Will We Allow Dentistry to Be Left Behind? Principles Underlying Dental Education and Practice

J. Bernard Machen, D.D.S., M.S., Ph.D.

Dr. J. Bernard "Bernie" Machen is President of the University of Florida in Gainesville. He previously served as President of the University of Utah, Provost and Executive Vice President for Academic Affairs at the University of Michigan, Dean of the University of Michigan School of Dentistry, Associate Dean of the University of North Carolina School of Dentistry, and President of the American Association of Dental Schools (now the American Dental Education Association). Dr. Machen earned his D.D.S. degree from St. Louis University and his M.S. (pediatric dentistry) and Ph.D. (educational psychology) degrees from the University of Iowa. Direct correspondence to him at Office of the President, University of Florida, 226 Tigert Hall, P.O. Box 113150, Gainesville, FL 32611; 352-392-1311 phone; 352-392-9506 fax; president@ufl.edu.

It is a special pleasure to provide remarks at the opening of the Macy study convocation. This meeting is extraordinary and important for several reasons: the attendees are essentially all the leaders in dental education; our nation is approaching a tipping point with regard to changing the health care system; medicine and dentistry are in the midst of transforming from a focus on treatment of disease to predictive, personalized medicine; and dentistry today is better aligned with and accepted as a valuable component of health care than ever before. The final reason is that we are here to examine an agenda with purpose and promise for action.

It is a treat for me that this conference is sponsored by the Josiah Macy, Jr. Foundation. My good friend and former dean colleague, June Osborn, who is president of the foundation, is an important figure in public health in the United States, and dentistry is fortunate to have her input and support. June and I stood together more than a decade ago at the dental education crossroads defined through expansive analysis by the Institute of Medicine. While we have witnessed some change since then, the progress has not been nearly enough if dentistry is to sustain its national and international leadership in education, research, and practice.

Leadership in the profession of dentistry begins at our educational institutions. This has always been true, and it is surely the case today. From the earliest days of students' education, we are shaping their potential for contributions to clinical practice, research and teaching, and improvements in the health of the public. However, dental education's collective vitality and capacity for contributions in research, education, and practice are at risk. Our system of education is requiring far too many sacrifices just to deliver basic education. It is becoming more and more difficult to make contributions in both practice and research.

In my time with you this afternoon, I would like to examine some of the principles and objectives driving the Macy study and urge you to renew your commitment to consider change, to take action, and to maintain your advocacy role. Left unchecked, the current internal and external pressures on dental education will bring types of change that will not advance or even sustain the profession. The need is great, and the time for action is right now.

The Macy Study

The Macy study has reviewed current trends in the system for educating dentists in the United States. The study team, led by Allan Formicola and Howard Bailit and joined by Tryfon Beazoglou and Lisa Tedesco, has identified weaknesses in the system and pointed out successful models and strategies that would, if implemented, create new momentum for change and enhance the U.S. position as the leader in worldwide dental education.

We are here to talk about change. It seems we have always been about change! But this time, the conversation is about the observations of the Macy study and the new and renewed commitment to an action agenda for real and sustainable change.

For a number of reasons, our meeting again, at this time and at this crossroads, shapes a new imperative. If left unanswered, our principal role as health care providers will diminish. The link to keep in mind is the direct connection between what is taught and what is practiced. Let us look at the three primary principles of the Macy study.

1. Dentistry is a learned, self-regulating profession. This principle is one of the most widely held tenets of the profession. It is predicated on specialized training that renders practitioners competent to provide services specific to our professional disciplines. Dentistry continues to stand out in a positive way compared to other self-regulating professions. I am sometimes asked by legislators for input into regulatory skirmishes. Dentistry is rarely an issue, while most other professions are in various stages of interdisciplinary conflict. This has not always been the case. I remember the battles of years ago. For whatever reason, we are fighting fewer battles nowadays. Good for us!

Fundamental to the covenant of a learned profession is ensuring we have the trust of our patients and the public. This trust means that the patient can rely on us to put her or his interests before any self-interest.[1] Our capacity to protect that trust provides us with the privilege of being self-regulating. Without contemporary knowledge and skill, without appropriate scientific depth and breadth—and if our standing as a learned discipline is compromised—the profession's capacity to self-regulate is threatened.

