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PRACTICE MANAGEMENT

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Endodontic training: Study calls for standardisation, modernisation



Dr Raidan Ba-Hattab is a researcher at the College of Dental Medicine at Qatar University.

In the past, studies showed that the technical quality of root canal treatments performed by general dental practitioners and students often fell below accepted standards. In response, the European Society of Endodontology (ESE) issued guidelines to strengthen undergraduate endodontic curricula and has continued to update these. Improvements in training in some countries have been noted, and researchers from Qatar, Jordan and Portugal have now conducted a global survey of undergraduate endodontic training. They concluded that investment in modern tools and standardised integration of evidence-based practice in curricula could help to improve the global delivery of endodontic therapy.

The researchers surveyed 38 dental schools across six continents regarding endodontic training and assessments in undergraduate curricula. They found that preclinical endodontic training was generally provided as a key part of other courses at dental schools in Australia and South America and as a separate course at schools in Asia, Africa and North America. Most colleges had dedicated clinical areas for endodontic training, and over half of those surveyed in Europe offered clinical training in dental clinic settings.

Regarding the type of simulators and teeth employed in preclinical training, all of the schools surveyed in Europe and North America and

the vast majority of those in Africa, Asia and Australia used phantom heads. Schools in South America largely employed virtual reality simulators instead. The majority of the schools surveyed employed extracted human teeth in preclinical training, besides schools in Australia, which used commercial plastic teeth and 3D-printed teeth. The majority of schools in North America used commercial plastic teeth in addition.

The researchers found that endodontic topics are taught over one or more academic years at different times across dental schools, and the schools in Africa and Asia generally introduce preclinical training later, owing to varying programme duration (four to six years). The study authors pointed out that introducing these topics earlier in the curriculum can help students build a stronger knowledge base, which may enhance their postgraduate clinical performance.

Mean staff-student ratios in preclinical training were also found to vary. The lowest (1:9) were at schools in Asia, Australia and Europe, and the highest (1:7) at those in South America. At 1:6, schools in Asia, Australia and Europe had the highest staff-student ratio in clinical training and were thus closer to meeting the new ESE recommendation that a staff member should supervise a maximum of four endodontic treatments simultaneously.

Regarding advanced endodontic technologies, the researchers observed that many schools had adopted instruments such as electronic apex locators, modern rotary instruments and bioceramic cements. However, they found that adoption of the latest root filling techniques, magnification and ultrasonic instruments in curricula remained limited.



Targeted investment needed

Discussing the findings in an interview with Dental Tribune International (DTI), lead author Dr Raidan Ba-Hattab, associate professor of endodontics at the College of Dental Medicine at Qatar University, pointed out that effective endodontic training hinges on several factors, including maintaining optimal student-staff ratios. Dr Ba-Hattab commented: "When clinical training is overseen by specialists, students are more likely to develop stronger diagnostic, technical and decision-making skills, which can directly enhance their self-efficacy and readiness for independent practice. Our study found that dental schools in Asia, Europe and Australia approached this ideal, while those in other regions often exceeded limits recommended by the ESE."

Given the global reliance on traditional techniques identified in the study, the findings alluded to barriers preventing global adoption of more

advanced endodontic technologies. Dr Ba-Hattab identified three key factors limiting the integration of more advanced technologies into undergraduate curricula: financial constraints, faculty preparedness and institutional prioritisation. She explained: "Many dental schools, particularly in developing countries, face budget limitations that make it difficult to procure expensive tools such as microscopes, CBCT units and ultrasonic systems. Even when the equipment is available, there is often a lack of trained instructors comfortable with teaching these technologies, which limits their use in both preclinical and clinical training. Additionally, educational institutions may be hesitant to shift from well-established traditional methods that are simpler, less costly and logistically easier to implement." Dr Ba-Hattab emphasised that targeted investments were needed to close the technology gaps identified in the study.

The study identified a divergence in obturation techniques taught at North

American dental schools from those taught elsewhere, and Dr Ba-Hattab commented that this trend hinted at a pedagogical emphasis on evidence-based practice and early adoption of contemporary clinical methods. She told DTI: "Establishing greater standardisation in undergraduate endodontic education could offer meaningful benefits—most notably, by ensuring a consistent baseline of clinical competency among dental graduates globally." She emphasised that calls for standardisation should be viewed not as a call for uniformity but as a framework supporting the integration of evolving clinical practice. "Incorporating modern endodontic tools into this standardised framework would not only raise global clinical standards but also better equip students for the technological demands of modern dental practice. Updating curricula to reflect advancements in endodontics requires strong collaboration between educators and policymakers, along with strategic investments in infrastructure, faculty development and academic research. Ultimately, the goal is to design a curriculum that balances consistency with adaptability—encouraging both competence and innovation," Dr Ba-Hattab concluded.

