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A. To urge the extension and improvement of measures for the control and prevention of oral disorders;

B. To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels;

C. To encourage graduate studies and continuing educational efforts by dentists and auxiliaries;

D. To encourage, stimulate, and promote research;

E. To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;

F. To encourage the free exchange of ideas and experiences in the interest of better service to the patient;

G. To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public;

H. To make visible to professional persons the extent of their responsibilities to the community as well as to the field of health service and to urge the acceptance of them;

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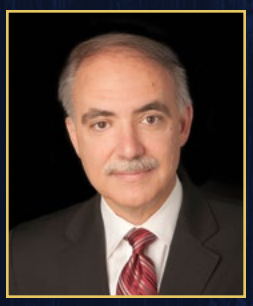
EDITORIAL

Ethical Frontiers in Dentistry: Navigating Artificial and Augmented Intelligence



Robert A. Faiella, DMD., MMSc., MBA

The dental profession is continually evolving, and the emergence of artificial and augmented intelligence presents both transformative opportunities and critical challenges. Artificial intelligence generates automated outputs, and augmented intelligence synergistically integrates human expertise with machine-derived insights to enhance clinical judgment and decision-making. The terms will be used interchangeably here, abbreviated as AI.

The integration of AI into dental practice represents one of the most profound and promising advancements in modern health care, yet it also poses ethical considerations. As a clinician deeply engaged in AI-powered technology, I have witnessed firsthand how these innovations are reshaping our profession by offering unprecedented improvements in diagnostic accuracy, treatment planning, and operational efficiency. AI-driven applications leveraging machine learning and neural networks are refining our ability to detect pathologies, assess risk, and personalize care with a level of precision that was previously unattainable. These advances hold significant potential to enhance clinical decision-making, optimize patient outcomes, and elevate the overall standard of care.

Yet, are these technologies consequential?

AI-driven applications leveraging machine learning and neural networks are refining our ability to detect pathologies, assess risk, and personalize care with a level of precision that was previously unattainable. These advances hold significant potential to enhance clinical decision-making, optimize patient outcomes, and elevate the overall standard of care.

As we stand at the forefront of this technological transformation, we must learn to navigate the ethical landscape with the same diligence and rigor that we apply to our clinical practice. The benefits of AI are significant, but they are not without challenges. If misapplied or misunderstood, AI-powered systems can introduce risks that compromise patient trust, exacerbate healthcare disparities, and create ambiguity in clinical accountability. Our responsibility as clinicians and leaders is to ensure that AI serves as a collaborative tool that enhances – not replaces – our expertise, preserving the clinician-patient relationship as the cornerstone of ethical dental practice.

A key ethical consideration in AI adoption is the principle of patient autonomy. Informed consent must evolve alongside technology to account for the complexities of AI-powered decision-making. Patients must understand not only the benefits of AI-enhanced diagnostics and treatment planning but also the role that algorithms play in influencing their care. Transparency around data use and the interpretability of AI-generated recommendations and clear communication about the limitations of these systems are essential in fostering trust and enabling truly informed recommendations.

The principle of beneficence – our duty to maximize benefit and minimize harm – compels us to deploy AI in ways that elevate patient care. AI-powered diagnostics can significantly improve the early detection of conditions such as periodontal disease, oral cancer, and implant complications, allowing for earlier intervention and improved prognoses. Predictive analytics can also help identify patients at higher risk for disease progression, facilitating more proactive and preventive strategies. However, beneficence also requires vigilance in monitoring for unintended consequences. AI systems are not infallible, and we must remain attentive to their potential for error, ensuring that human oversight remains integral to the clinical decision-making process.

The use of these emerging applications additionally demands that we address the risk of health care disparities. While AI has the potential to expand access to high-quality care, particularly in underserved areas through teledentistry and remote diagnostics, its application can also inadvertently reinforce existing biases if not properly designed and implemented. AI algorithms learn from historical data, and if that data reflects systemic inequities, the technology may perpetuate rather than alleviate disparities. To mitigate this risk, AI models must be trained on diverse and representative datasets, and their performance must be continuously audited and adjusted to ensure fairness and accuracy across all patient populations.

The increasing reliance on AI also brings heightened concerns regarding privacy and data security. AI systems thrive on vast amounts of patient data, and as we move toward an era of predictive analytics and cloud-based diagnostic platforms, safeguarding this information must remain a top priority. Robust cybersecurity measures, strict data

Most importantly, enhancing the patient experience by providing timely treatment, engaging their understanding of treatment recommendations with reason, and improving their outcomes over time with objective metrics fosters a patient-centric environment that can only augment the trust central to the delivery of care.

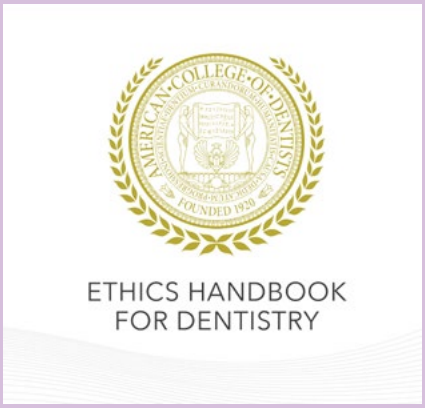
governance policies, and compliance with evolving regulatory frameworks are integral to protecting patient confidentiality and maintaining public trust in these technologies.

Beyond these ethical imperatives, we must further confront accountability and transparency challenges in AI integration. As AI systems become more complex, their decision-making processes often lack interpretability, a challenge known as the "black box" problem. In clinical practice, it is not enough for AI to provide an answer; we must understand how and why a particular conclusion has been reached. Enhancing algorithmic transparency (known as "explainable AI") will be critical in ensuring clinicians can meaningfully evaluate and validate algorithmic recommendations. Furthermore, clear accountability policies must be in place to delineate responsibility if and when AI-generated insights lead to adverse outcomes.

Regulatory oversight will continue to evolve as AI becomes more deeply embedded in health care, but as clinicians, we cannot afford to take a passive role in this process. We must actively engage with policymakers, contribute to developing ethical guidelines, and advocate for regulations that balance innovation with patient safety. The American Dental Association, the Food and Drug Administration, and global health organizations (such as the International Organization for Standards, known as ISO) are beginning to address these challenges, and our voices as practitioners and experts will be crucial in shaping the future of AI governance in dentistry.

Looking ahead, AI will continue to expand its capabilities, potentially revolutionizing everything from robotic-assisted surgery to real-time genetic analysis for personalized dental care. As innovation occurs, the ethical considerations surrounding these advancements will become even more intricate, demanding ongoing discussion, education, and adaptation. As leaders in our field, we must commit to staying informed, continuously refining our ethical frameworks, and ensuring that AI-driven technologies complement and do not compromise the fundamental values of patient-centered care.

The future of our profession depends not only on our ability to innovate but also on our dedication to using technology in ways that honor the trust placed in us by our patients and colleagues. Our capacity to objectively analyze patient needs for continuous quality improvement will only expand in the coming years. These changes will provide novel digital frameworks and transform dental care delivery. Most importantly, enhancing the patient experience by providing timely treatment, engaging their understanding of treatment recommendations with reason, and improving their outcomes over time with objective metrics fosters a patient-centric environment that can only augment the trust central to the delivery of care.



ACD CARES: A Framework for a Value-driven, Ethical, and Student-centered Dental Education

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ACD CARES: A Framework for a Value-driven, Ethical, and Student-Centered Dental Education

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Abstract

Dental education is renowned for its rigorous 4-year curriculum that consistently produces highly competent entry-level practitioners. However, the intensity of this training often leads to increased stress and mental health challenges among students as they strive to maintain pace in demanding programs. The prevalence of student issues related to stress and mental health is well-documented, with many students experiencing significant distress throughout their education.

The American College of Dentists (ACD) recently introduced a set of core values known as ACD CARES, an acronym for the ACD core values of accountability, competence, dignity, collaboration, advocacy, reflection, empathy, and stewardship. This paper proposes that dental educators should apply the ACD CARES values to the educational context to foster a more humanistic, student-centered learning environment. By integrating these values into the educational experience, we can help alleviate the mental health challenges faced by students without compromising academic rigor and prestige.

After introducing the need for this framework, we explore various interpretations and applications of each ACD CARES value within dental education. Faculty, administrators, and staff are encouraged to reflect on how these values can be incorporated into their teaching and institutional operations. Similarly, we urge students to embrace these core values as guiding principles for fostering a supportive and collaborative learning environment for all. The adoption of the ACD CARES values by academic dentists has the potential to create a more positive and sustainable culture in contemporary dental education, enhancing the well-being of students while maintaining the high standards of the profession.

Introduction

Dental education is widely recognized for its rigor, prestige, and commitment to the highest standards of care. Extensive documentation, however, has highlighted the significant levels of distress experienced by students and the subsequent adverse effects on their mental health and overall well-being.[1,2] Considering these concerns, this paper proposes applying the American College of Dentists' (ACD) CARES framework, an acronym for the ACD core values of accountability, competence, dignity, collaboration, advocacy, reflection, empathy, and stewardship, to didactic and clinical instruction, reinforcing and cultivating a humanistic, student-centered approach to dental education. We contend that, as part of this framework's implementation, a shift in perspective away from traditional instructional models is essential. Specifically, we argue that dental education can maintain its rigor while simultaneously promoting greater self-esteem and confidence in learners.

With an increased focus on person-centered dental care, dental educators train future providers to view patients holistically and encourage them to understand not only how oral health impacts overall quality of life but also how a patient's life circumstances influence their oral health.[3] This approach encourages providers to see patients as more than just a set of teeth, fostering a deeper appreciation of the interconnectedness between oral health and general well-being. In fact, as outlined by the Commission on Dental Accreditation (CODA), instruction and clinical experiences in comprehensive and compassionate care in dentistry are a standard all predoctoral programs must meet.[4] Moreover, the American Dental Association (ADA) Principles of Ethics and Code of Professional Conduct (ADA Code) and the *ACD*

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Ethics Handbook for Dentistry (ACD Handbook)[5] provide key principles and values that shape oral health provider behavior. These ethical principles and values shared across the dental profession encourage providers to respect ideals related to the autonomy, dignity, and humanness of their collective patient population. Indeed, many dentists pursue their profession *because* of their desire to serve others.[6-8] We argue that dental educators and institutions should be bound by those same ethical principles to ensure that students are treated with the same dignity and humanness with which they are later expected to treat their patients.[9]

In this article, we aim to demonstrate how the ACD CARES values provide an opportunity to guide the dental community, particularly administrators and educators, in policy creation, curriculum and instructional design, assessment strategies, faculty-student interactions, and programming to be more humanistic and to meet the unique needs of future students. In the sections that follow, we describe the significance of each value in the academic dental education context and provide potential practical applications for those involved in dental education.

The ACD CARES Framework for Dental Education

With possibilities for widespread application within the context of dental education, we propose that institutions adopt educational practices that align with the ACD CARES values. The following discussion provides recommendations and rationales that can be helpful for course directors, instructors, clinical supervisors, administrators, and students alike.

Accountability

Faculty, students, and everyone else involved in dental education should embrace a spirit of unity, dependability, and collaboration for the shared benefit of both patients and the profession. This includes following through on commitments, meeting professional standards, engaging in transparent communication, and being responsible for one's decisions and behavior. While students develop their own sense of professionalism, faculty can model accountability through acts of humility, such as the willingness to learn from their students. Accountability also requires an acknowledgment that dental educators, by virtue of their authority to shape curricula and institutional culture, are responsible for the systems they create. Consequently, if a negative culture emerges, it is incumbent upon faculty and administrators to actively pursue meaningful changes to improve the educational environment.

