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Standards: Part I

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Cover image Measuring up to the profession's standards.

From the Editor

Maybe Darwin Was Right

We might even go so far as to propose the hypothesis that the vitality of an individual or organization can be read by observing whether form follows function or the other way around.

Tithonus loved Eos. This was a common enough theme about a man and a maiden among the legends of Greek mythology. What made it unique and ultimately tragic was that Eos was a goddess (the Romans called her Aurora) and Tithonus was a mortal. Even on Olympus, that was regarded as an unnatural relationship. Eos made matters worse by pestering Zeus to grant her lover eternal life. Be careful what you wish for…Tithonus continued to age, but he could not die. One shudders to think of immortality without eternal youth.

As I grow older, I have gradually placed more emphasis on wisdom. I began thinking of myself as somewhat senatorial. That was before I saw the Gallup Poll showing that America's public trust in that body is in the single digits and before I looked it up online and found that "senator" means literally "old man."

Being around students and residents is wonderful. They think I am smart because I know things they do not. In reality I am just adept at changing the subject and talking about the things I was once expert in. I am getting hard of hearing, so I talk more. I am as smart as the young folks today, but I am not as current in managing the emerging challenges of the profession using the newly available approaches. And I would not want to hold them back by insisting that they first help me solve the issues I am still struggling with. I could not grow old in comfort without some assurance that the things we care most about are in the hands of those able to carry on. That includes my family, my professional work, and the energy and civility of our community.

Perhaps the most memorable, certainly the most ambivalent, day of my life was 15 years ago. My sons and I played a lot of one-on-one basketball in the court behind our house. Both my sons are good, but the old man is smart and, when it comes to playing dirty, I am a master of plausible deniability. Then it happened. My oldest son beat me. Not a fluke, he started beating me consistently. My self-image had never taken this kind of blow before. At the same time you would never find a prouder parent. It cost me something to move to the next level in life. Life without transitions is just waiting to fulfill dreams that are walking away faster than we can chase them.

There is a well-known axiom in the business world: "Form follows function." Roughly, this means the big guys will play under the basket or on the line, houses in Hawaii will be raised off the ground and have lanais, we will structure our communication platform around our audience and their needs rather than the other way around, we will have a good reason for raising money, and we will assign people to tasks rather than titles.

Life without transitions is just waiting to fulfill dreams that are walking away faster than we can chase them.

There is probably a "should" somewhere in that formula. Form does not always follow function, but it should. This is straightforward Darwinian thinking. Regardless of how well the group practice or large commercial clinic works in the suburbs of Los Angeles, it will not survive in White Falls, Montana. No matter how well written the 3,000-word articles are in respected journals, few will read them, and fewer will change their practices in response. Most dentists want short, actionable interactions or just to not be bothered so much. When the function is no longer served, the form becomes rigid and loses its effectiveness. Just ask Tithonus.

Stanley Liu is a professor of orthodontics at the Stanford Medical School. He recently put a new twist on the "form follows function" rule. He said that as long as the organism is vital, form will follow function. Teeth and jaws move where they are supposed to be, sometimes with a little professional help. The young mouth grows to adapt to the needs of its owner. But with age, function begins to follow form. As the mouth starts to break down, we adapt by changing our diet, mumbling, and falling victim to obstructive sleep disorders.

We might even go so far as to propose the hypothesis that the vitality of an individual or organization can be read by observing whether form follows function or the other way around.

The American College of Dentists has maintained its vigor for a century. The essential formula has been to change its focus every decade or so. The founding purpose was to encourage young dentists to pursue advanced training. That was followed by attention to standards for education and licensure and then better journalism. In the 1940s attention turned to insurance, denturism, and America's role in the world. By the 1960s and 1970s, the college was focused on research and recruiting students to the unfilled places in dental schools. Most recently, we are working on ethics. The college is long-lived because it "functions" well.

The trick to perpetual renewal is to identify the right unit of analysis. We are not a club of honorable individuals who have been giving awards for a hundred years. We are an honorable group of outstanding individuals working for the betterment of the profession. Groups can function indefinitely by replacing their members with those responding to new times. The Mormon Tabernacle Choir remains relevant despite the fact that there are no members singing today who were in the original group. Darwin was pretty clear about this. Species survive or thrive or vanish because old individuals are replaced by new ones who are adapted to the changing environment. Of course the new ones need a little guidance along the way. But we should be proud to have them moving into position.

(Did I say that I was originally taught to shoot free-throws underhand?)

The Dodo birds of a century ago probably thought they were about the best Dodo birds around and that Darwin was a pessimistic academic. But maybe Darwin was right.

Standards and Organizations

Stephen A. Ralls, DDS, EdD, MSD, FACD

Abstract

This paper defines and reviews the use of standards in organizations and offers insights. Some standards are direct, while others are indirect and diluted within other organizational text. Standards allow meaningful assessments of actions, which can lead to positive organizational changes. The level at which standards are set is important and has ramifications for an organization. Factors in setting standards are discussed and the sensitive topic of faux standards is introduced. Standards and quality are interrelated–the quality of an organization is a reflection of its standards.

Dr. Ralls is the president of the American College of Dentists. He served as the executive director of the college for over 20 years and prior to that was commanding officer of the former Naval Dental Research Institute.

The American College of Dentists was founded in 1920 to elevate the standards of dentistry. This was at a time when dentistry was struggling with low standards, proprietary influences, and trade-like pockets of less-than-professional activity. The high standards espoused by the college, particularly in education, research, and journalism, moved dentistry in the right direction. An emphasis on standards has remained a special interest of the college. This paper explores standards in dentistry from an organizational perspective, to include insights on their use and misuse.

The concept of a standard goes back at least as far as the Greek word for canon (κανων), which initially meant measuring rod, but came to mean a standard or norm. The imagery of a measuring rod is instructive here—a reference point that allows comparisons or testing. As used here, a standard is defined as a descriptive statement of a *desired* state against which an *actual* state can be compared. The descriptive element may be qualitative or quantitative, while the term *state* encompasses subsets of performance, outcomes, behavior, status, and condition. This rather inclusive definition is consistent with the broader perspective sought through this work. Time is also a sometimes-overlooked component of standards. A standard can be tested at a single point in time—comparing the desired with the actual—or at multiple points in time. The differential between the desired state and actual state can represent either a static shortfall or excess, or an expression of change depending on the situation and standard.

Unfortunately, a discussion of standards in organizations is not without some built-in confusion. Organizations in dentistry are typically composed of individuals in one or more of the following categories: employees, members, volunteers, and students. The issue is that standards at the entity level cannot be divorced from standards applicable to the individuals participating in that entity. There is overlap. Organizations typically establish standards that apply to both the entity *per se* as well as to the individuals within the entity. Examples of entity-level standards are shown in Table 1. Examples of standards for individuals within an entity as employees or members are presented in Table 2. As an illustration, an organization may have a corporate statement of ethics for the entity in addition to a code of ethics for its members or employees, or it may have a single code that serves dual purposes. In similar fashion, the bylaws of the organization may state standard-like principles that apply to the entity in addition to principles or criteria that relate to the members or employees of the entity.

To further complicate the issue, there are also the pervasive umbrella

TABLE 1. **Examples of Entity-level Standards**

- Codes of ethics (entity-level)
- Core values
- Strategic
  - Mission statement
  - Vision statement
  - Guiding principles
  - Strategic goals
  - Strategic objectives
  - Branding promise
- Prescriptive
  - Bylaws
  - Policies and procedures manual
  - Standard operating procedures
  - Best practices
- Communication
  - Public relations statements
  - Advertising statements
- Performance and outcomes
  - Entity
  - Board
  - Departments
- Finances
  - Budget projections
  - Market-share goals
  - Investment goals
  - Fundraising goals
- Employees
  - Employee manual
  - Employee hiring criteria
  - Employee termination criteria
  - Employee reward criteria
  - Employee advancement criteria
  - Employee discipline criteria
  - Employee retirement criteria
  - Employee development criteria
- Members
  - Sustaining membership criteria
  - Member admission criteria
  - Member exit criteria
  - Membership goals
  - Member/customer satisfaction
  - Member/customer service
- Professional development
  - Goals
  - Outcomes by group
  - Curricular criteria
  - Assessment criteria
  - Competency criteria
- Research
  - Evidence-based policies

TABLE 2. **Examples of Individual Standards within an Entity**

- Codes of ethics (individual level)
- Prescriptive
  - Bylaws
  - Code of conduct
  - Policies and procedures manual
  - Best practices
- Employee
  - Employee manual
  - Recognition criteria
  - Disciplinary criteria
  - Termination criteria
  - Advancement criteria
  - Retirement criteria
  - Promotion criteria
  - Performance criteria
  - Behavioral criteria
  - Competency standards
  - Continuing education requirements
  - Assessment criteria
  - Learning objectives
- Member
  - Membership requirements
  - Recognition criteria
  - Disciplinary criteria
  - Termination criteria
  - Advancement criteria

TABLE 3. **Examples of Umbrella Standards**

- Laws and regulations
- Social standards and norms
- Community standards
- Cultural standards
- Sector standards
  - Profession
  - Education
  - Institution
  - Research
  - Journalism
  - Communication
  - Advertising
- Religious principles
- Political principles
- Importance and use

standards lying unobtrusively in the background that can apply to both the entity and its individuals. The impact of the applicable umbrella standards cannot be separated from the entity or the individuals within it. Examples of umbrella standards are shown in Table 3. As a case in point, federal and state laws and regulations will govern aspects of an entity's operation while other laws and regulations will govern the licensure and practice of a professional who works in the entity. Organizational standards are not established in isolation of umbrella standards—the umbrella standards influence both entity-level standards and standards of individuals within the entity.

We intuitively understand that standards are important, but we rarely ponder life without them. Without standards, we approach chaos. Without standards, there can be no ethics, no professionalism, no professions, no excellence, no quality, no effective leadership, no planned performance, no intentional outcomes —virtually no meaningful assessment, measurement, or evaluation of any kind. A measurement without a standard is just a number. An event without a standard for context is just an undefined, unassigned, or unattributable episode in time.

Without standards there can be no ethics, no professionalism, no professions, no excellence, no quality, no effective leadership, no planned performance, no intentional outcomes—virtually no meaningful assessment, measurement, or evaluation of any kind.

Among other applications, standards permit useful comparisons that allow assessment of status, condition, or results; measurement of progress or regress; or understanding of improvement or decline. As aptly stated by Taiichi Ohno, "Without standards, there can be no improvement."

An organization will have standards, whether or not those standards are always recognized as such. Any organization that has budgets has standards. Educational institutions cannot function without standards. Inappropriate behavior cannot be assessed, counseled, directed, or sanctioned without standards. Standards are vital in corporate work that involves assessments of actions, events, or people. The complexity and use of standards often parallel the complexity and interests of the organization. Large organizations may have layers of standards while a very small office may have very few in comparison. Standards allow purposive events, action, or movement within an organization to be assessed and better understood, which in turn allows the organization to be more effective. Standards can be an accurate reflection of an organization in terms of mission, direction, quality, size, management, deliverables, and interests.

There is also a dynamic aspect to standards. They can be modified, scrapped, or replaced, depending on the needs and desires of the organization. Standards do not directly change performance, but standards can certainly influence performance. In one sense, a standard is a driver—a carrot that leads the horse. In another sense, a standard is a stopwatch or odometer that measures the race just run.

The use of the *standards* term in dentistry is common. Generic categories of dental standards that apply to both individuals and organizations include journalism, research, education, advertising, professionalism, and ethics, among others. Specific dental examples include Commission on Dental Accreditation standards, competency standards, and standards of care. Standards are also implicit in another term that is referenced quite liberally in dentistry, *evidence-based*. The basis of virtually anything classified as evidence-based disintegrates without standards. Standards are an essential component of an evidentiary process. The close relationship between standards and evidence is inherent in the term *general standards of evidence*, which is found in communities such as law and science.

In a very real sense, an organizational standard is the rose by any other name. Miscellaneous organizational terminology can directly or indirectly signal standards, including language embracing projections, goals, objectives, policies, principles, criteria, guidelines, and even estimates or expectations. These terms, and others, can form or be incorporated into the standard statements that describe a desired state against which an actual state can be measured.

It is important at this point to distinguish another aspect of standards that bears directly on our understanding. A standard is only a standard if it is used or enforced. It is otherwise just a façade or prop with some other motive or purpose in play. A statement of desired performance is not a standard if never followed or used. A policy statement regarding

employee conduct is not a standard if never enforced. There are no *potential* standards. While standards established at the present can be applied to previous situations as part of a retrospective analysis, the term *standard* more conventionally applies to present and future comparisons.

Direct and Indirect Standards

Standards can be categorized as *direct* or *indirect*. A direct standard is a statement whose primary purpose is as a standard and that is developed and presented as such. An indirect standard is a statement that fits the general requirements of a standard but is not always obvious in that role because it is usually woven into a larger or different textual context. For example, the primary purpose of a mission statement is normally to succinctly state the mission of an entity, not to express standards. In actual practice, though, a mission statement may serve as a standard and its language measured against actual mission accomplishment. If the mission of an entity is to be "the voice for professional excellence in dentistry," then the actual "voice" of the entity that emerges over time, whatever that entails, can be compared with the mission statement in its capacity as an indirect standard. Because of their more disguised nature, sometimes less-precise language, and risk of being overlooked, indirect standards can have some interpretive leeway, which can be a disadvantage over direct standards. On the other hand, indirect standards allow organizations to have understated standards targeted for certain situations without the formality of direct standards, and sometimes that can be an advantage. The almost-subliminal messaging found with some indirect standards can be very effective.

Qualities of Standards

Standards are characterized by several qualities, namely: intentionality, clarity, specificity, measurability, relevancy, and realistic achievability. There are no accidental direct standards—direct standards by definition have intentionality and reflect advance planning and design. That level of intentionality may or may not exist with indirect standards. Any intentionality behind an indirect standard is usually latent or secondary to the purpose of the larger contextual language containing the indirect standard. The particular language that becomes an indirect standard may arise with no original intent to be a standard, its status as such being assigned retroactively.

Ambiguous standards should be avoided. Indirect standards, even though less obvious or conspicuous than direct standards, should still have clarity. As a general rule, the higher the specificity of a standard, the greater the precision that can be achieved in comparisons made with the standard. Indirect standards by their nature are often wrapped in a more sweeping textual context and carry a degree of associated subjectivity. Standards should also be relevant to an aspect of the organization that is of interest to the organization—they are not usually associated with wild-goose chases. Lastly, standards should be realistically achievable. While some standards may intentionally be difficult to meet, impossibly high standards should be avoided. Standards attached to pipe dreams serve no useful purpose.