The study, titled "Global trends in preclinical and clinical undergraduate endodontic education: A worldwide survey", was published online on 24 March 2025 in *Scientific Reports*.

“Even when the equipment is available, there is often a lack of trained instructors comfortable with teaching these technologies.”

Carbon footprint of Egyptian dental laboratories



The global push for reaching net-zero emissions has led to a better understanding of the types and volumes of emissions attributable to dental clinics; however, little attention has been paid to the carbon footprint of dental laboratories. A new study by researchers at

Alexandria University has quantified the direct and indirect carbon footprints of private dental laboratories in Egypt. Among the findings was that energy consumption and the depreciation of dental equipment were significant contributors to the businesses' carbon emissions.

The cross-sectional study included data from 21 private dental laboratories operating in Alexandria, Cairo and El Beheira. The authors pointed out that calculating the laboratories' carbon footprints required the combination of direct and indirect greenhouse gas emissions arising from services, products and processes, including from staff travel, waste, energy and water consumption, procurement and depreciation of dental equipment. The emissions were expressed in terms of carbon dioxide equivalent (CO₂e), a standardised unit that accounts for the global warming potential of all greenhouse gases by converting them into the equivalent amount of carbon dioxide.

The study found that the average laboratory had a carbon footprint of 20,820 kg CO₂e, which was equal to 2.9 kg CO₂e per appliance sold. At 43.6%, staff travel accounted for the greatest share of the total carbon footprint, followed by procurement, at 27.8%, energy consumption, at 25.0%, waste, at 3.3%,

and water consumption, at 0.1%. When the depreciation of dental equipment was factored in, the average carbon footprint of the laboratories increased by 7.7%.

The high CO₂e associated with energy consumption was attributed to the use of multiple couriers freighting appliances and impressions between locations via motorbike. Further excess energy consumption was attributable to the use of air conditioning to cool energy-intensive machines year-round and to long staff working hours.

On average, the laboratories were in operation for 309 days annually, had seven full-time staff and fabricated 7,119 prostheses per year. The authors commented that the results could be extrapolated to dental laboratories in other low- and middle-income countries owing to their shared challenges in the dental industry, energy production and transportation.

The researchers recommended greater implementation of digital den-

tal technologies, including CAD/CAM and 3D printing, to help shorten staff hours and decrease energy and water use. Using energy from renewable sources was recommended to avoid the high CO₂e of fossil fuel-based economies like Egypt. Buildings designed with thermal efficiency could help to reduce the use of air conditioning and power consumption, they added. The authors commented that the depreciation of dental equipment was a hitherto overlooked source of greenhouse gas emissions accumulating over the lifespan of devices.

According to the study, the global dental industry accounts for around 3% of global healthcare greenhouse gas emissions. The latter reached between 1.6 and 2.0 Gt of CO₂e in 2019 and accounted for over 4% of total global emissions.

The study, titled "Carbon footprint of private dental laboratories in Egypt: A cross-sectional study", was published online on 17 April 2025 in *BDJ Open*.

Qatar University celebrates first dental graduates

Qatar University has marked a historic milestone with the graduation of the founding cohort from the College of Dental Medicine, the country's first and so far, only dental school. This achievement represents a significant advancement in Qatar's ongoing efforts to develop a sustainable, locally trained oral healthcare workforce.

The first graduating class comprises 14 students, half of whom are Qatari nationals. The majority are set to begin their professional careers with leading national healthcare providers, including Hamad Medical Corporation and the Primary Health Care Corporation, thereby directly contributing to the country's health services. The development represents a notable stride towards workforce localisation and national self-sufficiency in Qatar's healthcare sector, according to an article by the Qatar-based English daily *The Peninsula*.

Founded in September 2019, the college offers a six-year Doctor of Dental Medicine programme specifically designed to build a sustainable, locally trained workforce of oral health professionals. The



curriculum integrates foundational sciences with early clinical exposure, and students have access to state-of-the-art facilities, including a simulation clinic equipped through a partnership with Dentsply Sirona.

Reflecting on the occasion, Prof. Asmaa Al-Thani, vice-president for health and medical sciences, commented that the graduation ceremony was a celebration of the students' achievements and of the country's progress in providing

high-quality health education. He said: "The College of Dental Medicine stands as a national model of what can be achieved when academic excellence, clinical partnerships and strategic vision come together. We are proud to

contribute to a new generation of health profession leaders who will shape the future of patient care in Qatar."

