EUROPEAN REVIEW PROTOCOL FOR HEALTH PROMOTION

A Protocol produced by the
GETTING EVIDENCE INTO PRACTICE
Strand I

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In collaboration with GEP Strand I project team members and partners

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Colophon

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(Evidence Consortium, GEP, European Commission Grant agreement no 2003123 (790841). Strand I

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## Abbreviations

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<th>Definition</th>
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<tr>
<td>CASP</td>
<td>Critical Appraisal Skills programme</td>
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<tr>
<td>CRD</td>
<td>Centre for Reviews and Dissemination</td>
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<td>EBM</td>
<td>Evidence Based Medicine</td>
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<td>EPPI</td>
<td>Evidence for Policy and Practice Information and Co-ordinating Centre</td>
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<td>EU</td>
<td>European Union</td>
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<td>GEP</td>
<td>Getting Evidence into Practice project</td>
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<td>HDA</td>
<td>Health Development Agency</td>
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<td>HONcode</td>
<td>Net Foundation Code of Conduct</td>
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<td>HP</td>
<td>Health Promotion</td>
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<td>HP/PH</td>
<td>Health Promotion and Public Health</td>
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<td>HPRIN</td>
<td>Health Promotion Researcher internet Network</td>
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<td>HTA</td>
<td>Health Technology Assessment</td>
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<tr>
<td>IUHPE</td>
<td>International Union of Health Promotion and Education</td>
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<td>IDM</td>
<td>Interactive Domain Model</td>
</tr>
<tr>
<td>NDLTD</td>
<td>Networked Digital Library of Theses and Dissertations</td>
</tr>
<tr>
<td>NICE</td>
<td>National Institute of Clinical Excellence</td>
</tr>
<tr>
<td>NHS</td>
<td>National Health Service</td>
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<tr>
<td>QA-tool</td>
<td>Quality assessment tool</td>
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<td>RCT</td>
<td>Randomised Control Trials</td>
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<tr>
<td>TRoPHI</td>
<td>Trials Register of Promoting Health Interventions</td>
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<tr>
<td>UK</td>
<td>United Kingdom</td>
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Foreword

This European review protocol for health promotion has been developed by the Getting Evidence into Practice, GEP project Strand I. This project was an initiative by a number of European health promotion institutes who were aware that they all were working on the same tracks and decided to share forces. The content of the protocol have been prepared in collaboration of the GEP, Strand I project team members and partners: they acted as critics, field testers and helped to make sure that a wide consensus is behind this protocol.

In the first chapter more is being said about the necessity to work with protocols and how specific characteristics of health promotion pose a challenge to go beyond traditional procedures.

The review protocol itself is divided into three main phases:
1. Planning the review
2. Conducting the review
3. Reporting and disseminating the results of the review.

The planning phase describes the process of deciding the scope of the review. The conducting phase concentrates on collecting, analysing and synthesising the information. Finally, the results of the review have to be reported and disseminated. The final paragraph gives instructions on how to do this. The whole protocol has been developed keeping in mind the need of health promotion and public health (HP/PH) and need of broadening the evidence base beyond research information.

Sanna Räty & Arja R. Aro, National Public Health institute, KTL, Finland

Helsinki 31st of August 2005
I Introduction and Background

1 Introduction

The consensus-based European review protocol for health promotion and public health (HP/PH) topics is a tool to help the reviewing process by instructing how and where to collect the existing information on health promotion and public health topics/issues and how to synthesize this information into the evidence, which then can be transferred into practice. The review protocol supports the GEP project’s overall aim to broaden the evidence base. The GEP project builds on the broad consensus of evidence that has emerged in health promotion research and practice; besides written information, attention should be given to expert knowledge and secondary sources including the Internet. Thus this review protocol recommends including research information both quantitative and qualitative as well as non-research information such as documents, expert opinion and knowledge from practice in the reviewing process. This protocol is to be used to select and review items on health promotion effectiveness/topics as they appear in the research literature, policy papers, and other documents as well as in health promotion practice. Especially the use of a diversity of sources requires a variety of guidelines to judge and use each element in an appropriate manner.

The target groups of the detailed (full model) European review protocol are mainly the researchers, policy makers and practitioners with sufficient knowledge of research and/or reviewing process. The development of the European review protocol for HP/PH topics has been raised from the recognized need:

1. to develop a coherent and unified way of collecting and judging information for European HP/PH practice, and
2. to widen the evidence base from purely research information to practice and expert opinion to meet the needs of the HP/PH policy makers in different contexts.

To enhance the applicability also the end-users of the protocol were included in the development process of the review protocol. The European review protocol for health promotion and public health topics takes into account the applicability of the protocol in national contexts.

The goal of best practice in health promotion is effectively and efficiently improving and maintaining health. When striving toward the best practice the actors in the field of HP/PH need to answers few key questions, like:

- what health issue is at stake
- what determinants are relevant
- what is known about the impact of interventions
- what conditions and context is required to make that impact probable?

Research information e.g. per reviews may not give answers to all these questions. Especially information on what works in what context may not be found from the research articles. As the research information solely may not give the right picture of e.g. health promotion interventions
effectiveness, the collection of information for health promotion and public health has to cover all the health promotion arenas: research, policy and practice (see Picture 1). All these different layers of information sources should be included to ensure that the end report (review) is useful and applicable for multiple end-users, researchers, practitioners and policy makers.

**Picture 1.** Collecting and defining evidence for health promotion and public health (1-3).

The European review protocol aims to answer the current ‘handicapped’ situation of HP/PH research which does not yet take fully into account the complex and multilevel nature of health promotion interventions. In the long run the use and further development of this protocol aims at increasing the quality and appropriateness of the HP/PH research e.g. use of theory and taking the contextual factors into account.
2 Background

The Getting Evidence into Practice, GEP project, builds on the current practice and existing experience in the different countries with regard to ‘putting evidence into practice’, in terms of strengthening the evidence, setting up reviews, establishing guidelines for effective and evidence-based health promotion, and supporting the implementation by practitioners. By developing and publishing a consensus based European review protocol the project aims to strengthen the evidence base for HP/PH.

The GEP project builds on a broad consensus regarding the definition of ‘evidence’ (4-6). Evidence can not be restricted to the results of ‘hard scientific research’, but should be seen as the broader answer to the question: what works in HP/PH. Thus the project supports the logic of evidence-based practice, which identifies a cyclic relation between practice, evaluation, evidence and further evaluation (7, 8).

Ideally, all HP/PH policy and practice should be evidence-based. One of the tools for gathering evidence used by health promotion practitioners (practitioners, decision makers as well as researchers) are reviews of the existing evidence. A (systematic) review is a method of identifying, appraising and synthesizing research evidence (7, 9). In the context of evidence-based practice, the production of these reviews is a technical processes that require a good understanding of information retrieval and research methods and that are guided by review protocols and standard criteria (7).

There are many systematic review initiatives internationally, several of which have focused specifically on health promotion and public health topics and interventions (10). However, most of these initiatives have used existing review protocols, originally designed for medical and clinical studies (and then applied to health promotion). Speller et al (11) have cautioned that considering health promotion with the tools used in Evidence Based Medicine (EBM) carries the risk that health promotion may be designated ‘not effective’ because it is assessed with inappropriate tools. In addition, the selection of information (studies) is done on the basis of the quality of research only, not on the quality of the health promotion interventions. (11)

The adaptation of the EBM review protocols has been common in the field of HP/PH, so there have already been also significant attempts to address scientific evidence for health promotion. The most recent attempts to encounter the challenges of HP/PH in reviewing the evidence are Cochrane health promotion and public health field’s guidelines for systematic reviewers of health promotion and public health interventions (12) and the initiative of the Health Development Agency, HDA Evidence Base (13). Also the National Health Service Centre for Reviews and Dissemination in UK, which have close ties with the Cochrane Collaboration, produces systematic reviews of health interventions, predominately health care interventions, but several health promotion and disease prevention reviews have also been conducted (14). All of these initiatives have their own instructions on how to find, define and summarize evidence. But most of the existing review protocols still concentrate on finding evidence from a specific type of research (randomised control trials (RCT) and from published
documents, preferably articles in peer reviewed journals. This had the disadvantage that a lot of information was excluded and not taken into account. Little emphasis has been given to finding evidence from practice and from expert opinion. One of the challenges of the GEP project is to broaden this scope, and to include also non-research information on health promotion effectiveness, as well as qualitative research and other qualitative information to the reviews whenever relevant. That offers a challenge on how to formulate guidelines for a diversity of sources. That is why issues like the theory base and contextual aspects are considered very important. Applicability of the results by different end users, and the value of the protocol in adding to the knowledge base of health promotion effectiveness, is of central interest.

3 The development process

The development of the European review protocol was based on the analysis of the existing review protocols (n=16) and two Delphi rounds conducted by the GEP project team members and partners. The results of the analysis of the existing review protocols have been described in the separate document (15). Based on the analysis and Delphi exercise (GEP, strand I workshop in the Woerden meeting, 4th February 2005) the first draft version of the European review protocol was created. In the first Delphi round the GEP participants were asked to comment the draft paragraphs. The Second Delphi round concentrated to the topics where consensus was not achieved in the first round. More detailed information on the results of the Delphi round is presented elsewhere (16, 17). Based on the feedback received from the participants (of the Delphi rounds) the first version of the European review protocol was developed. The further development of the protocol was done with the help of the feasibility test and third Delphi round at the 6th IUHPE Effectiveness Conference, in Stockholm, 1-4 June 2005 (17).

In the development it became obvious that those who have already experience with using protocols and the search-judge-advice process could use shorter items and would need less information to guide their work. As this protocol is to be used by institutes and professionals with less experience we have chosen to try to elaborate each step in such a way, that it is instructive for all users.

The protocol will be further developed in the near future. The further development will be made in close collaboration with the project participants and it will concentrate to the:

- Highlighting some of the provided examples (e.g. quality assessment) as the most reliable
- Concentrating to the development of the evidence grading for non-research information
- Including practical examples of the reviewing process by applying the protocol in practice to a certain topic (validation phase of the protocol)
- Developing training material and guidelines on how to use the European review protocol.
4 Instructions on how to use the European review protocol

The purpose of this review protocol is to describe the steps of the reviewing process with the help of answering questions. The reviewers using this protocol are suggested to familiarize first with the whole protocol before starting the reviewing process. Even if the reviewing process is presented in the chronological order as a process starting from the preparation phase and ending to the getting evidence into practice phase, the users of this protocol should be aware that different steps and phases described are overlapping and thus most of them are happening at the same time. Reviewing is a kind of learning process: often at the end only the implications of what seemed to be an easy question become clear. Regular feedback with the person who asked the question can help to keep the review on track.