Setting Standards

The level at which a standard is set is shaped by multiple factors. In general, low standards are low risk, low reward, while high standards are high risk, high reward. It can be stressful on an organization when standards are not met. If an organization establishes a membership goal and announces it publicly, but does not meet the goal, then it can get very awkward for both the leadership and the members. Organizations usually realize—as one option for consideration—that this discomforting situation can be avoided if the bar is set low so the standard will always be met.

The million-dollar question for boards and other organizational leadership is where to set the standards. Some organizations are tempted to draw a conclusion of convenience, reasoning that it is better to have a low standard and meet it that have a high standard and fall short. Unfortunately, the reality is not that simple. While low standards are more easily met, they can result in an underperforming organization. On the other hand, although high standards can be unmet and invite criticism, the organization may actually end up performing at a higher level than it would have without the high standards.

Just as low standards that are more easily met can bring comfort, unmet high standards bring stress and discomfort, even unrest. Low standards can usually be met and the status quo maintained, but they can

short-change an organization's growth and development. A good example is a fundraising goal, also a type of standard. A dental organization that sets a $3 million goal for a capital campaign, but falls short of achieving that goal by only raising $2.2 million, has the uncomfortable task of acknowledging that "failure" to its members and to those major donors who contributed substantially to the campaign. On the other hand, if the goal had been set at $1.5 million but $2.2 million was raised, the response and interpretation are reversed. Everyone is happy. A rollout of results is easy when expectations are exceeded—as in goals, quotas, and projections.

While low standards have the advantage of being easily achieved, they create their own problems. When standards are set too low, then the problem is not achieving the standard, the problem is one of potential underperformance or under-achievement. To continue with the capital campaign example, if the goal were initially set low at $1.5 million, then the campaign may not have generated much interest or excitement from donors and, as a result, it may not have come close to the $2.2 million that would have been raised had the goal been set higher at $3 million. This balancing act is a dilemma frequently faced by those who establish organizational standards. Setting standards is a tightrope walk between achieving and pushing limits. An experienced board that fully understands its organization and membership will normally be best equipped to determine the balancing point, but there are no guarantees. Standard setting is often a dynamic process where standards can be adjusted to meet changing needs, desires, and circumstances.

The impact of standard levels on performance can also be illustrated with a hypothetical example of individuals within an organization. Imagine that a student has to demonstrate a level of performance on an individual task that is part of a series of tasks. Also imagine that the level of performance required to proceed from one task to the next is a minimum standard, termed here as "good enough." This imagined scenario is somewhat analogous to competency standards in dental education. A good question then is: To what extent, if any, does a standard set at "good enough" detract from potential performance above the standard, say toward "excellence"? It is acknowledged that the answer is far more complicated than the question—there are many considerations when setting student standards—but conceptually the question needs to be asked. Do we still strive to perform at the highest levels? At what expense? Does a low standard halt the inertia of performance at the level of the lower standard? How do we get from good to best? It is hoped future dialogue on standards will include these or similar questions. That would be a useful conversation.

Faux Standards

A sensitive question regarding standards warrants introduction to minimally raise the issue and ideally stimulate discussion. It is important to note that the question is not meant to paint dentistry or dental organizations with a broad brush. Specifically, do some dental organizations make claims couched in standard-like language without having any intention of fulfilling their claims or living up to the language? Unfortunately, an answer to this question is largely in the realm of conjecture. Possible explanations do emerge from the few facts or credible observations that can be pieced together. In a few instances it does appear we are dealing with cosmetic props or cosmetic claims, disingenuously used for branding, public relations, or some other cloaked purpose to improve the perception or standing of the organization. Since claims can be considered a type of standard, depending on intent, the use of such tactics could be termed standards cosmetology.

Many dentists are involved in organizations that shun such tactics. But occasionally there is enough smoke in the air to make us suspicious of a few fires. There is certainly an avenue for faux or potential standards to be used under ulterior motives. Situations are reported that raise our suspicions. Anecdotally, we see organizations claim one thing in their publications, publicity, and advertisements, then appear to do something quite different through their actions. Or when organizations fail to put resources needed to achieve what they say is valued, we suspect faux standards. Enough of this is at least perceived that the reality must be considered.

The problem of gaming standards could be addressed through organizational accountability, but that solution assumes the organization would have a desire to avoid gaming and deception, which puts this squarely in the domain of a

contradictory, self-defeating argument. Outside of invasive oversight, which is usually the purview of external agencies, there are scant strategies to practically or consistently address an organization's intent to deceive. Sunlight is one possibility, but revealing or exposing a problem is not without its own risks. There is no question this is a difficult issue to approach.

The Takeaway

Change does not happen because we wish it to happen. Change is an effect that requires an antecedent cause. Change in an organization happens because influential people in the organization take action, good or bad, one way or the other. Organizations make their own policies and operate under their own corporate philosophies. Standards are an integral part of organizational plans and action, and they mirror the goals and aspirations of the organization. Consistently superior organizations will have good leadership and strong standards, among other traits. The reverse is typically true for weak organizations. A healthy organization understands the value of regularly reviewing its standards and the importance of setting standards that optimize the future of the organization.

Standards and quality are interrelated, particularly at an organizational level. Standards are the catalyst for quality. Integrity is also intrinsically connected—fraud, dishonesty, and corruption are incompatible with organizational quality. The level of quality is directly influenced by the level at which applicable standards are set. It seems clear that as standards loosen, quality correspondingly declines, and organizational stature eventually weakens. As has been attributed to Ray Kroc, "The quality of a leader is reflected in the standards they set for themselves." A corollary is most definitely applicable to organizations: the quality of an organization is reflected in its standards. A foundational question for any organization is the level of quality it seeks for itself. The answer will involve standards. ■

> We anecdotally see organizations claim one thing in their publications, publicity, and advertisements, then appear to do something quite different through their actions. Or when organizations fail to put resources needed to achieve what they say is valued, we suspect faux standards.

Suggested Reading

Galbraith, J. R. (2014). *Designing organizations: Strategy, structure, and process at the business unit and enterprise levels*. San Francisco, CA: Jossey-Bass.

Herriott, S. R. (2016). *Metrics for sustainable business: Measures and standards for the assessment of organizations.* New York, NY: Routledge.

Defining the Standard of Care

Laurance Jerrold, DDS, JD, FACD

Abstract

The standard of care is worked out in individual cases based on a balance of multiple factors, including duty to care and compensable injury, the reasonable person, locality, respectable minority schools of thought regarding practice, specialty versus general care, and referral. Practitioners are expected to possess and exercise SKEEET (skill, knowledge, experience, expertise, education, and technology) appropriate to the treatment they provide.

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The Legal Basis

The standard of care is a nebulous concept that defies a black or white definition. Its amorphous nature is, in part, subject to the specific facts regarding the situation to which it is applied. In order to appreciate the standard of care, which is another way of saying the duty to which one will be held, one has to understand the context in which it is considered. In tort law, medical/dental malpractice is considered a type of negligence, and negligence, whether simple or professional, is a type of tort. A tort is a civil wrong based on having breached a reasonably imposed duty of care owed someone to do, or refrain from doing, something under an existing set of circumstances that proximately (directly) results in a compensable injury to that person, the person's property, or the person's reputation. This reasonable duty of care owed can be heightened upon finding the existence of a special relationship. Examples of special relationships are priest/penitent, teacher/school/pupil, innkeeper/patron, common carrier/passenger, and of course that found between a doctor and a patient.

In order for a potential plaintiff to succeed in a malpractice suit against a healthcare professional, the plaintiff must prove all four elements included in a lawsuit based on professional negligence. They are:

- that the defendant had a duty to conform to an established standard of care
- that this duty was breached, not adhered to, in some fashion
- that the plaintiff suffered a compensable injury of some sort
- that the breach of the duty owed was the direct or proximate cause of the injury sustained

The Evolutionary Road to Reasonableness

Prosser, in Keeton et al (1984), notes: "Traditional tort law gives the medical profession …the privilege, which is usually and emphatically denied to other groups, of setting their own legal standards of conduct, merely by adopting their own practices. …Physicians are expected to behave reasonably; the reasonableness of their conduct is determined by ascertaining their compliance with customary practices." This standard of care, one based on custom and usage, was articulated in *Garthe v. Ruppert* (1934); the court stated: "The duty of the defendant was none other than to keep the place reasonably safe for the purpose for which it was maintained. …One man is not obliged to run his business the same as some other man, nor can he be judged before the law according to the methods employed by others. However, when certain dangers have been removed by a customary way of doing things safely, this custom may be proved to show

A tort is a civil wrong based on having breached a reasonably imposed duty of care owed someone to do, or refrain from doing, something under an existing set of circumstances that proximately (directly) results in a compensable injury to that person, the person's property, or the person's reputation.

that a [defendant] has fallen below the required standard. …When a question of negligence is involved, the general usage or practice is competent to show either ordinary care or the failure to exercise such care. One is not obliged, however, to use the best methods or to have the best equipment or the safest place, but only such as are reasonably safe and appropriate for the business."

Relying on customary practices, however, can be somewhat problematic and so through a process of legal evolution that occurred over decades, the reliance on custom and usage slowly gave way to the standard of care being determined according to whether one acted with reasonable prudence. In *Texas & Pacific Railway Co. v. Behymer* (1903), the court stated that "What usually is done may be evidence of what ought to be done, but what ought to be done is fixed by a standard of reasonable prudence, whether it usually is complied with or not." The reasoning behind this thinking is that there are situations in which an entire calling, business, or profession can be found to have been conducting its business in an unreasonable or unacceptable manner. The courts recognized that this deviation from compliance with reasonableness, the argument that "I'm merely doing what everybody else is doing," could not be allowed to provide a defense for not conforming to a given duty owed.

In the case of *The T. J. Hooper* (1932), some tugboats sank in a sudden storm because they did not have radio receiving sets to apprise them of the upcoming gale. There was no uniform custom for the time period in question to equip or not to equip ocean-going tugs with this new technology that would act as "…the ears of the tug to catch the spoken word, just as the master's binoculars are her eyes to see a storm signal ashore." The court noted that receiving sets could be had for a reasonably small cost, they were reasonably reliable if kept up, and they were a great source of protection to the vessels that employed them. As a result of this logic, the court stated: "Reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. [That calling] may never set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission."

Another example of the courts not allowing an entire calling to set its standard of care so low that it cannot be breached can be seen in *Helling v. Carey* (1974). In *Helling,* the plaintiff, in her late twenties, complained of vision problems ten times over a five-year period. The defendants were of the opinion that the complaints were due to issues concerning the contact lenses that had been prescribed. Finally, one of her physicians performed a glaucoma test that revealed substantial and irreversible vision loss. The plaintiff claimed that the test should have been done sooner, and if it had she would not have suffered the devastating injury she did. The defendants claimed that they conformed to the ophthalmological standard of care, which held that glaucoma tests were not routinely performed on patients under the age of 40. It seems the incidence of glaucoma occurring in persons under the age of 40 is .01%, while the incidence after the age of 40 is 2% to 3%. The court opined that a patient under the age of 40 should be afforded the same protections as someone over that age because a glaucoma test is simple to do, it is inexpensive, there is no real judgment involved in interpreting the results, evidence of the disease can easily be detected, and the disease can be arrested if discovered early, hence avoiding the devastating results if the test is not administered. The court held: "Under

the facts of this case reasonable prudence required the timely giving of the pressure test to this plaintiff. The precaution of giving this test to detect the incidence of glaucoma to patients under 40 years of age is so imperative that irrespective of its disregard by the standards of the ophthalmology profession, it is the duty of the courts to say what is required to protect patients under 40 from the damaging results of glaucoma."

The Reasonable Person and the Standard of Care

It might be tempting to believe that doing the best that one can do is a reasonable enough standard for one to have to adhere to. However, the courts long ago dismissed this argument. In *Vaughan v. Menlove* (1837), the issue of whether the defendant acted reasonably in stacking his hay, which spontaneously combusted causing significant property damage, came into question. The defendant claimed that he acted to the best of his ability, in good faith, and using his best judgment. The court held: "Whether the defendant had acted honestly and bona fide to the best of his own judgment would leave so vague a line as to afford no rule at all. Because the judgments of individuals are as variable as the length of the foot of each we ought rather to adhere to the rule which requires in all cases a regard to caution such as a man of ordinary prudence would observe."

A "man of ordinary prudence," also known as a "reasonable man," was defined in *State v. Cripps* (1995) as: "A fictional person with an ordinary degree of reason, care, prudence, foresight, or intelligence; whose conduct, conclusion or expectation in relation to a particular circumstance or fact is used as an objective standard by which to measure or determine something."

However, medical and dental practitioners are held to a higher standard of reasonableness or care. *West's Encyclopedia of American Law* (1980) defines a reasonable doctor as one who possesses greater than average skills; and because he or she holds a special relationship with his or her patients, is obligated to conform to higher duties of care. The definition goes on to note that doctors are to be judged according to how a reasonable healthcare practitioner would have acted under the circumstances as presented. They should be judged according to the level of their professional education and training, and they should have to conform to the customary practices and general procedures as are followed by similarly trained and practicing professionals.

Geography and the Standard of Care

The standard of care is an evolving concept. Civil jurisprudence from an evolutionary perspective is often situationally based. Lewis et al (2007) notes that when medical care in early America was mostly performed by rural doctors who did not have the same access to the same levels of basic medical training, certain medical supplies, equipment, support facilities, continuing education, and a myriad of other resources as were available to their big-city brethren, the standard of care was determined to be what a reasonable practitioner in good standing did or should have done who was practicing under the same or similar circumstances in the same or in a similar geographic locale. This gave rise to what was known as the "locality rule." One tangential aspect of the locality rule was that it tended to make expert witnesses harder to come by as local doctors were often unwilling to testify against their colleagues. This actually perpetuated the locality rule mentality and helped keep a lesser standard of care in place.

> "The law cannot undertake to decide technical questions of proper practice over which experts reasonably disagree."

As access issues slowly disappeared and medical education became more standardized, with national accreditation of medical schools and all doctors having to pass nationally accepted certifying examinations, a "national standard" was adopted by a majority of jurisdictions. Even so, approximately 30% of states still maintain some form of the locality rule in determining the standard of care. A good example is Virginia whose legislative code states: "The standard of care by which the acts or omissions are to be judged shall be that degree of skill and diligence practiced by a reasonably prudent practitioner in the field of practice or specialty in this Commonwealth and the testimony of an expert witness, otherwise qualified, as to such standard of care, shall be admitted; provided, however, that the standard of care in the locality or in similar localities in which the alleged act or

omission occurred shall be applied if any party shall prove by a preponderance of the evidence that the health care services and health care facilities available in the locality and the customary practices in such locality or similar localities give rise to a standard of care which is more appropriate than a statewide standard. Any physician who is licensed to practice in Virginia shall be presumed to know the statewide standard of care in the specialty or field of medicine in which he is qualified and certified."

