In this era of the World Wide Web there is instant access to a vast store of information related to clinical practice in orthodontics. Not all of this information is of equal value, however, creating the need for standardized and unbiased means of evaluating it, and for determining the relative merits of various types of data in clinical practice. What has emerged from this effort is “evidence-based” medicine and dentistry. By this measure, inferences drawn from expert opinion are considered weak; narrative literature reviews are accorded moderate value; systematic reviews relying on the results of prospective randomized clinical trials are considered strong; and consensus reports based on robust evidence-based systematic reviews are regarded as providing the most valid and reliable evidence for determining a course of action in clinical practice.1

Because orthodontics is a latecomer to prospective randomized clinical trials, few truly robust systematic reviews have been published. As a result, much of clinical orthodontic decision-making is based on case narrative, such as “describe how you would treat a Class II, Division 1 malocclusion in a 12-year-old female with no primary teeth remaining.” Against this backdrop, the present controversy regarding whether the clinical decision-making process in orthodontics should be primarily experienced-based or evidence-based is taking place. Academicians and orthodontic journal editors assert that evidence-based information ought to be paramount, while many full-time practicing orthodontists claim that the practical thought processes they apply daily are primarily experienced-based and rely heavily on case narratives. The debate can be quite passionate, and as a result the discourse often produces more heat than light. This outcome is not only unfortunate, but is entirely unnecessary since it stems from the spurious premise that the 2 positions are mutually exclusive if not frankly antagonistic.

Decision-making in orthodontic clinical practice is based neither wholly on evidence nor on experience. Rather, it is firmly based on a type of practical reasoning called clinical judgment. Opponents in the current debate would readily agree that the hallmark of a good orthodontist is the ability to exercise sound clinical judgment. This core competency incorporates application of experience and consideration of evidence, complementary qualities compatible in, and necessary for, interpretative reasoning.

In her recent monograph How Doctors Think,2 Kathryn Montgomery holds that clinical judgment embodies the capacity for rational thinking and action in the face of uncertainty. It is the educated hunch required when there is little formal evidence to be applied, yet an opinion or action is needed to decide the best course of action to be taken for the patient. Clinical judgment is needed to decide what is optimal for that individual at the time when the only available evidence is derived from averages. It is perception based on experience with sometimes little immediate scientific evidence to support it. Scientific evidence alone may reduce, but not eliminate, uncertainty when making clinical decisions or predicting outcomes, but reflective clinical judgment honed by experience makes a unique and necessary contribution to clinical decision-making.

In orthodontic practice, clinical judgment requires a similar integration of clinical experience and systematic assessment of relevant scientific evidence in the context of the patient’s orthodontic condition, treatment needs, and preferences. Clinical judgment is indeed a skill or a “knack” (art), incorporating the best available evidence (science) with societal and patient values and tastes (trans-science). Some elements of orthodontics transcend the realm of science to extend into exercising moral and esthetic judgments. In this sphere, there may be questions to be asked in scientific fashion but not open to testing in a scientific manner.

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These issues have been called trans-scientific.\textsuperscript{3} Robust scientific evidence in the life sciences aspires to a level of reliability and predictability possible many times only in the physical sciences because of the variability inherent in biological systems.

Orthodontists admire the reliability and predictability offered by strong scientific evidence. It is unlikely that any group craves control more than orthodontists. If it is agreed that sound clinical judgment is a critical virtue for an orthodontist, and orthodontists acknowledge the reliability of valid scientific evidence, why should there be a dispute regarding the relative value of experience versus evidence in orthodontic diagnosis and treatment since each is a key element of clinical judgment? There may be some disinclined to be “confused with the fact”. On the other hand, adherents of evidence-based orthodontics (EBOs) in recent years have been extremely critical of the value of narrative case-based and experience-based orthodontic practice, applying the pejorative term “anecdotal” when referring to any clinical opinion or action that cannot be supported by published scientific evidence. “Narrative” and “anecdotal” are tantamount to the same thing. The EBO adherents bristle when an accomplished clinician makes a statement prefaced by “in my experience,” as if sacrilege has been uttered. The EBO implication is that orthodontics is now a science when, in fact, orthodontics in itself clearly is not a science, although it relies more and more heavily on science and technology. The need for greater use of scientific evidence in clinical orthodontics is not in dispute here. But to denigrate the contribution of experience and the narrative case-based tradition in our specialty is an injustice to the truth. The truth is that the most important attribute of a thoroughly competent clinician is clinical judgment, which develops from sound experience and is bolstered by, but not based exclusively on, systematic scientific evidence.

In dentistry, orthodontic practice is unique in the time it takes to complete one unit of clinical experience, that is, the management of a patient from first contact to completion and follow-up. During this time, and the years that follow treating other patients, a clinician gains experience that contributes to and enriches continuously his or her clinical judgment, that unique competency which is the hallmark of the truly accomplished clinician. Orthodontists cannot realistically aspire to practice in an entirely evidence-based mode. We have a proud heritage of contributing significantly to the lives of the vast majority of our patients. Therefore, let us put aside an empty debate and agree that the soundest mode of practice today is reflective, experienced evidence-bolstered orthodontics.

REFERENCES