Dean of the College, Prof. Mandeep Singh Duggal, said the graduation was a "proud and pivotal moment in the history of education in the State of Qatar, and a dream that has been realised to have dental education within our borders."

Prof. Duggal continued: "In partnership with our stakeholders, the college has grown into an internationally recognised institution. These new graduates are ready to make an excellent, evidence-based and ethical contribution to dental practice, and they will stand shoulder to shoulder with the best dental graduates in the world."

Qatar has undertaken significant efforts to Qatarise its health workforce, aligning with its National Vision 2030 and broader labour localisation objectives. Late last year, Emir Tamim bin Hamad al-Thani ratified a law mandating private-sector organisations to prioritise Qatari nationals and issue biannual reports on their workforces.

IMPRINT

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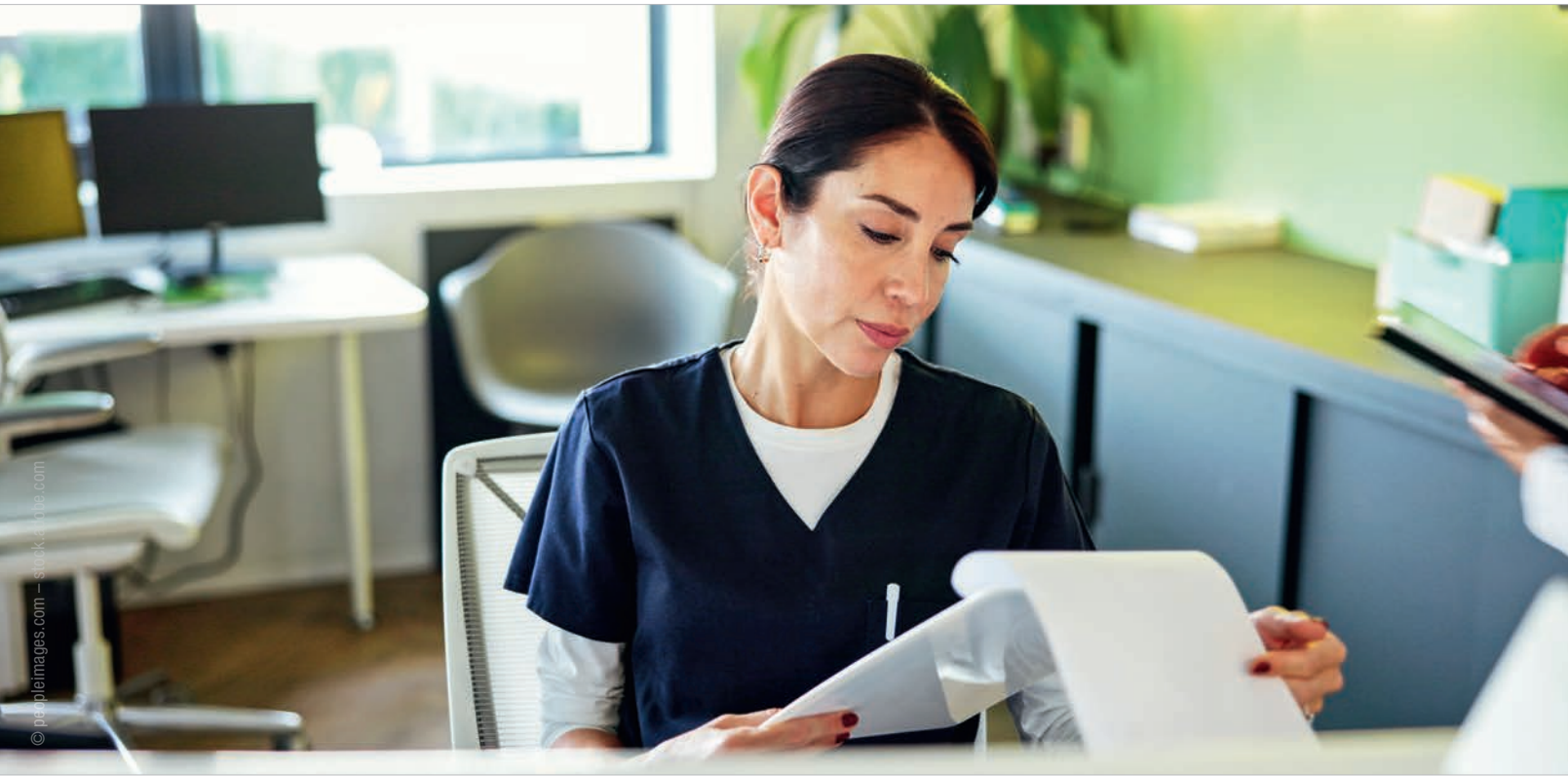
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Discrimination of dental patients in Syria