Factors Influencing the Standard of Care

Curley and Peltier (2013) note that the standard of care is influenced by a multitude of factors, including external powers and forces generated by societal mores and economics such as what patients want, the court of public opinion, and the policies of third-party payers. In addition, there are internal powers and forces that are generated by the dental profession such as the content of continuing education courses, clinical practice guidelines or parameters of care as promulgated by various factions of organized dentistry, policies and procedures espoused by state dental boards and various certifying boards, journals and textbooks, dentists' opinions, practitioner preferences, and professional consensuses of opinion. Finally, there are governmental inroads and oversight that influence the standard of care, such as state and federal laws, rules, and regulations, and appellate court decisions resulting from adjudicated legal actions.

Grasskemper (2004) notes that the standard of care is NOT defined by what everybody else is doing, what the specialist is doing, what the dental schools are teaching, what one's study clubs agree upon, what certifying boards say the standard should be, what organized dentistry recommends or has a position on, what the textbooks say, or doing the best that one can. He goes on to state that while none of the above in and of itself is dispositive, all will, to one degree or another, be considered in determining whether one is practicing within a defined standard of care. He further notes that in addition to the considerations stated above, the standard of care is, in part, defined by new developments and advancements within one's field of endeavor such as new materials, new treatment modalities, and new techniques. In addition, he notes that the standard of care is defined, to a degree, by those treatment failures that are subsequently adjudicated in the courts.

Retrospectively, the reality is that when looking at breaches of the standard of care, it is our sins of omission, those acts, tests, referrals, etc. that we did not make, as opposed to those sins of commission, actually performing a procedure negligently, that are far more likely to result in litigation.

Pike v. Honsinger (1898) depicts three components that make up the standard of care. The first is that one must possess the requisite amount of what I refer to as SKEEET (skill, knowledge, experience, expertise, education, and technology). As noted in the court's decision, "It does not require the surgeon to possess that degree of extraordinary learning and skill which belong only to a few men of rare endowments, but such as possessed by the average member of the profession and in good standing."

The second prong, that one must exercise that degree of SKEEET in a reasonable manner, is noted by the following statement: "It does not require the exercise of the highest possible degree of care, but there must be a want of ordinary and reasonable care, leading to a bad result."

Finally, the third prong of the standard of care, that one must use one's best judgment in the treatment of a patient, was articulated by the following sentence: "The physician is not liable for a mere error of judgment, provided he does what he thinks best after careful examination."

More recently, a fourth component was expressed in Pennsylvania's Jury Instructions (2015); it stated that "A physician must also keep informed of the contemporary developments in his or her specialty." If a physician fails to keep current or fails to use current knowledge in the treatment of a patient, the physician is negligent.

The courts have recognized that to some degree, we are limited by our language, particularly when we use any phrase espousing conformance to the degree of SKEEET as possessed or exercised by the *average* practitioner of good standing and practicing under the same or similar circumstances (location, point in time, same school or specialty, etc.). The *Restatement of Torts* (1965) admonishes: "The standard is not that of the most highly skilled, nor is it that of the average member of the profession..., since those who have less than median or average skill may still be competent and qualified. Half of the physicians of America do not automatically become negligent in practicing medicine at all, merely because their skill is less than the professional average. On the other hand, the standard is not that of the charlatan, the quack, or the unqualified or incompetent individual who has succeeded in entering the profession."

Setting the Bar for the Standard of Care

The question then becomes, insofar as the standard of care is concerned, where is the bar actually set? *Hall v. Hilbun* (1985) would have us believe that minimal competency is where the bar is set; the court noted in its opinion: "When a physician undertakes to treat a patient, he takes on an obligation enforceable at law to use minimally sound medical judgment and render minimally competent care in the course of the services he provides. A physician does not guarantee recovery. If a patient sustains injury because of the physician's failure to perform the duty he has assumed under our law, the physician may be liable in damages. A competent physician is not liable *per se* for a mere error of judgment, mistaken diagnosis, or the occurrence of an undesirable result."

We must always be aware of the fact that someone graduates dental school last in the class and someone passes the applicable licensure exams with the minimal passing score. The state then grants this individual a license to practice dentistry based on the fact that the individual has exhibited a minimally required level of competency, meaning the doctor in question has shown and exercised the requisite degree of SKEEET. While this may meet the administrative requisites for licensure, from a legal perspective we note that the possession and exercise of one's SKEEET must be more; it requires reasonableness as articulated in *Vassos v. Roussalis* (1983). "As we noted in our first disposition of this case, a doctor's duty to his patient is established by the existence of a physician-patient relationship. The extent of that duty or the standard of care owed by a physician is that a physician or surgeon must exercise the skill, diligence and knowledge, and must apply the means and methods, which would reasonably be exercised and applied under similar circumstances by members of his profession in good standing and in the same line of practice. The skill, diligence, knowledge, means and methods are not those 'ordinarily' or 'generally' or 'customarily' exercised or applied, but are those that are 'reasonably' exercised or applied. Negligence cannot be excused on the grounds that others practice the same kind of negligence. Medicine is not an exact science and the proper practice cannot be gauged by a fixed rule."

The Expert Opinion

It is the function of the jury to determine whether the standard of care in a given situation was breached or not. Not being trained in the medical area being litigated, how are they to know what the standard of care should be? This is the function of the expert witness. Must there always be an expert witness? No, as noted in *Vassos v. Roussalis* (1981): "When the circumstances…are within the common knowledge of the jury, the jury does not need assistance in comprehending the standard fixed by the court. But when such circumstances are not of such common knowledge, the jury must depend upon testimony of experts to explain the standard and thus prevent a conclusion based on conjecture and speculation. The facts, means and methods relative to the skill, diligence and knowledge to be reasonably exercised under the circumstances by members of the profession in good standing and in the same line of practice must of necessity be determined on the basis of opinion evidence."

The *Federal Rules of Evidence* (2018) have been adopted by virtually every jurisdiction in the country. Article VII, Rule 702 states: "Witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case."

Rule 703 states: "An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed: (a) if the experts in the particular field would reasonably rely on those kinds of facts or data in forming an opinion on the subject and (b) the proponent of the opinion may disclose such facts or data to the jury only if their probative value substantially outweighs their prejudicial effect."

When each party has its expert witnesses, one side espousing that the standard of care was breached while the other is arguing that it was not, it sets up the proverbial "battle of the experts." This often presents a conundrum of sorts in the jury's quest to determine what the standard of care is and whether it was adhered to. The solution was stated nicely in *Daubert v. Merrell Dow Pharmaceuticals, Inc.* (1995) wherein the court noted that "Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of

proof are the traditional and appropriate means of attacking shaky but admissible evidence."

The problem lies in the fact that medicine and dentistry are clinical sciences and there is not just one way to see and assess a given clinical presentation. Quite often, there may be more than one way to address treating the entity that is finally diagnosed.

Two Schools of Thought and the Standard of Care

There would not be opposing experts if there were not differences of opinion regarding the diagnosis that was made, the treatment plan that was developed, and the clinical approach chosen to effectuate those treatment goals. Legally, this differing of opinion regarding whether one acted within the standard of care was elucidated in *McCourt v. Abernathy* (1995). The court provided a clear analysis of this issue by stating: "A physician is not an insurer of health, and a physician is not required to guarantee results. He undertakes only to meet the standard of skill possessed generally by others practicing in his field under similar circumstances. The mere fact that the plaintiff's expert may use a different approach is not considered a deviation from the recognized standard of medical care. Nor is the standard violated because the expert disagrees with a defendant as to what is the best or better approach in treating a patient. Medicine is an inexact science, and generally qualified physicians may differ as to what constitutes a preferable course of treatment. Such differences due to preference…do not amount to malpractice."

A patient's clinical presentation may result in two or more practitioners assessing that patient's oral health status differently. A doctor's experience with various treatments may yield a clinically acceptable treatment bias as there are many subjective factors that are often considered among the doctor's objective brethren. Training, experience, and patient-directed considerations all come into play when formulating diagnostic and treatment decisions. *Fall v. White* (1983) addressed this by noting: "Where there are two or more methods of treating a problem which are recognized as proper by physicians in similar practices at the time in question, it is not negligence for the physician to adopt any one of the recognized treatment methods. The fact that a different treatment method was available or that a different doctor might have chosen a different treatment method is not evidence of negligence. A physician is negligent where he selects a treatment method which is not recognized as proper by physicians with the same specialty in this or similar communities at the time in question."

When applying the Two Schools of Thought doctrine, one has to wonder if it is the judge (the trier of law) or the jury (the trier of fact) who in the end has to make the determination as to whether a doctor acted reasonably and conformed to one of many acceptable or viable diagnoses or treatment plans and approaches. This was addressed in *Furey v. Thomas Jefferson University Hospital* (1984) wherein the court stated: "The rule [two schools of thought doctrine] is that, where competent medical authority is divided, a physician will not be liable if in the exercise of his judgment he followed a course of treatment supported by reputable, respectable, and reasonable medical experts. The testimony clearly showed a difference of medical opinion, expressed by physicians and surgeons of unquestioned standing and reputation. The jury are not to judge by determining which school, in their judgment, is the best. If the treatment is in accordance with a recognized system of surgery, it is not for the court or jury to undertake to determine whether that system is best, nor to decide questions of surgical science on which surgeons differ among themselves."

> "What usually is done may be evidence of what ought to be done, but what ought to be done is fixed by a standard of reasonable prudence, whether it usually is complied with or not."

What constitutes a school of thought? Section 299A of the *Restatement of Torts* (1965) notes that "The law cannot undertake to decide technical questions of proper practice over which experts reasonably disagree." It has often been expressed that so long as a respectable minority of practitioners practiced in the manner under consideration, this group constituted a school of thought. *Hood v. Phillips* (1977) noted that "A physician is not guilty of malpractice

where the method of treatment used is supported by a respectable minority of physicians, as long as the physician has adhered to the acceptable procedures of administering that treatment." *Mosciki v. Shor* (1932) framed it in the following language: "Where competent medical authority is divided, a physician or surgeon will not be held responsible if in the exercise of his judgment he followed the course of treatment advocated by a considerable number of his professional brethren in good standing in his community." Obviously, a "respectable minority" is qualitative in nature while a "considerable number" is more quantitative. The court in *Jones v. Chidester* (1992) attempted to address this discrepancy by developing a hybrid solution by stating: "We are called upon in this case to decide once again whether a school of thought qualifies as such when it is advocated by a 'considerable number' of medical experts or when it commands acceptance by 'respective, reputable and reasonable' practitioners. The former test calls for a quantitative analysis, while the latter is premised on qualitative grounds. Where competent medical authority is divided, a physician will not be held responsible if in the exercise of his judgment he followed a course of treatment advocated by a considerable number of recognized and respected professionals in his given area of expertise."

Standards of Care for the General Practitioner and the Specialist

Are there different standards of care for a general dentist as opposed to a specialist?

> The argument that "I'm merely doing what everybody else is doing" could not be allowed to provide a defense for not conforming to a given duty owed.

Carbone v. Warburton (1953) holds that "One who holds himself out as a specialist must employ not merely the skill of a general practitioner, but also that special degree of skill normally possessed by the average physician who devotes special study and attention to the particular organ or disease or injury involved, having regard to the present state of scientific knowledge."

Unfortunately, this is a states' rights issue and the various jurisdictions are split. Some states hold that if a general dentist performs procedures associated with a particular specialty discipline, the standard of care that the dentist should be held to is lessened to some degree, as a generalist would not be expected to possess the same degree of SKEEET as a specialist. Two examples of this thinking are seen in *Birmingham v. Vance* (1994) and *Burks v. Meredith* (1976). In *Birmingham,* the court noted "We are of the opinion that the standard of care by which general practitioners are now judged permits them to perform certain procedures under a less strict standard of care than that which they should be expected to adhere." A similar holding was espoused in *Burks* wherein the court stated: "A specialist is generally expected to possess a higher degree of skill and learning than a general practitioner. …If the general practitioner exercises the care and skill of other physicians similarly situated, he is not responsible for an error of judgment even though a specialist would not have made the same mistake."

On the other hand, a number of states take the position that a generalist should be held to the standard of care of a specialist if the generalist chooses to perform specialty-recognized procedures. The *American Law Reports* (1969) defines a specialist as one who (a) has taken a residency, subsequently undertaking and passing specialty certification examination(s); (b) limits his or her area of practice to a particular area or discipline of medicine; and (c) holds himself or herself out as possessing special knowledge and skill in the treatment of particular organs or diseases. Examples of this position can be noted in both *Jordan v. Bogner* (1993) and *Lane v. Skyline Family Medical Center* (1985). As noted in *Jordan*, "A physician will be held to the standards of physicians within that same specialty." In *Lane*, the court stated: "If a practitioner discovers the patient's ailment is beyond his knowledge or technical skill or ability or capacity to treat with a reasonable likelihood of success, he is under a duty to disclose this situation to the patient or advise him of the necessity for other or different treatment. A physician is held to the standard of care applicable to the specialty to which referral should have been made."

Referral Liability and the Standard of Care

Whenever the issue of a generalist performing specialty care comes up, it begs the question of the generalist's obligation to refer the patient to one more qualified if the generalist decides that referral is in the patient's best

interests. There are essentially three reasons supporting referral as the standard of care. They are (a) when the practitioner in question lacks the requisite level of SKEEET required to successfully address the patient's particular problem; (b) when a practitioner knows or should know that referral to a specialist is in the patient's best interest; and (c) if other practitioners would have made the referral under the same or similar circumstances. Examples of these rationales can be seen *Larsen v. Yelle* (1976), *King v. Flamm* (1969), and *Simone v. Sabo* (1951). "If a general practitioner discovers, or should know, or should discover, that a patient's ailment is beyond his knowledge or technical skill or ability or capacity to treat with a likelihood of reasonable success, he is under a duty to disclose this to his patient, or to advise him of the necessity of other or different treatment. A general practitioner is not required to consult with a specialist but there is a duty to seek consultation with, or refer patients to, a specialist when he knows or should know the services of a specialist are indicated. A physician has a duty to refer his patient to a specialist if expert testimony supports the conclusion that reasonably careful and prudent practitioners would have made the referral or sought consultation under the same or similar circumstances."

