Outline

Basic Knowledge for Practical Use of Medical Databases

2019
Graduate School Medical Science
Basic Training -- Document Retrieval
Goal of Basic Training -- Document Retrieval

- To understand the characteristics of medical databases, and acquire the skills to efficiently retrieve the literary information necessary for one's research

- Having acquired information through searching the database, to then understand how to acquire the actual paper
Basic Medical Science Training -- Document Retrieval Schedule

- **Morning Session**
  - Outline
  - PubMed

- **Afternoon Session**
  - Web of Science, EndNote, JCR
  - OPAC Inter-library Loan

* Please without fail put a check by your name on the attendance chart near the entrance!
To start
Nagoya University Medical Library Website

https://www.med.nagoya-u.ac.jp/medlib/index_en.html

To the Japanese homepage

Links to commonly used databases
Outline

1. Basic Knowledge for Practical Use of Databases

2. Outline of Medical Databases
1. Basic Knowledge for Practical Use of Databases

1-1 Having a search plan
1-2 Points to remember when entering search terms
1-3 Logical operations
1-4 Truncation
1-5 Thesaurus
  ① Handling synonyms  ② Organization of related terms
1-6 Automatic mapping functions
1-7 Tricks to searching
1. Basic Knowledge for Practical Use of Databases

1-1 Having a search plan

- Selecting keywords
  - First, try searching the words (in natural language) that come to mind
  - For a highly precise search, search with "controlled vocabulary" (See section on the "Thesaurus") When you have found a piece of literature that matches your research theme, search using the controlled vocabulary for that literature's data

- Create multiple sets of searches (check number of hits and content)

- Cross and then winnow down your sets of searches
  - If you winnow them down too much at the start, you might overlook an important piece of literature
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1-2  Points to remember when entering search terms

- Differences in spelling
  tumor -- tumour

- Synonyms = Other ways of saying something
  cancer -- tumor

- Suffix changes
  biology -- biological, kid -- kids
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1-3 Logical operations

- **AND operation**
  - A AND B

- **OR operation**
  - A OR B

- **NOT operation**
  - A NOT B
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1-4 Truncation

- If you enter part of your search term (in natural language), you can search for literature with the same text string.
- Affix symbols such as *, ?, and $ before or after the search term.
  - Match with first part metabolic* metabolic disorder
  - Match with middle part *metabolic* basal metabolic rate
  - Match with last part *metabolism basal metabolism

※ Be aware that symbols may vary depending on the database. Some databases may not require symbols.
1. Basic Knowledge for Practical Use of Databases

1-5 Thesaurus

- The database's collection of synonyms
  - Synonyms are gathered under "controlled vocabulary"

- Tree Structures
  - Broader terms -- narrower terms

- Literature data are given controlled vocabulary based on the thesaurus.

- Primary database thesauruses
  - PubMed ... "MeSH" Medical Subject Headings
  - Ichuushi Web ... "Medical Term Thesaurus"
1-5 Effects of a thesaurus ①: organization of synonyms

- MeSH Ex.

- By using controlled vocabulary to search, one can avoid literature "falling through the cracks" of differences in expression.
1. Basic Knowledge for Practical Use of Databases

1-5 Effects of a thesaurus ②: organization of synonyms

- Tree Structures
  - You can understand the exact controlled vocabulary by having an idea of where a term is mapped.
  - You can search for a number of narrower terms all at once (optional)

- MeSH Tree Structures

  Neoplasms by Site
  Thoracic Neoplasms
    Respiratory Tract Neoplasms
      Lung Neoplasms
        Bronchial Neoplasms
        Multiple Pulmonary Nodules
1. Basic Knowledge for Practical Use of Databases

1-6 Automatic mapping functions

- By using a function of thesaurus-enabled databases, avoids missed results when searching with natural language
- When searching with natural language, the system automatically guides you to the appropriate controlled vocabulary (mapping)
- The search becomes an OR operation using both natural language and controlled vocabulary
- If there is no thesaurus function, the engine searches only for the natural language term
1-7 Tricks to searching

- As you search, narrow your results down
- No results found! → Did you perhaps mistype?
- Make good use of thesauruses for high-precision searches
  - Rough search using natural language → check results for controlled vocabulary → search again using the controlled vocabulary
2. Outline of Medical Databases

2-1 Outline

2-2 Access and guides to databases

2-3 Introduction of databases not practiced on during this session

① EBM-related database UpToDate
② EBM-related database Cochrane Collection
③ Other databases usable on EBSCOhost
④ Searching articles published in Japan CiNii Articles
⑤ Searching books in university libraries CiNii Books
⑥ Free search engine specializing in academic articles Google Scholar
2. Outline of Medical Databases

2-1 Outline

Scientific Papers
- PubMed.gov: Internet version of MEDLINE (Fast)
- MEDLINE / Biological Abstracts / PsycARTICLES / CINAHL, etc
- Japanese Internet version of MEDLINE
- Use by Web of Knowledge and EBSCO

EBM-Related
- Cochrane Collection
- UpToDate: Supports best patient care

Cited
- ImpactFactor
- Full text available
- Nagoya University Electronic journals / Access Service
- NU Link: Find Full Text
2. Outline of Medical Databases

2-2 Guide to Database Access

Links to commonly used databases

Tools for Paper Writing (submission guidelines, abbreviations for journal titles, style guides for references), dictionaries (the Life Science Dictionary) etc.

http://www.med.nagoya-u.ac.jp/medlib/index_en.html/
2. Outline of Medical Databases

2-2  Guide to Database Access

http://www.nul.nagoya-u.ac.jp/index_e.html
2. Outline of Medical Databases

2-2 Guide to Database Access

http://www.nul.nagoya-u.ac.jp/guide/gsheets/index_e.html
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

EBM-related database **UpToDate 1**

- A clinical support tool that, using the latest evidence, lets you quickly and easily to find specific, practical answers to the clinical questions that come up in everyday treatment.

