrha.ca>
 - Kelsey Trail Health Authority <http://www.kelseytrailhealth.ca>
 - Mamawetan Churchill River Health Authority <http://www.mcrrha.sk.ca>
 - Prairie North Health Authority <http://www.pnrha.ca>
 - Prince Albert Parkland Health Region <http://www.paphr.sk.ca>
 - Regina Qu'Appelle Health Region <http://www.rqhealth.ca>
 - Saskatoon Health Region <http://www.saskatoonhealthregion.ca>
 - Sun Country Health Region <http://www.suncountry.sk.ca>
 - Sunrise Health Region <http://www.sunrisehealthregion.sk.ca>
- Alberta
 - The Provincial Health Authorities of Alberta (PHAA)
 - Aspen Regional Health Authority <http://www.aspenrha.ab.ca>
 - Calgary Regional Health Authority <http://xweb.crha-health.ab.ca>
 - Capital Health Authority <http://www.cha.ab.ca>
 - David Thompson Regional Health Authority <http://www.dthr.ab.ca>
 - East Central Health <http://www.ech.ab.ca>
 - Palliser Regional Health Authority <http://www.palliserhealth.ca>
 - Peace Regional Health Authority <http://www.peacehealthregion.com>
 - Northern Lights Regional Health Authority <http://www.nlhr.ca>
- British Columbia
 - Northern Health <http://www.northernhealth.ca>
 - Interior Health <http://www.interiorhealth.ca>
 - Vancouver Island Health Authority <http://www.viha.ca>
 - Vancouver Coastal Health <http://www.vch.ca>
 - Fraser Health <http://www.fraserhealth.ca>
 - Provincial Health Services Authority <http://www.phsa.ca>
- Yukon
 - Government <http://www.gov.yk.ca>

- Health and Social Services <http://199.247.156.231>

- Northwest Territories
- Beaufort-Delta HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/inuvik_regional_hss_authority.asp
- Deh Cho HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/deh_cho_hss_authority.asp
- Fort Smith HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/fort_smith_hss_authority.asp
- Hay River HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/hay_river_hss_authority.asp
- Sahtu HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/sahtu_hss_authority.asp
- Stanton Territorial Health Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/stanton_territorial_health_authority.asp
- Tlicho Community Services Agency
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/dogrib_community_services_board.asp
- Yellowknife HSS Authority
http://www.hlthss.gov.nt.ca/content/About_HSS/Authorities/yellowknife_hss_authority.asp
- Nunavut
- Labrador Inuit Health Commission
- Nunavik Regional Board of Health and Social Services
<http://www.rrss17.gouv.qc.ca/en/main.aspx>

Contact Universities, University Departments (content), and other research organizations

- Research Centres (National)
- Canadian Health Network (CHN), Health Canada
- Canadian Health Services Research Foundation (CHSRF)
- Canadian Institute for Health Information (CIHI)
- Canadian Institute for Advanced Research (CIAR) <http://www.ciar.ca>
- Canadian Institutes of Health Research (CIHR)
- Social Sciences and Humanities Research Council of Canada (SSHRC)
http://www.sshrc.ca/web/home_e.asp
- Canadian Fitness and Lifestyle Research Institute
- Research Centres (regional)
-
- University (Faculties and Schools, Libraries, Research Centres)
- Newfoundland and Labrador
 - Memorial University of Newfoundland (MUN)
 - Health Research Network <http://www.mun.ca/nlhrn>

- Faculty of Medicine <http://www.med.mun.ca>
 - Canadian Heart Health Database Centre www.med.mun.ca/chdbc
 - Faculty of Health Professions
 - School of Human Kinetics and Recreation <http://www.mun.ca/hkr>
 - The School of Nursing <http://www.mun.ca/nursing>
- Nova Scotia
 - Dalhousie
 - Atlantic Health Promotion Research Centre <http://www.medicine.dal.ca/ahprc>
 - School of Health and Human Performance <http://hahp.healthprofessions.dal.ca>
 - Population Health Research Unit <http://www.phru.dal.ca>
 - St. Francis Xavier University
 - Department of Human Kinetics, (902) 867-2185
 - Acadia University
 - School of Recreation Management and Kinesiology, (902) 585-1457
- New Brunswick
 - University of New Brunswick
 - Canadian Research Institute for Social Policy (CRISP) <http://www.unb.ca/crisp/index.php>
 - Faculty of Kinesiology, (506) 453-5063
 - Moncton University
 - École d'éducation physique et de loisirs, (506) 858-4165
- Prince Edward Island
- Quebec
 - Laval
 - Groupe de recherche et d'intervention en promotion de la santé de l'Université de Laval <http://www.ulaval.ca/fsi/gripsul.html>
 - Faculté de médecine, Département de médecine sociale et préventive, Division de kinésiologie http://www.msp.ulaval.ca/prog_cours/kinesiologie.html
 - Knowledge Utilization <http://kuuc.chair.ulaval.ca>
 - University of Montreal
 - Groupe de recherche interdisciplinaire en santé www.gris.umontreal.ca
 - Groupe de recherche sur les aspects sociaux de la santé et de la prévention (GRASP) <http://www.grasp.umontreal.ca>
 - Département de kinésiologie, (514) 343-6151
 - McGill
 - Department of Physical Education, (514) 398-4184 ext.0302
 - Bishop's University
 - Psychology Department, (819) 822-9600 ext. 2470
 - Concordia University
 - Department of Exercise Science, (514) 848-2424 ext.3327
 - Université de Sherbrooke,
 - Faculté d'éducation physique et sportive, (819) 821-7000 ou (819) 564-5200
 - Université du Québec à Chicoutimi,
 - Département des sciences humaines, (418) 545-5011
 - Université du Québec à Montréal,

