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Grey Literature: Its Emerging Importance

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This article emphasizes the importance of grey literature in the arsenal of search tools available to medical researchers. Because of the delay between research and publication, and because of the potential that some important research may never be published, access to innovative information is challenging. Grey literature is a tool to fill that void. The authors define grey literature, explore its sources, and identify its major users and uses. The authors identify the range of grey literature, its advantages and disadvantages, the various outlets that produce it, and where it may be found.

KEYWORDS “dark data,” ephemeral, fugitive literature, grey literature, gray literature, nonconventional, unpublished, semi published

INTRODUCTION

This article seeks to explore the importance of grey literature and to outline major sources for locating grey literature in the health sciences. There are a number of reasons to consider this topic. The current research climate makes grey literature a vital adjunct to traditional library reference. There is a significant time lag between research and publication. Some research is never published. Grey literature often represents research at its initial development and may be a tool both to uncover innovative information and to shorten the time between research and practice.

Who are the patrons for whom grey literature searches will prove most helpful? The research of doctoral students as well as faculty presenting at national and international conferences should include material that can be uncovered only by a combing of grey literature. Clinicians researching...
orphan illnesses and performing quality improvement initiatives will benefit from grey literature. Much public health information resides in grey literature (1).

The definition of grey literature needs to be established. At one time, grey literature was referred to as "fugitive literature" because of its elusiveness and the difficulty in retrieving it (2). In 2002, McKimmie and Szurmak suggested that any material that cannot be retrieved via a traditional index or electronic database is grey literature (3). Marcus Banks feels that the distinction between gray literature and peer-reviewed research will gradually diminish if such material is made available through institutional repositories and via open access (4). Rothstein and Hopewell propose that eventually grey literature will include nonwritten material, "written media may no longer be the only archival source of scientific information. Consider, for example, the potential for podcasts or video clips of scientific reports as sources of data relevant to a synthesis" (5). The proliferation of institutional Facebook pages, blogs, and wikis and the advent of Slideshare presentations suggest that this era may have arrived.

Although the timeliness of grey literature is important, there are some disadvantages. A significant disadvantage is that it "is not peer reviewed and not indexed in major bibliographic resources" (6). The significance of this is that grey literature does not have to meet the criteria of peer-reviewed publications. Peer-reviewed articles must meet the standards of the peer reviewer or editorial board whose responsibility it is to maintain the quality of the journal.

It is important to note that, although not considered a scholarly form of publication, grey literature is often produced by experts in the field. Including grey literature in an article provides a means whereby a researcher can minimize bias in a comprehensive search: "published trials tend to be larger and show an overall greater treatment effect than grey trials. This has important implications for reviewers who need to ensure they identify grey trials, in order to minimize the risk of introducing bias into their review" (7). Trials with positive results tend to be published sooner than those with negative results, thus making them more quickly accessible (7). Reports of grey literature include those of smaller, unpublished trials and trials whose treatment effect does not meet the convention of .05 probability (the likelihood that the results are a product of chance).

Another reason for mining grey literature is that it deals with information in its earlier forms given the significant time lag between research and publication. In addition, in many cases, information, and data revealed at conference presentations never make it to publication. In 11 studies (39 meetings), abstracts were followed up from submission to full publication. Follow-up times ranged from 8 to 127 months; "About one third of abstracts submitted to biomedical meetings is eventually published as full reports . . . . However, the estimate implies that about two thirds of all
submitted biomedical research abstracts will not get published” (8, 9). This represents a frighteningly large amount of new knowledge that is hidden from commonly accepted means of retrieval.

Librarians and end searchers need to use traditional evaluation methods to assess the accuracy and validity of the information gleaned from grey literature. It is important to reiterate to patrons that the sources provided are grey literature sources and to document the efforts of the librarian to evaluate the credibility of the information presented therein. “... It is necessary that users learn the skills for assessing the quality and credibility of a Web site in the same manner that they assess a scholarly article. An author's background, institutional affiliation, research methods, data collection procedures, hypothesis testing, data collection, statement of findings, and source of a Web site must be evaluated by users in order to ascertain the credibility and the accuracy of the information presented” (10).

RESOURCES FOR GREY LITERATURE

Librarians often find it difficult to locate grey literature. Listed below are some reliable sources for locating grey literature in the health sciences.

Association of College and Research Libraries (ACRL)

ACRL has published an interesting study that helps to define grey literature, identify the patrons who request it, and also discusses the challenges and advantages associated with it. Entitled “Learning About Grey Literature by Interviewing Subject Librarians: A Study at the University of Rochester,” the study is available at http://www.ala.org/ala/mgrps/divs/acrl/publications/crlnews/2005/jul/learngreylit.cfm.


ClinicalTrials.gov

ClinicalTrials.gov is a registry of federally and privately supported clinical trials conducted in the United States and around the world. ClinicalTrials.gov gives information about a trial’s purpose, who may participate, locations, and phone numbers for more details. ClinicalTrials is now publishing results of trials that have been concluded. Researchers may use this resource to determine researchers currently conducting work in a field in which their patrons are
interested or to refer them or their physicians to clinical trials. ClinicalTrials offers an information page at http://www.clinicaltrials.gov/ct2/info. The page describes how clinical trials work, their advantages and risks, links to the Food and Drug Administration (FDA) resources, and links to tutorials on how to use ClinicalTrials. The site says it “contains thousands of studies conducted around the world to test the effect of experimental drugs, devices and procedures for many diseases and conditions.”

