

## PURPOSE AND PROCEDURE

The purpose of *Evidence-Based Medicine* is to alert clinicians to important advances in internal medicine, general and family practice, surgery, psychiatry, paediatrics, and obstetrics and gynaecology by selecting from the biomedical literature those original and review articles whose results are most likely to be both true and useful. These articles are summarised in value-added abstracts and commented on by clinical experts.

The procedures we follow as we attempt to achieve this purpose are:

1. Detecting, using pre-stated criteria, the best original and review articles on the cause, course, diagnosis, prevention, treatment, quality of care, or economics of disorders in the foregoing fields;
2. Introducing these articles with declarative titles and summarising them in structured abstracts that describe their objectives, methods, and results;
3. Adding brief, highly expert commentaries to place each of these summaries in its proper clinical health care context; and
4. Disseminating these summaries in a timely fashion to clinicians at every stage of their professional careers.

The American College of Physicians and the BMJ Publishing Group publish *Evidence-Based Medicine* bimonthly, under the editorship of Dr. R. Brian Haynes at McMaster University in Canada and Dr. David L. Sackett at the University of Oxford. The Health Information Research Unit of the Department of Clinical Epidemiology and Biostatistics at McMaster University hosts the editorial office for the service.

Journals are reviewed according to the following priority list, based on the proportion of articles that meet *Evidence-Based Medicine* criteria:

### 1. Core journals:

*American Journal of Medicine*  
*American Journal of Obstetrics and Gynaecology*  
*American Journal of Psychiatry*  
*American Journal of Surgery*  
*Annals of Internal Medicine*  
*Annals of Surgery*  
*Archives of Disease in Childhood*  
*Archives of General Psychiatry*  
*Archives of Internal Medicine*

*Archives of Pediatrics and Adolescent Medicine*  
*Archives of Surgery*  
*Arthritis and Rheumatism*  
*BMJ*  
*British Journal of General Practice*  
*British Journal of Obstetrics and Gynaecology*  
*British Journal of Surgery*  
*Circulation*  
*Clinical Pediatrics*  
*Cochrane Library*  
*Diabetes Care*  
*Hypertension*  
*JAMA*  
*Journal of the American Board of Family Practice*  
*Journal of the American College of Surgery*  
*Journal of General Internal Medicine*  
*Journal of Internal Medicine*  
*Journal of Neurology, Neurosurgery and Psychiatry*  
*Journal of Pediatrics*  
*Journal of Vascular Surgery*  
*Lancet*  
*New England Journal of Medicine*  
*Obstetrics and Gynecology*  
*Pediatrics*  
*Surgery*

### 2. Journals for continuing review:

*Acta Obstetrica et Gynecologica Scandinavica*  
*Age and Ageing*  
*American Journal of Cardiology*  
*American Journal of Gastroenterology*  
*American Journal of Public Health*  
*American Journal of Respiratory and Critical Care Medicine*  
*Annals of Emergency Medicine*  
*Annals of Medicine*  
*Archives of Family Medicine*  
*Archives of Neurology*  
*British Journal of Psychiatry*  
*British Journal of Rheumatology*  
*Canadian Medical Association Journal*  
*Chest*  
*Clinical and Investigative Medicine*  
*Critical Care Medicine*  
*Fertility and Sterility*  
*Gastroenterology*  
*Gut*  
*Heart*  
*Journal of the American College of Cardiology*  
*Journal of the American Geriatric Society*  
*Journal of Clinical Epidemiology*  
*Journal of Family Practice*

*Journal of Infectious Diseases*  
*Medical Care*  
*Medical Journal of Australia*  
*Neurology*  
*Spine*  
*Stroke*  
*Thorax*

This list is subject to modification based on the relative performance of each journal according to the criteria set out below; we also assess journals nominated by our readers.

