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Keeping up to date with information retrieval research: Summarized Research in Information Retrieval for HTA (SuRe Info)

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Abstract

BACKGROUND: Increasing numbers of research papers about information retrieval for health technology assessments, systematic reviews and other evidence syntheses are being published in scientific journals, but it is time-consuming and demanding to keep up-to-date with the latest developments in the field.

OBJECTIVE: To present the SuRe Info methodology and output.

Methods: A methodology has been elaborated to identify, appraise and summarise the relevant literature. Appraisals and chapters are published as a specific section of the HTAi Vortal and updated every six months. Free online tools are used to support project management.

RESULTS: SuRe Info consists of two sections: 1) information on general search methods common across all health technologies and 2) methods to use when searching for specific aspects of health technologies. The latter is mainly based on the structure of the HTA Core Model® (EUnetHTA). Within both sections there are chapters summarizing the current research findings concerning a particular information retrieval aspect. The references listed at the end of each chapter are linked to structured appraisals of the included publications, written by members of the SuRe Info project group.

CONCLUSION: SuRe Info is a new open-access web resource that provides research-based information relating to the information retrieval aspects of producing health technology assessments and systematic reviews. It seeks to help information specialists to stay up-to-date in the latest developments in this field and to support research-based information retrieval practice.

Introduction

The Information Resources Group (IRG) of the Health Technology Assessment international (HTAi) network is an Interest Sub-Group for individuals who provide the information resources, conduct research, and develop information management issues that support HTA decision making. Members of the IRG are staff members of HTA organizations, government departments and agencies, for profit and not for profit firms, consultants and experts, and all those who use, provide, or otherwise support HTA information needs.(1)

Since the last years, increasing numbers of research papers about information retrieval for health technology assessments, systematic reviews and other evidence syntheses are being published. Staying up-to-date on the latest developments within the field of information retrieval has thus become a challenge.

In November 2011 a small group of IRG members launched a project called "Summarized Research in Information Retrieval for HTA" (SuRe Info) to meet this challenge. The group envisioned to deliver a website that provides up-to-date evidence-based information relating to information retrieval aspects of health technology assessments and systematic reviews condensed into an easily digestible format. The website helps information specialists and others who conduct searches to inform evidence syntheses to stay up-to-date in the latest developments by providing easy access to current methods papers, and in that way support more research-based information retrieval practice.(2) The information provided on the website is organised into chapters divided in two sections: the first section counts nine chapters about general search methods; the second section counts 10 chapters mainly based on structure of the HTA Core Model® developed by the European network for Health Technology Assessment (EUnetHTA).(3)

Aim

This article presents the SuRe Info methodology developed to create the chapters organised following the structure of the HTA Core Model®; and the resulting output.

Material & methods

A methodology has been elaborated by the group. Specific search strategies are designed for each HTA Core Model® domain and are conducted in relevant bibliographical databases; searches are completed by manually searching a selection of journals. A list of inclusion exclusion criteria is elaborated to assess the identified articles. The relevant literature is summarised following a template. An update is conducted every six months.

In order to reduce costs, the group makes use of several free tools to support project management. Meetings are planned using Doodle. Appraisals and chapters are produced by an international project group who shares preparatory documents through the cloud storage Box and the Zotero bibliographical management system. During conference calls, the screen of the presenter is shared using the LogMeIn service.

The web resource is published as a specific section of the HTAi Vortal, a website developed and maintained by another working group of the IRG that centralises resources in the field of health technology assessment.(4)

Results

Scientific process

SuRe info is available online at http://www.sure-info.org. Six chapters summarizing the current research findings concerning a particular aspect of information retrieval are currently published (see table 1). The remaining chapters are in preparation and the aim is to publish all chapters by the middle of 2015.

Table 1: List of domains and their respective publication status

HTA Core Model® domain	Publication status
Health problem and current use of technology	Published
Description and technical characteristics of technology	Published
Safety	Published
Diagnostic accuracy	Published
Clinical effectiveness	Awaiting update of the Cochrane Handbook chapter for literature searching
Costs and economic evaluation	Published
Ethical analysis	In preparation
Organizational aspects	Planned
Social aspects	In preparation
Legal aspects	Published

For each domain, information retrieval methods publications are identified by running topic-specific search strategies in a selection of relevant databases (see table 2). Alerts are set up for the prospective identification of publications.