In practice, accountability in dental education might be demonstrated by faculty who work to continually improve their ability to accurately self-assess. Self-assessment can occur formally, for example, through peer evaluation as part of the promotion and tenure process, but it can also occur informally through one's intrinsic desire for self-improvement. To this end, faculty can ask for student feedback about their course or instruction throughout the semester and use that information to shift their pedagogical approaches. Indeed, educators can take a 360-degree inventory of others' perceptions of their instruction by conducting self-assessments and proactively seeking informal evaluations from peers and students.

Competence

Practitioners must demonstrate knowledge and competence in dental specializations and commit to continuous professional development as part of licensure requirements. Still, in a field that places immense value on lifelong learning, professional development related to *educational practice* in dentistry remains underemphasized.[10,11] The result is that many academic dentists enter their roles with limited experience as educators, making it essential for faculty to pursue additional training or mentorship from experienced educators to develop the skills necessary to facilitate dental education and training effectively.

For faculty seeking guidance in foundational concepts related to course design, assessment, and teaching methodologies, the equivalent of an institution's center for teaching and learning is an excellent resource. Here, content experts in education often offer services in various areas to support teaching and learning. Such centers may offer one-on-one and small-group instructional coaching, review course materials, aid in curricular revisions, provide inclusive teaching resources, and/or host workshops introducing innovative educational technology. Faculty and administrators can work collaboratively with on-campus instructional designers for large-scale projects, such as creating new courses and programs. These designers are equipped to provide guidance in all aspects of course and program design, from articulating learning objectives to designing learning activities and creating assessment plans. Faculty may also choose to audit education courses at their universities to learn more, often free of charge as a benefit of employment.

Whichever avenue faculty choose to pursue, acquiring new skills requires time and effort. To ensure time and effort are best utilized, professional learning frameworks provide guidance when choosing amongst the many continuing education

opportunities available. Relatedly, Kirkpatrick [12] outlined that successful professional learning should not only yield positive participant satisfaction upon completion but should also assess the learning that took place during the training, identify changes in attitude and behavior from participants because of the training, and assess the tangible impact of the training on student learning outcomes. Such an approach encourages faculty to seek opportunities that are engaging and sustained, assesses changes in participating faculty knowledge and/or skills, and includes longitudinal analysis and reflection of the training's impact on student learning outcomes.[13]

Dignity

Dental professionals must consciously eschew stereotypes and personal biases to treat all patients with empathy and compassion. Similarly, dental educators must extend their commitment to upholding human dignity for the students learning under their supervision. As adult learners, dental students begin their education with repertoires of different experiences, frameworks, preferences, and motivations, all of which individually and collectively impact learning. Recognizing and valuing a student's identity, previous experiences, knowledge, background, and autonomy in the learning process allows faculty to ground their instruction through a more humanistic lens. Rather than the "sage on the stage" approach to instruction traditionally used when teaching children, faculty might consider their role as the "guide on the side" when working with adult learners.[14] In other words, information "banking," unidirectional instruction from instructor to student, should be reconsidered in favor of approaches that foster respect for the various levels of previous knowledge and experience present in the classroom or clinical setting.[15]

Knowles [16] recognized the inherent differences in the way in which children and adults learn and proposed guidelines for achieving the best learning outcomes while preserving the dignity of adult students. These recommendations entail developing instructional plans that involve students in the learning process by providing rationale for the content taught, offering opportunities for experiences that mimic real life and allow for mistakes through task-based learning, facilitating experiences that are immediately impactful and respect learning preferences, and creating problem-based activities that encourage the application of content. Additional practical approaches include modeling respect by treating patients compassionately and respectfully, addressing students professionally, and choosing positive language throughout the learning process. Furthermore, faculty can foster critical thinking by offering constructive, immediate feedback after observation while encouraging learners to reflect on their practice and identify opportunities for improvement.[17]

Collaboration

Carl Rogers, a preeminent psychologist known for his humanistic philosophy, argued in favor of the need to see others with "unconditional positive regard." This attitude is useful for developing rapport and connection with others and helping others know that they are worthy of positive regard. [18,19]

One key to treating dental students with unconditional positive regard is to collaborate with them as junior colleagues. Seeing a student as a colleague helps reduce the power hierarchy inherent in professional training and encourages common respect. In the motivational interviewing literature, the principle of "come along side" provides a potent literal and metaphorical image of partnership and a more balanced distribution of power among multiple parties.[20] We do not suggest that students possess the same level of knowledge as faculty. Rather, we assert that both should consciously cultivate a collaborative spirit, working together toward a common goal.

Embracing the value of collaboration means being open to learning from students' perspectives and recognizing that the best solutions often arise when multiple people, both novice and expert, come together to share ideas.[21] As mentioned under the value of competence, collaborative faculty recognize they cannot be experts in all things and, therefore, demonstrate a willingness to collaborate with others who might help them develop skills outside of their expertise. We simply propose here that such collaboration be extended to students as well.

Advocacy

In Standard 4 – Educational Support Services, CODA requires that student services *must* include student advocacy.[4] In general, faculty and dental educators see the value in advocating for a diverse and equitable workforce and understand the value of a heterogeneous dental community.[22] They also advocate for their students to empower them to achieve optimal outcomes. Inherent in advocacy is the idea that those in power can work for the good of those who cannot do so for themselves.

Many students encounter barriers in their educational journeys. In turn, faculty can acknowledge and embrace the fact that students' challenges may be compounded by factors such as race/ethnicity, socioeconomic status, educational background, health literacy, and other variables. While such factors can lead to challenges, the extant literature also demonstrates the benefits of increased contact with people from diverse backgrounds in creating a healthy culture and a sense of respect.[23-25]

In practice, advocacy in dental education may look like connecting students to and facilitating residency applications, connecting students with opportunities in the dental community, offering mentorship, or providing comprehensive academic and clinical support. Faculty can also adhere to the value of advocacy by modeling patient advocacy. For example, volunteering at charitable events that improve access to oral health care can provide a powerful example of servant leadership to which students can aspire. Indeed, helping students see the profound impact that dental providers can have in assisting patients in navigating complicated health care systems is a rewarding experience for patients, practitioners, and dental students. Finally, faculty should consider participating in advisory boards for student organizations to gain a deeper understanding of student needs, thereby enhancing their capacity to advocate for meaningful changes.

Reflection

CODA recognizes the importance of self-evaluation and reflection during the learning process. To adhere to this framework, accredited institutions must ensure that predoctoral program students achieve competency in their ability to "demonstrate the ability to self-assess, including the development of professional competencies and the demonstration of professional values and capacities associated with self-directed, lifelong learning."[4] As dental educators are charged with modeling proper professional behavior for students throughout the predoctoral curriculum, so must faculty demonstrate the capacity for thoughtful reflection and self-assessment of their own instruction. When faculty work to develop students' ability to accurately self-assess and discourage students from treating above their skill level, they are similarly obligated to regularly inventory their own instructional skills and identify and remediate any deficiencies (see the "Competency" section above).

Moreover, building awareness of teaching and learning theory and its applications in the classroom leads faculty to honest realizations about the overall effectiveness of their didactic and clinical instruction. This critical analysis requires humility and objective assessment facilitated by reflection. Often, faculty self-report a misalignment of teach-

ing philosophy and classroom practices. For example, faculty may self-report a preference for classroom environments that promote critical thinking and problem-solving yet routinely develop assessments that rely heavily on rote memorization.[26] The maturation process of faculty self-assessment is necessary for continuous improvement and aligning theory and practice. To this end, faculty might consider completing a published rubric evaluating their methodologies (such as the Teaching Perspectives Inventory (TPR),[27] seeking feedback from students during class sessions, requesting a colleague to conduct a peer observation of a class, or proactively identifying trends on student evaluation surveys and drafting responsive action plans.

Empathy

As noted in the ACD Ethics Handbook, empathy is demonstrated by "focusing on a person's experience and responding with compassion . . . [and being] aware of other people's emotions and understand[ing] their feelings."[5] Psychological safety is a related notion that posits that individuals feel they can express and present themselves as they are and that, in such instances, they can take interpersonal risks, ask questions, speak up when concerned, and openly seek feedback without fear of reproach or negative consequences.[28] Psychological safety is cultivated when those in power empathize with those not in positions of power. To promote a more trusting educational environment, it is vital that faculty recognize the inherent power dynamic that exists in every faculty-student interaction. Without a psychologically safe environment, students may be less likely to ask questions in class or before procedures, potentially jeopardizing patient outcomes. Additionally, faculty can model respect with their students, and students, in turn, will likely mimic the art of respectful communication with their patients and create patient-provider trust.[29-31]

This empathic environment wherein all involved in patient care can feel comfortable talking about mistakes will significantly enhance patient safety, as discussed in *To Err is Human,* the seminal publication from the US Institute of Medicine on the environment in medical care related to patient safety.[32] When mistakes are not met with open dialogue, we neglect to learn from them and are deprived of the option to develop systems that may mitigate future mistakes.

Stewardship

Academic dentists are charged with ensuring alignment between curriculum and contemporary societal oral health needs. As stewards of the profession, academic dentists are uniquely positioned to implement meaningful enhancements within their courses that prepare students to become the next generation of value-based practitioners. To this end, dental educators are encouraged to embrace their status as change agents and design and teach courses in ways that challenge long-standing (and often outdated) institutional norms and priorities.

At times, accomplishing this requires working against institutional inertia, or the process that occurs when historical decisions and practices create a culture that impedes change.[33] Recognizing the existing gaps between optimal patient outcomes, the curriculum, and current instructional practices is the first step in promoting new standards in dental education.

Designing courses and clinical experiences that integrate evidence-based dentistry is an essential strategy that teaches students to think critically in pursuit of quality patient care. Faculty can incorporate appropriate technology and advocate for a fair allocation of resources to maximize learning and patient outcomes and prepare students for practice outside of the educational clinic environment.[34]

We charge students from all walks of life to treat faculty, administrators, staff, and all others involved in dental education with the same respect and values they expect to receive. A humanistic system is grounded in the empowerment of all stakeholders, unified by a shared set of values that foster mutual respect and advance educational excellence.

Additionally, faculty can advocate for co-curricular programming and clinical experiences that support the institution's mission while promoting equity and justice in dental education and providing oral health care. Demonstrating ethical sensitivity (e.g., establishing appropriate corporate partnerships and avoiding conflicts of interest) further contributes to an institution's goals of graduating students with the ethical and professional standards demanded of the profession.

Critically, stewardship exists not only in the written curriculum of a dental education program but is also reflected in the hidden curriculum that is imparted to students. Therefore, educators should be cognizant that unintended learning occurs outside of the curriculum through a student's observations and interactions with faculty inside and outside the classroom. This unwritten curriculum has the remarkable ability to shape students' values and behaviors.[35]

Summary

This paper has outlined how the ACD CARES value framework is useful in contexts beyond the intended audience of practicing oral health professionals. Applying the same framework to academic dentistry can help shape a more humanistic training environment where students can thrive. The brief interpretations of each value and its application to dental education serve as a foundation upon which others can build and refine, with the ultimate shared goal of providing dental students with an optimal educational experience, creating better practitioners, and creating a more equitable profession in the long run.

While it is important to consider each value individually, the adoption of the framework as a whole will impact positive changes. Future work could develop a standardized and validated inventory that assesses the degree to which faculty incorporate ACD CARES values into daily clinical and didactic instruction. Doing so would create an objective measure by which individuals or programs can monitor progress. In the spirit of student-centered education, if students are expected and encouraged to self-assess, then creating objective inventories of value-driven educational practices should also be encouraged.

