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Overcoming medical challenges to restore function and achieve a natural result *p.18*

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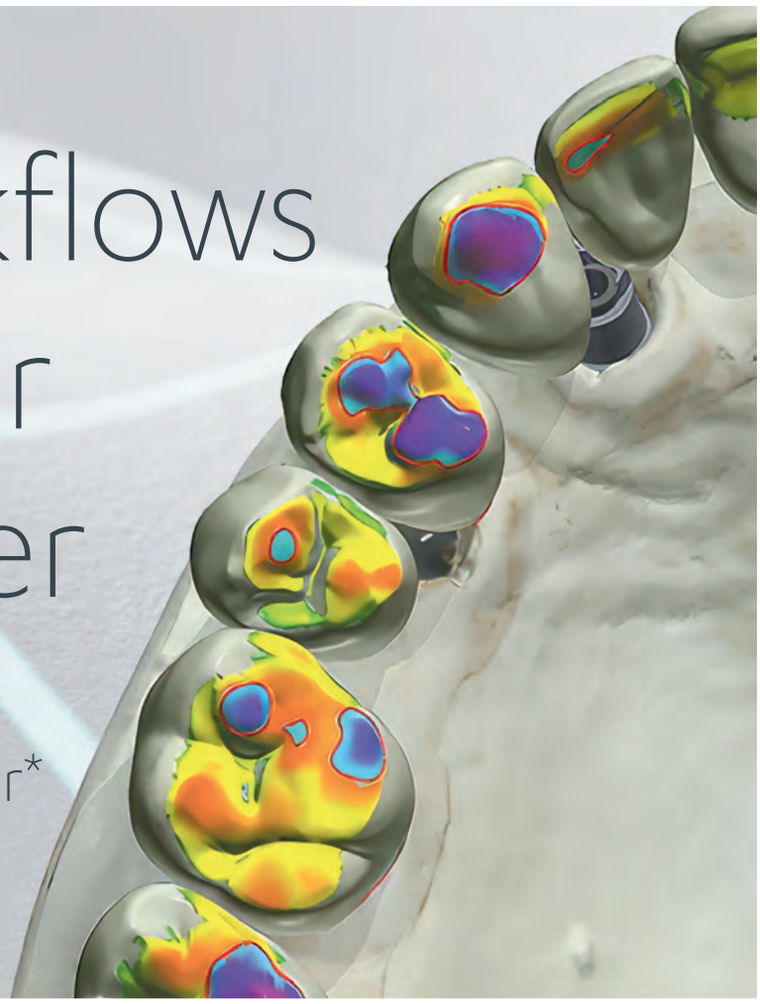

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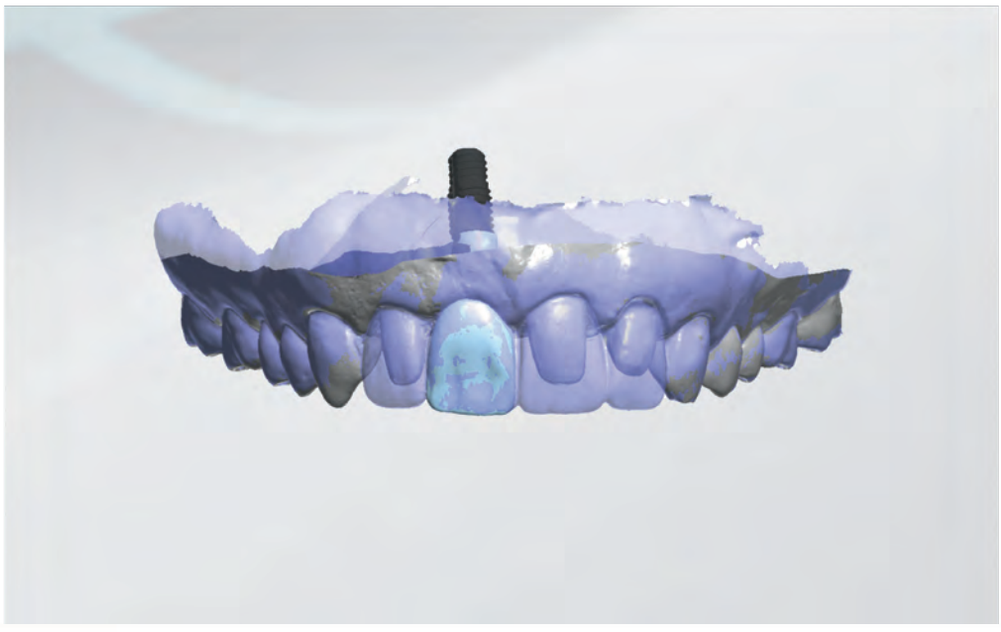

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A time to reflect

MATT EVERATT
Editor-in-chief

As we step into 2025, this is a moment to reflect on the challenges and changes we have encountered in our profession while looking ahead to the opportunities that lie ahead.

One significant issue that emerged in conversations with many of you towards the end of 2024 was the variation in workload over the festive period. Several laboratories reported an unusually quiet Christmas season, while others were busier than ever.

This disparity raises important questions: could this be a reflection of the growing divide between NHS and private dental treatments? Is the shift toward private dentistry reshaping workflows and the demand for certain types of lab work? In our own laboratory, we experienced a busy run up to Christmas and the usual tight deadlines for cases before the break. I do hope you all get off to a flying start in 2025.

IMPORTANT DISCUSSIONS

On the broader horizon, the ongoing decline in the number of dental technicians remains a pressing concern. Recruitment, retention and training are critical issues we must address collectively to ensure the long-term health of our profession. That's why we are thrilled to announce a dedicated discussion panel in the Laboratory Theatre at the North of England Dentistry Show in Manchester this March. This event hopes to bring together representatives from the General Dental Council (GDC), the Dental Laboratories Association (DLA), the Dental Technologists Association (DTA), and other key voices. We have invited the associations and we eagerly await their responses. We aim to tackle pressing questions, including how to address workforce challenges and adapt to the evolving landscape of dentistry.

HAPPY NEW YEAR

I will take this opportunity to wish you all the very best for 2025. May it be everything you hope it to be, and more.

Here's to a year of collaboration, innovation, and resilience. Let's keep the conversation going and continue to shape the future of dental technology together.

GET IN TOUCH
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Laboratory

VOL 19 NO 1, WINTER 2025

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MISSION STATEMENT

Laboratory nurtures connection, passion and quality within the dental technician community by showcasing inspirational individuals, best practice and technical brilliance.

Laboratory is printed by Buxton Press.

Subscription enquiries and back issues –
Call 01923 851771
Email subscriptions@fmc.co.uk

Finlayson Media Communications,
Hertford House, Farm Close, Shenley,
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ISSN NUMBER: 2053-5465

A fresh start for 2025

Last year brought uncertainty and extended quiet periods for a number of labs. While fluctuations and challenges are a normal part of business, the impact was widely felt across the lab industry, with many adapting to tighter budgets and shifting priorities. However, the new year brings hope for growth, stability, and innovation in 2025.

With this in mind, work pressures can be a huge source of mental strain and stress, as stated by Sean Ward on page 33. The start of a new year is an excellent time to check in on your wellbeing and reach out for support if needed. Sean outlines a number of ways to spot and cope with stress in his article, so be sure to check it out.

One breakthrough making waves in the dental profession is the invention of a new type of denture featuring octopus-inspired suckers. Developed by researchers at King's College London (KCL), these dentures aim to improve grip and comfort, eliminating the need for adhesive. Lead researcher Sherif Elsharkawy discusses the next steps in his research and the inspiration behind the design on page 26.

The North of England Dentistry Show is returning to Manchester on Saturday 8 March with a new look, new energy and new flow. Completely reimagined, attendees can expect an unparalleled experience with more interaction than ever before. We are also excited to present the leading lineup of dental technology experts over in the Laboratory Zone. Here, you will be able to learn something new, connect with like-minded professionals and earn CPD. Turn to page 11 to find out more about what to expect at the show and the Laboratory Zone highlights.

Another key date for your diary is the 2025 Dentistry Awards. This year's ceremony has made a seasonal shift to June, transforming into the ultimate summer party. On Friday 6 June, the awards will return to The Athena in Leicester for another incredible evening of celebration and glamour. Registration is now open, so head over to www.dentistry.co.uk/awards for more information and to register for free.

As always, we would love to hear from you! Whether you have feedback or would like to contribute an article to *Laboratory*, get in touch with us. For tips on crafting a standout technical article, check out our guide on page 21 to improve your chances of passing our review process and showcasing your case study in the magazine.

I hope you have a great start to 2025 – see you in spring!

LUCY VEAL
Editor of *Laboratory*

ENHANCED CPD

Complete this issue's enhanced CPD online at cpd.dentistry.co.uk or scan the QR code. Email cpdsupport@fmc.co.uk if you're in need of guidance.

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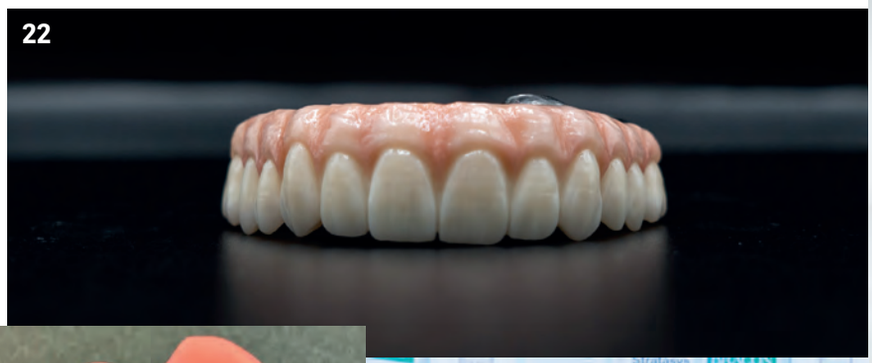

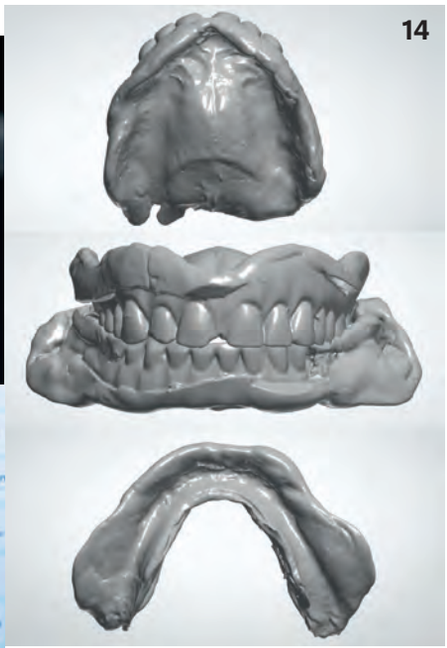

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Clinical dental technician and managing director, CMB Dental Laboratory

ASHLEY BYRNE

Associate director, Byrnes Dental Laboratory, part of the Corus group

MASSIMO CICATIELLO

Orthodontic dental technician and owner, Napoli Ortodonzia

MATT EVERATT

Editor-in-chief, *Laboratory* and director, S4S Dental Laboratory

NINA FRKETIN

Senior dental technician, Mango Dental Technologies

ANNA MUNRO

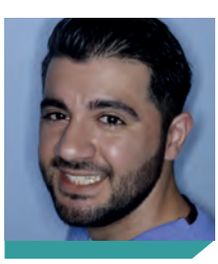
Dental technician, Southend University Hospital

ELEANOR PITTARD

Managing director and co-owner, Hive Dental Laboratory

EMILY PITTARD

Clinical dental technician, clinical director and co-owner, Hive Dental Laboratory



KASH QURESHI

Clinical dental technician and managing director, Bremadent Dental Laboratory

DANIEL SHAW

Maxillofacial prosthetist and laboratory manager, Chesterfield Royal Hospital

BRIANA SLACK

Dental technician, S4S Dental Laboratory

LOLA WELCH

Senior dental technician, Quoris 3D

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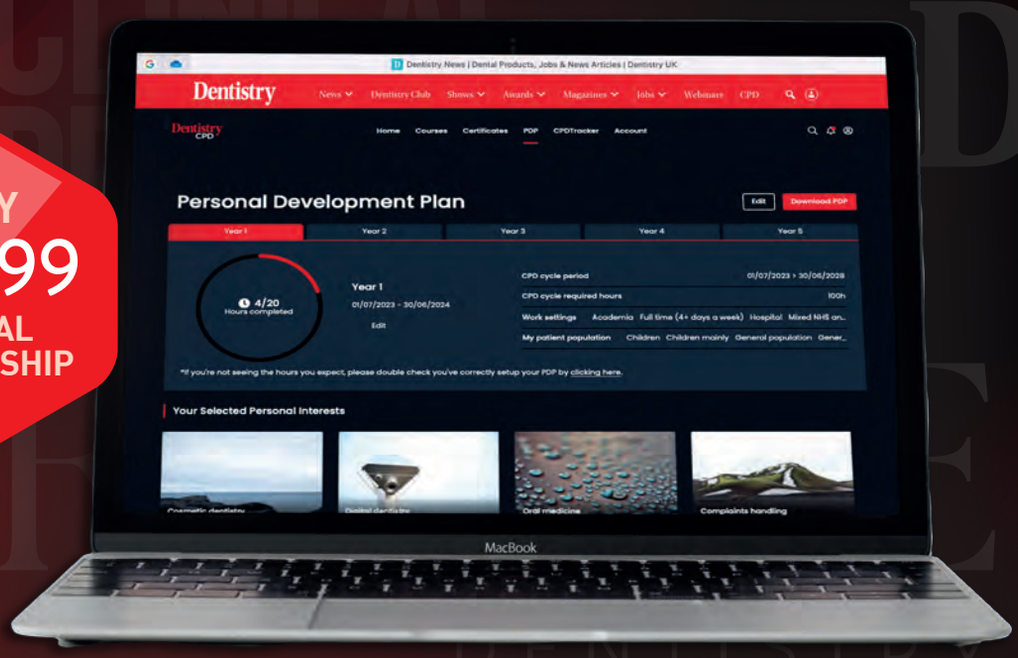

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Plans approved for new dental school

Plans to open a new dental school in Norfolk have advanced, supported by £1.5 million in funding.

