GUEST EDITORIAL

What Is a Clinical Scholar?

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In a well-written article, Oakley and Vieira[1] reiterated a long-standing problem regarding the inadequate number of full-time dental school faculty and posed some innovative methods to overcome the continuing decline in the academic ranks. They admitted that less than 10% of grants submitted to NIH are funded, and that the fierce competition, given that many dental schools "demand first authorship on significant peer-reviewed articles and often a consistent record of external funding," could spur more competition than collaboration. And although one could spend hours debating what is "significant" in the peer-reviewed literature, and what external funding has to do with scholarship, my concern with their premise is not with the facts presented and their recommendations, but with their definition of a *clinical scholar.* Medline Plus recommends the following definition, at least for the term *clinician* (noun): "an individual qualified in the clinical practice of medicine, psychiatry, or psychology as distinguished from one specializing in laboratory or research techniques or in theory."

They also had an entry for *clinical* (Adjective):

"1: of, relating to, or conducted in or as if in a clinic: as a: involving or concerned with the direct observation and treatment of living patients ⟨engaged in full-time clinical practice⟩ ⟨clinical professor of obstetrics and gynecology⟩; b: of, relating to, based on, or characterized by observable and diagnosable symptoms of disease ⟨the clinical picture on admission was that of mild depression in an extremely rigid personality—*Occupational Therapy & Rehabilitation*⟩ ⟨three of these six foods were actually the cause of symptoms, and upon their elimination, clinical cure was effected—*Journal of Pediatrics*⟩; c: applying objective or standardized methods (as interviews and personality or intelligence tests) to the description, evaluation, and modification of human behavior ⟨clinical psychology⟩."

Because Medline Plus does not have an entry for the term *scholar*, or *scholarly activity* for that matter, I sought other sources. The Merriam-Webster version is as follows: "A person who has done advanced study in a special field. A learned person." Now please note that nowhere does it say—*requires a PhD*, and nowhere does it say—*requires a federal grant*.

A scholar is someone engaged in the intense study of a specific topic. Dentists go through at least four years of predental training, four years of dental school, and perhaps a general practice residency and/or advanced training in a specialty. They participate in continuing education courses and often achieve advanced status in either special courses or tests given by various organizations or Board Certification in their specialty. Clinicians have mandatory continuing education and are committed to lifelong learning. So, if one tracked the amount of time a dentist spends studying the art and science of the profession, that person is indeed, by definition, a scholar.

David Chambers made an interesting point in the *Dental Clinics of North America* January 2002 issue on Evidence-Based Dentistry.[2] He averred that dentists perform common experiments in their office and that the first time a procedure is performed following a continuing education course it is indeed an experiment, and the clinician is doing clinical research. In fact, he proposes that the most common way dentists learn is by observing the outcomes of their work, done with their hands, in their practices, on their patients. If we take that to the next level, over many years the clinician has a cohort of patients, with sucesses and failures to guide in choosing the effective treatment for the next patient.

Although the university-based researcher deals with a homogeneous population, the clinician deals with a heterogeneous one. The knowledgeable researcher has a well-defined list of inclusion and exclusion criteria, and in many cases a patient with a defined diagnosis. The clinician sees a patient in need who requires a diagnosis as well as treatment, and that most often cannot be excluded from treatment. However, the researcher can try to eliminate confounding varaibles; the clinician does not have that luxury. We treat the diabetic, the smoker, the heavily medicated, etc., in a wide range of age groups across the gender and socioeconomic spectrum. Researchers love Gauss, as they are looking for the "mean" patient and a cohort with a tight standard deviation; clinicians refute Gauss, as they rarely, if ever, meet the "mean" patient and are usually treating outliers. The researcher deals with volunteers, the clinican with the reluctant patient. The researcher has a null hypothesis, the clinician a problematic question.

