

## ACC NEWS



## President's Page: The Next Challenge: Balancing Individual Quality Care With Community Resources

SUZANNE B. KNOEBEL, MD, FACC

*President, American College of Cardiology*

### The College as a Unique Source of Counsel

In the past year, the American College of Cardiology has developed positions on such diverse issues as the clinical applicability of and indications for phonocardiography, cardiokymography, ergonovine testing, percutaneous transluminal coronary angioplasty, programmable pacemakers, transtelephonic pacemaker monitoring and the training requirements for the safe handling of radioisotopes utilized for cardiovascular diagnostic testing. Opinions have been rendered on automated blood pressure monitoring, heparin infusion pumps, diagnostic endocardial electrical stimulation, intraoperative ventricular mapping, Doppler ultrasound, hyperbaric oxygen therapy, photoplethysmography, digital subtraction angiography and rapid sequence pyelograms. The College, in collaboration with the American Heart Association, is in the process of formulating state of the art papers on treadmill testing and the indications for pacemaker implantation. The College has initiated conferences to gain consensus on the relative sensitivity, specificity and indications for diverse techniques in the assessment of ventricular function. Considerations relative to the indications for streptokinase infusion in acute myocardial infarction and the resources necessary to assure proper utilization of this procedure are underway.

The College has testified in support of the National Heart,

A portion of these remarks has been adapted from an address to be presented March 21, 1983, at the Opening Plenary Session of the 32nd Annual Scientific Session of the American College of Cardiology in New Orleans, Louisiana.

Address for reprints: Suzanne B. Knoebel, MD, Indiana University School of Medicine, 1100 West Michigan Street, Indianapolis, Indiana 46223

Lung, and Blood Institute's appropriations and authorizations and has supported, by written statement, increased warnings on cigarette packages, the desirability of sodium content labeling for prepared foods, special consideration for "orphan" drugs and extension of patent protection time for drugs requiring prolonged clinical testing periods.

Other emerging issues that the College is monitoring because of the potential for impact on cardiovascular health care delivery include, among others:

- Reimbursement by diagnosis,
- Primary care networks,
- Free-standing emergency care centers,
- Rehabilitation centers.

The College is participating in the Medical Necessity Program of Blue Cross/Blue Shield, the declared purpose of this program being to obtain advice on what "constitutes medically appropriate, cost-effective cardiac care in order that better allocations of community health resources and improvement in medical care can result."

All of the above would indicate that the opinion of the College is being increasingly sought and an effective response mechanism has been developed. The College is accepting the new roles that are necessary to be a dynamic force in the emerging environment of intense and understandable concern about medical costs and the socio-economic aspects of health care delivery. As a collection of professionals with the momentum, qualifications, resources and staffing to serve as the chief source of counsel to government, health care agencies and all other groups interested in cardiovascular care, the College is unique. If a balanced

solution to social and economic issues relative to cardiovascular health care delivery is to be as important to progress in cardiology in the years to come as research has been in the past, the College is the organization to be consulted.

### **Balancing Roles of Patient Advocate and Cost Accounting**

Why then is there a sense of apprehension that can be easily discerned at meetings of the Cardiovascular Procedures Committee, the Government Relations Committee, the Board of Governors, the Executive Committee and all other College committees dealing with cardiovascular care guidelines and socioeconomic issues? I believe the anxiety arises from the perception that it is our responsibility, as the patient's advocate, to maintain cardiovascular health care quality and cost factors in balance, from the concern that quality of medical care may be compromised in the name of cost-containment unless we are ever vigilant and credible, and from the certainty that methods to assure appropriate balance must be formulated before imposed actions become irreversible. Although others have said, "You provide the medical opinion and leave the cost-accounting to us," our intuition and training tell us that the two factors are not easily defined or weighted, are not inflexible or immutable and that the latter is, perhaps, more subject to persuasive argument in the short range and, once structured, difficult to modify. Medical opinion on the other hand, is being modified constantly as research results, and new drugs and therapies are demonstrated to be of benefit for patient outcome. It is not proper or prudent to leave cost-accounting totally to others.

### **Consideration of Community Resources**

Most of us have been trained and have functioned in a medical environment of relatively unlimited resources. We were trained to use all available tools to diagnose and treat under the tenet that the more information available, the better the clinical decision-making. For example, the importance of subgrouping of patients by anatomy, ventricular function or electrophysiologic milieu has been demonstrated repeatedly to be of significance for optimal clinical decision-making in the relevant disease states. We are now increasingly being asked to consider community resources as we provide care for the individual patient. As the increased cost of quality care is an inevitable outgrowth of the last few decades of research productivity, conflict arises when financial constraints are placed on our ability to secure what we deem to be necessary information for proper clinical decision-making. It is difficult to be asked to discard the benefits of the research that produced for patients in the United States the highest standard of medical care in the world because of a lack of resources to pay for its utilization.