The new dental school will be built at the Norfolk and Norwich Hospital (N&N) as part of the University of East Anglia (UEA).

Norwich council leaders granted the funding following calls for the UEA to address the 'dental desert' in Norfolk. This comes as a report found that Norwich had the second lowest acceptance rate for NHS dentistry in the UK, with just eight out of the 50 practices (16%) accepting patients.

Currently, East Anglia is the only region in the country without a dental training school. The university hopes the dental school, which is expected to cost a total of £3 million, will result in more dentists practising in the county.

Sue Holland is leader of Broadland District Council and chairman of the Greater Norwich Growth Board. She said: 'The lack of access to a dentist is a real concern for too many of our residents. Training dentists locally will provide much needed resources for existing dental practices.'

NEW DENTAL SCHOOL IS 'AN IMPORTANT STEP'

Named the School of Oral Health, the new dental training facility will be created on the second floor of an extension on the N&N's Edith Cavell Building.

The university is set to provide the remaining £1.5 million from its capital budget for equipment. This includes nine dentist chairs and specialist teaching facilities. At first, the school will enrol 40 students per year, though this is expected to increase to 65 students per year following another expansion.

The university is now in discussions with the General Dental Council (GDC) to advance the required registration process so the school can start the dental training courses.

Kay Mason Billig, leader of Norfolk County Council, said: 'The county council has been working hard to support UEA's ambitions for a new School of Oral Health, which is why we brought this proposal to the Greater Norwich Growth Board. We are delighted, therefore, that this investment now has the support of district partners.'

Norwich City Council leader Mike Stonard added: 'I really strongly support this. We have a shortage of dentists, particularly NHS ones in Norfolk, and the nearest training facility is a long, long way away.'

David Maguire, vice chancellor of the UEA, also said: 'This is an important step in our bid to deliver undergraduate dental training at UEA, building on the success of the Norwich Medical School.'

Up to 96% of practices are not accepting new NHS adult patients

Up to 96% of dental practices in England are unable to take on new adult NHS patients, suggest findings from a new *Daily Mirror* investigation.

The newspaper found that 4,800 (73%) dental practices on the NHS 'Find a Dentist' website are currently not accepting new adult patients. In addition, there was not a single NHS dentist accepting new adult patients in 10% of constituencies. Together with the British Dental Association (BDA), the newspaper then contacted 100 practices which were listed as accepting new adult patients 'when availability allows'. However, this revealed that 84 were in fact not currently accepting new patients, with one practice's waiting list as long as 10 years.

As a result, this suggests that the actual figure of practices not accepting new adult NHS patients is closer to 96%, as opposed to the 73% indicated by the NHS website.

Following these findings, the BDA has stated that the government 'must show urgency and ambition' on its promise to reform the NHS dental contract. The professional body also stresses that 'there simply won't be a service left to save without rapid action'.

LEVEL OF ACCESS 'EXAGGERATED'

The BDA believes that the changes made to the NHS website under the last government have made it 'all but impossible' to identify whether practices are accepting new patients.

Previously, practices were ask to state if they were taking new NHS patients with a yes or no question. The website update now asks practices whether they can do so 'when availability allows'. This change was implemented by the former government following the announcement of its dental recovery plan.

According to the BDA, this change seems 'designed to exaggerate the levels of access available to patients'.

Eddie Crouch, BDA chair, said: 'Every week I speak to MPs reporting how deep the crisis in NHS dentistry goes.

'There are votes to be won and lost here, and constituents are looking for action. If this ends up as another line on a pledge card at the next general election, there simply won't be a service left to save.

'The information on the NHS website was redesigned to give cover to the last government. But until the new government keep their promises, millions will face long hours on the phone, struggling to access care.'

GDC fails to reach all standards of 'good regulation'

The General Dental Council (GDC) has met 16 out of 18 Standards of Good Regulation for 2023/24. This marks the same number that were met in the 2022/23 review period.

According to the Professional Standards Authority (PSA) annual review, it was found that the GDC failed to meet the standards for EDI (equality, diversity and inclusion) and fitness to practise timeliness.

The report also found the regulator is 'taking too long' to handle fitness to practise cases. While it acknowledged that the GDC has put in place measures to improve its fitness to practise timeliness, these have not yet made sufficient improvements to the time it is taking to reach decisions in cases.

There is a slight overall reduction in the total number of older cases. However, the GDC now has more cases older than 156 weeks than at any time in the last three review periods.

Speaking about EDI, the review reads: 'There are concerns with the progress and public reporting on the GDC's previous and current EDI strategies. There is a lack of emphasis on diversity in the GDC's current standards, and it does not currently require education and training providers to demonstrate that they take appropriate account of diverse student needs.

'There are gaps in the EDI training for council members and others. We have commended the GDC on its work to ensure that it seeks out and acts on the views of a diverse range of stakeholders in its policy and research work. We have also outlined a number of opportunities for improvement.'

Following the review, the GDC said its EDI vision and approach will be incorporated into its corporate strategy from 2026, to ensure that EDI is embedded within its broader strategic objectives.

The regulator also met Standard 11 for the first time in two years, improving the median processing time for UK graduate applications each quarter during the review period. The GDC has been clearing the backlog of overseas-qualified dentists who applied as dental care professionals (DCPs) prior to the route closing on 8 March 2023.

The backlog has 'reduced significantly', with the number of unworked DCP applications standing at 1,089 by June 2024, down from 5,700 in April 2023.

BUILD TRUST

Tom Whiting, chief executive of the GDC, said: 'We welcome the PSA's recognition of our progress across multiple areas, particularly in registration, while acknowledging there is more work to do. We remain firmly committed to improving fitness to practise processes and implementing our EDI strategy.

'Our priority is ensuring we deliver effective regulation that protects patients and supports dental professionals.

'We welcome close working with partners and stakeholder organisations to build trust in effective regulation and achieve a goal that we all share, which is patient safety and public confidence in the dental professions.'

Dentistry Awards launch for 2025

It's time to mark your calendar – the Dentistry Awards will now take place on 6 June 2025. Imagine longer, lighter evenings, vibrant summer vibes and the perfect opportunity to honour excellence in dentistry against a backdrop of sunshine and celebration.

Dubbed 'dentistry's biggest party', the awards will return to The Athena in Leicester for another showstopping evening. You can expect all the excitement, glamour and prestige of previous years, now as the highlight of your summer.

Our team is working hard behind the scenes to make this year's awards a truly unforgettable experience. While we finalise the details, why not start planning your moment in the spotlight?

The Dentistry Awards celebrate excellence in dental practice, recognising dental professionals for their achievements and advancements. This prestigious event highlights talent, innovation and dedication in dentistry.

Nominees are chosen for their exceptional skills, patient care and community contributions. The awards not only honour individual and team accomplishments but also inspire continued excellence in oral health care.

REGISTER NOW

It's never too early to start considering your entry. Which categories will you enter? What were your biggest achievements in 2024? How will you show the judges exactly what sets you or your lab apart?

The deadline for entries is 19 March – register today at dentistry.co.uk/awards/the-dentistry-awards. You can then add your details and select your categories. We'll be sure to remind you when it's time to upload your submission. Entries can then be uploaded through an online form. This is now the only way to submit entries for all FMC awards.

As entry to the awards is completely free, you have nothing to lose by trying!

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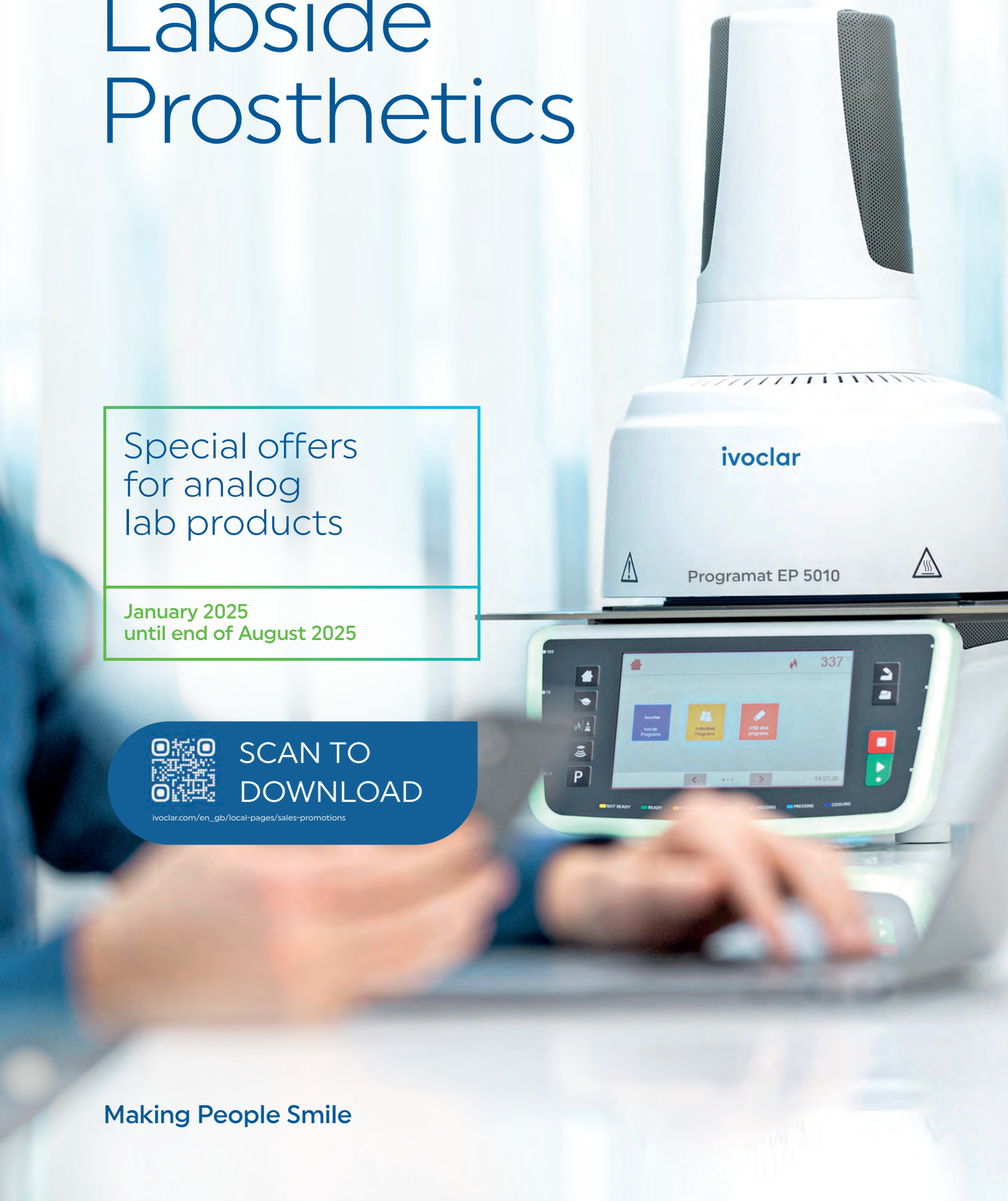

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Making People Smile

The **North of England Dentistry Show** returns to Manchester for 2025 – find out what's in store

The North of England Dentistry Show returns to Manchester Central Convention Complex on Saturday 8 March 2025.

With a new look, new energy and new flow, this year's show has been reimagined from the ground up to deliver an unparalleled experience.

The one-day event will keep delegates at the heart of the experience – with more interaction than ever before, on top of seamless session flows, meaningful networking opportunities and actionable insights tailored for professional growth.

More than 50 renowned speakers will present cutting-edge research, innovative techniques and practical expertise across multiple lecture theatres. Each session is CPD-verified, offering hours of certified content to help you stay up to date.

The event will showcase the latest advancements in dental technology, interactive workshops and a vibrant exhibition featuring more than 100 leading suppliers.

Best of all, the North of England Dentistry Show is entirely free to attend, ensuring the whole team can take advantage of this incredible opportunity to learn, connect and explore.

THE LABORATORY ZONE

One of the show's lecture theatres is the Laboratory Zone, featuring a tailored lineup specifically designed for technicians and clinical dental technicians.

Dedicated to bringing you the latest discussions and trends, this is the perfect space to learn something new and make everlasting connections with like-minded professionals.

What to expect:

- Learn from experts– with leading dental technicians in attendance, you will have an abundance of knowledge at your fingertips
- Discover the latest techniques – at FMC, we pride ourselves in having the forefront and future of dentistry present at the North of England Dentistry Show. This is no different for our theatres – discover the latest techniques and technology for 2025
- Network with like-minded professionals – after each lecture, take the opportunity to meet the speakers, connect with peers, and build lasting relationships.

LECTURE LINEUP

Find out what you can expect from the confirmed speakers so far. More will be announced in the coming weeks, so stay tuned.

Tim Jackson: Precision in prosthetics – digital dentures using design softwre

In this lecture, clinical dental technician and lab co-owner Tim Jackson will explore the transformative impact of digital design when producing dentures. Using 3shape design software, he will discuss how to utilise their workflows to construct high quality digital dentures, aiming to enhance patient comfort, functionality and aesthetics while streamlining the workflow for technicians.

Tim will also share how to increase efficiency and productivity within the dental lab and enhance the quality of care for patients. He hopes attendees will come away from his lecture with increased confidence and be able to recognise the advantages of digital design compared to traditional methods.

Kristina Vaitelyte: Hack the workflow – CAD/CAM planning made smarter

Kristina Vaitelyte is an experienced digital dental technician specialising in CAD/CAM technologies for over 10 years. In this exciting session, Kristina will discuss how to unlock the full potential of your CAD/CAM workflow, diving into smart strategies that not only save you time but also boost precision and elevate the quality of

your restorations. Attendees will learn how optimising scans and designing for both function and aesthetics can streamline your process, and the crucial role dental and dental lab photography plays in enhancing communication and showcasing your work to its highest standard.