Each time a procedure is performed, the clinician must determine the correct course of action for that patient, with logical alternative options, including rendering no treatment. The clinical records mandated by good practice standards contain a wealth of information and experience. The actual term "clinical experience" is a synthesis of ideas generated by years of practice, having successes and failures. Clinicians, those in private practice and those in education who devote the majority of their week to the clinic floor, spend a lifetime honing their diagnostic, patient management, and treatment skills; thus, they are the real "clinical scholars." When making a critical decision concerning the proper treatment of the patient do you want it made, and performed, by the clinically inexperienced, albeit learned researcher, or the clinically experienced practitioner?

I posed the following question to a prominent former dental dean of a successful research institution: "Is someone who does research half a day a week capable of being a successful researcher?" He unequivocally said no. A subsequent question was posed: "Could someone who practices dentistry half a day a week be a successful clinician?" He reluctantly said probably not. He surmised that, given someone with a lot of clinical

experience, who was doing half a day to maintain their skills, probably yes, but given a recent graduate entering dental education who needs to hone his or her clinical skills, probably not. Logically then, can you compare full-time faculty members who devote their entire week to research with those who devote their entire week to clinical care?

Dental deans rationalize that our schools must be part of, and competitive with, the other schools and colleges in the university system. But the playing field is grossly uneven. Dental schools are different animals than Schools of Liberal Arts, and university presidents need to be made aware of these differences. The student contact hours of the two groups do not relate. My colleagues in the liberal arts, and for that matter the business and law schools, have limited contact hours and large amounts of time for scholarly pursuits, much of which is keeping up with current literature in their field. Although they have administrative duties, none are burdened with managing a functioning health care clinic, many of which function 12 months a year and occasionally outside of the traditional 8 to 5 business day. Medical schools are partnered with hospitals where their students gain clinical experience. Dental schools, however, manage their own clinics. At a time when medical schools are hearing cries to condense to two years, we are hearing cries to expand to five. What is wrong with this picture?

What is needed is a shake-up of the current archetype that has brought this problem upon us. Making clinical faculty second-class citizens, who work exhaustive hours in less than pristine environments, for less money than their private practice colleagues, will not attract the additional needed people into education. Vanchit et al,[3] in their recent publication on this problem, had "changing the institution's culture" as their first recommendation. Although we all like to create our students in our own image, we must realize that trying to take clinicians and turn them into laboratory researchers may not be successful. It is not why they chose dentistry as a profession. For a start, let's agree that clinical faculty help bring in clinic income plus, if you divide tuition dollars by contact hours, a large portion of the tuition revenue. If things are bad now, wait until the NIDCR largesse, another ship that needs to be righted, implodes, leaving our schools with an abundance of PhDs who can no longer attract funding.

Once again, Harvard seems to be the beacon of ingenuity and courage. In their 2008 Guidelines for Promotion and Recruitment, Dean Jeffrey Flier wrote, "If Harvard Medical School and Harvard School of Dental Medicine are to continue to attract and retain the best scientists, clinical experts and teachers in the world, it is essential that the contributions of faculty to new paradigms of research, clinical care and education be rewarded by promotion." They allow the selection of one of three areas of excellence: (1) teaching and educational leadership; (2) clinical expertise and innovation; and (3) investigation; with well-defined metrics and a flexible structure that allows each faculty member to assemble a profile that reflects their unique combination of activities and accomplishments.

While my bias leads me to believe that the order for the areas of excellence was not random, what is critical is that a major university is making a substantive effort to reverse a dangerous trend. Since the Merriam-Webster definition of professor is: (a) a faculty member of the highest academic rank at an institution of higher education; (b) a teacher at a university, college, or sometimes secondary school; (c) one that teaches or professes special knowledge of an art, sport, or occupation requiring skill, hopefully, everyone else will see how cogent the Harvard paradigm is.

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References

1. Oakley M, Vieira AR: The endangered clinical teacher scholar: will this eliminate discovery from the dental school environment? J Dent Res 2008;87:200-202
2. Chambers DW: The ethics of experimenting in dental practice. Dent Clin North Am 2002;46:29-44
3. Vanchit J, Papageorge M, Jahangiri L, et al: Recruitment, development, and retention of dental faculty in a changing environment. J Dent Ed 2011;75:82-89