Many dentists are erroneously taught that if they refer a patient to a specialist and that practitioner commits malpractice, they are then liable for having made a negligent referral because of the referred-to doctor's breach of the standard of care. Negligent referrals can be based on the finding of an agency relation-ship between the referring and the referred-to doctor. However, from a negligence perspective, the making of a negligent referral requires that the referring doctor knows or should have known that the referred-to doctor was incompetent by virtue of a lack of SKEEET or that the doctor was practicing while impaired. *Smith v. Beard* (1941) depicted this by holding that "A physician who is unable or unwilling to assume or continue treatment of a case, and recommends or sends in [refers to] another physician, is not liable for injuries resulting from the latter's want of skill or care, unless the recommended physician is in the referring doctor's employ or is definitely his agent, or is his partner, or unless due care is not exercised in making the recommendation or substitution."

Greenwell v. Aztar Indiana Gaming Corp. (2001) states this concept a little more bluntly. "Steering a patient to a doctor who commits malpractice is not itself malpractice or otherwise tortious unless the steerer believes or should realize that the doctor is substandard."

The only other means of imputing liability for having made a negligent referral is when the referring doctor maintains a degree of participation or control in the treatment rendered by the referred-to doctor as was noted in *Prooth v. Wallsh* (1980). "A patient's personal physician bears the responsibility to assure the welfare of his patients in all phases of the patient's treatment. Such treatment must, of necessity, include diagnosis and the prescription of a course of treatment by others, such as specialists. …If the treating physician refers his patient to another physician and retains a degree of participation, by way of control, consultation, or otherwise, his responsibility continues to properly advise his patients with respect to the treatment to be performed by the referred to physician."

The final point to discuss regarding the standard of care in referral scenarios is when the doctor makes a referral to a specialist, the patient refuses the referral, and instead implores the generalist to perform the recommended specialty treatment. The court in *West v. Sanders Clinic for Women* (1995) noted that "When a doctor makes a referral to another specialist, but the patient refuses to follow the referral, then the patient cannot complain later of the referring doctor's lack of skill and may only complain if the doctor negligently performs the treatment."

Clinical Practice Guidelines and the Standard of Care

Clinical practice guidelines (CPGs) have been both lauded and lamented by some regarding the role that they should play in determining the standard of care. Some believe they are reflective of how medicine should be practiced while others see them as more advisory in nature. The Agency for Healthcare Research and Quality (2014) defines clinical practice guidelines as "systematically developed statements including recommendations intended to optimize patient care and assist physicians and/or other health care practitioners and patients to make decisions about appropriate health care for specific clinical circumstances."

These statements are often considered as one more piece of evidence to be weighed when attempting to determine the standard of care in a given situation. They are not, in and of themselves, dispositive

of the standard of care. For any guideline to be included in the National Guideline Clearinghouse it has to conform to the following characteristics.

1. It must be produced under the auspices of a medical specialty association, relevant professional society, or public or private organization, a government organization at the federal, state, or local level, or a healthcare organization or plan.
2. It must be based on a systematic review of the evidence.
3. The guideline or its supporting documentation must contain an assessment of the benefits or harms of the care being recommended and alternative care options.
4. A full text of the guideline must be available to the public.
5. It must be the most recent version of the guideline and must have been published within the last five years.

Silverman et al (2015) state that CPGs "are not intended to serve or be construed as a 'standard of medical care.' Judgments concerning clinical care depend on clinical circumstances and data available and are subject to change as scientific knowledge and technology advance and practice patterns evolve."

CPGs are not without their problems. Some of the factors predisposing them to carry less weight when used to define a standard of care, as elaborated by Recupero (2008), are first that they have a short lifespan because of technological advances, new research, and changes in approaches to the delivery of care that is under consideration. Secondly, there are conflicting guidelines because there are a number of viable treatment modalities to address a particular clinical condition. Next, there is often a lack of evidentiary consensus and support. Older literature, which is often very valid, is disfavored merely because of its age. In addition, different guidelines use different literature to support the recommendations being made. This is seen when various groups or organizations produce guidelines concerning the treatment of particular conditions based on the existence of two schools of thought. Finally, there is bias. Guidelines are often produced by groups who lack a fiduciary relationship to the patient such as third-party payers, liability insurance carriers, pharmaceutical companies, supply vendors, etc. There is also the inherent bias that exists between clinicians, researchers, and scientists within any given field that is reflected in the guidelines ultimately developed by each group.

Recupero goes on to note that in the courtroom, CPGs are viewed, at least from an evidentiary perspective, as being akin to learned treatises much like textbooks and journal articles. They may be introduced as evidence by qualified expert witnesses, who are then subject to cross examination not only about various aspects of their testimony, but about the recommendations, findings, or positions that are articulated in the CPG in question. Dissenting and opposing CPGs must also be allowed to be introduced, both for the purposes of showing that a particular approach to care was or was not followed as well as to impeach the testimony of an opposing expert witness's opinion. In the end, CPGs are also useful in determining practices that constitute the standard of care. In addition, they can be used to identify experimental or fringe therapy, distinguish good from bad risk management practices, and define new or emerging standards of care.

Lane, et al v. Otts (1982) noted that in order for guidelines to be considered as having evidentiary value, they had to be based on empirical research, be subject to peer review, and have been periodically reviewed and updated. *Jewitt v. Our Lady of Mercy Hospital* (1992) noted that CPGs cannot usurp the sound practice of medicine by holding that "following clinical practice guidelines does not negate the need to follow sound clinical judgment given the facts of the case."

Summary

As has been shown, the standard of care, also known as the duty that we owe our patients, is not easily defined. It changes with advances in science, technological improvements, the demands of the public, and the practices of those providing the care. It concerns itself with not only what is, but to some degree what should or could be. It keeps us in check and responsive to the tenets of professionalism, incorporating all of the balances and nuances associated with providing the public with an appropriate level of health care given the circumstances inherent in the time, place, and manner of a patient's clinical presentation.

Yet, it is still not as clearly defined or as firm as some desire. Maybe that is as it should be. Asbell (1990) noted a line in a personal communication from Milo Hellman to W. H. Krogman in 1935 wherein Dr. Hellman opined that while "Perfection is the goal, adequacy is the standard." Many would argue that truer words were never spoken. ■

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The Academy of General Dentistry's Standards for Continuing Education

Neil J. Gajjar, DDS, FACD

Abstract

The Academy of General Dentistry works to raise the standards of general dentistry, primarily through intensive continuing education. Since the 1960s, AGD has guided general dentists to educational opportunities that meet appropriate standards and recognized those who have achieved 600 hours of education and passed a comprehensive examination with a fellowship designation. There is a further level of accomplishment, requiring an additional 500 hours of education, culminating in a master's designation. In recognition of additional training and community service, AGD dentists can earn the Lifelong Learning and Service Recognition. This award can be achieved multiple times. AGD provides a service to the entire dental profession through its Program Approval for Continuing Education (PACE) system. CE providers can be recognized for meeting 13 standards/criteria, including those for administration, fiscal responsibility, learning objectives, evaluation, and self-instruction and electronically mediated programs.

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Since its founding in 1952, the Academy of General Dentistry (AGD) has striven to raise the standard of excellence for general dentists. AGD accomplishes this goal primarily by offering high-quality continuing education (CE) specifically suited for general dentists and by recognizing its members who have exceeded industry expectations for the advancement of their professional educations with the earned distinctions of fellow (FAGD) and master (MAGD). These distinctions are voluntary, but they far exceed the CE requirements of state licensing boards and demonstrate a commitment to furthering one's education in order to provide superior care for the benefit of one's patients.

The Importance of CE

In 1966, one of AGD's founding members, Thaddeus V. Weclew, wrote about the need for continuing education in the *Journal of the American Dental Association*, noting that, "Up until the late 1950s, there was little pressure for continuing education from the profession." He went on to say that, "Unless the recipient of a degree earned 10 to 30 years ago progressively reinforces his knowledge with current developments and ideas, Supreme Court decisions, advances made in antibiotics, new concepts of science, and other forward strides that have been made, his degree will have become obsolete. The practitioner…has not fulfilled the debt owed himself and the community if he is not keeping up with the current advances of his profession."

With the astoundingly fast rate of change and technological advancements in modern dentistry, it is likely that, if you are an experienced and established clinician, there are procedures you perform differently from how you were taught in dental school; if you are a student now, it is likely that the landscape of dental materials will change before you reach the middle of your career, and so will the technologies you use in your practice. The education you receive in dental school is only the beginning.

Voluntary standards represent a commitment to personal excellence and professional growth. AGD members are committed to maintaining and building on their proficiency beyond simply meeting state dental board CE requirements. In order to broaden patient access to care and services, the general dentist is expected to have a much wider knowledge base than a specialist and ensure that this knowledge base is up to date, making CE that much more important. The founders of AGD recognized that the CE needs of general dentists differ from specialists, and, therefore, the driving force of AGD has been to provide that broad-based lifelong learning to general dentists. Due to the variety and number of services dentists provide to their patients, if a general dentist

settles for the minimal number of CE credits required by the state licensing board, the dentist risks falling behind on important new knowledge within the profession. It is impossible to stay current with every area of care general dentists provide without exceeding the minimal CE requirements.

In order to formally recognize members who prioritized professional growth in the form of CE, the AGD fellowship program began in 1962. The FAGD distinction requires the completion of 500 hours of CE, at least three years of membership, and the passing of a comprehensive fellowship exam. The MAGD distinction was created in 1968 for AGD members who wish to continue beyond the FAGD distinction and requires the completion of 600 additional hours of CE.

These distinctions serve two important purposes: On the surface level, they recognize practitioners who have made a commitment to lifelong professional education. They also provide a framework for professional improvement; for example, the MAGD distinction requires 400 hours of participation-based CE as well as minimum credit requirements in 18 major subject areas. These requirements set a high standard for the quality as well as the well-rounded nature of the education received. These distinctions encourage members to maintain a high level of education long after their dental school graduations by regularly participating in CE courses and engaging with new knowledge that can be applied in their practices for the benefit of their patients.

In addition to the standards FAGD and MAGD candidates are measured against, AGD also has rigorous standards for CE providers through its Program Approval for Continuing Education (PACE). The 13 standards/criteria for approval by the PACE program include standards for administration, fiscal responsibility, learning objectives, evaluation, and self-instruction and electronically mediated programs, among others, and ensure PACE-approved CE providers develop programs in accordance to quality standards. PACE is overseen by AGD's PACE Council, and two of the purposes and goals of PACE are to improve the educational quality of continuing dental education programs and to promote uniformity of standards for continuing dental education that can be accepted by the dental profession. When choosing CE courses, clinicians can feel confident that PACE-approved providers have the organizational structure and resources necessary to provide CE activities of acceptable educational quality. The PACE standards serve the dental profession by setting a bar for continuing dental education, and this, when combined with the measurable distinctions provided by AGD, creates a quantifiable measurement for

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professional excellence throughout a clinician's career with regard to lifelong learning and development.

Going Beyond

In addition to the FAGD and MAGD distinctions, AGD offers another measureable distinction: Lifelong Learning and Service Recognition (LLSR). LLSR requires an additional 500 CE credits—150 of which must be from participation-based course attendance—from at least eight of the major disciplines. LLSR also goes beyond CE by requiring the completion of 100 hours of dental-related community/volunteer service and/or service to organized dentistry. Acceptance of submitted service hours is subject to review by the Dental Education Council. Examples of recognized community and volunteer service include providing *pro bono* dental services through a not-for-profit organization, service in a volunteer dental clinic, service on a dental mission, and providing oral cancer screenings at a community location or event.

While the CE requirements of the FAGD, MAGD, and LLSR distinctions measure clinicians' dedication to continuously improving their skills and knowledge base in order to apply their improved education to patient care within their own practices, the service requirements of LLSR place an important voluntary standard on outward action. Many dentists prioritize volunteer service in an effort to fill the gaps in oral health care access in their own communities as well as in regions around the globe where access to oral health care is limited. Despite the numerous modern advances in dental treatment for caries and periodontal disease, significant barriers to accessing care remain, and these barriers hinder the progress dental professionals can make toward addressing the oral health concerns of their communities. Providing *pro bono* services can bring care to patients who could otherwise not afford it, and it can make a phenomenal difference in their lives. The LLSR distinction represents a flagpost goal that encourages clinicians to participate in these activities and give back as a way to achieve a more fulfilling professional and personal life. And while fellowship and mastership status are one-time achievements, LLSR can be earned repeatedly. Some AGD members have earned LLSR as many as four and five times. These dedicated clinicians are an excellent example of the benefit of voluntary standards, both for the clinician as an individual and for the community as a greater whole.

In addition to voluntary clinical service, AGD members also propel the profession forward through activities related to organized dentistry. AGD has a strong advocacy arm that works to ensure the voices of general dentists are heard loud and clear within the state and national governments. Members unite to advocate on issues such as anesthesiology and sedation, barriers and access to care, Food and Drug Administration issues, and Medicare, as well as scientific and practice issues. Involvement in advocacy through organized dentistry enables members to directly impact the standards against which all members of the profession are measured.

Pursuing Excellence Together

Pursuing distinction and recognition from a professional organization like AGD mimics the benefits of dental school on a much larger scale and with more individual control. Other members become your professional colleagues, much like your classmates in dental school. AGD members receive support on their paths to fellowship, mastership, and LLSR from other members who are in the same place in their careers as well as from those who have already achieved these distinctions. Members who are on the track toward these distinctions share the goal of bettering themselves as clinicians, and this shared motivation can enable close personal bonds between colleagues. These bonds provide mutual support as well as inspiration to succeed.

Unlike during a clinician's initial dental education, where the curriculum is packed and there is little room for deviation, CE allows clinicians to tailor their education to their professional needs and interests. While AGD mastership requires recipients to meet minimum CE credit requirements in all 18 major discipline areas in order to prove the general standard of excellence has been met, fellowship and LLSR both allow for a more open-ended approach to CE. Clinicians often serve patient populations with different needs, and those pursuing these distinctions can immerse themselves within the areas that will best serve their patients. Additionally, as clinicians consider adding new services to their treatment repertoire, they can pursue courses that meet their interests and learning objectives with the confidence provided by the PACE umbrella when choosing a CE provider.