2. Dental schools must be an integral part of a university, and a majority of dental schools must be based at research-intensive universities. No one can deny that dentistry is in one of the most rapid periods of scientific and technological expansion, with vast implications for oral and systemic health. New findings and growing evidence place dentistry as a primary care entity, ever closer to medicine in diagnostics and clinical interventions. Molecular medicine will redefine what happens in health care.

How we reshape our profession from one that is primarily surgical-restorative to one that is diagnostic and integrated into primary care is an agenda that must be taken up, and research universities must take the lead. Research funding once restricted to dental schools is continuing to be awarded to researchers throughout academic health centers. Dental faculty must be part of these research teams if we are to remain vital in our contribution to the science that advances the clinical practice of dentistry. Further, dental faculty must be able to keep up with their colleagues in other segments of the university and to be integral to collaborations. Without this connection, without this standing in the research university, dentistry's roots in science erode. We have come so far, in my professional lifetime alone, and we must not slip backwards. Science is the past, the present, and the future.

3. Dental schools must have adequate resources. This principle is the heart of the Macy study. Over the past two decades, inadequate resources have contributed to the closure of seven dental schools, five in research universities. It is indeed ironic that we find ourselves at Emory discussing the pressures of resources and threats to vitality since Emory was the site of the first school closure. I am told that a building less than three blocks from here still carries a sign saying "Dental Building."

Finances and a growing lack of fit with the mission of the university contributed to dental school closures and continue to contribute to constrained resources and academic and programmatic isolation. Schools must not only demonstrate their value and contribution to the campus, but also to the community.

Today, most schools continue to struggle with financial problems that threaten excellence and their ability to contribute to the university on the same level as their sister health science units. Dollars for faculty, research support, and curriculum change are too often forfeited to maintain clinical education and school-based clinics. Yet, comprehensive care, patient-centered care, and the quality assurance movement have not reached their full potential. School clinics have not become real delivery systems, and education, finances, and contributions to the public good will suffer until they do. Our deans know that traditional dental education clinics as cost centers require redirected subventions to survive.

We should not be lulled by the hope for less costly models of dental education in schools outside of our research universities. The long-term impact of doing so will jeopardize our contribution to the scientific basis of the profession. The scope of dental practice is quickly changing to include oral-systemic diagnostic practices and treatment interventions more aligned with primary care medicine. Indeed, conditions are set to seed a very different profession of dentistry. Thus, we cannot abandon our fundamental commitment to science and discovery. Looking for cheaper models is a false hope that some administrators hold out as a solution for the future. This occurs in many parts of higher education. Com-

munity colleges promise to offer four-year degrees at less cost, while so-called "primary care medical schools" suggest their costs are less than academic health centers. We should all beware of this sleight-of-hand maneuvering.

The dilemma for dental education is that our limited resources have to be divided three ways—among education, research, and clinical education. There has never been enough to fulfill all three missions. We are compelled to ask: are we able to continue this way into an uncertain future?

Principles That Return to the Public Good

Several additional principles have served as drivers for the Macy study. I would like to review them before I close.

Teaching, research, and service programs at all schools must contribute to reducing oral health disparities. This principle is obvious in its imperative for any health profession. It is the key to connecting dentistry to the public good. Oral health disparities continue to exist along lines related to race, ethnicity, and class. Prevention and access to care are not readily available to all. The number of areas in the United States where there is a shortage of dentists has doubled over the past decade from around 700 to 1,400. Recognition, commitment, and execution are key to sustaining programs.

Understanding human biology and behavior must be the same for medical and dental students. The time has really come for dental education to realign or better align its relationship to medical education. The oral-systemic connections emerging from research will have long-lasting implications for how clinical practice, including scope of practice, is determined in the days ahead. Dentistry's future scope and direction can change significantly if this principle is pursued.

Clinical training should include community-based, patient-centered care. We have not made nearly the progress one might have predicted, and the 1995 Institute of Medicine study advocated,[2] in advancing how our clinical education environment is structured. Following this principle could result in a significant recapture of resources that could be used to support research, faculty, and curriculum. It could provide vitality and sustainability for dental schools in research universities.