While this paper was primarily targeted at those in positions of power in the dental educational system (e.g., faculty and administrators), it is important to note that students must also adopt and live by the ACD CARES value framework during their education and into their careers. We charge students from all walks of life to treat faculty, administrators, staff, and all others involved in dental education with the same respect and values they expect to receive. A humanistic system is grounded in the empowerment of all stakeholders, unified by a shared set of values that foster mutual respect and advance educational excellence.

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PERSPECTIVE

Dentistry's ethical responsibility to patients' overall health through sustainable practices and climate change awareness.

Toni M. Roucka, DDS, MA, FACD

The dental profession is not only about ensuring that the oral cavity is healthy and smiles are bright. As healthcare providers, dentists bear a significant responsibility for their patients' overall health and well-being. Put simply, the oral-systemic connection cannot be denied. This responsibility extends beyond the immediate clinical outcomes of oral diagnosis and dental procedures; it includes providers' duty to consider the long-term impacts of their practice on the environment and public health.[1-3]

It is undeniable that something is happening to our world's climate, and it has been well established that greenhouse gases from fossil fuels and other human activities are exacerbating the problem. As environmental degradation, plastic waste, and climate change become more widely acknowledged as serious dangers to global health, the dental and healthcare industries must embrace more sustainable methods for delivering care. In its simplest form, sustainability aims to meet the needs of the present without compromising the ability of future generations to meet their needs. This aim is both a duty and an opportunity to make positive change and inspire others to do the same.

The Nexus Between Dentistry, Health, and the Environment

Like all healthcare providers, dentists operate within an ecosystem in which their actions can have far-reaching effects. The materials they choose, the waste they generate, and the energy they consume all contribute to the healthcare sector's environmental footprint. The interconnectedness of dentistry, health, and the environment is not just an abstraction; it is a reality that we must be acutely aware of and take responsibility for.

Have you ever visited the grocery store and consciously tried to avoid buying anything wrapped or packaged in some kind of plastic? It is nearly impossible. The healthcare industry is even worse. Single-use plastics, used to increase convenience and ensure patient safety through infection control, are ubiquitous. Because of their abundance, plastics have now been found embedded in human tissues, including but not limited to the bloodstream and the brain.[4] Since plastics are man-made, this *is* a man-made problem. Although the long-term effects of these findings are not known, we must ask an important question: Are we making ourselves sick in the name of safety and convenience?

Plastic is making our oceans sick as well. Plastic waste in the ocean kills hundreds of thousands of marine mammals and millions of fish and birds every year.[5] Our planet's oceans are central to reducing greenhouse gases and stabilizing the global climate, generating 50% of Earth's oxygen and absorbing 25% of all carbon dioxide emissions.[6] The great Pacific garbage patch, estimated to be 2 times the size of Texas and 3 times the size of France, is located between Japan and California and is composed almost entirely of plastics.[7]

Climate change exacerbates health issues such as respiratory, vector-driven, and cardiovascular diseases, which can be further linked to environmental factors such as pollution and global warming.[8] The healthcare industry annually contributes between 4.4% and 5.2% of greenhouse gas emissions worldwide.[9] This is a significant amount.

Environmental health is a branch of public health that focuses on the relationships between people and their environment, promotes human health and well-being, and fosters healthy and safe communities. Our colleagues in this field tell us what we know intuitively: that people need to live in a clean and healthy environment to thrive and flourish. Flourishing people live a good, fulfilling life with a sense of purpose, unencumbered by unhealthy external factors. In turn, they are committed to good mental, physical, and social health in their lives and community. This communal focus includes family, work, education, ecosystem, politics, economics, and more. A healthy environment is a basic human need—for everyone. Our overall health is interconnected with the planet's health.

Ecological grief is also becoming a public health concern, especially among young people aged

Figure 1. The sustainability continuum in dentistry.

18 to 35. This age group encompasses most of our dental student population and a good portion of our patient population. These young people are fearful for the planet's health and future, and this fear is taking a significant toll on their mental health. One study demonstrated that the majority of participants felt frustrated or embittered by indifference to environmental decline and the inaction of corporations and government agencies regarding climate change.[10] Respondents were very worried about the environment, but their ecological grief left them feeling impotent to affect change. The same study found that when participants engaged in collective rather than individual action, they noticed a greater capacity to protect themselves against depression.[10] The study shows that when we provide young people with opportunities to engage in collective action, they can experience a restoration of hope. This then allows them to identify goals and reclaim a sense of agency and connection on this issue.

In 2023, the American Dental Education Association (ADEA) House of Delegates passed resolution 4H-2023, Climate Change and Implications for Health, Oral Health, and Oral Health Education, acknowledging our responsibility to train future oral health professionals in sustainable practice.[11] Putting words into action, ADEA has a new Special Interest Group (SIG) on Sustainability in Dentistry. This growing SIG brings together like-minded faculty and staff to exchange ideas on best practices for incorporating sustainability content in the curriculum and reducing waste in clinical operations while maintaining patient safety. In response, dental schools are beginning to incorporate sustainable dentistry education into their curricula to teach students to make informed decisions for their future practices. Many universities are even creating climate action plans to identify and implement sustainable solutions that decrease waste and energy consumption and educate future leaders on these issues.

Patients are becoming more knowledgeable about climate change and plastic waste issues as well. Incorporating sustainable practices into the office can be a practice builder, but most importantly, as stewards of health, dentists have an ethical responsibility to mitigate their contribution to environmental harm.

Touchpoints of Sustainability in Dental Care

Sustainability is impacted at many levels along the dental care continuum. It begins with how raw materials used to make dental products are sourced. From there, manufacturing processes are a factor, particularly those that create plastic (a fossil fuel derivative). Packaging and distribution then play a role. Procurement is next, which then leads to actual patient care. When considering the environmental impact of patient care, we must also account for the transportation that patients, dental staff, and dentists take to and from the office. Transportation is the most significant contributor to greenhouse gas emissions in this continuum. Finally, waste management represents the far end of this continuum *(Figure 1)*.

As you can see, the sustainability in dental care is a complicated topic. However, the opportunities for increased sustainability are present at every level. More action is needed at each

touchpoint in the process to make a significant difference in greenhouse gas emissions in the long term. This includes the need for continued research on more sustainable dental materials, manufacturing processes, and packaging options. While the issue of climate change can seem overwhelming, if everyone makes small changes where they can, the impact will be magnified and result in a real difference.

Making Change Now

The American Dental Association has excellent resources regarding sustainability in dental practice.[12] If you are planning a building or remodeling project for your home or office, consider following Leadership in Energy and Environmental Design (LEED).[13] LEED aims to provide a framework for healthy, highly efficient, and cost-saving green buildings that offer environmental, social, and governance benefits.

Below are some additional ideas for implementing eco-friendly options at each level of the sustainability continuum.

Materials and Sourcing

Dentists can use eco-friendly and biocompatible materials such as non-BPA-containing resins, ceramics, autoclavable suction tips, cloth patient bibs and sterilization cassette wraps, metal bib clips, and bulk delivery systems (as opposed to unit doses), just to name a few. These items have a lower environmental impact than their counterparts. Additionally, prioritizing suppliers that utilize eco-friendly and fair-trade practices and offer sustainable options, such as recyclable packaging, can help reduce a practice's carbon footprint.

Manufacturing

Extending the prior point about suppliers, dental practices can support reputable manufacturers that utilize environmentally sound practices. More research and development are needed in this area, and by opting for products made from renewable resources or those that have a smaller environmental impact during production (eg, less plastic), dentists can encourage industry leaders to continue developing and refining greener manufacturing processes.

Packaging and Distribution

Practices can reduce waste by selecting suppliers that use minimal, recyclable, or biodegradable packaging. Supporting local suppliers can also reduce the carbon footprint associated with transportation.

Procurement

Dentists should establish procurement policies that prioritize sustainability, such as buying in bulk to reduce packaging waste. Additionally, consolidating orders to reduce the frequency of shipments can lower the carbon emissions associated with transportation.

Patient Care

Dentists can promote preventive care and patient education to reduce the need for resource-intensive treatments due to infection or tooth loss. Thoughtful treatment planning processes also decrease the practice's carbon footprint by maximizing patient care procedures at each appointment and decreasing patient transportation to and from the office. Training staff members to prepare carefully for each procedure additionally limits the number of times they need to change personal protective equipment during appointments to run and get something, as the overuse of disposable items leads to large amounts of medical waste, much of which ends up in landfills or the oceans. Using digital records and radiographs also cuts down on waste. Opting for nontoxic and sustainable dental products and encouraging patients to choose eco-friendly dental

Dentists' ethical responsibility extends beyond the dental chair. As healthcare providers, dentists must consider the broader impact of their practices on their patients' overall health and well-being, including the health of the environment and the mitigation of climate change, often described as the greatest public health challenge of the 21st century.

care products at home are other ways to align patient care with environmental sustainability.

Energy consumption is another significant aspect of a dental practice's environmental footprint. Dental equipment, lighting, heating, and cooling all require energy, which may come from nonrenewable sources, contributing to greenhouse gas emissions. One way to address this is to invest in energy-efficient equipment when such an option is available. Additionally, switching to LED lighting and optimizing the use of natural light can reduce energy consumption. Dentists can also consider installing renewable energy sources, such as solar panels or geothermal heating and cooling, to power their practices. While the upfront costs may be significant, the long-term benefits to the environment, the practice's operating costs, and energy consumption can be substantial.

Water conservation is another critical area where dentists can make a difference. Whether for patient care, rinsing and sterilizing instruments, or general cleaning, dental practices consume substantial amounts of water daily. Water-saving technologies and practices can help reduce this consumption, contributing to a more sustainable operation. Consider, for example, a dry vacuum instead of a wet vacuum system.

Waste Management

There are many opportunities to explore reducing overall waste generation through careful resource management. Implementing strict recycling protocols and minimizing single-use plastics and other materials can significantly reduce the waste a dental practice generates. Dental providers should also properly dispose of hazardous waste, such as biohazards, amalgam, and sharps, to prevent environmental contamination. As part of this effort, it is important to become familiar with the local community's recycling program opportunities, as these programs vary widely across the United States. Many dental suppliers also offer recycling programs.

Conclusion

Dentists' ethical responsibility extends beyond the dental chair. As healthcare providers, dentists must consider the broader impact of their practices on their patients' overall health and well-being, including the health of the environment and the mitigation of climate change, often described as the greatest public health challenge of the 21st century. By adopting sustainable practices and reducing their environmental footprint, dentists can help protect public health in the face of climate change.

While transitioning to more sustainable practices may present challenges, the long-term environmental and public health benefits are clear. By embracing sustainability, dentists can fulfill their ethical obligations to their patients and contribute to a healthier, more sustainable future for all. Our choices today will shape the health of our patients, communities, and the planet for generations to come.

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The Time Is Now for Oral Health to Embrace Trauma-Informed Care



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Trauma-informed care aims to accomplish the following:

- **Recognize the pervasive effects of trauma and comprehend rehabilitation routes.**
- **Identify the telltale signs and symptoms of trauma in staff, patients, and families.**
- **Incorporate trauma understanding into practices, policies, and procedures.**
- **Avoid re-traumatization.**

Trauma-informed care (TIC) starts with a comprehension of trauma and the recognition of its profound impact on individuals and their well-being.[1] Trauma is pervasive and affects almost everyone in one way or another. This dynamic extends to dental care as well: people approach and respond to subsequent encounters with dental professionals based on past experiences, especially if trauma is involved. By adopting a trauma-informed approach, healthcare professionals can cultivate empathy and responsiveness to patients' needs and enhance their self-efficacy.

