

Evidence-Based Medicine

In the 1990s, **evidence-based medicine** emerged as a way to improve and evaluate patient care. It involves combining the best research evidence with the patient's values to make decisions about medical care. Looking at all available medical studies and literature that pertain to an individual patient or a group of patients helps doctors to properly diagnose illnesses, to choose the best testing plan, and to select the best treatments and methods of disease prevention. Using evidence-based medicine techniques for large groups of patients with the same illness, doctors can develop **practice guidelines** for evaluation and treatment of particular conditions. In addition to improving treatment, such guidelines can help individual physicians and institutions measure their performance and identify areas for further study and improvement. The February 25, 2009, issue of *JAMA* includes an article about the importance of using evidence-based medicine to develop practice guidelines. This Patient Page is based on one published in the September 6, 2006, issue of *JAMA*.



LOOKING FOR EVIDENCE IN MEDICAL LITERATURE

Systematic reviews of the medical literature, large **randomized controlled trials** (the best way to assess the efficacy of a treatment), and **large prospective studies** (followed up over time) are types of research published in the medical literature that can be helpful in providing evidence about tests and treatments. Reports of the experiences of individual patients or small groups usually provide less reliable evidence, although they may provide important clues about possible adverse effects of treatments.

USING EVIDENCE-BASED MEDICINE

Practice guidelines developed using evidence-based medicine have helped to reduce **mortality** (chance of dying) from heart attacks. Evidence-based medicine guidelines have also improved care for persons with diabetes and other common medical problems. Evidence-based medicine does not replace physicians' judgment based on clinical experience. Any recommendations taken from evidence-based medicine must be applied by a physician to the unique situation of an individual patient. Sometimes there is no reliable research evidence to guide decision making, and some conditions are rare enough that there is no way to do large studies.

IMPROVING YOUR HEALTH

- Many evidence-based medicine guidelines are publicly accessible. You can use these guidelines to improve your health and make good choices about your medical care.
- Together, you and your doctor can make the best evaluation and treatment plans based on the available medical evidence.
- Understanding why your doctor recommends certain tests or treatments based on evidence from the medical literature will help you make good health care and lifestyle choices.

FOR MORE INFORMATION

- National Institutes of Health
www.nih.gov
- The Cochrane Collaboration
www.cochrane.org
- Centre for Evidence-Based Medicine
www.cebm.net

INFORM YOURSELF

To find this and previous JAMA Patient Pages, go to the Patient Page link on JAMA's Web site at www.jama.com. Many are available in English and Spanish. A Patient Page on randomized controlled trials was published in the June 21, 2006, issue; one on medical journals was published in the April 19, 2006, issue; one on medical research was published in the September 13, 2000, issue; and one on supporting medical research was published in the September 21, 2005, issue.

Sources: National Institutes of Health, The Cochrane Collaboration, Centre for Evidence-Based Medicine, American Heart Association, American Diabetes Association

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