When I discuss the activities of the American College of Cardiology (ACC), among the first I am likely to mention are our Practice Guidelines.

Background. More than a decade ago the ACC, in collaboration with the American Heart Association (AHA), began producing a series of educational documents describing the appropriate use of medical technologies in clinical practice. The two organizations are justly proud of these pioneering efforts that have attempted to bring scientific analysis and expert consensus to a branch of clinical medicine that has experienced an unprecedented proliferation of useful, often lifesaving, technology.

It was in 1980 that Drs. Robert Brandenburg and Thomas James, then Presidents of the ACC and AHA, respectively, conceived the idea of a joint task force to develop guidelines in areas of controversy, often involving competing diagnostic and therapeutic technologies.

Dr. Charles Fisch was appointed chairman of the parent committee, named the Task Force on Assessment of Diagnostic and Therapeutic Cardiovascular Procedures, which selects topics and appoints members expert in each topic to serve on ad hoc writing subcommittees. The written charge, which has remained virtually unchanged until the present, was as follows:

- The Task Force shall define the role of specific noninvasive and invasive procedures in the diagnosis and management of cardiovascular disease.
- The Task Force shall address, when appropriate, the contribution, uniqueness, sensitivity, specificity, indications, contraindications and cost-effectiveness of such specific procedures.

These documents are written by physicians for physicians and are intended to be educational. It was learned that appointing only recognized experts led to a cacophony of voices ("too many thoroughbreds"), and the process was strengthened by having a balance of general cardiologists and those expert in the technology on the writing committees. A useful taxonomy was developed:

**Indications for diagnostic procedures and therapeutic interventions.**

- **Class I**—General agreement that a procedure or therapy is appropriate.
- **Class II**—Diverse opinion as to whether a procedure or therapy is appropriate: A) weight of evidence in favor of appropriateness; B) weight of evidence against appropriateness.
- **Class III**—General agreement that a procedure or therapy is not appropriate.

Other changes occurred, perhaps most evolutionary of which was to write guidelines for the management of clinical entities, such as myocardial infarction and heart failure. Although cost-effectiveness was mentioned in the charge, analysis of cost has yet to be undertaken in any of the guidelines.

**Published guidelines.** The following ACC/AHA guidelines have thus far been published in JACC and Circulation:

- Implantation of Cardiac Pacemaker and Antiarrhythmia Devices (August 1984; revised July 1991), Leonard S. Dreifus, MD, Chairman
- Exercise Testing (September 1986), Robert C. Schlant, MD, Chairman
- Clinical Use of Cardiac Radionuclide Imaging (December 1986), Robert A. O'Rourke, MD, Chairman
- Coronary Angiography (October 1987), John Ross, Jr., MD, Chairman
- Percutaneous Transluminal Coronary Angioplasty (August 1988; revised December 1993), Thomas J. Ryan, MD, Chairman
- Ambulatory Electrocardiography (January 1989), Suzanne B. Knoebel, MD, Chairman
- Clinical Intracardiac Electrophysiologic Studies (December 1989), Douglas P. Zipes, MD, Chairman
- Early Management of Patients With Acute Myocardial Infarction (August 1990), Rolf M. Gunnar, MD, Chairman
Clinical Application of Echocardiography (December 1990), Gordon A. Ewy, MD, Chairman

Coronary Artery Bypass Graft Surgery (March 1991), John W. Kirklin, MD, Chairman

Cardiac Catheterization and Cardiac Catheterization Laboratories (November 1991), Carl J. Pepine, MD, Chairman

Electrocardiography (March 1992), Robert C. Schlant, MD, Chairman

Pare passu with the College's evolving experience in the development of guidelines, powerful forces were gathering that created new and possibly unrealistic expectations for Practice Guidelines. Escalating health care costs, variation in medical practice patterns, evidence that some health services are of little value, public curiosity about the process of clinical decision making and claims that various financial, educational and organizational incentives can reduce inappropriate utilization are among the factors that have engendered new expectations for Practice Guidelines.

Health system reform. Practice Guidelines have become the great hope for health system reform. The Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239) established the Agency for Health Care Policy and Research (AHCPR) "to enhance the quality, appropriateness, and effectiveness of health care services and access to such services" (1 [p. 1]). The AHCPR's appropriation for fiscal year 1990 was nearly $100 million, of which $2 million was obligated for Practice Guidelines. The AHCPR Practice Guidelines are targeted to the primary care physician and the "consumer," employ a clinical algorithm approach (cf ACC/AHA classification I to III), are quite explicit about the weight of the scientific evidence underlying each recommendation and have broad representation on its "contractor panels" in terms of gender, minority populations and geographic areas of the United States (1 [p. 2]). The AHCPR recently published Practice Guidelines for the diagnosis and management of unstable angina. The cost to the American tax payer for this project was $927,000 (2).

Yet we have never looked very carefully at the compliance with guidelines, much less measured their effects in terms of clinical and economic outcomes. "A valid practice guideline is one that, if followed, will lead to the health and cost outcomes projected for it" (3). Validity in this sense is yet to be established. I should like to see public monies spent on studies of compliance with existing guidelines and their impact on outcomes, before subsidizing guidelines that may duplicate the work of others.

If Practice Guidelines prove valid and are widely accepted, they could alleviate the ignorance and mistrust about appropriate utilization, offer a legal standard in malpractice litigation, become the basis for reimbursement, provide a foundation for instruments to evaluate practitioner and health system performance and avoid draconian alternative measures to control medical costs.

It is clear that unexamined reliance on professional judgment is no longer accepted. We are no longer trusted to define medical practice ourselves. New standards of credibility and accountability are demanded.

The future. What does this portend for the future of the ACC/AHA Task Force? Does the College have the resources to develop guidelines according to the new expectations? Should we concede that only government can attract the broad participation in guideline development necessary to achieve credibility? Should we resign ourselves to endorsing the guidelines developed by others to avoid competing guidelines?

My answer to these questions is that our experience during the "Fisch" era has firmly established our leadership in Practice Guideline development, and we should enthusiastically continue our own efforts. Guideline development remains fundamentally an educational exercise by physicians for physicians. Broadening participation to include "consumers" and other groups may increase political acceptance but is unlikely to change recommendations substantively. Exhaustive literature review may provide a patina of scientific validity but would be unlikely to uncover facts unknown to those chosen for the writing committees.

Others may spend enormous sums for guideline development and may achieve wide acceptance and dissemination of their products. The College, mindful of the increasing scrutiny given to guidelines, should continue to play a constructive, leadership role in guideline development. This is one of our best educational activities.

References