- Département de kinanthropologie, (514) 987-3000
 - Université du Québec à Trois-Rivières,
 - Département des sciences de l'activité physique, (819) 376-5011
- Ontario
 - Brock University
 - Faculty of Applied Health Sciences, (905) 688-5550 ext. 3385
 - Lakehead University
 - School of Kinesiology, (807) 343-8544
 - Laurentian University
 - School of Human Kinetics (705) 675-1151
 - McMaster
 - Department of Kinesiology, (905) 525-9140
 - HEALNet <http://hiru.mcmaster.ca/nce/default.htm>
 - University of Ottawa
 - Community Health Research Unit <http://www.uottawa.ca/academic/med/epid/chru.html>
 - Institute of Population Health <http://www.iph.uottawa.ca>
 - Centre for Best Practices http://www.iph.uottawa.ca/English/best_practices.htm
 - Centre for Health Policy http://www.iph.uottawa.ca/English/health_policy.htm
 - Centre for Research on Community Services <http://www.sciencesociales.uottawa.ca/crcs/eng/index.asp>
 - Research Centre for Sport in Canadian Society http://www.rcscs.uottawa.ca/index_eng.htm
 - Faculty of Medicine
 - Faculty of Health Sciences
 - Ryerson
 - University of Toronto
 - Centre for Health Promotion <http://www.utoronto.ca/chp>
 - Canadian Consortium for Health Promotion Research <http://www.utoronto.ca/chp/CCHPR/index.htm>
 - Faculty of Physical Education and Health, (416) 978-3437
 - Faculty of Medicine
 - Department of Public Health Sciences
 - Physical Activity Research Program <http://www.phs.utoronto.ca/activeyouth>
 - Ontario Institute for Studies in Education www.oise.utoronto.ca
 - University of Western Ontario
 - Faculty of Health Sciences <http://www.uwo.ca/fhs>
 - University of Waterloo
 - Faculty of Applied Health Sciences
 - Department of Kinesiology, (519) 888-4567 ext.2476
 - Centre for Applied Health Research <http://www.ahs.uwaterloo.ca/~cahr>
 - Centre for Behavioural Research and Program Evaluation (CBRPE) <http://www.cbrpe.uwaterloo.ca>
 - York University
 - York Institute for Health Research <http://www.yorku.ca/yihr>
 - School of Health Policy Management <http://www.atkinson.yorku.ca/SHPM>

- School of Kinesiology and Health Sciences
<http://www.kinesiology.yorku.ca/index.htm>
 - Queen's University
 - Faculty of Health Sciences <http://meds.queensu.ca>
 - University of Guelph
 - Department of Human Health and Nutritional Sciences
<http://www.uoguelph.ca/hbns/index.shtml>
 - Health and Performance Centre <http://www.uoguelph.ca/hpc>
 - Wilfrid Laurier University
 - Faculty of Science
 - Department of Kinesiology and Physical Education
http://www.wlu.ca/homepage.php?grp_id=42
 - University of Windsor
 - Faculty of Human Kinetics <http://www.uwindsor.ca/hk>
- Manitoba
 - University of Manitoba
 - Manitoba Centre for Health Policy
www.umanitoba.ca/centres/mchp
 - Manitoba Health Research Council <http://mhrc.mb.ca>
 - Diabetes Research and Treatment Centre
www.umanitoba.ca/outreach/drtc
 - Faculty of Physical Education and Recreation Studies, (204) 474-9747
 - Brandon University
 - Faculty of Education, Department of Physical Education, (204) 278-9520
 - University of Winnipeg
 - Department of Kinesiology and Applied Health , (204) 786-9824
- Saskatchewan
 - Saskatchewan Population Health and Evaluation Research Unit (SPHERU) <http://www.spheru.ca/www/html/Home/home.htm>
 - University of Saskatchewan <http://www.usask.ca>
 - College of Kinesiology
http://www.usask.ca/kinesiology/research_index.php
 - College of Nursing <http://www.usask.ca/nursing>
 - Department of Community Health and Epidemiology
<http://www.usask.ca/healthsci/che>
 - School of Physiotherapy <http://www.usask.ca/physther>
 - Prairie Region Health Promotion Research Centre
<http://www.usask.ca/healthsci/che/prhprc>
 - Community University Institute for Social Research (CUISR)
www.usask.ca/cuisr
 - University of Regina
 - Faculty of Physical Activity Studies, (306) 585-4360
- Alberta
 - University of Lethbridge <http://www.uleth.ca>
 - School of Health Sciences <http://www.uleth.ca/hlsc>
 - Department of Kinesiology & Physical Education
<http://www.uleth.ca/fas/knes/index.html>
 - University of Alberta <http://www.ualberta.ca>
 - Faculty of Physical Activity and Recreation
<http://www.physedandrec.ualberta.ca>

- Alberta Centre for Active Living <http://www.centre4activeliving.ca>
 - Faculty of Medicine and Dentistry
 - Department of Public Health Sciences <http://www.phs.ualberta.ca>
 - Faculty of Nursing <http://www.nursing.ualberta.ca>
 - Centre for Health Promotion Studies <http://www.chps.ualberta.ca>
 - Physical activity and population health research program http://www.chps.ualberta.ca/research/physical_activity_population.htm
 - Promotion of Optimal weights through ecological research http://www.chps.ualberta.ca/research/promoting_healthy_weights.htm
 - Alberta Heart Health Project <http://www.ualberta.ca/~ahhp>
 - Alberta Centre for Child Health Evidence <http://www.ualberta.ca/ARCHE/index.html>
 - University of Calgary
 - Faculty of Kinesiology <http://www.kin.ucalgary.ca/2002/home/index.asp>
 - Health Promotion Research Group www.ucalgary.ca/~hprguc
 - University of Lethbridge
 - Department of Kinesiology and Physical Education, (403) 329-2680
- British Columbia
 - University of British Columbia
 - Centre for Health Services and Policy Research <http://www.chspr.ubc.ca>
 - Institute for Health Promotion Research <http://www.ihpr.ubc.ca>
 - School of Human Kinetics, (604) 822-9192
 - University of Victoria
 - Community Health Promotion Coalition <http://web.uvic.ca/~chpc>
 - School of Physical Education, (250) 721-8373
 - Simon Fraser University
 - School of Kinesiology, (604) 291-3573
 - University College of the Fraser Valley
 - Department of Kinesiology and Physical Education, (604) 853-7441
 - University of Northern British Columbia
 - Department of Psychology, (250) 960-6501
- Yukon
- Northwest Territories
- Nunavut

International

- Active Living Research <http://www.activelivingresearch.org>
- Agency for Health Care research and Quality <http://www.ahrq.gov>
- American Institutes for Research <http://www.air.org>
- Canadian Coordinating Office for Health Technology Assessment (CCOHTA) <https://www.ccohta.ca>
- European Clearing House on Health Systems Reform Literature and Research Database <http://www.leeds.ac.uk/nuffield/infoservices/ECHHSR/dbase.html>

- International Life Sciences Institute (ILSI) <http://www.ilsi.org>
- National Coordinating Centre for HTA <http://www.hta.nhsweb.nhs.uk>
- New Zealand Health Technology Assessment (Systematic Reviews) <http://nzhta.chmeds.ac.nz/publications.htm#review>