insight into this issue it is useful to consult the FDI Dental Ethics Manual.³ It both ensures the dentist's right to refuse dental care except in the case of emergencies or humanitarian reasons and, at the same time, cautions that if dentists are not obligated to give any reason for refusing a patient, such a loophole may allow discrimination to run rampant. The possible conclusion to be drawn from this is that wherever the profession either explicitly or tacitly obligates dentists to treat patients with transmissible diseases like HIV, TB or Hepatitis B and C, procedural reasons may be used to partially cover an underlying fear, which may easily escalate into discrimination. The key for future research in both the Syrian setting and abroad is to critically move beyond stated answers to understand the deeper forces of fear and control that could lurk behind such high rates of rejection and seek to mitigate them as far as possible.

As health workers, dentists are occasionally placed at risk of disease transmission, since they are exposed to bloodborne infections of pathogens such as HIV, TB and Hepatitis B and C. At the same time, however, individuals carrying these conditions possess both a need and the human right to seek dental care. As shown in a recent study from Syria, the intersection of these two perspectives, while we might hope to see surrounded with technical expertise, empathy and tolerance, may in fact be fraught with tension. The study has found that most clinicians working in the capital Damascus actually refuse to treat patients with these diseases.

To explore how dental clinicians in Syria approach the matter of refusing or providing treatment to patients with a variety of conditions, the team of researchers from Damascus University undertook an extensive survey of 246 dentists from across the city. Their results showed a significantly high rate of treatment refusal. In the case of prospective patients with HIV/AIDS, 78% of dentists answered that they would refuse treatment. For patients with TB, 71.5% of dentists would refuse treatment, while for Hepatitis B and C the figure was 39.8%.

These figures alone underline the crucial point that for people with

these conditions, especially HIV, seeking regular dental care is far from a straightforward process and may be met with considerable resistance. In terms of refusal to treat patients with this specific condition, the Syrian figures are significantly higher than the 46.5% refusal rate found among Jordanian dentists or the 5% refusal rate reported in an American study.^{1,2}

The comparatively high figures raise the question as to what forces and conditions are driving this rejection. As reported in the study, the primary reason for refusing patients with TB was fear of infection

transmission to dental staff (29.0%). For HIV/AIDS patients, the most cited reason was the need for special protective procedures (32.4%), followed by the need for enhanced sterilisation procedures (27.7%). Taken at face value, these responses suggest that Syrian dentists are refusing to treat patients with a variety of conditions due to definitively technical factors: dentists refuse because they are simply not practically equipped.

So, are dentists justified, or indeed legally and ethically entitled, to impose such rejection on these vulnerable patients? To gain some

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Propranolol use among medical and dental students

The rite of passage through university education into the professional world is one that for many students is fraught with tension. Psychological pressure to succeed, whether internally or externally induced, may have a seriously detrimental effect on a student's well-being, leading to anxiety, depression and prolonged stress. A new study by researchers at the University of Jordan in Amman has shown that, while some students may seek physical activity and a healthy diet to redress their situation, some take a chemical route.

Conducted in December 2024, the cross-sectional survey included 584 students, 418 in medicine and 166 in dentistry, and explored their patterns of propranolol use, side effects experienced, motives and awareness of potential risks. The study, led by Dr Hana Taha, associate professor of global public health, found that 9.9% of medical and dental undergraduates self-medicate with propranolol—a non-selective beta-blocker—primarily to manage examination-related anxiety. They largely accessed the drug without prescription directly from a pharmacy, friends or family members,



and its use was mainly recommended to them by friends and peers. Despite 74.1% expressing awareness of the dangers of unsupervised use, 58.6% of users had taken the drug without a prescription.

The main motivations cited included anxiety reduction (65.5%) and examination stress relief (60.3%), and 60.3% of users reported perceived academic improvement. However, 36.2% reported side effects such as dizziness and fatigue.

Similar studies in Saudi Arabia have reported even higher prevalence rates: 29.9% at King Saud bin Abdulaziz University for Health Sciences and 22.4% at King Saud University, both in Riyadh.

Propranolol is widely used for hypertension, arrhythmia, migraine and hyperthyroidism. Although it crosses the blood-brain barrier and produces anxiolytic effects, it lacks approval from the US Food and Drug Administration for anxiety management.

