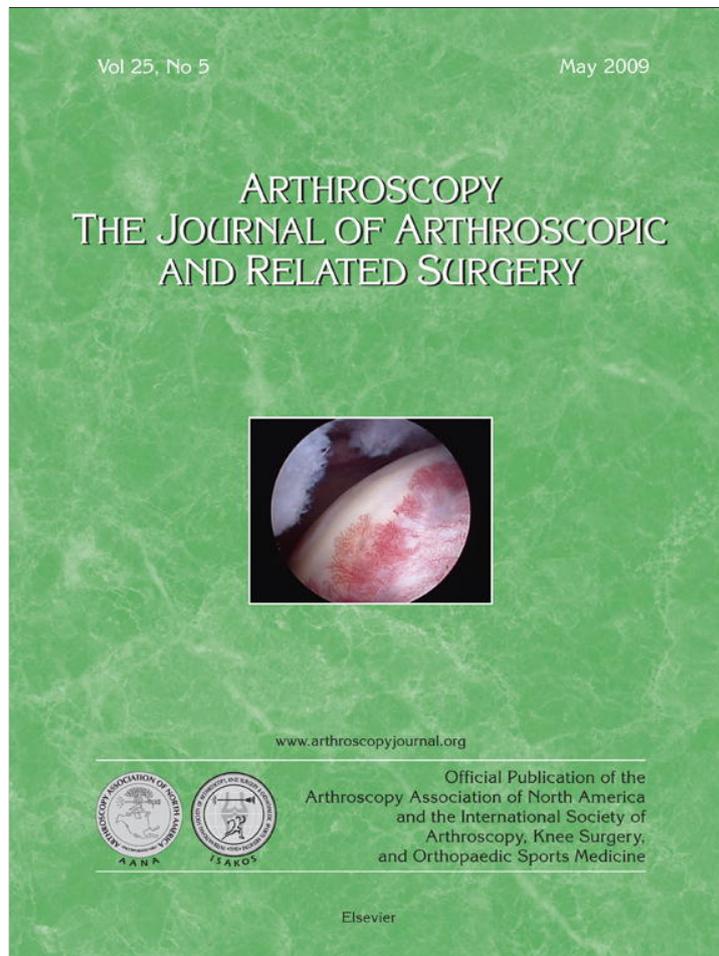


Provided for non-commercial research and education use.
Not for reproduction, distribution or commercial use.



This article appeared in a journal published by Elsevier. The attached copy is furnished to the author for internal non-commercial research and education use, including for instruction at the authors institution and sharing with colleagues.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to personal, institutional or third party websites are prohibited.

In most cases authors are permitted to post their version of the article (e.g. in Word or Tex form) to their personal website or institutional repository. Authors requiring further information regarding Elsevier's archiving and manuscript policies are encouraged to visit:

<http://www.elsevier.com/copyright>

Editorial

Comparative Effectiveness Research: We Must Lead (So As Not to Be Misled)

Arthroscopy is an international journal, published in the United States of America. Although our new President does not appear on our subscriber list, we can't help but wonder if President Barack Obama has perused our pages! We see that one of the first laws enacted under Mr. Obama's administration and approved by the United States Congress, is an economic stimulus bill that includes \$1.1 billion to support research comparing the effectiveness of different medical treatments for the same illness.¹ This emphasis on the importance of evidence-based, comparative research of a high level of evidence is suspiciously similar to that encouraged by your Editors over the past 5 years.²⁻⁹

While most surgical research is designed to demonstrate the safety and efficacy of a treatment over time, presenting the outcome of a series of cases represents Level IV evidence. The flaw with a case series is the absence of a control group. This raises the critical question: without a control group, how can we be sure that the treatment in question is equal to, or superior to, a different treatment (or no treatment)?

Because of the inherent weakness of Level IV evidence studies (no control group), we prefer comparative effectiveness research studies (Level I, II, or III evidence). Such studies are hierarchically ranked as having higher levels of evidence, and are defined as retrospective, comparative studies (Level III); prospective, comparative studies (Level II); and high-quality, randomized, controlled trials (Level I, the highest level of evidence). We are pleased that the United States government is committed to the importance of evidence-based medicine, because comparative effectiveness research has the goal of helping doctors help their patients by determining the best treatment for a specific condition. And we must note

that, for some time, "Britain, France and other countries have (had) bodies that assess health technologies and compare the effectiveness, and sometimes the cost, of different treatments."¹

Did someone mention "cost?"