It is important to emphasize that the CE credits AGD members pursue and the service hours they clock have far-reaching benefits. Keeping abreast of the latest in science and clinical practice translates directly into better care for patients. By pushing themselves to continuously learn new information and treatment methods, AGD members raise the bar for the dental profession to exceptional heights. By setting and meeting a higher standard for themselves, these clinicians set the standard for the profession. Staying current with the rapid pace of change and advancement in the dental industry as well as the latest recommended best practices is necessary in order to provide the highest level of care for patients, and the distinctions AGD confers encourage, recognize, and honor that commitment.

Conclusion

AGD commends the American College of Dentists for focusing on the broad issue of standards in dentistry and inviting AGD to participate. Dentistry is highly regulated, and each of the mandatory standards serves a specific purpose, which is often challenging to translate to the practicing dentist. Pursuing voluntary recognitions like FAGD, MAGD, and LLSR is about personal goal setting and lifelong learning and culminates with a sense of shared accomplishment. It is about setting a higher standard for yourself than what is required of you. The initials after my DDS also serve as a conversation starter with patients, giving me the opportunity to tell them about my dedication to continuing my dental education as a lifelong learner and keeping up with the latest in science, technology, and techniques in order to better serve my patients. The pursuit of these voluntary standards is a way for me to differentiate myself from the status quo, and it is also a way for me to elevate my own skills beyond what is merely required and instead work to achieve my own maximum potential as a clinician. By pursuing these voluntary standards as AGD members, we elevate ourselves and each other, and in doing so, we also elevate the profession. ■

> Voluntary standards represent a commitment to personal excellence and professional growth.

Can a Dentist Maintain Standards on Social Media?

Chris Salierno, DDS

Abstract

Traditional educational media, such as live lectures and journals, have filters to maintain certain standards for quality. Those filters have checks and balances in place to ensure that they are screening out substandard content. As the Internet and social media have evolved, there have been more opportunities for people to create and distribute educational content themselves. These new media channels often lack filters and checks and balances, thus leaving dentists to decide for themselves what content is to be trusted and what should be doubted.

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I was in between patients one day when I decided to browse a Private Facebook Group. Over the past few years, thousands of dentists, dental team members, and members of the dental industry have flocked to these gated forums for clinical discussions, for business advice, and as a means to blow off some steam. As I scrolled down my Facebook feed, I noticed a post from a dentist who provided a full-arch, cosmetic rehabilitation with a combination of full-coverage crowns and fixed partial dentures. The preoperative clinical photos showed what appeared to be relatively healthy teeth that might have been restored by more conservative means, but of course I had no understanding of the patient's personal goals, no pre-operative radiographs, nor any other critical diagnostic information that would allow me to critique this treatment plan. Sharing some pre-op and post-op photos on Facebook is not a formal case presentation at a study club, so I thought little of it.

A few weeks later, I noticed a similar post by the same dentist with a similar treatment plan. Upon looking into his post history, I noticed he apparently favored full-mouth, full-coverage restorations for all of the cases he had shared. Of note was one post where he stated he delivered local anesthesia to a patient for an extraction, "then i [sic] proceeded to do an entire smile makeover without him knowing or even giving me permission to." The dentist appeared to be seeking praise for donating his services to help a patient in need without realizing that he had committed a breach of the doctor-patient relationship, given the facts as presented. The comments section was divided; many praised his generosity while only some raised concerns about the lack of patient consent.

The Duty of Filters

I am the chief editor for *Dental Economics*. As an editor of one of the journals that is neither academic nor association-bound, I receive submissions that are brilliant, but I also bear witness to more egregious examples of poor dental education. I read proposed articles that were clearly written to serve the author's personal agenda. I have seen clinical cases that were clearly Photoshopped or were otherwise fraudulently presented. This kind of content is, of course, rejected for publication.

Let me be clear, the majority of submissions to *Dental Economics* are superb. I have the good fortune to read about business models, marketing, and human resources from some of the best minds in their respective fields. Clinicians whose names are synonymous with integrity have summarized the latest research and have articulated the prevailing wisdom into prose that we all can understand. Perhaps you have seen these dental dignitaries in live lectures and you have marveled, as I have, at their ability to reduce the complexity of clinical

Such is the role of the chief editor, peer-review boards at journals, and continuing education providers. We serve as filters, protecting our audiences from bad science and bad practices. We help maintain the standards of our profession in educational media.

decision making. When Dr. Gordon Christensen states that a post-and-core will work in a particular clinical situation, it is easier to doubt my own skills than to disagree with his recommendation. Dr. Christensen has an outstanding reputation in our field in part because he supports his claims with sound research.

I also have the privilege to review case studies from trailblazing clinicians who question our prevailing wisdom. New materials and new techniques that have not yet stood the test of time are presented responsibly and the need for further study is made clear. The dentist-patient relationship has been respected and the dentist has clearly upheld standards for quality of care.

What I continue to find personally interesting is where exactly the line would be crossed between the noble advancement of our learning and the ignoble abuse of a patient's trust. With resources like the ACD's *Ethics Handbook for Dentists* to draw upon, we may conclude that we have not crossed that line as long as (a) the patient gave informed consent to the procedures and (b) the clinician treated the patient with the best of intentions and paid all due respect to existing standards of care and safety.

For example, I recently published a themed issue on the use of 3D printing in dentistry. Our profession maintains standards for removable prosthodontic outcomes and the clinicians whose articles I shared all demonstrated a passion to maintain that standard. They acknowledged the shortcomings of the current 3D printing workflow in denture fabrication and made no false claims about where this emerging science has brought us today.

Such is the role of the chief editor, peer-review boards at journals, and continuing education providers. We serve as filters, protecting our audiences from bad science and bad practices. We fact-check and we temper claims that venture beyond what can be supported by evidence. We help maintain the standards of our profession in educational media. But how are the filters held accountable?

Who Will Watch the Watchmen?

There is a series of checks and balances in place for traditional media that helps maintain standards and the quality of information.

As an editor, I set forth and maintain editorial guidelines and strive to achieve a certain quality of information for the audience. But let's imagine what would happen if I were to lower my editorial standards to the point of dereliction of duty. My publisher would most likely replace me with someone with higher standards or, if left in my position for too long, the audience would abandon the publication. Printing and mailing 100,000 copies of a magazine is costly; if the audience leaves, the magazine would be out of business. So by the audience either appealing to a higher authority or by dropping their subscriptions, my failings as a filter would result in my dismissal from my post.

When a continuing education provider fails to follow the American Dental Association's Continuing Education Recognition Program guidelines and allows bad information and overt commercialism to run rampant, the ADA can receive complaints and either discipline the provider or remove the provider's ability to provide CE. Like print publications, live lectures are costly to produce, thus a failed filter could also result in the provider ceasing operations if audiences choose to not attend their events.

These systems are not perfect, but there is at least some recourse for audiences who see these media filters fail. Dentists can appeal to higher authorities such as publishers or CE regulators. They can also drop

subscriptions and choose to not attend conferences, thus forcing the traditional media source to change its ways or to go out of business. But what if there were no checks and balances in place? What if a content producer could reach audiences with little to no cost and bypass the traditional filters?

The Democratization of Media

The rise of social media has been a mixed blessing for our society. Blogs, podcasts, Private Facebook Groups, Instagram personas, Twitter feeds, and the like have three significant characteristics: (a) content can be produced and distributed at near-instantaneous speeds and at little to no cost; (b) content can be created by anyone and can be done anonymously; and (c) the creation of "filter bubbles," digital communities can perpetuate and reinforce self-selected concepts. For the cost of a laptop or mobile phone, anyone can create and distribute content to large audiences and compete with traditional media outlets, such as newspapers, journals, and television networks. The number of media channels has increased exponentially and they compete for our limited attention. We risk selecting digital outlets and communities that reinforce our existing ideas rather than those that present well-researched, objective data. It is arguably a positive thing for our society that people who would never have had a platform before are now able to share their content; however, these platforms often lack any standards for that content. The traditional filters that are in place for print journals and live lectures do not exist for Instagram influencers or Private Facebook Groups. The burden of research and fact checking falls upon the audience.

I believe that licensed healthcare practitioners can rise above the noise of unfiltered, poorly vetted educational content with simple common sense and respect for proper research.

But let us leave generalities and speak specifically about our profession. You have no doubt lamented the sometimes poor quality of dental information available online, which can sway our patients' decisions about their care. In a well-intentioned effort to educate themselves, our patients can stumble across oral health information online that either is taken out of context or is objectively false. We hope that they look to trusted resources, like the American Dental Association, that only share valid information with their audiences. But self-published blogs, Facebook feeds, and Instagram influencers have questionable filtration practices, if any at all.

Unfortunately, the same challenges exist for members of the dental community who look to online communities and social media platforms for clinical and business advice. Dentists without proper credentials or real expertise in a field can present educational content that has not been properly researched or performed to the profession's standards of care. Without a filter in place, the content is shared directly and immediately with the dental community. While it is always incumbent upon a healthcare professional to evaluate advice from peers before putting it into practice, I am concerned that the volume of unsupervised educational content and the persuasiveness of some of the content producers are occasionally teaching healthcare professionals to practice beneath the standard of care.

While there have been studies that discuss the dangers of social media consumption by patients seeking education (Moorhead et al, 2013) and the dangers of social media posting by healthcare professionals (Ventola, 2014), I am not aware of any research on social media consumption by healthcare professionals seeking education. While we wait for studies to reveal how healthcare providers are influenced by unfiltered media, practicing dentists who consume social media and participate in online dental communities should be advised to tread carefully when basing their clinical and practice decisions on that content.

How We Might Protect Standards in Social Media

I believe that licensed healthcare practitioners can rise above the noise of unfiltered, poorly vetted educational content with simple common sense and respect for proper research. But our profession would do well to not leave dentists unaided in the quest to seek quality education. Traditional media channels, social and digital media channels, professional organizations, and other key players should consider the following suggestions to help dentists assess their content and build trust with their audiences.

Clinical techniques and business practices that are not yet standard should be clearly identified as such. Our profession advances because we experiment, but audiences should know when products are being used off-label and when a field of study is still in its infancy. The appeal to novelty is a common fallacy used in marketing, but it should not be used in legitimate education.

Online forums, such as Private Facebook Groups, should clearly state their rules for discussion and they should be properly moderated. Digital communities are more akin to a local study club than a scientific journal, but their discussions are preserved for future reference. Thus an online forum should recognize and respond appropriately when questionable practices are being promoted.

In all forms of digital media, dentistry that has been clearly performed beneath the standard of care and clear violations of ethics should be immediately identified and addressed. While online forums typically have moderators who can intervene, self-published media like blogs and podcasts have no filters in place. It is up to the audience to report these egregious errors, and there may not always be a clear pathway to do so. I recommend that, at the very least, members of the audience approach the publishers of offending content privately and notify them about the issue. A successful outcome would be that the publishers remove said content, learn from their error, correct the substandard care or ethical violations with patients, and then educate their audiences about best practices moving forward.

Our profession will benefit from a renewed effort to improve our critical thinking skills. Even traditional, filtered media can publish bad research, so we must all endeavor to maintain healthy skepticism and to practice sound scientific reasoning.

Conclusion

The digital media revolution has allowed anyone to build an audience and create and distribute content for little to no cost. Without traditional quality control filters in place, and without traditional checks and balances for those filters in place, our profession must be more vigilant in assessing the veracity of claims made on social media channels and in online forums. Our critical thinking skills are being tested. The standard of care can be challenged by the popularity of an influencer rather than by the integrity of a researcher. While there is excellent content being shared on social media and in digital communities, there is also content that never would have passed through a traditional media filter and made it to an audience. Maintaining our profession's standards is more challenging than ever before. ■

> I am concerned that the volume of unsupervised educational content and the persuasiveness of some of the content producers are occasionally teaching healthcare professionals to practice beneath the standard of care.

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The Impact of Peer Review on the Quality of Dental Care

Richard E. Jones, DDS, MSD, FACD

Abstract

The standard of care in dentistry is not defined in fixed and definitive form; it must be interpreted. Peer review is a voluntary mechanism available to members of the American Dental Association, managed through state associations for nonbinding mediation and arbitration of differences between dentists and patients. The foundation in standard of care, operation of the mechanism, and its indirect but important effect on quality of dental care are discussed.

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Consider the following definitions of standard of care.

- Merriam-Webster dictionary: The degree of care or competence that one is expected to exercise in a particular circumstance or role.
- The Medical Dictionary by Farlax: Written statement describing the rules, actions, or conditions that direct patient care—standards of care guide practice and can be used to evaluate performance.
- Mosby's Medical Dictionary offers multiple definitions that seem to support multiple interpretations:

  Academic SOC: Every possible diagnosis would be ruled in or out at the same time, often through use of parallel testing.

  Economic SOC: Costs of diagnostic or therapeutic interventions may be a major consideration.

  Idealized SOC: Physician would have unlimited time to spend with a patient to establish a warm personal relationship and unlimited resources to carry out diagnosis and therapy.

  Managed care SOC: An economic criterion in which cost is minimized in order to promote profit.

  Medicolegal SOC: All hinges on limiting exposure to medical liability.

  Personal SOC: The individual physician draws from his or her education, training, and experience and incorporates an ethical and humanistic code of professional conduct.

  Practical SOC: The level of care that can be provided by the resources at hand or based on access—not economics.

There are many but somewhat inadequate definitions of standard of care. But we generally think of two aspects: (a) clinically and professionally, it is a diagnostic and treatment process that a clinician should follow for a certain type of patient, illness, or clinical circumstance, and (b) in legal terms, it is the level at which the average, prudent provider in a given community would practice and how similarly qualified practitioners would manage the patient's care under the same or similar circumstances.

A medical malpractice plaintiff must establish an appropriate standard of care and demonstrate that the standard has been breached. This raises a problem. The practicing dentist should use expert training and current available scientific and technical knowledge to provide the best dental care that is possible under the circumstances. This is an ideal and not a minimum. But that is not necessarily consistent with decisions made by a legal professional or legislator who is unfamiliar with the complexities of dentistry. This is exactly why and how society is protected by self-governance and self-regulation by the professions.

Why Standards Matter

Professional standards are essential to these functions.

- They define the profession.
- They guide us through the complexity of professional practice.
- They elevate patient care.
- They enhance the uniformity of care over the population of providers and patients.
- They protect the patient and the public.
- They protect the provider from inaccurate judgment.
- They provide legitimate dental guidelines to the legal system that may evaluate the treatment; that judgment is superior to decisions made by an individual with authority but lacking technical understanding.

Although there are standards, positions, policies, and parameters in dentistry, they may not be comprehensive and are not always clearly defined. There are reasons that we do not have more defined standards.

