WHERE TO SEARCH

KEY RESOURCES FOR TYPICAL COMPONENTS OF THE HTA

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Where to search for the typical components of HTA?

- The typical components of HTA
- Informing the components with evidence
- Why search more than one database?
- Where to search for HTA’s
- Additional resources
- How do we know when to stop searching?
Typical components of HTA reports

- In reports on evidence on clinical effectiveness of the technology in question e.g.
  - Effects evidence
  - Evidence on adverse effects
  - Ethical issues

- In reports on economic evaluations providing information on cost-effectiveness e.g:
  - Introduction to the disease
  - Current alternative treatments (Royle 2003)
  - Cost-effectiveness, utility, quality of life
  - Data for economic models
Why search more than one database?

Handsearching versus electronic searching to identify reports of randomized trials

“Handsearching still has a valuable role to play in identifying reports of randomized trials for inclusion in systematic reviews of health care interventions, particularly in identifying trials reported as abstracts, letters and those published in languages other than English, together with all reports published in journals not indexed in electronic databases” (Hopewell et al (2007):
Typical components – which resources?

- Effects evidence
- Data for models
- Adverse effects
- Ongoing research
- Cost-effectiveness Utilities/ quality of life studies
- Ethical issues
Some key resources
The S-pyramid

Start searching from the top

(Ormstad 2011)
Key resources – the S-pyramid

1. Computerised decision support systems
   - BMJ Best Practice, UpToDate, DynaMed, Evidence-based clinical practice guidelines

2. Syntheses
   - Database of Abstracts of Reviews of Effects (DARE), Evidence-based abstraction journals

3. Synopses of syntheses
   - Cochrane Database of Systematic Reviews, Health Technology Assessment Database (HTA), PEDro, OTseeker

4. Summaries
   - Evidence-based abstraction journals

5. Systems
   - Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE/ PubMed, EMBASE, NHS Economic Evaluation Database

DiCenso A, 2009
Type of research question and databases to search (examples)

**Effects evidence**
- CDSR, CRD DARE, MEDLINE & EMBASE (filter), TRIP database, US Food and Drug Administration (FDA), European Medicines Agency (EMA)
- Systematic review or HTA
- RCTs
- Clinical trials.gov etc./Grey literature sources

**Adverse effects**
- EMBASE, MEDLINE Derwent Drug File
- No systematic review or HTA
- No RCTs
- Controlled studies, cohort stud., cross-sectional stud. etc.

**Cost-effectiveness/quality of life etc.**
- CEA Registry (NHS Economic Evaluation Database), Health Economic Evaluation Database (HEED)
- Systematic review or HTA
- No systematic review, HTA or economic evaluations
- Economic evaluations (NBI search filter: MEDLINE, EMBASE)
- Studies with data for models
  - Epidemiological d.
  - Outcome
  - Quality of life
  - Costs etc.
Finding HTA’s or systematic reviews

- Cochrane Database of Systematic Reviews (CDSR)
- Database of Abstracts of Reviews of Effects
  - available in Cochrane Library and Centre for Reviews and Disseminations, CRD
- Health Technology Assessment Database (HTA)
- MEDLINE & EMBASE
  - using search filter: e.g. from ISSG search filter website
- TRIP database
- US Food and Drug Administration (FDA)
  - Approved drugs
- European Medicines Agency (EMA)
  - Responsible for the scientific evaluation of medicines developed by pharmaceutical companies for use in the European Union.
- HTA organisations websites
Database of Abstracts of Reviews of Effects (DARE)
- Structured abstracts of quality assessed systematic reviews
- Covers diagnosis, effect of interventions and etiology (adverse effects)
- Accessible through the Centre for Reviews and Dissemination (CRD) / Cochrane Library / OVID EBM Reviews

Health Technology Assessment Database (HTA)
- Contains health technology assessments
- Accessible through the Centre for Reviews and Dissemination (CRD) / Cochrane Library / Ovid EBM Reviews
(Ormstad 2011)
Cochrane Database of Systematic Reviews (CDSR)

- Systematic reviews prepared by the Cochrane Collaboration
- Covers prevention, effect of interventions and diagnosis
- Accessible through the Cochrane Library / Ovid EBM Reviews
1. Varenicline (Champix) for smoking cessation
   - National Prescribing Service Limited (Australia) 2011
   - Developing World? CPDICME Preview Conclusion Related

2. Varenicline (Champix) for smoking cessation
   - National Prescribing Service Limited (Australia) 2008
   - Developing World? CPDICME Preview Conclusion Related

3. Cost effectiveness of varenicline versus bupropion and unaided cessation for smoking cessation in a cohort of Finnish adult smokers
   - NHS Economic Evaluation Database, 2010
   - Developing World? CPDICME Preview Conclusion Related

4. The cost-effectiveness of an extended course (12 + 12 weeks) of varenicline compared with other available smoking cessation strategies in the United States: an extension and update to the BENESCO model
   - NHS Economic Evaluation Database, 2010
   - Developing World? CPDICME Preview Conclusion Related

