issn 1616-7390 • Vol. 11 • Issue 2/2020

2/20

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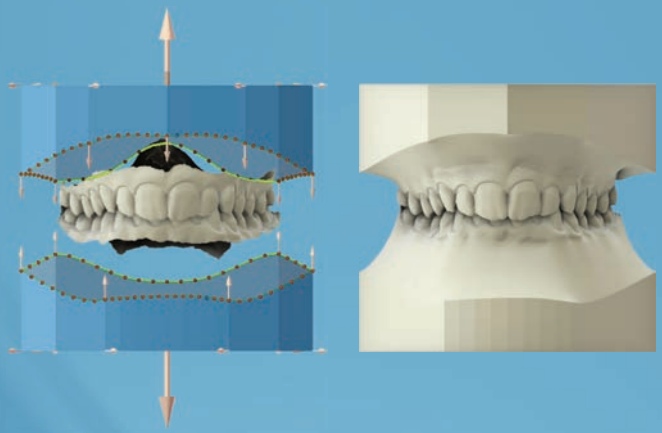

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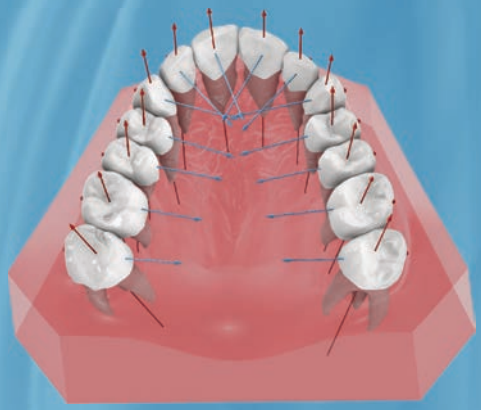

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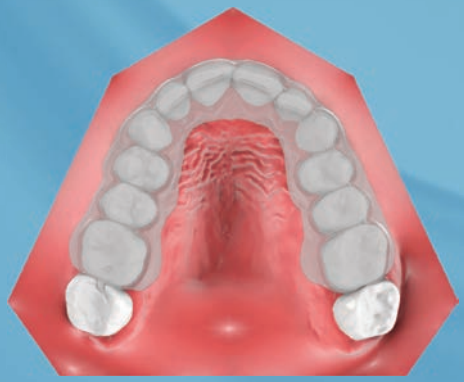

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Magda Wojtkiewicz

Managing Editor

The world has changed

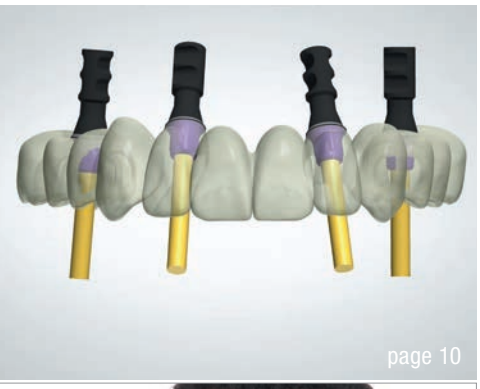
The COVID-19 pandemic has changed the world, and this change goes far beyond the obligation to wear masks and the excessive use of sanitisers in public spaces. The new reality requires the redesign of the micro- and macroeconomy, rethinking of marketing strategies, and adaption of social activities and habits. This, of course, also applies to dental offices and laboratories.

All major international congresses and exhibitions, including specialty-specific events, have been cancelled this year, and some have been postponed to 2022. Does this mean that there are no new concepts, technologies, materials or products to launch? Of course not! Progress is being made continually; it has just continued its shift to the digital arena at a faster pace than before the global pandemic.

Many dental events have been held virtually and attracted thousands of dental professionals worldwide. Others have taken the form of hybrid meetings, combining on-site and online features, and have been very successful. Some dental companies have built virtual exhibition stands with video product presentations, webinars and the possibility of live one-to-one chats with their representatives. All these efforts have been aimed at keeping dentists and dental technicians updated on the latest developments in the field.

It will probably take some time before we fully understand the impact of the COVID-19 pandemic on the dental industry, but what we have learned so far has made it clear that the ability to adapt to change is key not only to survival but also to success and development. There is always something to learn, and even in severe economic downturns and recessions, some businesses are able to gain advantage and grow. The ability to adapt is crucial; it has become necessary to shift our attitudes and develop our capacity to find opportunities in the new reality.

Magda Wojtkiewicz
Managing Editor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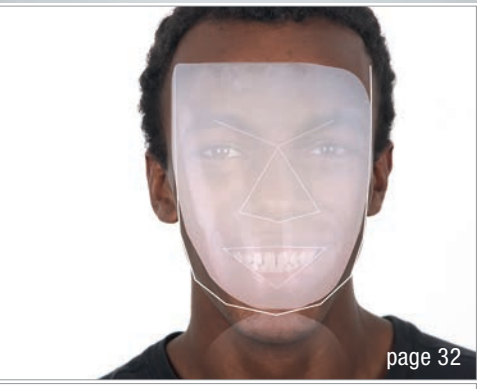
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THE DENTALISTS

"Dental laboratories will be left in an extremely vulnerable position"

By Iveta Ramonaite, Dental Tribune International

Close cooperation between dentists and dental technicians generates synergy and helps to ensure high-quality prosthetic dentistry. However, the COVID-19 pandemic has diminished the confidence of many professionals working in the dental field and has created much uncertainty about the future of dental technology. In this interview, Dental Tribune International discussed the topic with Barry Tivey, an accomplished dental technician and owner of Ceramic Techniques, a dental laboratory that produces crowns, bridges, implants and aesthetic restorations.

