Getting started with Evidence-Based Medicine Reviews

Evidence-Based Medicine

Definition: Evidence-Based-Medicine is the "...process of systematically finding, appraising and using contemporaneous research findings as the basis for clinical decisions."

Scherrer,C.S. & Dorsch,J.L. The evolving role of the librarian in evidence-based medicine. *Bulletin of the Medical Library Association.87*(3) 1999:pp.322-328

Evidence-Based Medicine Reviews [EBMR]

EBMR comprises a suite of web-based databases: the Cochrane Database of Systematic Reviews and Best Evidence. The service requires an ATHENS username and password. A general username, available from the library enquiry desk, authenticates access from PCs on campus. If you have internet access from home, you can apply for a personal ATHENS username by completing the online request form linked from the Databases web page. The same ATHENS username will access CINAHL.

Open your web browser software, such as Internet Explorer. Open the Library Databases page by typing http://www.ucsm.ac.uk/library/datasets.html in the Address box. At the Databases page, scroll down the screen to Evidence-Based Medicine Reviews and click on the link.

Type in your ATHENS username and password (NB. these are case sensitive). Click on the   button. Click on the link for the Cochrane Database. If you have used CINAHL, the EBMR search screens will be familiar.

Cochrane Database of Systematic Reviews

The Cochrane Collaboration is an international network of groups who prepare, maintain, and disseminate systematic topic reviews of current medical research. The Collaboration aims to scan the current biomedical literature, locate the results of clinical research, and assess the validity, applicability, and implications of those results. Each topic review consists of an introduction (background and objective), materials (selection criteria and search strategy), methodology, results (description of studies, methodological quality and results), discussion and conclusion, references to included studies, and log of excluded studies.

Fig.1. Cochrane Database Search Screen

On-Screen Help

Note that the on-screen help is generic for Biomed databases. Examples given are usually taken from Medline, and are not always useful.

Browse Searching

Click on the Browse Topics icon ⬛ from the options at the top of the screen. The Cochrane Group List indicates the range of topics currently under review. Click the Article List hypertext link for the Cochrane Dementia and Cognitive Improvement Group. A list of completed topic reviews, and protocols for future reviews, appears on screen. Check the status type that appears in square brackets at the end of the reference. Display options available from the list include an abstract or summary of the review; a complete reference comprising full citation, and keywords taken from the Medical Subject Headings (MeSH) list; and a full topic review. Choose a completed review, and click on the Topic Review link. The full-text of the review appears on screen. There are references to the research studies included in the topic review, but not the full-text of the research articles themselves. The review provides a detailed critique of current research.

Group portfolios are limited, so browsing is still the easiest way to search for reviews on a certain topic. As the database grows, you will need to use other search options. Click the Main Search Page icon at the top or bottom of the screen.

Keyword Searching

The system tries to match keywords within the whole document, so a simple search for the keyword *dementia* will retrieve all reviews that contain that term, regardless of whether or not *dementia* is the focus of the review. We'll explore some of the ways in which you can increase the relevance of the records you retrieve.

Combining Keywords

You can create a complex search string using the Boolean operators AND/OR

dementia AND (stroke OR hemiplegia)

Take care when using more than one operator in a search string. Parentheses are required to separate the elements of the phrase. Try searching with the example given above.

You can achieve the same result by searching each keyword separately, then using the combine icon above the Search History window. Complete three separate searches for *dementia, stroke, hemiplegia*. Click on the combine icon. The screen changes to include checkboxes, and an operator selection box. Take care with the order in which you combine the results of your searches. You need to use OR to begin with, so change the operator, and tick the checkboxes against *stroke*, and *hemiplegia*. Click the Combine Searches icon. Repeat the process, but this time use the operator AND to combine the results of your last search with the search for *dementia*. You should retrieve the same number of reviews by either search method. Click on Display to see the references. Scroll down the list, and use the Next Citations icon at the bottom of the page to view the next 10 records on the list.

Field Searching

Database records are similar to paper-based forms. They are composed of fields containing different elements of information. The separate fields are available as search operators. In a full-text database such as Cochrane, you might find it useful to limit your keyword search to the review title, abstract, and keyword (MeSH) fields. This should ensure you retrieve reviews in which your chosen keyword is highly relevant. Limiting a search in this way works better with broad keywords or phrases, rather than complex search strings.

Go to the Main Search screen. Click the Search Fields icon [Search fields] above the Search History window. Click the checkboxes against Abstract, Title, and Keyword. The red information icon provides details of each field. Enter

alternative OR complementary

in the search window. Click the Perform Search icon. On the Main Search screen, try the same search without using field limitations, and compare the results of the two searches.

Limit Options

A series of checkboxes appear below the Keyword box on the Main Search Page. These allow you to limit your search to Systematic Reviews, Protocols, New Reviews, or Recently Updated Reviews. Protocols are reviews in process, so you may prefer to exclude these.

