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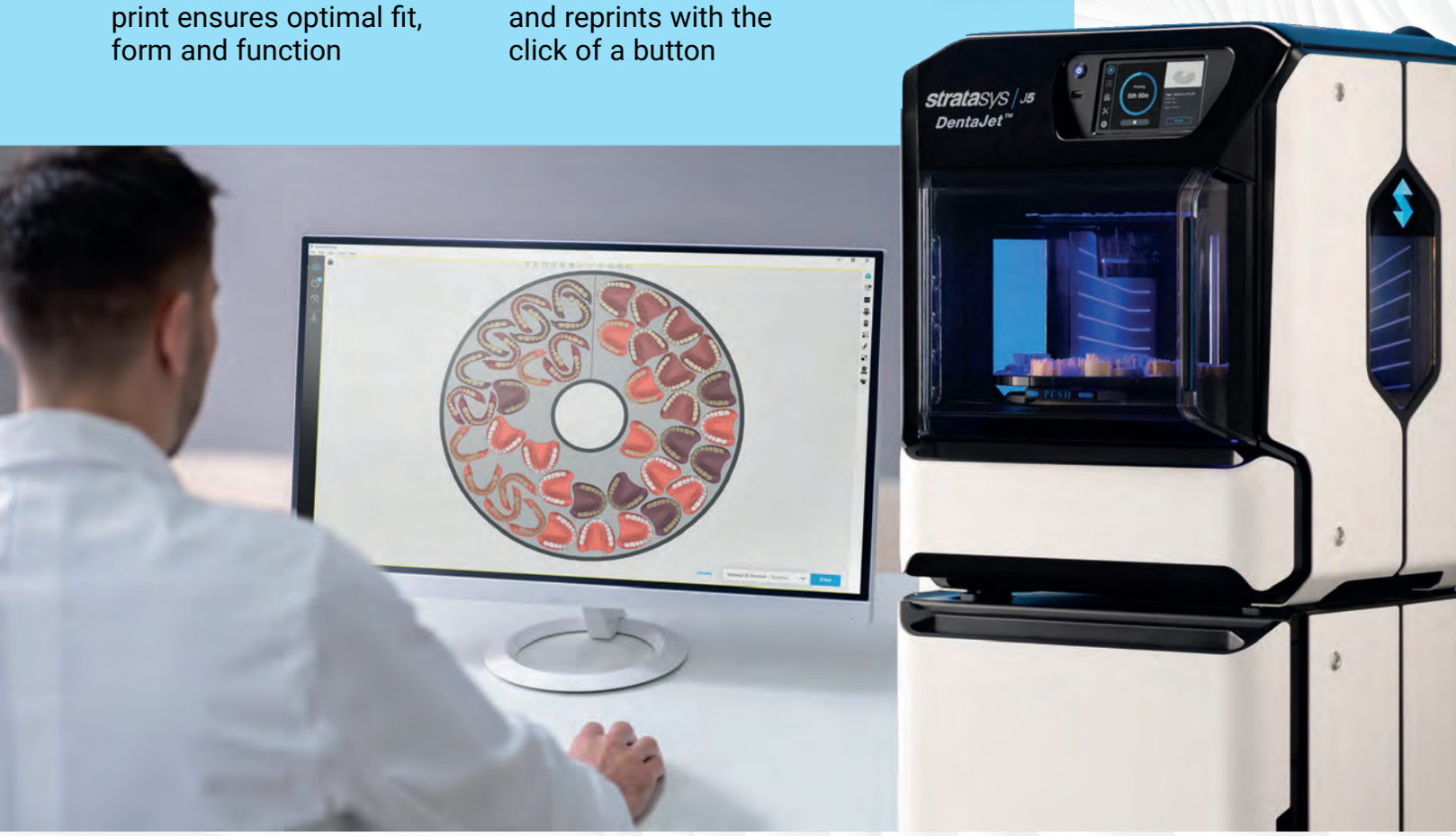

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THE DIGITAL FRONTIER

Discovering the new dimensions of digital dentistry *p.23*

Life at Southend Hospital *p.20*

Turning setbacks into growth *p.26*

Lab leadership in an AI era *p.35*

TWO HOURS' ENHANCED CPD INSIDE THIS ISSUE

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Looking ahead

MATT EVERATT
Editor-in-chief

The start of a new year is a natural moment to pause, not just to reflect on what we've done well, but to be honest about the pressures our area of the dental profession continues to face. Dental technology and laboratory businesses remain resilient, adaptable and innovative, yet they are operating in an increasingly complex environment. Regulation, compliance, workforce challenges and financial pressure are no longer background concerns; they directly influence how laboratories operate, how teams are supported and how patients are ultimately served.

THE NEED FOR CLARITY

Over the past year, *Laboratory* magazine has made several attempts to engage with the General Dental Council (GDC). These conversations are not always comfortable, but they are necessary. If regulation is to be effective, it must be informed, proportionate and grounded in a genuine understanding of laboratory practice. Representation matters, and so does constructive challenge when clarity is lacking.

All of us who choose to operate legally have faced the new issues with MHRA fees and the correct application of GMDN codes. It may not feel headline-worthy, but they sit at the heart of compliance, risk and accountability. Too often, laboratories are left navigating these areas with limited guidance, creating unnecessary anxiety and inconsistency. Some labs have faced bills in excess of thousands of pounds.

NEW BEGINNINGS

On a personal note, this year also marked my own exit from a business I helped build. It reinforced a belief I've held for some time: starting a business is only part of the journey – orchestrating a considered, ethical exit is just as important.

Too often we talk about growth without discussing sustainability, succession or timing. As the saying goes, 'Begin with the end in mind.' Strong businesses are built not just to survive, but to stand independently of their founders.

Looking ahead to 2026, the focus must be on clarity and sustainability. The profession needs proportionate regulation, realistic expectations and open dialogue. It also needs continued investment in skills, education and leadership if it is to remain credible and valued within the wider dental team.

Laboratory magazine will continue to provide space for informed discussion, practical insight and professional voice, not to dictate direction, but to support better decisions. Thank you to our contributors, partners and readers for your continued engagement. I look forward to the conversations and progress the year ahead will bring.

GET IN TOUCH
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Laboratory

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MISSION STATEMENT

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A new conversation

Welcome to the first issue of 2026! I hope you all enjoyed a well-deserved break and are feeling refreshed for the year ahead. As we step into the new year, the profession does so against the backdrop of recent dental contract changes announced in December. This reform has been named 'the most significant modernisation of the NHS dental contract in years' by the government. While the changes certainly acknowledge ongoing pressures within NHS dentistry, many are left wondering if – and hoping that – there is more to come. Turn to page 8 to find out what these contract changes entail.

With a new year underway and so much already changing across dentistry, now is the ideal time to look ahead. One of the first opportunities to do exactly that comes on Friday 13 February with the North of England Dentistry Show – returning to Manchester this year with a fresh look, renewed energy and a clear focus on bold ideas. Don't miss the chance to hear from keynote speaker Dr Miguel Stanley – one of global dentistry's most respected and recognisable voices. His lecture will explore the dangers of cutting corners and the rising need for 'revision dentistry'. In this unmissable session, Miguel will chart how digital technologies, advanced biomaterials and AI can elevate clinical outcomes and transform the patient experience. Register your attendance for free on Dentistry.co.uk!

The start of a new year also offers a moment to pause and recognise our achievements from the one just passed. On page 9, we reveal who won Best Dental Technician and Clinical Dental Technician at the 2025 Private Dentistry Awards – two brand-new categories dedicated to the dental lab community. Turn to page 30 to hear from one of these winners on how it felt to win and the impact he is making in the profession.

As we look ahead, the start of a new year may also be the perfect time to consider whether 2026 could be your year to enter. Keep an eye out for entry deadlines as they are announced in the coming months.

Laboratory is your title – let it be shaped by you. Your feedback, contributions and suggestions make this publication what it is, so please get in touch and share your thoughts. If you have a topic you would like to write on or want to share your story, I'd love to hear from you.

Have a fantastic start to 2026!

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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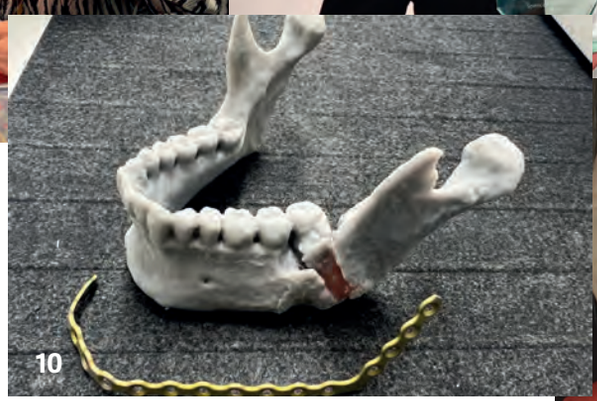

CONTENTS

Laboratory's Lab Experts panel

Presenting ***Laboratory*'s** editorial board – the Lab Experts helping to nurture connection, passion and quality within dental technology

CRAIG MARK BROUGHTON

Clinical dental technician and managing director, CMB Dental Laboratory

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DANIEL SHAW

Maxillofacial prosthetist and laboratory manager, Chesterfield Royal Hospital

LOLA WELCH

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Latest NHS dental contract changes released

The government has revealed the latest overhaul of the NHS dental contract, with prioritisation given to patients with the most urgent dental needs.

Dubbed 'the most significant modernisation of the NHS dental contract in years' by the government, the changes follow a consultation with the sector and the public.

The reforms – which will be introduced from April this year – will include incentives for dentists to provide emergency and complex treatments through the introduction of a standardised payment package.

The changes include:

- A new, time-limited care pathway for patients with more complex dental needs
- Better payments for more complex treatment, which is often poorly paid under the current contract
- Payments linked to activity that helps reduce dental disease, rather than just treating problems once they occur
- New funding to support clinical audits and peer review within dental practices
- A requirement for practices to provide a set level of urgent dental care, with improved pay for this work.

A NEW ERA FOR NHS DENTISTRY

Minister for care Stephen Kinnock said: 'We inherited a broken NHS dental system and have worked at pace to start fixing it – rolling out urgent and emergency appointments and bringing in supervised toothbrushing for young children in the most deprived areas.

'Now we are tackling the deep-rooted problems so patients can have faith in NHS dentistry – these changes will make it easier for anyone with urgent dental needs to get NHS treatment, preventing painful conditions from spiralling into avoidable hospital admissions.

'This is about putting patients first and supporting those with the greatest need, while backing our NHS dentists, making the contract more attractive, and giving them the resources to deliver more.

'This marks the first step towards a new era for NHS dentistry after a decade of decline, one that delivers for patients and our dedicated dental professionals.'

Government dentistry underspend falls by 91%

Unused government budget for NHS dentistry has fallen from £392 million in 2023/24 to just £36 million, the care minister announced this January.

Minister of state for care Stephen Kinnock told parliament that underspending on NHS dentistry had dramatically reduced in the past year.

The large underspend in dentistry has previously been cited as evidence of ample funding available for NHS dentistry. However, the British Dental Association (BDA) said it was likely due to practices being unable to fill vacancies or commit to delivering NHS appointments at a loss.

The association stressed that the reduction in unused budget means there are 'now no excuses for government not to invest in easing the access crisis'.

DELIVERING CARE AT A LOSS

Shiv Pabary, chair of the BDA General Dental Practice Committee, said: 'Ministers have used the vast underspends in NHS dentistry as an excuse not to invest. Underspends have now all but vanished, yet we still have an access crisis.

'We have practices delivering NHS care at a loss. Without sustainable funding there is no way to restore care to millions.'

Dental amalgam global phase-out announced

A 'global phase-out date' of 2034 has been set after which the manufacture, import, or export of dental amalgam will no longer be permitted.

The landmark decision was reached at the Sixth Conference of the Parties (COP6) to the Minamata Convention on Mercury, led by FDI World Dental Federation (FDI) and the International Association for Dental, Oral and Craniofacial Research (IADR).

The agreement includes an exemption that supports the joint advocacy by FDI and IADR, which ensures that even after the phase-out of dental amalgam it can be used 'when its use is considered necessary by the dental practitioner based on the needs of the patient'.

This provision ensures that patient care remains at the centre of decision-making, safeguarding access to essential restorative treatments where alternatives are not yet available or viable.