Contact key individuals (content experts) (telephone, email, website searches)

- Individuals
- Researchers
- Key content experts

Contact Content-specific Expert Organizations

- Directory of Information Resources Online (DIRLINE) <http://dirline.nlm.nih.gov/dirlineb.htm>

National Professional Organizations and Non-governmental organizations – general

- Best Practices in Health Promotion <http://www.bestpractices-healthpromotion.com>
- Canadian Association for Health, Physical Education, Recreation, and Dance (CAHPERD) www.cahperd.ca
- Canadian Association of Research Libraries <http://www.kdstudy.ca>
- Canadian Cancer Society <http://www.cancer.ca>
- Provincial listings on site
 - Canadian Coordinating Office for Health Technology Assessment <https://www.ccohta.ca>
 - Canadian Evaluation Society <http://www.evaluationcanada.ca>
 - Canadian Health Economics Research Association (CHERA) Cabot database
 - Canadian Institute for Health Information www.cihi.ca
 - Canadian Institute of Health Research www.cihr-irsc.gc.ca
 - Canada Institute for Scientific and Technical Information (CISTI) <http://cat.cisti-icist.nrc-cnrc.gc.ca/search>
 - Community Health Promotion Network Atlantic (CHPNA) www.chpna.ca/newsite/index.cgi
 - Canadian Medical Association <http://www.cma.ca>
- Office for Public Health http://www.cma.ca/index.cfm/ci_id/3295/la_id/1.htm
- Provincial and Territorial Divisions http://www.cma.ca/index.cfm/ci_id/19812/la_id/1.htm
 - Canadian Nurses Association <http://www.cna-nurses.ca>
- Provincial and Territorial members http://www.cna-nurses.ca/CNA/about/members/provincial/default_e.aspx
 - Canadian Public Health Association (CPHA) <http://www.cpha.ca>
 - College of Family Physicians of Canada (CFPC) <http://www.cfpc.ca>
 - Health Promotion Clearinghouse <http://www.hpclearinghouse.ca>
 - Health Quality Council <http://www.hqc.sk.ca>
 - National Network of Libraries for Health <http://www.chla-absc.ca/nnlh/vision.html>

National & Provincial Chronic Disease Prevention/Health Promotion initiatives

National

- Chronic Disease Prevention Alliance of Canada (CDPAC) <http://www.chronicdiseaseprevention.ca>
- Coalition for Active Living www.activeliving.ca/coalition.htm

- Canadian Heart Health Initiative www.med.mun.ca/chhdbc/default.htm
- Canadian Institutes of Health Research, Institute of Population and Public Health (IPPH) and Canadian Institute for Health Information, Canadian Population Health Initiative(CPHI)
- Coalition of Health Professions for Preventive Practice
- Health Action Lobby (HEAL)
<http://www.physiotherapy.ca/HEAL/english/index.htm>
- CANSPANN <http://www.canspann.uwaterloo.ca>
- Provincial
<http://www.chronicdiseaseprevention.ca/content/initiatives/provincial.asp>
- British Columbia
- BC Healthy Living Alliance www.bchealthyliving.ca
- Alberta
- Alberta Healthy Living Network
- Alberta Centre for Active Living www.centre4activeliving.ca
- Saskatchewan
- Chronic Disease Prevention Alliance of Saskatchewan
- Manitoba
- Alliance for the Prevention of Chronic Disease (MB) <http://www.apcd.mb.ca>
- Ontario
- Ontario Chronic Disease Prevention Alliance
<http://www.opha.on.ca/projects/ocdpa.html>
- Ontario Health Promotion Resource System
- OPHEA
- Ontario Prevention Clearinghouse <http://www.opc.on.ca/english/index.htm>
- Quebec
- L'Alliance québécois pour la santé de Coeur www.forumscv.qc.ca
- New Brunswick
- Healthy Eating Physical Activity Coalition of New Brunswick www.hepac.ca
- Nova Scotia
- Heart Health Nova Scotia http://www.chebucto.ns.ca/Health/Heart_Health
- Nova Scotia Alliance for Healthy Eating and Physical Activity
- Prince Edward Island
- Chronic Disease Prevention Initiative
- PEI Healthy Eating Alliance
- PEI Active Living Alliance
- Newfoundland and Labrador
- Newfoundland and Labrador Heart Health Program www.sji.ca/providers/nhnp
- Yukon
- Northwest Territories
- Nunavut
- Aboriginal Diabetes Initiative (ADI)

National Professional Organizations and Non-governmental organizations – health topic or population specific

- Active Healthy Kids <http://www.activehealthykids.ca>
- Active Living Alliance for People with Disabilities www.ala.ca
- Active Ontario www.activeontario.org
- Alberta Centre for Active Living www.centre4activeliving.ca
- Best Environmentally Sound Transportation www.best.bc.ca
- Canada On the Move <https://www.canadaonthemove.ca>
- Canadian Association for Health, Physical Activity, Recreation, and Dance (CAHPERD) <http://www.cahperd.ca>