The authors emphasised the urgent need for curriculum reforms to educate medical and dental students on the risks of beta-blocker self-prescription. They also advocated for enhanced psychosocial support services to promote healthier stress management strategies.

What is next? The study's limitations include reliance on convenience sampling from a single university, a cross-sectional design and potential for self-report bias. Nonetheless, it highlights a concerning trend in self-medication, pointing to the need for prospective, multi-institutional research.

The study, titled "Inappropriate use of propranolol among medical and dental students at the University of Jordan: Cross-sectional study," was published online on 9 May 2025 in *Frontiers in Medicine*.

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From chairside to cyberspace: Surviving disasters— why dentists need more than traditional backup

Part 3 of a four-part series on helping practices get prepared

Anne Genge, Canada

In Part 2 of this series ([digital 1/2025](#)), we talked about common cyber threats effecting dental practices. Imagine coming into the office on Monday morning, only to find all of your patient records locked, your schedule inaccessible and your imaging systems frozen. This is ransomware, the most common type of cyber-attack being used against organisations of all sizes today. No patients can be seen. No billing can happen. Patients start arriving and you have no answers. Everything grinds to a halt, and there is the potential of losing all your data.

Every dental office faces serious risks such as fire, theft, flood, server failure or a ransomware attack. Many teams assume that their data is safe because they have a backup—

but most traditional backups are not enough.

Take the real case of a general dentist who arrived one morning to find a chilling message on his screen: “Your files have been encrypted. Pay \$50,000 in Bitcoin or lose everything.”

He thought he had good backup. However, when his IT team went to restore from that backup, there was months of data missing. The backup had never been tested. He paid the ransom and still could not recover everything. Critical imaging data, treatment notes and patient records were permanently lost. His practice had no failover system, so it was offline for days, losing thousands in revenue, and it had a damaging effect on patient trust.

This case is not an isolated one. It highlights the urgent need for comprehensive business continuity plans, not just backups, to ensure that dental offices can recover quickly and fully from any kind of disaster.

What went wrong?

- The practice did not have an effective disaster recovery plan.
- The practice did not have failover technology.
- The practice had never tested its backups.

Did you know? A backup is not a business continuity plan

Today’s dental practices are much more reliant on connectivity

than they were 20 years ago. Today, many offices are highly digitised, employing digital diagnostics, digital patient records, automation, artificial intelligence and more. This means that the majority of dental offices cannot afford any downtime, let alone days of it, and they certainly cannot suffer data loss.

Most dental offices have some form of backup. Often, it is a cloud service that runs every night and/or an external drive that the team rotates once a week. While these methods can store data, they do not do a great job of protecting the practice from downtime, data loss or the stress of system failure.

Like the case just described, today’s risks are much more complex. The common types of disasters dental offices face are:

- cyber-attacks, such as ransomware, phishing and hacking;
- hardware failures, such as dead servers and crashed hard drives;
- natural disasters, such as fires, floods, earthquakes and power outages;
- theft or vandalism, such as stolen computers or malicious damage;

- human error, such as accidental file deletion or misconfigurations; and
- software corruption, such as bad updates that damage the system.

No matter how careful you are, something will happen. The question is: how fast can you recover? Each of these incidents can stop a practice in its tracks, and without a proper plan, recovery could take days or weeks.

What most dentists do not realise is that backup is just one part of what they need. Without a full business continuity plan, your patients, revenue and reputation are still at risk. Unfortunately, this is not a distant possibility. It is happening to dental practices every single week across North America. A failed backup, a ransomware attack, a server crash—these events can shut down your practice for days, weeks or forever if you are not properly prepared. According to the National Cybersecurity Alliance, a US non-profit organisation, 60% of small businesses that suffer a major cyber-attack are out of business within six months.¹

That is why understanding this matters: every dental practice

Table 1: Meaning and examples of the terms “backup”, “disaster recovery” and “business continuity”.

Term	Meaning	Example
Backup	A copy of your data stored somewhere safe	Saving patient records to a secure server
Disaster recovery	A plan and system to restore everything after a major incident	Restoring your systems again after a ransomware attack
Business continuity	Keeping the business running during and after a disaster	Still seeing patients even if your main server is down

needs not just a backup but a comprehensive backup, disaster recovery and business continuity solution designed specifically for the speed and complexity of modern dentistry and the unique needs of each individual dental practice (Table 1). Backup saves your data. Disaster recovery restores your systems. Business continuity keeps you treating patients. You need all three working together—not just one.