Over four days of deliberation, both organisations delivered individual and joint statements reinforcing the continued relevance of dental amalgam in restorative dentistry as well as the importance of prevention. They called for research into 'affordable, effective and sustainable' alternative materials and emphasised that waste management should be compulsory to reinforce the convention's broader objective of reducing environmental mercury exposure.

The efforts helped to extend the final phase-out timeline beyond 2030 – the date originally proposed.

The European Parliament voted to ban dental amalgam in January 2024, resulting in a total phase-out in the European Union (EU) from 1 January in 2025.

'MUCH-NEEDED TIME' ON AMALGAM PHASE-OUT

'As we move toward the eventual phase-out of dental amalgam, it is essential that the needs of our members, and the patients they serve, remain at the heart of every decision,' said Enzo Bondioni, executive director of FDI.

'This outcome provides much-needed time and clarity for our members to plan, prepare, and implement the necessary national policies. It reinforces FDI's commitment to supporting the global dental community in maintaining continuity of care and advancing oral health equity during this important transition.'

The decision gives parties nine years to adapt their national strategies and healthcare systems to this new framework. The Minamata Convention on Mercury, which entered into force in August 2017, now counts 153 parties as of September 2025.

'Science and evidence must remain at the heart of every global health policy decision,' said Dr Christopher Fox, CEO of IADR.

'This outcome reflects the progress we've made by investing in research into mercury-free alternatives, as called for in the text of the Minamata Convention, from both the public and private sectors.

'IADR remains committed to supporting continued innovation and research that will further the rapid improvement of affordable, effective and sustainable restorative materials, so no one is left behind in this transition.'

PRIVATE
DENTISTRY AWARDS 2025

Private Dentistry Awards 2025 winners revealed

Last year's Private Dentistry Awards took London by storm. On Friday 21 November 2025, the private dental sector gathered at the JW Marriott Grosvenor House London to celebrate another year of outstanding performance and patient care.

The Private Dentistry Awards are among the most respected accolades in UK and Irish dentistry – each year sees a new batch of winners achieve new heights of care, innovation and clinical excellence.

For the first time, the awards included categories dedicated to dental technicians and clinical dental technicians. Find out who won below.

DENTAL TECHNICIAN OF THE YEAR

- Anna Veli – winner
- Deepa Bharakhda – highly commended.

CLINICAL DENTAL TECHNICIAN OF THE YEAR

- Spencer Greening – winner
- Steve Morris – highly commended.

View the full list of winners on **dentistry.co.uk**

WITH THANKS TO OUR SPONSORS

Precision under pressure

Anna Veli presents two digitally planned mandibular reconstructions that required speed, accuracy and collaboration

ANNA VELI
Founder,
Engreco Healthcare

My field, maxillofacial prosthetics, encompasses a wide range of clinical and laboratory work: facial and body prostheses, oral and nasal obturators (my personal favourite), orthognathic model surgery, post-trauma restoration, congenital rehabilitation, and oncologyrelated reconstruction are just a few. But maxillofacial work rarely fits neatly within the confines of a short article. Cases can span months or even years, evolving with medical treatment plans, surgical outcomes and patient healing. Capturing their full scope in just one article words is almost impossible. That said, two cases that arrived recently felt timely, interesting and representative of the fast-paced, unpredictable nature of modern reconstructive surgery. Both involved urgent mandibular reconstruction using custom-made prebent titanium plates, and both required digital planning, fabrication and multidisciplinary communication.

CLAIM YOUR CPD

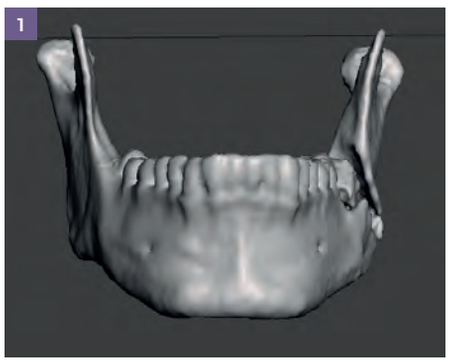
GDC anticipated outcome: C

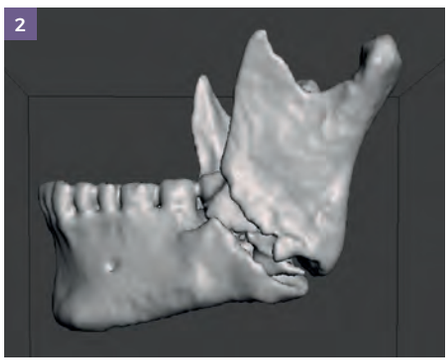
CPD hours: One

Topic: Mandibular reconstruction

Educational aims and objectives: To present two cases that involved urgent mandibular reconstruction.

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





FIGURES 1 and **2:** Fractured mandible – front and side view

CASE OVERVIEW

Mandibular reconstruction remains one of the most technically demanding challenges in maxillofacial surgery. The mandible is not simply a structural bone; it is a functional and aesthetic cornerstone. It shapes the face, maintains occlusion, enables speech and mastication, supports airway function, and plays an undeniable role in identity and confidence. When continuity is compromised due to trauma, surgical resection or infection, the resulting functional and psychological consequences can be profound.

The first of the two cases was a 34-year-old patient who sustained a comminuted mandibular fracture (Figures 1 and 2) after falling from an electric scooter. The injury affected the angle of the mandible and teeth, resulting in loss of contour and an unstable occlusion. A custom titanium reconstruction plate was required to stabilise multiple fragments and support healing.

The second case involved a 62-year-old patient diagnosed with squamous cell carcinoma (SCC) affecting the mandibular body, symphysis and teeth. The tumour infiltrated both bone and adjacent soft tissues, requiring a segmental mandibulectomy with clear oncological margins. The reconstructive plate in this instance would serve not only as mechanical stabilisation holding the fibula in place, but also as a long-term support structure for future prosthetic rehabilitation.

Both cases arrived with an urgent timeline; surgery scheduled within a week. Urgency and precision were equally non-negotiable.

CLINICAL AND TECHNICAL CHALLENGES

Upon receiving the CT images from the hospital's picture archiving and communication system (PACS) team, the first task was model planning. For both cases, a fully digital workflow formed the foundation: CT-derived anatomical data was processed using Invesalius to isolate skeletal structures and generate a digital mandible (Figure 3). The file was then imported into Meshmixer for refinement and conversion to an STL format suitable for 3D printing.

Despite being familiar territory, trauma can introduce unpredictable digital complexity. In the fracture case, comminution resulted in irregular anatomy, and small segments were difficult to digitally stabilise.

I had misjudged the degree of natural separation and printed the model with insufficient support. The result was a

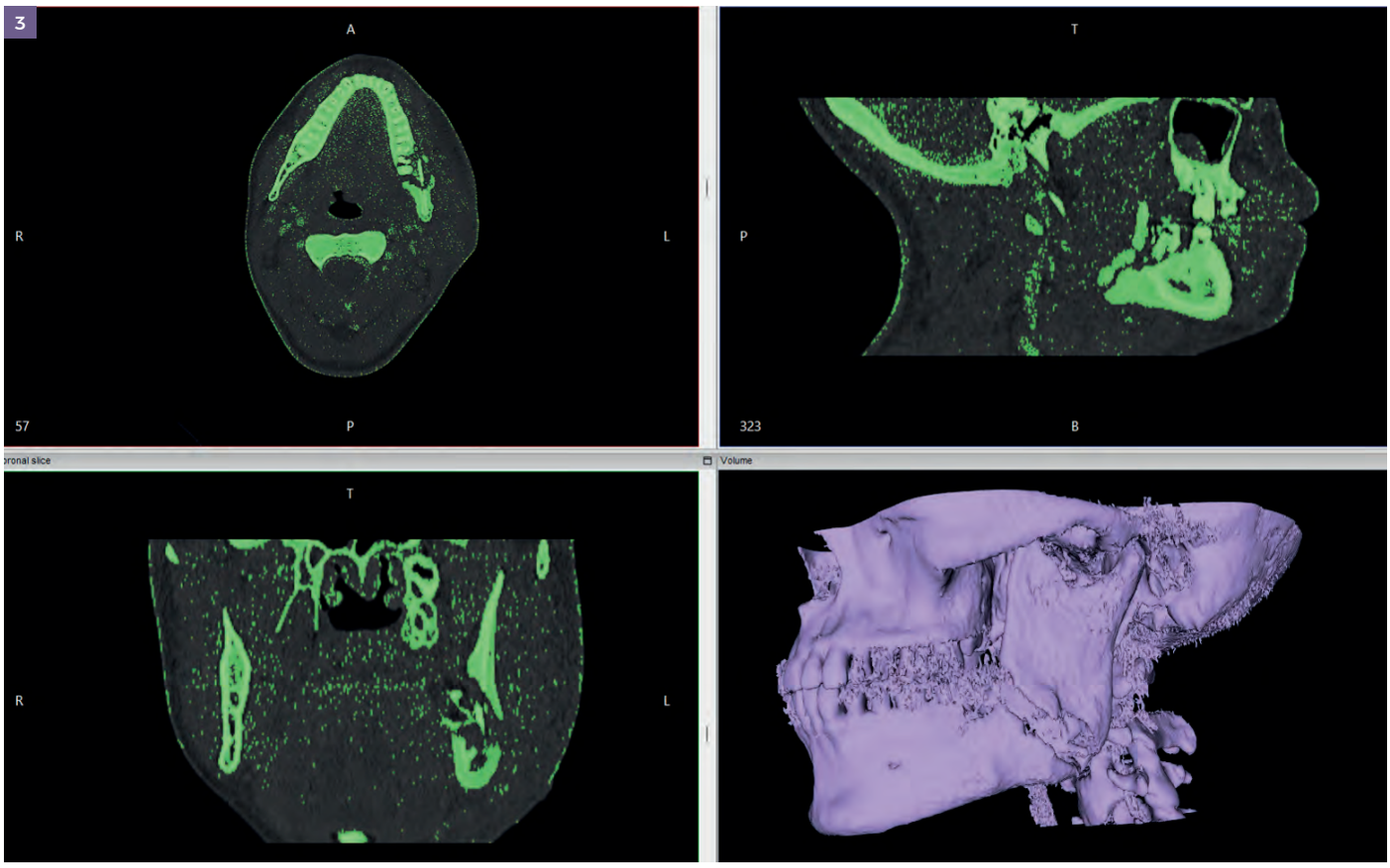
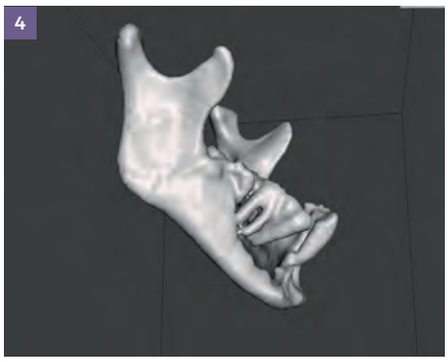
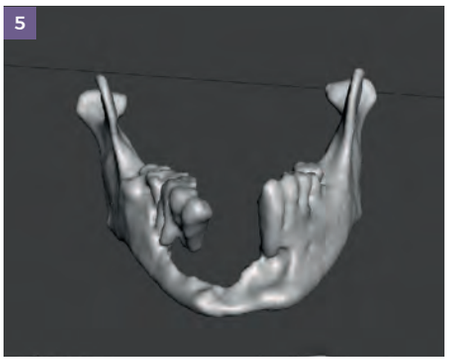


FIGURE 3: CT-derived anatomical data is processed using Invesalius to isolate skeletal structures and generate a digital mandible





FIGURES 4 and **5:** Oncology case – side and front view

DIGITAL WORKFLOWS HAVE TRANSFORMED MAXILLOFACIAL PLANNING AND EXECUTION, BUT PHYSICAL MODELS REMAIN IRREPLACEABLE

fragile structure that risked breaking during handling. To reinforce it, cold-cure acrylic was added manually across the fracture line, a reminder that digital precision is invaluable, but physical models still expose realities that screens cannot.

The oncological case was more straightforward digitally, but the planning priorities were entirely different. Instead of repairing fragments, the model would guide surgeons in contouring a plate to span a post-resection void (Figures 4 and 5). Planning, therefore, depended heavily on understanding intended resection margins, prosthetic possibilities and long-term function.

THE IMPORTANCE OF COLLABORATION

Urgent cases require clear, rapid and well-structured communication. The technology can be sophisticated and the workflow efficient, but without coordinated planning, even the most advanced digital tools cannot compensate for misalignment between clinical teams.