Kristina says: 'Collaboration between dentists and technicians is key to success, and I'll show you how digital tools can strengthen that partnership. Whether you're a technician or a dentist, you'll walk away with practical tips and fresh ideas to take your digital planning and workflow to the next level!'

Carmel Vickers-Wall: Communication between clinician, technician and patient – we can all do better

Carmel Vickers-Wall is a dual-qualified clinical dental technician and dental nurse with 10 years of experience in the field. Her lecture will explore communication strategies from the perspective of patient, technician and clinician, providing practical tips and techniques to enhance interactions at every stage of the dental process. Whether you're explaining procedures to patients or collaborating on treatments, this session will offer valuable insights to foster clear, respectful, and efficient communication.

Speaking on her presentation, Carmel said: 'As a dental care professional, effective communication is key to ensuring the best patient outcome and ensure a smooth workflow within the dental team. Have you ever wondered how to communicate better with your patients, the technician, or the clinician?'

Alessandro Cucchiaro: Optimising the digital workflow for the fabrication of full dentures – sponsored by Zirkonzahn

Specialised in CAD/CAM and digital technology, Alessandro Cucchiaro is a Zirkonzahn course instructor and worldwide lecturer. His lecture will offer dental professionals state-of-the-art methods and techniques for producing functional and aesthetically pleasing full dentures as an alternative to implant-supported prostheses. By presenting real case examples, Alessandro will guide participants through the challenges encountered when creating a full denture with 28 teeth, considering various different initial patient situations. Attendees will also benefit from hands-on demonstrations of bonding teeth to denture bases using an innovative protocol based on the principle of cold welding

Alla Leal and Riges Picaku: The artistry of morphology: crafting bespoke all-on-X solutions

Dental technicians Alla Leal and Riges Picaku will guide you through each stage of creating a full-mouth restoration all-on-X, from the initial design phase to the final result. They will share insights and best practices for delivering exceptional all-on-X restorations, including the importance of seamless communication in achieving optimal results.

Attendees will also learn how shapes are selected and customised to create bespoke designs tailored to each patient's unique needs, as well as why the green state is a crucial phase in the production process.

Finally, Riges and Alla will explore the materials and finishing techniques used to achieve stunning, lifelike restorations. They hope attendees will come away with increased confidence in morphology.

TAILORED TO INSPIRE

Leanna Ellis, FMC events director, said: 'The North of England Dentistry Show is set to be the most anticipated event of the year for the dental industry.

'We've designed this show to offer far more than just CPD hours. It's about providing each attendee with real, hands-on experiences, meaningful networking opportunities, and exclusive insights that truly elevate their practice.

'This year, we're bringing a new look and an enhanced flow to the existing event, with over 100 exhibitors, compliance and CPD hubs, and a new theatre crafted for an engaging experience that keeps all dental professionals feeling inspired and empowered.

'If there's one event to attend this year, it's the North of England Dentistry Show. We can't wait to welcome you all!'

Stay tuned over the coming months as more is revealed about what's in store.

Find out more and register for free now at **dentistry.co.uk/shows/north-of-england-dentistry-show**.

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Decoding digital dentistry

Beth Brown explains why digital design offers seamless, personalised and precise results

BETH BROWN
Prosthetic and digital dental technician, Hive Dental Laboratory

With over 10 years of experience in fabricating analogue dentures, I've witnessed first-hand how digital dentures have revolutionised the industry. Once limited by outdated methods, we were forced to compromise on aesthetics and functionality. Now, digital dentistry is integral to my daily workflow, transforming how I deliver results.

I'm eager to share both the benefits and the challenges I've encountered along the way, offering a genuine perspective from a technician who not only does these types of cases every day, but also built an education platform (The Party Enamel) to teach other technicians digital denture design and aid dentists in their clinical journey too.

FLEXIBILITY

Digital design offers unprecedented flexibility in modern dental prosthetics. Traditional laboratories typically stock a limited range of teeth and moulds, which can restrict the ability to create prostheses that blend naturally with a patient's existing dentition. This case demonstrates how digital tools not only enable the seamless integration of prosthetic teeth by incorporating personalised character traits, but also simplify the try-in process (Figure 1). With digital dentures, there's no risk of teeth separating from wax, and technicians have the advantage of assessing the shade before finalising the dentures, ensuring a more precise and customised result (Figure 2).

FIGURE 1: Digital partial try-in

> The benefit of flexibility extends beyond aesthetics. This approach enables tasks to be completed from virtually anywhere, providing the freedom to work remotely

The benefit of flexibility extends beyond aesthetics. This approach enables tasks to be completed from virtually anywhere, providing the freedom to work remotely. Additionally, it offers the significant advantage of storing digital data, making it easier to manage lost work or remakes. In certain cases, patients can retain trial sets as an interim solution or spare set, adding value to their treatment without incurring additional costs for the laboratory or clinic. This efficiency enhances both patient care and operational productivity.

FIGURE 2: Try-in in situ – clinical work by Dr Ferdi Chum

CLAIM YOUR CPD

GDC anticipated outcome: C

CPD hours: One

Topic: Digital dentistry

Educational aims and objectives: To demonstrate how digital design enhances technical outcomes

This article qualifies for one hour of enhanced CPD. Turn to page 48 to answer the questions.

FIGURE 3: Digital dentures with gingival composite

FIGURE 4: Milled dentures without characterisation – Den-tech charity case in collaboration with Emily Pittard

FIGURE 5: Milled dentures after characterisation – Den-tech charity case in collaboration with Emily Pittard

AESTHETICS

Digital dentures have faced criticism over the years, particularly regarding aesthetics, and at first glance, I can see why. Depending on the manufacturing process, the results can sometimes appear less refined compared to analogue cases. However, I firmly believe that the aesthetic outcome is ultimately in the hands of the technician.

My experience has shown me that the difference lies in the skills required to achieve exceptional results.

Just as our ceramic colleagues master shaping and staining, digital technicians can achieve aesthetics similar to traditional methods by refining these techniques. Mastering the application of gingival composites can further elevate your work and, combined with the precision and accuracy that digital dentistry provides, offer a desirable and optimal solution (Figures 3 to 5).

The key is not the limitations of digital technology, but the technician's willingness to evolve, expand their skillset, and adapt to advancements in our field. Restricting ourselves based on outdated mindsets will only hinder our growth and potential.

COMMUNICATION

Communication has long been an underutilised tool in achieving optimal case outcomes. Often overlooked, it has become an invaluable asset with the introduction of digital workflows. These innovations have empowered both clinical and technical teams to enhance communication, providing patients with more visibility and involvement in their treatment journey (Figure 6). This increased collaboration fosters better results and a more personalised experience.

> Empowering patients to make informed decisions, understand potential limitations and manage expectations leads to higher treatment acceptance and improved outcomes

The integration of photographs, for instance, allows me to overlay designs which enables clinical partners and patients to visually track the process of the case. This fosters space for constructive feedback, preferred aesthetics and collaborative planning. Empowering patients to make informed decisions, understand potential limitations and manage expectations leads to higher treatment acceptance and improved outcomes.

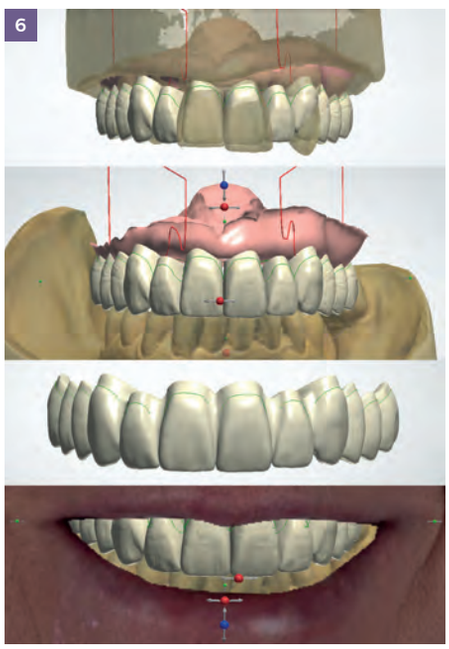

FIGURE 6: Digital design – clinical work by Dr Daniel Gillen

A perfect example of this is a full upper immediate denture case, where the patient cannot trial the denture before the extraction and fit appointment. Through this workflow, the patient gains insight into the aesthetic outcome, with the option for refinements before final manufacturing, ultimately saving time and resources for both the technical and clinical team.

REFERENCE DENTURES

Although analogue copy dentures have been in use for many years, it has been impossible to 'clone' a denture when setting new teeth by hand.

Digital technology now allows for the creation of copy dentures that accurately replicate the previous denture, including any wear facets. Reference dentures, however, follow the same principles as analogue copies and enable the production of new sets that offer enhanced fit, function, stability, and aesthetics.

Reference dentures offer effective solutions for a substantial number of edentulous patients, significantly reducing both clinical and technical time without compromising quality. By taking master impressions and bite registrations with the current prosthesis, we can create digital master models in the correct articulation (Figure 7). This allows us to bypass multiple steps in the traditional process and move directly to a printed try-in, reducing clinical appointments from six or more to just three. This case demonstrates how accurate clinical records can be utilised to produce digital try-in designs and final dentures (Figure 8). This streamlined workflow minimises

errors, boosts profitability and consistently delivers exceptional results.

CHALLENGES

Integrating digital workflows into your laboratory processes does not come without its challenges. While the availability of education and mentors who are willing to share their knowledge is growing, it remains a difficult resource to access. Courses on different software systems are often within reach with a simple search, but finding consistent, ongoing support remains a challenge. While I cannot speak for other programs, my Digital Denture Design course at 3shape UK is designed to provide continued support after the event, ensuring participants feel connected to peers and are not isolated in their digital journey. If you prefer a more relaxed learning environment, I encourage professionals to engage with the broader dental technology community by joining platforms like Tech Talk or Facebook groups, which foster collaboration, education and growth.

Once digital workflows are integrated, another key challenge is the gap in clinical knowledge required to fully execute the work. Establishing strong working relationships with dentists and clinical dental technicians (CDTs) is essential for ensuring a smooth transition, fostering an environment where experimentation and collaboration can occur without potential grievances. Creating open communication channels for educational discussions and constructive feedback promotes mutual learning, allowing clinicians and technicians to openly share personalised solutions. This collaborative approach helps streamline workflows and ensures that both sides can efficiently adapt to the evolving demands of digital dentistry.

SO, SHOULD YOU GO DIGITAL?

While digital dentures present some initial challenges, once these workflows are adopted, they can bring significant benefits to both you and your laboratory. Younger generations may not have the same exposure to analogue methods, which I believe are essential for fully understanding technical removable prosthodontics before transitioning to digital. Mastering both approaches allows you to combine the strengths of each, leading to the best functional outcomes (Figure 9). Digital dentistry has been a standard in the field for years and shows no signs of slowing down, making the integration of digital dentures into your lab not just beneficial, but inevitable. By leveraging these advancements, you can save time, reduce costs, minimise exposure to hazardous materials, and provide exceptional outcomes, all while enhancing collaborative treatment planning and maintaining valuable records for future care.

Mastering both approaches allows you to combine the strengths of each, leading to the best functional outcomes

FIGURE 7: Reference denture scans – clinical work by Emily Pittard

FIGURE 8: Final digital denture – clinical work by Emily Pittard

FIGURE 9: Final digital denture – clinical work by Dr Doug Watt

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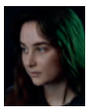
Restoring function amid medical constraints

Amanda Carson, Catherine Dallow and **Roua Kefi** present a comprehensive solution for an 84-year-old patient undergoing cancer treatment



AMANDA CARSON
Owner and dental technician,
Meliora Dental Studio

CATHERINE DALLOW
Prosthodontist,
Commonwealth Prosthodontics

ROUA KEFI
Owner and CAD/CAM technician,
Digital Dental Arts Lab

Restoring function and aesthetics in patients with complex medical conditions requires a highly personalised approach, particularly when dental implants are not a viable option. This case focuses on an 84-year-old patient referred by his periodontist for the rehabilitation of his mandibular missing teeth after implant failure and concurrent cancer treatment.

INITIAL ASSESSMENT

The patient sought a fixed solution to restore function and firmly rejected the idea of a removable prosthesis. At the time of evaluation, the implants in the anterior mandible were failing: the LL1 had already been removed, and LR1 exhibited lack of osseointegration (Figures 1 and 2). Surgical options were ruled out due to his cancer diagnosis and treatment.

A thorough clinical and radiographic evaluation revealed type II mobility in the LR4, while the remaining dentition was deemed periodontally and structurally suitable to serve as abutments for a fixed bridge prosthesis.

PLANNING AND INITIAL STEPS

The treatment plan began with an assessment of the remaining teeth for their potential to support a fixed dental prosthesis (FDP). Digital impressions and clinical photographs were taken to guide the design process. The preliminary plan involved splinting LL5 to LR4 and placing a single crown on LR5.

During the provisional phase, LR5 developed symptoms of discomfort and mobility due to its compromised structure. Extraction became necessary, prompting a redesign of the plan. The revised restoration included a span bridge from the LL5 to LR3, a single crown on LL5, and a three-unit bridge from LR4 to LR6, accommodating the arch's constriction and the tapered alignment of the remaining teeth.

PROVISIONALISATION AND EVALUATION

Immediate provisionalisation on LL5 to LR6

> At the time of evaluation, the implants in the anterior mandible were failing

FIGURES 1 and **2:** The initial assessment – the implants in the anterior mandible were failing, the LL1 had already been removed, and LR1 exhibited lack of osseointegration

FIGURES 3 and **4:** The patient was provided with a realistic preview of the final restoration's aesthetic

CLAIM YOUR CPD

GDC anticipated outcome: C

CPD hours: One

Topic: Crown and bridge

Educational aims and objectives: To present a complex crown and bridge case that restored functionality and aesthetics.

This article qualifies for one hour of enhanced CPD. Turn to page 48 to answer the questions.