Curriculum prepares graduates for general or specialty residency programs. Additional exposure and advanced training become even more pertinent in the educational system when we consider the advances in science, technology, and clinical interventions against the needs of an equally fast-changing population, as well as the factors of aging, polypharmacy, chronic conditions, advances in restorative medicine, and predictive health.

Sustained Momentum for Change

Taken together, the Macy study principles and these additional driving principles impel us to ask the following question: will we linger at the crossroads much longer and allow dentistry to be left behind?

Consider that, in the years following the 2000 U.S. surgeon general's report on oral health, public recognition that oral health is a component of general health seems to be growing, as illustrated in these examples:

- A recent Oral Health America telephone poll of 1,000 people indicated a shift in the public's perception of dentists and that the public now understands that oral health and general health are linked.
- Forces outside the profession have focused on the oral health-systemic health link and the lack of access to care. The press and legislators are onto both issues. As covered in the *Washington Post,* the recent death of a child in Prince George's County, Maryland, from abscessed maxillary anterior teeth dramatized both the oral-systemic health link and the access problem. Also, legislators in California have acknowledged the severity of the access problem in their state and passed legislation allowing dentists from Mexico to obtain limited licenses to practice there.
- Major foundations like the Macy Foundation, Robert Wood Johnson Foundation, California Endowment, and Kellogg Foundation continue to demonstrate their commitment on the part of the public to address health disparities including those related to oral health.

Within dentistry and dental education, there are also positive signs of change. Through the leadership of the American Dental Education Association (ADEA) and ADEA's Commission on Change and Innovation in Dental Education, important conver-

sations are ongoing that hold hope for advancing the public good through change in the curriculum (including clinical education), the development of faculty, and the resulting connections to assessment and evaluation in preparation for practice. The American Dental Association recognizes access to care and diversity as critical issues as well. The research community, supported by the National Institute of Dental and Craniofacial Research (NIDCR), is deeply involved through its work aimed at understanding the oral-systemic health link. These are the lighthouses in the harbor. Positioning our academic ships toward the light is needed, now. Academic dentistry's contribution is through research and is key for the advancement of the profession.

We must continue to take stock of all the levers for change and sustained movement. One lever that we cannot forget is accreditation. I am no stranger to this lever. In one of my former incarnations, I contributed to reforms that emerged after the Institute of Medicine report. For nearly two decades now, higher education and dental education have struggled with the distinction between process and outcomes and appropriate levels of assessment. With the increasing changes all around, the outcomes being assessed are out of step with what is increasingly needed for successful contributory clinical practice. And, at this time, it appears that process has been completely uncoupled from outcomes. The cudgel of accreditation and the appropriate connection of process with outcomes must be re-examined for the change it can provide.

Let me close by saying that, for successful change to occur, it is necessary to recognize the Macy study principles and to follow through with the wherewithal to educate based on those principles. Financial viability and institutional vitality go hand and glove. Consider well, and with care, the principles on which the Macy study is based and their relationship to school finances. Then, move forward on redefining and redesigning financial structures and change strategies that will serve those principles.

I urge you at this special convocation, where we find ourselves again at the crossroads, to take the time necessary to achieve the three goals of the meeting. First, take this time to increase your awareness, as major stakeholders, of the exquisitely critical issues confronting the dental education system in the United States over the next decade. Second, discuss with purpose the strategies to address the critical issues that threaten the vitality of dental education. Third, move forward with a real action agenda for sustainable change. The present system, left unchecked, will lead to unintended change that would place dental education further away from the center of health care in America, where we would no longer have a visible role in contributing to the public good. Much is at stake!

The persistence and insistence of leadership are needed if we are to remain vital as an educational system and profession. I look forward to hearing good things from you.

REFERENCES

1. Lundberg GD. Severed trust: why American medicine hasn't been fixed. New York: Basic Books, 2002.
2. Field MJ, ed. Dental education at the crossroads: challenges and change. An Institute of Medicine Report. Washington, DC: National Academy Press, 1995.