Virtual workflow meetings with surgeons and radiologists ensured that the digital models aligned with operative intent. Sharing early screenshots rather than printing first and hoping the interpretation was correct prevented avoidable delays.

Over the years, I have learned that many operative planning errors are not technical but administrative. Wrong file uploads, outdated imaging, evolving treatment pathways and tumour progression can all invalidate a model. The early review step exists precisely to avoid these issues.

The trauma patient was scheduled to receive an occlusal wafer after surgery to stabilise the bite, while the oncology patient would be referred to restorative dentistry postoperatively. These details mattered because reconstructive plate

positioning influences future implant feasibility, occlusal plane development and bone grafting options.

TECHNICAL APPROACH

Once communication was complete and models validated, fabrication could move forward. A resin anatomical replica of each patient's mandible will be printed. These models would act as bending guides for the prebend titanium reconstruction plates (Figure 6).

Titanium remains the gold standard material when it comes to intraoral and extraoral implants, due to its strength, biocompatibility and resistance to corrosion. While fully CAD/CAM milled or sintered patient-specific plates are increasingly available, legal and regulatory frameworks in the UK limit who can manufacture and sell implantable devices.

Current MHRA and MDR legislation means only CE and ISO 13485:2016 certified entities, typically large medical device companies or large hospital units, may produce patient-specific implant-grade devices. Smaller maxillofacial laboratories and independent clinics therefore, including mine, must rely on hybrid workflows: 3D printed anatomical models combined with intraoperative manual bending.

Despite appearing less technologically glamorous than fully manufactured patient-specific implants, this hybrid method remains highly effective, efficient and pragmatic, particularly when working under surgical time constraints. In both cases, prebending was expected to take roughly 30 to 40 minutes in theatre. Refinements would depend on tactile fit, osteotomy requirements, and surgeon preference. Premarking model contours (Figure 7) is useful when the plate is bent in advance, but in these cases I would be present in theatre, eliminating the need for permanent markers on the model.

FINAL PRODUCT

At the time of writing, the trauma case has been completed (Figure 8), and the cancer case is scheduled within days. The prebent titanium plate for the trauma patient will aim to re-establish mandibular alignment and occlusion, restoring shape and mechanical continuity, while the postoperative protective occlusal wafer will further support stabilisation during

FIGURE 6: 3D model acts as bending guide for prefabricating the reconstruction plate

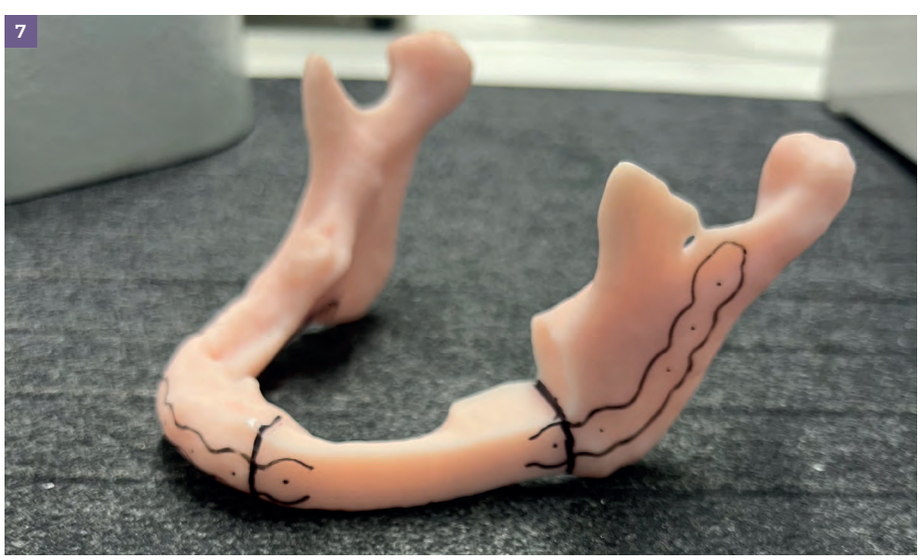


FIGURE 7: A past case showing pre-marking model contours, to help with plate repositioning, useful when the plate is bent in advance

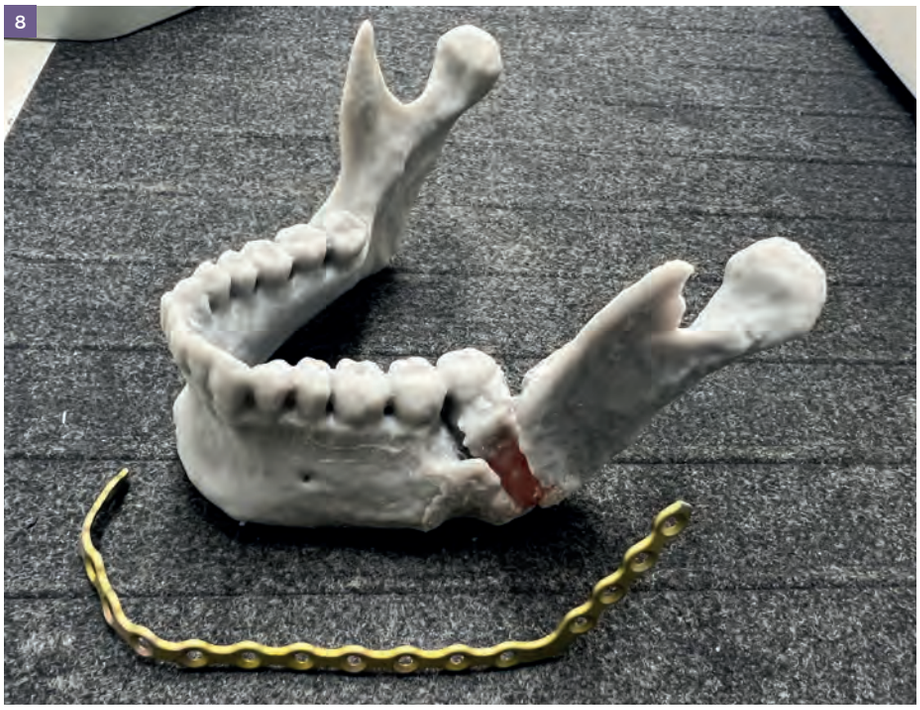


FIGURE 8: The trial titanium plate was prebend, to make sure the bending time during the surgery remains under the 30-40 minutes mark, without risking delaying the surgery

healing. For this, an intraoral dental impression is planned at the time of surgery, once the desired occlusion has been achieved.

The oncology case is scheduled within days. The reconstructive plate will serve first as a stabilising bridge following bone resection and later as part of a staged rehabilitation plan once healing, radiotherapy and tissue stability allow for implant placement. One challenge of working as a private external provider to NHS surgical units is the lack of consistent postoperative communication unless clinical concerns arise (Figure 9), or restorative work is required later.

The work continues in the patient long after the model leaves the bench, and sometimes we do not witness the completed pathway. It is one of the quieter realities of the field, and something I miss from my NHS days.

> DESPITE BEING FAMILIAR TERRITORY, TRAUMA CAN INTRODUCE UNPREDICTABLE DIGITAL COMPLEXITY

REFLECTIONS AND FINAL THOUGHTS

Maxillofacial reconstruction is never routine. Each case requires flexibility, creativity and respect for the individuality of human anatomy. Whether restoring a jaw fractured in an instant or rebuilding bone lost over months of cancer growth, the priority remains constant: restoring function, dignity and quality of life.

These two cases demonstrate not only the value of modern digital workflows but also the ongoing importance of tactile model-based planning. They also reinforce several key observations. First, digital workflows have transformed maxillofacial planning and execution, but physical models remain irreplaceable. Digital imaging provides precision, yet physical replicas reveal fragility, undercuts, asymmetry, and natural irregularities that software may minimise or obscure. Second, interdisciplinary communication is just as important as technical skill. Without fast communication from radiology, responsive surgeons and aligned planning goals, urgent cases could not proceed. Third, time pressure does not excuse shortcuts. Even when deadlines are tight, quality depends on accuracy and confirmation. And finally, the future is already shifting. 3D-printed titanium patient-specific implants will eventually become standard as regulation evolves and certification becomes more accessible.

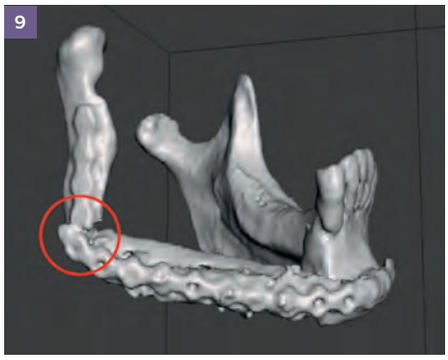


FIGURE 9: An example case, showing the reconstructive plate in situ, after cancer resection and fibula reconstruction surgery. Note, the plate has broken at the angle of the mandible

When smaller UK-based laboratories can manufacture implantable devices rather than relying on international medical device companies, turnaround times will shorten, treatment costs will reduce, and patient care pathways will streamline. Until then, hybrid workflows remain an elegant compromise, combining digital precision, manual craftsmanship, and real-world clinical practicality.

Our work often begins long before the operating theatre and continues long after the patient leaves the hospital. It lives in the planning, in the relationships between surgical and technical teams, in the quiet hours of digital design, and the hands-on shaping of titanium against resin bone. And in moments like this, at the time of writing, travelling, exhausted, yet deeply invested, I remember why I love what I do.

I would like to take this opportunity to thank the surgical teams I am working with for the trust they are putting on me and my business – only a small laboratory. I would also like to thank my lovely trainee, Polina Hristova, and all the students I've taught and mentored over the years, whose curiosity has pushed my limits and helped me stay sharp while I relearn with them and share their enthusiasm for the profession. Teaching them reminds me not only of how much I have learned over the years, but how much more there always is to learn.

CONNECT WITH ANNA @anna_maxfac

Digital minimal-prep veneers

Alin Galatanu demonstrates how digital precision can restore symmetry and brightness

ALIN GALATANU
Dental technician,
Uniqa Dental Laboratory

Achieving a brighter yet natural smile is one of the most common requests we hear in the laboratory, but each case carries its own set of challenges. This patient presented with clear aesthetic concerns: her upper anterior teeth lacked symmetry, the shade appeared dull and uneven, and the overall smile did not offer the fullness she desired (Figures 1 to 4).

She expressed a desire for a whiter appearance but was equally insistent that the final result should remain authentic and in harmony with her facial features.

With more than a decade of experience working in advanced aesthetic dentistry, I knew that fulfilling this balance of brightness, shape refinement and natural texture would require a careful, digitally driven and minimally invasive workflow.

At the first assessment, the irregularities in shape and proportion were evident. The incisal edges lacked uniformity, axial inclinations were inconsistent, and the smile arc did not follow the curvature of the lower lip. These subtle discrepancies can have a surprisingly large impact on the overall appearance of a smile. Addressing them in a way that preserved as much natural tooth structure as possible became a key priority.

FIGURES 1 to **4:** Initial case presentation showing asymmetry, dull shade and lack of fullness

After discussing all options with the clinician and patient, we agreed on a plan to restore the upper 10 teeth with minimal-prep lithium disilicate veneers. This approach would allow us to refine shape, enhance brightness and create symmetry while maintaining strength and natural translucency.

DIGITAL WORKFLOW AND MOCK-UP

To begin, a full digital smile design was completed in Exocad. Working digitally allows immense precision and the ability to visualise the final result long before touching the teeth. The design incorporated the patient's requests for increased fullness and improved harmony while also accounting for her facial proportions.

Because the patient wanted to see a realistic preview, we opted for an additive wax-up rather than a reductive one. This would allow us to 3D-print the model and transfer a mock-up directly into her mouth without modifying her natural teeth at that stage. When the patient saw the mock-up in place, her reaction confirmed that we were heading in the right direction (Figures 5 to 7). She immediately appreciated the subtle yet impactful improvements in shape and smile flow. The transparency of this stage is invaluable; it allows patients to feel confident before committing to treatment, removes uncertainty for the clinician and provides the laboratory with a clearly defined target.

PREPARATION AND TEMPORARIES

With the mock-up approved, the clinician proceeded to preparation. Using silicone guides taken from the additive wax-up, the teeth were prepared conservatively, maintaining enamel wherever possible. The goal was to keep the veneers between 0.3mm and 0.7mm in thickness, meaning there was very little margin for error in design or fabrication.

