Evidence-Based Medicine Task Force Resources

ACP PIER
http://pier.acponline.org

- Description: The Physicians' Information and Education Resource (PIER) is an evidence-based "System" of actionable information about health conditions and interventions. It builds on other ACP-ASIM publications including ACP Journal Club and MKSAP, enabling users to drill down to the evidence-synopses supporting recommendations.
- Scope: Most content appears in the "Diseases" section, with new topics added frequently. Modules include: Diseases, Screening and Prevention, Complementary/Alternative Medicine, Ethical and Legal Issues, Procedures and Drug Resources. PIER's drug resource can be accessed by clicking on the appropriate icon on the PIER homepage or through links on drug names in the text.
- Search: PIER is designed to allow the user to browse by topic or use a keyword search. Simple PIER searches are 'full-text' (terms in the article text and title).
- Currency: Publishing began in 2002. Updates are ongoing and occur frequently.
- Use: Organized by health condition and disease, optimized for quick review of disease management. Most complete for prevention, diagnosis and therapy.
- Validity: Content is subject to editorial, peer and user review, and relies on other evidence-based sources (e.g., ACP Journal Club) for much of the filtering and appraisal of validity.
- Applicability: Quick access to lists of key points in disease management. Guidelines are summarized for most conditions.

Thomson Micromedex Healthcare Series
http://www.micromedex.com/products/hcs/

- Description: An integrated collection of peer-reviewed health condition and intervention summaries.
- Scope: Disease profiles, clinical conditions, laboratory tests and common procedures
- Search: Search all databases simultaneously, by specific database, or by category (disease, test)
- Applicability: This evidence-based "System" resource presents information about health conditions and interventions in ways that highlight applications for individual patients
- Use: Useful for quick reference about management of common conditions
- Importance & Validity: Micromedex is created through a peer-review process of extensive literature surveillance and review; subsequently reviewed by an international
editorial board to ensure unbiased, well-researched, evaluated and referenced information.

- Currency: Updated quarterly

**QuickAccess**
http://www.accessmedicine.com/

- Description: QuickAccess is based on Current Consult: Medicine by Maxine A. Papadakis, Stephen J. McPhee, part of the Access Medicine collection of health care information resources.
- Currency: Updated on an ongoing basis; date of last modification is noted on each section.
- Scope: Evidence-System that provides brief, actionable, summaries of common clinical conditions and health interventions.
- Search: Browse through entries by alphabetical browse or conduct a focused search. Simple or advanced search modes; boolean search capability (AND/OR); subject index.

**Clinical Evidence**
clinicalevidence.bmj.com/

- Description: Clinical Evidence (CE) is a filtered clinical resource that focuses on summaries of the latest research evidence about clinical management problems frequently encountered by primary care and community-based clinicians. Published by the BMJ Group, United Kingdom.
- Currency: Publishing began in 1998. Updates occur twice a year (June and December). Sections with substantial updates are highlighted.
- Scope: Addresses over 1200 clinical questions in 19 sections organized by body systems. The question selection reflects an explicit process for identifying information needs of practitioners, and prioritizing those that merit an evidence-based analysis. Practitioners experienced in EBM submit questions and research. CE question assessments also consider complementary and alternative interventions.
- Use: The unit of information in CE is a clinical question, not an article or review. Accordingly, CE addresses some topics where evidence is poor or lacking and highlights gaps in evidence. Best used for addressing therapy and prevention questions. (Foreground Questions)
- Search: Browse sections and topics in the table of contents. Each topic includes a summary for quick review. Alternatively use the search engine to query across multiple different sections.
- Applicability: The clinical context is explored for each intervention where it may have an effect on the recommendations. Negative effects and harm are specifically noted. Many topics include guides to evidence application.
- Importance & Validity: Explicit search strategies and critical appraisal criteria are described on the website. Wherever possible, CE content is directly linked to supporting evidence in the Cochrane Library and other evidence-based resources.
The Cochrane Database of Systematic Reviews
http://www.mrw.interscience.wiley.com/cochrane/

- Description: The Cochrane Database of Systematic Reviews (CDSR) is a collection of high quality systematic reviews of the effects of health care interventions. Reviews focus on randomized controlled trials, including unpublished trials, analyzed by collaborative review groups (researchers and practitioners) organized through the Cochrane Collaboration.
- Currency: Publishing began in 1993. Updates occur quarterly, the date of last update is given for each review. Substantive changes are highlighted.
- Scope: Cochrane Database of Systematic Reviews (CDSR) includes planned [Protocol] and completed [Review] reviews. The topics reflect the interests and priorities of Cochrane Collaboration members.
- Use: Largely grounded in a register of randomized controlled trials (CCRCT), CDSR is best for therapy questions that can be addressed by strong quantitative study designs. (Foreground Questions)
- Search: Cochrane databases can be searched singly or simultaneously by using the keyword search function available from the home page. Search results (number of hits) are listed for each database. To display search results, click on the number of hits located directly across from the database name. Cochrane reviews are indexed using the NLM Medical Subject Headings (MeSH) and best results are had by using the keyword search (MeSH) function. Most reviews are provided in full-text.
- Applicability: Systematic reviews often include extensive sub-group analyses and policy considerations. Effect sizes usually expressed as absolute risk reduction and number needed to treat. Cumulative meta-analysis can be displayed for subgroups.
- Importance & Validity: Strictly controlled methods for identifying, reviewing, and performing the meta-analysis for evidence in each review. Extensive links to source evidence including studies excluded from the review.