- They are often difficult to establish.
- Dentistry has a historical paradigm of individualized practice by solo practitioners.
- They may restrict the art in the art and science of dentistry.
- Legislative bodies of organized dentistry have been reluctant to restrict the individualized practice of dentistry.
- Evidence-based dentistry has only been maturing in the past quarter-century.
- Dental science and techniques have been advancing rapidly.

The American Dental Association (ADA) does not define many standards of care, but it does have policies, clinical guidelines, recommendations, and position statements that enhance self-regulation. Examples of more clearly stated "standards" are related to infection control and radiographs. The ADA Center for Evidence-Based Dentistry states: The ADA maintains that recommendations for treatment are left to the treating dentist's professional judgment and that you, as the treating dentist, should do what is in the best interests of the patient.

The ADA places emphasis on protection of the public and it provides three systems of oversight: committees on ethics and judicial affairs, peer review, and wellness. Although the ADA has not been aggressive in establishing universal standards, there is a requirement that there be some process and mechanism in both components and constituents through which allegations of misconduct are heard. The ADA does not track the compliance of this tripartite requirement. There may only be a handful of states that actually have active mechanisms. Wellness committees are concerned with issues concerning a dentist's well-being, which will not be discussed here. The wellness program demonstrates the ADA's concerns and standards regarding personal demeanor.

Peer review, as a mechanism for interfacing between dentists and patients when a disagreement arises, is quite prevalent at all levels of the dental association and is a key example of self-governance. Peer review is the focus of this paper.

How Peer Review Works

Peer review is organized dentistry's dispute resolution service. Individuals enter the process voluntarily and, in most cases, voluntarily accept the committee's recommendation. Most components and constituents use the ADA protocol as a guide. The ADA

> Most dentists are anxious to know in advance how they might be judged, what common expectations exist for treatment, and how they might avoid difficulties.

The ADA maintains that recommendations for treatment are left to the treating dentist's professional judgment and that you, as the treating dentist, should do what's in the best interests of the patient.

model suggests three stages: mediation, panel review, and appeal. Mediation is nonjudgmental and is an effort to guide the parties to a mutually acceptable resolution. Mediation is free, quick, and very successful. Panel review is an arbitration by a committee of experts who are required to reach a determination of whether the treatment in question met the standard of care. Appeal is the third step and is clearly defined.

A panel of expert peer-review dentists is required to determine the relevant standard of care in the panel review process. This process is technically more accurate and equitable than the equivalent legal process. Unfortunately, there is no dental rule book for determining standard of care; the committee is usually left to its own devices.

In peer review, standard of care is typically considered what commonly should be done or the degree of skill exhibited by similar practitioners. The challenge is to determine what practitioners should be doing. Dental standards are mostly universal with little regional difference. This universality has been greatly influenced by evidence-based dentistry. Specialty-level treatments are held to the standards of specialists. Most dental specialty organizations have been proactive in defining standards. It is important to realize that standard of care does not measure perfection, but is a measure of acceptability. The dentist does not guarantee an excellent or particular result but there is an implied contract that the standard of general acceptability will be met.

There is a hierarchy of determinants for the peer review committee:

1. official standards, parameters of care, policies from the ADA, specialty organizations, or other dental organizations
2. evidence-based dentistry
3. prevalent teachings from the accredited dental schools
4. peer-reviewed scientific texts and dental journals
5. the majority subjective opinion of a jury of peers

Naturally, the panel would also consider professionalism, practice acts, codes of ethics and conduct, and other official guidelines before it yields to the final determining process, which is: What does the majority of the committee believe peer practitioners would have done in that circumstance?

The peer review panel collects available evidence, including examinations and interviews. The recommendation is issued to the patient and the dentist. The findings are not binding and the process is confidential.

Why It Matters

Although the volume of cases is often small, peer review may use the process of determining standard of care more than any group in dentistry. But what is the impact if the volume is small and the judgment is confidential? The answer is likely not measurable but there are significant factors involved.

Peer review has come to be known and respected by malpractice attorneys and insurance companies, governmental agencies, and society. Those groups are beginning to rely on the dental peer review committees for guidance in their own judgments and, especially insurance companies, use peer review determinations to establish some of their own expectations of what dentists should do. And dentists usually follow the guidance of the aforementioned groups.

The peer review committees are challenged to publicize their purpose and activity to the association membership, students, and others. Anecdotes are reported and standards are revealed. Most dentists are anxious to know in advance how they might be judged, what common expectations exist for treatment, and how they might avoid difficulties. Workshops are held for the peer review committee members and other groups, with discussions regarding standard of care. Dentists talk to their friends and compare notes. The trickle-down effect snowballs because almost all dentists want to treat their patients within the standard.

The peer review committees of the American Dental Association tripartite organization play an important role in defining standard of care. Despite the inability to measure the specific effect from this low volume and confidential process, there is an impact upon dental standards. Dental peer review has an impact in establishing and promoting standard of care. ■

Standards for the Oral Health of the Public

Caswell A. Evans, DDS, MPH, FACD

Abstract

Organizations and collaborations across groups of experts periodically issue reports that build on evidence and forecasts to recommend desired future descriptions of the oral health of the public and various activities thought necessary to achieve these goals. Such recommendations seldom identify resources or place binding conditions on the organizations that author the recommendations, and they usually call on others to make commitments. Nonetheless, such policy statements often serve as guides to a better future for oral health. This paper summarizes the major recommendations over recent decades.

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As a group of health professionals, dentists typically consider the oral health of individuals one at a time. Dentists may also have families in their practices, which offers the opportunity to consider oral health in the context of the family unit. It is less common for dentists to be involved with issues that affect the oral health of populations. Population health is less dependent on technical and procedural elements of direct provision of dental care to individuals. Efforts to improve population health can emanate from outcome goals intended to achieve improved health outcomes. Typically, attainment of goals is dependent on systems changes that prevent disease, improve access to care, and reduce oral health inequities among population groups.

The origin of goals can come from many sources, including federal, state, and local governments, foundations, advocacy organizations, and commercial interests, to name a few.

Profound standard change in dental education followed the 1926 issuance of the *Gies Report*. The report, supported by the Carnegie Foundation, contained five conclusions, or recommendations, that ultimately affected standards for dental education throughout the United States. A more recent report, *Dental Education at the Crossroads,* issued by the Institute of Medicine, National Academy of Sciences in 1995, contained 22 recommendations, many of which have been incorporated into the standards for dental education. (Please note: the Institute of Medicine has recently been renamed the National Academy of Medicine, National Academies of Science.)

The *Surgeon General's Report on Oral Health*, released in 2000 by U.S. Surgeon General David Satcher, provided a comprehensive and detailed review of oral health (see side bar, page 33). The report pointed out the essential role played by oral health in general health and well-being. It also provided a review of the oral health status of various population groups, disease prevention interventions, and salient facets of the oral health systems of care. The report contained eight major findings and included a five-part framework for action. In 2003, under the leadership of Surgeon General Richard Carmona, the *National Call to Action to Promote Oral Health* was issued. It contained recommendations for action that provided standards and objectives for improving oral health, preventing disease, and reducing oral health inequities among populations. Taken together, successive Surgeons General released major oral health documents that served to provide standards for improved oral health. While these reports focused on oral health, not dentistry as a professional practice, the reports were quite clear that achievement of the objectives to improve oral health would necessitate full collaboration of dental practitioners.

In 2001, the American Dental Association released a *Future of*

Dentistry report (see side bar, page 35). This was the second such report. The earlier report, released in 1983, explored the state of the profession, offered predictions regarding future challenges, and made recommendations that set a foundation for strategic planning. The 2001 report followed an outline similar to the earlier report and addressed trends in six essential subject domains addressed by separate expert panels: clinical dental practice and management; financing of and access to dental services; dental licensure and regulation of dental professionals; dental education; dental and craniofacial research; and global oral health. The predictions were intended to cover a five- to fifteen-year time horizon, and each subject panel was expected to provide recommendations to assist the profession in meeting identified future challenges. A vision statement and six guiding principles framed the report. In its summary, the report provided seven broad recommendations and 100 others tailored to the subject domains.

The Surgeon General's *Report on Oral Health*, released in 2000, pointed out the essential role played by oral health in general health and well-being.

Chapter four of *The Guide to Community Preventive Services*, published in 2005 by the Task Force of Community Preventive Services convened by the Centers for Disease Control and Prevention, focused on oral health. The Task Force, convened in 1996, was charged with developing recommendations for community-level interventions to promote health and prevent disease. The report provided strong recommendations for community water fluoridation and school-based or school-linked pit and fissure sealant delivery programs based on a systematic review of the scientific evidence of their effectiveness. These findings have affected the standards and practices of these interventions in many communities since the report was issued.

In 2011 the Institute of Medicine (IOM), National Academy of Sciences (now the National Academy of Medicine), issued two reports: *Improving Access to Oral Health Care for Vulnerable and Underserved Populations* and *Advancing Oral Health in America*. The Health Resources and Service Administration (HRSA), U.S. Department of Health and Human Services (DHHS), commissioned both reports; California Healthcare Foundation also provided support for the *Access to Oral Health Care* report. The reports entailed separate committees, meetings, and report review processes. Information about the conclusion and recommendations of the committees was not shared between them. The burden of unmet oral health needs among the most vulnerable populations and the documented connections between oral health and overall health led HRSA to request IOM to provide advice about improving access to care for these groups. HRSA, as a significant provider of resource support for health services to vulnerable populations, was eager to have recommendations it could consider in its effort to be as effective as possible in its role and regarding the resources it provides.

The *Access to Oral Health Care* report contained ten recommendations, a few of which went beyond HRSA's direct role, but were within HRSA's scope of influence. The recommendations included: integrating oral health care into overall health care; creating optimal laws and regulations; improving dental education and training; reducing financial and administrative barriers; promoting research; and expanding capacity.

The *Advancing Oral Health in America* report provided advice on actions that the DHHS should take for an oral health initiative. That committee provided seven recommendations in six areas, including: establishing and evaluating an oral health initiative; focusing on prevention; improving oral health literacy; enhancing the delivery of oral health care; expanding research; and measuring progress.

The *Healthy People* series of reports, issued by the U.S. Department of Health and Human Services, presents major health improvement initiatives and milestones for the nation. These reports have been prepared each decade starting in 1990. Oral health objectives are included among these goals. The *Healthy People 2020* report lists more than 600 health-

U.S. Surgeon General's Report on Oral Health, July 2000

The full report is available as a PDF: *Oral Health in America: A Report of the Surgeon General* (nidcr.nih.gov/sites/default/files/2017-10/hck1ocv.%40www.surgeon.fullrpt.pdf)

Major Findings

- Oral diseases and disorders in and of themselves affect health and well-being throughout life.
- Safe and effective measures exist to prevent the most common dental diseases–dental caries and periodontal diseases.
- Lifestyle behaviors that affect general health such as tobacco use, excessive alcohol use, and poor dietary choices affect oral and craniofacial health as well.
- There are profound and consequential oral health disparities within the U.S. population.
- More information is needed to improve America's oral health and eliminate health disparities.
- The mouth reflects general health and well-being.
- Oral diseases and conditions are associated with other health problems.
- Scientific research is key to further reduction in the burden of diseases and disorders that affect the face, mouth, and teeth.

A Framework for Action

All Americans can benefit from the development of a National Oral Health Plan to improve quality of life and eliminate health disparities by facilitating collaborations among individuals, healthcare providers, communities, and policymakers at all levels of society and by taking advantage of existing initiatives. Everyone has a role in improving and promoting oral health. Together we can work to broaden public understanding of the importance of oral health and its relevance to general health and well-being, and to ensure that existing and future preventive, diagnostic, and treatment measures for oral diseases and disorders are made available to all Americans. The following are the principal components of the plan.

- Change perceptions regarding oral health and disease so that oral health becomes an accepted component of general health.
- Accelerate the building of the science and evidence base and apply science effectively to improve oral health.
- Build an effective health infrastructure that meets the oral health needs of all Americans and integrates oral health effectively into overall health.
- Remove known barriers between people and oral health services.
- Use public-private partnerships to improve the oral health of those who still suffer disproportionately from oral diseases.

related objectives for the nation, to be achieved by the year 2020. The objectives are structured in the context of 12 leading health indicators. For the first time in the 40-year history of the reports, oral health—specifically access to care—is included as one of the 12 leading national health indicators. Few dentists know that through their services they can contribute to attaining significant oral health objectives for the nation.

The Access to Dental Care Summit convened in 2009 by the American Dental Association proved to be a launching point for another set of goals to improve oral health. The Summit participants included 144 dentists and oral health advocates selected to represent 12 key facets of access to care such as practice, community clinics, education, and

The American Dental Association released a *Future of Dentistry* report in 2001. A vision statement and six guiding principles framed the report. In its summary, the report provided seven broad recommendations and 100 others tailored to the subject domains.

research, among others. The Summit laid the foundation for the concept of a multifaceted effort to advance initiatives to improve access to care. From this origin the U.S. National Oral Health Alliance was formed, with support provided by the DentaQuest Foundation. During the years 2011 through 2013, a large and diverse group of oral health advocates and stakeholders gathered in a series of six colloquia focused on goals that would achieve systems changes to improve oral health. The colloquia themes were: Medical and Dental Collaboration; Prevention and Public Health Infrastructure; Oral Health Literacy as a Pathway to Health Equity; Metrics for Improving Oral Health; Financing Models for Oral Health; and Strengthening the Dental Care Delivery System.

In addition to standards, or oral health goals and objectives, that are intended to have a national impact, there are state and local efforts that address needs in state and local geographies. Using one state, Illinois, as an example, several initiatives are illustrative. The Illinois Department of Public Health, under a mandate by the state legislature, develops a periodic State Health Improvement Plan. In collaboration with the state, a diverse group of health advocates develops the plan through data and trend assessments, public meetings, written commentary, and direct participation. There are oral health elements within the Illinois State Health Improvement Plan.

There are also state-level examples of foundation engagement in oral health with a specific focus. For example, in 2016 the Illinois Children's Health Care Foundation, in collaboration with the Delta Dental of Illinois Foundation and the Michael Reese Health Trust, assessed oral health in the state. The report, *Oral Health in Illinois*, not only presented findings but also provided recommendations for goals and systems changes that could lead to oral health improvements in the state.

At the local level, city and county health departments may develop plans for their jurisdictions that contain goals and objectives, creating standards and related expectations for subsequent health improvement. One such example is *Healthy Chicago 2.0: Partnering to Improve Health Equity, 2016-2020*. With the full support of the mayor and using a process that included numerous community "town hall" meetings, the Chicago Department of Public Health developed web-based surveys, which were promoted widely and made available to all residents, with the collaboration of 130 organizations. Oral health improvement goals were included among the actionable strategies to reduce inequities and improve the health of Chicago residents. Reduction of dental emergency room visits in local hospitals and improving collaboration between childcare centers and oral health providers to improve the oral health of young children were examples of the goals related to oral health.