- Canadian Association for the Advancement of Women in Sport www.caaws.ca
- Canadian Association of Fitness Professionals www.canfitpro.com
- Canadian Cancer Society <http://www.cancer.ca>
- Canadian Centre for Ethics in Sports www.cced.ca
- Canadian Diabetes Association <http://www.diabetes.ca>
 - Regional offices http://www.diabetes.ca/section_regional/regionalindex.asp
- Canadian Institute for Child Health <http://www.cich.ca>
- Canadian Intramural Recreation Association – Ontario (CIRA-ON) <http://cira.mohawkc.on.ca>
- Canadian Fitness and Lifestyle Research Institute (CFLRI) <http://www.cflri.ca>
- Canadian Fitness Education Services www.canadianfitness.net
- Canadian Lung Association <http://www.lung.ca>
 - Provincial links on site
- Canadian Kinesiology Alliance <http://www.cka.ca>
- Canadian Mental Health Association www.cmha.ca
- Canadian Paediatric Society <http://www.cps.ca>
- Canadian Parks and Recreation Association <http://www.cpra.ca>
- Canadian Physiological Society <http://cps.cfbs.org>
- Canadian Physiotherapy Association <http://www.physiotherapy.ca>
- Canadian School Physical Activity & Nutrition Network (CANSPANN) <http://www.canspann.uwaterloo.ca>
- Canadian Society for Exercise Physiology <http://www.csep.ca>
 - Provincial offices <http://www.csep.ca/links.asp>
- Child and Family Canada <http://www.cfc-efc.ca>
- Coaching Association of Canada www.coach.ca
- Coalition for Active Living <http://www.activeliving.ca>
- Canadian Public Health Association <http://www.cpha.ca>
- College of Family Physicians of Canada (CFPC) <http://www.cfpc.ca>
 - Provincial Chapters listed on site
- Dietitians of Canada <http://www.dietitians.ca>
- Directorate of Agencies for School Health (DASH) www.dashbc.org
- Go for Green <http://www.goforgreen.ca>
- Greenist City www.greenistcity.org
- Health in Action www.health-in-action.org
- Health Work Wellness Institute of Canada www.healthworkwellness.com
- Heart and Stroke Foundation <http://www.heartandstroke.ca> ; <http://ww2.heartandstroke.ca>
 - Provincial listings on site
- Heart and Stroke Foundation of Canada www.heartandstroke.ca
 - Provincial Listings
- HIGH FIVE <http://www.highfive.org>
- Hike Ontario www.hikeontario.org
- Human Kinetics www.humankinetics.com
- Information Centre on Aboriginal Health <http://www.ica.h.ca>
- Institute for Work and Health www.iwh.on.ca
- Lung Association
 - Provincial listing
- National Aboriginal Health Organization <http://www.naho.ca>
- National Centre for Biking and Walking www.bikewalk.org
- National Fitness Leadership Advisory Council
- National Heart, Lung, and Blood Institute www.nhlbi.nih.gov
- National Institute for Nutrition www.nin.ca

- National Network of Libraries for Health <http://www.chla-absc.ca/nnlh/vision.html>
- National Quality Institute www.nqi.ca
- Ontario Association of Sport and Exercise Sciences <http://oases.on.ca>
- Ontario Cycling Association www.ontariocycling.org
- Ontario Health Promotion Resource System
 - Heart Health Resource Centre www.hhrc.net
 - The Health Communication Unit www.thcu.ca
- Ontario Prevention Clearinghouse www.opc.on.ca
- Ontario Public Health Association www.opha.on.ca
- Osteoporosis Canada <http://www.osteoporosis.ca>
- Parks and Recreation Ontario www.proontario.org
- Saskatoon in Motion www.in-motion.ca
- Sport Alliance of Ontario www.sportalliance.com
- The Foundation for Active Healthy Kids www.activehealthykids.ca
- TrailPAQ www.trailpaq.com
- TV Turnoff Network www.tvturnoff.org

National Organizations – other than Canada

- American College of Sport Medicine www.acsm.org
- American Council on Exercise www.acefitness.org
- American Heart Association www.americanheart.org
-

Identify ongoing studies/reviews

- Health Services Research Projects in Progress (HRSProj) <http://www.nlm.nih.gov/pubs/factsheets/hsrproj.html>

Review Conference Proceedings and Meeting Abstracts

- Web of Knowledge <http://www.isiwebofknowledge.com>
- Proceedings First (OCLC)
- ZETOC <http://zetoc.mimas.ac.uk>
- Contact specific organizations hosting meetings/conference

Review Preprints and E-Prints

- CogPrints <http://cogprints.ecs.soton.ac.uk>
- BMJ Netprints <http://clinmed.netprints.org/home.dtl>
- NetPrints <http://clinmed.netprints.org/home.dtl>

Contact Listserves and other networks– Information Sciences, grey literature, and content-specific

- Content-specific
- New Economics Papers on Social Norms & Social Capital <http://lists.repec.org/mailman/listinfo/nep-hea>
 A service of free notification of new downloadable working papers for over 40 specific fields. The goal is to provide subscribers with up-to-date information to the research literature: subscribing, you will receive a weekly e-mail report containing information (i.e., title, authors, abstract and link to the full text) on new papers on social capital and related topics)
- Active Living Network info@activeliving.org
- Canadian Obesity Network <http://www.obesitynetwork.ca>
- Click 4 HP Listserv
- Heart Health Listserv

- Leisure Information Network www.lin.ca
- Newfoundland and Labrador Heart Health Program infonet www.sji.ca/providers/nhhp
- Northern Diabetes Health Network www.ndhn.com
- Obesity Research Chair (Laval University) www.obesity.chair.ulaval.ca/obesity.html
- Ontario Healthy Communities www.healthycommunities.on.ca
- Physical Activity and Public Health On-Line Network PHYS-ACT@LISTSERV.SC.EDU
 - Library, Grey literature, KT specific
- GreyNet Listserve
- CHAIN Network
- JBI (Joanna Briggs Institute) Translation Network http://www.joannabriggs.edu.au/about/evidence_trans_groups_map.php
- KU-UC
 - Other
- Central West Health Planning Information Network www.cwhpin.ca

Identify on-going systematic reviews

- Campbell Collaboration (C2) www.campbellcollaboration.org
- CDC Guide to Community Preventative Services <http://www.thecommunityguide.org> (US)
- Cochrane Collaboration www.cochrane.org (INT)
- Cochrane Health Promotion and Public Health Field <http://www.vichealth.vic.gov.au/cochrane/welcome/index.htm> (AUS)
- Cochrane Effective Practice and Organisation of Care Group (EPOC) <http://www.epoc.uottawa.ca>
 - Database of Abstracts of Reviews of Effects (DARE) <http://www.york.ac.uk/inst/crd/darehp.htm> (UK)
 - Effective Public Health Practice Project (EPHPP) <http://www.myhamilton.ca/myhamilton/CityandGovernment/HealthandSocialServices/Research/EPHPP> (CDN)
 - EPPI <http://epi.ioe.ac.uk> (UK)
 - Health-evidence <http://health-evidence.ca> (CDN)
 - Joanna Briggs Institute <http://www.joannabriggs.edu.au> (AUS)
 - National Institute for Health and Clinical Evidence <http://www.nice.org.uk> (UK)
- Centre for Public Health Excellence at NICE www.publichealth.nice.org.uk (UK)
 - New Zealand Health Technology Assessment (NZHTA) <http://nzhta.chmeds.ac.nz/publications.htm#review>
 - Thomas C Chalmers Center for Systematic Reviews <http://www.chalmersresearch.com> (CDN)

Contact Funding Organizations

- Private Funding Organizations (US)
- Hewlett Foundation
- Knight Foundation
- Packard Foundation
- Pew Foundation
- Robert wood Johnson foundation
- Rockefeller foundation

- Smith Richardson Foundation
- Volkswagen Foundation
- William T. Grant Foundation