Maintaining enamel is especially

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Educational aims and objectives: To present a case that restores 10 teeth with minimal-prep lithium disilicate veneers.

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



FIGURES 5 to **7:** Intraoral mock-up transferred from the Exocad additive wax-up, showing proposed symmetry and fullness

important for bonding, longevity and colour stability, particularly when working with lighter shades (Figure 8).

Temporaries were fabricated directly from the approved design and fitted the same day (Figures 9 to 11). The patient wore them for two to three weeks, allowing enough time to assess both function and aesthetics in daily life. Interestingly, she requested no alterations during this period, confirming that the proposed shapes and lengths met her expectations in both comfort and appearance.

> I KNEW THAT FULFILLING THIS BALANCE OF BRIGHTNESS, SHAPE REFINEMENT AND NATURAL TEXTURE WOULD REQUIRE A CAREFUL, DIGITALLY DRIVEN AND MINIMALLY INVASIVE WORKFLOW

FIGURE 8: Tooth preparation and shade confirmation appointment, capturing the desired brightness and underlying stump shades

FABRICATION OF THE FINAL VENEERS

With the design fully validated, I began fabricating the final veneers using Ivoclar Emax lithium disilicate. This material remains a favourite for aesthetic work due to its balance of strength, translucency and natural light behaviour, particularly when used in thin sections.

I paid special attention to the patient's desire for a brighter shade while maintaining realism. The risk with brighter ceramic work is creating an overly opaque or artificial look, which we wanted to avoid at all costs.

To achieve the right balance, I worked in delicate layers, controlling the value through enamel thickness rather than relying solely on the core shade.

Once the veneers were shaped and refined, I applied Miyo characterisation to enhance vitality without overworking the surface. Miyo allows for extremely subtle modification, ideal when a patient wants bright teeth that still show gentle internal texture, halo effects and a touch of natural translucency.

A small amount of vertical character and incisal translucency helped prevent a flat appearance while keeping the final shade within the patient's brightness request.



FIGURES 9 to **11:** Temporaries in situ, confirming patient comfort, function and aesthetic approval during the provisional phase

FIGURES 12 to **15:** Final veneers in situ from frontal and lateral views, showing improved symmetry, brightness, shape consistency and natural integration within the smile

FINAL FIT AND OUTCOME

The veneers were fitted by Dr Lawrence Smith, who reported an exceptionally smooth insertion with no need for chairside adjustments. Achieving this level of precision is always satisfying, and it underscores the value of thorough digital planning, clear communication and careful execution of each step in the workflow.

The patient's reaction made the entire journey worthwhile. She was, in her own words, 'over the moon' with the new smile. The added symmetry, increased brightness and improved fullness transformed her appearance while still respecting her natural features (Figures 12 to 15).

The clinician was equally delighted with the result.

> TO ACHIEVE THE RIGHT BALANCE, I WORKED IN DELICATE LAYERS, CONTROLLING THE VALUE THROUGH ENAMEL THICKNESS

REFLECTIONS

Reflecting on this case, it reinforced how impactful a well-structured digital workflow can be in aesthetic dentistry. The Exocad smile design and additive wax-up allowed the patient to feel involved and reassured from the start.

The conservative preparation respected biology and improved bond strength, while the use of lithium disilicate ensured we could meet both aesthetic and functional demands at minimal thickness. Miyo characterisation offered the final touch – subtle enhancements that brought the veneers to life without compromising the bright, clean aesthetic the patient desired.

Cases like this remind me why I love being a dental technician. Even after more than 10 years in the field, each case brings a unique blend of artistry, engineering and communication. There is something incredibly rewarding about watching a patient rediscover confidence through the combination of digital precision and handcrafted ceramic work.

This case stands as a perfect example of how collaboration, modern technology and aesthetic sensitivity can all come together to achieve a result that feels beautifully balanced and entirely personal to the patient.

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The dreaded 'call me' lab ticket

Ashley Byrne highlights some common issues that crop up in communication between dentists and technicians

ASHLEY BYRNE
Associate director,
Byrnes Dental Laboratory

We've all seen it. The dreaded lab ticket with those two little words: 'Call me.'

No details, no prescription, no hint of what's needed, just a vague message that sends a ripple of frustration through the lab. It's become the universal signal for 'something's gone wrong' or perhaps 'I haven't quite decided yet'.

But as every technician knows, a 'call me' request is rarely simple. It means stopping work, picking up the phone, waiting for a dentist who's in surgery, then playing a round of voicemail ping-pong before getting an answer that could have been sorted in two sentences by email.

WHY WE STILL STRUGGLE TO COMMUNICATE

Dentists are busier than ever. Back-to-back patients, staffing challenges, admin, compliance – it's no wonder that returning lab calls slips down the priority list. But from the lab's side, a lack of communication can stop production dead in its tracks.

We can't make assumptions or fill in the blanks; we're bound by the prescription, by law. Every adjustment, every material choice, every shade tweak needs to be clear and documented. That's not just good practice – it's a legal necessity.

A written prescription is required by the MHRA, and while a Whatsapp message can help clarify details, it can't replace the official instruction.

Traditionally, the solution has been simple: chase the dentist. Ring the practice, leave a message, try again later. But in 2026, with the technology available to us, that approach feels more like firefighting than communication.

MEETING PEOPLE WHERE THEY ARE

Modern communication means thinking beyond the phone. Some prefer email threads that can be traced and archived. Others rely on Whatsapp for speed and photo sharing.

For some, practice management systems provide secure messaging between clinic and lab. However, the real trick is finding out what works best for each practice.

Sometimes, the right person to speak to isn't the dentist at all. It could be the dental nurse who books appointments, the practice manager who oversees logistics, or the treatment coordinator who handles the patient's journey.

At the start of every new working relationship, it's worth asking:

- Who should we contact for what?
- What's the best communication method – phone, email, Whatsapp or something else?
- Who covers messages when someone's on holiday?

Once you've agreed the process, document it. Having a clear, traceable system not only saves time but also protects everyone if things go wrong.

WHEN TECHNOLOGY MAKES THINGS HARDER

Ironically, as communication tools have evolved, so have the barriers. Many large dental companies have developed their own closed communication systems, often tied to their scanners, implant platforms, or CAD/CAM workflows.

In theory, these systems are designed to streamline case management. In practice, for labs, they've made life far more complicated.

We're now expected to use multiple platforms, one for intraoral scans, another for implant cases, another for aligners, another for digital dentures. Each one has its own logins, file types, messaging systems, and update quirks. Instead of simplifying communication, it's fragmented it.

For a busy lab working with dozens of clinics, each loyal to different systems, this patchwork of software has turned what should be simple collaboration into digital chaos. We've become software managers as much as technicians, juggling updates, passwords, and proprietary portals just to keep cases moving.

THE WAY FORWARD

We need to find a middle ground between old-fashioned phone chasing and the overcomplicated digital maze. Communication should be consistent, efficient and accessible, regardless of which scanner or implant system is being used.

That starts with mutual understanding. Dentists can help by clarifying how and when they prefer to be contacted, and by ensuring written prescriptions are complete and compliant. Labs can help by modernising their communication habits, using clear channels, and keeping records of every interaction.

If both sides commit to structured, respectful and traceable communication, we can replace the 'call me' lab ticket with something far more powerful: collaboration.

Because, at the end of the day, great communication doesn't just make our jobs easier, it makes our work better, safer, and more predictable for the people who matter most: patients.

We need to find a middle ground between old-fashioned phone chasing and the overcomplicated digital maze

A lack of communication can stop production dead in its tracks

Ironically, as communication tools have evolved, so have the barriers

Life at Southend Hospital

Anna Munro details why a hospital setting offers a comprehensive and fulfilling experience

ANNA MUNRO
Dental technician,
Southend University Hospital

I began my career in the orthodontic department at Southend University Hospital in 2007 as a dental nurse. After several years of clinical experience, I transitioned into the laboratory and retrained as a dental technician. This pathway allowed me to combine clinical exposure with technical expertise, ultimately providing a broader perspective on patient care.

The department is a busy, consultant-led NHS unit, providing specialist orthodontic treatment and acting as a training centre for orthodontic specialist registrars. Our patient population predominantly consists of individuals with complex malocclusions and high index of orthodontic treatment need (IOTN) scores.

Much of our work involves multidisciplinary collaboration, including surgical cases, hypodontia management, and functional appliance therapy.

The department has a rich history, having been established in 1970 by the esteemed consultant orthodontist David Di Biase, whose contributions to orthodontics and the British Orthodontic Society (BOS) are widely recognised.

Alongside his laboratory technician Arthur Leavis, Di Biase developed the 'Southend clasp', a retentive component in removable appliances that remains a notable innovation in orthodontic practice. The legacy of the department and its historical contributions continue to influence our clinical and technical approach.

FAST-PACED AND UNPREDICTABLE

The laboratory team currently comprises four part-time technicians who work collaboratively to ensure timely and precise fabrication of orthodontic appliances.

My daily responsibilities begin officially at 7:30am, though I often arrive earlier to initiate work in advance of the clinical schedule. This early period is crucial for reviewing the laboratory work diary, managing administrative tasks, liaising with clinical staff, and resolving queries. Key responsibilities include ordering materials, approving staff annual leave, and ensuring compliance with mandatory training and hospital policies.

Organising these tasks efficiently is essential to minimise disruption to patient-facing clinics and maintain the smooth operation of the department.

Despite a structured day list, the workflow is inherently unpredictable. Emergencies, urgent consultant requests, or unplanned adjustments to appliances often require rapid response and flexibility. Core laboratory tasks include the production of pressure-formed retainers, study models, and a wide variety of fixed and removable appliances. Functional appliance therapy, particularly the fabrication of twin block appliances, constitutes a significant portion of our workload.

CHALLENGES AND OPPORTUNITIES

Technicians are also routinely called into clinical areas to review appliances in situ, provide guidance, and support clinical decision-making.

This integration between laboratory and clinical teams strengthens communication, ensures high standards of care, and facilitates real-time problem-solving.

The department currently operates using entirely analogue workflows, with no integrated digital technologies. Although the potential benefits of digital workflows are acknowledged – including improved efficiency, accuracy and reproducibility – budgetary constraints and broader pressures within the NHS have delayed their implementation. Despite these limitations, the team consistently demonstrates technical proficiency and adaptability, delivering high-quality patient care using traditional methods.

Working in this environment has offered a unique opportunity to develop a broad spectrum of skills. Technical expertise in appliance fabrication is complemented by leadership, organisational and administrative abilities. The multidisciplinary nature of the department encourages collaborative problem-solving and exposes technicians to complex clinical scenarios, fostering critical thinking and adaptability. Additionally, training registrars provides a platform for mentorship and teaching, reinforcing the importance of knowledge transfer and professional development.

On a personal level, my role has reinforced the value of early preparation, time management and proactive communication. The interplay between clinical urgency, technical precision and administrative responsibility highlights the multifaceted nature of working in a hospital-based orthodontic laboratory. Each day presents new challenges and learning opportunities, contributing to continuous professional growth.

HIGH STANDARDS OF CARE

In conclusion, working in the orthodontic department at Southend University Hospital offers a comprehensive and fulfilling professional experience. The combination of historical legacy, multidisciplinary collaboration, technical challenge, and educational responsibility ensures ongoing development for both clinical and laboratory staff.

While digital workflows remain a future aspiration, the department continues to deliver high standards of patient care and professional training, maintaining a culture of excellence that reflects the vision of its founding consultants.

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Communication and collaboration

Kristina Vaitelyte discusses the main challenges faced by dental technicians and dentists when adopting digital dentistry

KRISTINA VAITELYTE
CAD lead and dental educator, Avant Garde Laboratory

Dentistry is a team effort, requiring the skills and expertise of various individuals in order to deliver exceptional outcomes for each patient. The advent and advancement of digital solutions have elevated workflows and afforded a number of additional benefits for professionals and patients alike. Collaboration and communication between dentists and dental technicians are crucial for success.

As an internationally renowned digital dental technician, Kristina Vaitelyte is passionate about helping colleagues utilise the capabilities of the modern digital workflow.

She considers what she feels are the main challenges faced by dentists and dental technicians when introducing digital dentistry into their processes: 'Communication is key when migrating systems to digital software, but it can be difficult to adapt processes and behaviours that have been unchanged for what could be decades.