Questions every dentist must ask about backup and recovery

Before disaster strikes, sit down with your IT provider (or cybersecurity professional) to obtain clear answers to these critical questions:

1. *Is all of my data backed up?* Practice management data, as well as imaging data, accounting data, desktop files, laptop data and email archives, must be backed up.
2. *How frequently is it backed up?* Backups should happen hourly or more frequently, not just nightly.
3. *How quickly can my practice recover from the worst-case scenario?* If it would take days, your patients and business are at serious risk.
4. *Are my backups tested regularly?* Untested backups means unreliable backups.
5. *Are my backups protected against ransomware?* If not, attackers can find and encrypt or delete your backups too.
6. *Are my backups encrypted?* Data must be encrypted at rest and in transit to protect confidentiality.
7. *Can the practice continue seeing patients even if the server fails?* This is the difference between surviving and closing your doors.

Why traditional backups often fail dental practices

Too many dentists still rely on outdated backup methods like external drives or cloud storage without any recovery plan. Here is why traditional backups fail today:

- They do not back up everything. Desktops, laptops and imaging are often missed.
- They do not run often enough. Nightly backup means potentially 12 or more hours of lost data.
- They are not tested. They are assumed to work—until they do not.
- They can be attacked too. Ransomware often corrupts backups first.
- They take days to restore. Waiting for a new server, reinstalling software and restoring data is not a fast process.



“A failed backup, a ransomware attack, a server crash—these events can shut down your practice for days, weeks or forever if you are not properly prepared.”

The bottom line is that old-school backups protect your files—not your business.

Solution: Modern dental practices need instant virtualisation

Instant virtualisation is the launching of a live version of your server from a backup device. Instant virtualisation is the gold standard for dental practice data protection today. In simple terms, if your server goes down or is crippled by a cyber-attack or any other disaster, you could boot up a working copy almost immediately from your backup appliance or cloud. This means no reinstalling, no waiting days for IT and minimal downtime. Think of it as a spare tyre for your entire dental office, ready to go when you need it. Businesses with instant virtualisation recover up to 90% faster than businesses with old-school backups.²

The benefits of instant virtualisation are:

- access to patient records in minutes, not days;
- built-in ransomware protection with secure snapshots;

- automatic backup testing—so you know your recovery will work; and
- hybrid backup, combining local (fast) and cloud (secure) options.

Understanding RPO and RTO

Recovery point objective (RPO) and recovery time objective (RTO) are the two numbers that could save your practice (Table 2). Dentists need to understand two simple concepts when designing their backup plans:

- A high RPO means major data losses, which is bad for patient care and regulatory compliance. Aim for an RPO of under 1 hour.
- A long RTO means a long downtime and thus lost revenue and unhappy patients. Aim for an RTO of under 2 hours where possible.

Final thoughts and tips: Resilience is strategy, not software

It is time to go beyond backup. If your current solution does not protect your entire system, recover quickly and allow operations to continue, it is not enough.

Stop accepting cookie cutter solutions designed for someone else’s business model. Your practice deserves a plan built for your needs—with input from professionals who understand the dental environment. Ask yourself: if disaster hit tomorrow, could you keep seeing patients the same day?

Critical blind spots to fix immediately:

- not backing up all data, especially imaging and desktop files;
- no backup testing schedule—untested means unsafe;
- no ransomware-resistant backups—criminals can target your backup too;
- unencrypted backup drives—at risk if stolen; and
- no plan for failover internet or power—a power outage can be as deadly as ransomware.

Determine your RPO and RTO and investigate instant virtualisation solutions for:

- a quick return to operations;
- protection against ransomware;
- minimal financial impact; and
- minimal regulatory impact.

Test your backup like it is a fire drill:

- Test backups at least quarterly.
- Testing verifies RPO and RTO.

- Require automated backup verification where possible.

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Anne Genge



is a leading expert in dental privacy, cybersecurity and secure artificial intelligence (AI) implementation. Based on her over 20 years of experience, she helps dental professionals transition to AI solutions while ensuring compliance, security and ethical implementation. She provides expert guidance on integrating AI safely, protecting patient data and navigating the evolving regulatory landscape. She has completed training in AI law at Queen’s University in Kingston in Ontario in Canada and is currently attending the AI in Health Care: From Strategies to Implementation programme at Harvard Medical School in Boston in the US.

Table 2: Meaning and examples of the terms “recovery point objective” and “recovery time objective”.

Concept	Meaning	Example
Recovery point objective	How much data you are willing to lose (in hours)	If you back up every hour, your RPO is 1 hour of potential data loss
Recovery time objective	How long it should maximally take to fully recover	If your RTO is 2 hours, your practice should be back online in 2 hours after an incident

Practice management by “staying informed, flexible and executing with intention”



Dr Elizabeth Himel.