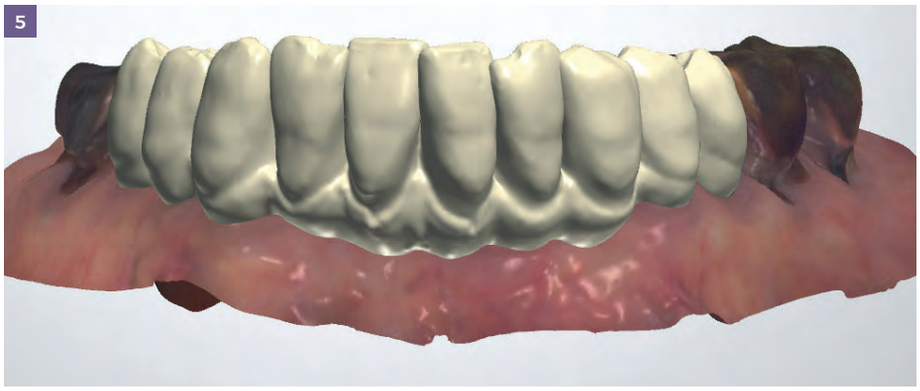


FIGURE 5: The final restoration, including a combination of a single crown and two bridges spanning teeth LL5 to LR6, addressed the patient's functional requirements while maintaining balanced occlusion

FIGURES 6 and **7:** The teeth were contoured manually in the green state to achieve proper interproximal separation, allowing for detailed interproximal aesthetics

using Bisacryl (Structur 2 SC by Voco), characterised with Optiglaze Color by GC, was performed. This approach provided the patient with functional temporisation, promoted soft tissue healing, and allowed for an evaluation of the design, occlusion and comfort.

After six weeks of healing, final impressions were taken to fabricate the definitive prosthesis. During the provisional phase, minor adjustments were made to optimise the design and ensure the final restoration would meet the patient's functional and aesthetic needs.

The initial step in the workflow involved designing the temporaries with a monolithic approach. This strategy was employed to provide the patient with a realistic preview of the final restoration's aesthetic (Figures 3 and 4). By doing so, it ensures the patient has accurate expectations and fosters confidence in the outcome.

> The patient expressed a desire for a restoration that would restore his sense of wholeness and confidence

TREATMENT EXECUTION AND PRIORITISING STRENGTH

The final restoration addressed the patient's functional requirements while maintaining balanced occlusion. The treatment included a combination of a single crown and two bridges spanning teeth LL5 to LR6, fabricated from full-contour zirconia enhanced with Miyo for improved aesthetics (Figure 5). These restorations successfully accommodated the patient's unique health considerations and arch configuration.

A full contour zirconia design was chosen to both ensure long-term strength and to minimise the risk of future failures. The restoration was milled from pre-shaded multi-layered A3 Zircad Prime, sourced from Ivoclar, due to its strength and aesthetic versatility.

GREEN STATE CONTOURING

To enhance the restoration's aesthetic realism, the teeth were contoured manually in the green state to achieve proper interproximal separation (Figures 6 and 7).

FIGURES 8 and **9:** Seamless blending of the patient's natural dentition resulted in a truly natural and harmonious appearance

FIGURE 10: The final restoration on a model

FIGURES 11 to **13:** The patient was satisfied with the final result

This step is crucial, as milling burs – limited to rounded and square shapes – cannot replicate the natural separation of teeth. Manual contouring allows for the detailed interproximal aesthetics essential for realistic looking bridgework.

COLOUR MODIFICATIONS

Before sintering, liquid modifiers from Zirkonzahn were applied to the zirconia. These modifiers altered the internal colour and effects, contributing depth and enhancing the natural appearance of the final restoration. By incorporating these colour adjustments at this stage, the restoration gains a customised, life-like translucency and chroma.

FIGURE 14: Before and after

To further refine the aesthetics, Miyo Liquid Ceramics from Jensen was applied to the monolithic zirconia after sintering. This colour application imparts a dynamic, multi-dimensional effect to the restoration, replicating the natural layering of enamel and dentin.

> Extraction became necessary, prompting a redesign of the plan

PERSONALISE

In this case, our goal was to create a personalised final restoration that seamlessly blended with the patient's natural dentition, making it virtually undetectable. The patient expressed a desire for a restoration that would restore his sense of wholeness and confidence.

Upon examining the opposing dentition, we observed significant wear patterns, including chipping, recession, staining and a variety of shades across individual teeth. These unique characteristics provided an opportunity for a creative approach. Instead of applying a uniform shade throughout the lower restoration, each tooth was individually tailored with varying degrees of chroma, staining and translucency. This customisation allowed the restoration to mimic the natural misalignment and individuality of the patient's opposing anterior teeth, resulting in a truly natural and harmonious appearance (Figures 8 and 9).

CONCLUSION

This case highlights the importance of adaptability and meticulous planning in prosthodontic care, particularly for patients with significant medical constraints. By leveraging advanced digital technology and fostering close collaboration between clinical and laboratory teams, we restored the patient's function and aesthetics with a fixed prosthetic solution (Figure 10).

The patient's satisfaction underscores the critical role of comprehensive treatment strategies and the expertise of dental laboratories in achieving exceptional outcomes for complex cases (Figures 11 to 14).

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IMAGES

Authors must also submit four to 15 images alongside the article. These should be clearly identified with a number or letter in the file name. Please provide captions with corresponding numbers/letters for all images and, if there is any doubt about which way up it goes, or from which side a picture should be viewed, please mark it accordingly.

Authors are also encouraged to make reference to the images within the article text, eg 'The casts were mounted on the articulator (Figure 3).'

The images should be supplied separately as jpegs at original size or at the highest available resolution (300dpi, at least 4cm x 4cm). Digital workflow screenshots are acceptable, but images of the physical/final restoration are important.

STRUCTURE

Address the following key points when putting together your article. The headings do not have to be replicated or followed precisely/in order:

- Case overview: what were the patient's problems at presentation? What treatment was needed/agreed upon? What solution did the technician need to supply?
- Challenges: outline briefly the key difficulties specific to this case – high aesthetic need, difficult shade matching, remote communication etc
- Technical work: describe the solution in more detail, mentioning why this decision was made. Detail the steps taken and the process of the case. Discuss how patient/dentist communication was prioritised
- Final product: briefly outline the final restoration and describe the patient/technician/dentist reaction to it. Ideally, include pictures of it before fit and in situ
- Reflections: a short review of the case from the technician's perspective – explain what went well, what could be changed and what lessons have been learned for the future.

SUBMITTING THE ARTICLE

Please send the article and images over via email or contact us to arrange using services such as Wetransfer. You should also include a short biography and headshot of all authors.

A low-resolution PDF will be supplied to authors for amends, provided the article is received by the stated deadline and passes our editorial review process. Corrections should be limited to those essential for correctness and clarity, so please try to ensure you are satisfied with your article when you submit it.

Please check that no inaccuracies have crept in during the production process and that the correct pictures are appropriately placed with the correct caption. Don't hesitate to point out any typographical errors!

Finally, please bear in mind that the article will have been adjusted to fit the pages. If you add a significant amount of extra copy, we will need to lose the same amount from elsewhere in the article. Similarly, slicing out a large chunk will create an awkward gap.

For specific requirements and best chance of case acceptance, liaise with the editor in advance of submitting your article.


TECHNICAL

A seamless collaboration

Nina Frketin and Harry Craig demonstrate how a clinical and laboratory partnership can elevate complete denture fabrication

NINA FRKETIN
Senior dental technician, Mango Dental Technologies

HARRY CRAIG
Associate dentist, Rivenridge Cosmetic Dentistry

With this clinical case, we present a journey where clinical and laboratory expertise converged at every stage of complete denture fabrication. The key to our success lay in the repeated use of clinical images, serving as a powerful tool for communication between the clinic and the laboratory. This meticulous collaboration ensured that we adhered to gold standards from the initial stages right through to the final masterpiece.

THE CASE

In pursuit of a brighter and more youthful smile to celebrate her 70th birthday our lovely patient Hilda sought a cosmetic dental assessment with us. Her primary concerns centred around the colour and shape of her existing dentures, her faithful companions for over three decades.

Upon thorough examination, it became evident that Hilda's existing dentures exhibited signs of wear and tear after so many years of dedicated service (Figures 1 and 2).

FIGURES 1 AND 2: Upon thorough examination, it became evident that Hilda's existing dentures exhibited signs of wear and tear after so many years of dedicated service.

The under extension of the dentures contributed to a lack of retention and stability, impacting her overall oral health.

Occlusal wear presented challenges during eating, while deficient buccal corridors contributed to a narrower smile than desired.

Furthermore, the presence of calculus and staining added to the ageing appearance of the dentures. Determined to welcome her milestone birthday with a new and vibrant smile, Hilda embarked on a journey to address both aesthetic and functional aspects of her smile.

The treatment plan involves the meticulous crafting of new custom dentures, strategically designed to both address the functional concerns and take the aesthetic aspirations Hilda envisioned into account.

IMPRESSION STAGE

Primary impressions were taken using denture stock trays. Both were modified with Green Stick, followed by silicone putty (Figures 3 and 4). The lower also had an alginate wash to ensure accurate special tray creation.

FIGURES 3 AND 4: Primary impressions were taken using denture stock trays. Both were modified with Green Stick, followed by silicone putty

CLAIM YOUR CPD

GDC anticipated outcome: C

CPD hours: One

Topic: Dentures

Educational aims and objectives: To highlight the teamwork between technician and dentist for complete denture fabrication.

This article qualifies for one hour of enhanced CPD. Turn to page 58 to answer the questions.

TECHNICAL

FIGURE 36: Zirconia bridge after sintering, ready for colouring.

By using these digital tools, the time and cost of production can be significantly reduced

REFLECTIONS

GET IN TOUCH

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A future-ready lab

Joe Ganderton shares how his lab has evolved into a hub of cutting-edge technology and forward-thinking practices

JOE GANDERTON
Associate director,
Corus Remo Dental Laboratory

Thinking back two years to when I set up Remo Dental Laboratory, it's incredible to see how much has changed in such a short time. What started as a small, traditional dental lab has quickly evolved into a hub of cutting-edge technology and forward-thinking practices.

We have since grown into a lab where digital design meets traditional craftsmanship, transforming both our work and what we can deliver.

Collectively, we have seen first-hand how embracing advancements – like 3D printing, hybrid milling and digital workflows – has reshaped our lab's capabilities, enabling us to deliver faster, more precise restorations. However, I'd be lying if I were to suggest it's all been plain sailing.

The journey hasn't been easy, but every step has been worth it...

HOW TECHNOLOGY IS CHANGING OUR CRAFT

At the heart of our operations is cutting-edge technology. When setting up, we quickly saw the potential of technology to expand what we could offer to dental practices and patients. In an industry that's often been slow to adopt new ways of doing things, we saw an opportunity to catch ground on some of our more established contemporaries.

Dental technology was advancing rapidly, and I knew that adopting tools like 3D printing, hybrid milling and automation could take our work to new heights.

One of the most exciting changes has been incorporating 3D printing into our workflow. 3D printing has allowed us to produce highly precise, natural-looking crowns, bridges and guides from digital scans provided by our partner.

It has also reduced our production time and minimised material waste, allowing us to become more sustainable. Watching the positive responses from dentists and patients alike has been really rewarding – it's clear that this technology is making a real difference.

I knew that combining traditional craftsmanship with modern digital techniques would be powerful, and hybrid milling has proven exactly that. At Remo, we use hybrid milling for zirconia restorations and complex metal frameworks, achieving a level of durability and precision that's vital for high-quality work.

This technology has allowed us to take on more complex cases and provide in-house solutions that were once impossible, ultimately reducing our reliance on external suppliers and ensuring our clients receive consistent results.

Bringing automation into the lab has been transformative, freeing up our team to focus on quality and artistry. With CAD (computer-aided design) and CAM (computer-aided manufacturing) systems, we're able to streamline repetitive tasks that used to take hours. Automation has freed up our team to focus on fine details, combining the efficiency of technology with the quality of hands-on work.

> BRINGING IN THIS TECHNOLOGY WOULDN'T BE POSSIBLE WITHOUT A TEAM OPEN TO LEARNING AND ADAPTING

ENHANCING RELATIONSHIPS WITH DENTAL PRACTICES

For me, one of the most rewarding outcomes of adopting these technologies has been the stronger relationships that we have built with dental practices. New technology has allowed us to work more closely with our partners, helping deliver better outcomes.

With cloud-based platforms, we're ready to get started as soon as we receive case files and scans, making everything faster and more precise. This instant data sharing allows us to get started right away and ensures that each product is tailored precisely to the patient's needs.

The direct feedback we receive from practices has been invaluable, as it helps us understand their needs in real time and adjust our work accordingly.

I'D BE LYING IF I WERE TO SUGGEST IT'S ALL BEEN PLAIN SAILING

We also now regularly hold virtual consultations with dentists, discussing case specifics and aligning on details before production begins. This ability to connect face-to-face – even remotely – has improved both accuracy and trust, building a true partnership between the practice and the lab.

OUR TEAM'S EVOLUTION

Of course, bringing in this technology wouldn't be possible without a team open to learning and adapting. Without sounding too cliched, I believe that investing in our team is the foundation of our success.

When I introduced these new tools, I encouraged the team to approach them as opportunities for growth. As our lab embraces digital tools, we're also committed to providing our team with the training they need to succeed in this new landscape.

With the integration of CAD/CAM, 3D printing and milling, we've established regular training sessions to ensure our team is equipped with the skills they need. It's inspiring to see our technicians, many of whom started with traditional methods, mastering complex digital tools. This commitment to learning is a key part of our lab's culture.

Encouraging our team to pursue certifications in advanced dental technologies has also helped us maintain high standards. These certifications validate our technicians' skills and reinforce our commitment to quality, ensuring our lab is staffed with experts in both traditional techniques and modern technologies.

NOT ALL PLAIN SAILING

Of course, every journey has its hurdles. For us, the path to innovation has required careful planning and strategic decision-making.

Advanced technology like 3D printers and hybrid milling systems requires a substantial financial investment.

We had to weigh the costs against the benefits carefully, but I firmly believe that these investments are the key to keeping Remo at the forefront of dental technology.