ACP Journal Club
http://www.acpjc.org/

- Description: ACP Journal Club is an evidence surveillance and abstracting service published by The American College of Physicians. It contains structured abstracts that summarize the most important and methodologically sound articles pertaining to clinical practice.
- Scope: Primary and secondary (reviews and guidelines) studies that meet key methodological criteria are summarized and commented on by experts. Strongest for internal medicine and primary care.
- Use: Best used for questions that can be addressed using clinical research, strongest for therapy and prognosis, weaker for diagnosis and causation. (Foreground Questions)
- Search: Uses 'full-text' search techniques (the database will look for search terms in the article text and title) to find abstracts. Articles are also indexed with MeSH terms and have links to the PubMed record for the abstracted article.
• Applicability: Each abstract summarizes details about patients, practitioners and practices addressed by the research; experts comment on clinical relevance.
• Importance & Validity: Articles are selected if they report evidence that could change what practitioners do. Explicit methods of selecting and summarizing articles are described in the introduction.

Bandolier
http://www.medicine.ox.ac.uk/bandolier

• Description: Bandolier is a journal produced in Oxford, England, that focuses on current issues in Evidence-Based Medicine (EBM).
• Scope: Covers a wide variety of EBM topics in a succinct, easy to read format. Gives analysis of one or more clinical studies on a topic in order to explore clinical questions and the limits to evidence in providing answers.
• Currency: Published monthly. Bandolier began in 1994 and all issues are available in full-text online.
• Use: Best for questions that can be addressed by clinical research. A good starting point when searching for evidence - Bandolier acts as a sign-post to original research.
• Search: Weighted boolean searching of all online issues. Ability to browse through the subject index or by specific issues.
• Applicability: Articles answer clinical questions which can be put into everyday practice. The 'What is' section provides easy to read explanations of major EBM concepts.
• Importance & Validity: Statistical significance of discussed study results are given, including the NNT (number needed to treat). References to all articles are provided. No clear editorial policy is given on the web page.

InfoPOEMs
http://www.essentialevidenceplus.com/

• Description: POEMs is an evidence-based clinical awareness and disease guidance system that includes daily and monthly update services and accumulated databases of assessments of clinical problems.
• Currency: POEMS began in 1993 and are updated daily.
• Scope: POEMs focus on physician clinical questions, filter by outcomes that patients care about, and prioritize evidence that could change practice.
• Use: Best used to answer clinical questions about primary care/urgent care/ emergency medicine. Some pediatrics and general internal medicine are covered.
• Search: Search is by keyword, you can enter a portion of a word, for example, 'mig' for 'migraine'. It is best to enter general clinical terms.
• Validity: POEMs uses internationally applied criteria for validity assessments of the articles reviewed. A level of evidence is assigned by using the criteria developed by the Working Group on Evidence-Based Medicine.

UpToDate
http://www.uptodate.com/home/index.html
Description: UpToDate is a clinical electronic reference that covers internal medicine and its subspecialties. Topic reviews are usually based on a specific clinical condition or management issue. Topic cards may contain aids such as graphs, photos, calculators, and links to drug information and MEDLINE abstracts of cited articles.

Currency: Publishing began in 1992. Updates occur every 4 months, date of last update is given for each topic card.

Scope: Covers internal medicine, family medicine, pediatrics, and obstetrics. Strongest in internal medicine, with emphasis on presentation, differential diagnosis, and causation. To date, strength of evidence is best considered for therapy. Some patient education materials are available.

Use: Best for questions relating to disease management. (Background Questions)

Search: Although browsing of a table of contents is supported, the resource has grown large and is best accessed through a simple full-text search function Searches can be narrowed by a topic list or by entering a second search term after the first search is completed. No Boolean searching but the thesaurus works well.

Applicability: Topic reviews are based upon clinical questions that arise from everyday practice. Topic cards may contain aids such as graphs, charts, photos, calculators, links to other drug information, and MEDLINE abstracts of cited sources.

Importance & Validity: Topic reviews are written by experts and peer reviewed. Reviewers monitor over 200 journals each month. UpToDate includes detailed references for each topic, linked to Medline abstracts. Evidence ratings are provided for select topics.

MDConsult
http://www.MDconsult.com

Description: An online clinical medical information service containing a wide range of electronic sources.

