Presidential Address

The College can help

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Editor's note: *Following is the edited text of the Presidential Address that Richard R. Sabo, MD, FACS, delivered during the Convocation at the 2002 Clinical Congress.*

you'll find yourselves dealing with them during the course of your career. In discussing these challenges, it will become obvious how much Dr. Carrico and his associates on the Committee on Emerging Surgical Technology and Education (CESTE) have done to help us all.

How things have changed

When I began my career in 1971, the practice of surgery was profoundly different. Radical mastectomy was done for most women with breast cancer regardless of the size or stage of the disease. Gastric surgery was common for the treatment of peptic ulcer disease. There were no surgical staplers or flexible endoscopes, and the thought of doing intraabdominal surgery with a laparoscope would have been incomprehensible.

How things have changed. Like most surgeons, my professional life has been characterized by continual change: changes in the concepts of disease, changes in the techniques of surgery, changes in the environment in which we practice, and changes in the expectations of patients.

Lawrence Way, MD, FACS, recently reported the results of a survey in which he asked 80 colleagues to name the major advances that have occurred in general surgery during the last 25 years.[1] The majority of respondents agreed that the most profound changes have been the better understanding and control of nutrition, improvements in critical care, the advent of fiber-optic endoscopy, and the introduction of laparoscopic surgery. When asked about major advances in the future, they predicted that the trend of less invasive surgery will continue as devices become smaller and even more sophisticated. They also predicted that new discoveries in molecular biology and genetics will result in dramatic therapeutic advances, especially in the treatment of malignant disease.

Changes such as these create much of the excitement and stimulation of surgical practice—the challenge to keep up with new ideas and the joy of learning and perfecting new skills. However, changes in

Surgeons tend to be risk-takers. They enjoy learning new procedures and pride themselves on their technical abilities. There are more pressures to adopt a new procedure than there are restraints to wait for solid evidence of its safety and efficacy. Where is the decision threshold? What is the trigger that tips the scale for a surgeon so he or she will sign up for a course and begin the training process? Surgeons, especially those of us who practice away from academic medical centers, are looking for guidance and the College can do much to help us.

The CESTE statements repeatedly call for an examination of the evidence supporting a new procedure. This may be the most difficult part of the evaluation process. Unbiased information is difficult to find. When we review the literature there is a tendency to select articles that suit our own point of view and fit into preconceived ideas. Information from industry is designed to sell products more than to educate surgeons. Suggestions from colleagues may or may not be based on facts.

Evidence-based medicine

In 1990, a new philosophy of medical practice was developed at McMaster's University in Alberta, Canada. It emphasized that each clinical decision should be based on knowledge and understanding of the medical literature. This philosophy became known as evidence-based medicine (EBM), a term defined as follows in an internal document for medical residents:

"Residents are taught to develop an attitude of 'enlightened skepticism….' The goal is to be aware of the evidence on which one's practice is based, the soundness of the evidence, and the strength of inference the evidence permits."[8]

Evidence-based medicine also suggests that there is a formal set of rules that complements training and common sense when clinicians interpret the results of clinical research.

The details of this philosophy are spelled out in a series of articles published in the *Journal of the American Medical Association* starting in 1993 and culminating in the recent publication of the *Users' Guides to the Medical Literature: A Manual for Evidence-Based Clinical Practice*.[8] It outlines basic skills for evaluating the literature that every practicing physician should have. Since its conception the process has evolved, especially with regard to its application to surgery.

Using the strict criteria of evidence-based medicine to evaluate surgical procedures has been frustrating. In 1997, the Royal Australasian College of Surgery established a pilot project to provide

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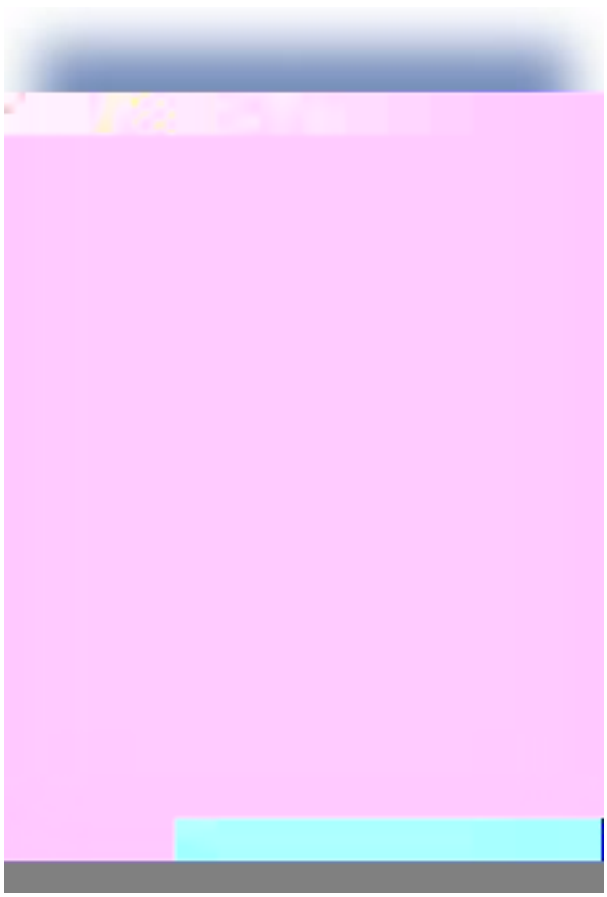
However, most practicing surgeons don't have the time, skill, or resources to do systematic reviews of the original literature. There were over 2,000 surgically related randomized controlled trials published last year. Fortunately, preassessed critical reviews and published practice guidelines are becoming increasingly available. The *British Journal of Surgery* has a section specifically directed to critical appraisal, entitled "Systematic Reviews." The October issue of the *Journal of the American College of Surgeons* introduced a new section called "Evidence-Based Surgery," which will be a regular feature of the journal.

Several collections of critical reviews are also available on the Internet: Here are some examples of their home pages:

- The Cochrane Library, *www.cochrane library.com*
- National Guideline Clearinghouse, *www. guideline.gov*
- Cancer Care Ontario's Program in Evidence-Based Care, *www.ccopebc.ca*.



Future steps

The College has an opportunity to use its communications resources, like our electronic newsletter *ACS NewsScope*, to quickly disseminate information on significant new critical reviews and practice guidelines.

An exciting development at the College is a

vision, teaching, role modeling, and evaluation. Many surgeons have difficulty finding suitable proctors. The College needs to facilitate this necessary link by encouraging experienced surgeons to offer their services and by assisting surgeons in locating proctors. In rural areas, the College might consider setting up regional preceptor programs and providing proctors with assistance and guidelines.

Evolving theories of adult education will result in more efficient techniques of teaching, methods that will ensure changes in physicians' performance. The College needs to develop new ways to teach surgeons by using skill laboratories, surgical simulators, and eventually distance learning techniques using high-speed Internet communications. Surgeons will need to discover new sources of information and adapt to new ways of learning.

Let me leave you with a final thought. All of you in the class of 2002 will be faced with continual changes in your practice and will confront the challenges of incorporating new technology into the work that you do. Dr. Carrico left us all with a legacy both by example and through the work of CESTE. Ultimately, the responsibility of wisely incorporating new technology into your daily practice lies in the principles you have sworn to uphold as a Fellow of the College and will depend on your integrity, your commitment to lifelong learning, your professionalism, and your desire to put the welfare of your patients above all other considerations.