By strategically planning our growth, we've been able to absorb these costs as investments into our future.

Shifting to digital workflows required significant adaptation. Team members with years of traditional experience understandably needed time to adjust to new tools. We tackled this by emphasising hands-on training and creating a supportive environment where everyone could learn at their own pace.

Today, our team is completely comfortable with both the digital and conventional aspects of our work, creating a well-rounded skill set that's become our strength.

WHAT'S NEXT FOR REMO?

Winning Dental Laboratory of the Year at the 2024 Dentistry Awards has given us a chance to see the progress we have made up to this point, but it's also just the beginning. Embracing technology has allowed us to innovate, develop and upskill our people, and build stronger partnerships with dental practices.

Today, our lab is a blend of traditional craftsmanship and advanced digital tools – a place where every member of the team is committed to delivering high-quality, precise restorations that meet the needs of our patients and partners.

As we continue to grow and evolve, Remo Dental Laboratory remains dedicated to delivering excellence in every product, building partnerships based on trust, and leading the way into the future of dental technology.

For us, this award highlights what we are here to do: keep evolving, keep learning, and keep delivering quality.

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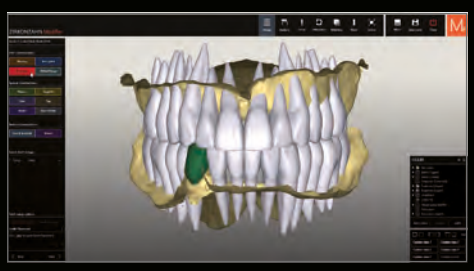


Making waves with retention

Sherif Elsharkawy, the lead researcher behind the dentures inspired by octopus suckers, shares what drew him to the sea creatures and outlines the next steps in the research

SHERIF ELSHARKAWY
Clinical lecturer in prosthodontics, King's College London

A team of scientists has designed a new type of denture with octopus-like suckers for improved grip and comfort.

The researchers at King's College London (KCL) explored how they could replicate the suckers octopuses have on their eight arms which allow them to attach to surfaces. They then formulated the idea of using similar suckers to attach to the soft mucosa of the mouth. As a result, the researchers designed small 'suction cups' into 3D-printed models using CAD. Following analysis, they found that the new denture design had twice the amount of retention as standard dentures.

The scientists, who belong to the KCL faculty of dentistry, oral and craniofacial sciences, believe the new design could help denture wearers across the UK. They suggest it could aid 11% of the UK population who use a denture and the 350 million people around the world who have no natural teeth at all.

The octopus-like suction design would remove the need for denture adhesive and improve the retention, according to the researchers. Here, the lead researcher shares what impact these dentures could have on the public.

WHAT MADE YOU LOOK AT OCTOPUSES FOR THIS RESEARCH?

We looked at octopuses because they are very special creatures in nature. They survived because of their tentacles which have suckers to allow them to stick to different surfaces, hide and hunt prey.

They need to survive in a very challenging, very wet environment, like the deep sea. And that's how we got inspired, because it's basically the same problem that we have with dentures. We need them to survive in a challenging, wet environment.

The mouth is full of saliva and mechanical challenges, such as biting and eating. As a result, we thought that multiple small suckers on the fitting surface of dentures could potentially make the denture stick better to the mucosa in the mouth.

WHAT IMPACT COULD THESE DENTURES HAVE ON THE PUBLIC IF SUCCESSFUL?

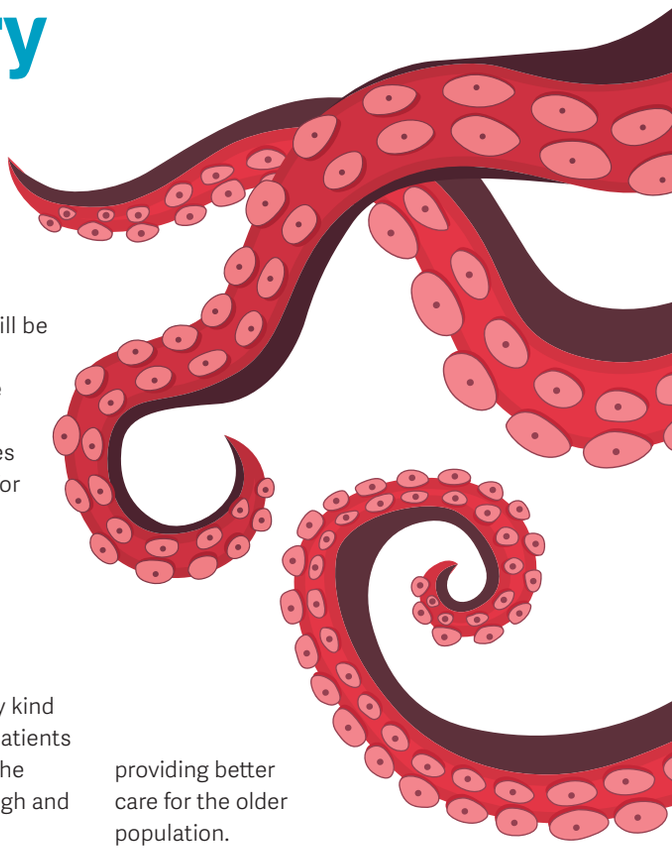
A lot of patients could benefit from using these dentures because they may not require extra adhesives. Patients may not enjoy using denture adhesive, and these dentures could have enough retention for them to grip without adhesive which will impact a lot of people.

The reasons a lot of patients don't like denture adhesive are that it changes the taste of food and it changes the perception of how to use a denture. It's also not hygienic, and cleaning the denture becomes very difficult due to the denture adhesive.

They could also impact some patients who have cancer or who are not in a financial position to afford implants. For example, some cancer patients may not be suitable for implants because of radiotherapy or due to the nature of their medical condition. These dentures could be an affordable option while also providing a strong grip, meaning the patient would not have to use implants.

This research has made a huge impact over the last few weeks – I have been getting emails from all over the globe. People want to hear more about it and patients want to try it.

PHOTO CREDIT: King's College London



WHAT'S THE NEXT STAGE?

We are still at the development stage, and we're going to do some initial clinical trials with our healthy volunteers at King's College London, so that will be the first cohort. We also need to investigate how it's going to behave in that challenging environment.

Another consideration is how it's going to behave with the presence of biofilm and bacteria in the mouth. This is one of the things that we need to be careful with, so we're now trying to test it with multiple chemical and physical cleaning methods that are available to patients for cleaning.

These dentures rely on the use of 3D printing technology that we have available nowadays. We currently have a lot of 3D printing capability, and dentists have access to these printing facilities. But with time, 3D printers will get even better in resolution.

As they do, the dentures will improve even more because the suckers will get smaller, have higher density on the surface, and potentially become more beneficial. This means we can add more suckers onto the surface to make it even more retentive, so it's only going to improve in the future.

We hope that our future efforts will be successful in order to offer this treatment to our patients. We have had really good attention from the media, from other dental colleagues and from patients who are asking for the denture, so it's making a really strong impact.

WHAT EXCITES YOU ABOUT THIS RESEARCH?

I see a lot of denture patients as a prosthodontic consultant, so it's my kind of bread and butter. All week I see patients who wear complete dentures, and the amount of frustration they go through and the lack of satisfaction they have, especially on the lower denture, needs to change. We need to advance our treatment to make sure that patients can have a better lifestyle when they get older. What excites me is the possibility of providing better care for the older population.

The older population is growing massively now, with patients getting older and older, so there will probably be a lot more dentures in the future. L

A letter to my younger self

Mark Ambridge shares the lessons he would share with his newly-qualified self about the 'mysterious' and rewarding world of dental technology

MARK AMBRIDGE
Owner,
Ambridge Ceramics

Dear younger Mark,

As I sit down to write this, I can see you vividly: eager, curious, and maybe a little overwhelmed by the world you've just stepped into. You have chosen to be part of the mysterious, almost secretive field of dental technology – though at times, it might feel like the profession chose you.

Right now, you're unsure of where this journey will lead, but trust me: every late night, every challenge and every moment of doubt will be worth it. Let me share a few lessons I've learned along the way. If I could reach back in time, this is what I'd tell you.

EMBRACE CHANGE, INNOVATION AND TECHNOLOGY

At this stage in 1981, the idea of working with computers or hearing terms like 'computer-aided design (CAD)' or 'digital workflows' probably seems far-fetched, science fiction even – probably even a bit intimidating. But let me assure you, dental technology will evolve faster than you can imagine. Embrace it.

Don't fear progress; see it as a chance to push boundaries and improve your craft. CAD/CAM systems, 3D printing, and something called digital impressions will transform the way you work. Be the one who adopts and adapts early, who leads rather than follows. This mindset will become your greatest asset.

PATIENCE IS A SKILL – CULTIVATE IT

Perfection takes time, and you'll soon discover that not everything will go as planned. Some days, a restoration you've laboured long and hard over just won't fit and, despite your best efforts, needs making again (known as a dreaded remake).

Other days, it will feel like no one truly appreciates the time and care you put into your work.

But here's the thing: these moments of frustration are opportunities. Learn from them. Failure, as disheartening as it feels, is often the best teacher.

Resist the urge to rush. Focus on the details, because that is where excellence truly lies. Your commitment to quality will define your reputation, marking you not just as a skilled technician, but as a true professional.

> PERFECTION TAKES TIME, AND YOU'LL SOON DISCOVER THAT NOT EVERYTHING WILL GO AS PLANNED

BUILD RELATIONSHIPS, NOT JUST RESTORATIONS

Success in this career isn't just about technical skill; it's about connection. Dentists, patients and colleagues will look to you not just for expertise, but for guidance. Do not shy away from these interactions.

Listen closely to what they need – you will often find the solution within your experience and intuition (yes, even those 'been there, done that, got the t-shirt' moments).

Collaboration is powerful. The relationships you build will open doors to opportunities you can't yet imagine. Treat every conversation as a chance to learn and grow.

DON'T FEAR PROGRESS; SEE IT AS A CHANCE TO PUSH BOUNDARIES AND IMPROVE YOUR CRAFT

NEVER STOP LEARNING

At some point, you will feel like you have mastered your craft, and that confidence is important. But here's a warning: the moment you think there's nothing left to learn, you risk falling behind.

Stay curious. Experiment with new techniques. Attend courses, read journals and seek out mentors who inspire you. This industry moves fast, and staying ahead means committing to lifelong learning.

TRUST YOUR INSTINCTS

There will be times when you will doubt yourself – especially when the dreaded remake rears its head. Those moments of self-doubt will test your resolve. But don't forget: every challenge, every mistake is shaping you into the professional you are destined to become.

Trust your instincts. Over the years, your gut feeling will become one of your most valuable tools. And don't hesitate to lean on your colleagues or ask for advice when you need it. No one succeeds alone.

THE RELATIONSHIPS YOU BUILD WILL OPEN DOORS TO OPPORTUNITIES YOU CAN'T YET IMAGINE

TAKE TIME TO REFLECT

Success isn't just about the quality of your work – it's about the lives you touch. As a dental technician, you will restore more than teeth – you will restore confidence, smiles and self-esteem. Take pride in that. Don't let the daily grind blind you to the bigger picture.

Pause every now and then to reflect on your journey. Appreciate the impact you have had and remind yourself why you chose this path in the first place.

Finally, Mark, walk this path with pride. It won't always be easy, but every setback will make you stronger, and every triumph will remind you of your purpose. One day, you'll look back and know that you have made a difference – not just in restorations, but in lives. Keep going. Your future self thanks you. Always remember this: common sense and deep understanding of the physics of mechanics will help you solve all your problems every time.

First impressions from a dental technician

Lucy Moxon shares the moment she knew she had chosen the career for her and what she has learned so far

LUCY MOXON
Student dental technician

Hi, my name is Lucy Moxon. I'm 26 and currently in my third year at the University of Bolton studying dental technology. During my time at university, I have been fortunate to learn from some amazing professionals within the field. My studies have consisted of learning the theory and techniques around orthodontic, removable and fixed dental restorations. Though each has its own rewards and challenges I have found a particular passion for orthodontics.

THE COURSE FOR ME

As a young child, I struggled with dental issues that caused me to be in and out of dental clinics and hospitals. It was only in my early twenties that I realised I wanted to learn more about dentistry, and that's where I found dental technology and began exploring dentistry for myself. It mixes my passions for making things, dentistry and wanting to help people. I knew I'd found the course for me when I saw how passionately the course leader spoke about dental technology on the university open day and thought to myself, 'That's what I want to be doing'.

From my first day in a dental laboratory, making occlusal rims, I knew I'd found my future career. I enjoy how it almost doesn't feel like work, but more like professional crafting. There is so much variety within this work. Each case is so unique that no two are alike.

BENEATH THE SURFACE

So far through university, I have had hands-on experience in two labs; one being a large commercial lab and the other a hospital-based maxillofacial lab. These experiences have been invaluable, providing me with insight into the diverse applications of dental technology.

When I first started studying dental technology, I didn't realise how much artistic intricacy went into each part of an appliance, as well as the scientific knowledge that is behind each case. Another surprise was the amount of work that can be done digitally through CAD/CAM software, and how it is constantly advancing. As exciting as these new advancements are, they can be a challenge to keep up with.

FUTURE-FOCUSED

I definitely see CAD/CAM taking over most of the manufacturing process in time, but I don't believe all laboratories will convert to CAD/CAM-only processes. There has been a spike of interest in dental technology over the last few years, so I am hoping that there will be more dental technicians overall in the UK. Hopefully, we will be able to take on more challenging roles within the industry together, such as maxillofacial training, and also find new ways to create restorations.

I am hoping that once I have graduated, I will be able to get a job in a laboratory focusing on orthodontics and continuing to build my skills up with time. Hopefully I will also be able to work abroad one day.

Overall, I feel that dental technology is more than just a career, but a way to make a positive change in people's lives. There are so many possibilities within this profession and I'm excited to see where it takes me and to contribute to the industry in meaningful ways.