With trauma being commonplace, universal trauma precautions were developed as part of the TIC approach. TIC is a framework designed to understand, recognize, and respond to the effects of all types of trauma and can be adapted and applied to both clinical and learning environments. It involves creating a treatment environment where patients feel physically and psychologically safe and emphasizes the need for dental professionals to be aware of trauma in their patients' past experiences.[2] The case scenario below presents an opportunity to embrace a trauma-informed care approach and to see its benefits.

Case Scenario

Dr. Meandra Jenkins runs an affluent dental practice in a large suburb of a major metropolitan city. She receives a new patient, Alex, a 33-year-old professional who is highly educated and successful. He seems hesitant but polite during his initial appointment. His forms indicate he is a researcher who has not seen a dentist in 8 years. During the appointment, Dr. Jenkins notices Alex's unease. When the dental assistant, Elijah, tries to take X-rays, Alex appears tense but does not voice his concerns. Elijah reports Alex's discomfort to Dr. Jenkins before she begins her examination. Dr. Jenkins is unsure how to best approach her new patient and uncover the source of his anxiety thus far in the appointment process. An ideal scenario would unfold as follows.

A Trauma-Informed Approach

Dr. Jenkins incorporates a revised screening form designed with TIC principles, including questions about cultural background and previous medical experiences. After consulting his answers, Dr. Jenkins gently initiates a conversation, ensuring Alex knows the office is a safe space. Alex's form reveals he's Latino and Muslim. Dr. Jenkins shares about her travels to Peru, Costa Rica, and Colombia to establish common ground; Alex shares that his family has roots in Medellin, Colombia, and that his given name is actually Alejandro. On his form, he also shares that his family has had negative experiences with healthcare providers, lead-

Trauma impacts anyone regardless of age, gender, socioeconomic status, race, ethnicity, geography, religion, sexual orientation, or any other demographic characteristic.[3] Trauma is an almost universal experience of people with mental and substance use disorders.

ing to his own subconscious distrust. Dr. Jenkins inquires about the past dental and medical experiences that might influence Alex's feelings toward dental care. Alex eventually opens up about a traumatic dental experience in his childhood, where he was restrained and experienced significant pain without his consent. This was not indicated in his initial forms but is uncovered through a trauma-informed approach.

Why Is a Trauma-Informed Care Approach Needed?

One might ask, "Why is a TIC approach needed across the delivery of oral health care?" To answer this question, one must recognize the vast common occurrence of trauma across the globe. Trauma is a serious, pervasive, and expensive public health problem resulting from issues such as violence, abuse, neglect, loss, natural disasters, war, and other emotionally damaging events.[3] Trauma impacts anyone regardless of age, gender, socioeconomic status, race, ethnicity, geography, religion, sexual orientation, or any other demographic characteristic.[3] Trauma is an almost universal experience of people with mental and substance use disorders. Because of its ubiquity, the need to address trauma is increasingly viewed as an important component of effective health care delivery as a whole as opposed to being relegated to behavioral health care services.[4] Addressing trauma necessitates a multifaceted, multi-agency, public health approach, one that incorporates public education and awareness, prevention and early detection, and assessment and treatment tailored specifically to trauma. Our organizations, institutions, and practices must build knowledge and awareness of trauma and its extensive effects to optimize our effectiveness while minimizing harm to patients and team members alike.[5]

Understanding Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are traumatic events that occur during childhood and adolescence that can significantly impact brain development.[6] Examples of ACEs include physical, sexual, and emotional abuse and physical and emotional neglect. Aspects of a child's environment—such as growing up in a household with substance use, mental health challenges, or even instability due to parental separation or household members being in jail or prison—can also undermine their sense of safety, stability, and bonding. In response to these traumatic experiences and emotional distress, individuals may adopt risky health behaviors like smoking, substance use, and eating disorders, which can have lasting adverse effects on their health, including their oral health.[2] Research also suggests that severe ACEs in childhood may increase the risk of chronic conditions such as heart disease, cancer, depression, and anxiety.[7-10]

Unfortunately, ACEs are common. About 64% of US adults reported experiencing at least one type of ACE before age 18, and nearly 1 in 6 (17.3%) experienced four or more types of ACEs.[11] Scholars

have estimated that preventing ACEs could potentially reduce numerous health conditions. For example, by preventing ACEs, up to 1.9 million heart disease cases and 21 million depression cases could have potentially been avoided.[12]

Some people are at greater risk of experiencing one or more ACEs than others. While all children are at risk of ACEs, numerous studies have found inequities in experiences linked to the historical, social, and economic environments in which some families live. ACEs were highest among females, non-Hispanic American Indian or Alaska Native adults, and adults who were unemployed or unable to work.[13-15]

In one study, ACE-related health consequences cost an estimated economic burden of $748 billion annually in Bermuda, Canada, and the United States.[16] ACEs greatly contribute to stress and how humans respond to stress. Continuous and repeated activation of the fight-or-flight response can "burn out" the system, which is not intended to be in constant use. Furthermore, adults suffer physical health issues if adrenaline and cortisol are released too frequently into their bodies. High blood pressure, chronic inflammation, high glucose levels, and low bone density are just a few of the numerous side effects, which themselves can then result in anxiety, depression, digestive problems, headaches, heart disease, sleep problems, weight gain, and memory and concentration impairment.

There can also be a communal aspect of how trauma affects members of a particular group, demographic, and/or shared identity. Community trauma undermines both individual and collective resilience, especially in communities highly impacted by violence.[17] Racially and ethnically minoritized groups, people who are incarcerated, people experiencing poverty, and LGBTQAI+ populations have higher prevalence rates of stress. These elevated rates likely stem from historical trauma, which is passed on from prior generations and can impact populations who have experienced collective, long-term, and widespread adversity across generations. With stress being so prevalent in these groups, combating and mitigating it has emerged as a mounting problem and a dire challenge across varying identity lines. The American Psychological Association's 2022 Stress in America study found that 56% of Black American adults under the age of 35 reported that most days they are so stressed they cannot function.[18] Studies have also shown that LGBTQIA+ adults have consistently reported higher rates of anxiety and depression symptoms than non-LGBTQIA+ adults, regardless of age.[19]

How Are Racial Discrimination, Social Determinants of Health, and TIC Connected?

The connection between social determinants of health (SDOH) and TIC is significant, especially when addressing root causes like racism and discrimination. SDOH encompass the conditions in which people are born, grow, work, live, and age, as well as the broader set of forces and systems shaping the conditions of daily life. For example, more than 50% to 60% of health outcomes are thought to be caused by SDOH, and some research suggests that social determinants may be responsible for as much as 80% of health outcomes.[20,21] Racism and discrimination are significant social determinants that negatively impact health and can lead to chronic stress, mental health issues, and physical health problems. These issues also extend into the dental profession; as Smith states, "Studies have shown that healthcare providers, including dentists, are unaware of and insensitive to the social issues that underlie the biological or psychological concerns that patients from socially disadvantaged backgrounds face. Due in part to the dental office, including front-office and clinical staff, exhibiting

> **"Studies have shown that healthcare providers, including dentists, are unaware of and insensitive to the social issues that underlie the biological or psychological concerns that patients from socially disadvantaged backgrounds face. Due in part to the dental office, including front-office and clinical staff, exhibiting bias and differential treatment of patients receiving social assistance, dentistry has openly shown discriminatory and differential behaviors."[22]**

bias and differential treatment of patients receiving social assistance, dentistry has openly shown discriminatory and differential behaviors."[22]

Furthermore, discrimination experiences in dental settings have an additive effect on reporting fair/poor oral health and a suppressive effect on planning a future dental visit.[23] Patients from racially or ethnically marginalized groups may face the unfair dilemma of meeting their urgent dental or preventative care needs while receiving inhumane or discriminatory treatment. Indeed, research has shown that patient race affects the decisions made by individual dentists. Numerous studies that look at recommendations for tooth extraction versus retention or root canal therapy have revealed a prevalence for suggesting tooth extraction for Black patients.[24,25] According to other research, race and skin color influence the course of treatment for teeth with severe caries.[26]

Thus, a TIC approach is greatly needed to combat the ethical issues our profession faces that could be undergirded by racism and discrimination.[27] Oral health practitioners and the profession at large should work more to understand the links between racism, trauma, and oral health outcomes to eliminate this social harm. Researchers have specifically called for using and implementing evidence-based therapies, including TIC, as part of these efforts.

TIC addresses these issues in several vital ways:

- **Acknowledging Historical Trauma:** It recognizes the long-term effects of systemic racism and discrimination on individuals and communities.
- **Creating Safe Spaces:** It ensures that healthcare environments are free from bias and discrimination, promoting trust and safety.
- **Empowering Patients:** It encourages patients to share their experiences and participate in their care decisions, which in turn can help mitigate the effects of trauma.
- **Cultural Humility and Competence:** It trains healthcare providers to be aware of and sensitive to cultural, historical, and gender-related issues.

Trauma-Informed Care Approach as a Solution

Preventing re-traumatization is the main objective of TIC and is examined through the 4Rs model: *realization, recognize, respond, and resist* (Figure 1). This means that a trauma-informed approach involves *realizing* facts about trauma and how it affects people and groups, *recognizing* the signs of trauma, having a system that can *respond* to trauma, and *resisting* re-traumatization.[28] An organization that understands and applies the 4Rs exhibits the following characteristics and actions.

Realization

Every member of the organization or system, regardless of level, understands the basics of trauma and how it can impact people and their families, groups, organizations, and communities. People's experiences and behaviors are understood in the context of coping mechanisms developed to endure overwhelming circumstances and adversity,

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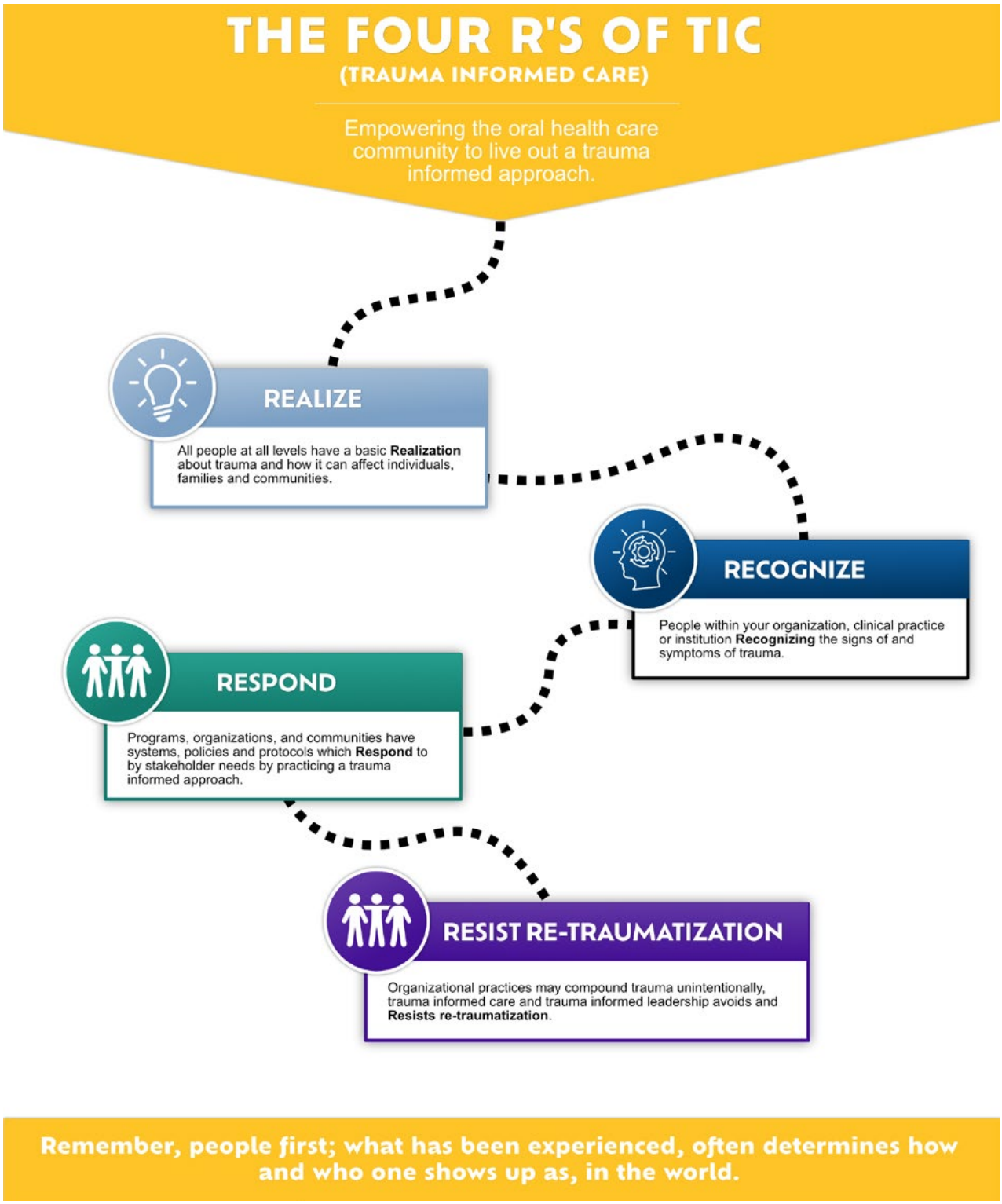