Thus, the conflict and the anxiety. And it is reasonable to assume that apprehension will continue until imaginative and creative ways to establish model or normative systems for clinical decision-making and patient management plans are formulated in order that the contribution of any specific technology, procedure or practice pattern on patient outcome can be defended as a sine qua non for optimal care. It is then that the medical factor of the total care equation can be placed in its proper position, with the proper weight.

### **Mechanisms for Decision-Making**

**List standards and information theory.** Although the details of how we must proceed are at this point unclear, it is certain that a mechanism for demonstrating the quantitative relation among patient data, physician knowledge or skills, clinical decision-making and patient outcome will need to be developed and refined to a degree not previously required. Explicit lists of historical, physical examination and laboratory items that contribute to the diagnosis or management of the patient with a specific disease have been utilized in attempts to establish quality care criteria. Professional Standards Review Organization (PSRO) standards are an example of "list" standards. Such lists, however, fail to account for the demographic, epidemiologic, temporal and other factors that influence the diagnosis and management of an individual patient's disease. Attempts to weight specific tests or procedures also have been unsatisfactory as moderators of criteria in relation to the clinical state of a patient at any particular point in time. In addition, criteria lists do not enable assessment of cardiovascular conditions for which the outcome could be affected by failure to secure the necessary critical information.

Clinical decision-making logic trees also have been utilized as a means to formalize "expert" clinical consensus. The problems with such trees are numerous, the primary one being that all eventualities must be considered. This is cumbersome and makes the outcome unwieldy or even unusable.

Stimulated by considerations of computer applications to clinical medicine, a proposal has been made that some degree of formalization of the clinical decision-making process is attainable by reference to information theory. An estimate of the amount and significance of any particular piece of information can be obtained by rating the increase in security concerning a patient's diagnosis or management plan occasioned by the acquisition of that given piece of information and this change may be expressed in quantitative terms. Thus, when a patient is first seen, uncertainty exists as to the best means to handle the patient. Information subsequently obtained reduces or attenuates the original diagnostic or therapeutic uncertainty and directs a course of action. This type of criteria setting has been termed criteria mapping. In this system, criteria are developed to reflect

sequential medical decision-making based on the specific findings for an individual patient at any specific time or at any particular disease stage. It is obvious that because the process is disease- and pathophysiologically oriented, nonmedical considerations that may impact on clinical decision-making or patient management plans can be tested for potential significance by assessing their effect on optimal care.\*

**Requirements for best decision-making system.** Whatever system is eventually established on which to base College positions on cardiovascular care issues, it should be data-based either by existent or collectable data, be clinically oriented, have a wide spectrum of applications and be computer-compatible. In the interest of adaptability, the system should be responsive to new knowledge and data. As a guide to research and education, it would be useful if the system assessed the potential of missing data for altering the decision pathway. Of immediate interest and application would be the identification of areas in which no data are available or consensus is lacking. Finally, the system will need to be validated by our membership. Individual physicians may dismiss "expert" criteria or standards as being "academic" and "unrealistic" unless they are personally involved in the criteria-setting process and accept the standards as their own.

### **Creativity Versus Acceptance of Mediocrity**

When resources were unlimited, creativity was applied almost exclusively to the art and science of medicine. Resources are no longer unlimited and it is now essential that

---

\*More information on the use of information theory and criteria mapping may be secured from the referenced articles.

we address the art and science as well as their application to the care of the patient. It is largely because of the great advances in technology, diagnosis and therapeutics during the past few decades that many of the major contemporary problems in cardiovascular health care are philosophical or socioeconomic, or both. Our new responsibilities are but a logical extension of previous creativity. I am certain that this same creativity will allow us to meet the new challenges involved in achieving balance between effective optimal care and the other components of the cardiovascular health care delivery equation. If we do so in a manner that establishes a solid basis for the reasonableness of the position we take, it is probable that an effective balance between individual patient rights for quality care and wise use of community resources can be achieved. This is the goal and the challenge.

We must not acquiesce to the potentially emerging philosophy that every citizen is entitled to an adequate level of care but not necessarily a maximal level. The result of mediocrity in patient care is mediocrity in research and education, and progress in cardiology would be slowed if not stilled.

### **References**

1. Bolinger RE, Aklers P. The science of "pattern recognition." *JAMA* 1975;233:1289-90.
2. Greenfield S, Lewis CE, Kaplan SH, Davidson MB. Peer review by criteria mapping. *Ann Intern Med* 1975;83:761-70.
3. Pryor TA, Gardner RM, Clayton PD, Warner HR. A distributed processing system for patient management. *Computers in Cardiology*. September 1978; (IEEE 78CH1391-2C), 325-8.
4. Warner HR. Computer-based support for medical decision-makers. In: Connelly DP, Benson ES, Burke MD, Fenderson D, eds. *Clinical Decision in Laboratory Use*. Minneapolis: University of Minnesota Press, 1982:244-50.