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Squashing stress

Sean Ward shares his tips for coping with stress and the symptoms to look out for

SEAN WARD
Clinical dental technician,
Echo Dental Solutions

Stress can raise its head in many forms – sometimes it can be 'good', such as productive stress in which the person engages with their work in a good and meaningful way.

There is also a bad side – harmful stress – and this can appear in anyone at any time.

We have to remember that this is not a one-size-fits-all solution; everybody has different needs and perhaps different solutions, hence the phrase 'walk a mile in my shoes'.

This short piece is about how I have dealt with stress and some of the methods I have used to help myself and others in the workplace.

WHAT IS STRESS?

- Stress is the body's natural response to pressure or demands
- It can be caused by various factors like work, relationships or major life changes
- While some stress can be motivating, too much or prolonged stress can be harmful to physical and mental health
- Learning to manage stress through relaxation techniques, exercise and seeking other support can be beneficial.

Stress can also be brought on by too much 'strain'. In the context of mental health, strain refers to the stress and pressure that individuals experience because of various demands and challenges in their lives.

Mental strain can arise from numerous sources, including work, relationships, financial difficulties, health issues and other personal circumstances. Prolonged or intense mental strain can have significant negative effects on an individual's psychological wellbeing and overall health.

SPOTTING DEPRESSION

Harmful stress can lead to clinical depression – here are the symptoms to watch out for:

Emotional symptoms:

- Persistent feelings of sadness, emptiness or hopelessness
- Loss of interest or pleasure in most or all activities (anhedonia)
- Feelings of worthlessness or excessive guilt
- Irritability or frustration, even over small matters.

Cognitive symptoms:

- Difficulty concentrating, remembering or making decisions
- Pessimism or negative thinking
- Recurrent thoughts of death or suicide.

Physical symptoms:

- Changes in appetite or weight (significant weight loss or gain)
- Insomnia or oversleeping (hypersomnia)
- Fatigue or lack of energy
- Physical aches or pains without a clear cause.

Behavioural symptoms:

- Withdrawal from social interactions and activities
- Reduced ability to function at work or school
- Neglect of personal hygiene and self-care.

WE HAVE TO REMEMBER THAT THIS IS NOT A ONE-SIZE-FITS-ALL SOLUTION

WHAT CAUSES STRESS?

While these are some of the symptoms that appear, we also need to look at the causes of them.

Pressures from work can be a cause for many people, due to time constraints, patients/customers, staff and overwork.

Factors outside of work can also affect stress, such as major life changes, death in the family or of a friend, and illness.

COPING WITH STRESS

So, how do we go about dealing with stress? There are many ways that people use to help themselves, and some do it without even realising. I'm going to look at a few that I myself and some of my friends have used.

First of all, try to remove yourself from the stress-causing environment. Sometimes just by taking a break from a particular process that you are doing, walking away for a few minutes, recomposing yourself and then getting back to the task in hand can be a benefit in the short term.

If you're at work, this obviously depends on your workspace and size. It could be a quiet room or little-used space, such as a kitchen, the tea area if you have one, or a seating area outside if it's a fine day.

TYPES OF HELP

- Mindfulness – being aware of yourself and feelings and removing yourself from the situation if you can – only you know you
- Meditation – this can take several forms. I sometimes use guided meditation, just five- or 10-minute sessions can help, or 30-40 minutes at bedtimes. There are a few apps available to help you with meditation, and you won't know unless you try

MENTAL STRAIN CAN ARISE FROM NUMEROUS SOURCES, INCLUDING WORK, RELATIONSHIPS, FINANCIAL DIFFICULTIES, HEALTH ISSUES, AND OTHER PERSONAL CIRCUMSTANCES

- Grounding – have you ever wondered how children are so carefree when they're young? Perhaps it's the running around in bare feet. Grounding is doing exactly that – walking or standing barefoot on grass, soil or at the beach and relaxing. Perhaps a bit of meditation along with it too to find your inner calm
- Yoga – this can encompass relaxation techniques during the exercises
- Exercise – it can help to blow off steam by exercising, but try not to overdo it. If a walk is all you can manage, then that's as good as a heavy session in the gym
- Therapy – finding some help and having them listen non-judgmentally – it's good to talk
- Hypnosis – I have found therapy followed by a hypnosis session to be a great help
- Massage therapy – taking some time to get the muscles loosened up in a nice, quiet and relaxing atmosphere
- Tree hugging – I have a good friend who does this. She goes walking in the forest barefoot (grounding) to find her favourite tree and embraces it until she feels much better. It may not be for everyone, but you won't know until you try
- Non-prescribed medication – this can include St John's wort and Calms
- Prescribed medication (anti-depressants) – ensure you have a supportive GP as medication can also have side effects during first use and on withdrawal.

REMEMBER THESE FEW THINGS

- You can see a broken leg, not a broken mind
- If the axel breaks on a cart due to a heavy load, you don't fix it by taking off the last thing you put on it
- Look after yourself first so you can look after your family
- Some you win, some you lose
- It is only teeth.

These have been some of the things that have helped me cope in dentistry, perhaps one of the most stressful jobs I have had in a varied career.

If you find yourself needing help, please do seek a medical professional.

FOR MENTAL HEALTH SUPPORT

- NHS mental health services – call 111 (open 24 hours a day, 365 days a year) for urgent help for your mental health
- Samaritans – to talk about anything that is upsetting you, call 116 123 (open 24 hours a day, 365 days a year) or email jo@samaritans.org
- National Suicide Prevention Helpline UK – call 0800 689 5652 (6pm to midnight every day) for a supportive listening service to anyone with thoughts of suicide
- If you or someone else is in danger, call 999 or go to A&E.

Your mental health is as important as your physical health. You will not be wasting anyone's time.

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A quiet lab is a troubled lab

Ashley Byrne discusses the dangers of a quiet lab – and it's not about the money

ASHLEY BYRNE
Associate director,
Byrnes Dental Laboratory

For many of us, 2024 was a challenging year. Sales were flat, the dental industry isn't seeing the growth it once did, and the latest government budget seems to have done little to promote business growth or entrepreneurship.

As the communications lead for the Dental Laboratories Association (DLA), I've heard from many of you about the frustrations you're experiencing this year, particularly following the recent budget announcement.

I won't dive into the specifics of the budget – that was covered thoroughly by Matt Everatt in the last issue. Instead, I want to focus on how we, as dental labs, can weather the storm and keep our teams engaged and motivated, regardless of external factors.

KEEPING YOUR LAB ENGAGED

The truth is tooth restorations don't just disappear. Treatment plans may be delayed, but when a patient has been quoted for implants, large veneer cases, or other major work, it's highly unlikely they will back out entirely.

The challenge for dental labs is managing the quieter periods, keeping the team engaged, and maintaining cashflow while waiting for patients to move forward with their treatments.

For many labs, the real struggle isn't about being profitable, it's about surviving the slower times. It's about managing the ebb and flow of business, staying motivated during the lulls, and keeping morale high so that when things pick up again, your team is prepared to hit the ground running.

THE PRESSURE PARADOX

I'll be the first to admit that my team operates best when we're under a certain amount of pressure. We don't want to be running at 120% all the time – burnout is real – but when we're at about 95%, that's when we're in the zone.

We're smashing deadlines, getting things done, and delivering quality work. But here's the paradox: we make more mistakes when we're not under pressure.

It may sound counterintuitive. When we're busy, we're focused, and the work seems to flow more naturally. But when things are quieter, we tend to make more errors. Why is that?

The answer lies in something called the Yerkes-Dodson Law, which explains how moderate levels of stress can actually improve performance.

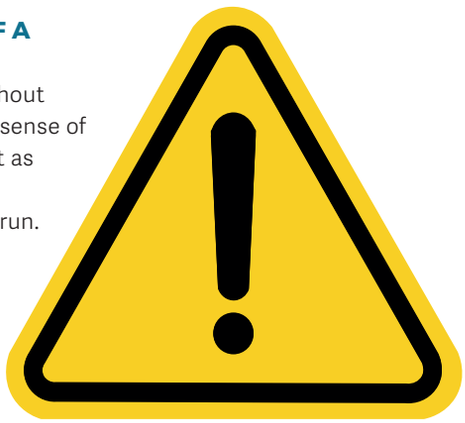
In simple terms, a bit of pressure helps our brains stay alert, focused and sharp. As Yerkes-Dodson Law suggests: 'Moderate levels of stress can improve performance on tasks. Teams channel their anxiety and urgency into heightened concentration, leading to faster decision-making and better productivity.'

This response is part of our biological makeup – our 'fight or flight' instinct kicks in under pressure, which ultimately enhances performance.

In a team setting, this shared sense of urgency brings people together, encourages collaboration, and helps everyone stay aligned on the task at hand. Pressure can actually improve team coordination and efficiency – when it's at the right level.

But there's a fine line. Too much pressure can lead to burnout, and that's where the danger lies. But a lack of pressure? That's even worse.

THE DANGERS OF A QUIET LAB



A quiet lab – one without deadlines, without a sense of urgency – can be just as damaging to your business in the long run. Without pressure, motivation tends to wane. Team members get relaxed, and the absence of immediate tasks or goals leads to a lack of focus.

When the pressure is off, it's easy for confidence to turn into complacency, and for overconfidence or even arrogance to set in. Mistakes creep in, roles and responsibilities can blur, and the team structure begins to erode.

Decision-making becomes sluggish, risks go unchallenged, and a kind of organisational rot sets in. Quiet periods can also lead to communication breakdowns, both within the team and with clients, which we all know is a recipe for disaster.

As a lab owner or leader, it's critical to manage your team's workload so they stay engaged and productive during slower periods. For me, one approach is to allow team members to 'bank' holiday days or take extra time off during quieter times. Then, when the workload picks up again, I can pull from those banked days as needed. This ensures the team is still under a manageable level of pressure, rather than sitting idle, twiddling their thumbs.

This keeps morale high, and it reduces the risk of mistakes that often come with complacency. It also ensures that when we're busy, we've got the manpower to handle the rush without overburdening anyone.

Managing pressure is a fine art. Too little pressure leads to disengagement, mistakes and inefficiency. The key is to find a balance – keeping your team engaged without pushing them into burnout territory.

But make no mistake: pressure is a powerful motivator. A little bit of it can keep your team focused, sharp and ready for whatever comes next.

> Quiet times are inevitable, but they don't have to be your downfall

EMBRACE THE CHALLENGE

Quiet times are inevitable, but they don't have to be your downfall. By managing your team's workload and keeping a moderate level of pressure, you will be able to maintain a high level of performance even during the slower periods.

After all, dental restorations are not going away anytime soon, and neither is the need for well-run, motivated teams.

Stay engaged, keep the pressure at the right level, and your lab will be ready to thrive no matter what the future holds.

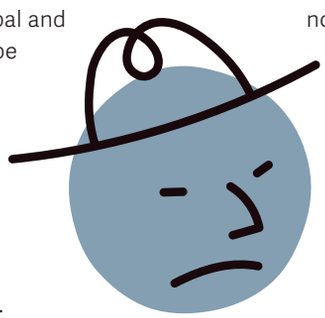
More than words

Toyin Akala discusses the power of non-verbal cues and emotional awareness

TOYIN AKALA
Dental therapist, Bond Dental and AF Dental Hackney

Effective communication is the cornerstone of quality oral healthcare, directly influencing patient experience and treatment outcomes. In the fast-paced environment of a dental practice, opportunities to connect with patients can often be overlooked. When the focus shifts to diagnosing and treating problems rather than understanding patients as individuals, misunderstandings and increased anxiety may arise. To address these issues, clinicians must pay closer attention to subtle, often non-verbal cues and details.

Research by Simpson and colleagues (1991), cited in Matthews et al (1987), highlights that actively listening to patients' concerns is a key quality that patients value in their clinician. Given the intimate nature of oral healthcare – where patients must trust their clinician while in a vulnerable position – effective communication, both verbal and non-verbal, should never be underestimated.



By honing these communication skills, dental professionals can foster positive clinician-patient relationships and significantly enhance the overall patient experience.

NON-VERBAL COMMUNICATION IN A DENTAL SETTING

Non-verbal communication encompasses all the messages sent without words and plays a crucial role in how information is conveyed and received in dental settings. This form of communication includes elements such as facial expressions, gestures, body posture, tone of voice, eye contact, physical proximity, and touch. Each of these components can significantly influence the patient experience and the overall effectiveness of communication in a clinical environment.

In a dental setting, patients often arrive anxious or uncertain, and non-verbal cues can speak louder than words. Therefore, a reassuring smile, gentle tone or open posture can quickly put a patient at ease.

Similarly, non-verbal signals like clenched fists or tense posture may reveal discomfort, guiding the clinician to adjust their approach for the patient's comfort.

THE IMPORTANCE OF NON-VERBAL COMMUNICATION

Research by Albert Mehrabian (1971) highlighted the significance of non-verbal cues in communication. His findings indicate that a substantial portion of interpersonal communication is non-verbal, with only 7% attributed to verbal content. Specifically, his model suggests that 93% of communication is non-verbal, composed of 38% vocal elements (including tone, pitch, and volume) and 55% body language.

In dental care, this research is particularly relevant. The way something is communicated often matters more than the words themselves.

For example, when explaining a procedure, the clinician can actively use facial expressions, eye contact, and tone of voice to create a calming environment, helping the patient feel secure. Conversely, a hurried or distracted tone – even if the words are reassuring – may increase a patient's anxiety. Body language, such as keeping an open posture and ensuring appropriate physical proximity, can communicate attentiveness and empathy.

> ACTIVE LISTENING TO PATIENTS' CONCERNS IS A KEY QUALITY THAT PATIENTS VALUE

THE ROLE OF EMOTIONAL AWARENESS

Non-verbal communication is not just about sending cues, it also involves interpreting the patient's emotional state and reading their non-verbal signals.

Roter and colleagues (2006) emphasise that the emotional context of care is closely related to non-verbal communication. Sending and receiving non-verbal messages, combined with emotional awareness, is critical for providing high-quality care.

Patients may not always articulate their anxieties, fears or concerns, but their body language and facial expressions often reveal their emotional state.