Appendix B: Organizational Sources of Systematic Reviews and Practice Guidelines

Systematic Review-producing Organizations

- Campbell Collaboration (C2) www.campbellcollaboration.org
- Centres for Disease Control and Prevention (CDC)
 - Task Force for Community Preventive Services
<http://www.thecommunityguide.org>
- Centre for Reviews and Dissemination –
 - Database of Abstracts of Reviews of Effects (DARE)
<http://www.york.ac.uk/inst/crd/darehp.htm>
 - HTA Database
 - NHS Economic Evaluation Database (NEED)
- Cochrane Collaboration www.cochrane.org
 - Cochrane Health Promotion and Public Health Field
<http://www.vichealth.vic.gov.au/cochrane/welcome/index.htm>
 - Cochrane Effective Practice and Organisation of Care Group (EPOC)
<http://www.epoc.uottawa.ca>
- Effective Public Health Practice Project (EPHPP)
<http://www.myhamilton.ca/myhamilton/CityandGovernment/HealthandSocialServices/Research/EPHPP>
- Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre) <http://eppi.ioe.ac.uk>
- Health-evidence.ca <http://health-evidence.ca>
- Health Development Agency Evidence database (now with NICE)
<http://www.nice.org.uk>
- Joanna Briggs Institute <http://www.joannabriggs.edu.au>
- Centre for Public Health Excellence Nice (National Institute for Health and Clinical Evidence) www.publichealth.nice.org.uk
- New Zealand Health Technology Assessment (NZHTA)
<http://nzhta.chmeds.ac.nz/publications.htm#review>
- Sara Cole Hirsch Institute for Building Best Nursing Practices Based on Evidence <http://fpb.cwru.edu/HirshInstitute>
- Thomas C Chalmers Centre for Systematic Reviews
www.chalmersresearch.com

Guideline Producing Organizations

- Guidelines International Network <http://www.g-i-n.net>
- National Guidelines Clearinghouse (NGC) <http://guideline.gov>
- New Zealand Guidelines Group <http://nzgg.org.nz>
- Registered Nurses Association of Ontario Best Practice Guidelines Initiative
<http://www.rnao.org/bestpractices/index.asp>
- Scottish Intercollegiate Guidelines Network www.sign.ac.uk

Review/Guideline Search Tools

- CMA Infobase Clinical Practice Guidelines
<http://mdm.ca/cpgsnew/cpgs/index.asp>
- Clinical Improvements Project (CLIP) Database
http://www.eguidelines.co.uk/clip/clip_main.htm
- Turning Research into Practice (TRIP) database

Appendix C: Search strategy employed to locate published reviews for health evidence.ca

The search strategy for locating published reviews currently includes electronic searches, handsearching, and examining the reference lists of relevant reviews for additional titles. Each of these 3 types of searches is outlined below in detail.

Electronic search strategy

With the help of a public health librarian and health sciences librarian, the research team developed a search strategy which sub-divided the fields of public health and health promotion into various topic areas; for example, addiction, community health, and pregnancy & childbirth. This resulted in the creation of 17 topic areas listed here:

- addiction/drug use
- adult health
- chronic diseases
- communicable disease/infection
- community health
- dental health
- environmental health
- food safety and inspection
- injury prevention/safety
- mental health
- nutrition
- parenting, infants and children
- physical activity
- pregnancy
- sex education
- STDs
- women's health

Each topic area was initially searched from 1985-2001 in the following 6 databases: Medline, CINAHL, Embase, Sociological Abstracts, BIOSIS, and PsycInfo. In 2002, annual updates began to keep the registry current.

Handsearch strategy

The research team, having done extensive work in public health and health promotion, developed a list of the following 26 main journal titles around public health and health promotion, generally:

- Accident Analysis and Prevention
- Addiction (formerly British Journal of Addiction)
- Addictive Behaviors
- American Journal of Health Behavior (formerly Health Values)
- American Journal of Health Promotion
- American Journal of Preventive Medicine
- American Journal of Public Health
- Annals of Epidemiology
- Annual Reviews of Public Health
- British Medical Journal (BMJ)
- British Journal of Addiction
- Canadian Journal of Dietetic Practice and Research (formerly Journal of the Canadian Dietetic Association)
- Canada Communicable Diseases Report (CCDR)

- Canadian Journal of Nursing Research
- Canadian Journal of Public Health
- Canadian Medical Association Journal (CMAJ)
- Cancer Causes and Control
- Cancer Epidemiology, Biomarkers and Prevention
- Evidence-Based Nursing Journal
- Family Planning Perspective
- Family Practice
- Health Education and Behavior (formerly Health Education Quarterly)
- Health Education Research
- Health Promotion (formerly Health Education)
- (*continued as Health Promotion in Canada)
- Health Promotion International
- Injury Prevention
- International Journal of Food Microbiology
- Journal of the American Medical Association (JAMA)
- Journal of Clinical Child and Adolescent Psychology (formerly Journal of Clinical Child Psychology)
- Journal of Community Health Nursing
- Journal of Epidemiology and Community Health
- Journal of Nutrition Education and Behavior (formerly Journal of Nutrition Education)
- Journal of Obstetricians and Gynecologists of Canada
- Journal of Public Health Dentistry
- Journal of Public Health Medicine (formerly Community Medicine)
- Journal of School Health
- Journal of SOGC
- Journal of the American Dietetic Association
- Journal of the National Cancer Institute
- Journal of Trauma
- MMWR
- Nicotine and Tobacco Research
- Pediatrics
- PHERO (Public Health and Epidemiology Report Ontario)
- Preventive Medicine
- Social Science and Medicine
- Tobacco Control

Experts in the various public health and health promotion fields were contacted to request a list of up to 5 additional titles in their area of expertise; for example, dental health, and communicable & infectious disease. The resulting short list of journal titles for each sub topic under public health and health promotion was then searched for the most recent 5 years. If any (one or more) relevant reviews were found, that journal title remained on the short list for that sub topic. If no relevant reviews were found in recent volumes for the latest 5 years of the journal, the journal title was removed from the list. Titles on the list for each sub topic area are updated each year.

Reference list search strategy

The reference lists of all relevant reviews are searched for titles that may be relevant. Relevant titles are retrieved and the relevance tool is applied. In addition, if a non-relevant article clearly referred to a review that was potentially relevant, the

article itself was rejected but that review would have been retrieved for relevance testing.

To date, approximately 150,000 titles have been screened. Of these, thousands have been retrieved and relevance tested, after which over 500 relevant titles have been included in the registry to date.