Viewing Figures and Images

Some reviews include figures or tables, and images. Figures or tables usually display on screen, although you may need to use the Get TIFF facility to print clearly. Images are not always available.

Output

You can save reviews to disk, print or email. Each procedure varies. Prefer the following to the on-screen instructions.

- **Full-Text.** To email the full-text of the topic review, click on Topic Review, then use the Full-Text Manager at the bottom of the page. To save to disk, or print, it is easier to use the Save As, or Print options from the File menu on the browser task bar. Save the review as a Text File (*.txt) so that you can open it later in a word processing application.

- Selected Citations. To email selected citations, click the checkboxes against preferred reviews. Choose the fields you require from the Citation Manager at the bottom of the page. Click the Email button, and check the citations you selected are listed in the Annotations window. Type your email address in the email window, and delete<>. Click the Send Email icon. To save to disk , or print, click the checkboxes against preferred reviews. Choose the fields you require from the Citation Manager at the bottom of the screen. Click the Display icon. Then use the Save As, or Print options from the File menu on the browser taskbar. Save the file as a Text File (*.txt) so that you can open it later in a word processing application.

Logout

Remember to logout using the Logoff icon at the top of the screen. Alternatively, use the Change Database icon to switch to the Best Evidence database, and continue with the worksheet.

Best Evidence

The database comprises two online review journals: *Best Evidence* and *ACP Journal Club*. Both journals provide reviews of individual research articles that have been published by the medical press. Over 90 publications are scanned, including all issues of the following core journals: *American Journal of Medicine, Annals of Internal Medicine, Archives of Internal Medicine, BMJ, Circulation, Diabetes Care, JAMA, Journal of General Internal Medicine, Journal of Internal Medicine, Lancet, New England Journal of Medicine*. Each review consists of a reference to the original article, enhanced abstract, and commentary that considers the relevance of the research results for clinical practice.

Browse Searching

Click on the Browse Journals icon ![Browse Journals] from the options at the top of the screen. The two review journals: *Evidence-Based Medicine*, and *ACP Journal Club* are listed. Click the Issue List hypertext link for a Table of Contents. Choose an article, and click on the Article Review link. The full-text of the review, but not the original research article, appears on screen.

Keyword Searching

Although the Best Evidence reviews are not as detailed as the Cochrane reviews, broad keywords still retrieve too many records. Field limits for abstracts and titles are not always useful, since the review considers a single article rather than a topic. Try to build up a search using different keywords. You can create a search string, or combine the results of searches using the Combine icon. See the examples given for the Cochrane Database, or create some searches of your own.

Field Searching

If you are looking for a research article for a critique exercise, then you may want to restrict your search to journals available locally. Click on the Search Fields icon. Tick the checkbox for Reviewed Article Journal Name. Enter *Lancet* in the search window, and click the Perform Search icon. This will limit your search to reviews of articles originally published in the Lancet. Note that journals are usually referred to by their abbreviated titles eg *JAMA, Ann Intern Med.* etc. You can then combine the results of a journal search with your keyword search, by using the Combine icon at the top of the main search page.

Limit Options

The Best Evidence search screen allows you to limit your search by publication year, or by ticking the checkboxes against one or more of the following:

- Therapeutics - restricts retrieval to reviews focusing on issues of prevention and treatment, as well as quality improvement and economics.
- Diagnosis - restricts retrieval to reviews that relate to the diagnosis of disease or symptom.
- Prognosis - restricts retrieval to reviews that focus on issues relating to the prognosis of disease.
- Etiology - restricts retrieval to reviews focusing on causal factors relating to disease.
- EBM Trends - restricts retrieval to editorials.

Output

You can save reviews to disk, print or email. Each procedure varies. Prefer the following to the on-screen instructions.

- Full-Text. To email the full-text of the topic review, click on Topic Review, then use the Full-Text Manager at the bottom of the page. To save to disk, or print, it is easier to use the Save As, or Print options from the File menu on the browser task bar. Save the review as a Text File (*.txt) so that you can open it later in a word processing application.
- Selected Citations. To email selected citations, click the checkboxes against preferred reviews. Choose the fields you require from the Citation Manager at the bottom of the page. Click the Email button, and check the citations you selected are listed in the Annotations window. Type your email address in the email window, and delete<>. Click the Send Email icon. To save to disk , or print, click the checkboxes against preferred reviews. Choose the fields you require from the Citation Manager at the bottom of the screen. Click the Display icon. Then use the Save As, or Print options from the File menu on the browser taskbar. Save the file as a Text File (*.txt) so that you can open it later in a word processing application.

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Getting Started with ASSIAnet

http://www.ucsm.ac.uk/library/

Library
ST MARTIN'S SERVICES LTD

1. Introduction

ASSIAnet (Applied Social Sciences Index and Abstracts) is a web-based indexing and abstracting tool for the health and social sciences. Areas covered include social services, psychology, health, economics, politics, race relations, and education. Abstracts, or summaries, of articles from 650 UK, US and international periodicals (journals or serials) are available from 1987 onwards. The library web page also shows a hypertext link to the list of periodicals indexed in ASSIAnet. The database does not give access to full-text articles. Take care to record the full reference (citation) of any useful item so that you can locate it in the library or place an Inter-Library Loan request. Article citations should include the author, title and page number of the article, as well as the title, volume and issue number, and date of the periodical. Check the original article for an accurate citation, before adding it to your bibliography.