Figure 1. Universal Trauma Precautions, VCU School of Dentistry Public Oral Health Digital Bading Course, Oral Health Initiatives, Public Policy, and Community Perspectives

whether these are present now (eg, a staff member living with domestic violence in the home), occurred in the past (eg, a client who experienced abuse as a child), or connected to the emotional distress arising from learning about another person's first-hand experiences (ie, secondary trauma). Trauma is comprehensively addressed in settings for prevention, treatment, and rehabilitation since it can play a role in mental and substance use disorders. As a whole, the organization acknowledges that the effects of trauma extend beyond the health care delivery sectors, are crucial to other systems (like primary health care, criminal justice, child welfare, and peer-run and community organizations), and frequently impede successful outcomes in those systems.

Recognition

The people who work in the system, organization, or practice can recognize the signs of trauma. Both people who are receiving (patients) or providing services (team members) in these situations may exhibit trauma symptoms, which can be gender, age, or environment-specific. In addition to trauma screening and evaluation, workforce development, employee support, and supervisory measures are also used to detect trauma.

Respond

The program, institution, clinical practice, or organization applies trauma-informed ideas to every aspect of functioning. Systems account for an understanding that traumatic events affect everyone directly or indirectly involved. From the person who greets clients at the door to the executives and the governance board, all staff members change their language, behaviors, and policies to reflect the trauma that the adults and children who use their services and the staff who deliver them have experienced. A budget that encourages ongoing staff development, employee training, and leadership helps address the effects trauma has on staff and the clients they serve. The organization has professionals who have received training in trauma-informed methods. The organizational culture is founded upon the concepts of resiliency, healing from trauma, and recovery from trauma and promotes these concepts through mission statements, staff handbooks, and manuals. For example, the agency may state in its mission that it is dedicated to promoting trauma recovery. Agency policies may demonstrate this commitment by appointing individuals who have benefited from the agency's services to the board of directors or establishing client advisory boards. Agency training may contain materials to help supervisors support employees in managing secondary traumatic stress. In summary, the organizational infrastructure aims to provide a physically and psychologically safe environment. Lastly, leadership ensures that employees work in an environment that prioritizes justice, openness, and confidence.

Resist Re-traumatization

The goal of a trauma-informed strategy is to prevent re-traumatization of all parties involved, including staff, clients, and patients. Corporate purpose fulfillment, client healing, and employee morale are all hampered by the toxic or stressful environments that organizations unknowingly create. Workers in trauma-informed environments are taught to recognize how organizational practices might trigger painful memories and re-traumatize clients who have previously experienced trauma. For example, they are aware that putting a neglected and abandoned child in a seclusion room or shackling a victim of sexual abuse might cause re-traumatization and hinder their healing and recovery.

Dentists, like other medical professionals, frequently treat patients who have endured a variety of traumatic life experiences. Similar in concept to universal precautions related to infection control and safety measures in health care settings, universal trauma precautions are a means of applying trauma-informed principles consistently and broadly in all interactions, recognizing that trauma may

not always be visible or disclosed. [29,30] There are six widely accepted guiding principles to TIC and its fundamental components:[31]

1. **Safety:** Ensure both physical and emotional safety. This includes creating a welcoming environment and being aware of the patient's comfort levels during interactions and procedures.
2. **Trustworthiness and Transparency:** Be clear about what to expect. Explain procedures, respect confidentiality, and consistently build trust through honest communication.
3. **Peer Support:** Encourage peer support through mentorship programs or support groups, helping individuals connect with others who have had similar experiences.
4. **Collaboration and Mutuality:** Involve the patient or individual in decision-making. Recognize that healing happens in relationships and that power is shared in interactions.
5. **Empowerment, Voice, and Choice:** Encourage individuals to share their concerns and preferences. Validate their experiences and provide choices to help them feel more in control.
6. **Cultural, Historical, and Identity Issues:** Be sensitive to and respect cultural, historical, and identity-related factors. Understand and acknowledge how these issues may impact the individual's experience and response to care.

By adopting universal trauma precautions, healthcare providers, including dentists, can create an environment that is conducive to healing and supportive of all individuals, regardless of their trauma history. This approach promotes trust, reduces anxiety, and fosters a positive experience for everyone involved, ultimately leading to better outcomes.

Invitation for Action

Now that you have become familiar with TIC, let's refer to our opening case scenario and utilize a trauma-informed approach to taking patient and medical histories. Here are some sample questions that might help patients feel comfortable disclosing trauma: "Have you ever experienced a traumatic event that significantly impacted your life? Can you tell me about a time when you felt unsafe or threatened? Have you ever been exposed to violence or abuse in your childhood or adulthood? Do you have any experiences with natural disasters or major accidents that caused significant distress? How do you feel when discussing these experiences?" The goal is always to ensure that one approaches the topic with sensitivity, validates the patient's feelings, and allows them to share at their own pace. Actionable steps might include the following:

Training and Education:

- Attend workshops and training sessions on TIC principles and practices. Encourage your team to participate as well.
- Stay informed about the latest research and developments in TIC.

Screening and Assessment:

- Implement screening forms with questions about past medical and dental experiences, cultural background, and potential trauma.
- Use these forms to identify patients who may benefit from a trauma-informed approach.

Patient Communication:

- Develop a communication strategy hat prioritizes empathy, active listening, and clear explanations.
- Create patient education materials that explain TIC principles and how they are applied in your practice.

> **"Have you ever experienced a traumatic event that significantly impacted your life? Can you tell me about a time when you felt unsafe or threatened? Have you ever been exposed to violence or abuse in your childhood or adulthood? Do you have any experiences with natural disasters or major accidents that caused significant distress? How do you feel when discussing these experiences?" The goal is always to ensure that one approaches the topic with sensitivity, validates the patient's feelings, and allows them to share at their own pace.**

Continuous Improvement:

- Regularly review and assess the effectiveness of your TIC practices. Seek feedback from patients and staff to identify areas for improvement.
- Adapt and refine your approach based on this feedback to ensure ongoing progress and effectiveness.

It is critical to recognize that trauma can take many different forms. Consider a child who survived a life-threatening illness. He never flinched at vaccinations before his ICU stay, but ever since he was there, he has become very nervous around needle jabs. Consider a woman who, after years of invasive infertility treatments and despite becoming a mother, sobs uncontrollably at her simple routine gynecologic exam because it touches a nerve of helplessness and failure. Anyone can have a history that impacts their encounter with the medical system, and TIC entails the open-mindedness and compassion that all patients deserve. As providers, we need to recognize that many patients have a history of physical, sexual, and/or emotional abuse, as well as serious illnesses and negative experiences within healthcare settings.

Again, trauma is not always visible or disclosed, but its effects can manifest in various ways, including anxiety, fear, and avoidance of dental care. Therefore, consider integrating TIC principles into your daily practice to create a safe, supportive, and empowering environment for all patients. This approach enhances both the patient and practitioner experience and contributes to better health outcomes and a more positive, supportive work environment for your team. A dental professional's ethical and professional duty is to react with compassion, empathy, and understanding. Together, we can make a meaningful difference in the lives of our patients and foster a culture of healing and trust in our practices.

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ETHICAL CONSIDERATION

The Ethical Dilemma of Social Media

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Technology and digital communication have radically altered how we communicate and interact. As a consequence, the ethical use and application of technology within the profession, particularly the utilization of social media, is essential to preserving and upholding the tenets of professional conduct across dentistry.

Introduction

Dentistry has a long-established history of upholding high ethical and professional standards through organizations such as the American Colleges of Dentists (ACD) and the American Dental Association (ADA). This legacy has helped the profession rigorously pursue the highest quality of patient care, education, and training for students and instill its practitioners with a steadfast, lifelong commitment to continuous self-improvement. These are lofty and admirable goals that have been passed down over the years, but with shifts in and between generational norms and changes spurred by industrial revolutions, the lines around ethical and professional standards have begun to blur. Technology and digital communication have radically altered how we communicate and interact. As a consequence, the ethical use and application of technology within the profession, particularly the utilization of social media, is essential to preserving and upholding the tenets of professional conduct across dentistry.

The third industrial (3IR), or the digital revolution, created a technological boon. With the onset of the fourth revolution (4IR), the fusion of physical, digital, and biological dimensions occurred, resulting in immediate connection and complex communication and information transfer methods.[1] This change, in many cases, has outpaced our understanding around and governance of communication.[2] In recent years, social media has emerged as a key driver of particular interest in the communication and data exchange arena. Early on, social media primarily focused on social connections and interactions. It has since evolved into a major influence in all forms of communication, impacting individuals, businesses, industries, and even societal trends.

This article will explore the benefits and challenges of social media in the dental profession and offer ideas about how to best utilize its positive aspects while preserving the profession's ethical values.

Role of Social Media in Dentistry

Social media has become a staple in the dental and health professions nationally and globally, and its increased utilization has enhanced the transfer of information from private to public sectors. For this article, social media refers to websites and online platforms that allow users to create and share content and interact with others individually or collectively. Examples include Twitter (X), Facebook, Instagram, LinkedIn, Snapchat, TikTok, and many others.

Social media emerged in the early 2000s and has evolved from siloed platform systems to highly interconnected environments, allowing smooth interconnectivity and the sharing of content.[3] Despite its limited history, social media has become a crucial part of modern society, with billions worldwide using these platforms to communicate, share information, and develop connections.[4] Generationally, millennials

established and shaped how social media is used, while Generation Z (Gen Z) has accelerated and expanded its use, largely through the promotion of content that is brief and received in real time.[5] Millennials (born 1981 to 1986 or 2000, depending on the source) and Gen Z (born 2001 to 2020 or 1997 to 2012, depending on the source) are digital natives, meaning they have grown up with social media technology.[6] Notably, millennials comprise 75% of the global workforce, with Gen Z only being 5% despite making up 25% of the US population.[7] These numbers clearly indicate that as we move into the future, these generations will compromise much of the dental workforce and significantly impact the use of social media in how we work, communicate, and connect in all areas, specifically with patients.