'Our job as technicians is to use the written and visual aids provided to create the right restoration for the patient – this requires a good level of detail from the clinician to ensure it translates effectively into a physical product. This communication must be strong throughout the "golden triangle", which consists of the dentist, the dental technician and the patient. All three need to be clear in what they require.

'We are treating people, not just solving problems, and being able to enhance someone's quality of life is very powerful.'

> DON'T BE AFRAID TO DIVE IN, TO GIVE THINGS A TRY AND TO LEARN FROM MISTAKES

AT THE CUTTING-EDGE

Kristina continues: 'Looking at implant dentistry more specifically, it's important to accept that this is a complex field that takes time to accomplish. Don't be afraid to dive in, to give things a try and to learn from mistakes.

'Digital dentistry is changing rapidly, so it's important to seek guidance from the equipment manufacturers and to work well with the rest of the dental team. It's a very exciting field, with the chance to increase the predictability of patient care, but it is a team sport! You need a village to complete a case.'

Given the speed of development in the digital arena, Kristina shares what she and clinicians she works with do to remain at the cutting-edge. 'It's crucial to research any technology before investing,' she says. 'This should include a conversation with the manufacturer and speaking to other users or pilot testers – they could save you time in making a decision and help you select the right product.

'Be wary of marketing and exciting headlines – they shouldn't be relied on alone and must be backed up by honest feedback from other technicians or clinicians.

'Despite the advancement in digital, it is fundamental for professionals to retain a proper understanding of analogue techniques. You need to know how procedures work in order to correctly apply them to cases. In addition, you need to be able to verify and sense-check digital plans and guides – none of us can rely on technology entirely; our skills and expertise are still crucial.'

ELEVATING CAPABILITIES

As the ADI technical representative – and the first female in the role at that – Kristina believes that getting involved with the association is also a must for professionals operating in the field.

'The ADI has had a major influence on my implant career since attending my first event. Exciting research and ideas were presented, and I was thrilled to connect with passionate professionals who eat, sleep and breathe dentistry – they were my kind of people.

'As the ADI technical representative I aim to advocate for my colleagues, for the importance of technical skill and for creating opportunities for fellow technicians to elevate their capabilities. It is a delight to be part of such a friendly and inclusive organisation that offers many great member benefits.

'No one is forgotten and it affords an excellent source of community.'

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DIFFERENT CONFIGURATION OPTIONS

Turning setbacks into growth

Eboni-Rose Williams explores how failure can become a powerful catalyst for growth

EBONI-ROSE WILLIAMS
Reconstructive science MA student, University Hospitals of Leicester

Failure. It is such a stigmatised word, typically full of self-doubt and disappointment.

It can often feel like the end of the world, especially when you're a student. But it is only after accepting it and stepping back that we often see failure for what it really is: a normal part of learning and growing.

I recently found myself in this position after having to resit an exam, despite months of revision and preparation. I felt devastated. However, the knowledge gaps that showed up needed to be addressed.

Getting through my course means everything to me, and helping people is my passion. I was not prepared to let this setback derail the hard work I put in or threaten a career that I love. Instead, I had to sit with the disappointment, pick myself up, seek guidance from my mentors, and find a way forward. I chose to write about this experience because I know I'm not alone; sharing the reality of learning is important, not just the curated highlights.

Here's what I learned about redefining failure – and why it might just be one of the most important tools for growth.

STEP ONE: ACCEPTANCE

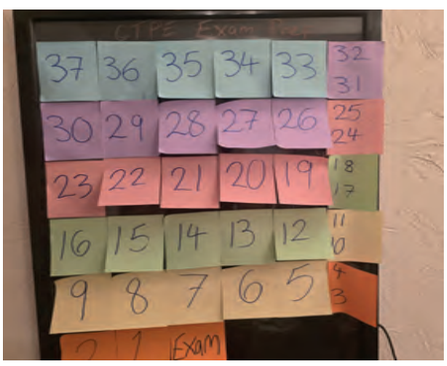
Acceptance does not mean giving up; it means being honest about the situation so you can move forward with clarity. The first step was allowing myself to feel the grief. Failing hurts. Acknowledging emotions and discussing worries with family, friends and mentors helped manage my stress and anxiety. The old saying 'a problem shared is a problem halved' really is true.

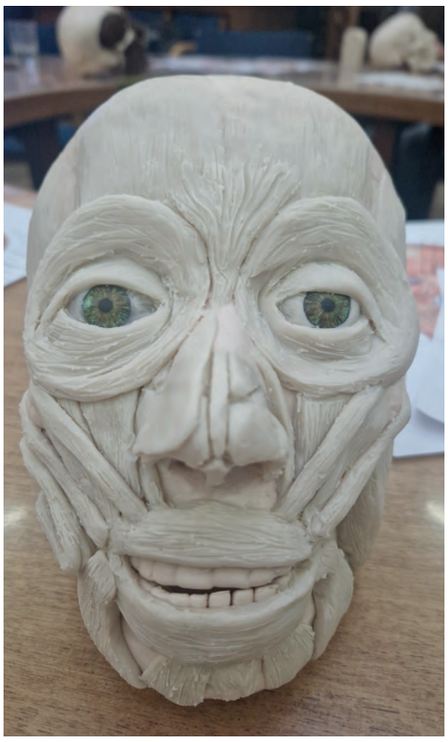
I am very grateful for their support. By acknowledging my emotions, instead of pretending everything was fine, I was able to release some of the pressure I was carrying. You are not a failure, and this setback does not define you. It is an opportunity to improve and learn.

STEP TWO: PLANNING

Once I got my resit date, it was go time. I put together a clear plan of action, breaking everything down into manageable steps.

Although I'm aware of the environmental and ethical issues surrounding artificial intelligence (AI), I found it incredibly useful as a revision tool. I used Chat GPT to help me create a study plan. I uploaded my module guide, explained the assessment style (written, verbal, patient-facing questions), and asked it to generate a week-by-week topic list. I even got it to write practice questions.





Furthermore, I used my lecturers' supportive feedback, which was an important starting point.

This gave me a structure, which I then shared with my mentors. They helped me bridge gaps in my knowledge and test me along the way. On top of that, I built a daily timetable and stuck to it.

One small but powerful motivator was my visual countdown. I covered my blackboard in post-it notes, each one representing a day until the exam. Peeling one off every evening was a small victory, a reminder that I was one step closer. It sounds simple, but it kept me motivated.

STEP THREE: ACTIVE RECALL

Luckily, a huge bulk of my revision was done already, so instead of just re-reading/re-writing my notes for the resit, I had to actively test myself.

That meant timed questions, practising active recall on whiteboards, and explaining techniques out loud to colleagues. The goal was to explain processes well in my own words until I was correct and more confident. My classmates and I did a revision session together that was helpful too, as we have different exposures due to being in different units.

Also, the revision session with our lecturer was incredibly invaluable, which I am very grateful for.

Retention is more important than the quantity of revision notes. Adjusting your old process of revising will result in improved results. I carried out timed questions, practised active recall with whiteboards, and spoke to colleagues to check my understanding, and repeated this process.

STEP FOUR: WELLBEING AND DISCIPLINE

One of the hardest parts of resitting was managing my energy. It is so easy to slip into burnout when the stakes feel high. I had to remind myself that rest and balance were not luxuries but essentials. It felt counterintuitive at first, my inner monologue believing 'I need to be studying every hour!' But actually, managing my time gave me the focus and energy I needed to keep going.

Prioritising sleep, going to the gym, and time in nature with my dog were significant for managing my stress on the run-up to the exam. This helped my study sessions be more focused and productive too. The weeks before my exam were spent mainly indoors revising, though!

LESSONS FOR MAXILLOFACIAL PROSTHETICS

Mistakes are not just something that happen in exams. In maxillofacial prosthetics, mistakes are inevitable while learning too.

In the first few months, while practising, I added the wrong catalyst to silicone. I felt confused and frustrated after taking lots of care when packing the prosthesis. However, after a trip to the canteen for lunch and back, I realised my mistake. I quickly learned to be more conscious not to repeat this.

FINAL THOUGHTS

I wanted to write this to bring light to the realities of studying; setbacks are inevitable and part of the rollercoaster of life. No path is linear.

How we deal with failure, redefine it and learn is so important. It forces us to pause, reflect, put a plan in place, lean on our support network, improve and get back up.

Mistakes are how we build the skills and confidence to get better.

In a field focused on precision and high attention to detail, it is an honour to be motivated to achieve the best outcomes for patients and to use as your 'why' to keep going.

To anyone facing their own setback right now, you've got this.

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I met my **younger self** for coffee...

Emily Pittard reflects on girlhood, turbulent school years, and inherited strength

EMILY PITTARD
CDT, clinical director and co-owner, Hive Dental Laboratory

I spot her straight away – grass-stained knees, hair doing its own thing, quietly humming to herself while drumming a rhythm on the table with two sugar sticks she's decided are drumsticks. She's ten, full throttle, and I slide a hot chocolate her way before I even sit down.

'You look like me,' she says, eyeing my latte art.

'Yep,' I laugh. 'Still loud. Still heavy-handed. Still forgetting to brush the mud off.' I thank her for never listening when someone said, 'You can't do that, you're a girl.' Remember the boy who said you'd always be weak? You showed him just how weak your punch was, and for some reason he still ran off crying. Your older self thoroughly approves.

I thank her for that unstoppable curiosity and for laughing too loudly

THE SCHOOL YEARS

School won't exactly be your highlight reel. You'll skip a few classes, sell the odd packet of cigarettes, and pick resistant materials while everyone else chooses cupcakes and sewing. You'll rock up late, earn a detention, and when they say you've got a problem with authority, you'll work your arse off until you are the authority.

She might feel behind next to her A-grade sister, but she'll keep sawing and soldering. Those hands will one day open The Hive with the woman she loves: 3D printers humming, a decon room shining, and not a single cigarette sale required.

'You mean I still get to use power tools?' she asks, eyes wide.

'Better ones,' I wink. 'And people pay you to do it.'

> Those hands will one day open The Hive with the woman she loves

KEEPING STRENGTH

I thank her for that unstoppable curiosity and for laughing too loudly.

I apologise for worrying so much about what's 'proper', because it turns out proper is overrated.

Before she leaves, I add quietly, 'Mum's grit is in you. Every late night, every bold idea – you'll feel her strength behind it all. That's the part you never lose.'

She wipes the chocolate moustache from her lip, swings her rucksack onto one shoulder and grins.

'Any last advice?' she asks.

'Yeah,' I say. 'Never believe anyone who says girls can't. And maybe... try not to punch the next kid who does.'

She flashes that big, slightly feral smile and heads off – same spark, same strength, and a good dose of mum's too. L

CONNECT WITH EMILY @cdtemily

Setting the gold standard

After winning Clinical Dental Technician of the Year at the Private Dentistry Awards, **Spencer Greening** reflects on his impact in the digital denture space

SPENCER GREENING
CDT and owner,
Smilecraft Studio

How and why did you become a clinical dental technician?
As a dental technician, I was working with dentists and I really enjoyed the experience of liaising with patients. I felt it elevated my work with my lab designs, and I found a passion for it.

I seem to find a connection with patients – I can get information out of them about what their perfect smile is, so I just thought it was a perfect marriage for me to be working in clinic and doing the lab work.

What inspired you to focus specifically on digital dentures, when few in the UK were doing it?
As a dental technician, the average age of a dental technician is 58-59 years in the UK, and there's 5,000 registered technicians. As a lab owner, I was wondering how we could scale our businesses up, and digital dentistry was the only way I could see to expand or grow our laboratories. So, I invested in that technology at an early infancy.

I had already done crown and bridge, but I had a passion for dentures, so I invested in scanners and lab software.

How did it feel to win Clinical Dental Technician of the Year at the Private Dentistry Awards 2025?
Winning Clinical Dental Technician of the Year was honestly just moving – the fact that I've actually been recognised for something I've done.

I feel I'm sort of stepping into new territory with everything regarding digital dentures, and for people to recognise that now just gives me great confidence going forwards and pushing the boundaries even further. I didn't expect to win!