Table 2: List of bibliographical databases (published domains)

Database (provider)	Status
Cumulative Index for nursing and allied health literature - CINAHL (EBSCOhost)	Specific database
Embase (Ovid)	Core database
Library and Information Science Abstracts - LISA (Proquest search)	Complementary database
Library, Information Science and Technology Abstracts - LISTA (EBSCO host)	Complementary database
MedLine (Ovid) / PubMed	Core database
Web of knowledge (ISI)	Specific database

Core database = database that is required to search; complementary database= database that is optional to search regarding availability; specific database = database to search if pertinent for the considered domain

Retrieved articles are selected based on the inclusion and exclusion criteria developed by the group (see table 3).

Publications fulfilling the SuRe Info inclusion criteria are tagged using a list of keywords developed by the group. The same article can be of interest for different domains; the assessment occurs only once

Table 3: Inclusion and exclusion criteria

Research publications that fulfil the following criteria should be included in SuRe Info (Inclusion criteria)	Research publications that fall into one of the following criteria will be excluded (Exclusion criteria)
1. The research question is relevant to information retrieval for HTA and the SuRe Info chapter in which it is to be included. 2. The publication provides latest evidence on a specific methodological issue. 3. The publication includes research findings of a completed scientific study (including reviews, evidence syntheses and theses). 4. The publication describes the scientific methods used in the study. 5. The research findings are still valid, i.e. have not been overtaken by technological or database changes. 6. The conclusions are supported by the presented results and the results answer the research question. 7. The results of the publication are generalizable or usable to other HTA information specialists or transferable to other projects or studies.	1. Duplicate publications, previous publications associated with the same study or project, and letters or comments to the editor will be linked to the related publication. 2. Individual studies or reviews presented and assessed in other evidence-based collections (such as the InterTASC Information Specialists' Sub-Group – ISSG - Search Filter Resource) (5), will not be included. A link or a citation to the resource rather than the individual studies will then be provided.

Table 4: Classification used to tag articles and some examples of keywords

Category	Examples of keyword
A. Where the research paper explores the value of a publication type to HTA or investigates how to identify publication types one or more of the following index terms can be applied to the record.	Databases, grey literature,…
B. Designing strategies where the general principles are described	General
C. Designing strategies: specific (more than one may be applied to each record)	Controlled vocabulary, keywords, proximity operators, …
D. Other issues related to information retrieval research for HTA	Search filters, Peer reviewing, …
E. Categories reflecting the elements which may be addressed within an HTA (more than one may be applied to each record)	Safety, ethics, ….
F. Study design (using MeSH headings)	Clinical Trials, Phase III, Multicenter Studies, …
G. Topic area (using MeSH headings)	Health occupations (Nursing, Pharmacology, …), Disease areas (Bacterial infections and mycoses, Cardiovascular diseases, …)…

Each selected article is included in the online bibliography of the web resource. A structured abstract containing a brief critical appraisal is then produced following a template, and published (see figure 1). 28 appraisals were published by January 2014 (full list is available on the website).

Figure 1: Example of SuRe Info publication appraisal

The appraisals are then synthesized into topic specific domain specific chapters. Each chapter has an introduction, a list of sources to search, information on designing search strategies and a list of references. Each reference is followed up to three links (see figure 2):

1. Link to the full reference, from the bibliography module;
2. Link to the structured appraisal, written by SuRe Info project group members;
3. Where possible, link to the full-text.

Figure 2: Reference list of the SuRe Info chapter "Legal aspects"

The bibliography module of the website may offer several links for each record (see figure 3):

- links to export in various bibliographical formats (Tagged, BibTex, XML)

- a link to a search of Google Scholar that helps to identify full-text or citing articles
- a link to the PubMed records (when the record is imported from PubMed)

- a link to the publisher website

Serendipity is ensured by several other links (authors, keywords, tags) sending to other references of the HTAi Vortal.

Figure 3: Example of a full record from the HTAi Vortal bibliography module

Home | Bibliography

Bridging international law and rights-based litigation: mapping health-related rights through the development of the Global Health and Human Rights Database.