Benefits of Social Media in Dentistry

Since social media now serves as an essential tool for communication in areas such as health, entertainment, education, and even social and political movements, these communication channels offer significant advantages, especially as it relates to keeping people connected, promoting real-time information/education, and even encouraging health assessment no matter where one is located geographically. With the sudden explosion of artificial intelligence (AI) and its ability to mimic human intelligence, emerging tools' combined data-processing capabilities, learning algorithms, and predictive models have revolutionized how users interact with social media platforms.[8] Further, access to social media can enhance the patient/provider or student/faculty dynamic and can be beneficial for both: 1) for patients, it can lead to better health outcomes through self-monitoring, real-time communication, scheduling, and quality of care, and 2) for students, it can facilitate greater access to faculty, audiovisual materials, interactive learning, community building, and ultimately greater academic success. As part of this educational dynamic, providers/faculty use social media in various ways to communicate and enhance the quality of care, create professional communities for lifelong learning opportunities, and elevate practice visibility. Social media can also assist research thought leaders with developing new approaches to challenging or complex dental problems.

Ethical Challenges and Risks

While social media has many demonstrated benefits, its use also entails ethical dilemmas associated with patient care and education. The oral health care and education settings pose problems with a broad acceptance of social media tools, as there is always the potential that protected or classified information that does not belong in the public domain may be shared. Importantly, social media platforms have access to an enormous amount of personal data, and there are clear challenges with how this type of data is being stored, collected, and used.[9] Users must carefully consider the risks around social media and sensitive information, especially as social media has made the inappropriate sharing of such information more readily available and consequential.[3,4,10] Relatedly, the broad use of social media has led to a rise in data breaches, which have impacted informational security.[11] All information posted on social media platforms can lead to oversharing and issues around personal identification, especially when such information is confidential. These platforms also present opportunities for disseminating misleading and potentially harmful information.

In response to these topics, the ACD has published a position paper on the use of digital communication in dentistry. To honor the professional standards of dentistry, the ACD holds that dentists should adhere to the following 8 principles when engaging in the use of digital communication, including social media:[12]

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1. The professional relationship between dentist and patient should not be compromised by the use of digital communication.
2. Digital communication should not permit third parties to influence the dentist-patient relationship.
3. Dentists should exercise prudence to ensure that messages are professional and cannot be used in unprofessional ways by others.
4. Personal data should be protected, and professional communication should be separated from personal communication.
5. Dentists should be generally familiar with the potential of digital communication, applicable laws, and the types of information to which patients have access on the Web.
6. Practitioners should maintain an appropriate distinction between communication that constitutes the practice of dentistry and other practice-related communication.
7. Responses to criticism on digital media should be managed in a professional manner.
8. Dentists should be prepared to make more accommodations for patients than patients make for dentists in resolving misunderstandings about treatment

These guidelines are comprehensive, targeting frequently problematic areas in the dental profession when using social media. Other concerns with social media are related to student learners and involve excessive use, cyberbullying, inappropriate misinformation, mental health problems, and dishonesty. [13,14]

The ability to access large amounts of data and disseminate it broadly has arrived, and we cannot turn back. As a consequence, attention must be consistently given to potential adverse outcomes of leveraging social media platforms as a mechanism to provide information and content. While many see tremendous value in social media, some practices may well violate codes of ethics in patient care, professionalism, education/training, and research.

Moving Forward: Ethical and Professional Considerations

Maintaining integrity while on social media is paramount in building and maintaining trust. Trust benefits our patients, communities, trainees, and the profession as a whole. Once a practitioner or office establishes a presence on social media, it is difficult to erase that digital footprint. To avoid intentional or unintentional ethical breaches, it is vital to learn about and consistently apply the ADA

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principles of patient autonomy, nonmaleficence, beneficence, justice, and veracity along with the ACD core values of accountability, competence, dignity, collaboration, advocacy, reflection, empathy, and stewardship. In enacting these values, the dental professional will gain an excellent foundation for utilizing social media and its various platforms.[15,16] To help those in the profession attain this goal, the ADA has also published a social media policy for dentists, highlighting 5 rules of engagement with social media:[17]

1. Do not post copyrighted or trademarked content without permission from the content owner or a citation, as appropriate.
2. Do not disclose any of the practice's confidential or proprietary information.
3. Do not post information about a patient, employee, or another individual, including a testimonial, photograph, radiograph, or even a name, without the appropriate written consent, authorization, waiver, and release signed by the patient (or the patient's guardian).
4. All postings on your social media sites should be monitored for compliance by a designated individual in your practice. Keep in mind that if your practice has a policy to monitor media sites and fails to do so (or fails to act on information discovered through monitoring), it could be exposed to liability. Inappropriate, derogatory, or disparaging postings should be removed at your discretion—err on the side of caution.
5. Maintain final approval on postings, even if you designate an employee to monitor and manage social media. Employees shouldn't speak on the practice's behalf unless you have authorized them to do so.

Social media is here to stay, and managing it effectively will allow dental practitioners to enjoy its advantages while avoiding its pitfalls.

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PERSPECTIVE

Preventive Dentistry and Access to Care: Ethical Imperatives Highlighted by the COVID-19 Pandemic

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For decades, dentists have been scheduling patients for regular cleanings and checkups as a cornerstone of preventive dentistry. If asked prior to COVID, every dentist would have said that dental care was an essential service. After the pronouncements of the WHO that non-essential services, such as preventive care, be postponed, there was a backlash from organized dentistry.

The profession of dentistry carries many ethical obligations, especially around the need for dentists to remain patient-centered and responsive to society's needs.[1] This article addresses 2 of these ethical issues: ensuring access to care and having a preventive and proactive focus, both of which can help dentists fulfill their professional and societal obligations.

In Ontario, the Royal College of Dental Surgeons of Ontario (RCDSO) listed routine dental cleanings and preventive therapies as "non-essential care."[2] In August of 2020, the World Health Organization (WHO) advised that non-essential dental treatment be delayed in areas of uncontrolled community transmission of COVID-19.[3] This guidance stemmed from the belief that routine dental procedures involving air rotors and ultrasonic scalers generate aerosols that increase the risk of viral transmission. As a result, for the first 3 months of the pandemic, in-person visits to dentists were restricted to emergency care and essential treatment only. Non-essential appointments were postponed, and many patients, including those with emergent problems, stayed away out of fear of contracting COVID. The RCDSO also recommended emergency screenings be done using teledentistry. Non-urgent procedures were not permitted until May 2021. Even with regular care being permitted, the Centers for Disease Control and Prevention (CDC) updated its treatment advice to dentists on July 13, 2021, to avoid using aerosol-generating procedures for patients with suspected or confirmed COVID-19 infections.[4] The RCDSO then updated its recommendations to Ontario dentists on July 29, 2021.[5]

For decades, dentists have been scheduling patients for regular cleanings and checkups as a cornerstone of preventive dentistry. If asked prior to COVID, every dentist would have said that dental care was an essential service. After the pronouncements of the WHO that non-essential services, such as preventive care, be postponed, there was a backlash from organized dentistry. Debate ensued about what constitutes *essential* oral health care services and whether oral health care service interruptions were justified in the interest of public health.[6] Notably, lack of regular preventive care leads to deterioration of periodontal health as well as progression of carious lesions and stress-related damage to both hard and soft tissues. Almost certainly as a consequence of reduced preventive care, the American Dental Association (ADA) Health Policy Institute (HPI) published the results of a survey in September 2020 in which dentists reported an increase in carious lesions of 26%, an increase in periodontal disease of 30%, and a large increase in stress-related damage of over 50% which

included increases in bruxism (60%), chipped and cracked teeth (53%), and TMJ disorder symptoms (53).[7] Such results clearly show that the COVID-19 pandemic negatively impacted patients` oral health.

What, then, about the patients whom dentists are not seeing? It is well known that when patients lose their jobs and/or dental insurance, they stop seeking routine dental services. Many patients have experienced job losses because of the pandemic and its resulting economic effects. The travel industry, entertainment, food, and hospitality services, to name a few, were severely impacted by COVID-19. In a study commissioned by CareQuest (April 2021), an estimated 6 million American adults lost their dental insurance during the pandemic.[8] Many adults faced barriers to receiving much-needed oral health care even before the pandemic, and now, with so many people losing their dental benefits, dentists have seen a surge in oral health diseases.[8]

According to a recent Statistics Canada *Health Reports* publication (Feb. 2024),[9] "of the 44.5% of Canadians who reported needing dental care in the 12 months before the survey, 5.8% did not receive the care they reportedly needed." Nearly 20% with specific needs had their appointment canceled, rescheduled, or delayed, an issue that "was more common for individuals with unmet dental care needs (46.9%) than it was for those who had received dental care (17.1%)." For patients who required urgent care, "23.3% . . . experienced pain in their mouth or teeth in the previous 12 months," and "among those with dental pain, 64.2% sought treatment, and the majority (86.4%) received the treatment they needed." Of note, almost a full third of these patients "avoided care for their dental-related pain because of fear of contracting COVID-19." The report went on to suggest we should continue to monitor these issues to "determine whether these COVID-19 service interruptions will have lasting effects on Canadians' oral health."

Notably, periodontal disease has long been linked to systemic conditions such as diabetes and cardiovascular disease.[10] A study led by a McGill researcher suggests that periodontal disease may be associated with higher risks of complications from COVID-19, including ICU admission and death.[11] Relatedly, researchers discovered that COVID-19 patients with periodontal disease were 3.5 times more likely to be admitted to the intensive care unit, 4.5 times more likely to need a ventilator, and 8.8 times more likely to die when compared to those without periodontal disease. Researchers have noted that "there is a very strong correlation between periodontitis and COVID-19 disease outcomes."[12,13]

It is quite clear from these findings that optimum oral health may not only impact patients' systemic health but also may help them survive COVID-19 if infected. What is also clear is that dentists need to take a new approach toward prioritizing low-cost preventive services moving forward so that more people, particularly those who may be at higher risk of such diseases, can receive needed care.[14] There is also a need to reduce risk by limiting aerosols. According to Habib Benzian, not everything we used to do with the drill needs to be done with the drill or ultrasonic scaler.[6]

In order to best serve our communities, dentists and hygienists need to overcome their patients' fears and the confusing guidance by regulators, the press, and health departments with better communication, different techniques, and increased advocacy for including preventive dental care in Social Service benefits. While it will take some time before patients and dentists feel completely comfortable with the new normal, maintaining a strong ethical focus of being proactive on patient-centered prevention and advocating for greater access to care will help us navigate these changing times.

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REVIEW

Things that Go Bump in the Night

Jean L. Creasey, DDS, FACD

What keeps you up at night? This was a query posed to panelists and attendees at this year's American College of Dentist (ACD) Fellows Forum presentation on "The Dark Side of Leadership." What followed was exceptional.

Click button for the 2024 Fellows Forum in New Orleans, Louisiana.

(left to right) Dr. Janet Southerland, Stephen Pachuta, and Dr. Sree Koka at the 2024 Fellows Forum in New Orleans.

The discussion considered the various traps, snares, and foils faced regularly by those who serve in leadership. We discussed mistrust of colleagues, misuse of influence, unrealistic expectations, and harsh judgments, topics that could make any room full of seasoned leaders squirm in their chairs. The conversation addressed the fact that while we may try hard to channel "our better angels," we don't always do so perfectly, sometimes allowing our negative attitudes, skepticism, "me-centered" impatience, and disrespect to creep in around the edges of our leadership personas. As ACD leaders who promote the four pillars of ethics, professionalism, leadership, and excellence, we rarely talk about the less luminous side of our human nature.