Emotional awareness sharpens a clinician's ability to read these cues, ensuring that care is tailored not only to the physical problem but also to the emotional needs of the patient.

For example, a patient fidgeting, gripping the armrest or avoiding eye contact may indicate nervousness or discomfort. Dental professionals must recognise these signs and adjust their approach, whether by offering reassurance, explaining procedures further, or providing a moment of comfort. In some cases, treatment may need to be postponed until the patient is in a better emotional state.

PRACTICAL APPLICATIONS IN DENTAL CARE

Each aspect of non-verbal communication serves a different purpose within the clinical environment:

- Facial expressions: a warm smile can create an inviting atmosphere and alleviate tension, while a concerned or furrowed brow signals attentiveness to the patient's needs. Dental professionals should be mindful of how their expressions might be interpreted, ensuring they are calm and reassuring even during complex procedures
- Eye contact: maintaining steady eye contact shows engagement, builds trust and reassures the patient that their concerns are being taken seriously. Avoiding eye contact or shifting focus too quickly may give the impression of disinterest or lack of confidence
- Tone of voice: a soft, calm voice can reduce patient anxiety, while an upbeat and positive tone can make routine visits feel more pleasant. In contrast, a rushed or monotonous voice may convey stress, disinterest or lack of empathy, causing patients to feel uneasy
- Body language: open, relaxed body language communicates comfort and confidence. Standing with crossed arms, sitting rigidly or leaning too far away can create a psychological barrier between the clinician and the patient. Instead, leaning slightly forward with arms relaxed signals that the clinician is engaged and approachable
- Gestures: subtle hand gestures, like nodding when listening, can affirm that the clinician understands the patient's concerns. On the other hand, abrupt or excessive gestures may signal impatience or frustration, which can heighten a patient's nervousness
- Space/proximity: maintaining an appropriate physical distance is key in creating a comfortable environment. Standing too far may feel distant and disengaged, while being too close can invade personal space and increase anxiety. Adjusting proximity based on the patient's comfort level – whether they need more space or reassuring closeness – is essential for effective care
- Touch: gentle, reassuring touch, such as a light hand on the shoulder or arm, can provide comfort and reduce fear, particularly in nervous patients. However, clinicians must remain mindful of personal boundaries and preferences, adjusting to the patient's cultural background and comfort level with physical contact
- Pacing and timing: the speed at which a dental professional moves or speaks can convey a lot. Rushing through explanations or procedures can leave patients feeling anxious or overwhelmed, while a more measured pace fosters a sense of calm and control. This approach gives patients the time to absorb the information, ask questions, and gain a deeper understanding, ultimately leading to informed consent
- Active listening cues: nods, brief verbal affirmations (like 'I understand'), and other subtle gestures can signal active listening. These cues reassure the patient that their concerns are being heard and taken seriously
- Incorporating awareness of these non-verbal elements into patient interactions can not only make appointments more comfortable but also foster a stronger patient-clinician relationship. When patients feel that their health provider is attuned to their emotional and physical cues, they are more likely to communicate openly, comply with treatment plans, and trust the overall care provided.

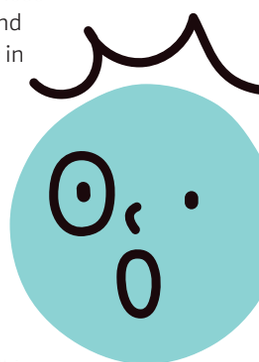
EFFECTIVE COMMUNICATION IN DENTISTRY TRANSCENDS MERE TALKING AND LISTENING

CULTURAL SENSITIVITY

Non-verbal communication is also deeply influenced by cultural factors. What is considered appropriate body language, eye contact or personal space can vary across cultures.

In some cultures, direct eye contact is seen as a sign of confidence and honesty, while in others, it may be perceived as disrespectful or confrontational. Similarly, the use of physical touch may be more accepted in certain cultures and seen as intrusive in others.

Dental professionals need to be culturally competent and sensitive to these differences. Understanding and respecting cultural variations in non-verbal communication can help avoid misunderstandings and ensure that patients from diverse backgrounds feel respected and understood.



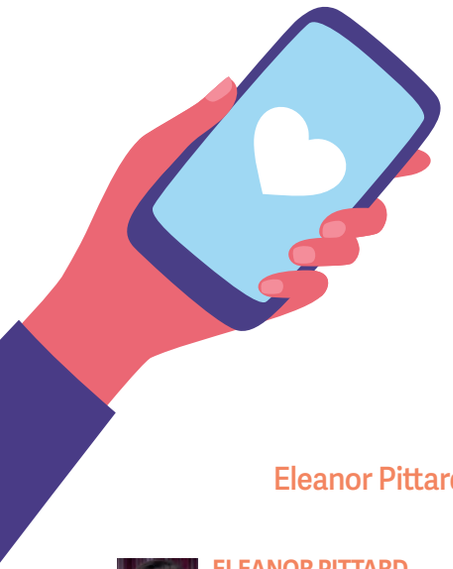
CONCLUSION

Effective communication in dentistry transcends mere talking and listening; it requires an active interpretation of non-verbal cues and emotional signals to foster a deeper understanding between clinicians and their patients.

Dental professionals must not assume that all patients communicate or understand in the same way; each interaction presents a unique opportunity to assess and address individual needs.

By cultivating emotional awareness, practicing cultural sensitivity, and mastering the subtleties of body language, clinicians can create a more compassionate, patient-centred environment. This not only enhances patient satisfaction but also significantly improves treatment outcomes.

Ultimately, embracing the power of non-verbal communication will elevate the quality of care in dentistry, leading to stronger, more trusting relationships with patients.



Building a brand online

Eleanor Pittard offers her top tips for making the most of social media as a lab owner

ELEANOR PITTARD
Co-director and owner of Hive Dental Laboratory

In today's digital-first world, an effective social media strategy is not just a luxury; it's a necessity for dental professionals. Whether you run a dental clinic serving patients or a dental laboratory collaborating with dentists, social media platforms offer a unique opportunity to connect, build trust and expand your reach. As we enter a new year, I thought it would be helpful to summarise some key ways you can make the most of it.

UNDERSTANDING YOUR AUDIENCE

As a dental laboratory, dentists are your target. Highlight the quality of your products, your expertise, turnaround times and how your services make their practices more efficient.

PLATFORM SELECTION: WHERE SHOULD YOU BE?

- Instagram: perfect for visual storytelling. Share before-and-after photos (with patient/dentist consent), lab processes and team highlights
- Facebook: great for community building. Use it to host Q&A sessions and post updates about your lab
- Linkedin: ideal for business-to-business connections. Dental labs can use Linkedin to connect with dentists and share industry insights
- Tiktok: an emerging platform for reaching younger audiences. Share fun, behind-the-scenes content or quick tips.

> Remember to consider your target audience before you spend money on advertising

CONTENT IDEAS THAT RESONATE

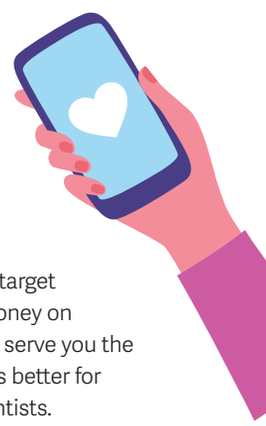
1. Educational posts: showcase your expertise by sharing insights into materials, techniques or trends in restorative dentistry. You could do a 'what's new on the market?' reel
2. Testimonials and reviews: share video testimonials from happy patients or dentists to build trust and credibility
3. Before-and-after showcases: these are especially impactful for cosmetic dentistry or custom prosthetics. Ensure high-quality visuals and always obtain proper consent. You don't need loads of fancy equipment, but a solid and dependable camera is essential, along with some external flashes
4. Behind-the-scenes content: highlight your team's expertise and the technology you use. For example, show the craftsmanship behind dental restorations. Try doing a time lapse video of a case from start to finish
5. Interactive content: run polls, quizzes or live Q&A sessions. These encourage engagement and foster a sense of community.

STRATEGIES FOR ENGAGEMENT

- Use hashtags strategically: include local hashtags (eg #LondonDentalTechnician) and industry-specific tags (eg #DentalCare, #DentalLabTech). The use of hashtags is not anywhere near as helpful for growing your Instagram as it used to be, but a few choice tags can always aid a little. They also help to identify the intended audience
- Consistency is key: post regularly to stay visible. A content calendar can help you plan and stick to a schedule. It is far better to do two posts a week than seven on one week and none the next
- Respond to comments and messages: social media is a two-way street. Timely responses show you care.

> Social media offers an unparalleled opportunity to grow your dental brand by connecting with patients and dentists alike

LEVERAGING PAID ADS



Social media advertising can amplify your reach. Target ads to dentists, showcasing your unique selling points like rapid turnaround times or advanced materials.

Remember to consider your target audience before you spend money on advertising. What platform will serve you the best? Traditionally, Facebook is better for patients and Instagram for dentists.

ANALYTICS: MEASURE WHAT MATTERS

Track metrics like reach, engagement and conversion rates to refine your strategy. Tools like Instagram Insights or Facebook Analytics can provide valuable data.

SUMMARY

Social media offers an unparalleled opportunity to grow your dental brand by connecting with patients and dentists alike. By understanding your audience, choosing the right platforms and sharing engaging content, you can build trust and credibility.

Whether you're showing off a smile makeover or the precision of a dental crown, authenticity and consistency will set you apart. Start small, measure your success, and watch your online presence transform your business in 2025.

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Take your time

Ray Cox explains why dental laboratories should take a careful look at funding options when undertaking a major project and purchasing equipment

RAY COX
Managing director,
Medifinance

In business, as in life in general, we are constantly making decisions, both big and small. We never consciously decide to make wrong decisions, but it is only after those decisions have taken effect that they can be judged good or bad. We simply must expect the unexpected and recognise that many variables impact on our lives. Having said that, I believe that it does make sense, where realistically possible, to minimise risk by drawing on experience.

Over the many years that I have worked with the health professions, sourcing funding has been relatively straightforward. Banks and lenders have taken the view that they represented a good risk and, as a result, most applications for finance went through 'with a nod'. In the current economic climate this has changed – not dramatically, but significantly – and for major projects particularly, plans need to be seen to have been thoroughly researched, considered and realistic before money is forthcoming. But I see this as a good thing. It focuses the mind, makes our thinking more diligent and mitigates against our rushing into making hasty decisions.

DILIGENT PLANNING

The point I really want to make is that when 'money is easy' we can fall into the trap of disregarding sensible financial management and the longer-term implications of our decisions. I'll give you an example...

Recently a client of mine decided to set up his business and fund both renovation and refurbishment and equipment with a single loan from his bank. He was being offered a good rate and, at face value, it seemed a good deal. However, what he had not taken into account is the shorter life cycle of equipment which would need relatively frequent updating and replacement. I pointed out that a single, consolidated loan would ultimately cost him far more than funding renovations and equipment separately. And we are talking thousands of pounds saved here.

GETTING THE BALANCE RIGHT

No business can grow without taking a degree of risk, but taking the time to plan carefully and review the options will be time well spent. So, my advice is always to strike a balance between ambition and caution. I have been fortunate enough to work with clients whose businesses have evolved and developed with considerable success, but by the same token I have seen mistakes made that, with a little discretion, could have been avoided.

I would never claim to have 'seen it all before', but Medifinance does have an unrivalled depth of experience of the healthcare markets and its funding. This is experience that we are happy to share with clients and potential clients without any commitment on their part.

> WHEN 'MONEY IS EASY' WE CAN FALL INTO THE TRAP OF DISREGARDING SENSIBLE FINANCIAL MANAGEMENT AND THE LONGER-TERM IMPLICATIONS OF OUR DECISIONS

A HEALTHY BUSINESS CHECK

Based on our years of experience working with the health professions we have prepared business plan templates and a comprehensive business, funding and marketing checklist we believe you will find invaluable, available free of charge and with absolutely no obligation. Simply email me on rcox@medifinance.co.uk and we'll send the templates and checklist to you straight away.

If you have any immediate or longer-term funding requirements, please contact Ray Cox on **07785 757782** or email **rcox@medifinance.co.uk**. Find out more at **www.medifinance.co.uk**

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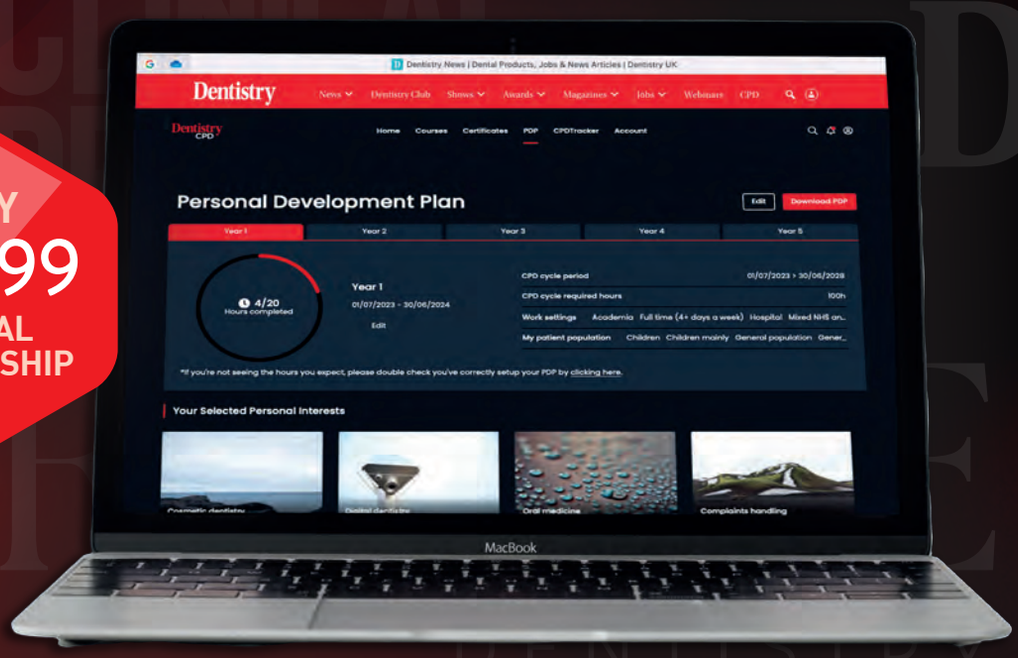

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High-tech meets handicraft

Zirkonzahn shares the details of its upcoming lecture tour in Cambridge, Brighton and London

The dental company Zirkonzahn (South Tyrol, Italy) has announced its 2025 'High-Tech meets Handicraft – Optimisation of the Digital Workflow for the Fabrication of Full Dentures' lecture tour will be coming to Cambridge, Brighton and London from 28 to 30 January, offering dental professionals state-of-the-art methods and techniques for the creation of functional and aesthetically pleasing full dentures as an alternative to implant-supported prostheses.