While the benefit of evidence-based clinical research is obvious, the potential for government involvement in the relationship between a doctor and his or her patients also presents risks. First, from a clinical perspective, we have previously warned, "Medical literature ahead: proceed with caution . . . a single publication must be interpreted in the context of the complete body of medical literature . . . studies (use) different methods that (lead) to different results. In such a case, additional research may ultimately clarify our understanding . . . (C)onclusions . . . depend highly on (study) methods . . . (W)e . . . must carefully scrutinize the methods when we consider the conclusions of a meta-analysis or a systematic review,"^{5,7} let alone when we consider the conclusions of a single, original scientific article.

To be clear, our point is that even studies of the highest levels of evidence may reach incorrect conclusions. We physicians and scientists are trained to discern the meaning of the entire body of medical literature, including the potential lack of conclusive meaning, and the ever-present need for new research. A potential risk of a government's involvement in medical research is that a government could misinterpret the meaning of our literature. Should a government base policy on such a misinterpretation, patients would not be well served.

Although this concern is hypothetical, there are specific causes for unease. Returning to issues of cost, comparative effectiveness research is hoped to "eventually save money by discouraging the use of costly, ineffective treatments," and it is well recognized that "(t)he soaring cost of health care is widely seen as a problem."¹ Yet, some fear that the findings of comparative effectiveness research "will be used by insurers or the government to deny coverage for more

expensive treatments and, thus, to ration care.”¹ In addition, some commentators complain that government may use, or misuse legislation, “to intrude in a person’s health care by enforcing clinical guidelines and treatment protocols.”

We emphasize and feel strongly that the Editorial pages of this Journal are not an appropriate place for political opinion. However, we do believe that it is often appropriate, and sometimes our obligation to share with readers our scientific or clinical opinion, and it is our opinion that a worse-case scenario could be that patient care is denied, rationed, or intruded upon based on misunderstanding or misinterpretation of the medical literature. We further state, as we have continually,²⁻⁹ that medical literature of the highest level of evidence is required to answer clinical questions. In the present climate, *Arthroscopy* journal contributors and readers must lead (rather than be misled).

We must lead by conducting, publishing, reading, and understanding comparative clinical trials. We must consider the comparative effectiveness, and sometimes cost-effectiveness, of various arthroscopic and related surgical or nonsurgical treatments. We must acknowledge that “comparative effectiveness research will be based on broad population averages that (may) ignore the differences between (individual) patients”¹; in contrast, we must understand that individual patients have unique histories, physical examination and imaging findings, activity levels, occupational and social goals, medical or surgical comorbidities, and cultural circumstances or imperatives. As scientists, clinicians, and particularly as surgeons, we must determine the best treatment for each individual.

Policies, algorithms, and clinical treatment protocols may represent guidelines. By definition, we believe that such protocols may “guide” but must not dictate how an individual surgeon must treat an individual patient. Let it be the readers of *Arthroscopy* who determine the best method to treat arthroscopic patients.

JAMES H. LUBOWITZ, M.D.
Assistant Editor-in-Chief

GARY G. POEHLING, M.D.
Editor-in-Chief

REFERENCES

1. Peer R. US to compare medical treatments. *The New York Times*. Feb 15, 2009. Available at: http://www.nytimes.com/2009/02/16/health/policy/16health.html?_r=1&ref=todayspaper. Accessed February 16, 2009.
2. Lubowitz JH. Understanding evidence-based arthroscopy. *Arthroscopy* 2004;20:1-3.
3. Lubowitz JH, Poehling GG. Shoulder instability: Surgical versus nonsurgical treatment. *Arthroscopy* 2007;23:117.
4. Lubowitz JH, Poehling GG. Arthroscopy: The future. *Arthroscopy* 2007;23:453-454.
5. Lubowitz JH, Poehling GG. Clinically relevant articles of high levels of evidence are required to change surgical practice. *Arthroscopy* 2007;23:803.
6. Lubowitz JH, Poehling GG. The introduction should create reader interest. *Arthroscopy* 2007;23:1031-1032.
7. Lubowitz JH, Poehling GG. Medical literature ahead: Proceed with caution. *Arthroscopy* 2007;23:1255-1256.
8. Lubowitz JH, Poehling GG. A new year. *Arthroscopy* 2008;24:2-3.
9. Lubowitz JH, Poehling GG. Techniques in double-bundle anterior cruciate ligament reconstruction: As simple as ABC, or putting the cart before the horse? *Arthroscopy* 2008;24:1089-1091.