The panelists, Drs. Janet Southerland, Carlos Smith and Stephen Pachuta, along with moderator, Dr. Sree Koka, each have stellar leadership experience in academic, military and institutional settings. They vulnerably shared stories of their own "less-than-stellar" moments and the experiences that kept them up at night. They discussed the importance of understanding our own leadership style and how to avoid toxic leadership and stressed that using a variety of leadership approaches, dependent on circumstances, is the most effective approach. They explored examples of "moral distress," which occurs when you are aware of the right thing to do but somehow feel unable to do it. They talked about the importance of self-care and life balance. I especially appreciated that they offered practical advice on increasing our self-awareness and introspective capacities, sharing relevant reading lists and references on the topic. It was all "news we could use," and attendees were quick to capture the information in screenshots.

The level of audience engagement further evidenced how deeply the topic resonated with attendees. Incoming ACD president Dr. Bob Faiella agilely ferried the microphone around the ballroom venue filled with eager questioners and commenters. One attendee related an episode when they felt diminished

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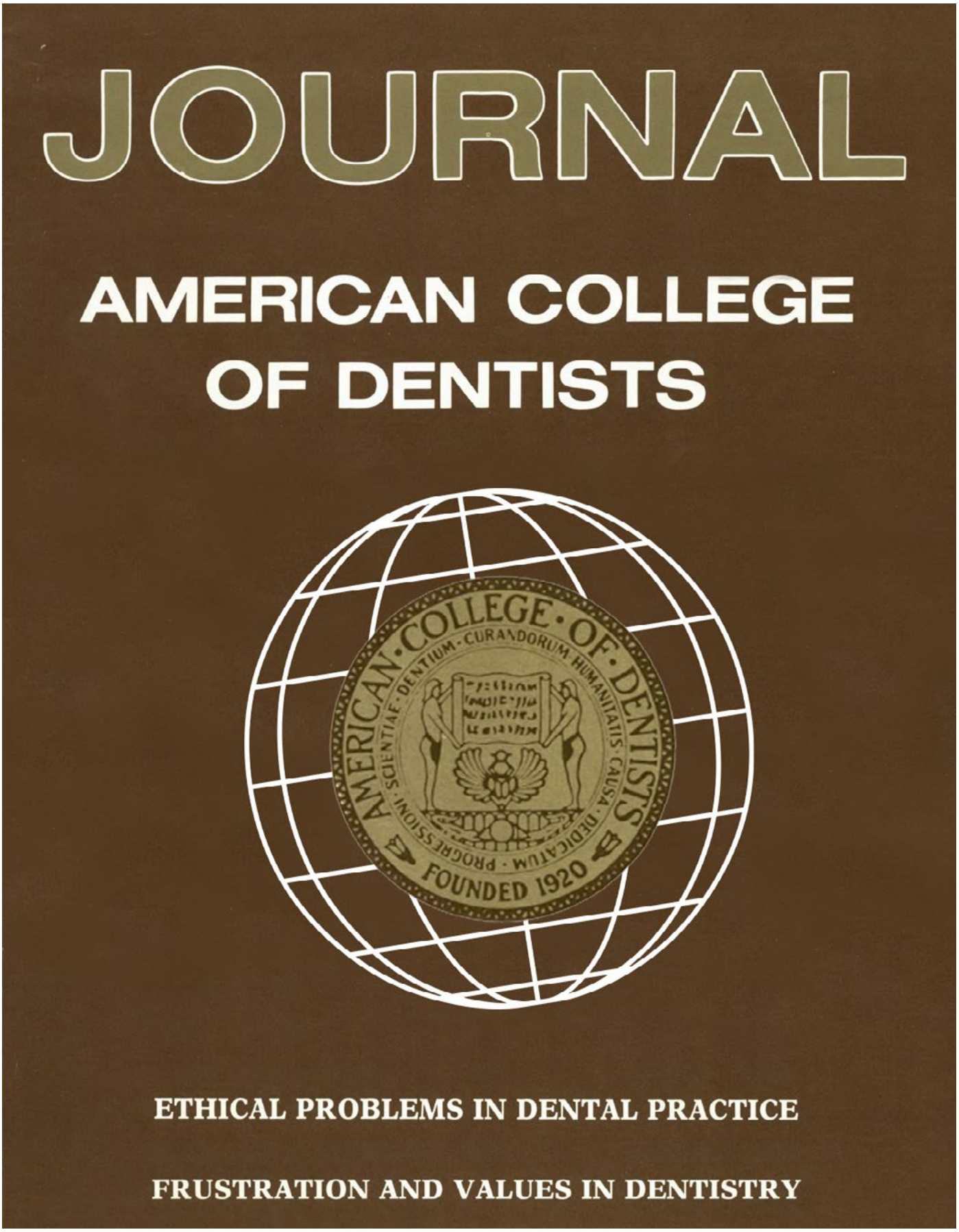
and humiliated by a fellow section board member pushing their agenda. No one supported them against the bullying. This elicited a conversation about the obligations of "witnesses" in supporting fellow leaders who experience abuse versus putting our heads in the sand and being grateful we were not targets as well. This discussion raised questions about what makes otherwise good people behave badly. We have all been there. Another attendee asked the panelists about the role of forgiveness when breaches occur. No one offered pat solutions but instead responded thoughtfully. Wisdom in the face of life's toughest questions cannot be "googled." Our best discernments come from personal reflection and honest conversation with those we trust.

As accomplished professionals, no matter what we've already achieved, we cannot assume the work of personal transformation is complete. This evolution requires constant attentiveness and focus. We were reminded a few hours later during the convocation that sainthood does not follow by default when fellowship (or a leadership position) is conferred. In fact, the work has just begun. We must be aware of our Achilles' heels to lead and serve optimally. We need to recognize our drivers, biases, and, ultimately, the limitations of our human nature. Creating space and an environment to openly discuss leadership challenges was bold, but it was needed. Bravo to ACD leadership for bringing this topic and these leaders to our national forum.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ETHICAL PROBLEMS IN DENTAL PRACTICE
FRUSTRATION AND VALUES IN DENTISTRY

Ethical Problems in Dental Practice

Jeffrey A. Hollway*
Donald R. McNeal**
Stanley Lotzkar***

Dentistry is very much a human to human profession which has as its end the well being of the people served, and inherently involves the public trust. As a result, every day the dental practitioner, whether recognized or not, faces ethical dilemmas that arise from the nature of the professional relationship with patients. These daily encountered situations are all value based in some way and require value judgments at a very concrete level. In response to this atmosphere of professional accountability, dental schools are manifesting greater interest and concern with the ethical behavior of their students and are helping students to confront and grapple with ethical issues and problems before they even step into a dental operatory. (Odom, 1982)

The University of Florida's College of Dentistry offers a formal course in dental ethics and jurisprudence as well as integrating in the curriculum other, less formal, instructional opportunities for students to increase their acumen in dealing with ethical problems in dentistry. The dental ethics and jurisprudence course was modeled after a successful professional ethics program developed by the University of Minnesota School of Dentistry (Bebeau, 1982). The primary course objectives are to increase student competence in recognizing underlying ethical dilemmas in daily practice, and to help them acquire sufficient skill in the process of ethical inquiry and decision-making so that they can deal with ethical dilemmas in a moral and responsible manner. The instructional methodology used in this course centers on a series of small group seminars which critically examine hypothetical as well as student generated dental ethics problems. Case histories are used to increase interest and relevance as well as to draw out broad ethics principles which may be in conflict. In an attempt to make this course work as pertinent and practical as possible, a group of active Florida practitioners were surveyed in order to identify moral and ethical issues of concern among members of this state's dental community .

It is important to realize that the image of the dental profession is exactly what dentists have made it over the years.

Academy One Hundred Survey

The Academy One Hundred is an alumni association committed to the achievement of quality dental education in Florida. A brief questionnaire was sent out to the Academy membership under the signature of the chairman of the University of Florida College of Dentistry's Department of Community Dentistry. The members were asked to respond candidly and anonymously to each of the following open-ended questions:

1. Please describe briefly the two or three (or more) most troubling moral/ethical dilemmas which you have experienced in the course of your dental career in the last several years.
2. What training did you receive in dental school which helped you to deal with these dilemmas?
3. What improvements/changes could have been made in your dental education which may have better prepared you to deal with moral/ethical dilemmas in dentistry?

Of the 268 questionnaires mailed out, 78 were answered and returned—a 29 percent response rate. Such a disappointing return may have been due to the format and content of the questions. That is to say, the open-ended questions required the respondents to write out their answers in contrast to more traditional questionnaires that allow the busy dentist to quickly and conveniently "check the appropriate box." Also, the content of the questions dealt with a topic about which many of the

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practitioners may have felt too uncomfortable or too unknowledgable to discuss openly even though asked to do so anonymously.

Question #1: Troubling moral/ethical dilemmas experienced in the course of one's dental career in the last several years.

Sixty-one of the seventy-eight respondents addressed this question and identified specific situations in dental practice which they perceived as creating troublesome ethical problems. The remaining eleven respondents either did not answer the question or wrote a very broad answer describing their general concern and frustration with the overall ethical climate in dentistry. A total of 123 ethical problems or issues were contributed by the sixty-one respondents. Each cited problem or issue was written on a separate index card, and then all were carefully read, labeled, and sorted according to common themes. Five major categories of ethical problems in dentistry emerged from this card sort. These categories are presented in Table I along with a listing of the specific ethical areas of concern cited within each category. The categories are rank ordered beginning with the category having the most citations of ethical problems or issues.

1. Policing and Protecting the Profession

Overall, this was the most cited category of troublesome ethical

Table I ACADEMY ONE HUNDRED SURVEY
Cited Ethical Problems/Issues (N = 123)

	# Citations
1. *Policing and Protecting the Profession* (32%)	
a. Advertising and marketing practices	16
b. Methods of charging and collecting fees	11
c. Closed panel practices and 3rd party control	4
d. Performing specialty services when not qualified	4
e. Reporting an incompetent dentist	2
f. Prescribing drugs for nonpatients	2
2. *Interactions With the Patient* (31%)	
a. Communicating without critically reflecting on professional peers	19
b. Patients requesting the falsifying of billing	10
c. Informing patients of dental needs and treatment choices	5
d. Establishing a respectful interpersonal relationship with patient	2
e. Unprofessional personal involvement with patient	2
3. *Clinical Treatment Practices* (22%)	
a. Compromising the quality of delivered dental care	18
b. Promotion of overtreatment	9
4. *Working Relationship With Professional Colleagues* (8%)	
a. Pirating patients or staff from professional colleagues	4
b. Dealing with conflicting opinions or treatment plans of professional associates	3
c. Confronting a professional peer about inadequate performance	2
d. Referral practices among professional colleagues	1
5. *Personal Professionalism* (7%)	
a. Monitoring and evaluating the quality of one's personal performance	3
b. Putting the patient's interests ahead of one's personal interests	2
c. Placing patient service before monetary gain	2
d. Taking a responsible attitude toward employee well being	1
e. Serving as an ethical role model in the community	1
	123

problems or issues. As Table 1 shows, the greatest concern within this category was with advertising and marketing practices. Some of the expressions of concern included statements that any type of advertising was professionally unethical, that some dentists were resorting to any means possible to increase their patient volume, and that retailing dentistry will lead to a reduction in the quality of dental services. One dentist noted the practice of "advertising basic services at a low fee then adding extras or conditions which bring the fee up to or above the usual fees charged within the community." Another respondent warned that "bait and switch" practices and "hucksterism" will reduce dentistry to the merchandising level and, thereby, lower the image of dentistry as a profession.