Mr Tivey, could you tell us something about yourself and your background in dentistry?
I completed my apprenticeship over 35 years ago in a crown and bridge laboratory. On leaving school, I joined the civil service; however, I used to watch my future father-in-law in his laboratory and was fascinated by the intricacies and artistry of the profession. After much persuasion, he agreed to train me, and I enrolled on a day-release course at a local college. He was an old-school technician, and when I presented most of my early work to him, it was greeted with a shake of the head and a trip to the waste bin. I took over the running of the laboratory 25 years ago, and since then, we have introduced implants and digital technology into our portfolio of services.

Continuing education has always been important to me, and I completed a Master of Science in Dental Technology in 2015. I am currently president of the Dental Technologists Association (DTA) in the UK. In my spare time, I like to play golf and ride my motorcycle.

In light of the pandemic, many dental offices were instructed to close their doors and to provide emergency care only. How has the COVID-19 pandemic affected work in your dental laboratory?
Let me try to put this into perspective. Five years ago, we moved into a purpose-built laboratory, and I thought that it was the most stressful situation I would ever encounter. How wrong I was! In the week before the lockdown, work had started to slow down quite dramatically, and that was the situation until dental surgeries started to reopen on 8 June. Work is returning slowly, but it is nowhere near pre-lockdown levels. Our laboratory provides crown, bridge and implant restorations, and we have a mix of private and National Health Service (NHS) clients. However, according to my experience, it is mostly private surgeries sending work at present, and only a handful of cases are coming from NHS practices.

President of the Dental Technologists Association, Barry Tivey, told Dental Tribune International that financial difficulties, new staffing requirements and uncertainty about the future are posing a great threat to the sustainability of many dental laboratories. *(Image: © Barry Tivey)*

A great deal of research has been done on the economic, social and psychological effects of COVID-19 on general dentists. What impact has the pandemic had on you?
The pandemic has had an impact on every aspect of life. From a business perspective, turnover has been dramatically affected, as no work has come into the laboratory for over three months. It has been a very fast-moving situation, and a lot of information has been posted by

government and professional bodies daily. Just trying to keep up with that has been, in itself, very stressful. On a personal level, my daughter was working abroad when the lockdown began and had to try to arrange a flight home, and I had several elderly relatives who were in the SARS-CoV-2-vulnerable category and needed suitable care arrangements to be put in place.

The DTA kept members informed of the financial help that was available to them, as well as provided them with general health and welfare advice; however, there was very little constructive guidance specifically offered to dental technicians by any governing bodies. I spoke to other dental technicians and laboratory owners and found that the majority of them are small business owners. There is much anxiety surrounding cash flow, future business and how to manage staffing requirements with so much uncertainty surrounding the volumes of work that can be expected in the future. Many staff members fear that they may be made redundant owing to the current lack of work in the industry.

Most dentists use a dental laboratory to manufacture dental prostheses. Have dental laboratories recently experienced a reduction in the number of prescriptions for custom-made dental appliances?
Yes, we have experienced quite a substantial drop in the number of cases coming into the laboratory every month. In fact, owing to the restrictions on aerosol-generating procedures (AGPs), many of us face receiving very little or even no work at all in the coming months. The 60-minute fallow time significantly reduces the number of appointments a clinician can offer to patients, and I feel this will potentially reduce the amount of work a dental laboratory can expect to receive. When you combine the AGP restrictions and the phasing out of government-funded schemes in October, I think that dental laboratories will be left in an extremely vulnerable position.

Dentists in the UK have received continuous support from the government during the pandemic. Has this also been the case with dental technicians? Has the government shown tangible support for dental technologists and dental laboratories in terms of rescue packages, grants or value-added tax (VAT) cuts, for example?
My understanding is that the majority of dentists are being supported via the NHS and continue to receive a percentage of their monthly payments, though private dentists do not benefit from this. Dental technologists do not receive any support directly from the NHS or via clinicians. In fact, I have been made aware that some technicians still have unpaid invoices for work that they completed in March. My business was fortunate enough to be eligible for several grant schemes, and I am aware of technicians who have been able to apply for grants through the Self-Employment Income Support Scheme or the Coronavirus Job Retention Scheme; however, unfortunately, some technicians have been unable to claim either. I have heard of a number of laboratories that have closed as a result of the financial impact of the pandemic.

There was a brief VAT cut on personal protective equipment, which helped purchases when preparing to return to work, but nothing specifically relating to dental laboratories. I suppose that, on the whole, we are a small profession, of which not many members of the government are aware. Many people do not realise that their restorations are custom-made by highly skilled technicians, rather than being taken from a shelf marked "Mrs Smith's teeth"!