The European review protocol can be used either on its own or besides the other existing review protocols or other review handbooks/guidelines. In addition, reviewers are recommended to familiarize with the additional information sources from other review handbooks/guidance manuals, particularly for issues relating to data analysis and quality assessment. Added value of using this European review protocol is to provide information for health policy decision making and HP/PH practice and also for situations where traditional research based evidence is not (yet) available and/or it’s not applicable in certain contexts. In addition, the GEP project acknowledges the practical know-how among practitioners and experts and their input in the knowledgebase of HP/PH. The European review protocol once it is tested and finalised provides a coherent and unified way of collecting and judging information for European HP/PH practice and thus enables the collaboration between different countries. The glossary (Appendix 2) and flow chart (page 13) will help the user of the protocol.

Conclusion: The European review protocol enables the reviewers to:

- Plan the reviewing process properly
- Be familiar with some of the key challenges of conducting reviews of HP/PH topics/issues
- Formulate an answerable review question
- Identify research information, non-research information as well as expert opinions and knowledge from practice, including developing strategies for searching these
- Evaluate the quality of the information collected
- Synthesize the body of evidence
- Formulate conclusions and recommendations from the body of evidence
- Participate in the process of getting evidence into practice in HP.
II European Review Protocol for HP/PH

About the reviewing process

The whole reviewing process has been divided into three main phases:

1. Preparatory phase
2. Conducting phase
3. Reporting and dissemination phase

Each of these phases includes critical steps which have been described in detail in the following chapters. The flow chart in page 14 describes the main phases and steps of the reviewing process. It can be used as critical step-list which to follow during the reviewing process. Each chapter e.g. description of the main phases of the reviewing process starts with the summary table of the main steps inside the phase. After the summary table the critical steps have been described more in detail with the help of critical questions and remarks.
## A flow chart of the reviewing process

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<tr>
<th>I Preparatory phase</th>
<th>II Conducting phase</th>
<th>III Reporting and dissemination</th>
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<tr>
<td>Plan the review</td>
<td>Scope possible classes of information sources</td>
<td>Write the report and disseminate it</td>
</tr>
<tr>
<td>Formulate the review question</td>
<td>Scope possible channels of finding information</td>
<td>Contribute to the process of getting evidence into practice</td>
</tr>
<tr>
<td>Select the reviewers</td>
<td>Develop a search strategy with relevant search terms and conduct the search</td>
<td></td>
</tr>
<tr>
<td>Form the advisory group</td>
<td>Select the most relevant information by applying the selection criteria developed</td>
<td></td>
</tr>
<tr>
<td>Decide resources (time &amp; money)</td>
<td>Assess the quality</td>
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<td></td>
<td>Extract the data</td>
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<td></td>
<td>Synthesise the information</td>
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<tr>
<td></td>
<td>Interpret the main findings</td>
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- Plan the review
- Formulate the review question
- Select the reviewers
- Form the advisory group
- Decide resources (time & money)
- Scope possible classes of information sources
- Scope possible channels of finding information
- Develop a search strategy with relevant search terms and conduct the search
- Select the most relevant information by applying the selection criteria developed
- Assess the quality
- Extract the data
- Synthesise the information
- Interpret the main findings
- Write the report and disseminate it
- Contribute to the process of getting evidence into practice
1 Preparatory phase
The reviewing process starts from the need of the review. Usually the need for a review (a review question) appears from HP/PH research, policy and/or practice (chapter 1.2). The decision on the best or most relevant reviewers depends partly on the subject area e.g. review question. In addition to agreeing on the reviewers (their skills and expertise required) the reviewer(s)and/or the order of the review have to agree on the questions related to the available resources e.g. persons involved, forming of an advisory group, and money and time available (18-20).

Main steps of the preparatory phase:

| Planning the review | † The need of the review appears from HP research, policy and/or practice in certain context  
|                     | † Plan the whole process with the help of flow chart |

| Formulating the review question | † Remember to formulate an answerable question
|                               | † Spend time to form the review question
|                               | † Use multiple expertise and also end-user perspective in scoping the review question
|                               | † Use the advisory groups experience
|                               | † Remember: "Ask an answerable question and you will get a good review"

| Selecting the reviewers | † Use at least two reviewers (select the most relevant reviewers with relevant expertise to carry out the review)
|                       | † The number and expertise required depends on the subject area as well as on the experience of the reviewers

| Forming the advisory group | † Use a comprehensive perspective when selecting the members of the advisory group
|                          | † The number and expertise required depends on the subject area
|                          | † The broader the HP/PH problem the wider the need of the experts with different backgrounds

| Deciding resources (time & money) | † Reserve a minimum of 6 months
|                                   | † Reserve adequate resources (money, time, expertise etc).

NOTE! THE STEPS IN THE PREPARATORY PHASE REPRESENT NO DISTINCT STEPS: IN PRACTICE THEY OFTEN OVERLAP AND HAPPEN SIMULTANEOUSLY!

1.1 Planning the review
Before starting the actual reviewing process the whole process has to be well planned. The flow chart in page 14 can be used as a starting point for this planning process. Before starting the reviewing process it’s good to have go through all the steps and have at least some kind of image who, how and what will be done and when. It’s good to notice that the process of reviewing has much in common with research processes: it shares the same emphasis on articulated questions to start with, clear designation of methods to tackle the question and a great awareness of how source of bias may influence the conclusions.
1.2 Formulating the review question

Why it is important to define the review question properly?
As was stated earlier the reviewing process starts from the need of the review. When reviewing
information for HP/PH topics/issues, especially for interventions, the main questions where the
answers are usually wanted for are:
1. Does the intervention work? (e.g. safety and cost effectiveness)
2. Does it matter? (e.g. appropriateness and satisfaction)
3. How does it work? (e.g. under what conditions, which factors contribute to effectiveness
   and acceptability) (12, 21)

Usually the need for a review (a review question) appears either from HP/PH research, policy and/or
practice. It is important that the question is well formulated before beginning the actual reviewing
process (e.g. collect studies, check whether studies are eligible, conduct the analysis etc. (12). A
clearly framed question will guide both the end-user of the review (in their initial assessment of
relevance of the review) and the reviewers (on how to conduct the reviewing process (12, 22, 23).
Carefully formulating the question contributes towards:
• Defining information for inclusion and exclusion (selection criteria, chapter 2.4)
• Determining the appropriate search strategy to be used (see chapter 2.3)
• Specifying the data elements that will need to be extracted from each information sources (see
  chapter 2.6)

Thus it is important to reserve adequate time and effort to define and form the review question (19, 20,
22, 23).

What to take into account when forming the review question?
According to most of the existing review protocols, the important facets to be considered when framing
precise review questions are:
1. population
2. interventions
3. outcomes relevant to the objectives of the review
4. designs of primary studies and quality of possible other documents that are suitable for
   addressing the review question (12, 14, 18-20, 22, 24-26).

A well-formulated review question should contain also discussion of the health problem and a
statement of the problem's significance. Presenting a brief overview of the question, including its
theoretical, practical, and methodological history e.g. an overview of the theoretical, conceptual,
and/or practical issues surrounding the problem is recommended (20). Identifying the review question
should be linked to the reflection of why the review is carried out and why the results are needed. It is
also good to notice that a well-formulated review question occurs in the context of an already formed
body of knowledge (already existing information, (20, 23) and thus it is important to identify subject
areas for searching by examining also the existing reviews and research. For example looking for review-level information (reviews of reviews) on the selected subject area can be used as a starting point.

**Who and what could help in forming the review question?**

Usually the review question is created in collaboration with the reviewers and the advisory group (see chapters 1.3 – 1.4). The involvement of end-users (HP/PH policy makers and practitioners etc.) to the scoping of a review question is fundamental to make the reviewing process feasible and its results more applicable to a certain context. The advisory group can also provide valuable assistance with scoping the review question (12). In addition, sometimes carrying out the qualitative (pilot) research/study might help to formulate the review question (e.g. selecting interventions and outcomes of interest to participants).

A good practical example and exercise on forming a review question can be found from the Cochrane’s health promotion and public health field instructions via [http://www.vichealth.vic.gov.au/cochrane/training/Unit%20Five%20to%20print.pdf](http://www.vichealth.vic.gov.au/cochrane/training/Unit%20Five%20to%20print.pdf). These instructions includes practical exercise on how to form answerable questions through describing the population (P), intervention (I), comparison (C), and relevant outcomes (O). In addition, it includes good discussion and examples on

1) Poorly designed questions:
   - ‘What is the best strategy to prevent smoking in young people?’

2) Answerable questions
   - ‘Are mass medias (or school-based or community based) interventions effective in preventing smoking in young people?’ (12)

The review question appears usually in a certain context. In these cases it is important to include also the specification of the context/situation in the review question:

- ‘Are mass medias (or school-based or community based) interventions effective in preventing smoking in young people in the new accessories countries of the EU?’

**1.3 Selecting the reviewers**

**How many reviewers?**

The number of the reviewers depends on the subject area or expertise needed. A basic rule is that reviews should NOT be done by one person alone that means minimum of two reviewers. Also other review protocols or handbooks recommend using at least two independent reviewers (18, 19, 22, 24-27).

However, the number of reviewers recommended varies from review to review. Depending on the review question/subject area it may be relevant to form a review team to perform the work instead of two independent reviewers (13). It should be noted however, that also in a review team one or
possibly two individuals should take the responsibility for overseeing the day-to-day work of the group as a whole. Whatever the case, the number of reviewers should be stated in the review (final product/report, (18, 19, 22).

What expertise is required?
Also the expertise and skills required from the reviewers depends on the subject area and review question. Ideally, one of the (at least) two reviewers should be an expert in the research field under study, whereas the other one preferably should be an outsider. However you can also consider an expert in policy and practice of that field (18, 19, 22). But be warned: It has been said that experts in a particular area frequently have pre-formed opinions that can bias their assessments of both the relevance and validity of the articles (19).