At this time unpublished work or “grey literature” is not included in the search strategy for health-evidence.ca. However, it is a future goal of the research team to secure adequate funding to locate unpublished work in a systematic and comprehensive way, for inclusion in the registry.

Appendix D: Grey literature related to the effectiveness of interventions to promote physical activity among children and youth

(N=68)

From systematic review producing organizations

EPHPP

1. Thomas, H., Ciliska, D., Micucci, S., Wilson-Abra, J. & Dobbins, M. (2004). Effectiveness of physical activity enhancement and obesity prevention programs in children and youth. Hamilton, Ontario: Public Health Research Education and Development Program. Effective Public Health Practice Project.
2. Micucci S, Thomas H, and Vohra J. (2002). The effectiveness of school-based strategies for the primary prevention of obesity and for promoting physical activity and/or nutrition, the major modifiable risk factors for type 2 diabetes: a review of reviews. The Effective Public Health Practice Project.
3. Dobbins, M., Lockett, D., Michel, I., Beyers, J., Fledman, L., Vohra, J., & Micucci, S. (2001). The Effectiveness of School-Based Interventions in Promoting Physical Activity and Fitness Among Children and Youth: A Systematic Review. Hamilton, Ontario: Effective Public Health Practice Project.

EPPI

4. Brunton, G., Harden, A., Rees, R., Kavanagh, J., Oliver, S., & Oakley, A., (2003). Children and Physical Activity: A systematic review of barriers and facilitators. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Available at: http://eppi.ioe.ac.uk/EPPIWebContent/hp/reports/physical_activity02/Children_PA.pdf
5. Shepherd, J., Garcia, J., Oliver, S., Harden, A., Rees, R., Brunton, G., & Oakley, A. (2002). Barriers to, and facilitators of, the health of young people: A systematic review of evidence on young people's views and on interventions in mental health, physical activity and healthy eating. Volume 2: Complete Report. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Available at: http://eppi.ioe.ac.uk/EPPIWebContent/hp/reports/composite_report01/Vol%202_Web.pdf
6. Rees, R., Harden, A., Shepherd, J., Brunton, G., Oliver, S., & Oakley, A. (2001). Young People and Physical Activity: A systematic review of research on barriers and facilitators. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London. Available at: http://eppi.ioe.ac.uk/EPPIWebContent/hp/reports/physical_activity01/physical_activity.pdf

CDC

7. Centers for Disease Control and Prevention. [CDC]. (2000). Promoting Better Health for Young People Through Physical Activity and Sports: A Report to the President from the Secretary of Health and Human Services and the Secretary of Education

http://www.cdc.gov/HealthyYouth/physicalactivity/promoting_health/pdfs/ppar.pdf

8. CDC. (2003). Promising Practices in Chronic Disease Prevention and Control: A Public Health Framework for Action. Atlanta, GA: Department of Health and Human Services. Available at: <http://www.cdc.gov/nccdphp/publications/PromisingPractices/pdfs/PromisingPractices.pdf>

It is important to note that in addition to these unpublished documents, the CDC has also produced related papers in peer reviewed journals.

Health Development Agency

9. Health Development Agency [HDA]. (1997). Young people and physical activity: A literature review. London: HDA.
10. Coggins, A., & Foster, C. (1997). Active for Life: Promoting physical activity with young women: guidelines. London: Health Education Authority [HEA].
11. Biddle, S., Sallis, J., & Cavill, N. (1998). Young and active? Young people and health-enhancing physical activity - evidence and implications. London: HEA.

National Guidelines Clearinghouse

12. Adams, S., & Bagby, K. (2005). Increasing physical activity in schools: kindergarten through eighth grade. Iowa City (IA): University of Iowa Nursing Interventions Research Center, Research Dissemination Core.

Registered Nurses Association of Ontario

13. Registered Nurses' Association of Ontario (2005). Primary Prevention of Childhood Obesity. Toronto, Canada: Registered Nurses' Association of Ontario.

From research organizations

1. Booth, M., O'Brodovich, H., & Finegood, D. (2004). Addressing Childhood Obesity: The Evidence for Action. Ottawa: CIHR. Available at: <http://www.cihr-irsc.gc.ca/e/23293.html> (Chapter 3.C.1 - Physical Activity)
2. Canadian Population Health Initiative. [CPHI]. (2006). Improving the Health of Canadians: Promoting Healthy Weights. Ottawa, ON: Canadian Institute for Health Information. Available at: http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=PG_470_E&cw_topic=470&cw_rel=AR_1217_E

From government organizations

1. Bellew B. (1999). Increasing Participation in Physical Activity: A review of published interventions. Unpublished. Commonwealth Department of Health and Aged Care.
2. Bull F.C (2003) Review of Best Practice and Recommendations for Interventions on Physical Activity. A report for the Premier's Physical Activity Taskforce on behalf of the Evaluation and Monitoring Working Group. Western

- Australia Government, Perth Western Australia.
http://www.ausport.gov.au/fulltext/2003/wa/BestPrac_Aug03.pdf
3. Egger G, Donovan R, Swinburn B, et al. (1999). Physical Activity Guidelines for Australians: Scientific background report. A report by the University of Western Australia and the Centre for Health Promotion and Research, Sydney for the Commonwealth Department of Health and Aged Care.
 4. Garrard, J., Lewis, B., Keleher, H., Tunny, N., Burke L., Harper, S., & Round, R. (2004). Planning for healthy communities: Reducing the risk of cardiovascular disease and type 2 diabetes through healthier environments and lifestyles. Melbourne, Australia: Victorian Government Department of Human Services. Available at:
http://www.health.vic.gov.au/healthpromotion/downloads/healthy_communities.pdf
 - o Chapter 7: Promoting Physical Activity
 5. Holtzman, J., Schmitz, K., Babes, G., Kane, R.L., Duval, S., Wilt, T.J., MacDonald, R.M., Rutks, I. (2004). Effectiveness of Behavioral Interventions to Modify Physical Activity Behaviors in General Populations and Cancer Patients and Survivors. Rockville, MD: Agency for Healthcare Research and Quality [AHRQ]. Available at:
http://dccps.nci.nih.gov/d4d/evidence_report.html
 6. Latino Health Access Latino Childhood Obesity Prevention Initiative Demonstration Project. The Office of Public Health and Science (OPHS). Available at:
<http://www.osophs.dhhs.gov/ophs/BestPractice/LatinoObesity.htm>
 7. National Physical Activity Guidelines for Australians. Sydney: University of Western Australia and the Centre for Health Promotion and Research, Sydney for the Commonwealth Department of Health and Aged Care.
 8. Trost, S.G. (2005). Discussion paper for the development of recommendations for children's and youths' participation in health promoting physical activity. Canberra, ACT: Australian Government Department of Health and Ageing. Available at:
[http://www.health.gov.au/internet/wcms/publishing.nsf/Content/E6DB023029F7D7D6CA25705100815E68/\\$File/physical_discussion.pdf](http://www.health.gov.au/internet/wcms/publishing.nsf/Content/E6DB023029F7D7D6CA25705100815E68/$File/physical_discussion.pdf)
 9. U.S. Department of Health and Human Services. (1999). Promoting physical activity: A guide for community action. US Department of Health and Human Services, Centres for Disease Control and Prevention, National Centre for Chronic Disease Prevention and Health Promotion.