Dr Elizabeth Himel's path in dentistry is shaped by heritage and guided by a strong sense of purpose. From taking over her father's private practice to leading confidently within a Dental Support Organisation (DSO), she has defied expectations and embraced a modern perspective on professional, personal and business growth. In this interview, Dr Himel shares insights on patient care and clinical autonomy and outlines her approach to leadership and making a meaningful impact both inside and outside of the dental practice.

Dr Himel, what initially attracted you to dentistry?

Initially, the inspiration came via the deep impact that education has had on my family. It has been the key to unlocking opportunity, growth and a better life. I come from humble beginnings—my grandfather was a coal miner, working hard to provide for his seven children. Three of his children became doctors, a fact that speaks volumes about the power of resilience, hard work and education.

Both of my uncles attended Stanford Medicine, and my father earned his dental degree from Rutgers University. From a young age, I deeply admired that dedication to healthcare. An older cousin of mine also became a physician, and I remember watching her graduate and the moment her dad placed the hood over her shoulders. It was a powerful image that stayed with me. When it was my turn, at my graduation ceremony, I was hooded by both my father and older brother, who is a dental anaesthesiologist. For me, this was a full-circle experience, and a reminder that dentistry is so much more than a profession. It is part of a legacy built on perseverance, opportunity and the desire to serve others.

How did your path lead you to practice ownership?

I had always planned to eventually take over my father's private dental practice. What initially appealed to me was the interpersonal aspect. Growing

up in a small town, I witnessed firsthand the charm and deep-rooted connections that come with that kind of environment. My father was not just a dentist; he was a trusted figure in the community. His patients knew him, and he knew them and their families. That kind of loyalty and trust is built over years of care, compassion and consistency.

I took a year off before dental school to get married and work in my father's clinic. That year changed everything for me. I got to see the business side of dentistry—the things that are not necessarily taught at dental school but which are critical to running a practice. As my own career progressed, my path shifted, but that foundational experience never left me. Now, even in a larger group practice setting, I strive to bring that same private practice feeling to the clinic.

How do mentorship and continuous learning shape your leadership style and approach?

These values are at the heart of my approach; however, ultimately, my leadership style is rooted in empathy, self-awareness and a deep belief in people's potential. I believe leadership starts with working on being the best version of oneself, every single day. That means holding yourself to a high standard but also giving yourself grace when things do not go as planned. We all have tough days. The key is to wake up the next morning with a fresh mindset and a renewed commitment to your purpose.

Running a successful practice requires more than clinical skill—it takes emotional intelligence, resilience and the ability to build a team that shares your values. When doing so, I look for honesty, loyalty and a strong work ethic. Everything else can be taught or trained. Skills can be developed—but character is foundational. It is also important for team members to have the curiosity and ambition to grow their skillsets and advance in their careers. The DSO I am

affiliated with offers a lot of training and continuing education courses and I encourage my team to take advantage of those opportunities to build a career based on their personal strengths.

When managing people, I take time to look at all perspectives before addressing an issue. I try to meet people where they are, truly see them and accept them for who they are, but I also challenge them to grow. That balance of acceptance and accountability is not always easy, but it's necessary for both personal and professional growth. Leadership is also knowing when to walk away from situations or people that are not serving the team or the business. That is not always easy but protecting the culture and the greater vision sometimes requires difficult decisions.

What would you say are the key benefits and challenges of being affiliated with a DSO?

I grew up watching my father practice dentistry, and while I deeply admired his work and dedication, I also saw first-hand the toll that traditional solo practice ownership can take. One thing I knew early on was that I did not want to feel chained to a practice and constantly worried about things such as payrolls and taxes. I didn't want to feel like I couldn't take a day off without everything falling apart.

The DSO model has allowed me to focus on what I love: patient care and clinical excellence. It has also increased

my access to the latest dental technologies, which has helped to ensure that our patients receive the absolute best treatment possible.

One of the biggest misconceptions is that being part of a DSO means sacrificing autonomy. In my experience, the opposite is true. I have full clinical autonomy in my office, and even more importantly, I have autonomy in my life. I can take time off when I need to, and walk away from the office at 5 p.m. Having that kind of work-life balance helps me to thrive both professionally and personally. Of course, there are times when aligning the goals of a larger organisation with your personal vision takes communication and clarity. Ultimately, the DSO model has given me the freedom to practice dentistry the way I want.

Your passion for lifestyle balance and community engagement are also evident in your social media feeds. How do your personal interests and social media presence influence your role as a dental professional?