The need of the wide range of expertises in the reviewing process is essential in many health promotion and public health topics. Thus, when selecting reviewers a multidisciplinary approach should be adopted to ensure coverage of all relevant subject areas and viewpoints. Examples of the possible experts suitable for making reviews are for example:

- review methodologist
- information specialist/scientist and/or librarian
- expert in health measurements
- statistician oriented to medical and/or social sciences and preferably to HP/PH topics
- expert in health technology assessment / health economist
- researcher with experience with qualitative and/or quantitative research
- epidemiologist oriented to medical and/or social sciences and preferably to HP/PH topics
- HP/PH subject area specialist
- political scientist/expert
- HP/PH practitioners.

Whether the most relevant reviewer appears to be a researcher, policy maker and/or a practitioner it is essential to ensure that the person selected to carry out the actual reviewing process will have at least sufficient knowledge on research and/or reviewing process.

What is the role of the reviewers?
Reviewers (or a team of reviewers) carry out the reviewing process in collaboration with (if necessary) librarian, information specialist, statistician, subject area specialist and advisory group. The tasks of the reviewers include:

- planning the review
- forming the review question in collaboration with the advisory group
- forming the inclusion criteria and the search strategy
- collecting the relevant information in collaboration with information specialist and advisory group (if necessary)
• assessing the quality of the collected information
• extracting the data
• synthesising the results
• writing the final versions of the review
• taking part to the dissemination of the results.

The reviewers are responsible for the day-to-day work of the reviewing process. The collaboration with others (e.g. librarian, statistics specialist) depends partly on the reviewers’ experience and skills and partly on the subject area/review question. As the review process is a project in itself, a clear delineation of responsibilities on project management is also important.

1.4 Forming the advisory group

How many people to involve?
The advisory group of the reviewing process includes different experts who help the reviewers in the reviewing process. It is beneficial/advisable to form the advisory group as soon as the subject area and topic of the review has been selected or is clear (18-20, 23). There is no general consensus or advice on the number of the people to be involved in the advisory group. It depends on the subject area or expertise needed. A smaller advisory group (minimum of three people) may cover all necessary areas and be easily manageable (13, 23). However, sometimes e.g. when the review question is multidimensional and covers broad and multidisciplinary health promotion/public health problems the advisory group may include even 15 to 20 persons (12, 28). The Effective Public Health Project (29) recommends using a six person’s advisory group: a six person advisory group has been found to cover most often all the necessary areas and be still manageable.

What expertise is required?
Systematic reviews are more likely to be relevant and of higher quality if they are advised by people with a range of expertise, in terms of both topic and the methodology (22). The members of the advisory group should be:

1. familiar with the HP/PH topic / subject area (12, 14)
2. familiar with the methodological questions (12)
3. and include policy makers, possible funders, HP/PH practitioners and potential end-users’ (also lay people) perspectives (12, 20, 23).

It is good to keep in mind that where possible, the advisory group members should reflect a range of opinions and not one particular perspective (14, 23, 30). In addition, special attention should be paid to the involvement of potential end-users of the review. Gaining significant input from the end-users of the review will help to bring about a review that is more meaningful, generalizable and potentially more accessible and usable (12, 20, 23). Promoting public involvement in NHS, public health and social care research website (www.invo.org.uk (31) includes further information on how to involve end-users in research. These instructions can also be adapted when forming an advisory group.
An international perspective may also be useful in forming the advisory group (23). For example, to increase the relevance of reviews, reviewers could also consult health professionals in other (European) countries whenever relevant.

What is the role of the advisory group?
The advisory group helps the reviewers make necessary but difficult decisions, such as;

- scope the most relevant review question regarding the topic/subject area chosen
- making and refining decisions about the interventions of interest, the populations to be included, priorities for outcomes and, possibly, sub-group analyses
- providing or suggesting important background material that elucidates the issues from different perspectives
- helping identify relevant literature – especially grey literature – and to evaluate and suggest changes in the final review of published reviews
- helping to interpret the findings of the review
- designing a dissemination plan and assisting with dissemination to relevant groups
- monitoring the progress of the reviewers
- reviewing the final document
- advising the process of getting the evidence into practice.

Generally, there are no set guidelines on how much involvement the advisory group should have in the development of the review, this depends on the reviewers and how much input they feel is necessary (13). In addition, people of the advisory group can be consulted either individually, or as a group (14). Job descriptions and role specifications of the advisory group may help to clarify expectations, both the reviewers and advisory groups. A good work sheet to identify the roles and involvement of the advisory group members in the each stage of the reviewing process can be found for example from the IDM protocol (32), http://idmbestpractices.ca/pdf/evidence_IDM_10-04-02_dist.pdf and from Promoting public involvement in NHS, public health and social care research website (31) www.invo.org.uk. Information on how to find the possible HP/PH experts and practitioners can be found also from the chapter 2.1.

An advisory group is often a formal appointed group that meets several times at predesignated moments of the review process. However the possibility to seek feedback from people in a less formal way could also be considered: it lead to advisory teams that meet once, only to assist in exploring certain issues.
1.5 Deciding resources

How much time to reserve for the reviewing process?
Conducting a review is usually a time-consuming task. There is no research available on the overall time needed to complete a health promotion and public health systematic review (12). The amount of time required will vary, depending on the topic (review question), the number of studies, the methods used, the experience of reviewers and the types of support provided by the advisory group etc. The estimations of the required time vary from 6 to 24 months. (12, 20, 22, 23)

It can be said that a minimum of six months (full time work) should be reserved for carrying out a review (12, 24, 33). A shared European effort to keep certain reviews updated may help to lay the foundations for more efficient reviewing. However, it should be noted that the health promotion and public health review(s) may require longer time due to less standardised definitions (e.g. concepts, terminology) and the need to search multiple databases, reference lists and consultation with experts ((12), see also chapter 2.1).

What could help to plan the process and divide the time properly?
A timetable with specified target dates for accomplishing key tasks may help to plan the whole reviewing process and divide the time effectively (20, 23). When clarifying the timetable for the reviewing process the reviewers (in collaboration with the advisory group) should take into account the steps of the reviewing process (see the flow chart, page 13) and also the possible need for training of the reviewers and advisory group members (e.g. methodology and/or contents/them of the review) as well as the time needed for the meetings between the reviewers and advisory group.

How much money is needed for reviewing process?
Reviews should be undertaken according to rigorous methods (e.g. using at least two reviewers, systematic searching of information etc.) and therefore require an appropriate level of resources (22). When planning the budget of the review it is good to consider the existing and also potential resources:

- resources needed (people, skills, collaborating partners, time, commitment and enthusiasm, positive dynamics in working together, money, organizations, tools, sources of information, space, equipment etc.)
- resources currently available and accessible
- resources not available but might be able to get (e.g. potential sources of funding, (32).
The budget of a review project should include for example the following items:

- Salaries of the reviewers and possible fees of the advisory group
- Possible salaries of the librarians or information specialist (help for the database searches etc.)
- Salary of a possible research assistant (assess studies for inclusion, assess the quality of included studies, obtain data and conduct analyses)
- Possible salary of the statistician (support for synthesising (if appropriate) the results of the included studies)
- Equipment (e.g. computing hardware and software)
- Supplies and services (long distance telephone charges, facsimiles, paper, printing, photocopying, audio-visual and computer supplies)
- Administrative support
- Translation costs (if needed)
- Travel funds (of the advisory group, reviewers)
- Possible consultancy costs for areas of expertise not available in the review team
- Dissemination (costs for arranging conferences and seminars, and/or producing electronic and printed media for dissemination, (13, 14, 22).

In developing a budget for the reviewing process, it is good to ask help from the finance staff.

2 Conducting the review

Searching for information for a certain review question starts from the development of the search strategy (chapter 2.3). The review question defines the main frames (and methods) for the search strategy: the question asked determines the most relevant information sources as well as the channels where the information can be found. Thus it is essential to think (and know) what information can be used for this specific HP/PH question and where to find the information before the actual development of the search strategy.

The review question determines also the selection criteria e.g. the inclusion and exclusion criteria which are also essential part of the search strategy. After searching and selecting the most appropriate information for the review the reviewers have to assess the quality of the information before synthesizing it and interpreting the results.
Main steps of the conducting phase:

| Scope possible classes of information sources | ✫ Start the development of the search strategy by thinking about the possible information sources  
✫ Take the review question as guidance’ (population, outcome, intervention) |
| Scope possible channels of finding information | ✫ Scope the possible channels where the information can be found  
✫ Start thinking of possible research information sources but think also what are the possible sources of information other than the research sources relevant for your review question |
| Develop a search strategy with relevant search terms and conduct the search | ✫ Design the search strategy by using the most appropriate search terms coherent with the review question and keep in mind also your selection criteria  
✫ Develop search strategies for identified information sources e.g. use multiple search terms and remember to create own search terms for different databases e.g.  
✫ Choose the most relevant information sources identified for the topic and relevant for the review question  
✫ When ever relevant cooperate with the advisory group  
✫ Search comprehensively:  
• Start from research information  
• If you do not find information from research / your question requires information on e.g. context continue your search from other sources such as non-research, expert opinion etc.  
✫ Remember to save your search results (search history) |
| Select the most relevant information by applying the selection criteria developed | ✫ Use your selection criteria developed  
✫ Selection of the information has to be in line with the review question  
✫ Discuss with the advisory group on the selection of the non-research information |
| Assess the quality | ✫ Assess the quality of information by using some of the existing quality assessment tool/checklist  
✫ Check also the quality of the interventions included  
✫ Grading systems for comprehensive evidence including both non-research and research information are under development |
| Extract the data | ✫ Develop your own form or use some of the existing data extraction forms |
| Synthesise the information | ✫ Synthesise the main findings |
| Interpret the main findings | ✫ Describe characteristics HP/PH interventions’ effectiveness and theory basis  
✫ Describe applicability of the results and list the main things learned from the reviewing process |
2.1 Scope possible classes of information sources

The decision regarding which information to include in the review should be led by the review question or methodological appropriateness, and not vice versa. If the review question has been well formulated then the knowledge of the types of information (e.g. study designs, grey literature, expert opinions) needed will automatically follow (21). It is essential to keep in mind that different information sources can be used (e.g. be most feasible) for different questions. For example, in order to assess the effectiveness of an intervention (what works and how well) the research literature (peer reviewed research) may give the most appropriate answers. However, sometimes the information from research literature can not be found or does not exist or does not give relevant information on e.g. context and on what works in practice. Thus also non-research (e.g. grey literature; documents, evaluation reports etc.) may have to be searched (however, knowing that the strength of the evidence presumably would be weaker). If the review question posed concerns for whom the intervention works for and under which circumstances, the research literature may not give enough (or any) answers. In these cases the knowledge from practice and experts may help the reviewer to perform the search of information and to find the information most suitable for the certain context.