### Criteria for Review and Selection for Abstracting

1. General: All English-language original and review articles in an issue of a candidate journal are considered for abstracting if they concern topics important to the clinical practice of internal medicine, general family practice, surgery, psychiatry, paediatrics, or obstetrics/gynaecology. Access to foreign language journals is provided through the systematic reviews we abstract, especially those in the Cochrane Library, which summarises articles taken from over 800 journals in several languages.
2. Studies of prevention or treatment: random allocation of the participants to the different interventions; clear measures of known or probable clinical importance for the participants who entered the investigation; and an analysis consistent with the study design.
3. Studies of diagnosis: clearly defined comparison groups, at least one of which is free of the target disorder or derangement; either an objective diagnostic standard (e.g., machine-produced laboratory test) or a contemporary clinical diagnostic standard (e.g., a venogram for deep venous thrombosis) demonstrably reproducible (checked for any subjectively interpreted component (e.g., report of better-chance agreement among interpreters); interpretation of the result without knowledge of the diagnostic standard result; interpretation of the diagnostic standard with

knowledge of the test result; and an analysis consistent with the study design.

4. Studies of prognosis: an inception cohort of persons, all initially free of the outcome of interest; follow-up of  $\geq 80\%$  of patients until the occurrence of either a major study end point or the end of the study; and an analysis consistent with the study design.
5. Studies of causation: a clearly identified comparison group for those at risk for, or having, the outcome of interest (whether from randomised, quasi-randomised, or nonrandomised controlled trials; cohort analytic studies with case-by-case matching or statistical adjustment to create comparable groups; or case-control studies); masking of observers of outcomes to exposures (this criterion is assumed to be met if the outcome is objective [e.g., all-cause mortality or an objective test]); observers of exposures masked to outcomes for case-control studies or masking of subjects to exposure for all other study designs; and an analysis consistent with the study design.
6. Studies of quality improvement and continuing education: random allocation of participants or units to comparison groups; a follow-up of  $\geq 80\%$  of participants; outcome measures of known or probable clinical or educational importance; and an analysis consistent with the study design.
7. Studies of the economics of health care programs or interventions: The economic question must compare alternative courses of action; the al-

ternative diagnostic or therapeutic services or quality improvement strategies must be compared on the basis of both the outcomes they produce (effectiveness) and the resources they consume (costs); evidence of effectiveness must come from a study (or studies) that meets journal criteria for diagnosis, treatment, quality improvement, or review articles; results must be presented in terms of the incremental or additional costs and outcomes incurred and realised by one intervention over another; and a sensitivity analysis must be done where there is uncertainty or imprecision in the estimates or measurements.

8. Clinical prediction guides: The guide must be generated in 1 set of patients (training set) and validated in an independent set of patients (test set), and must also meet the above-noted criteria for treatment, diagnosis, prognosis, or causation.
9. Systematic reviews: The clinical topic being reviewed must be clearly stated; there must be a description of how the evidence on this topic was tracked down, from what sources, and with what inclusion and exclusion criteria; and  $\geq 1$  article included in the review must meet the above-noted criteria for treatment, diagnosis, prognosis, causation, quality improvement, or the economics of health care programs.

Because our goal is to abstract only the very best literature, consistent with a reasonable number of articles making it through the quality and usefulness filters, we hope to strengthen these criteria with time. When there is not enough

space to publish abstracts and commentaries for all of the articles that meet our current review criteria, we will raise the quality filters. In the interval, priority will be given to articles of highest relevance to clinical practice.

*Evidence-Based Medicine* has a related journal, *ACP Journal Club*, in which abstracts are restricted to internal medicine. It is generated using procedures identical to those used for *Evidence-Based Medicine* and is published by the American College of Physicians. Approximately half of the abstracts in *ACP Journal Club* are published in *Evidence-Based Medicine*, and the abstracts not published are listed, by their declarative titles, in the section titled Additional Articles Abstracted in *ACP Journal Club*.

Abstracts in *Evidence-Based Medicine* conform to the published standards for more informative abstracts (1), with the following modifications: Abstracts can be up to 425 words in length, and each abstract is reviewed by an expert in the content area. This expert also provides a commentary, in which he or she provides the contexts of previous knowledge and clinical practice within which the results of the abstracted study will be applied, points out any important methodological problems that affect the interpretation of the study results, and offers recommendations for the clinical application of the study findings. The author of the original article is given an opportunity to review the abstract and commentary before publication.

#### Reference

1. Haynes RB, Mulrow CD, Huth EJ, Altman DG, Gardner MJ. More informative abstracts revisited. *Ann Intern Med*. 1990;113:69-76.