2. Starting up

Open your web browser software, such as Internet Explorer. To open the library web page, type http://www.ucsm.ac.uk/library/ in the Address box. Select the databases option from the on-screen list. Scroll down to ASSIAnet and click on the hypertext link. There is direct access from College PCs. Off-campus access is available by username and password.

This is recorded on the College Intranet via the login link. Please note the College Intranet is only accessible from College PCs. Having accessed the ASSIAnet website, click on the ASSIAnet logo. Then select proceed, or type in the username and password to login to the database. There is a limit on the number of students who can access ASSIAnet at any one time. If access is denied, please try again later.

3. Standard search

You can carry out standard or advanced searches, but please access the functions from the toolbar at the top of the Welcome page rather than the hyperlinks below.

The standard search screen has a text box for words or phrases. Scroll down the screen to view the search tips. Try the following search using a combination of words and phrases. Note that phrases must be enclosed within quotation marks.

"young people" AND alcohol

Click the **Search** button to initiate the search.

Over 200 records are retrieved. Click the button to **Refine Search** The text box is redisplayed. Add another search term, and rerun the search.

"young people" AND alcohol AND crime

This reduces the number of records retrieved. Select 3 or 4 articles by clicking the checkboxes to the left.

Click on the button at the top of the list to **Display** additional information. A second window opens. You might need to maximise the window using the [_] symbol in the top right hand corner.
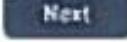
Click the **Next** button to display the following records.

Close the window by clicking on [x] in the top right hand corner, and return to the title list. Each title acts as a hypertext link to the abstract or summary. You can access individual abstracts this way. You can print the abstract displayed on screen by right clicking the mouse. Select print from the drop down menu, then OK. There is no facility to download records directly to disk, although you can cut and paste if necessary. Multiple records can be emailed to your address and printed out subsequently. The

email option functions from the **Download** button on the Titles screen. You can customise the format by clicking the checkboxes for the required fields. Scroll down the screen and enter your email

address in the box provided. Click the **Download / E-mail** button to send the email.
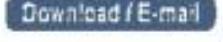
4. Advanced search

The advanced search screen allows you to limit your search by year of publication, source (periodical title), author etc. It also allows you to search the subject index using terms selected from the thesaurus. However, the thesaurus is quite prescriptive. You might find it more profitable to try your own search terms as free text searches. The following example illustrates some of the search options available from the drop-down menus on the Advancedsearch query form eg. to find articles on *pregnancy* in the periodical *Youth & Policy*.

Source	Youth & Policy	AND
Free Text	pregnancy	

More complex searches are possible using Query Builder at the bottom of the screen. Examples of different search syntax are given from the on-screen HELP under Query Builder. Two letter codes are used to limit the search to a specific part of the record: so=source (periodical title) and yp=year of publication are the most useful ones. The following example illustrates the search facility from Query Builder.

(pregnancy OR motherhood) AND so=youth & policy

5. Truncation

Search terms must match the words in the record for the record to be retrieved. Truncation allows you to cover a number of options, so you don't need to enter variations of a word. Using the asterisk * as a truncation symbol for *pregnan** the software will search for records containing the words *pregnancy, pregnant,* or *pregnancies*. This should retrieve more records than searching for *pregnancy* only. The truncation function is available in both standard and advanced searches.

6. Boolean operators

The three Boolean operators AND/OR/NOT can be used in both standard and advanced search modes to construct search strings. The examples given below illustrate the use of these operators.

AND will retrieve only those records containing both search terms
eg. alcohol AND crime

OR will retrieve those records containing either search term
eg. pregnancy OR motherhood

NOT will retrieve those records containing the first search term but not the second
eg. drugs NOT marijuana

Note that Boolean Operators are available from the drop down menu in the third column of the Advancedsearch query form.

7. Displaying more than 20 records

Some searches will retrieve high numbers of records. ASSIAnet displays these in sets of 20. A navigation box at the top and bottom of the screen provides links to the next sequence of references. Click the Next or Previous hypertext links within the navigation box to view the complete set of records retrieved.

8. Browse

Select the Browse option from the main toolbar to browse various indexes including the source or journal list, the author list, and the subject index. You can search for articles written by members of the academic staff at St.Martin's eg. Dr.Sue Bloxham. Open the Browse screen, and accept Authors as the Current Index. Type the surname Bloxham in the Current Search window. Click the [Browse] button. Scroll down the screen to view the author list. Tick the checkbox to select Bloxham, S.

To display the article titles, click the [View Selection] button.

9. Logout

When you have finished searching ASSIAnet please exit via the logout button.