Basic instruction is that for HP/PH reviews information can:

- be derived from a wide variety of information sources, including research information and expert opinion among others, and from a wide variety of methods (e.g. qualitative and quantitative) (32)
- be either published or unpublished
- include results/outcomes related to not only to the past and but also to current HP/PH practices (32).

NOTE! Some reports do not offer data on the context of the events reported and also data on organisational effort is often not given. To judge the outcomes you need an idea of the investments required. Also check in what time and place the study was executed. What worked there and then will not necessary work here and now.

Where to start?

Usually it is essential to start the reviewing process by looking what has already been studied on the subject. Thus review-level information (reviews of reviews) can be used as a starting point when collecting information. As HP/PH topics are multidisciplinary and multi-sectorial, also reviews of reviews on other fields such as education, social sciences, policy and marketing etc. may be good to be searched.

NOTE! The first search or the first glance on the review topic can cause the reformulating of the review question!
Which study designs are appropriate for which review questions?

Depending on the review question different research information (different study designs) can be included in the review. There are lots of instructions on which study designs are appropriate for which questions. For example, it has been noted that:

- Randomised Control Trials, RCT’s are best for questions of effectiveness (did it work?), safety and cost effectiveness
- Qualitative studies and surveys are best for questions of salience (does it matter?), appropriateness and satisfaction
- Qualitative studies alone are best for questions concerning process (how does it work?) and acceptability (21).

Further information on which study designs are appropriate for which questions can be found for example from The IDM Manual for Using the Interactive Domain Model Approach to Best Practices in Health Promotion - Research & Evaluation

http://idmbestpractices.ca/pdf/research_evaluation_IDM_06-04-02_dist.pdf (34)

When considering which study designs are good for which questions the reviewers should keep in mind that every study design has strengths and limitations. Information (evidence) produced by one type of research design is not necessarily better than information produced by another kind of research design (32, 34). The appropriateness of the study designs for certain review depends mainly on the review question. A short description of different study designs is presented in Table 1.
Table 1. Short descriptions of different study designs (12).

<table>
<thead>
<tr>
<th>Study Design</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Randomised controlled trial</strong></td>
<td>Subjects are randomly allocated to groups either for the intervention being studied or the control (using a random mechanism, such as coin toss, random number table, or computer generated random numbers) and the outcomes are compared. Each participant or group has the same chance of receiving each intervention and the investigators cannot predict which intervention is next.</td>
</tr>
<tr>
<td><strong>Quasi-randomised controlled trial / pseudo-randomised controlled trial</strong></td>
<td>Subjects are allocated to groups for intervention or control group using a non-random method (such as alternate allocation, allocation of days of the week, or odd-even study numbers) and the outcomes are compared.</td>
</tr>
<tr>
<td><strong>Controlled before and after study / cohort analytic</strong></td>
<td>Outcomes are compared for a group receiving the intervention being studied, concurrently with control subjects receiving the comparison intervention (e.g. usual or no care/intervention).</td>
</tr>
<tr>
<td><strong>Uncontrolled before and after study / cohort study</strong></td>
<td>The same group is pre-tested, given an intervention, and tested after the intervention. The intervention group, by means of the pre-test, acts as their own control group.</td>
</tr>
<tr>
<td><strong>Interrupted time series</strong></td>
<td>A time series consists of multiple observations over time. Observations can be on the same units (e.g. individuals over time) or on different but similar units (e.g. student achievement scores for particular grade and school). Interrupted time series analysis requires knowing the specific point in the series when an intervention occurred. These designs are commonly used to evaluate mass media campaigns.</td>
</tr>
<tr>
<td><strong>Qualitative research</strong></td>
<td>Qualitative research explores the subjective world. It attempts e.g. to understand why people behave the way they do and what meaning experiences have for people or to understand interrelations of determinants, or changes in social systems. Qualitative research relevant to effectiveness reviews may include the following: Qualitative studies of experience: these studies may use a range of methods, but frequently rely on in-depth tape-recorded interviews and non-participant observational studies to explore the experience of people receiving an intervention. Process evaluations: these studies can be included within the context of the effectiveness studies. These evaluations use a mixture of methods to identify and describe the factors that promote and/or impede the implementation of innovation in HP/PH interventions or services.</td>
</tr>
<tr>
<td><strong>Combined research</strong></td>
<td>Increasingly combinations of designs are being used to see a problem from several perspectives.</td>
</tr>
</tbody>
</table>
What is the added value of using other types of information?

1. Qualitative research
   Special attention should be paid to the possibilities of including qualitative research/studies to the review whenever relevant. Qualitative research/studies can contribute to reviews of effectiveness of HP/PH interventions or policies in number of ways such as:
   - helping to frame the review question
   - identifying factors that enable/impede the implementation of the intervention (e.g. human and contextual factors)
   - describing the experience of participants receiving the intervention
   - providing participants’ subjective evaluation of outcomes
   - helping to understand the diversity of effects across studies, settings and groups
   - providing a means of exploring the fit between subjective needs and evaluated interventions to inform the development of new interventions or refinement of the existing ones.
   - adding background information (12, 14, 19, 20, 23, 28).

2. Non-research information
   Finding out about non-research information (e.g. government reports, governmental and non-governmental evaluation reports, conference proceedings, abstracts, graduate school theses), and including it in the review, when eligible, may be important to minimise publication bias meaning that only e.g. positive results of effective interventions will be published (22, 24). In addition, it can provide valuable information for reviews and help in linking the subject to the specific context as well in enhancing the applicability of the results of the review.

3. Expert opinion
   Information from experts such as HP/PH researchers, policy makers etc., is one way to identify relevant published and especially unpublished studies (e.g. non-peer reviewed) as well as non-research information (22, 24, 35). For example, colleagues can be an important source of information on unpublished studies, and sometimes be the only means of identifying unpublished data (22, 24). In addition, contacting experts or other key actors in the field of HP/PH may be useful in order to obtain directly information on: the effectiveness or efficiency of HP/PH interventions such as community health interventions under review, and key issues and possible consequences of interventions and ethical considerations. (12, 26)

4. HP/PH practitioners
   The most recent review protocols have started to face the challenge of widening the evidence base into practice. For example, HDA has included in its evidence briefing process meetings with practitioners (36). Also information from practice surveys and reports conducted by practice level actors may be included as a source of information (12, 37). In some cases, for
example, data collected routinely by public health units, hospitals and federal HP/PH organisations and agencies can be used to assess the burden of disease or potential improvement in health (26). Administrative processes in institutions can help to identify investment levels. The need of using HP/PH practitioners as a source of information is especially relevant in the review questions concentrating on the specific context and interventions.

5. “Lay people”

All people are experts in one field and lay in many others. In some cases also involvement of the general public as end-users of the HP/PH services and key-members of community can be included in the reviewing process e.g. advisory group (32). In cases for example, when research information is lacking lay people can provide further perspectives to the whole reviewing process and give ideas also for sources of information. Lay people may also provide some information and aid concerning the getting evidence into practice phase of the reviewing process (see chapter 3.2). For example consulting lay people could allow exploring the acceptability of the interventions, the perception of interventions and the place of interventions compared with other interventions in different settings.

**NOTE!** Even if the HP/PH experts and practitioners as well as lay people are instructed to be contacted when relevant it should be noted that their strong opinions are not seen as a source of rigorous unbiased evidence.

2.2 Channels of finding information

The search for HP/PH information has to be done by using several databases and by covering possibly also hand search, searching grey literature and information from research registers as well as the possible consultation of HP/PH experts and practitioners (38, 39). The channels needed to be searched depend on the review question and subject area. The presented databases and list of journals etc. are only examples of the possible channels of finding information. It should be noted that also national databases and other channels can be included in the search (depending on the review question and context).

**What electronic literature databases can be searched?**

Reviewers should ensure that the search strategy is developed for a number of databases covering the variety of domains where the literature may be located. Table 2. includes an examples of the databases relevant to the HP/PH topics (12). In addition, good examples of the free public health databases and subscription-only databases are available at http://library.umassmed.edu/ebpphasph/freephdbs.cfm.¹

¹ Note: The databases and their addresses change frequently, and thus the list needs to be updated frequently
Table 2. Examples of the electronic databases relevant for HP/PH topics

Psychology: PsycINFO/PscyLIT


Sociology: Sociofile, Sociological Abstracts, Social Science Citation Index

Education: ERIC (Educational Resources Information Center), C2-SPECTR (Campbell Collaboration Social, Psychological, Educational and Criminological Trials Register) http://www.campbellcollaboration.org, REEL (Research Evidence in Education Library, EPPI-Centre) http://EPPI.ioe.ac.uk

Transport: NTIS (National Technical Information Service), TRIS (Transport Research Information Service) http://ntl.bts.gov/tris, IRRD (International Road Research Documentation), TRANSDOC (from ECMT (European Conference of Ministers of Transport)

Physical activity: SportsDiscus

HP/PH: BiblioMap (EPPI-Centre) http://EPPI.ioe.ac.uk, HealthPromis (HDA, UK) http://www.hda-online.org.uk/evidence/, Global Health

Other: Popline (population health, family planning) http://db.jhuccp.org/popinform/basic.html, Enviroline (environmental health) – available on Dialog, Toxfile (toxicology) – available on Dialog, Econlit (economics)

Qualitative: ESRC Qualitative Data Archival Resource Centre (QUALIDATA) (http://www.qualidata.essex.ac.uk), Database of Interviews on Patient Experience (DIPEX) (http://www.dipex.org).

Policy: Scan relevant sources using links provided by misters, advisory group etc.

When is it advised to hand search and what journals to search?
Hand searching of journals is an option than can be done whenever relevant, for example, when it is not possible to locate information from the electronic literature databases (37). Notice that sometimes especially the HP/PH intervention studies are not indexed with terms that allow them to be easily identified. In addition, hand searching offers a possibility to find the newest articles/reports that are not yet included in the electronic databases.