Social media has always been a natural part of my life. Growing up as a millennial, it felt like having your best friends in your Top 8 on Myspace was a social requirement; however, over time, using social media has become much more meaningful. Having originally used it to keep in touch with family, I gradually began to share more, including with colleagues. That was when

I realised how much of an impact authenticity can have. What I post is not curated or staged—it represents my real life, both in and out of the office. My posts resonate with people because I am being relatable, honest and vulnerable.

This has had a direct influence on my role as a dental professional. My presence on social media allows me to build trust beyond the walls of the practice. Patients often come in already feeling a kind of connection between us. This is because they get to know me as a person who is passionate about dentistry, but who also values family, balance and authenticity. This helps to break down barriers, foster stronger relationships and ultimately enhances the patient experience. Social media is not just a hobby, it has become a meaningful extension of how I communicate, connect and provide care. Just don't ask me to dance on TikTok!

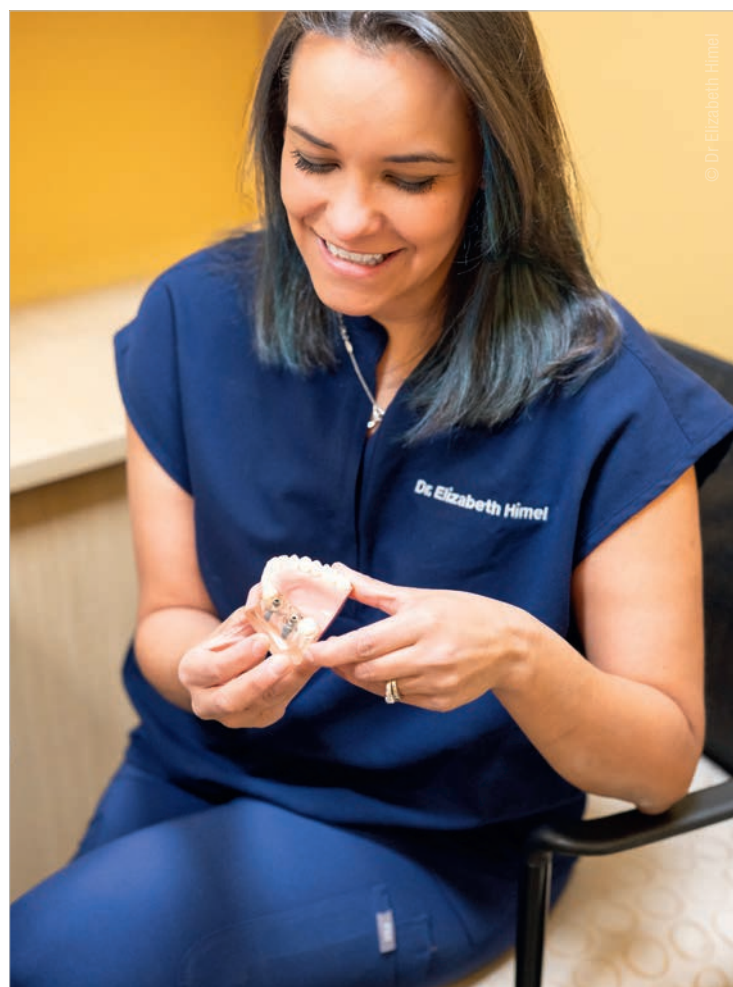
Finally, what are some of the most critical components of effective practice management today, especially when it comes to team dynamics, patient care and business growth?

Nowadays, effective practice management is a balance of leadership, clinical excellence and strategic foresight. For me, that means focusing on three core areas: team dynamics, patient care and business growth.

When it comes to team dynamics, mutual respect and boundaries are essential to achieving accountability and clarity. This does not mean we cannot laugh together or that I don't care about them as people—I absolutely do. Boundaries allow the team to function as a high-performing unit while avoiding confusion, frustration and inconsistency. Structure and respect build trust, and trust builds a strong team.

In terms of patient care, my approach centres around honesty. Patients deserve transparency about all aspects of treatment. Beyond that, I believe in pushing myself to grow continuously as a clinician. Dentistry is always evolving, and staying committed to lifelong learning ensures I can offer my patients the highest standard of care.

Naturally, business growth is also a key aspect of practice management, and this is where I really lean into the support systems provided by my DSO. The organisation gives me access to facts, year-over-year comparisons and key performance indicators that help guide effective decision-making. I use those metrics to identify opportunities and refine processes. I also keep pace with current events and economic trends, a greater awareness of which has helped me to anticipate shifts in the economy and plan proactively for both high- and low-production months. Growth is not about guessing; it is about staying informed, flexible and executing with intention.



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