Indeed, even if minimally invasive procedures are becoming increasingly important, there are still patients who need a complete restoration after total tooth loss. Master dental technician Alessandro Cucchiaro will guide participants through the challenges faced when creating a full denture with 28 teeth, considering the different initial patient situations. Whether the patient is edentulous or wearing existing prostheses in good or poor condition, the lecture will provide insights into the tailored approaches needed for optimal results.

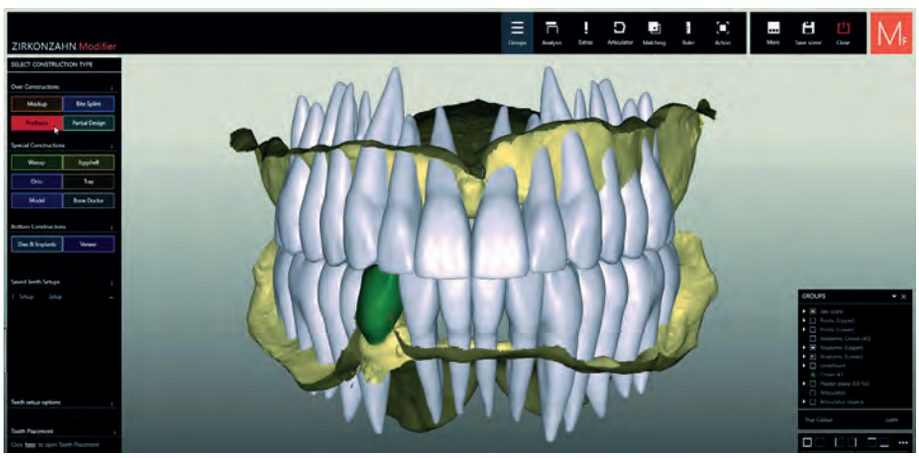
The process of creating high-quality dentures also involves digital technologies and correct materials. For this reason, the lecture will introduce two new particularly biocompatible PMMA-based resins which feature an extremely low residual monomer concentration and will demonstrate how digital solutions with automated set-up functions can simplify tooth placement and gingiva creation, ensuring an efficient, accurate and optimised workflow.

Furthermore, participants will benefit from hands-on demonstrations of bonding teeth to denture bases using an innovative protocol based on the principle of cold welding.

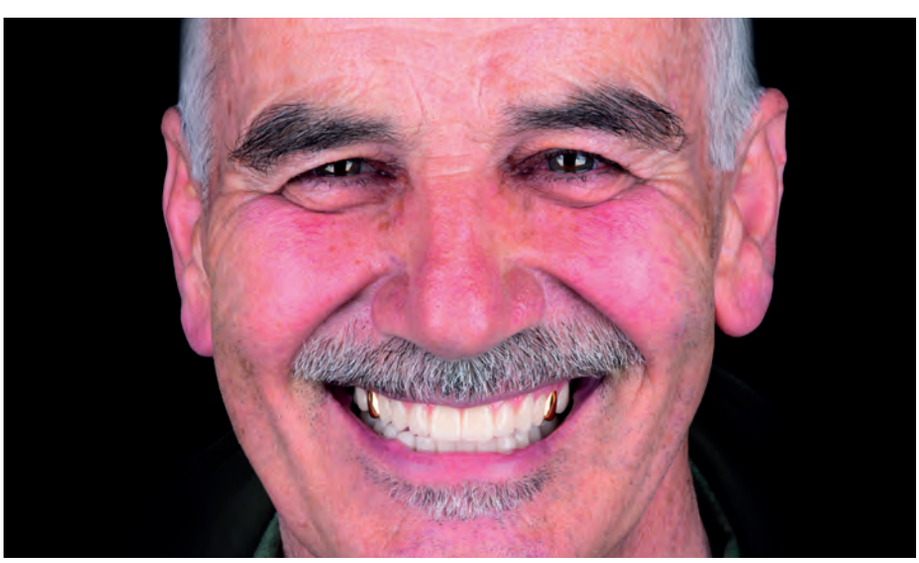
Zirkonzahn® *Human Zirconium Technology*

FOR MORE INFORMATION

To register, scan the QR code, visit **www.zirkonzahn.com** (events section), call the Zirkonzahn UK team on **+39 0474 066 680** or email **carmen.ausserhofer@zirkonzahn.com** or **jasmin.oberstaller@zirkonzahn.com**



Digital tooth set-up in Zirkonzahn.Modifier



Dentures in Abro Basic Multistratum and Denture Gingiva Basic Mono Pink resins

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The new Abro® Basic Multistratum® resin, with a natural colour gradient and improved material properties, features an extremely low residual monomer concentration and is characterised by excellent translucency values, high flexural strength as well as fracture and abrasion resistance. Specifically conceived for the production of denture teeth, this resin is also well suited for long-term temporaries as well as various secondary and tertiary structures.

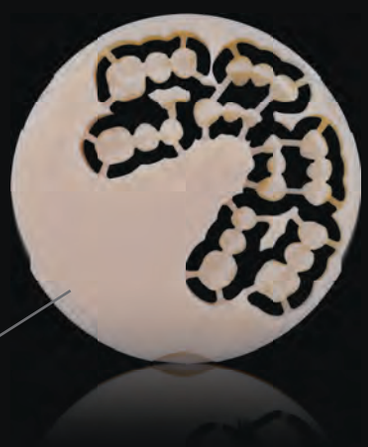
MORE
INFORMATION

r.zirkonzahn.com/6tu

Ø 98 mm

ALSO AVAILABLE IN
Ø 98 mm WITH STEP

Ø 95 mm



EXTREMELY LOW
RESIDUAL MONOMER CONCENTRATION

NEW! DENTURE GINGIVA
BASIC MONO

Gingiva-coloured resin with improved material properties in terms of flexural strength and fracture resistance, specifically conceived for the production of denture bases. In addition, the extremely low residual monomer concentration greatly improves biocompatibility. The resin blank is available in Ø 125 mm for the manufacturing of up to two denture bases in just one milling process.

MORE
INFORMATION

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Ø 95 mm

Ø 98 mm

ALSO AVAILABLE IN THE STANDARD SIZE OF Ø 95 mm
AS WELL AS IN Ø 98 mm WITH STEP

Ø 125 mm

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Simplifying dental workflows

Outdated workflows and fragmented communication are holding the dental industry back, says **Nipun Kathuria**

NIPUN KATHURIA
Co-founder and CEO,
Smile Genius Dental

Let's face it: the dental industry has been stuck in a cycle of inefficiencies for far too long. Labs and clinics often struggle with fragmented workflows, endless emails and miscommunications that ultimately affect patient care. Traditional lab management systems handle internal tasks well – but they fail to address the real challenge: seamless collaboration between labs, clinics and patients.

It's not that labs and clinics aren't trying – they're working harder than ever. But without the right tools and technology, even the most skilled teams can get bogged down by inefficiencies. And in an industry where precision and timeliness are everything, the stakes couldn't be higher.

This begs the question: how can the dental industry evolve to meet today's demands? The answer lies in rethinking how labs and clinics collaborate – and it starts with technology.

THE PROBLEM

The relationship between labs and clinics is the backbone of patient care. Yet, these two critical players often work in silos, relying on outdated methods of communication and fragmented systems.

Consider this:

1. A clinic sends over a case
2. The lab gets to work but has questions about the treatment plan
3. Emails go unanswered, deadlines get pushed, and suddenly a two-week turnaround stretches into four.

It's a scenario we've all seen, and it's not just frustrating – it's avoidable.

The disconnect stems from a lack of integration. Traditional lab management systems focus on internal tasks, leaving labs to piece together communication with clinics. It's like trying to solve a puzzle with half the pieces missing.

THE SOLUTION

The truth is: disconnected workflows aren't just inefficient – they're costly. For labs, managing multiple channels of communication can lead to missed details, repeated work and frustrated clients. For clinics, a lack of transparency often results in delays and dissatisfied patients.

A unified approach eliminates these issues by creating a single source of truth. Case management platforms like Smile Genius Dental that integrate seamlessly into existing workflows empower labs and clinics to:

- Operate with precision: errors decrease when everyone is working with the same up-to-date information
- Enhance efficiency: automated workflows free up time for teams to focus on high-value tasks
- Drive growth: data-driven insights from case tracking and performance metrics allow labs to refine their processes and expand their offerings.

HUMAN IMPACT

At the heart of this shift is the patient. When labs and clinics can operate as a cohesive team, patients feel the difference:

- Faster turnarounds mean patients spend less time waiting for their aligners or restorations
- Clear communication leads to more precise treatments, reducing the need for adjustments or rework
- A smoother experience builds trust, leaving patients confident in their care.

But it's not just patients who benefit. For labs, streamlined workflows mean fewer headaches and more time to focus on quality. For clinics, real-time visibility into cases allows them to manage their schedules and meet patient expectations more effectively.

The dental industry is at a crossroads. With increasing demands for speed, precision and personalisation, the old ways of working simply aren't enough. It's time to embrace the tools and technology that allow labs and clinics to rise to the occasion.

The message is clear: we have the technology. Now, it's time to use it to transform how we work, how we connect and how we care.

New materials for full dentures Zirkonzahn

With Abro Basic Multistratum and Denture Gingiva Basic Mono Pink resins, Zirkonzahn introduces new PMMA-based materials which are particularly biocompatible and health-friendly due to their low residual monomer concentration. Abro Basic Multistratum shows a natural colour gradient from dentine to the enamel. It also has improved material properties in terms of translucency values, flexural strength as well as fracture and abrasion resistance, making it particularly suited for the manufacture of denture teeth. However, it can also be used for long-term temporaries and various secondary and tertiary structures.

Zirkonzahn®
Human Zirconium Technology

On the other hand, Denture Gingiva Basic Mono Pink is a gingiva-coloured resin with improved material properties in terms of flexural strength and fracture resistance, specifically conceived for the production of denture bases. The resin blanks are also available in Ø 125 mm for the manufacture of up to two denture bases in just one milling process.

The gingival area of the restorations can then be characterised individually with gingiva composites. Their colour spectrum is based on the company's Ice Ceramics tissue shades from light to dark: through the temporary, dentists and patients can get an immediate aesthetic impression of the final restoration.

www.zirkonzahn.com

Double trouble Kemdent

The workflow for dental technicians can pile up, prompting the need for quicker solutions within a more efficient environment. Kemdent can support this with their Kemsil Duplicating silicone.

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By using the latest in addition-cured silicone solutions, dental technicians can produce the accurate duplication of master models while lightening their workload at the same time. To unlock the benefits of excellent duplication, consider Kemdent.

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Enhanced CPD

LAB/WINTER/BROWN/PAGE 14

1. According to the author, what is one significant advantage of digital denture design over traditional methods?
- ☐ a. Lower cost of production
- ☐ b. Elimination of dentist involvement
- ☐ c. Seamless integration of personalised character traits
- ☐ d. Complicates the try-in stage

2. How has digital technology improved the creation of reference dentures compared to analogue methods?
- ☐ a. It allows for the use of cheaper materials
- ☐ b. It reduces clinical appointments from six or more to three
- ☐ c. It eliminates the need for master impressions
- ☐ d. It eliminates the need for bite registrations

3. What does the author suggest is key to achieving exceptional aesthetics in digital dentures?
- ☐ a. Using the latest software
- ☐ b. Relying solely on aesthetics provided by default manufacturing processes
- ☐ c. Expanding the technician's skillset and mastering gingival composite application
- ☐ d. Avoiding collaboration with clinicians

4. What is a noted challenge of integrating digital workflows into a laboratory?
- ☐ a. Lack of demand for digital dentures
- ☐ b. High risk of errors during the digital design process
- ☐ c. Limited access to consistent, ongoing education
- ☐ d. Excessive reliance on the patient's feedback

LAB/WINTER/CARSON/PAGE 18

1. What material was chosen for the final restoration for improved aesthetics?
- ☐ a. Full-contour zirconia enhanced with Miyo
- ☐ b. Monolithic porcelain fused to metal
- ☐ c. Bisacryl resin for its flexibility
- ☐ d. Acrylic with composite overlays

2. Why was manual contouring performed in the green state?
- ☐ a. To simplify the milling process
- ☐ b. To achieve proper interproximal separation for realistic aesthetics
- ☐ c. To eliminate the need for sintering
- ☐ d. To reduce production costs

3. Why were liquid modifiers used before sintering?
- ☐ a. To strengthen the restoration against occlusal forces
- ☐ b. To adjust the restoration's translucency and chroma for a natural appearance
- ☐ c. To simplify the contouring process
- ☐ d. To remove surface imperfections

4. What significant factor influenced the treatment plan for the patient described in the article?
- ☐ a. The patient's desire for removable dentures
- ☐ b. The patient's concurrent cancer treatment ruling out surgical options
- ☐ c. The high availability of donor implants
- ☐ d. The patient's preference for uniform tooth shading

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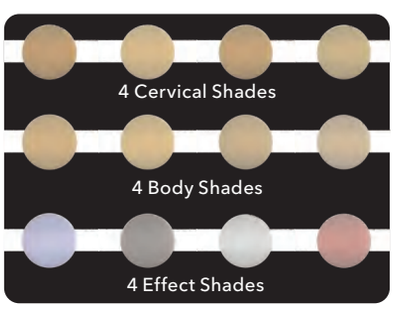

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