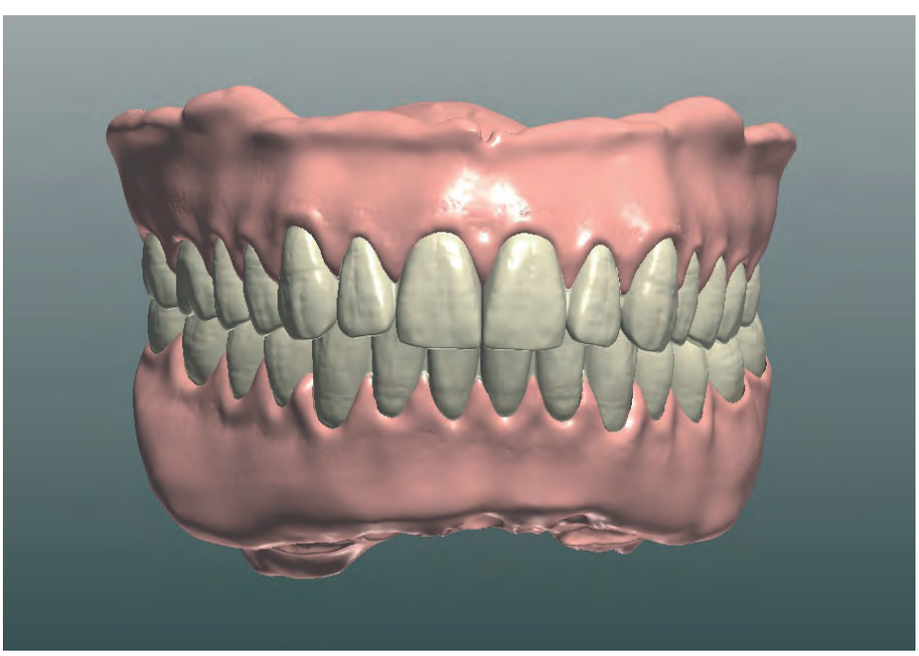
What do you think this award recognises most about your work?
It recognises that I'm pushing the boundaries with digital dentistry or digital dentures. So, it shows how possible it is in the workflows. And I think this will get into mainstream dentistry very quickly, although it is starting in its infancy at the moment, in the next couple of years it will take off.

Do you have a standout career moment so far?
My standout career moment is seeing digital dentures at the forefront. I feel like I'm spearheading that with technology education pieces, and it's just opening a lot of doors for me at the moment.

I've got new things in the pipeline for 2026, which have all come off the back of digital dentures and my exposure from winning this award and my Linkedin profiles. I've been offered quite a lot of KOL positions from global companies, just off the back of awards and the profiles that I'm putting out there. But I think a lot more is to come. This is just the tip of the iceberg.

> DIGITAL DENTISTRY IS COMING AND IT'S COMING FAST. MY ADVICE WOULD BE TO GET ON IT NOW AND BECOME A TRAINER

Is there one case during your career that has stayed with you and why?
I would say the cases that stay with you are your failure cases. It's when something hasn't quite gone right and you have sleepless nights but persevere and you get through them. At the end of that outcome, the



patient's been super happy and wore the dentures really successfully.

One of the biggest things I've noticed is when we fit the dentures, when we do the reviews after, it's not the smile, it's the sparkle in their eyes that actually blows you away. It's the change of confidence.

What's your top piece of advice for clinical dental technicians who are yet to adopt digital dentistry?

Digital dentistry is coming and it's coming fast. My advice would be to get on it now and become a trainer – start training dentists to scan. It will be another string to your bow, another revenue stream for you. And educating is great; passing that knowledge on is a great feeling.

What do you think the future of removable prosthetics looks like?

The removable prosthetics space is going to change massively over the next five to 10 years. Traditional local labs, as we know them today, will largely be replaced by global digital design centres, supported by local manufacturing hubs.

Design will no longer be constrained by geography – scans will be captured chairside, uploaded instantly, and designed by highly specialised teams anywhere in the world. The physical production will then happen locally through 3D printing or milling, dramatically reducing turnaround times and costs.

Digital dentures will be the biggest disruptor. They remove much of the manual, artisan dependency that traditional labs rely on. Once the clinical data is captured correctly, the workflow becomes repeatable, scalable, and far more predictable.

This will challenge the conventional lab model, where outcomes are heavily dependent on individual technicians and physical workflows.

That doesn't mean craftsmanship disappears – it becomes digital craftsmanship. The skill set shifts from wax and acrylic to data capture, digital design, occlusion strategy, and material science.

In short, removable prosthetics will move from a local, manual, labour-heavy model to a global, digital, data-driven ecosystem.

Labs that embrace digital dentures will scale and thrive. Those that don't will struggle to survive.

This change isn't coming – it's already happening.

Is your lab successful or just overstretched?

Matt Everatt asks lab owners to consider whether their hard work is truly paying off and suggests how to ensure it does

MATT EVERATT
Editor-in-chief, *Laboratory* and strategic technical consultant, S4S

In the fast-paced dental lab world, it's easy to fall into the trap of being constantly busy: cases coming in, 3D printers whirring, acrylic dust flying everywhere, phones ringing. But at the end of the month, the profits just don't reflect the workload. Does that sound familiar?

If so, you may have joined the ranks of the 'busy fools' – those working flat out, often for minimal return, in a relentless race to be the cheapest, or worse, forced into it by clients who value price over quality.

WHAT IS A BUSY FOOL?

The term 'busy fool' refers to someone who is always occupied but rarely productive in a meaningful or profitable way.

When I first heard this term used at a business networking event, it struck a chord. In business, it's a dangerous place to be. Peter Drucker once said: 'There is nothing so useless as doing efficiently that which should not be done at all.' This cuts to the heart of the issue for many dental labs – churning out low-margin work under pressure, trying to compete on price alone while profitability and sustainability suffer.

THE RACE TO THE BOTTOM

It's too easy to fall into a race to the bottom, undercutting others or being squeezed by dentists who shop around for the lowest price, sometimes slipping into the downward race inadvertently through fear of being quiet. On the surface, this keeps the workflow coming, but at what cost? Increased material costs, skilled labour and rising overheads all eat into already slim margins. Before long, the lab is a hive of activity but there's little left after the bills and wages are paid.

Competing solely on price often leads to compromises: in quality, in service, in staff wellbeing. It's a false economy. Reworks and remakes climb, missed appointments, reputations suffer, and the burnout rate rises. Meanwhile, labs that position themselves on value, consistency and service retain better clients and healthier profit margins.

> Being busy is not the same as being successful

VALUE OVER VOLUME

Warren Buffett nailed it when he said: 'Price is what you pay. Value is what you get.' Too often, labs are forced into offering premium-quality work at rock-bottom prices, devaluing not just their own service but the profession as a whole.

Instead of chasing volume, labs should focus on differentiation. Michael Porter, renowned business strategist, argued: 'Competing to be the best is an illusion. Competing to be unique is the key to success.' That could mean specialising in a niche area, offering exceptional turnaround times, or leveraging digital workflows to increase efficiency and justify a premium price.

WHO'S REALLY DRIVING YOUR PRICES?

A key question for lab owners is this: are you setting your prices, or are your clients setting them for you? Too many labs fall into the habit of reacting, lowering prices to keep clients happy, accepting unfavourable terms, and absorbing increasing costs without passing them on.

There's power in knowing your worth. Clients who only care about cost are rarely loyal; those who value service, reliability and long-term partnerships are willing to pay for them. Educating your clients on the value you provide and being willing to walk away from unprofitable accounts is vital.

FINAL THOUGHTS: PROFIT OR PERISH

Dental labs aren't charities. They're businesses that deserve to make a profit. Being busy is not the same as being successful. Take a hard look at your workload, your margins, and your clients. Are you making money or just staying afloat? Are you growing or running faster to stand still?

It's time for the dental lab sector to stop competing to be the cheapest and start striving to be the best at delivering value. Otherwise, we're not just working hard – we're working hard for nothing.

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VOCO THE DENTALISTS

Lab leadership in an AI era

Eleanor Pittard talks automation, people and the new technician skill set

ELEANOR PITTARD
Co-director and owner,
Hive Dental Laboratory

If you're a dental lab and you think AI is just some sci-fi buzzword, put the scepticism away. Artificial intelligence (AI) is already sneaking into your workbench (or soon will), and whether you like it or not, it's forcing a rethink of what being a 'technician' even means.

According to a 2025 forecast for the UK dental-device and lab equipment market, uptake of CAD/CAM systems, 3D printing and digital imaging is accelerating fast – and labs investing in digital workflows are being touted as the future.

By 2030, many labs will be neither dusty low-lit workshops nor glass-fronted showrooms – they'll be hybrid digital-studios. As diagnostics shift more digital, technicians will spend less time grinding stone and more time polishing pixels (and polishing actual ceramics when it really counts).

WHAT AI CAN (AND CAN'T) DO

Modern AI-enabled CAD/CAM platforms already assist with margin detection, occlusion design, nesting algorithms, and even suggest optimal tooth morphology based on prior data.

Sounds like a dream? Well... yes, but there are caveats. As one recent UK-industry article put it: digital doesn't mean automatic. Even with the best AI, restorations still require craftsmanship, fine-tuned shading, occlusion nuance, and things that machines simply cannot judge with aesthetic subtlety.

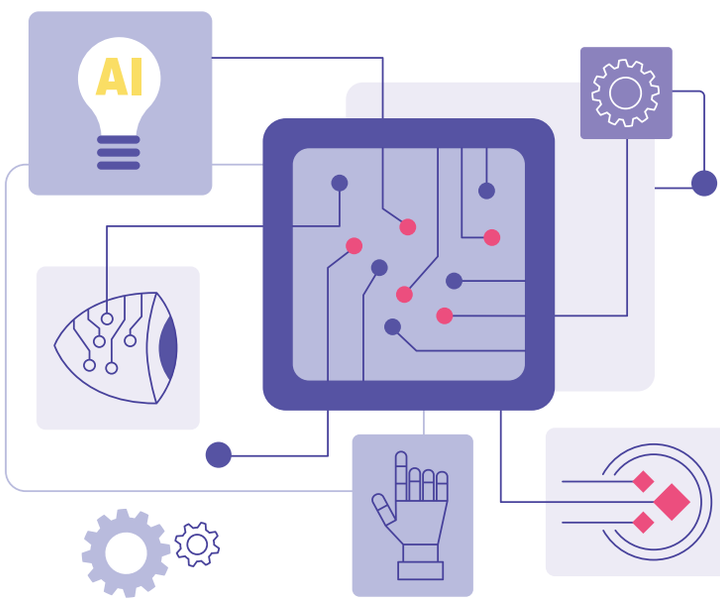
In short: AI will handle the boring, repetitive bits, freeing up human technicians to do what they do best: artistry, final finish, problem-solving and quality control.

THE NEW 'TECHNICIAN 2.0' JOB DESCRIPTION

So, what kind of people will labs want in 2027–2035? Spoiler: not just people who can wax-up like it's 1995. The future lab will likely prioritise:

- Technicians comfortable with software, dual-screen CAD suites and cloud workflows
- People who can communicate clearly with clinics, interpret digital scans correctly, and explain limitations (shade matching, material constraints, design compromises)
- Hybrid skills: artistry, tech sense, client-communication and project management.

The labs that will really stand out won't just make great restorations. They'll act like partners who help clinicians solve problems, improve workflows and communicate more clearly. Quality matters, but insight, guidance and collaboration matter just as much.



WHY IT PAYS TO INVEST IN PEOPLE (OVER MACHINES)

Here's the kicker: AI and automation will drive up volume and consistency, but they'll also raise expectations. Dentists won't settle for 'close enough'. They'll expect perfect fits, consistent shade-matching, quick turnarounds, and perhaps even predictive support. For instance, software could suggest: 'This patient may be better suited to zirconia rather than PFM due to heavy occlusion and long-span load.'

If you have a well-trained, communicative, digitally fluent technician, that's a competitive edge. If not... well, you're just another noisy milling machine.

BRINGING A BIT OF SOUL BACK INTO DENTISTRY

At heart, dentistry is human. Machines don't smile. Machines don't notice when a restoration shade is just slightly off. Machines don't ask a shy patient how their weekend was while fitting a crown.

AI is a co-pilot, not a replacement. The labs that succeed will be led by humans who know tech, but value craftsmanship, communication and care.

So, if you're a lab owner reading this: maybe it's time to start thinking about who you want on your team in 2030. Because by then, your 'best technician' might be someone who never picks up a bur – but never misses a nuance.

