

# Evidence-Based Healthcare Resource / Guide

## Overview

Finding reliable evidence for high quality patient care and decision-making is a must for healthcare practitioners and managers.

This guide will outline the what, why, how and where of evidence based healthcare.

Parts of this guide have been adapted from *Centre for Evidence-Based Medicine Introduction to EBM* <http://ktclearinghouse.ca/cebm/> (Online) [Accessed January 2016]

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## What is Evidence-Based Healthcare?

The most common definition of Evidence-Based Healthcare (EBH) is from Dr. David Sackett. EBH is “the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. (Sackett, 1996)

## Why Evidence-Based Healthcare?

Population-based outcome studies have found that therapies that are evidence-based have more positive effects on patient care than opinion-based healthcare. For example, heart attack survivors prescribed aspirin or beta-blockers have lower mortality rates than those who aren't prescribed these drugs.

## How does Evidence-Based Healthcare work?

EBH comprises of 5-steps:

**Step 1.** A decision needs to be made arising from a patient's care or service development.

**Step 2.** You formulate a focused question, accounting for your population group, problem, intervention and any comparisons or outcomes.

**Step 3.** You identify the appropriate resources to search for the best evidence — here's where the library can help the most.

**Step 4.** Critically appraise the evidence- the library can help you here too!

**Step 5.** Implement in practice, if applicable.

## How do I formulate my question?

Before you search think about:

A. What kinds of patients you are interested in? For example, population group (age? gender? ethnicity?) and problem, disease or condition.

B. What intervention or treatment you are concerned with? For example, drug therapy, diagnostic test or surgical procedure.

C. Which, if any, comparisons you want to make? For example, different population groups or interventions.

D. What outcomes are you looking for? For example, improved quality of life, less morbidity, complications or improvement in function.

## What is research evidence?

“Best evidence” can be classically categorized into a hierarchy- the higher up you go on the hierarchy the more you can rely on the findings.

**1.** Systematic reviews - reviews in which all available evidence on a particular topic is summarized

**2.** Randomised controlled trials-a group of patients are allocated- preferably randomly, where possible and ethical, to receive different treatments. Outcomes are then compared.

3. Cohort studies- involves identification of 2 groups (cohorts) of patients, one which did receive the exposure of interest, and one which did not, and following these cohorts forward for the outcome of interest
4. Case control studies - involve identifying patients who have the outcome of interest (cases) and control patients without the same outcome, and looking back to see if they had the exposure of interest
5. Cross sectional surveys - observations of a defined population at a single point in time or time interval. Exposure and outcome are determined simultaneously
6. Case reports-reports on single subjects or patients with an outcome of interest; sometimes collected together into a short series
7. Expert Opinion — consensus of experience amongst professionals
8. Anecdotal — observation

## Where can I find Evidence-Based resources?

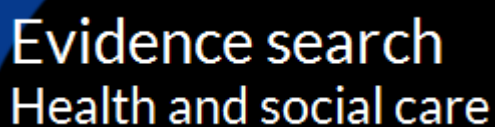
There are a number of specialist online resources which evaluate and summarise available research evidence.

These can be divided into:

1. Synopses and answering services
2. Summaries and digests
3. Guidelines and pathways
4. Syntheses and reviews
5. Specialist databases
6. Database search filters
7. Critical appraisal resources
8. General web resources

Below we look at some key sources in each of these areas.

As a starting point you may want to try NICE's Evidence Search:

The logo for NICE's Evidence Search, featuring the text "Evidence search" in a large, bold, white font above "Health and social care" in a smaller, white font, all set against a dark blue background with a white diagonal stripe.

<https://www.evidence.nhs.uk/>

NICE Evidence is a great place to start when looking for evidence. This NICE-produced database aims to allow easy access to a range of UK evidence based resources online. No password is needed, although you can register with the site if you want to save searches.

It Includes:

British National Formulary <http://www.evidence.nhs.uk/formulary/bnf/current>

British National Formulary for Children <http://www.evidence.nhs.uk/formulary/bnfc/current>

Clinical Knowledge Summaries <http://cks.nice.org.uk/#?char=A>

Journals and Databases <http://www.nice.org.uk/about/what-we-do/evidence-services/journals-and-databases>

## 1. Synopses and answering services



Centre for Reviews and Dissemination

**DARE (Database of Abstracts of Reviews of Effects)** is

focused primarily on appraising systematic reviews that evaluate the effects of health care interventions and the delivery and organisation of health services. Produced by the NHS Centre for Reviews and Dissemination. The DARE database closed in March 2015, but the records are still available to view.

Available at: <http://www.york.ac.uk/inst/crd/>



**BMJ Evidence-Based Medicine** <http://ebm.bmj.com/>



**Evidence-Based Nursing** <http://ebn.bmj.com/>



**Evidence-Based Mental Health** <http://ebmh.bmj.com/>

These three titles from the BMJ publishing group, critically appraise the validity of the most clinically relevant articles and summarize them including commentary on their clinical applicability

You will need your NHS OpenAthens username and password to access these titles.



**BESTBets**

Rapid best evidence answers to clinical questions in Emergency Medicine.

Available at: <http://www.bestbets.org/>

## 2. Summaries and digests



**DynaMed Plus** - A point of care reference tool presenting evidence-based summaries and guidance for over 3.5k topics.

NHS staff at the following Trusts can access Clinical Evidence with their NHS OpenAthens password: St. George's University Hospitals NHS Foundation Trust.

Available at: <http://www.dynamed.com>



**Best Practice**

**Best Practice** from the BMJ, this single source combines the latest research evidence, guidelines and expert opinion – presented in a step-by-step approach, covering prevention, diagnosis, treatment

and prognosis.

Onsite Library access for NHS staff. University members, use your network login to access.