If the reviewers are to start the hand searching it should be taken into account in the timetable. Hand searching of journals is time-consuming involving a manual page-by-page examination of the entire contents of a journal issue to identify all eligible articles and reports (14).
The selection of the journals that are good to be hand searched depends on the review question. Effective Public Health Practice Project in Canada (http://www.city.hamilton.on.ca/PHCS/EPHPP/default.asp) has listed the most productive HP/PH journals:

<table>
<thead>
<tr>
<th>Journal Name</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Journal of Health Promotion</td>
<td><a href="http://www.ajhp.org/">http://www.ajhp.org/</a></td>
</tr>
<tr>
<td>American Journal of Preventive Medicine</td>
<td><a href="http://ajp.sagepub.com/">http://ajp.sagepub.com/</a></td>
</tr>
<tr>
<td>BMJ</td>
<td><a href="http://www.bmj.com/">http://www.bmj.com/</a></td>
</tr>
<tr>
<td>Other useful journals include Annual Review of Public Health, Health Education and Behaviour (formerly Health Education Quarterly), Health Education Research, JAMA, Preventive Medicine, Public Health Reports, Social Science and Medicine.</td>
<td></td>
</tr>
</tbody>
</table>

Good list of journals are also available from:
1) The Lamar Journal Soutter Library list of public health journals: http://library.umassmed.edu/ejournals Faction.cfm
2) The Core Public Health Journals List compiled by Yeal University: http://www.med.yale.edu/eph/library/phjournals/ (Coch_hp)

In addition, the following journals may be good to be scanned through:

- Critical Public Health http://www.tandf.co.uk/journals/authors/ccphauth.asp
- Health Education Journal http://www.hej.org.uk/
- Health Education Research: Theory & Practice http://her.oupjournals.org/
- Health Promotion International http://heapro.oupjournals.org/
- Health Promotion Practice http://www.sagepub.com/journal.aspx?pid=238
- Journal of Epidemiology and Community Health http://jech.bmjournals.com/
- American Journal of Community Psychology,
- Health and Social Care in the Community,
- Canadian Review of Social Policy.

Also in the hand search the multidisciplinary nature of HP/PH topic should be taken into account. Besides health promotion and public health journals it is sometimes (depending on the question and context) good to search also non-health promotion and public health journals, which may cover the topic of interest (e.g. marketing, policy journals etc.) and also topic specific journals such as journals concentrating on the nutrition, AIDS etc. (12).

**When is it advised to search for research registers and what registers to search?**

In some cases research registers on the topic area can offer information that cannot be found from the electronic literature databases and are thus good to be searched. However, the added value of searching research register depends on the review question.

There are not so many research registers relevant for HP/PH. However, for example central register of controlled trials; TrialsCentral™ (www.trialscentral.org ) and Current Controlled Trials (www.controlled-
trials.com) may offer some future information on ongoing RCT studies also on HP/PH topics. The Trials Register of Promoting Health Interventions (TRoPHI, http://eppi.ioe.ac.uk/EPPIWeb/home.aspx?Control=Search&SearchDB=trials&page=/hp/ ) is a web-based database that holds all of the randomised controlled trials and controlled trials (non-randomised) identified as a result of conducting systematic reviews within the EPPI-Centre. It currently contains over 1,000 trials.

When is it advised to search grey literature and where to search?
Grey literature e.g. documents, governmental reports etc. offer also a good source of information for HP/PH topics. Especially when information on the topic can not be find through electronic literature databases.

Methods to find grey literature are e.g.:
- Scanning reference lists of relevant studies
- Contacting HP/PH authors/academic institutions of key studies (un-published)
- Searching theses, conference proceedings; one source of dissertations and theses is the Networked Digital Library of Theses and Dissertations, NDLTD: http://www.ndltd.org/
- Searching the internet
- Searching the key HP/PH organisations;
- Searching for evaluation studies and reports

There are also some databases including grey literature: For example SINGLE, NTIS, Health Management Information Consortium -CD-ROM, British National Bibliography for Reports literature, Spriline, dissertation Abstracts, Conference paper index, Index to Scientific and Technical Proceedings include grey literature.


When is it advised to do a free internet search?
Internet is useful in finding information on relevant organizations and experts. In addition, free internet search is a good way to find non-research information. A useful search engine for locating academic work is Google Scholar (http://scholar.google.com). In addition, search engines such as Copernic, Dogpile, MedNet, NSABP Medical Search Engines, Northern light and Scirus can be searched. Also Google, AltaVista and Yahoo can be used for searching further information on the topic. (19, 37, 40)

When searching the internet the reviewers should keep in mind the critical evaluation of resources (how to know what www-pages are good and reliable). Good sources on how to evaluate the information via Internet can be found for example through the WWW Virtual Library http://www.vuw.ac.nz/staff/alastair_smith/evaln/evaln.htm. In addition also the Health on the Net Foundation Code of Conduct (HONcode) has elaborated the Code of Conduct to help standardise the
reliability of medical and health information available on the World-Wide Web. More information on the HONcode can be found via http://www.hon.ch/home.html. Searching information through Internet is very time-consuming and the search terms may differ from the terms used in the database search. Thus the consultation of information specialist/person experienced with the internet search is recommended.

When is it necessary to contact experts and/or HP/PH practitioners and where to find them? HP/PH experts (researchers, policy makers and practitioners) usually have the newest information on the ongoing projects and interventions, and in addition, they have experience on what really works in HP/PH practice in a certain context. The experts and practitioners are also good sources to identify completed but unpublished studies and other relevant information sources. Thus contacting HP/PH experts and practitioners is recommended whenever relevant for the review question.

HP/PH experts and practitioners can be found for example through Internet search or through contacting the local, national and/or international HP/PH organisations and agencies. A good source of finding the HP/PH authorities and organisations is for example HPSource.net databases (http://www.hp-source.net/index.html including for example an overview of HP per country). Also HPRIN, Health Promotion Researcher Internet Network (http://www.phs.ki.se/hprin/Default.htm) provides links to Health Promotion Research Centres, Schools of Public Health and other Internet Resources of Interest for Exchange of Health Promotion Experiences or of Public Health Interest. HPRIN also manages a mailing list for group discussions.

Formal letters (also e-mail) of request for information, phone interviews and also possible meetings with experts are good ways of collecting the information as well as expert opinions. Also e-mail discussion lists (personal contacts) are possible ways of finding further information.

NOTE! Please remember to check also the references of the information found in the search results.

2.3 Search strategy

When developing a search strategy the following aspects should be taken into account:

- The review question/subject to be searched
- Selection criteria (inclusion and exclusion criteria, see chapter 2.4)
- The most relevant information sources identified for the topic (see chapter 2.2)
- Search strategies for identified sources

As stated earlier the searching for information depends on the review question. Usually the search is started from the research information sources and includes, if relevant, also sources of non-research information. Sometimes if the information cannot be found from these sources, contacting experts may be the only option to obtain information or new sources of information. For each type of information (research literature, non-research literature and expert opinion) it is recommended to form own search strategy.
How to form a search strategy?
Searching for primary studies and other information on HP/PH topics can be a time-consuming task, as a search strategies will need to be adapted for a number of databases and cover possibly the consultation of experts. In addition, the existing databases and keywords are typically not well suited for finding information on HP/PH intervention studies efficiently (37). Reviewers should thus ensure that the search strategy is developed for a number of databases that cover the variety of domains where the literature may be located. In addition, reviewers need to take into account that the HP/PH terminology may not be very specified and standardised.

The construction of a search strategy should be based on the components of the review questions, i.e. populations, interventions, outcomes along with the study designs and other possible information sources being considered (12, 14, 20, 22-24). However, when considering the most feasible search terms, the reviewers should be aware that outcomes are described in many different ways and may not be described in the abstracts of the articles (12, 19).

Good examples of the search terms and search strategies have been presented in:

| 1. Systematic Reviews of Health Promotion and Public Health Intervention Handbook (health promotion and public health interventions(12): |
| 3. HDA Manual (13), for review-level information): http://www.hda-online.org.uk/evidence/ebmanual_pqs.html |

Notice that the search can be limited to cover a certain time period if relevant. The most appropriate time period for the search depends on the question, availability of information, development of the field etc. If there are no strict requirements for the time period it may be good to limit the search to 5 to 10 years.

Languages to be included in the search strategy depend on the review question and context, but also on the language skills of the reviewers and/or other resources available (e.g. translation costs). The main instruction is that information in all relevant languages should be included (18, 19, 22). Sometimes if seen necessary translation of the most important articles can be considered. When creating the search strategy it is advisable to keep in mind that it is usually good to search both international and national sources. However, evidence collected should not be restricted to the national language without a good reason. If different languages are used, multilingual reviewers are wise to involve in the reviewing process.
What to take into account when developing a search strategy for research information?
It is important that the search for research literature (primary studies) is extensive, otherwise reviews risk producing biased and/or imprecise estimates of effects. To develop a thorough search strategy, it is advisable that reviewers and librarians work together to identify search terms and sources to be searched. Usually comprehensive searching can only be achieved by using a variety of search methods (both computerized and manual) and searching multiple, possibly overlapping, sources of studies.

What to take into account when developing a search strategy for non-research information?
Basically the instructions on searching non-research information are the same as described above. Especially if the non-research information has been published (searched from electronic databases such as grey literature databases) similar rules apply as for research literature. The search strategy of non-research should pay attention to the context/setting and be coherent with the review question. Pay also attention to the selection criteria relevant to non-research information and the topic area. The assistance of an information specialist in identifying the non-research literature is strongly recommended. In addition it is recommended to discuss the search terms and possible sources with other reviewer/s as well as with the advisory group. If the research question requires (e.g. the context) co-operation with other countries it is even strongly recommended.

What to take into account when developing a search strategy for practical knowledge (e.g. experts/lay people)?
Especially when searching information on review question on what works and under what circumstances reviewers in collaboration with advisory group should be prepared for searching consensus statements and other expert opinion on the topic. Expert opinion and opinions of practitioners may provide additional information which helps to put the findings in the specific context. There is no standard rule which experts should be consulted: it depends on the review question (see chapter 2.1 and 2.2). However, it is recommended that the reviewers in collaboration with the advisory group agree on the possible need and use of the expert opinion. In addition, the assessment of the quality of the information (see chapter 2.5) has to be agreed before contacting experts.