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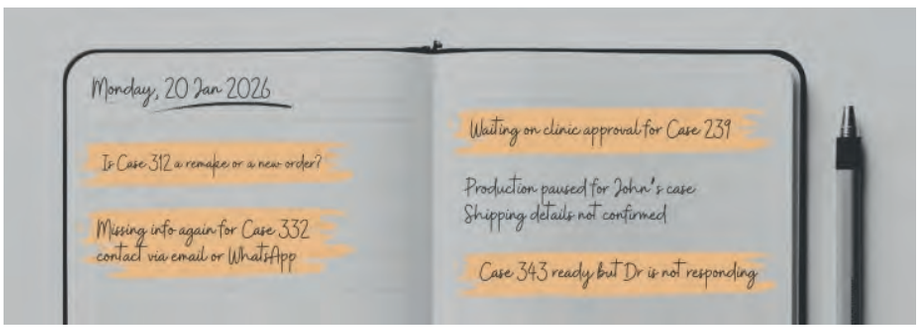
Dental work by Nasser ShadeMan

COMPANY HIGHLIGHT

The quiet tax on every case

Vikas Prasanna reveals the hidden cost of context switching in labs

VIKAS PRASANNA
Co-founder and director,
Smile Genius Dental



There is a cost in labs that never shows up on an invoice. It is paid in small pieces, all day long.

One owner described it to me as death by a thousand clicks.

Blunt, but accurate.

The problem is not that any single scanner or LMS (learning management system) portal is terrible. The problem is that your team is forced to context switch. Context switching is where attention leaks, and attention leaks are where mistakes are born.

It is also why it can feel like you are always hiring or being overworked, but never catching up. When intake is messy, adding headcount often just adds more people doing the same stitching work. Fix the front door, and the same team can handle more cases with less noise.

WHAT INTAKE LOOKS LIKE IN REAL LIFE TODAY

Open portal. Download scan. Search email. Ask for shade photos. Check a message thread. Confirm the due date. Realise it is a remake. Try to find the original. Ask the clinic which one to use. Wait. Restart.

Each step is a small tax on attention. It is not dramatic, but it is constant.

A simple way to sense the scale is to do the math yourself. If you lose just four minutes per case chasing missing info, and you process 30 cases a day, that is 120 minutes a day, ie two hours. Over a five-day week, that is 10 hours of skilled time spent on detective work. If your volume is higher, or your cases are more complex, you can imagine how quickly that number moves.

This is why the scanner conversation sometimes misses the point. Better scanners did not remove admin. They multiplied channels. What labs need is not another place to check – they need a calm front door for every case.

When labs start thinking about how to bring order to intake, it is rarely framed as a 'product' problem. It is usually just a feeling that too many things are coming in from too many places. The idea itself is unremarkable – almost boring, and that is why it works: give the lab one place to properly handle intake.

Proper intake does three things:

1. It gathers. Every incoming file, note and message lands into one case record. That includes scans, prescriptions, photos and the remake context. The case record becomes the single source of truth for that patient
2. It checks. Each lab has its own rules. What details must be present? What files are required? What is acceptable for a remake? Intake should catch gaps before production starts, not after a technician has already spent time interpreting the request
3. It closes the loop. When something is missing, it is requested consistently, so the lab is not rewriting the same email 20 times a day. This is not about policing clinics. It is about removing ambiguity so everyone can move faster, with fewer blame games.

This is also where relationships improve.

> FIX THE FRONT DOOR, AND THE SAME TEAM CAN HANDLE MORE CASES WITH LESS NOISE

Clinics do not mind being asked for missing details. They mind being asked late, after the patient is in the chair.

A calmer intake means clearer expectations, fewer remakes due to misunderstandings, and fewer awkward calls.

WORKS WITH WHAT YOU ALREADY USE

None of this requires ripping out what already works. Most labs have invested years into their systems and workflows. The right approach is a blended addition: a layer that works alongside your LMS, CAD workflow, and production setup.

That is the direction we are building towards with Smile Genius. We are opening early access for a small number of UK labs. Founder pricing will be locked in for the first group, and one participating lab will get Smile Genius free for life.

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COMPANY HIGHLIGHT

Graphene in dentistry: the G-Cam advantage

As digital dentistry evolves, **Ornella Tosta Villino** discusses G-Cam, a graphene-reinforced CAD/CAM material, and its practical benefits for everyday dental laboratory workflows

ORNELLA TOSTA VILLINO
Technical support manager, Graphenano Dental

Tell us about your background in dentistry
My career has allowed me to perform functions in multiple departments within laboratories and through my dedication and passion for the field, I've made it a priority to stay in constant training. I have a strong interest in keeping up-to-date with the latest advancements and technology, which led me to the world of CAD/CAM.

In collaboration with Graphenano Dental, I've been able to help provide a complete system that spans from design to machining and finishing of dental prostheses. One of the most exciting developments has been working with innovative materials like G-Cam, a biopolymer reinforced with graphene.

UK dental technicians are increasingly expected to advise clinicians on material choice. When does G-Cam outperform traditional options, and when would you recommend an alternative?
G-Cam can be used in a wide range of treatments when the manufacturer's design parameters are followed. If one indication stands out, it is implant-supported restorations, where G-Cam's mechanical properties, low weight, and ability to absorb masticatory forces similarly to natural teeth make it particularly advantageous.

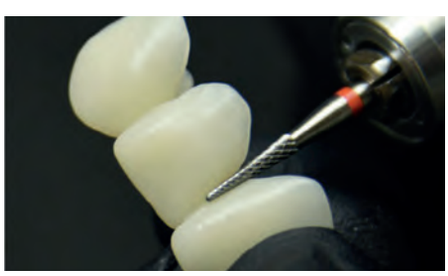
How does G-Cam respond to typical lab processes such as milling strategies, bur selection, polishing and staining, compared with materials technicians already use day-to-day?
One of G-Cam's key competitive advantages is its milling efficiency. It uses a dedicated milling strategy available in widely used software such as Millbox. However, the PMMA/composite milling strategy can also be used, without the need for specialised tools. Milling can be performed dry or wet. Workflow efficiency is further improved as no thermal processes are required, and once milled, restorations can be manually polished or characterised with standard composites or stains, without any additional investment.

Sustainability and material safety are growing priorities. Are there any health, environmental or regulatory considerations technicians should be aware of when working with graphene-based materials?
G-Cam is a fully biocompatible dental material, thoroughly tested in accordance with current international medical and dental regulations. The graphene is completely embedded within the polymer matrix, making it non-releasing, non-cytotoxic and biologically inert under normal laboratory and clinical conditions.

From an environmental and health perspective, G-Cam presents no additional risks compared to conventional dental polymers and can be handled, milled, finished and disposed of in the same way.

Its regulatory classification remains unchanged, and no special precautions beyond standard laboratory safety are required.

Longevity is critical due to the cost of remakes. What do we know about G-Cam's wear resistance, fracture behaviour and long-term fatigue – and where is the evidence strongest or still emerging?
G-Cam is indicated for definitive prosthetic restorations. Clinically, the oldest documented cases have been in function for six years, with no significant changes in material properties. Scientific evidence supporting its longevity includes thermocycling and ethanol degradation studies, all showing favourable results in terms of durability, wear resistance and fatigue behaviour.



If you could give UK dental technicians one piece of advice about adopting materials like G-Cam without disrupting productivity or quality, what would it be?
Keep an open mind and set aside preconceptions. Innovative materials are designed to improve workflows and patient outcomes, not to complicate laboratory processes.

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COMPANY HIGHLIGHT

Transforming workflows in the dental lab

James Balmforth describes the current workflows for scanning dental objects available in the lab, the challenges these present, and his experience using the Cubit360

JAMES BALMFORTH
Dental technician, Nexus Dental Laboratory

For many years, our bench-top lab scanner has dictated the pace of our work. Once the object is placed on the table for scanning, it cannot be disturbed. This means that a new scan must begin each time another element is captured. This is very inconvenient. The stop-start movements, the rotating table, the waiting and the constant interruptions created a workflow that felt clunky, slow and exhausting. It worked – but it never worked with us.

Typical model scans are possible with automated scans that effectively capture data. But there are usually further scans required. This takes up valuable time as we must constantly reposition the model.

It takes a great deal of time and patience to achieve something resembling accuracy when scanning physical impressions using our current lab scanners. Endless stitching and multiple scans are required to capture an impression in this way – there are simply too many inaccessible areas. This process misses a lot of key areas – undercuts and particularly narrow spaces, such as incisal edges – and is, therefore, unreliable and inaccurate.

Scanning dentures with traditional lab scanners presents unique challenges, especially those with attachments. The buccal flange of the denture can be so deep that the scanner cannot capture the data. Again, this leads to inaccuracy and complicated workflows.

REACHING THE AREAS OTHER SCANNERS MISS

The first time I used the Cubit360, everything changed. It is certainly unique compared to other scanners and felt very intuitive. Even without experience, I could tell instantly how much time was being saved. What would normally take minutes of rotation and repositioning was done in seconds. Quite honestly, it felt like scanning in a tenth of the time.

Cubit360 completely transformed the scanning process. I was able to capture accurate data in areas that are traditionally hard to reach – undercuts, interproximal areas, and analogue implant sites.

I was initially sceptical about the possibility of scanning impressions using the Cubit360, based on my experience with our previous scanner. I was delighted with this improvement. It allowed me to get clean and usable data straight from the impression tray – this opens up a world of possibilities for dental professionals everywhere. For example, by scanning impressions directly, we can skip the casting stages, using an accurate scan of the impression to jump directly into fully digital design.

Cubit360's auto-alignment feature requires just one simple tertiary scan. With just a five second sweep, our previous scans are brought into relation – such as bite scans or a denture in situ scan.

ANYONE CAN PICK IT UP INTUITIVELY

The Cubit360 will save dental labs so much time going forward – both due to its quick scan capture time, and its ease of use. Any member of the lab team can master this technology – even the newest dental technician in the lab can take a quick scan and get back to work. Most importantly, Cubit360 has the potential to remove so many analogue stages from our workflow. Simply scan the impression, process the case from the inverted scan, and move straight into design. All those manual stages that used to slow us down have suddenly disappeared.

RIPPLE EFFECT OUTSIDE THE LAB

The Cubit360 has a big impact on the wider profession, with dentists able to implement it within the clinic too. As an example, clinicians can simply take an impression, take a quick scan, and send it directly to the lab. This means that the lab can flag any issues with the impression before the patient has even left the practice. This further improves the speed of patients' care by eliminating postage, reducing retakes, and enabling quicker turnarounds.

For us as technicians, this means less physical labour and fewer bottlenecks. For clinicians, it means cleaner, faster and more predictable results. And, for patients, it means an experience that finally reflects what modern dentistry should be.

With the Cubit360, digital isn't just an option – it becomes the natural default.

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COMPANY HIGHLIGHT

Beyond products, towards people

Zirkonzahn looks back at its client event in South Tyrol and the bond that makes clients call the company 'a partner'

Across Europe and beyond, dental technicians and dentists over the years have come to see the Zirkonzahn company not just as a supplier, but as a true partner – one that listens, innovates and grows alongside them.

For more than two decades, the Italian company's founder, Enrico Steger, and his son, Julian Steger, have cultivated a deep sense of partnership at the heart of their work.

VALUABLE BOND

To continue reinforcing this valued bond, Zirkonzahn regularly opens its doors to clients and interested professionals at its headquarters. Last September, the company hosted a major client event, welcoming 31 participants from 21 laboratories across the UK, Scandinavia and Greece.

During the two-day event, participants were guided through the company headquarters and production facilities in the heart of the Alps. They observed the machines in action and attended a presentation on the latest workflow innovations developed by Zirkonzahn's in-house research and development team. The in-house approach is something clients value greatly. As one participant explained: 'When we choose a partner or supplier in the dental field, there are several critical factors to consider. With Zirkonzahn, it was an easy choice – their staff are well-trained, deliveries across Europe are fast, and most importantly, they build their own products. When you make it yourself, you have the answers.'

Zirkonzahn's continuous innovation – from pioneering materials to the newest CAD/CAM systems – is guided by a commitment to staying true to its roots. As another attendee put it: 'They're constantly innovating and looking into the future, but they still remain true to who they are and where they came from.'

HUMAN CONNECTION

The event was not only an opportunity to exchange knowledge and explore the latest innovations – it was also a chance to share the South Tyrolean culture that inspires and shapes Zirkonzahn's philosophy every day. Staff and guests enjoyed local excursions and convivial moments, exchanging perspectives and personal experiences.