Available at: <http://bestpractice.bmj.com>



Clinical Knowledge Summaries

**Clinical Knowledge Summaries**, (CKS) is an up-to-date and freely available online source of evidence-based information about the diagnosis and management of clinical conditions

encountered in primary and first contact healthcare.

Available from: <http://cks.nice.org.uk/>

## 3. Guidelines and pathways



**NICE Pathways** is an online tool that provides quick and easy access, topic by topic, to the range of guidance from NICE, including quality standards, technology appraisals, clinical and public health guidance and NICE implementation tools.

Available: <http://pathways.nice.org.uk/>



**Map of Medicine** is a clinical knowledge tool containing over 300 evidence-based clinical pathways.

This reduced version for the public is hosted by NHS Choices.

Available: <http://healthguides.mapofmedicine.com/choices/map/index.html>



**SIGN** (Scottish Intercollegiate Guidelines Network)

Guidelines produced for NHS Scotland.

Sign also produce an award winning mobile App. Freely available for iPhone, iPad and Android devices this App allows you to search for latest guidelines from almost anywhere.

Available: <http://www.sign.ac.uk>



**US National Guidelines Clearinghouse** is a public resource for evidence-based clinical practice guidelines.

Available at: <http://www.guideline.gov/>

## 4. Syntheses and reviews



**The Cochrane Library** is freely available (no password required) and will enable you to identify systematic reviews and other high quality reviews which have been conducted to good standards.

A review is an attempt to synthesise the results and conclusions of two or more publications on a subject. A systematic review is a review which aims at a comprehensive overview of all the literature on a subject. It will synthesise the results and conclusions of any primary studies in the field that satisfy certain standards of scientific rigour and technique.

Available at: <http://www.cochranelibrary.com>

## 5. Specialist databases



**BMJ Evidence Updates** references from over 100 journals are assessed for quality and relevance and added to a searchable database to support clinical decision-making.

Free registration required.

Available at: <http://www.bmjupdates.com/>



**DUETs (The Database of Uncertainties about the Effects of Treatments)** has been established in the UK to publish uncertainties that cannot currently be answered by referring to reliable up-to-date systematic reviews of existing research evidence.

Available at: <http://www.library.nhs.uk/duets/>



**OrthoEvidence** focuses on presenting high-quality evidence within the field of orthopaedics, thereby providing orthopaedic healthcare professionals with only relevant content.

The website is designed to save clinician the most time by:

- searching for randomized controlled trials and meta-analyses in over 60 orthopaedic journals each month
- critically appraising each included article
- creating a unique summary report (Advanced Clinical Evidence Report) which highlights the important take-home information

Available at: <http://www.myorthoEvidence.com/>



**OTseeker** is a database that contains over 4,000 abstracts of systematic reviews and randomised controlled trials relevant to occupational therapy.

Available at: <http://www.otseeker.com/>



**PEDro (The Physiotherapy Evidence Database)** has been developed to give rapid access to bibliographic details and abstracts of over 9,000 randomised controlled trials, systematic reviews and evidence-based clinical practice guidelines in physiotherapy.

Available at: <http://www.pedro.fhs.usyd.edu.au/>



**speechBITE** seeks to enable speech pathology clinicians and researchers to efficiently access the best available evidence to inform speech pathology practice and research.

Available at: <http://www.speechbite.com/>



**TRIP database** is a clinical search engine designed to allow users to quickly and easily find and use high-quality research evidence to support their practice and/or care.

Available at: <http://www.tripdatabase.com/>

## 6. Database search filters

Primary research databases such as Medline also offer specialist search strategies to help you find material higher up the evidence hierarchy.

### **NHS Healthcare Databases**

You can apply a clinical queries search filter to your in Embase search via the NHS Healthcare Databases hosted by NICE.

Available via NHS OpenAthens <http://www.library.nhs.uk/hdas>

### **PubMed**

Use the Clinical Queries options in PubMed to focus your search results on items higher-up the evidence hierarchy.

Available at: <http://www.pubmed.gov>

### **NHS Centre for Reviews and Dissemination**

Provides access to the DARE database and information on optimal search strategies.

Available at: <http://www.york.ac.uk/inst/crd/>

## 7. Critical appraisal

### **Critical Appraisal Skills Programme (CASP)**

Checklists to help you judge the quality of research.

<http://www.casp-uk.net/>

### **The (JAMA) Journal of the American Medical Association's Users' Guide to the Medical Literature**

Available at: <http://www.cche.net/usersguides/main.asp>

## 8. General web resources

### **Centre for Evidence-Based Medicine**

Available at: <http://www.cebm.net/>



## Centre for Evidence-Based Mental Health

Available at: <http://www.cebmh.com/>

## Netting the Evidence

A Google search engine customised by ScHARR. It searches over one hundred web sites associated with the methodology of evidence based practice.

Available at: <http://tinyurl.com/2poh3a>

## Further reading

Greenhalgh, T. (2014) How to read a paper: the basics of evidence-based medicine. 5th edn. Chichester: Wiley-Blackwell (Also available as an eBook)

Nordenstrom, J. (2007) Evidence-based medicine in Sherlock Holmes' footsteps. London: Blackwells (Also available as an eBook)

Straus, S. (2010) Evidence based medicine: how to practice and teach EBM. 4th edn. Edinburgh: Elsevier Churchill Livingstone

## Further help and support

Our web pages are at: <http://library.sgul.ac.uk/>  
(click on the NHS Staff tab for NHS specific information)

Our St George's Hospital intranet pages are at:  
<http://stginet> (Click on L for Library under Units and Departments)

or book on to one of Evidence-Based Healthcare Resources Training sessions - visit the library's training web page for the latest programme.

To self-register for an NHS OpenAthens account visit <http://openathens.nice.org.uk>



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