Guest Editorial

Of Purer Science and Holier Laws . . .

Charles Kingsley, the 19th century English clergyman, poet and novelist, gave promise of a "fuller day of purer science and holier laws." "Science frees us in many ways," he wrote, "from the bodily terror which the savage feels. But she replaces that, in the minds of many, by a moral terror which is far more overwhelming." Kingsley's visions apply to the future of the 150-year-old profession of dentistry and presage an essential challenge of the next few decades, the relationship between science and ethics and the role of each.

Last year, 400 clinicians and scientists, reviewers for the *Journal of the American Dental Association,* were polled to determine the ten most significant events and issues that dentistry faced during the year. Eight of the ten items were scientific or technological matters, including AIDS and infection control, a recombinant DNA probe test for bacteria linked to periodontal disease, dental implants, and controversies surrounding the diagnosis and treatment of temporomandibular joint disorders. Each is vested with complex ethical considerations—real and potential.

Until a few years ago, sessions of the reference committee on scientific affairs at the ADA House of Delegates typically lasted a few minutes over one or two housekeeping issues and were attended, at best, by a handful of delegates. Recently, it has become one of the key reference sessions, dealing with many priority resolutions. It is often standing room only.

Few would disagree with a prediction that the future of dentistry lies largely in research. If the trends of the past 30 years continue, we will see an explosion of new methods of diagnosing and treating oral and dental diseases. We can also expect to see a further decrease in the prevalence of dental caries and a significant decline for periodontal disease.

Likewise, most informed, forward-looking health professionals see on the horizon serious challenges in the financing and delivery of health care for an aging population, thanks, in part, to medical research's successes in increasing the life span of all, including the unhealthy.

Tomorrow's patients will bring increasingly to the dental office a complexity of problems related to chronic and degenerative diseases. A recent study has indicated that Alzheimer's disease has affected twice the number of older citizens as previously believed.

This editorial is reprinted with permission from ***Focus on Ohio Dentistry,*** *the newsletter of the Ohio Dental Association.*

Future dentists must have a better understanding of the elements of ethical decision making. In an aging, consumer-oriented society, where third- and fourth-parties will be involved in the patient's affairs, including financial matters, ethical concerns relating to patient care will arise more frequently. Often these issues will not wait for the profession's leadership to provide the practitioner with a proper solution. The dentist will be required to make on-the-spot decisions related to situations not covered in the *Principles of Ethics and Code of Professional Conduct.*

Dentists of the future must have an understanding of scientific methodology to be able to sort out valid therapy from the superstitious. Whenever old ideas are challenged by new scientific discoveries, one can expect unscientific ideas to surface as well. The development of new high technologies can invite their unscientific application to patient care by clinicians ignorant of scientific methodology. A highly sophisticated form of quackery can result.

Therefore, the concept of science in dental education must have a broader scope in the predoctoral curriculum than its current role as a requirement to memorize an extensive set of facts about human biology, most of which are perceived to have little relevance to clinical dentistry. The recent growth of predoctoral student research programs is a step in the right direction.

Basic human biology must be included in the dental school curriculum for reasons that transcend passing Part I of the National Board Examination. It must serve as a basis for developing skills in physical diagnosis and a solid clinical understanding of pharmacology and current medical therapy. These skills and knowledge will be critical for the safe and effective care of tomorrow's patients but must be acquired without compromising the quality of surgical and restorative services.

If dentistry is to continue as a legitimate and valuable health profession over the next century and a half, it must begin to prepare now for a "fuller day of purer science and holier laws." Preparation begins with a vision of what lies ahead beyond the next few months. Dentistry could be on the threshold of its Golden Age.

Donald F. Bowers, DDS
Editor
Focus on Ohio Dentistry