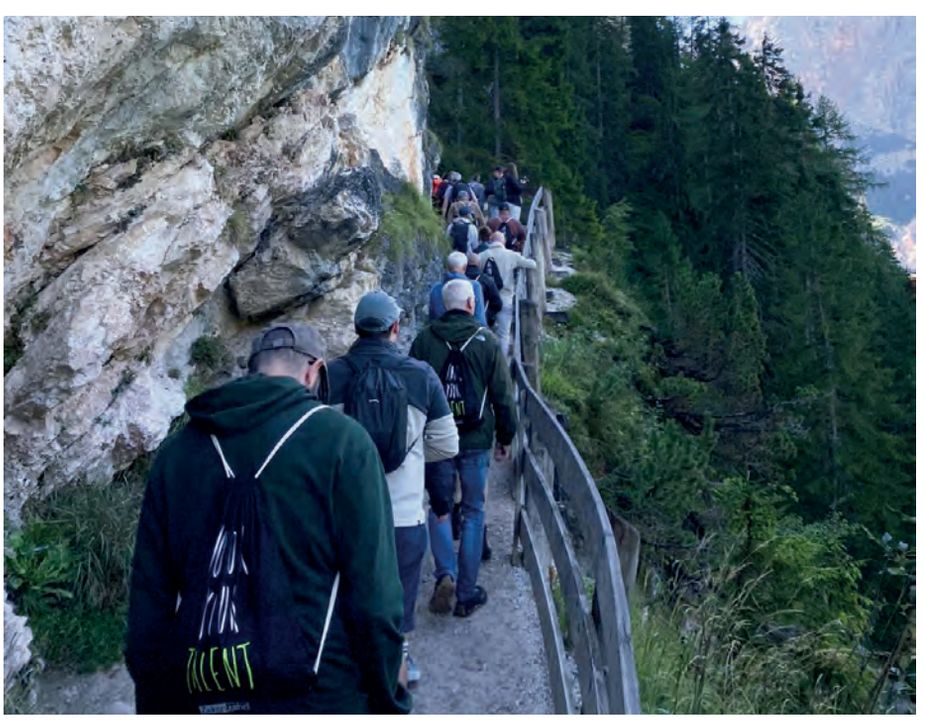
What another participant highlighted is that Zirkonzahn's approach goes beyond products – it's about people. 'We've been working with them since 2008,' one attendee shared. 'Our experience has always been excellent – we can get answers to any question, whether it's about technology, design or equipment. They are always there to support us.'

At the event it quickly became apparent that innovation isn't only about advanced machinery – it's about empowering customers to work with greater precision, creativity and confidence. Indeed, as another long-time customer expressed: 'Zirkonzahn has a welcoming atmosphere where you feel genuinely acknowledged and well cared for. Whenever you need help or have a question about software or hardware, you just pick up the phone or send an email – someone is always there to assist.'

What this event ultimately highlighted is that at Zirkonzahn, innovation and human connection are inseparable. Advanced technology is important – but it's the trust, collaboration and shared passion with customers that truly drive progress. When people work together, growth follows. And that is why, for so many, Zirkonzahn isn't just a company – it's a partner.

FOR MORE INFORMATION

Watch the video with participant interviews on Zirkonzahn's Facebook or Instagram pages



How zirconium dioxide technology is transforming prosthetics

Patric Freudenthal discusses how advances in zirconium dioxide technology are reshaping prosthetic production and the choices facing modern dental labs

PATRIC FREUDENTHAL
Dental technician,
Unique Dental

In recent years, the production of prosthetics using zirconium dioxide has become more accessible – marking a notable shift from the difficulties once associated with the process. Technological advancements have transformed the landscape, introducing a broad spectrum of machinery, materials and techniques that support both fully customised and large-scale industrial manufacturing.

Today, the challenge lies not in the limitations of technology, but in navigating the vast array of available options. The increasingly globalised dental market has heightened the need to strike a balance between cost and quality

So, how do we make the right choices?

KEY FACTORS

Naturally, the specific needs and decisions will vary depending on the dental laboratory itself. Labs can range from small operations with just one or two technicians to large-scale enterprises employing thousands and operating their own milling centres. Each setup comes with its own set of priorities and possibilities.

Is the lab dedicated to achieving the highest level of aesthetic excellence, or does it focus more on producing standardised, efficient solutions? These strategic choices shape everything from equipment investments to material selection.

And, of course, a key factor that cannot be overlooked is market dynamics – what price point will your market realistically support?

In the early days of setting up my previous dental lab, my primary focus was on aesthetics and quality. For nearly a decade, this approach served me well – until I was faced with a harsh reality: I needed to start generating a sustainable profit. Around that same time, the industry experienced a major shift with the rise of in-house production technologies.

This turning point forced me to conduct a thorough profitability analysis to manage existing debts and ensure future revenue. I became deeply invested in understanding the true cost of materials, operational expenses, and the financial implications of ongoing investments – especially given the rapid pace of innovation in our field.

PRODUCTION ANALYSIS

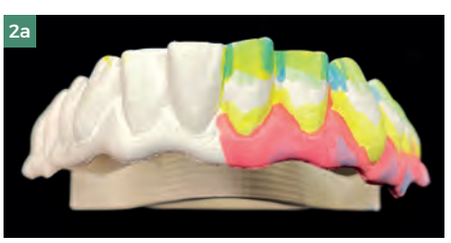
Two key questions guided my analysis: what is the cost per finished workpiece? How much time does it take to produce each one?

A simple way to calculate this is by using a basic cost breakdown chart. Input your annual expenses and divide them by the number of units produced per year to determine the average cost per production stage.

Inventory management also plays a significant role. The scale of your repository can greatly affect your overhead. In my experience, small dental labs can achieve better aesthetics and cost-efficiency by milling white zirconia and individually colouring each crown, creating a more sustainable and streamlined workflow. Why? Because not every workpiece requires the same shade, and with 16 Vita dentine shades available, flexibility is key.

As the lab expands and daily production reaches approximately 10-20 elements of the same colour, transitioning to multilayered blanks could offer greater efficiency and effectiveness. Aesthetic quality can still be preserved by dyeing the multilayered blanks using a compact colouring kit. While this approach may raise inventory costs, the time required for each production stage is reduced.


1


2a


2b


2c


2d

DYEING MULTILAYERED ZIRCONIA

In this process, a small selection of colours is typically required: grey and blue for the enamel, orange and yellow for cervical areas, and pink or red for the gingiva. Depending on the satisfaction with the base colour of the multilayered zirconia, some dentine colour may be used for adjustments. A slight colouring of the multilayered zirconia with small amounts of blue, grey, and pink can be completed within a minute or two, providing an excellent foundation for the microlayering technique (Figures 1, 2a and 2b). Subsequently, additional time and effort are invested in further characterisation through painting and micro-layering (Figures 2c and 2d).

In contrast, the bridge on the right was milled from white zirconia, with all colour effects achieved through layered painting. While this method takes more time compared to using a multilayer disk – about five to 10 minutes, depending on the complexity of the final look – the aesthetic outcome is distinct and compelling. It also simplifies the workflow, requiring only two main steps: painting and micro-layering.

The overall time difference between these techniques is minimal. Both bridges require the same amount of time for milling, shaping and cleaning. The key distinction lies in where you choose to invest your time – early in the process with a multilayer disk or later with more detailed painting. This choice ultimately depends on the desired aesthetic result.

DYEING WHITE ZIRCONIA

To achieve a specific colour, you can either apply multiple layers of paint or dip the product for varying durations. These two techniques can also be combined for more nuanced results. The speed at which this process can be completed depends entirely on the desired outcome.

PAINTING

If the product should be nearly finished and only lightly glazed afterwards, the process demands more time and a higher level of skill from the person performing the work. On the other hand, if the goal is simply to establish a soft base colour tone, the process is easily standardised for efficiency (Figures 3a to 3e).

It's important to note, however, that the additional painting or glazing that will be needed later may take longer.

DIPPING

If there will be additional layering on the crown – on the entire surface or just buccally – applying a soft base colour tone is also an option. For this, the dipping (or immersion) technique is commonly used (Figure 4).

As with other approaches, the objects must first be ground, cleaned and properly prepared for staining. It's also important to vary the saturation in the incisal area to avoid a uniform colour throughout. This ensures a natural gradient from the cervical to the incisal region, if required. This technique is particularly suited for large-scale production where consistent colour quality is essential.

CONCLUSION

At our dental laboratory, we have established a streamlined and efficient workflow for zirconia-based restorations. With a daily output between 100-150 units a day, our production demands both speed and consistency without compromising on aesthetic quality.

Most of our restorations are milled from multilayer zirconia, followed by a straightforward individual dyeing process. This approach has proven to be the most time-efficient while still delivering high-quality results (Figure 5).

In select cases, where specific shades are required, a full-surface staining is carried out on white zirconia. This method necessitates a comprehensive system of effect dyes tailored for incisal and cervical regions, as well as gingival areas. Additionally, access to a basic palette of dentine shades is essential for fine-tuning and achieving optimal colour matching.

Fortunately, advanced dye systems are now available on the market. These systems typically include dentine shades categorised into A, B, C and D groups, facilitating intuitive and precise application. Incisal effects are supported by blue and grey tones, while pink hues are used for gingival areas – providing all the necessary components for effective multilayer zirconia staining.

Given the scale of our production, efficiency and safety are critical. To optimise your own production process, consider the following steps:

- Assess your production volume
- Calculate the cost per unit
- Select appropriate zirconia blanks and colouring liquids based on your workflow and aesthetic requirements.

In this way, unnecessary production delays are avoided, product quality is maintained, and profit margins are preserved.

Cases used GC Initial IQ Coloring Liquids and One Sqin System (Lustre Pastes + Sqin)

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- Duration: 09:00 – 17:00 (arrival from 08:30)
- CPD: seven hours
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Enhanced CPD

LAB/WINTER/VELI/PAGE 10

1. What was the main purpose of processing CT data into a digital mandible model?

- ☐ a. To manufacture implant-grade titanium plates
- ☐ b. To generate printable anatomical models for planning
- ☐ c. To design postoperative occlusal wafers
- ☐ d. To replace surgical consultation

2. What issue occurred when printing the mandibular fracture model, and how was it managed?

- ☐ a. Model fragility reinforced with cold-cure acrylic
- ☐ b. Incorrect anatomy corrected digitally
- ☐ c. Poor scan quality required repeat imaging
- ☐ d. Occlusion errors corrected intraoperatively

3. Why are smaller UK laboratories restricted from manufacturing patient-specific titanium implants?

- ☐ a. Titanium is unsuitable for small-scale production
- ☐ b. NHS-only manufacturing rules
- ☐ c. Regulatory requirements for CE and ISO certification
- ☐ d. Limitations of digital workflows

4. Why are physical anatomical models still considered essential despite advanced digital planning? They...

- ☐ a. Eliminate the need for CT imaging
- ☐ b. Reveal fragility, undercuts, asymmetry, and natural irregularities not always evident digitally
- ☐ c. Allow implant manufacture without regulation
- ☐ d. Replace intraoperative adjustments

LAB/WINTER/GALATANU/PAGE 14

1. What was the primary reason for choosing an additive wax-up rather than a reductive wax-up in this case?

- ☐ a. To increase ceramic thickness for strength
- ☐ b. To allow reduction guides to be fabricated
- ☐ c. To enable a realistic mock-up without modifying natural teeth
- ☐ d. To simplify the laboratory fabrication process

2. Why was preserving enamel during tooth preparation considered especially important in this case?

- ☐ a. To reduce the risk of postoperative sensitivity only
- ☐ b. To allow for faster preparation by the clinician
- ☐ c. To eliminate the need for temporaries
- ☐ d. To improve bonding, longevity and colour stability of the veneers

3. How was brightness controlled in the final veneers while maintaining a natural appearance?

- ☐ a. By selecting a lighter core shade and increasing opacity
- ☐ b. By controlling value through enamel thickness rather than core shade
- ☐ c. By increasing veneer thickness uniformly
- ☐ d. By polishing the surface to a high gloss only

4. What was the main purpose of applying subtle characterisation to the veneers?

- ☐ a. To mask preparation margins
- ☐ b. To create a highly textured, matte surface
- ☐ c. To enhance vitality while maintaining a bright, natural look
- ☐ d. To darken the incisal third for contrast

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