5. Use of varenicline for 4 weeks before quitting smoking: decrease in ad lib smoking and increase in smoking cessation rates
   - Evidence-Based Synopses 2011
   - Developing World? CPDICME Preview Conclusion Related

6. Cost-utility analysis of varenicline, an oral smoking-cessation drug, in Japan
   - NHS Economic Evaluation Database, 2009
   - Developing World? CPDICME Preview Conclusion Related

7. Cost-effectiveness of varenicline compared with nicotine patches for smoking cessation results from four European countries

Medline Articles

Therapy 55
Finding effect evidence – single studies

- The Cochrane Central Register of Controlled Trials (CENTRAL)
- MEDLINE & EMBASE
  - using search filter: e.g. from ISSG search filter website
- TRIP database
- US Food and Drug Administration (FDA)
  - Approved drugs
- European Medicines Agency (EMA)
  - Responsible for the scientific evaluation of medicines developed by pharmaceutical companies for use in the European Union.
MEDLINE and EMBASE

- **MEDLINE**: a major database covering
  - biomedicine, biological and physical sciences
  - humanities and information science (related to medicine and health care).

- **EMBASE**: a major biomedical and pharmaceutical database
  - drug research, pharmacology, pharmaceutics, toxicology
  - clinical and experimental human medicine, etc

- Search filters may be used if large search results are produced to focus on specific search designs such as Systematic Reviews, RCTs and other specific study design.
Subject-specific databases

- Nursing and allied health:
  - Joanna Briggs - Systematic reviews within nursing and midwifery
  - Cumulative Index to Nursing and Allied Health (CINAHL)
- Alternative and complementary medicine:
  - MANTIS
  - Allied and Complementary Medicine (AMED)
- Mental health:
  - PsycINFO
  - The PILOTS (Published International Literature on Traumatic Stress)
- Physiotherapy:
  - Physiotherapy Evidence Database (PEDro)
- Occupational Therapy Systematic Evaluation of Evidence (OTseeker):
  - Systematic reviews within occupational therapy
- Cancer therapies
  - ASCO American Society of Clinical Oncology
Finding Adverse effects evidence

- No clear single approach recommended searching for adverse effects

- It is unclear which sources are most effective at providing information on adverse effects (Golder S 2010)

- Resources:
  - EMBASE
  - MEDLINE,
  - Derwent Drug File
  - contains information on drugs and pharmaceutical science from over 40 countries (produced by Thomson Reuters)

- Industry submissions to HTA agencies may potentially provide the greatest number of relevant references for information on adverse effects of drugs (Golder S 2010)
Finding Adverse effects - continued

- RCTs may not have long enough follow-up to detect all adverse events. Other study designs may be relevant e.g.
  - Case control or Cohort studies
  - Observational studies

- Include named adverse events in your search but be aware of possible bias due to adverse events we do not do not know about and therefore have not included
  - E.g. Headache, Drug toxicity

- Database subheadings/qualifiers, e.g.
  - Kidney Diseases/ci - Chemically Induced
  - Folic acid/ae - Adverse Effects

- Repeat the subject headings as text words, e.g.
  - Headaches.ti,ab.
  - Drug toxicity.ti,ab.
Type of research question and databases to search (examples)

**Effects evidence**
- CDSR, CRD DARE, MEDLINE & EMBASE (filter), TRIP database, US Food and Drug Administration (FDA), European Medicines Agency (EMA)
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**Cost-effectiveness/quality of life etc.**
- CEA Registry, (NHS Economic Evaluation Database), Health Economic Evaluation Database (HEED)
  - Systematic review or HTA
  - MEDLINE, EMBASE, CEA registry, CRD HTA
  - Economic evaluations (NB! search filter: MEDLINE, EMBASE)
  - Studies with data for models
    - Epidemiological d.
    - Outcome
    - Quality of life
    - Costs etc.
Finding Economic Evaluations

- Cost-effectiveness/ utility/ quality of life studies

- **NHS EED (NHS Economic Evaluation Database)**
  - Critical appraisals of economic evaluations since 1994
  - Free of charge
  - Or as part of the Cochrane Library

- **HEED**
  - Categorisations and assessments of economic evaluations
  - Subscription database offered by Wiley

- **CEA registry**
  - US resource offering categorisations of cost-effectiveness studies and the ratios
  - Free of charge
Finding Economic Evaluations – continued

- Health Technology Assessment (HTA) database
  - Free of charge at http://www.crd.york.ac.uk/crdweb/
  - Technology appraisals often including reviews of the economic studies and models

- Searching MEDLINE and EMBASE last 2 years with filters
  - ISSG search filter website

(Glanville 2011)
Effects
Evidence
Adverse
effects
Cost-effectiveness
Utility
Ethical issues

Ongoing research

Data for models

HEED: Health Economic Evaluations Database

About this Database

HEED equips health professionals with access to high-quality evidence to inform decisions. It provides a comprehensive guide to the latest research and data for models andDoll. Adverse effects of treatment on utility and quality of life are considered. Ethical
issues are also discussed, including ongoing research.