- Provides over 9,500 ranked, recommended courses of treatment through clinical reviews of over 11,000 cases covering over 25 specialties.

*(Usable only on the Tsurumai Campus)*

http://www.uptodate.com/contents/search
2. Outline of Medical Databases

2-3 Introduction of databases not included this session

UpToDate 2
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

**UpToDate 3 Search Screen**

Don't click on "Login"!

Enter your search term and click on the "Search" button.
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

Expand your results
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

UpToDate 5 Example of topic display

Avian influenza A H7N9: Epidemiology, clinical manifestations, and diagnosis

Author: Anna R Thorne, MD
Section Editor: Martin S Hirsch, MD
Deputy Editor: Allyson Bloom, MD
Contributor Disclosures

All topics are updated as new evidence becomes available and our peer review process is complete.


INTRODUCTION — In late March and April 2013, human cases of novel avian influenza A H7N9 infection in China were reported to the World Health Organization [1-7]. The initial wave occurred from February to May 2013 [8]. The number of new cases peaked in April 2013 and then declined [9], likely related, at least in part, to implementation of control strategies including closure of live bird markets and increased public awareness. Since then, annual epidemics have occurred during influenza season; most cases have occurred in China [10-13]. The largest wave was the fifth wave in late 2016 and early 2017 [13].

The epidemiology, clinical manifestations, and diagnosis of avian influenza A H7N9 infections will be reviewed here. The treatment and prevention of avian influenza A H7N9 infections are discussed separately. (See "Avian influenza A H7N9: Treatment and prevention".)

Other avian influenza viruses (e.g., H5N1 influenza) and seasonal influenza viruses are also reviewed separately. (See "Epidemiology, transmission, and pathogenesis of avian influenza" and "Clinical manifestations and diagnosis of avian influenza" and "Treatment and prevention of avian influenza" and "Avian influenza vaccines" and...
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

UpToDate 6 Obtaining full texts from topic references

PubMed、PubMedID

PDF
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

UpToDate 7 View images by topic
The Cochrane Collaboration is a project begun as part of the United Kingdom's National Health Service to evaluate medical techniques for treatment and prevention.

The Cochrane Collection is a database created by the Collaboration to support the practice of EBM (Evidence Based Medicine).

Only carefully selected data is included, so there are not a great number of cases.

http://search.ebscohost.com/
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session ②

Cochrane Collection 2

- **Cochrane Database of Systematic Reviews (CDSR)**
  - You can obtain the full texts of systematic reviews (a means of collecting, critically evaluating, summarizing and publishing papers of a certain standard from around the world, in order to clarify the evidence for medical interventions)
  - Updated 4 times a year

- **Cochrane Clinical Answers**
  - Concise summary of the high quality evidence of CDSR in a Q & A format

- **Cochrane Central Register of Controlled Trials**
  - Database of bibliographical information for articles on controlled clinical trials

- **Cochrane Methodology Register**
  - Reports concerning controlled clinical trial methodology

There are 4 databases that can be used
Cochrane Collection  3

The Systematic Review Process

1. Research subject is established
2. Research results are thoroughly collected
3. The validity for each research is evaluated
4. They are summarized in abstract form
5. Statistical analysis is done through meta-analysis
6. Results are interpreted
7. Database is edited and updated

Note: A meta-analysis seeks to integrate the results of a number of past studies in order to reach a result with even greater reliability. It also refers to that methodology or statistical analysis.
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

Cochrane Collection
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

Cochrane Collection 5

Put a check by the databases you wish to use (check as many as apply)
Click the "Continue" button
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

Cochrane Collection 6
Searching the Cochrane Database of Systematic Reviews

① Enter your search term(s)
② Click the "Search" button
2. Outline of Medical Databases
2-3 Introduction of databases not included in this session

Cochrane Collection 7 Full texts from search results

Click on “Linked Full Text”

PDF
Other databases usable on EBSCOhost

- MEDLINE (1809 - )
  - Medical subjects such as medicine, nursing, pharmacy, dentistry
  - Collected data (Over 5,600 journals) is virtually the same as PubMed
  - Time lag

- Academic Search Premier (PDFs from before 1975 available)
  - Full texts from over 4,600 academic journals

- You can choose multiple databases at the same time

   ▼ For more information "EBSCOhost 2.0 Search Guide"

http://www.nul.nagoya-u.ac.jp/db/guide-ebsco.pdf
Searching articles published in Japan  

**CiNii Articles 1**

- **Academic paper database**
  
  Integrates academic society publications, university research bulletins, organizational repositories, the National Diet Library's journal article search database, the National Institute of Infomatics' works cited search database, J-STAGE, and Journal@rchive

  **Abstracts from commercial academic publications in the medical field are not included**

- **Number of abstracts:** about 21.5 million (as of 3/2019)

- **Possible to obtain full texts from search results**
  (some may cost a fee)

http://ci.nii.ac.jp/en
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

CiNii Articles 2  Search Screen and List of Results

NAGOYA Repository

etc.

Links to full texts
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

CiNii Articles 3 Full texts from search results

1

2

3
You can search for information on all books (including periodicals) held by university libraries across Japan.

http://ci.nii.ac.jp/books/
2. Outline of Medical Databases

2-3 Introduction of databases not included in this session

Free search engine specializing in academic articles  Google Scholar

http://scholar.google.co.jp
Thank you very much