General instructions
Although the majority of searching will be undertaken at the beginning of the review, a series of updating searches may need to be scheduled to take place near the end of the project. A systematic approach to recording the search results will help to keep the review on track. The search history should be well documented and search results should be saved and retained for future potential re-analysis. A reference management system will facilitate the work and save time.
2.4 Selection criteria

How to create the selection criteria?
The selection of information is done after the search process with the help of selection criteria. The creation of the selection criteria is good to be done or at least started at the planning phase of the review (when considering the review question). Reviewers in collaboration with the advisory group define the criteria (coherent with the review question and the topic). The aim of the selection of the information is to identify those articles and documents etc. that help to answer the review question. Therefore, selection criteria (e.g. inclusion and exclusion criteria) for the information (e.g. studies, documents etc.) should be in line with the review question and they should be defined in terms of:

- population
- interventions/HP approaches
- outcomes
- study designs and/or type of information source.

For example the question: ‘Are mass medias (or school-based or community based) interventions effective in preventing smoking in young people in the new accession countries of the EU?’

INCLUSION CRITERIA:
- population: young people, age xx
- interventions /HP approaches: mass medias (or school-based or community based) interventions
- outcomes: Smoking; prevention of smoking/ stopping smoking
- study designs and/or type of information source: relevant research information and information for context from the non-research information, expert opinions

In some cases judgments to include information may be based also on characteristics of the intervention, depth of available literature, theory, and/or other considerations such as empowerment and equality. But the basic rule is that the selection of information must be relevant to the current review question, specific situation, population, outcomes, research designs, and/or type of information source (and best practices initiatives).

The selection criteria are basically the same for all information sources e.g. research information and non-research information. However, when the searching information concerns also non-research information and possible contacts of experts also the quality of the information sources as well as the quality of the information itself should be evaluated already in the selection phase (at some level). For example, when finding some documents/reports through internet search, which fit with the inclusion criteria it is useful to read them critically paying attention to the writer, publisher/sources, references, resources used and also to the outlook of the report. In addition it is recommended to discuss with the advisory group on the findings before including the non-research material and expert opinion to the review.
How to do the selection of the information in practice?

When selecting the studies from the search result at first it is good too look at the headings, and then the abstracts or summaries of the articles/reports/documents and try to see if all the relevant inclusion criteria are fulfilled. If the heading and abstract give the impression that the article/document etc. fulfils the criteria, it is included in the review and read through. To be included in the review, a study or document needs to meet all inclusion criteria (and no exclusion criteria). However it is good to notice that also excluded studies may have a very useful contribution elsewhere, even though they are not considered relevant for the current review.

2.5 Quality Criteria

After the most relevant information has been selected by using the selection criteria (see chapter 2.4), the assessment of the quality of the information follows. The quality assessment of the collected information is important to determine a minimum quality threshold for the selection of both research information (e.g. primary studies) and other information. In addition, quality assessment of the information collected makes it possible to explore quality differences as an explanation for heterogeneity in the study results, and to weigh the study results in proportion for the synthesis phase. Quality assessment guides also the interpretation of findings and aids in determining the strength of inferences. (14)

2.5.1 Quality criteria for research information

How to assess the quality of quantitative studies?

Number of quality assessment tools has been developed to assess the quality of research information for the reviews. The reviewers are asked to familiarize themselves with the given examples and use some of the existing quality assessment tool/checklist when assessing the quality of quantitative research information:

- The Effective Public Health Practice Project (29), Canada has developed a Quality Assessment Tool for Quantitative Studies [http://www.city.hamilton.on.ca/PHCS/EPHPP](http://www.city.hamilton.on.ca/PHCS/EPHPP). The tool includes components on study integrity and takes between 10-15 minutes to complete. The use of this tool is strongly recommended by the Cochrane’s Health Promotion and Public Health field (12)
- Health Evidence Bulletins Wales. A systematic approach to identifying the evidence. Project methodology 5.(40) [http://hebew.uwcm.ac.uk/projectmethod/Project%20Methodology%205.pdf](http://hebew.uwcm.ac.uk/projectmethod/Project%20Methodology%205.pdf) includes quality assessment tools for different study designs (systematic reviews, RCT, interventional studies, observational studies, qualitative studies, economic evaluations and for guidelines)
- CRD Report (14) [http://www.york.ac.uk/inst/crd/report4.htm](http://www.york.ac.uk/inst/crd/report4.htm) includes good instructions on developing a quality assessment instrument as well as list of question for quality assessment of experimental studies, observational studies, and qualitative studies.
Reviewers may also choose of a number of checklists available to assess the quality of qualitative research, including:

- CASP appraisal tool for Qualitative Research  
  http://www.phru.nhs.uk/casp/qualitat.htm
- CDR Report (14)  
  http://www.york.ac.uk/inst/crd/report4.htm refers to many different quality assessment tools of qualitative research:
  - Poppay et al. (41) Rationale and standards for the systematic review of qualitative literature in health service research.
  - Mays N. & Pope C. (42) Rigour and qualitative research
  - BSA group: Criteria for the evaluation of Qualitative research papers (43).
- EPPI Centre 12-list question: appraisal of process evaluations:  
- Health Evidence Bulletins Wales. A systematic approach to identifying the evidence. Project methodology 5. (40)  
  http://hebw.uwcm.ac.uk/projectmethod/Project%20Methodology%205.pdf includes quality assessment tools for different study designs (systematic reviews, RCT, interventional studies, observational studies, qualitative studies, economic evaluations and for guidelines)
- A framework consisting of 18 appraisal questions (44)  

**NOTE!** At the moment there is no consensus on what of the exiting quality assessment tools the GEP project recommends using either for quantitative or qualitative research information. Notice also that unpublished studies (non-peer-reviewed) are subject to the same evaluation process as published studies.

**NOTE!** In addition to quality assessment of the review material as such, the quality of the interventions included in the review material needs to be judged by using relevant criteria (see the GEP, Strand 2 QA-tool, the must to do list will be developed in collaboration with Strand II, in GEP phase II)

### 2.5.2 Quality criteria for non-research information

**How to assess quality of other information than from research?**

Other reports than research should be assessed by the whole review team (e.g. reviewers in collaboration with advisory group). Also the decision on whether the results and findings presented should be included in the review should be done in collaboration with the advisory group.
Non-research information (grey literature) in the form of reports from studies that are not published in scientific journals can be evaluated in the same way as published research information. Appraisal could be done by using the appraisal tools for qualitative research designs. However, there are no set guidelines on how to assess the quality of non-research information (other than studies, e.g., governmental documents, evaluation reports, etc.). The quality assessment of non-research information is partially based on the critical reading (e.g., evaluating who is the writer, publisher, how the document has been written and referred, etc.). If the document describes the evaluation of some HP/PH interventions, it is good to evaluate also for example the intervention itself; was the intervention professionally planned and how was the intervention evaluated and reported?

When assessing the quality of the expert opinion (e.g., practitioners, researchers) it should be noted that the national consensus statements are of high quality (of the form of expert opinion). If the expert opinions are needed, contact experts who are recognized as such, and have preferably been cited. Thus, it is recommended to contact (if necessary) different experts (e.g., project or intervention leaders and scientists/technical experts) among others and preferably organize a meeting and/or a panel discussion.

**NOTE!** Even if HP/PH experts and practitioners are instructed to be contacted (when relevant) it should be noted that their opinions can not be seen as a source of rigorous unbiased evidence but to give additional information especially on the question on what works and under what circumstances! Diversity of opinion is an interesting source of information, as it enriches the review question and the search.

**NOTE!** In addition to quality assessment of the review material as such, the quality of the interventions included in the review material needs to be judged by using relevant criteria (see the GEP, Strand 2 QA-tool, the must to do list will be developed in collaboration with Strand II, in GEP phase II).

### 2.5.3 Grading the evidence

**How to grade the evidence e.g. how to know what is the highest possible evidence?**

Usually the information collected is graded to the highest possible evidence and lowest possible evidence according to an evidence hierarchy (usually according to some traditional evidence hierarchy relaying to the different study designs). At the moment, there are some initiatives developing evidence grading for health promotion interventions (45) e.g., the National Institute of Clinical Excellence, NICE is developing and piloting framework for grading evidence and recommendations [http://www.publichealth.nice.org.uk/page.aspx?o=503422](http://www.publichealth.nice.org.uk/page.aspx?o=503422). It is a central part of the reviewing process however at the moment it’s under development. Saan & de Haes (3) advocated a combination of RCT and other types of designs, but also suggest that an intervention should be well established before that kind of research is relevant. At this stage, the GEP project collects the initiatives for the grading system of the evidence but does not present its own grading system yet.
NOTE! Experts can be used also for judging and grading both research information and non-research information (This is also how the process of national consensus meetings and reports mostly functions). Discussion on criteria and the implications of judgements are part of the learning process in a review.

2.6 Data extraction

How to do data extraction?
Data extraction can be done using either paper or electronic data collection forms (e.g. QuatroPro, Excel and Lotus or database programs such as FoxPro or DataEa). Paper forms can be easier to design because electronic forms require computer-programming knowledge. On the other hand, large amounts of data from reviews involving large numbers of studies are more easily stored and retrieved with electronic than paper forms (22). The data extraction form is a bridge between what has been reported in primary sources of information (e.g. journal articles, project reports, personal communications) and what is ultimately reported by a reviewer.

What to include in the data extraction form?
The data extraction form is directly linked to the formulated review question and planned assessment of included studies and, therefore, provides a visual representation of these. In addition, the data extraction form is the form from which the analysis will emerge. Given the important functions of data extraction forms, time and thought should be invested in their designs. Because each review is different, data collection forms will vary across reviews. However, there are similarities regarding types of information that are important, and forms can be adapted from one review to the next. (12, 19)

Jackson (12) advises that the data abstraction form should include the criteria used for quality appraisal. Useful data to collect /should include for example the following (and their interaction):

- publication details
- study details / information on the evaluation process of intervention etc. (e.g. evaluation reports/documents)
- population details
- intervention details
- theoretical framework
- provider
- setting
- target group
- consumer involvement
- process measures- adherence, exposure, training etc.
- contextual details
- outcomes
- findings.
Where to find examples of the data abstraction forms?