Scope: 80+ clinical journals and textbooks, 600 clinical practice guidelines, information for 30,000+ medications, 3000 patient handouts, CME courses, news and updates.

Currency: Updated daily. Each textbook and journal is updated separately, thus check edition and copyright date.

Use: Use as a reference tool and to stay current with clinical medical literature.

Search: Search all or only specific sections. Use Boolean AND/OR/NOT from drop down menu. Remembers search results from previous session.

Applicability: Customize home page to receive news and updates. "Case of the Week" includes links to texts and articles. "What Patients are Reading," includes media excerpts (e.g. On Last Night's ER) with links to current clinical information.

Importance & Validity: Founding partners include Mosby, Harcourt, W.B. Saunders Co., Lippincott Williams & Wilkins. Medical societies and U.S. government agencies also contribute.

STAT!Ref
http://statref.com/
- **Description:** Electronic library of medical texts covering a wide range of clinical specialties.
- **Scope:** Suitable for background questions in most clinical disciplines.
- **Use:** Use ACP's PIER decision support modules for rapid retrieval of practical clinical information at the point-of-care.
- **Search:** Common search interface for all texts in active collection.
- **Currency:** Texts are 1-10 years old

**bmjupdates**
http://bmjupdates.mcmaster.ca/

- **Description:** Evidence-based surveillance service. Provides access to current best evidence from research, tailored by health care interest, as email alerts or via a searchable database.
- **Currency:** Registered users can select how frequently they would like to receive email updates.
- **Scope:** Topics cover all areas of clinical medicine. Over 100 journals are scanned (according to individual publishing schedules), articles concerning causation, diagnosis, prediction, prevention, treatment, quality improvement and health economics are selected for inclusion.
- **Use:** Best used for staying up to date on new health care research.
- **Search:** Database can be searched using a simple or advanced search features.
- **Applicability:** Each abstract is rated according to its relevance and newsworthiness.
- **Importance & Validity:** Articles are selected by expert research staff according to explicit criteria, with high reproducibility and periodic quality assurance checks. Each article selected is rated by clinicians in one or more specialty areas and often includes commentary.

**PubMed**

- **Description:** PubMed is a bibliographic database which covers the world's biomedical and health sciences journal literature, consisting primarily of MEDLINE and Pre-MEDLINE.
- **Scope:** Includes coverage of more than 11 million citations dating back to 1966, with links to participating online journals. Coverage includes the fields of medicine, nursing, dentistry, veterinary medicine, the health care system, and the preclinical sciences, among others.
- **Currency:** Updated daily.
- **Use:** A best source when searching for recent biomedical journal articles.
- **Search:** Subject and keyword searching with a 'limits' feature; MeSH Browser with subject tree; ability to search specific fields (ie: author, journal); boolean search capability (AND/OR/NOT); Index.
- **Applicability:** The Clinical Query feature includes search filters for therapy, diagnosis, etiology, and prognosis.
• Importance & Validity: Bibliographic information is managed by the National Library of Medicine, the world's largest and most well-respected medical library.

Trip Database
www.tripdatabase.com/

• Description: TRIP Database allows health professionals to easily find the highest-quality material available on the web to help support evidence based practice.
• Scope: Includes a collection of information compiled from numerous evidence based websites.
• Currency: Routinely updated on a monthly basis.
• Use: Aimed at anyone seeking information on evidence based medicine.
• Search: The search results are worked out using a search algorithm that scores each document on three main variables: year of publication, term position/density, and publication.
• Validity & Applicability: Department of Family Medicine at Laval University, Quebec, Canada helps identify and appraise sites using the Directory of Clinical Information Websites, a web-based tool created and maintained by the Department of Family Medicine at Laval University. The Directory features over 100 critically appraised websites that mainly offer critically appraised topics (CATs) or original articles, systematic reviews and clinical practice guidelines (CPGs). All sites listed in the Directory are assessed and described using a validated evaluation instrument. Once a site has been identified as potentially useful it is then assessed by an in-house team of information experts and clinicians and external experts to assess quality and clinical usefulness. If the site passes this additional test we start the process of ‘grabbing’ content.

SUMSEARCH
http://sumsearch.org

• Highlights: SUMSearch simultaneously searches for original studies, systematic reviews, and practice guidelines from multiple sources. Searches for studies are revised up to 6 times as needed, while guidelines and systematic reviews may be revised once each. Results from PubMed, Dare, and NGC are merged and sorted. As SUMSearch executes live searches of external websites in response to your query, SUMSearch is always up-to-date.
• Changes from v1: 1) faster; 2) search strategies are validated; 3) automated summaries are provided as well as bibliometric markers of article quality; 4) Guidelines from PubMed and National Guidelines Clearinghouse are merged into one list sorted by year of publication, 5) systematic reviews from DARE and PubMed are merged into one list and sorted by year of publication.
• History: SUMSearch is written by Bob Badgett was first online as "Medical SmartSearch" in October, 1998. SUMSearch was moved to SUMSearch 2 in August, 2010.