From other content-related organizations

1. Canadian Association of Health, Physical Education, Recreation, and Dance [CAHPERD]. (2003). Best and Promising Practices for Physical Education Teachers. Available at:
http://www.safehealthyschools.org/physicaleducation/best_practices.htm

2. Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Canadian Diabetes Association. (2003). Clinical Practice Guidelines for the Prevention and Management of Diabetes in Canada. Can J Diabetes, 27(suppl 2) <http://www.diabetes.ca/cpg2003/chapters.aspx>
 - Chapter: Type 2 Diabetes in Children and Adolescents
 - Prevention
3. Connolly, C.R. (2005). Interventions Related to Obesity: A State of the Evidence Review. Ottawa: The Heart and Stroke Foundation of Canada.
4. Council on Physical Education for Children (COPEC) of the National Association for Sport and Physical Education [NASPE]. (2004). Physical Activity for Children: A Statement of Guidelines for Children Ages 5 - 12, 2nd Edition. Reston VA: NASPE.
5. Effectiveness of Behavioral Interventions to Modify Physical Activity Behaviors in General Populations and Cancer Patients and Survivors. Available at: <http://www.ahrq.gov/clinic/tp/pacantp.htm>
6. Joint WHO/FAO Expert Consultation on Diet, Nutrition and the Prevention of Chronic Diseases. (2002). Diet, nutrition and the prevention of chronic diseases: report of a joint WHO/FAO expert consultation. Geneva, Switzerland: WHO. Available at: http://www.who.int/hpr/NPH/docs/who_fao_expert_report.pdf
7. Knowledge Exchange Network. (2005-2006). Information Package for Evidence-Informed Interventions: Effective School-Based Interventions in Physical Activity. Winnipeg, MB: Canadian Cancer Society – MB Division. Available at: http://www.cancer.ca/vgn/images/portal/cit_86751114/8/23/567321677mb_children-schoolphysicalactivity_en.pdf
8. Koplan, J.P., Liverman, C.T., & Kraak, V.A. (Eds). (2005). Preventing Childhood Obesity: Health in the Balance. Committee on Prevention of Obesity in Children and Youth. Washington: IOM. Available at: <http://www.iom.edu/report.asp?id=22596>
9. National Association for Sport & Physical Education. (2002). Physical Activity Guidelines for Infants & Toddlers. Available at: <http://www.aahperd.org/NASPE/template.cfm?template=toddlers.html>
10. Nutrition and Physical Activity Work Group. (2002). Guidelines for Comprehensive Programs to Promote Healthy Eating and Physical Activity. Human Kinetics. Available at: www.humankinetics.com
11. Shilton, T., Abernathy, P., Atkinson, R., Bauman, A., Brown, W., Naughton, G., Oldenburg, B., Owen, N., & Wright, C. (2001). Promoting physical activity: Ten recommendations from the Heart Foundation: A position paper for health professionals and organisations planning to develop and promote physical activity programs. National Physical Activity Program Committee, National Heart Foundation of Australia. Available at: <http://www.heartfoundation.com.au/downloads/Promoting%20phys%20activity%20Ten%20recs%202001.pdf>

12. Taras H, Duncan P, Luckenbill D, Robinson J, Wheeler L, Wooley S: Health, Mental Health and Safety Guidelines for Schools. (2004); Available at <http://www.schoolhealth.org>
 - See section on physical education
13. World Health Organization [WHO] & CDC (2004). CDC/WHO Partners Meeting: Implementation of WHO Physical Activity Strategy. Geneva: WHO. Available at: http://www.who.int/moveforhealth/publications/pah_WHOMiamiReport_FINAL.pdf
14. WHO (1998). Promoting Active Living in and Through Schools: Policy Statement and Guidelines for Action. Available at: http://www.hpclearinghouse.ca/downloads/WHO_Promoting_active_living_in_schools.pdf
15. Wright, C., MacDougall, C., Atkinson, R., & Booth, B. (1996). Exercise in Daily Life: Supportive Environments. National Physical Activity Program Committee, National Heart Foundation of Australia. Available at: <http://www.heartfoundation.com.au/downloads/Exercise%20in%20Daily%20Life%20supportive%20environments.PDF>

From Internet Search using various search engines

1. Corti, B., Egger, G., Bull, F., Donovan, R., Swinburn, B. (1999). Background Paper 3: Increasing participation in physical activity – A review of published interventions. In Egger, G., Donovan, R., Swinburn, B., Giles-Corti, B., & Bull, F. (1999). Physical Activity Guidelines for Australians – Scientific Background Report. A report by the University of Western Australia and The Centre for Health Promotion and Research Sydney for the Commonwealth Department of Health and Aged Care. Sydney, AU: The University of Western Australia and The Centre for Health Promotion and Research. Available at: [http://www.dhac.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-active-who.htm-copy3/\\$FILE/scientific.pdf](http://www.dhac.gov.au/internet/wcms/publishing.nsf/Content/health-pubhlth-strateg-active-who.htm-copy3/$FILE/scientific.pdf)
2. Kaufman, N., Brown, E.R., Babey, S.H., Sallis, J.F., Gonzalez, E., Yancey, A., Garcia, R., Slusser, W., & Yang, K. (2005). Evidence-based Programs to Promote Physical Activity among Youth. UCLA Center for Health Policy Research. Available at: <http://www.clipi.org/ourwork/documents/Evidence-basedprogramstopromotephysicalactivity.pdf>
3. New Zealand National Advisory Committee on Health and Disability (National Health Committee – NHC). (1998). Active For life: A call for action: The health benefits of physical activity. Available at: <http://www.nhc.govt.nz/publications/activeforlife/index.html>
 - o Chapter 7: Strategies for intervention: evidence of effectiveness and cost effectiveness. Available at: <http://www.nhc.govt.nz/publications/activeforlife/7.html>
4. Washington State Department of Health (2002). Best Practices to Promote Physical Activity. Available at: <http://www3.doh.wa.gov/here/howto/images/BPPhys.html>