Conference Alerts

Available at http://www.conferencealerts.com/. Conference Alerts freely publishes information regarding academic conferences worldwide. Conferences are organized by topic or country on the home page. The Health and Medicine category includes the following topics, each linked by month and day to relevant conferences in the field: Alternative Health, Cardiology Dentistry, Dermatology Disability and Rehabilitation, Family Medicine Health, Gastroenterology, Gerontology Infectious Diseases, Medical Ethics, Medicine and Medical Science, Neurology Nursing, Nutrition and Dietetics, Oncology, Palliative Care, Psychiatry, Public Health, Radiology, Reproductive Medicine & Women’s Health, Social Work, and Surgery. There is a free subscription service available for e-mail updates tailored to an individual interest profile. The site offers a database searchable by city, country, date, and keyword.

Docuticker

One of the many valuable United Kingdom FreePint offerings, Docuticker (http://www.docuticker.com) presents “reports published by government agencies, think tanks, research institutes and other public interest groups available without cost on the web.” The Docuticker site offers a free weekly e-mail newsletter that contains searching tips as well as snippets of current posts from government and public sources. The purpose of the FreePint family of resources is to assist information workers in their pursuit of excellence on the job. The FreePint homepage links to FUMSI, a forum and Q&A section on how to “find, use, manage, and share” information and the Resource Shelf, where editors search the Web for free quality sites.

Grey Matters: A Practical Search Tool for Evidence-Based Medicine

Grey Matters is available at http://www.cadth.ca/index.php/en/cadth/products/grey-matters. It offers a grey literature checklist that helps to document the search process. Available as a Word document, the tool provides a
list of Canadian and international health technology assessment agencies, regulatory industries, clinical trial registries, thus enabling researchers to search systematically and comprehensively.

GreyNet International

Available at http://www.greynet.org/, GreyNet International hosts conferences, workshops, a discussion list, a newsletter, a repository, and an archive for the field. Emanating from the Netherlands, GreyNet International hosts a moderated discussion list and publishes The Grey Journal (TGJ). The fee-based publication is aimed at an audience consisting of “Colleges and Schools of Library and Information Studies, as well as, information professionals, who produce, publish, process, manage, disseminate, and use grey literature e.g. researchers, editors, librarians, documentalists, archivists, journalists, intermediaries, etc.” The site also offers a free bimonthly newsletter, GreyNet Newsletter. The site hosts an archive of 150 documents on grey literature, indexed by first author, and the first page of each is available for free. Corresponding PowerPoints are available, too. The GreySource Index categorizes Web sites according to one of two classification systems: the COSATI (American) and SIGLE (European) classification systems. Categories related to health sciences include the following:

- 02—Agriculture, Forestry, Fisheries, Veterinary Sciences
- 03—Environmental Pollution, Protection and Control
- 05—Social Sciences (Economics, Information Science, Psychology, Etc.)
- 06—Biological & Medical Sciences
- 18—Sciences and Technology—S&T (Multidisciplinary)

Each category then leads the researcher to grey literature in that area. This is an especially valuable tool for the investigator whose evaluation skills are shaky as the sites are well vetted before being listed.

The International Conference on Grey Literature

The International Conference on Grey Literature has prepared what it refers to as “Tear Sheets” in Grey Literature. Available at http://www.textrelease.com/tearsheets.html, the compilation includes document types, a list of Web-based resources, biographical notes of authors in the field, collections of conference-based papers from 1995 to 2008, a thematic index to The Grey Journal, and a bibliographic archive of 150 papers on grey literature dated from 2004 to 2010. Of particular value is Tear Sheet 1 entitled List of Grey Literature Document Types, for it points out the variety of data that fall under
the category of grey literature, and, in so doing, highlights the difficulties in finding, identifying, and evaluating the materials therein.

The New York Academy of Medicine Library’s Grey Literature Collection

The Collection is a bimonthly publication of grey literature focused on public health. It is available at http://www.nyam.org/library/pages/grey_literature_report. This page offers links to resource awareness blogs, an online subscription form to the Grey Literature Report, a cataloged database of grey literature publications, a useful definition of grey literature, and links to partner sites that either include grey literature in their collections or are grey literature–producing organizations.

OpenSIGLE System for Information on Grey Literature in Europe

The site explains that “SIGLE—System for Information on Grey Literature in Europe, was created in 1980 in order to collect and to make available grey literature produced in the countries of the European Community by the intermediary of an online database. Created with the support of the European Community, the base was produced from 1985 onwards by EAGLE—European Association for Grey Literature Exploitation. Each country is represented by documentation centres or libraries of national importance.” The site has not been updated since 2004. It is available at http://opensigle.inist.fr/.

Scirus

With over 450 million scientific items indexed at last count, the science search engine Scirus allows researchers to search not only journal content but also scientists’ homepages, courseware, preprint server material, patents, and institutional repository and Web site information. It is possible to limit a search to a variety of file formats such as PowerPoint, pdf, or Word, the formats that nonpublished material often use. It is available at http://scirus.com/.

Further Information

For further information regarding grey literature, the authors recommend highly several sources: Dean Giustini’s presentation on Slideshare entitled “Finding the Hard to Finds: Searching for the Grey Literature in Medicine” is available at http://www.slideshare.net/giustinid/libr534-class-vi-ib2; Giustini’s Health science wiki, available at http://hlwiki.slais.ubc.
Grey literature can simplify difficult ideas for a nonspecialist audience, and it can convey new information earlier than traditional forms of academic publication. Grey literature is an important resource in the arsenal of search tools available to medical researchers.

REFERENCES