> "We have experienced quite a substantial drop in the number of cases coming into the laboratory every month."

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The DTA was very proactive in supporting technicians during the lockdown and provided some excellent advice for technicians starting back to work. It also provided the Dental Laboratory Crisis Management Pack.

The coronavirus is changing business practices around the world. Do you think that the pandemic will create any lasting workplace changes in dental laboratories?
Yes, from a technical view, we are already used to cross-infection control and disinfection procedures. However, in the long term, there may be a quicker move to intra-oral scanning by dentists rather than taking impressions. This will push forward the digitalisation process.

From a business aspect, the dental technology profession is made up of many small businesses that are extremely concerned for their future. I fear that many will not survive this pandemic, resulting in a loss of skills which will have an impact on the whole dental team and could result in patients suffering long delays for their custom-made appliances.

As president of the DTA, I am also very concerned about our dental technology students currently in training. Closure or downsizing of dental laboratories will have a great impact on many of them. However, the DTA will continue to focus on education to meet and cope with future challenges.

"Owing to SARS-CoV-2 concerns, an in-house workflow has become the centre of interest"

Franziska Beier, Dental Tribune International

Fig. 1: Dr Andreas Kurbad has published more than 100 titles on subjects including ceramic restorations, aesthetics, computerised dentistry, implantology and epidemiology.

Dr Andreas Kurbad, who runs a private practice in Viersen in Germany, has lectured widely on the topic of computerised dentistry. For 3Shape's 24-hour global online symposium, Kurbad gave a presentation on an in-house workflow for CAD/CAM-based single-tooth restorations. Prior to the event, the expert had talked to Dental Tribune International about his own in-house workflow and why such procedures offer advantages, especially in light of the restrictions imposed by SARS-CoV-2.

Dr Kurbad, I understand that you were the first in the world to use the TRIOS intra-oral scanner and TRIOS Design Studio with PrograMill One. What has been your experience with these products in your own daily practice?
Yes, I believe I was the first-ever clinical user of the PrograMill One, and I am very happy with the workflow. Scanning with the TRIOS intra-oral scanner works very well, especially with the new generation of the TRIOS Design Studio software, which includes artificial intelligence scans. Hence, many of the working steps with the optical impressions are managed automatically, speeding up the process. This is also why the in-house technology allows treatments to be performed in only one appointment.

The PrograMill One is revolutionary in many ways. You can manage the whole machine with an app which allows you to be connected to the machine at any time and from any place.

In addition, you can process up to five mills in a row without accessing the machine. In my dental practice, we use it every day, and my experience with this product has been very good. In 2017, I published a scientific

Fig. 2: The practice team of Dr Andreas Kurbad uses the TRIOS intra-oral scanner and the TRIOS Design Studio every day. **Fig. 3:** The PrograMill One can be managed with an app which allows users to be connected to the machine at any time and from any place. *(Images: © Andreas Kurbad)*

article about the ProgaMill One milling machine in the *International Journal of Computerized Dentistry.*

There are many scanners and a great variety of software on the market. In your opinion, why should dentists familiarise themselves with 3Shape/Ivoclar Vivadent products and use them in their daily practice?

They possess some extraordinary features. An example is the wireless camera, which allows you to use only the scanner and perhaps a screen in the treatment room. Everything else can be stored in a different place.

Also, the workflow with the software offers some unique opportunities for design. The milling machine differs from all other milling machines in that the ceramic block from the material is held by a robotic arm. This technology is unique and the milling results are a great improvement on the results of the other 5XT (five-axis turn-milling technique) milling machines that I know of.

What are the advantages of an in-house workflow?

Owing to SARS-CoV-2 concerns, an in-house workflow has become the centre of interest, on the one hand, because you should make as few appointments as necessary in order to reduce infection risk and cover as many treatment steps as possible in one appointment. On the other hand, this workflow is also very economical. Of course, we need a dental laboratory for larger restorations, but single-tooth restorations do not have to be manufactured off-site. Another advantage is that the entire treatment takes only one hour or a maximum of two hours, making it very comfortable for patients.

What has changed through PrograMill One in terms of materials?

The new technology allows the use of modern materials made from composites such as Tetric CAD, which cannot usually be processed with conventional methods in a dental laboratory. With the help of CAD/CAM technology, the use of these materials becomes very simple. For example, the Tetric CAD material produces very satisfying results and can be produced within a short time. It also shows good results for longevity.

> "...many of the working steps with the optical impressions are managed automatically, speeding up the process. This is also why the in-house technology allows treatments to be performed in only one appointment."

Processing zirconium dioxide is also possible, but I think it is not very useful for an all-in-one appointment, since it needs sintering. However, small restorations made of zirconium dioxide will be possible in the future.

Editorial note: Dr Andreas Kurbad's webinar, titled "The in-house treatment concept for CAD/CAM-based single-tooth restorations—the TRIOS and PrograMill One workflow", was broadcasted in June. Dental professionals who would like to rewatch the webinar may register at www.3shapesymposium.com.