From Key Contacts

1. Bull, F.C. (2003) Review of Best Practice and Recommendations for Interventions on Physical Activity. A report for the Premier's Physical Activity Taskforce on behalf of the Evaluation and Monitoring Working Group. Western Australia Government, Perth Western Australia. Available at: http://www.ausport.gov.au/fulltext/2003/wa/BestPrac_Aug03.pdf
2. Bull, F.C., Bauman, A.E., Bellew, B., Brown, W. (2004). Getting Australia Active II: An update of evidence on physical activity for health. Melbourne, Australia. National Public Health Partnership (NPHP). (attached)
3. Dubois, N., Andrew, C., & Wilkerson, R. (2004). Systematic review: Best Practice Programs & Related Resources/Contacts. Scotland, ON: DuBFit.
4. Dubois, N., Andrew, C., & Wilkerson, R. (2005). A Gap Analysis of Best Practices for Community Based Interventions Related to Chronic Disease Prevention and Control. Scotland, ON: DuBFit.
5. Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Project Final Report and Appendices), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada). Available at: http://www.ahs.uwaterloo.ca/~hbr/projects/best_practices_type2_diabetes_prevention_report.pdf
6. Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (August 2004). International Best Practices in Type 2 Diabetes Prevention, (School Channel Report), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).
7. Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (August 2004). International Best Practices in Type 2 Diabetes Prevention, (School Channel Project Summaries), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).
8. Heart Health Resource Centre. Best and Promising Practices Toolkit Available at: <http://www.hhrc.net/bpt/index.cfm> Note: This toolkit is being replaced by the "Towards Evidence-Informed Practice" (TEIP) program, which is currently in development by the Heart Health Resource Centre. For more information on TEIP contact TEIP@opha.on.ca
9. Naylor, P.J. (2005). This author has developed a systematic review covering the 18 months following the work of Thomas and colleagues (2004). Currently this document is an Internal report only and has not yet been released publically. The document was requested but was not able to be shared.
10. Olds, T., Dollman, J., Ridley, K., Boshoff, K., Hartshorne, S., & Kennaugh, S. (2004). Children and sport in Australia: A report prepared for the Australian

- Sports Commission. Adelaide: University of South Australia. Available at: <http://www.ausport.gov.au/research/documents/childrensfullreport.pdf>
11. Olds, T. Children and Sport: An Overview: A Research Report by the University of South Australia. Available at: <http://www.ausport.gov.au/research/documents/ChildrenSportOverview.pdf>
 12. Trost, S., & Brown, W. (2001). Young people's participation in physical activity: A report prepared for the Australian Sports Commission. The University of Queensland.
Unable to locate
 13. Willett, W.C., & Domolky, S. (2004). Integrated Recommendations and Action Items of the Strategic Plan and Woodstock Summit Conference. Available at: http://www.neconinfo.org/02-11-2003_Recommendations.pdf
 14. Drs Michael Booth and Philayrath Phongsavan from the University of Sydney together with Dr Anna Timperio from Deakin University are almost finished a thorough review of the physical activity intervention evidence among children and adolescents between 1985-2005 (March).

From other networking sources

These resources were gathered by a knowledge broker working with Dr. Dobbins from January 2005 until December 2005 on a randomised controlled trial related to the effectiveness of various knowledge transfer strategies. The focus of the evidence being transferred in this trial was on the promotion of physical activity among children and youth.

1. Canadian Fitness and Lifestyle Research Institute [CFLRI]. (2000). Increasing Physical Activity: Supporting Children's Participation. Ottawa: Author. Available at: <http://www.cflri.ca/pdf/e/2000pam.pdf>
2. CFLRI. (2001). Increasing Physical Activity: Encouraging Physical Activity through School. Ottawa: Author. Available at: <http://cflri.ca/pdf/e/2001capacity.pdf>
3. Center for Health Improvement. (2004). Childhood Obesity: Using School Programs to Encourage Increased Physical Activity Among Youth. Sacramento, CA: Author. Available at: <http://www.healthpolicyguide.org/doc.asp?id=6457>
4. Center for Health Improvement. (2004). Community-Wide Interventions to Increase Physical Activity. Sacramento, CA: Author. Available at: <http://www.healthpolicyguide.org/doc.asp?id=6552>
5. Center for Health Improvement. (2004). Increasing Physical Activity in Schools. Sacramento, CA: Author. Available at: <http://www.healthpolicyguide.org/doc.asp?id=3741>
6. Marcus, B., & Forsyth, L. (2003). Motivating People to Be Physically Active. Windsor, ON: Human Kinetics Publishers.

7. McLaren, L., Shiell, A., Ghali, L., Lorenzetti, D., Rock, M., & Huculak, S. (2004). Are Integrated Approaches Working to Promote Healthy Weights and Prevent Obesity and Chronic Disease? A Review and Synthesis of the Literature with Suggestions and Recommendations for Policy and Decision Makers. Centre for Health & Policy Studies, Dept Community Health Sciences, University of Calgary. Available at:
http://www.chaps.ucalgary.ca/Working_papers/Report_BRIEF_McLaren.pdf
8. Ministry of Health, New Zealand. (2003). DHB Toolkit: Physical Activity: To increase physical activity. Wellington, NZ: Author. Available at:
<http://www.newhealth.govt.nz/toolkits/physical/PhysicalActivityToolkit03.pdf>
9. Moor, G. (2005). A Review of Better Practices for the Prevention of Obesity and Overweight and the Maintenance of Healthy Weights. Victoria, BC: Provincial Health Services Authority, British Columbia. Available at:
http://www.phabc.org/pdf/PHSA_Healthy_Weights_Report_July-05.pdf
10. Patrick, K., Spear, B., Holt, K., Sofka, D., eds. (2001). Bright Futures in Practice: Physical Activity. Arlington, VA: National Center for Education in Maternal and Child Health. Available at:
<http://www.brightfutures.org/physicalactivity/pdf/index.html>
11. Raine, K.D. (2004). Overweight and Obesity in Canada: A population health perspective. Ottawa: Canadian Institute of Health Information, Available at:
http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=GR_1130_E