The extent to which dentists and organizations representing the broad interests of dentists are aware of these types of population-focused goals and objectives cannot be determined easily. Dentist and dental organization involvement in these types of goal-setting initiatives is typically sought. However, the level of participation may vary substantially. Dissemination of these types of community "standards" does include dental organizations, but the extent to which the information is passed on to their membership is not certain. It is rare for a dental organization to formally "endorse" these types of efforts. ■

The Future of Dentistry—Today's Vision: Tomorrow's Reality

A report of the American Dental Association. The full report is available online at ada.org/en/~/media/ADA/About%20the%20ADA/Files/fu%C2%ADture_execsum_fllreport

Broad Recommendations

- Establish and support partnerships and alliances among dental, other health care professional, and public health organizations, as well as business and social service groups, in order to address common goals to improve oral health.
- Aggressively address the oral health needs of the public.
- Strengthen and expand dentistry's research and education capabilities.
- Ensure the development of a responsive, competent, diverse, and "elastic" workforce.
- Develop strategies to address the fiscal needs of the practice, education, and research sectors of dentistry to ensure their viability and vitality.
- Establish a formal organization with membership consisting of the American Dental Association representing dental practice, the American Dental Education Association representing dental education, and the National Institute of Dental and Craniofacial Research and the American Association of Dental Research representing research.
- Utilizing the combined resources of the dental profession and dental industry, emphasis should be placed on the development of highly targeted, collaborative marketing and public relations initiatives.

Clinical Practice Recommendations

1. Continued comprehensive studies should be conducted to assess the capacity of the dental workforce addressing all of the possible factors and variables that affect the ability to provide adequate services to the public. The status of the workforce should be reassessed periodically.
2. The dental profession must continually evaluate its data requirements and collect needed data in sufficient quantity, frequency, and detail to form the basis for a rational assessment of workforce requirements.
3. Due to regional workforce imbalances, a consortium of appropriate leaders and other policymakers should be convened to develop a plan to address these issues.
4. Individual states or regions should develop workforce plans that address their specific needs.
5. Workforce models should continually be evaluated and changed, refined and strengthened, as necessary to forecast the future dental care needs and demands of the public.
6. The dental profession, through collaboration among all levels of organized dentistry, governmental agencies, and educational institutions, should devise a program of recruitment to encourage the youth of minority populations to enter an educational track that would lead to joining the dental workforce.
7. The dental profession should support licensure by credentials for dentists and dental hygienists.
8. Workforce studies should be undertaken to identify the optimum number and distribution of allied dental personnel.
9. The dental profession should establish as a goal the standardization of approved duties for allied personnel within the United States.
10. An alliance should be formed among the dental profession, organized dentistry, government health agencies, and the dental industry to develop and fund a "National Health Awareness Campaign" focusing on increasing the awareness of the public and policymakers of the importance of oral health.
11. Lobbying activities should be organized that include the participation of all levels of society to convince legislators that oral health is a major part of general health and that increased funding is necessary to support efforts to achieve the goal of optimum oral health for all.

12. The dental profession, together with all interested parties, should increase efforts to convince the public, as well as local, state, and national policymakers, that fluoridation of water supplies is a safe and cost-effective way to protect oral health.
13. The dental profession should conduct intensive public service information and education efforts to reduce the death rate due to oral cancer through early diagnosis.
14. A comprehensive study should be undertaken to assess the efficacy of risk-based dental care.
15. Dental practitioners, educators, researchers, and policymakers should develop a common definition of evidence-based practice.
16. The dental profession, in concert with all other interested parties, should identify ways in which to integrate science from systematic research, practitioner expertise, and patient choice to ensure the appropriate application of the latest knowledge into the delivery of care.
17. An appropriate system of diagnostic codes should be developed and integrated into the daily practice of dentistry. A network of practitioners, assembled by the appropriate professional organizations and connected by electronic communication, could provide a large source of data on procedures and outcomes. Clinical practitioners, to enhance their ability to monitor clinical and procedural protocols, should be able to access unbiased and reliable information easily.
18. The dental profession should strive to develop the leading repository of the most accurate diagnostic and therapeutic databases.
19. A consortium of representatives of dental practice, research, education, and the dental product industry should be established to ensure the rapid transfer of information regarding new modalities of oral health care to private practitioners.
20. A study should be undertaken to address the adequacy of the number of dental laboratory technicians and to develop a strategy for attracting qualified individuals into that profession.
21. The dental profession should develop strategies to maintain the dentist as a knowledgeable director of laboratory procedures to insure [sic] the safety of the patient.

Financing Recommendations

1. The dental benefits industry should explore a market-oriented solution to financing dental services that would include tax-deferred dental/medical savings accounts and direct reimbursement plans.
2. Financing of dental services should be structured so it will not inappropriately interfere with the professional judgment of the dentist or create unwarranted intrusion into the decisions reached jointly by dentists and patients regarding appropriate and best treatment options.
3. The professional dental communities must continue their support of national legislation that will protect patients from health plans that place bottom-line profit ahead of quality and access to care. Even after the passage of such legislation, the profession must remain vigilant in ensuring that the intent of the legislation is not undermined.
4. The dental profession should develop an active campaign to educate employers and employees regarding dental benefits choices so they can become better healthcare consumers. This campaign should include dentists as members of the educational team.
5. The dental profession should encourage the dental benefits industry to streamline procedures, reduce administrative burden and policy limitations, and provide greater flexibility for covered individuals in their reimbursement for dental services.

6. The dental profession should commence constructive dialogue with third-party carriers to develop a user-friendly attitude and more efficient administrative procedures in their dealings with providers and purchasers.
7. The dental benefits industry should shorten its response time for including scientifically accepted new diagnostic and treatment options in its reimbursable plans.

Access Recommendations

1. Public funding should be expanded to provide resources that would cover basic dental services for the long-term unemployed. In order to assure participation by providers and improve access, dentists should be reimbursed at market rates for their services. Administration should be managed utilizing the same procedures and systems as employer-based dental prepayment plans.
2. New programs, subsidized in part by public funding, should be developed in which individual employees could purchase insurance plans directly from risk pools if their employers do not provide it.
3. Effective incentives should be offered to attract dentists to underserved areas. These could include loan forgiveness, tax credits, or adequate reimbursement rates.
4. The National Health Service Corps program should be expanded to help provide dental care in the underserved areas.
5. A publicly funded or subsidized dental program should be developed for people with disabilities, recognizing their special needs.
6. Outreach programs at the state and local levels, which might include the establishment of specialty dental clinics, should be developed to meet the needs of patients unable to receive care in traditional dental offices.
7. Tax-deferred dental/medical savings accounts should be established in which the balances accrue over time and can be used by the elderly as needed during their retirement.

Licensure and Regulation Recommendations

1. National board examinations, as well as regional clinical licensing examinations, should evolve to reflect more accurately the change in dental disease patterns and clinical practice patterns.
2. The dental profession should support a study to address the issues of continuing competency.
3. The profession should strive for approaches aimed at evaluating the clinical competency of a dental practitioner by simulated methods or post-treatment case review.
4. In order to assure the quality of care for patients, the dental profession should maintain the role of dentists as the ultimate authority for the diagnosis of, treatment planning for, and delivery of care for oral disease.
5. The dental profession should establish as a goal the equivalence or unity of all examining bodies.
6. The dental profession should encourage all licensing boards to develop guidelines and procedures that allow for the examination of educationally-qualified specialists in their respective areas of expertise without requiring concurrent examination for a general dentistry license.
7. The dental profession should intensify efforts to achieve licensure by credentials in all states.
8. The profession must continue to be vigilant and proactive in identifying and researching potential hazards that might impact the safety of patients, the dental workforce, and the environment.
9. The dental profession must remain proactive in advocating scientifically valid solutions to identified hazards.
10. The ADA's Division of Government Affairs and Constituent Dental Societies must remain vigilant and vigorous in ensuring that the voice of dentistry is heeded in regulatory discussions.

Education Recommendations

1. The provision of sustained federal/state funding to support dental student training, either in the form of scholarships or direct unrestricted block grants, should be a high-priority issue.
2. Creative financing and partnership with various communities of interest should be developed to increase the diversity of the dental workforce.
3. Programs should be developed to educate dental students and young graduates in debt and financial management.
4. Dentists should be encouraged to provide significantly increased financial support for their educational institutions. They should also suggest to grateful patients, as well as to other philanthropic individuals among their friends, that they consider a gift to the local dental school.
5. Dental schools should explore regionalization in dental education in which dental schools collaborate to reduce costs and enhance quality in dental education. Dental schools should examine the cost effectiveness of sharing teaching faculty through electronic distance learning. Innovative techniques, such as placing curriculum on a DVD, clinical simulation, and virtual reality, warrant further evaluation as means of reducing instructional costs.
6. Dental educators should seek to use new technology and scientific advances that have the potential to reduce the cost of instruction.
7. Any plans for a dental school to expand its clinical activities outside the school's primary location should be discussed with local practitioners, alumni, and local components of organized dentistry.
8. Research should be conducted on the cost effectiveness of off-site training opportunities.
9. Dental schools should develop programs in which students, residents, and faculty provide care for members of the underserved populations in community clinics and practices.
10. Dental education curricula should include training in cultural competency, as well as the necessary knowledge and skills to deal with diverse populations.
11. Dental schools should undertake a comprehensive evaluation of undergraduate curricula to ensure that the appropriate and modern scientific and clinical content is included.
12. Dental researchers (especially clinical researchers) should become more integrated in the foundation of curriculum and, when possible, in clinical activities.
13. The education community should enhance undergraduate exposure to the ethics of dental practice while also providing cultural competency that provides information and training on delivering care to all segments of the population.
14. A formal dialogue among all healthcare professions should be established to develop a plan for greater cooperation and integration of knowledge in medical and dental predoctoral education, hospital settings, continuing education programs, and research facilities.
15. An interdisciplinary structure between dental and medical schools should be established to promote close cooperation between health teaching institutions and universities.
16. When economically and logistically feasible, a PGY-1 year should be a requirement for all dental graduates.
17. In order to make PGY-1 economically feasible, the dental profession should develop lobbying efforts directed to increasing the funding support for additional General Practice Residency and Advanced Education in General Dentistry programs. This funding should be sufficient to offer all future dental graduates the opportunity for further clinical training.
18. The dental profession should design and implement a formal education program to train existing dental practitioners to become members of the dental faculty.

19. The dental profession should develop educational tracks with special degrees or certification for students interested in research, education, or public health futures. Specialized curricula should be developed to train these individuals for work in those areas.
20. The dental profession should seek actions to extend debt forgiveness programs to dental graduates who are willing to make a commitment to academic dentistry.
21. Federal programs that underwrite research and specialty training need to be enhanced with sufficient funds allocated to dental applicants.
22. Specialty organizations should be encouraged to continue efforts dedicated to funding teaching scholarships and fellowships.
23. Dental educators should be encouraged to test alternative, less faculty-dependent models for educating dental students.
24. The dental profession should support the establishment of centers for research excellence that provide research training and opportunities for organized research for dental faculty within a defined geographic area.
25. The dental profession should develop lobbying efforts directed towards the development of new assistance programs for the improvement of the physical facilities of dental schools.
26. Well-funded, innovative recruitment programs to identify and enroll quality candidates for dental hygiene, dental assisting, and laboratory technology education should be developed.
27. The development of additional training programs for allied dental personnel, which employ both traditional and innovative educational programs, needs to be encouraged. This could be accomplished through the combined efforts of national, state, and local dental societies, working with various allied communities of interest.
28. Credit against educational debt should be sought for dental team members who work with dentists in designated underserved locales.
29. Continuing education programs, designed to provide upward mobility for dental team members, need to be developed and offered.
30. The dental profession should continue its efforts to ensure quality control, educational counseling, and appropriate recognition for achievement.

Research Recommendations

1. Professional organizations and patient advocate groups should form a coalition to support the long-term maintenance of National Institute of Dental and Craniofacial Research as a separate institute within the National Institutes of Health.
2. The dental profession should be an active member of the National Health Profession Coalition for the Human Genome. Research on pathogenesis, prevention, etiology, diagnosis, and treatment is necessary for all oral diseases. Future research will form an improved definition of genetic, environmental, and microbial risk factors for oral disease that will lead to development of a profile for patients at risk for advanced disease.
3. Additional studies should be undertaken to develop new approaches to the non-invasive diagnosis and genetic assessments of patients at risk for caries, periodontal diseases, oral cancer, craniofacial anomalies, and other oral conditions. Clearly accepted criteria for the diagnosis of oral diseases should be developed.
4. Controlled clinical trials must be conducted to assure the safety, efficacy and appropriateness of new and emerging approaches to the treatment of oral diseases.

5. Federal agencies, the insurance industry, private foundations and the dental profession should establish partnerships to fund the development of systems that can model future oral diseases or conditions in the context of rapidly changing demographics, increased co-morbidities associated with aging, and enhanced understanding of complex oral diseases.
6. The research community should establish as a goal the refinement and improvement of biomaterials and bioappliances with the aim of increasing their efficacy and longevity and minimizing their iatrogenic effects.
7. The scope of clinical research should be expanded to incorporate tissue engineering and biomimetic approaches.
8. Health promotion activities should be undertaken to educate the public of the continued presence of dental caries and the need to engage in preventive and diagnostic regimens to assure optimum oral health. The mouth has been called the mirror of the body, reflecting signs and symptoms of health and disease. Recent research reveals findings that relate oral infections to systemic conditions. Specifically, emerging evidence indicates that chronic oral infections such as periodontal diseases may contribute to the risk for pre-term birth, diabetes, stroke, and cardiovascular disease.
9. If it is demonstrated that oral infections are related to one or more systemic diseases, coalitions within the health professions should encourage national and international clinical trials to establish optimal dental treatment protocols.
10. If clinical trials confirm the existence of links between oral and systemic diseases, health promotion activities will need to be targeted to high-risk groups.
11. The research community should establish as a priority goal the identification of patients at risk for oral cancers.
12. The dental profession should educate legislators about the need for economic support for individuals who wish to follow a career track into research.
13. Professional organizations should develop mechanisms to provide financial support for research projects and/or training for dental school faculty in their fields of interest.
14. Together with nonprofit organizations and industry, the dental profession should consider creating and supporting fellowship programs for research.
15. The dental profession, in concert with federal agencies and the private sector, should work for enhanced resources for clinical research.
16. Building upon the ADA's Research Agenda for the Practicing Dentist, the dental profession should convene a clinical research consortium to develop and oversee the implementation of this agenda.
17. The dental profession should support the development of oral health research centers of excellence that would facilitate collaborative and clinical research.
18. To improve the research capabilities of dental schools, funding programs for enhancement and modernization of their facilities should be developed and promoted.
19. A plan to ensure the effective and accelerated transfer of research findings and new technology into practice and into the dental curriculum should be established.
20. The dental profession should take the lead in convening all members of the healthcare community in developing a plan to incorporate appropriate oral and systemic healthcare concepts into the respective curricula.