Title	Bridging international law and rights-based litigation: mapping health-related rights through the development of the Global Health and Human Rights Database.
Publication Type	Journal Article
Year of Publication	2012
Authors	Meier BM, Cabrera OA, Ayala A, Gostin LO
Journal	Health and human rights
Volume	14
Issue	1
Pagination	E20-35
Date Published	2012
ISSN	2150-4113
Keywords	Databases, Factual; Government Regulation; Human Rights; Humans; International Cooperation; Jurisprudence; Legislation as Topic; World Health
Abstract	The O'Neill Institute for National and Global Health Law at Georgetown University, the World Health Organization, and the Lawyers Collective have come together to develop a searchable Global Health and Human Rights Database that maps the intersection of health and human rights in judgments, international and regional instruments, and national constitutions. Where states long remained unaccountable for violations of health-related human rights, litigation has arisen as a central mechanism in an expanding movement to create rights-based accountability. Facilitated by the incorporation of international human rights standards in national law, this judicial enforcement has supported the implementation of rights-based claims, giving meaning to states' longstanding obligations to realize the highest attainable standard of health. Yet despite these advancements, there has been insufficient awareness of the international and domestic legal instruments enshrining health-related rights and little understanding of the scope and content of litigation upholding these rights. As this accountability movement evolves, the Global Health and Human Rights Database seeks to chart this burgeoning landscape of international instruments, national constitutions, and judgments for health-related rights. Employing international legal research to document and catalogue these three interconnected aspects of human rights for the public's health, the Database's categorization by human rights, health topics, and regional scope provides a comprehensive means of understanding health and human rights law. Through these categorizations, the Global Health and Human Rights Database serves as a basis for analogous legal reasoning across states to serve as precedents for future cases, for comparative legal analysis of similar health claims in different country contexts, and for empirical research to clarify the impact of human rights judgments on public health outcomes.
URL	http://www.hhrjournal.org/index.php/hhr/article/view/473/746
Alternate Journal	Health Hum Rights

Tags: Reference tools   Legal analysis

Share / Save   Tagged   XML   BibTex   Google Scholar   PubMed

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Project management

Since 2011, the international working group met about 15 times. All meetings but one (at the very beginning of the project) were conducted using information technologies (conference call system, screen sharing system). E-mail traffic is reduced thanks to the use of a cloud storage to share documents (meeting minutes, draft of chapters, reference documents).

Discussion

Information specialists and others who conduct searches to inform evidence syntheses in the field of health technology assessment benefit from several online resources to support their daily work (the Cochrane Handbook for Systematic Reviews of Interventions, the HTAi Vortal, HIRU Hedges, …). Now, they may also benefit from SuRe Info. Like the Cochrane Handbook, Dare or NHS EED, SuRe Info is a free web resource: all chapters and appraisals are publically accessible.

Setting up and maintaining an international working group is always a challenge. The group being composed of members with a long experience in international collaborations, it could rapidly define a methodology and start to produce the output of the SuRe Info. Another success factor is related to the internet connected world of today: project management can benefit from several free online resources allowing a reduction of costs and enhancing efficiency of such a group.

Also, being integrated into the HTAi Vortal, SuRe Info benefits from several useful functionalities (bibliography module with import from PubMed and various export format, share module, five star module) without having to care about the technical aspects.

Conclusion

SuRe Info contributes to an evidenced-based information retrieval practice. It aims to serve as a common platform for HTA information specialists in different countries. SuRe Info will help HTA information specialists to stay up-to-date in the latest developments within information retrieval for systematic reviews and health technology assessments; it will provide evidence-based information to those new to the field of information retrieval for systematic reviews and health technology assessments, and help to find the current evidence when updating own methods handbooks.

Six chapters based on 28 appraisals are already available; more will follow until 2015 and the content will be updated every six months. Have a look at http://www.sure-info.org and contact us if you wish to participate!

Acknowledgements

Bibliography

1. HTAi :: Information Resources. [Webpage] 20130814 [cited 20140515]; Available from: http://www.htai.org/index.php?id=554
2. Ormstad SS, Isojärvi J. Keeping up to date with information retrieval research: Summarized Research in Information retrieval (SuRe Info). Journal of EAHIL. 2013;9(2):17-9.
3. Lampe K, Makela M, Garrido MV, Anttila H, Autti-Ramo I, Hicks NJ, et al. The HTA core model: a novel method for producing and reporting health technology assessments. International journal of technology assessment in health care. 2009 Dec;25 Suppl 2:9-20.
4. Chalon PX, Droste S, Ormstad SS. The new HTAi vortal: from demonstrator to working prototype. 9th HTAi Annual meeting - "HTA in Integrated Care for a Patient Centered System". Bilbao (Spain); 2012. p. 47.
5. ISSG Search Filters Resource. [Web site] [cited 20140515]; Available from: https://sites.google.com/a/york.ac.uk/issg-search-filters-resource/