A number of data abstraction forms are available in the following publications:

4. The Effective Public Health Practice Project reviews – (appendices in reviews) http://www.city.hamilton.on.ca/phcs/EPHPP/default.asp

In every review the reviewers (in collaboration with the advisory group) should create their own data abstraction form, which can be done based on some of the proposed examples. Many reviewers use a double-abstraction process whereby two independent assessments of information can be compared and reconciled if necessary (e.g. blinded data extraction). However, it should be noted that the blinding is difficult to achieve, it is time consuming and may not substantially alter the results of a review (46, 47).

2.7 Data synthesis

What are the options of doing data synthesis?

The purpose of the synthesis is to summarise the data that have been extracted from the primary articles/document/reports. In general, analyses of the information may be narrative, such as a structured summary and discussion of the studies’ characteristics and findings, or quantitative, that is involving statistical analysis. Meta-analysis – the statistical combination of results from two or more separate studies – is the most commonly used statistical technique. Good instructions on doing meta-analysis can be found for examples from the Cochrane’s Reviewers Handbook (22) http://www.cochrane.dk/cochrane/handbook/hbook.htm, chapter 8; Analyzing and presenting results).

The choice of doing either narrative or quantitative synthesis depends on the diversity of studies included in the review. Diversity of studies is often referred to as heterogeneity. If studies differ in such characteristics as design, methods, or outcome measures, a quantitative synthesis is not always possible. If the studies are more homogenous, a meta-analysis is usually possible. (14, 19) Guidelines for doing the narrative synthesis are not yet available, although research is currently underway. According to the CRD report (14) in the narrative synthesis the reviewers should ideally:

- describe studies
- assess whether quality is adequate in primary studies or documents to trust the results
- demonstrate absence of data for planned comparisons
- demonstrate degree of heterogeneity
- stratify results by populations, interventions, settings, context, outcomes, and validity.
How to combine results from different sources?

When studies of different designs and also other information than research are included in a systematic review, it is important that the potential biases that could be introduced by statistical combination are investigated e.g. in the following ways:

1. One approach is to separately synthesise the results of subgroups of studies /other information with different designs or levels of validity and to compare the summary estimates of the subgroups for trends and important differences.

2. An alternative approach is to cumulatively combine studies/other information of decreasing the strength of evidence and monitor the changes in the overall estimates when studies of lower validity are included (a form of sensitivity analysis). Producing a plot of the study effects in decreasing order of validity may assist with this.

3. A third approach involves modelling the strength of evidence as a variable in a regression analysis similar to that used in the exploration of causes of heterogeneity. This requires each study to be given a grading according to its quality or validity. This method may be useful to describe systematic relationships between the validity of the primary studies and their results, and may give insights into the value of different methodological approaches. (22)

However, when synthesising the results of studies with different designs and other information, non-quantitative synthesis is often the only feasible option. Triangulation may provide one possible approach. This is a widely accepted technique for exploring the validity of, and relationship between, findings from research through the systematic comparison of data collected from different perspectives (for more information, see the CRD report (14).

Another approach to the synthesis of information from different types of sources underpins consensus methods, such as the Delphi process and the nominal group technique. The EPPI-Centre (48) has developed methods for synthesising the findings from diverse types of studies within one review. These methods involve conducting three types of syntheses in the same review:

1. statistical meta-analysis to pool trials of interventions tackling particular problems (or a narrative synthesis when meta-analysis is not appropriate or possible)
2. synthesis of studies examining people’s perspectives or experiences of that problem using qualitative analysis (‘views’ studies)
3. ‘mixed methods’ synthesis bringing the products of 1) and 2) together.
Synthesis 1) Effectiveness synthesis for trials

Effect sizes from good quality trials are extracted and, if appropriate, pooled using statistical meta-analysis. Heterogeneity is explored statistically by carrying out sub-group analyses on a range of categories specified in advance (e.g. study quality, study design, setting and type of intervention).

Synthesis 2) Qualitative synthesis for ‘views’ studies

The textual data describing the findings from ‘views’ studies are copied verbatim and entered into a software package to aid qualitative analysis. Two or more reviewers undertake a thematic analysis on this data. Themes are descriptive and stay close to the data, building up a picture of the range and depth of people’s perspectives and experiences in relation to the health issue under study. The content of the descriptive themes are then considered in the light of the relevant review question (e.g. what helps and what stops children eating fruit and vegetables?) in order to generate implications for intervention development. The products of this kind of synthesis can be conceptualised as ‘theories’ about which interventions might work. These theories are grounded in people’s own understandings about their lives and health. These synthesis methods have much in common with the work of others who have emphasised the theory building potential of synthesis.

Synthesis 3) A ‘mixed methods’ synthesis

Implications for interventions are juxtaposed against the interventions, which have been evaluated by trials included in Synthesis 1. Using the descriptions of the interventions provided in the reports of the trials, matches, miss-matches and gaps are identified. Gaps are used for recommending what kinds of interventions need to be newly developed and tested. The effect sizes from interventions which matched implications for interventions derived from people’s views can be compared to those which do not, using sub-group analysis. This provides a way to highlight which types of interventions are both effective and appropriate. Unlike Bayesian methods, another approach to combining ‘qualitative’ and ‘quantitative’ studies within systematic reviews which translates textual data into numerical data, these methods integrate ‘quantitative’ estimates of benefit and harm with ‘qualitative’ understanding from people’s lives, whilst preserving the unique contribution of each. (32)

Reviewers are recommended to familiarize themselves precisely with the given examples and preferably read also the additional reading proposed:


3. Oliver S, Harden A, Rees R, Shepherd J, Brunton G, Garcia J, Oakley A. An emerging framework for including different types of evidence in systematic reviews for public policy. Accepted for publication in Evaluation, the International Journal of Theory, Research and Practice.
2.8 Interpretation of the results

The reviewers formulate conclusions and recommendations from the body of evidence. To be able to interpret the results of the synthesis reviewers have to understand the factors that have an impact on the effectiveness of public health and health promotion interventions. As those who read reviews (e.g. policy makers, practitioners etc.) may not have time to read the whole review it is important that the conclusions and recommendations are clearly worded and arise directly from the findings of the review (14).

The most important things to be discussed in the conclusion are:

- what works
- for whom
- under what circumstances
- how well.

How to describe the characteristics HP/PH interventions’ effectiveness?

Reviewers should discuss whether the studies and other information sources included in the review illuminated the key process factors that led to the effective interventions. In addition, the relationship between intervention integrity\(^2\) and effectiveness should be described, i.e., did studies that addressed integrity thoroughly show a greater impact? (12). Also the complexity of the interventions should be noticed\(^3\). The extent to which the intended outcomes or interventions are sustained should be an important consideration in the systematic reviews.

How to describe the applicability of the results?

Applicability is also a key issue to be faced in the reviews, especially in cases where the goal of the review is to recommend interventions that are likely to be effective in different settings. Notice that health promotion work is almost always affected by the context: community norms and values, the people involved, organisational and economic constraints, etc. Thus it should be made crystal-clear in the discussion that the success of a project in one setting by no means guarantees that it would be successful if carried out in another setting. Because interventions that are effective may be effective due to the pre-existing factors of the context into which the intervention was introduced. Reviewers can help policy makers, practitioners etc. to make decisions about applicability by drawing attention to

\(^2\) The Integrity of intervention is the degree to which specified procedures or components of the interventions are implemented as planned. The term is often used synonymously with fidelity (37). Jackson, S, Waters E. Guidelines. Systematic Reviews of Health Promotion and Public Health Interventions: The Cochrane Collaboration. Cochrane Health Promotion and Public Health Field; 2005 March 2005.

\(^3\) Health promotion interventions are often complex interventions e.g. multiple outcome measures can happen because several types of outcomes are measured within the same study (e.g. recidivism and school attendance within a study of intervention effects on juvenile delinquency) and/or because the same outcome is measured at multiple points in time. (6, 32)
the spectrum of contexts to which the evidence is likely to be applicable, contexts where the evidence is not likely to be applicable and predict variation in effects across different contexts. (12)

To help end-users of the review determine the likelihood that available information will or will not apply to their local situations/ context reviewers should:

1. define target populations and settings for which the intervention might be considered
2. assess whether available studies have evaluated the intervention in those populations and settings.
3. assess the extent to which the populations or settings in those studies are likely to represent the target populations and settings of interest
4. make judgments about whether the intervention works better or worse in some populations and settings than in others. (28)

Good practical examples on how the reviewers can take the needs of the end-user more effectively into account is provided in the Systematic Reviews of Health Promotion and Public Health Interventions Handbook http://www.vichealth.vic.gov.au/cochrane/training/Unit%20Ten%20to%20print.pdf. It includes an evaluation form of the applicability of an individual study or body of evidence. The aim and also benefit of using this form is to point the end-user towards interventions that are ready for translation to real world settings.(12)

Why to describe also theory base?

Both theoretical and conceptual perspectives should be discussed when synthesising the evidence (12, 32). According to Jackson (12) reviewers should seek to examine the impact of the theoretical framework on the effectiveness of the intervention in two reasons. The assessment of the theory within systematic review:

1. helps to explain success or failure in different interventions, by highlighting the possible impact of differences between what was planned and what actually happened in the implementation of the program
2. assists in identifying the key elements or components of an intervention, aiding the dissemination of successful intervention

In addition, the theory may be used as a framework within which to explore the relationships between findings from different studies. For example, when combining the findings from different studies, reviewers can group interventions by their theoretical basis: all interventions based on, for example, a Stages of Change Model for Behaviour Change. Reviews would be greatly enhanced if in the discussion attention is paid also to the gaps in the theoretical coverage of interventions. For example, a large number of interventions seek to change the choices people make by focusing on single level changes (knowledge, attitude, behaviour, etc) rather than seeking to change the environment within which people make their choices. (12)
Why to list also clearly the main things learned from the reviewing process?
Reviewers should think what lessons have been learned through the review, which are relevant to health promotion (32). Public health and health promotion reviews are in an ideal position to determine the implications for practice and future research to be conducted to address any gaps in the evidence base. For example, where evidence is shown to be lacking, reviewers should clearly describe the type of research required, including the study design, participants, intervention details and context and settings. If the reviewed evidence base is flawed due to particular methodological issues (e.g. outcome, assessment tools, allocation bias etc.) these quality issues can be addressed in future studies. (12)

Also reviewers’ experiences conducting each new systematic review will add considerably to what is known about carrying out systematic reviews. Problems faced and ideas occurred during the reviewing process that may facilitate the future reviews should be collected and used for further development the reviewing process itself. Information, suggestion and ideas on the European review protocol can be sent to the GEP www-page (a link to be developed).