The second leading ethical issue in this category related to the methods of charging and collecting professional fees. Some of the unethical practices frequently cited included: varying fees for the same service performed, charging higher fees for insurance cases, charging for services not rendered, not declaring cash received to avoid taxation, and a referring dentist collecting the consulting dentist's fee.

A number of respondents raised the issue of professional qualifications. That is to say, dentists who stretch their limitations and perform services for which they are underqualified, and the dilemma of reporting an incompetent professional colleague to the State Board or the A.D.A. Other respondents complained about closed dental practices, government intervention, and third party payments, and the negative impact these were having upon the professional freedom of dentists. Finally, under this category there were two references made about the prescribing of drugs to nondental patients.

2. Interactions With the Patient

The most critical issue within this category was the criticizing of previous dental care performed by one's professional peers in the presence of the patient, especially when uncertain about the conditions under which the dentistry was done. The focus of concern was how to appropriately communicate to the patient that substandard or inadequate dentistry exists without critically reflecting upon or indicting the previous dentist(s) or the dental profession as a whole.

Our patients are not able to judge professional services; they can only rely on our intellectual and ethical honesty. We must not betray that trust.

Another common dilemma noted was a patient requesting the falsifying of billing or the adjusting of data on insurance forms so that some benefit can be gained by the patient. A number of citations dealt with improving interpersonal communication with the patient such as: talking to the patient in a respectful, tactful and clear manner; properly informing the patient of existing dental problems; and allowing the patient to make an informed choice of treatment. Two respondents referred to incidents of unprofessional contact with the patient; one example involved improper physical advances toward a patient, while the other warned against becoming involved with the outside personal affairs of a patient.

3. Clinical Treatment Practices

Two primary areas of concern were identified within this category, namely: the delivering of substandard or compromised treatment, and the promotion of overtreatment. The primary motive for overtreating the patient was seen by the respondents as being a means to increase the dentist's financial gain, however, a number of reasons were given for compromised dental treatment. The compromising of the quality of dental care was often the result of ethical dilemmas such as a patient's insisting on a specific treatment, or constraints created by the patient's age, health, or financial status, or problems in working with an uncooperative patient, or needing to increase profit margins.

4. Working Relationship With Professional Colleagues

In comparison to the preceding categories, this was a minor area of concern since only ten citations were classified within this category. The practice of "pirating" staff personnel or patients from other dentists, and dealing with differing opinions or treatment plans of professional associates were the two most troublesome issues. Two respondents raised the issue of how to properly approach and discuss with a colleague that he is doing poor dentistry or is developing a bad reputation by his poor chairside manner. One respondent was troubled by observing "referrals based upon personal loyalty to another practitioner rather than upon his capabilities."

5. Personal Professionalism

Citations which were classified under this heading seemed to focus upon the development of a personal sense of responsibility and integrity in one's professional role. This encompassed such examples as: honestly monitoring and evaluating the quality of one's dentistry, being responsible for the well being of one's patients and employees, leading an exemplary life as an ethical role model in the community, and finally, putting service before remuneration and the patient's interests ahead of one's own. As aptly stated by one

practitioner, "The test of integrity is how well I treat my patient when it costs me something to do it."

Question #2: Training received in dental school which helped one to deal with ethical dilemmas?

Forty-five of the seventy-eight respondents answered this question; of these, only eleven (24%) indicated having received any type of formal instruction in ethics during their dental training. Eight mentioned having had one course although three of these specifically stated that the course content centered on dental jurisprudence rather than ethics per se. Two respondents had participated in an ethics program that extended through an entire semester, and one other respondent was involved in a year long ethics program. The remaining thirty-four respondents stated that they had not received any type of formal training while in dental school that would help them deal with the ethical dilemmas they are now encountering in practice. However, eight of these practitioners did point out that they acquired some degree of learning about dealing with ethical problems through informally observing and interacting with dental faculty who were perceived to be good professional role models. As expressed by one practitioner, "the instructors' commitment and dedication instilled in me a strong sense of professionalism and a dedication to excellence."

Question #3: Improvements or changes that could be made in dental education to better prepare one to deal with ethical dilemmas in dentistry?

Forty-eight Academy One Hundred practitioners offered suggestions in response to this question. Twenty-five (52%) recommended the inclusion of more formal instruction within the dental curriculum to better equip dental graduates to confront ethical problems which may arise in their practice. Other suggestions for helping students strengthen their professional ethics during their dental education career, included:

a. Placing greater emphasis on assessing students' moral/ethical perspectives during the initial admission procedures. (5 citations)
b. Inviting successful and respected practitioners to participate in school seminars and share their experiences and philosophy for success. (4)
c. Provide students with more training in practice administration, particularly in principles of business and law. (4)
d. Provide dental students with more extensive training in interpersonal communication skills. (2)
e. Promote a more strict enforcement of ethical conduct while students are in dental school. (2)
f. Encourage students to become more actively involved with organized dental associations and local community affairs. (2)
g. Encourage dental faculty to be good role models. (2)
h. Offer students internships in dental offices which are generally recognized for their professionalism. (1)
i. Develop and distribute through the Florida Dental Association an instructional pamphlet which addresses dental ethics (1).

Interestingly, eleven of the respondents (23%) regarded students' ethics as being a fixed entity by the time they have reached dental school and that there was little one could do to significantly change their ethical attitudes. As noted earlier, five of these respondents advocated finding some way to evaluate a student's moral and ethical outlook prior to their admission to dental school.

As shown by the seventy-eight Academy One Hundred practitioners, a variety of unethical behaviors have been personally observed or encountered during their professional careers. The three professional behaviors which caused the most concern, ordered by the number of contributed incidents, were: critically reflecting on a professional peer in the presence of a patient (19), compromising the quality of dental service delivered to the patient (18), and unprofessional advertising and marketing practices (16). These three ethical problems comprised 43 percent of the 123 incidents cited. With the presence of so many potential ethical problems that can arise in one's professional dental practice, it is troubling to discover that less than a quarter of the respondents had received any type of course work in ethics during their dental education. The inclusion of some type of ethics offering in dental curricula has likely increased since these Academy One Hundred practitioners graduated from their respective dental schools. In a 1982 survey of the 60 dental schools in the U.S., only 13 schools reported that no formal instruction in ethics was available. However, an examination of available course syllabi from the schools offering ethics coursework showed evidence of great diversity in the content of ethics instruction. Many ethics courses consisted "primarily of malpractice and jurisprudence, and review of the American Dental Association's and the State's Code of Ethics and Conduct with little emphasis on bioethics, values, or a humanistic approach to ethical problems in dentistry" (Odom, 1982).

As noted earlier, a number of respondents considered the teach-

ing of ethics to be a moot issue. That is to say, they felt an entering dental student's "ethics" was already established and, thereby, exposure to courses in ethics would not alter the students ethical outlook to any significant degree. This is likely a valid claim if one equates ethics with morals so that, in effect, one is saying that you cannot directly teach morals or morality as you would a Class II amalgam. However, if one defines ethics as the study of moral behavior whereby students learn to sort out arguments that bear upon moral problems and apply them to concrete situations, the ethics becomes a subset of moral behavior. In this sense it becomes a matter of teaching ethical inquiry and decision-making skills rather than attempting to indoctrinate professional morality. Thus, dental schools can offer instructional experiences which help students become more sensitive to the existence of ethical issues embedded within their daily interactions, provide them with opportunities to develop and hone ethical reasoning skills, and promote their personal motivation and commitment toward choosing the ethical alternative. As a result, we, as educators, can increase the probability that they will recognize and manifest professional morality when confronted with an ethical dilemma.

Given this interpretation of ethics instruction, it would seem both worthwhile and viable to offer dental students a good grounding in ethical principles and theories which have historically helped health professionals reach an ethical decision, and to provide them with a systematic approach to analyzing ethical dilemmas (created when principles or interests come into conflict) so that they can make an ethically justifiable choice. Such instruction should involve the use of dental case histories which are rigorously examined to determine the most ethically acceptable action under the given circumstances. To assure relevance and the meaningfulness of the instruction, case content should focus on ethical problems which, as suggested by these findings, are likely to be encountered later in practice. For example, troublesome situations could be presented which depict: various pressures weighing on the dentist to compromise the quality of the dental care given to the patient, or talking to the patient about dental work needing to be redone without casting blame on the previous dentist(s) or the profession, or advertising and marketing techniques that raise the question of ethically acceptable methods of soliciting patients.

Numerous suggestions for improving ethics instruction in dental education were contributed by many of the respondents. However, in a lengthy letter submitted by one practitioner, some general thoughts on professionalism in dentistry as well as specific advice to those entering dental practice was candidly and articulately shared. It is with excerpts from this letter that we would like to bring closure to this report. These remarks seem to summarize well some preventive measures which can eliminate or, at least reduce, the prevalence of ethical dilemmas encountered in one's dental practice. He begins by pointing out that "it is important to realize that the image of the dental profession is exactly what dentists have made it over the years. A profession, like a neighborhood, is a reflection of the people in it . . . We have a professional responsibility that goes far beyond that required in most human endeavors. The reason is simple: our patients are not able to judge professional services; they can only rely on our intellectual and ethical honesty. We must not betray that trust!"

He continues with the following advice to those about to embark on their dental careers:

a. Don't get so money hungry that you prostitute your profession.
b. Don't over-promise or overcharge.
c. Be honest and candid with patients.
d. Improve your interpersonal communication. Most problems arise from improper or inaccurate communication.
e. Get involved with your dental association. Every dentist owes part of his time and money to a professional organization that is striving to improve working conditions.
f. Get involved in your community by lending your talent to civic and charitable groups. We must not extract more from a community than we put back into it.

Finally, he concludes with the contention that the true moral obligation of any dentist is first to his patient, second to his profession, and third to himself. And, he proposes that all dentists commit to the moral charge: "I shall, in the light of circumstances surrounding my patient, give to him that service which, were I in like circumstances, I would apply to myself."

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Submitting Manuscripts for Potential Publication in *JACD*

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 the dental profession 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.

Manuscripts for potential publication in the *Journal of the American College of Dentists* should be sent as attachments via e-mail to editor@acd.org. In the submission cover letter, please confirm 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.

Submissions must include:

1. The full name of each author;
2. E-mail address, mailing address, fax number, and phone number for each author;
3. Degrees and institutional affiliation (if appropriate) of each author; and
4. Statement of responsibility from each author indicating what they have contributed to the document.

Submissions should:

1. Be between 1500 and 3000 words in length.
2. Use inclusive language, including gender-neutral pronouns, unless referring to specific persons;
3. Sufficiently de-identify any descriptions of patients and/or clinical encounters;
4. Include disclosure of any conflicts of interest;
5. Designate a corresponding author;
6. Follow the most recent edition of the American Medical Association Manual of Style; and
7. Ensure all published references are cited in the text and numbered consecutively. No references should be cited in the abstract. Each reference should be cited only once; the original number should be used in subsequent citations.

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Unless a solicited article, review by the editor (or, in some instances, a "guest editor") will occur within 21 days of receiving a manuscript to determine whether it suits the general content and quality criteria for publication in the *JACD.* All manuscripts that are suitable for publication will undergo single-blinded peer review. Usually there are two anonymous reviewers comprised of subject matter experts and board members of the College and/or the *JACD* editorial board. Because all peer reviewers are volunteers, review may take between 4 and 6 weeks. Once reviewer comments are received by the editor, a decision will be made to accept, accept with minor revisions, accept with major revisions, or reject. *JACD* reserves the right to edit manuscripts to ensure conciseness, clarity, and stylistic consistency.


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