The Cochrane Library

Independent high-quality evidence for healthcare decision making

Search the Cochrane Library

ECONOMIC EVALUATIONS RESOURCES

Browse the NHS Economic Evaluation Database - Issue of 4, Apr 2011
Browse the Health Economic Evaluations Database (Access user name and password required)
NHS Economic Evaluations Database
Ethical issues

- Comprehensive HTAs include thorough reflections on ethical issues associated with health technologies, their use, and value-based decisions in the assessment process.

- As methods of information retrieval for effectiveness assessments are not applicable to information retrieval on ethical issues, a **specific methodological** approach is necessary” (Droste et. al. 2010).

- Important sources:
  - MEDLINE,
  - EMBASE
  - Science Citation Index

- As ethics depends on social and cultural context and values, national and non-English language ethics databases are important and should always be considered additionally.
Grey literature

- Grey literature
  - OpenGrey
  - The internet is probably now the best source of grey literature
    - General searches
    - searching within relevant organisations

- Format specific databases, e.g.
  - Proquest Dissertations & Theses Database (PQDT)
    - Previously Dissertation Abstracts
  - Inside Conferences
    - Available from Dialog

(Glanville 2011)
Ongoing research

- Research registers
  - National
    • Australian New Zealand Clinical Trials Registry
    • clinicaltrials.gov/ (US)
  - International – WHO portal
    • International Clinical Trials Registry Platform
  - Industry
    • The Association of the British Pharmaceutical Industry (ABPI) – Pharmaceutical Industry Clinical Trials database
  - Company
    • www.astrazenecaclinicaltrials.com/
  - Subject specific
    • National Cancer Institute - www.cancer.gov/ (USA)
  - Trials Results Registers (completed studies)

(Glanville 2011)
Ongoing research

ClinicalTrials.gov
A service of the U.S. National Institutes of Health

Basic Search Advanced Search Studies by Topic Studies on Map

Enter a word or phrase, such as the name of a medical condition or intervention.

Example: Heart Attack AND Los Angeles

Search Tips:
Use AND (all upper case) to search for prostate cancer AND radiation heart disease AND stroke AND California

World Health Organization

Welcome
- The Clinical Trials Search Portal provides access to a central database containing the trial registration data sets provided by the registries listed on the right. It also provides links to the full original records.
- To facilitate the unique identification of trials, the Search Portal bridges (groups together) multiple records about the same trial.
- Please note: This Search Portal is not a clinical trials registry. How to register a trial
- For mobile users, please use this link http://www.who.int/trialsearch/phone_web.aspx it can be opened from any smartphone

View/Search Trials

How to register a trial
How to update a trial
ANZCTR Statistics
Data Item Definitions
Links

Basic search:
1. You can search on all fields using exact phrases entered in inverted commas e.g. "breast cancer" will search all fields with the phrase breast cancer. If you enter the text words breast cancer without the inverted commas, the database will search all fields for the text breast OR cancer.
2. ACTR registration number and Request number can also be searched by entering the complete number in the search bar.

Type in text for basic search:

Advanced search:
Allows you to refine your search by searching on specific fields.
Click here for advanced search options.
Search within results:
Ongoing systematic reviews

The Cochrane Collaboration
Cochrane Reviews

New Reviews and Protocols from The Cochrane Library, Issue 6, 2011

New + Updated

Full Text:

Adhesives for bonded molar tubes during fixed brace treatment

PROSPERO
International prospective register of systematic reviews

Home > Search PROSPERO

Search PROSPERO has recently opened for registration and so contains few published records, searching is therefore limited.

Search

Combine these selections with

Search by registration number

Display all published records

Status
Data for models

- Which database to choose depends on the type of information you need to find
  - Epidemiological data: incidence and prevalence
  - Outcome data
  - Quality of life data – patient reported outcomes
  - Costs
  - Resource use
  - Adverse effects

- Possible resources e.g:
  MEDLINE, National statistical databases on the internet e.g
  MAPI’s Patient-Reported Outcome and Quality of Life Instruments Database (Glanville 2011)
How do we know when to stop searching?

- When the main purpose of a literature search, to inform the HTA with as much as possible of relevant high quality research evidence available to a specific question, is ensured.

- When the search approach and resources in which we search has been considered according to the research question.

- When the literature search which is informed by the key issues mentioned earlier today and the search is as up to date as possible.
References

Cochrane Handbook for Systematic Reviews of Interventions [updated March 2011]


Ormstad S. Effective and efficient evidence search for HTAs and other evidence syntheses. PPT presentation, Norwegian Knowledge Centre for the Health Services 2011

Thank you - Obrigada