3 Reporting and dissemination
The last phase of the reviewing process concentrates on the reporting of the results as well as on the dissemination of the findings. Especially in this phase the role and needs of the end-users of the review are important to take into account.

Main steps in the reporting and disseminating phase:

| Write the report and disseminate it | ¶ Start the writing process and the planning of the dissemination plan |
|                                   | ¶ Think for whom to write (keep in mind the needs and interests of the main end-users) |
|                                   | ¶ Write the full report of the review and ensure that it is accessible |
|                                   | ¶ Consider also different versions of the review (e.g. short version for policy makers etc.) |
|                                   | ¶ Co-operate with the advisory group and end-users when disseminating the results |
|                                   | ¶ Make sure that the information reaches the possible end-users |
| Participate to the process of getting evidence into practice | ¶ Pay attention to the dissemination of the results of your review; to all possible end-users & possible different formats |
|                                   | ¶ Participate or ensure the implementation of the results |
3.1 Reporting and dissemination

Report writing is an integral part of a systematic review. Clear reporting enables readers to judge the validity and usefulness of the review for decision-making (14). A clear structure helps readers to find the results of research quickly and to assess the validity, applicability and implications of those results. (14, 20, 22)

3.1.1 Instructions on writing the report

What to include?
Most of the existing review protocols suggest a structure for the review reports. The review report should include:
1. Cover Sheet
2. Executive Summary
3. Background
4. Objectives / review question
5. Methods
6. Recommendations and Conclusions (including the answer to the review question)
7. References
8. Appendixes
9. Tables
10. Acknowledgements

What to take into account when writing the report?
It is important that the report is informative, reliable, and accessible and developed in a consistent format and style (13). Thus the report should be clear and concise and take into consideration the needs of its intended end-users (readers and actors). In addition, the special attention should be paid to the summary, which is critical in catching the end-users attention. It should therefore contain enough information that the end-user can quickly determine the usefulness and reliability of the conclusions. Policy-makers and practitioners often do not have time to read the entire report. For this reason, the discussion section and the conclusions should be written to make it clear that they are based on the results of the overview and not on speculation (19).

When starting the writing process the reviewers should keep in mind many critical questions, such as:
1. Who is the audience?
2. What is the appropriate type of reporting for the audience?
   - format presentation style
   - language level
   - distribution/dissemination methods.
3. What steps have to be taken to ensure high quality reporting?
   • feedback from relevant stakeholders
   • revision of the report as appropriate
   • double check for accuracy, language, spelling, presentation
   • plan for production, distribution, and follow up discussion.

4. What is included in the report?
   • identifying the question
   • accurately reflecting all the relevant findings of analysis and/or summary/synthesis
   • providing the important information in a clear manner
   • providing a full description of methodology and perspective
   • describing lessons learned relevant to health promotion
   • identifying limitations and the implications of these reflecting concerns of relevant stakeholders.

   (32)

Again, take the end-users perspective into account when writing the review. A useful tool for the review writers is the Critical Appraisal Skills Programmer’s, CASP:
http://www.phru.nhs.uk/casp/reviews.htm, 10 questions to help to make sense of review (12). This tool assesses the quality of the review, but the questions of this tool are also good to keep in mind when writing the final review report.

NOTE! In the field of rapid development such as HP/PH, regular updating of the review is necessary. The frequency of updates depends on the subject and review question.

3.1.2 Instructions on the dissemination of the report

It is desirable to use different ways of publishing and spreading the final products. Several reporting formats can be used as for example, a journal article, a conference abstract, a scientific electronic preprint, an awareness report for health professionals, a consumer report (for example for community members), a web version of the consumer, and in some cases also a patient information leaflet (13, 19, 22).

However, it is important that the needs of the potential end-users are taken into account in each format. So there needs to be clarity on at whom the report is indented. Especially the full report (covering review’s methods in detail so that readers can appraise the study for themselves to see how the authors have reached their conclusions) has to be easily accessible. In addition, an accessible summary could be useful in disseminating results to a wider audience.
An action plan for the dissemination of each review report may help the dissemination. The dissemination plan should include:

- Distribution list (in primary, secondary, tertiary settings)
- World-wide publication (if relevant)
- Relevant talks and conferences

In addition it is good to consider:

- How many hard copies of the full version should be produced
- How many copies of the executive summary should be produced
- To whom copies should be sent to.

In summary, promotion and dissemination strategies will vary from review to review, and they must be tailored to suit the aim of the project and the needs of the target group. It is also a good idea to follow up and evaluate the dissemination of the articles, reports etc. (18, 19)

3.2 Instructions on getting evidence into practice

This review protocol gives some advice on how to get evidence into practice, it does not include however precise instructions. To make evidence collected through the reviewing process accessible and usable, further implementation is required. When planning the dissemination, it is good to use members of the advisory group (especially, practitioners, policy makers and lay people) to plan the dissemination of results to the end-users (23). Dissemination may be undertaken by national and regional organisations, but implementation cannot be accomplished without local involvement in activities designed to get research and other information translated into practice (14).

The reviewers can contribute to the implementation of the results but it may be feasible to leave the main responsibility to the people with skills and expertise in communication who preferably cooperate with the HP/PH practitioners. The process of transferring evidence into the practice is often slow. Main principles for dissemination are:

- Development of an evidence-based plan for dissemination
- Targeting three key groups (public, practice, policy)
- Development of a systematic framework for each target group
- Further evaluation (14, 24, 49)

The Health Development Agency (13, 50) suggests using the following model when getting evidence into practice:

- Dissemination – planned efforts at raising awareness and encouraging adoption
- Adoption – making a commitment to initiate
- Implementation – interventions to assist in delivering the programme to its original design
- Maintenance – encouragement to continue use of evidence
When thinking about the transfer of research evidence from reviews into practice, reviewers as well as the advisory group should keep in mind that it is a complex process and its research base is incomplete. In addition, it is good to make clear (for the end-users) that the review is not the same as HP/PH recommendation: Reviews synthesise the body of evidence in a certain topic and evidence is continuously formed and updated in a cyclic process of research, evaluation, feeding with information from different sources, good practice, policy implications and exchange with end-users. From the review two types of information will become available. The protocol aims mainly at evidence to answer the question posed and to help policy and practice in certain area. It is important to notice that interventions described in the reviews need to be evaluated using agreed principles such as developed in Strand II of the GEP project.
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Appendix 2. Glossary

**Evidence:** Agreed certainty on what affects health and well-being, how to improve it in partnership in a certain group and context. Information from (health promotion/public health) research, policy and practice becomes evidence after it has been judged according to some predetermined criteria.

**Health promotion:** is the process of enabling the people to increase control over their health and its determinants, and thereby improve their health. It is the core function of public health and contributes to tackling communicable and non communicable diseases and other threats to health.

**Information:** Information on what works in HP/PH can be derived from HP/PH research, policy and/or practice. Information can be either published or non-published. Non-published information includes e.g. evaluation reports and internal documents. Published information can be peer-review or other published information.

**Non-research information:** Information e.g. expert opinions as well as information that are not published in the peer reviewed scientific journals (e.g. grey literature). Non-research information can be divided into documents, policy papers – opinions, know-how (practice, experts, media).

**Research information:** Information that has been published in the peer reviewed scientific journals. Research information can be either published or non-published.

**Review:** A systematic way of identifying, appraising and summarizing relevant studies and information (for the evidence).

**Review protocol:** A well-developed and useful instrument for gathering, selecting and translating information/data on a (health) topic from different sources in a way that best reflects evidence. It specifies the plan which the review will follow to identify, appraise and collate evidence.
Appendix 3. 10 questions to help you make sense of reviews (CASP)

1. Did the review ask a clearly-focused question? Yes Can’t tell No
   Consider if the question is ‘focused’ in terms of:
   – the population studied
   – the intervention given or exposure
   – the outcomes considered

2. Did the review include the right type of study? Yes Can’t tell No
   Consider if the included studies:
   – address the review’s question
   – have an appropriate study design

Is it worth continuing?

3. Did the reviewers try to identify all relevant studies? Yes Can’t tell No
   Consider:
   – which bibliographic databases were used
   – if there was follow-up from reference lists
   – if there was personal contact with experts
   – if the reviewers searched for unpublished studies
   – if the reviewers searched for non-English language studies

4. Did the reviewers assess the quality of the included studies? Yes Can’t tell No
   Consider:
   – if a clear, pre-determined strategy was used to determine which studies were included. Look for:
     – a scoring system
     – more than one assessor

5. If the results of the studies have been combined, was it reasonable to do so? Yes Can’t tell No
   Consider whether:
   – the results of each study are clearly displayed
   – the results were similar from study to study (look for tests of heterogeneity)
   – the reasons for any variations in results are discussed

6. How are the results presented and what is the main result?
   Consider:
   – how the results are expressed (e.g. odds ratio, relative risk, etc.)
   – how large this size of result is and how meaningful it is
   – how you would sum up the bottom-line result of the review in one sentence

7. How precise are these results?
   Consider:
   – if a confidence interval were reported. Would your decision about whether or not to use this intervention be the same at the upper confidence limit as at the lower confidence limit?
   – if a p-value is reported where confidence intervals are unavailable

8. Can the results be applied to the local population? Yes Can’t tell No
   Consider whether:
   – the population sample covered by the review could be different from your population in ways that would produce different results
   – your local setting differs much from that of the review
   – you can provide the same intervention in your setting

9. Were all important outcomes considered? Yes Can’t tell No
   Consider outcomes from the point of view of the:
   – individual
   – policy makers and professionals
   – family/carers
   – wider community

10. Should policy or practice change as a result of the evidence contained in this review? Yes Can’t tell No
    Consider:
    – whether any benefit reported outweighs any harm and/or cost. If this information is not reported can it be filled in from elsewhere?

FULL VERSION SEE:  [http://www.phru.nhs.uk/casp/reviews.htm](http://www.phru.nhs.uk/casp/reviews.htm)
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