Global Health Recommendations

1. The American dental profession should be an active partner and leader in the global environment.
2. International collaborative networks should be established to facilitate funding and implementing of research, education, and practice-related activities.
3. The American dental profession should work to restore and perpetuate the presence and effectiveness of oral health programs at the World Health Organization.
4. The dental profession should emphasize the importance of addressing global oral health and general health issues to its members and to other health professions.
5. National and global health policies, particularly those promoting primary preventive strategies, should be developed.
6. The international dental profession should work to establish and maintain a strong global data bank that would capture information that helps to prevent the spread of diseases and promote the best clinical practices.
7. The international dental community should ensure that there are sufficient individuals trained in epidemiology, dental informatics, and health services research.
8. The international dental community should foster the development of exchange programs and fellowships to ensure that basic principles of ethics, competencies, and sensitivity to cultural differences are maintained.
9. The international dental community should foster research training for investigators from developing countries.
10. International standards for dental products and equipment should be fostered.
11. The international dental community should support the emerging development of standards for dental education and clinical practice.
12. The global dental community should foster the expansion of international volunteer activities to include educational components for local practitioners and populations.

Conscience, Training, and Professionalism

William van Dyk, DDS, FACD

Abstract

What separates the dentist who mistreated so many patients described in the *Atlantic Monthly* article from the vast majority of excellent dentists was not the lack of standards for appropriate dental care. It was the absence, in this case, of an internal standard. Profit or some other motive nullified the widely held and well-documented norms of good dentistry. In the end, it is the individual practitioner's conscience that is the ultimate standard.

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Every so often someone takes a crack at dentistry. *Reader's Digest* had a field day a few years back as a reporter submitted his mouth to a series of widely different diagnoses and treatment plans by a variety of dentists. Recently an article in *Atlantic Monthly* caused quite a stir in the offices of the profession. Various dental organizations, including the American College of Dentists, reacted with advice and instructions to counter potential negative reactions among patients.

Individual dentists as always returned to their practices the morning after and continued to treat their patients according to the standards they had developed over time and learned through experience. The standards that these dentists follow are first formed by the institutions that support them, but ultimately become their individual philosophy of practice.

Dentistry is a curious profession. Its ranks grew out of itinerant self-taught practitioners and coalesced into a group of independent members of the healthcare establishment, separate from medicine, but a part of the medical treatment of patients. It also stayed out of the operating room and the benefits of general anesthesia for the most part. The result has been the development of a very effective and efficient system of oral care delivered by highly trained practitioners in isolated practice settings.

To combat the potential for uncontrolled activity in this type of environment, a system of intense education, coupled with a testing program designed to ensure high educational standards, and a mandate of continuing education throughout a dentist's career slowly developed. In addition, the profession created for itself a vigorous research establishment that not only tests and develops new and improved products and services, but also connects the dots between dentistry and the rest of the medical world. Numerous examples of connection between oral health and overall health are continually being established. All this activity plays a significant role in the standards that dentists follow, but, because of their isolation, the interpretation of those standards can vary widely. It is this individual interpretation that leads to the opportunity for many inside and outside the profession to question the capability and honesty of its professionals.

Dentists practicing in an isolated environment can give their patients some concern. In every aspect of medicine and dentistry, there is a fear by patients that they do not have the knowledge to choose a competent practitioner. Patients just cannot know all there is to know about the various ailments, infections, and operations that might be needed to get them healthy or at least to stay alive. In medicine, patients receive some

solace in the fact that medicine is practiced in hospitals and large clinics where physicians and nurses continually evaluate and observe each other in practice.

Little of that exists in dentistry. The great majority of dentists practice solo or in very small groups without any oversight even by other professionals in the practice. Individual patients are caught in the conundrum of "buyer beware" in a system where they know little or nothing about the treatment they will receive. Their sole defense is the confidence they have in the practitioner in front of them. They can receive reassurance from other patients about the practitioner's competence. Sometimes they can even receive assurances from a fellow practitioner. And they can read the documents on the wall verifying graduation and licensing to show institutional and government approval. But ultimately patients have to look a dentist or hygienist in the eye and decide that they can trust that person.

Where Does the Problem Lie?

Very likely, as long as there are cases such as the one described in the *Atlantic* article patients will have doubts about the trustworthiness of all dentists. Diagnosis is based on a variety of factors: the clinical skills of the dentist, the materials available, and the desire by the patient to maintain or improve their oral environment. The standard of care in a community is not a thin line, but rather a pathway with many options that can be different but still acceptable. Decay in a tooth could be watched to see if it worsens, replaced with amalgam or a composite, or treated with a gold inlay. All of them are acceptable and within the standard of care. Putting a price tag on each possibility makes them seem ridiculously varied. If the public only sees the dollar signs, the choices seem unbalanced.

Likewise, the *Atlantic* article described a case where a dentist did not follow the information available in the world of research and expertise. Research is very often coupled with experience to provide the most effective treatment possible. But to just compare the day-to-day knowledge of the individual with the volumes of material being published in the field daily gives the impression of ignorance and inadequate treatment. In medicine, physicians often use drugs "off label" due to observation in the field of positive effects outside the tested recommendations. Were the public made aware in an investigative fashion that physicians were circumventing the Food and Drug Administration to treat without research and testing protocols, there might be a slight uproar. But the fact that they work closely in hospital and clinic settings gives the public some confidence that their recommendations have been

All this activity plays a significant role in the standards that dentists follow, but, because of their isolation, the interpretation of those standards can vary widely.

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vetted if not by the FDA, then at least by fellow professionals.

In dentistry, there is no clear pattern of consultation about the value of experience.

Some parts of dentistry are clearly effective and proven through years of research. Good studies show that stopping decay before it reaches the pulp of the tooth saves money, pain, and the need for more complex treatment. Excellent studies show that endodontics saves dying teeth in a natural fashion that allows for continuous use and function, often for the rest of the patient's life. And implants work in a vast majority of patients based on studies of placement and longevity. The list is long and inclusive. There are parts of dental care, however, that can be the subject of debate. Has the profession ever done double-blind studies on the benefits of flossing or the effectiveness of fluoride varnishes? Does instruction in preventive care make a difference in the ultimate number of teeth lost in life? Sure, there are anecdotal reports (some of them often repeated) of improvements in populations, even measureable results against populations where treatment was not provided, but the variables involved make the information less than perfect.

In addition, in dental practice many treatment techniques have developed through experience in individual offices. How long should a tooth be etched? What kind of base or lack of base or chemical treatment results in the least post-operative sensitivity? What temporary cement works the best to calm a tooth and keeps a temporary in place for the time it takes to make a permanent crown? No matter what standards and studies say, what works best in each office is often the individual decision of the dentist. Because this creates variety in the field, dentistry is subject to doubts sown by media and consumer groups about the validity of the overall standards. And if the public demands only treatment that has been tested to universal standards, it is difficult for dentistry to stand the scrutiny.

Conscience: the Ultimate Standard

We are at risk for imposing standards that are worse than the problem if we are clear about where the problem lies. It is not lack of evidence that causes overtreatment. It is lack of conscience that ensures that all dentists use the documented best approaches. The question then remains, will dentistry always be the subject of investigations into its vulnerabilities or can the profession right its ship without losing what is valuable about dental care? The answer is complex and unsettled. Some solutions would answer concerns but create new and, in many cases, worse outcomes. Dentistry could move closer to the medical model, and patients in need of treatment could be treated only in hospital settings with general anesthesia. Dentistry could require that all treatment be vetted in legitimate double-blind studies or dropped from recommended treatment. Private practice could be reinvented into only large clinic settings where consultation and education would be continuous.

Ultimately, the solution needs to come from the smallest part of the problem, the individual practitioner. As was noted earlier, in each instance of attack on the profession and in each encounter with a patient, the solution

lies in the relationship between the individual patient and the individual dentist. To counter the doubt and the implication of inadequate care, a practitioner needs to do the right thing and convey that fact to the patient. In the case described in the *Atlantic* article, the dentist was doing the wrong thing, even though patients trusted him. Dentistry is more than an art and a science, it is a bond-building experience between two individuals. How to do that?

Let's first look at the quality of dentistry. Every dentist knows right from wrong. Every dentist has seen the ideal (it is the basis of dental education), and every dentist can compare the actual to the ideal and try to get as close to the ideal as possible. Ethical behavior is not a flexible rod. When patients or patient advocates find fault with the profession, it often begins when a dentist ignores what has been shown to be true and uses some rationale to explain the compromise. The author of the *Atlantic* article described such a case. Granted, there are many instances where the ideal is not achievable due to circumstances beyond anyone's control. And there are many additional aspects of dental practice beyond the clinical expertise that affect the overall quality of care. These aspects of dentistry combined together often get closer to the ideal than just the clinical technique. Patient confidence, adaptation to patient limitations, and personal connections all play a role in the quality of care. But continuously providing dental care that is below the standards of care is never a solution and leads to justifiable attacks.

If the standard of care is being met by the members of the profession, the next step is to build a product and service line that can be explained easily and with confidence. The number of patients with full dentures is plummeting. Even partial dentures are no longer a common occurrence. These facts can be a first line of argument against attacks on the effectiveness of the profession. More teeth are being saved for a longer period of a patient's life than ever before. The adage of old age "You'll get wrinkles, your hair will disappear, and your teeth will fall out" is only two-thirds true. Patients are keeping their teeth for a lifetime. There are multiple reasons for this very positive change in oral health in this country, some of them due to researched and developed products and services that work better. Some are also due to a longstanding effort by dentistry to build on prevention of oral problems. Many of these efforts cannot be rigorously studied because it is not ethical or possible to deny some people a lifetime of preventive care to compare to others who receive the preventive care for comparison purposes. Do not floss for 30 years and let us see where your teeth are compared to someone who does floss. There are multiple anecdotal instances of improvements among patients who try certain therapies. These can be and have been documented. All of the efforts of the profession, from institutional efforts to individual practice efforts, must be documented and disseminated to the profession and the public in easily explained and observed fashion. Does fluoride work? What types of fluoride work and with whom? Does an electric brush work better than a manual one? And which works best in which instance? What does toothpaste do? How does a desensitizer work? And what cleaning techniques work best in what instances? What makes endodontics successful and where are implants beneficial, and why do they work? The list can be endless and it can be evidence based, not all in independent double-blind studies, but based on studies and accumulated observations and long-term results.

And lastly, dentists need to realize that they have to offset the model of their practice life. Their isolation needs to be countered by the strength of their relationship with patients. What builds that connection? First of all, patients want to know that their practitioners know what they are talking about. Time with patients for clear explanations of conditions and treatment options with back-up information is essential. The days of "fill and bill" are fading fast. Patients have become savvy consumers and are much better with questions and demand better answers. Communication to patients of what is being learned at meetings and conventions can instill confidence in the practitioner. There are standards and they need to be easily used by patients to judge their practitioners. Secondly, patients want to feel that their dentists are concerned about them as whole people. Certainly it is essential that a dentist hear and focus first on the patient's chief complaint, but overall the patient wants the

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"doctor" to communicate an understanding of how to make the whole patient healthier through teamwork with medicine and specialties. Communication through the patient between various members of the medical and dental fields can expand the feeling of confidence based on multiple inputs. Thirdly, and part of the whole-patient focus, dentists need to understand and develop personal connections to patients. Sometimes this comes naturally and trust and confidence come easily. But it is essential that it come implicitly for every patient. Patients are more than a set of teeth and gums and the better the individual dentist gets that across to the patient, the better the level of trust and confidence. Essential listening skills can be learned and used to give patients the belief that the dentist hears their concerns and cares for their overall health.

Treatment Based on Trust

The essence of a strong bond between patients and the profession is built on numerous blocks. The standards of care, the research arm of the profession, the various policing and guiding institutions are all there. The cornerstone, however, is the relationship between the individual dentist and the individual patient. The dentist needs to operate with a conscience that is based on a true and universally accepted standard of care. The dentist needs to maintain that standard through continuous learning provided by a profession built on research and the benefits of experience. And the dentist needs to foster an unbreakable relationship with patients that speaks to their needs, guides them toward excellent health, and shows them the valuable tools available for them in the profession that have withstood the test of time. It will take a proactive effort from the top to the bottom of the profession, but it will build a level of confidence among the public that will negate the efforts by investigators to find the vulnerabilities in the profession.

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Submitting Manuscripts for Potential Publication in *JACD*

Manuscripts for potential publication in the *Journal of the American College of Dentists* should be sent as attachments via e-mail to the editor, Dr. David W. Chambers, at dchambers@pacific.edu. The transmittal message should affirm that the manuscript or substantial portions of it or prior analyses of the data upon which it is based have not been previously published and that the manuscript is not currently under review by any other journal.

Authors are strongly urged to review several recent volumes of *JACD*. These can be found on the ACD website under "publications." In conducting this review, authors should pay particular attention to the type of paper we focus on. For example, we normally do not publish clinical case reports or articles that describe dental techniques. The communication policy of the college is to "identify and place before the fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. The goal is to stimulate this community to remain informed, inquire actively, and participate in the formation of public policy and personal leadership to advance the purpose and objectives of the college."

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A "desk review" is normally provided within one week of receiving a manuscript to determine whether it suits the general content and quality criteria for publication. Papers that hold potential are often sent directly for peer review. Usually there are six anonymous reviewers, representing subject matter experts, boards of the college, and typical readers. In certain cases, a manuscript will be returned to the author with suggestions for improvements and directions about conformity with the style of work published in this journal. The peer-review process typically takes four to five weeks.

Authors whose submissions are peer-reviewed receive feedback from this process. A copy of the guidelines used by reviewers is found on the ACD website under "How to Review a Manuscript for the *Journal of the American College of Dentists*."

An annual report of the peer review process for *JACD* is printed in the fourth issue of each volume. Typically, this journal accepts about a quarter of the manuscripts reviewed and the consistency of the reviewers is in the phi = .60 to .80 range.

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