Introducing a treatment coordinator: The Bridge to case acceptance

By Lina Craven, UK

You might think that in financially challenging times the last thing you need is a new member of staff. For a practice to thrive and prosper in a difficult financial climate, however, it has to become more efficient, more competitive and more profitable. One way to do that is to introduce a treatment coordinator (TC) into the team or if you already have one then to offer appropriate training. This is a relatively new role to the European market, but in the US, where the role is a central part of any practice, it has proven to dramatically add value to the patient experience, reduce in chair time and increase case acceptance.

The introduction of a well-trained TC will change your entire approach to new patient care, as well as increase profitability. While many practices know how to attract patients, their case acceptance ratio is low. The first contact, first visit and follow-up are the most important elements of the new patient process, yet they frequently represent a wasted opportunity because of a lack of skill, focus, time or all three.

In my experience, a major downfall of practices is the unwillingness of practitioners to delegate the new patient process to staff, or what we call the TC role. This is often due to a wide range of factors, including the practitioner’s perception that the patient wants communication on his or her treatment to come from the practitioner, the perception that patients do not pay to see the practitioner–patient time. Rather thanTC role. This is often due to a wide range of factors, including the practitioner’s perception that the patient wants communication on his or her treatment to come from the practitioner, the perception that patients do not pay to see the practitioner–patient time. Rather thanTC role. This is often due to a wide range of factors, including the practitioner’s perception that the patient wants communication on his or her treatment to come from the practitioner, the perception that patients do not pay to see the practitioner–patient time. Rather than consider the time spent by the practitioner with the new patient and calculate how much of that time is non-diagnostic. A good TC can often reduce up to 50 percent of practitioner-patient time. Rather than this being a barrier to patients— which is indeed what many practitioners perceive to be the case—in my experience, patients actually feel much more at ease with the TC and therefore better informed. Doctor time is not always doctor time. As a typical example: if an new patient appointment is 30 minutes, but the clinical part is actually only 15 minutes, there is potentially 15 minutes still available. Think about the impact an additional 15 minutes for every new patient in the appointment diary could have.

A good TC will manage all aspects of the patient journey, from referral to case start and potentially increase your case starts. He or she is the first point of contact. People buy from people, so the development of a relationship and establishing of rapport between the TC and the new patient are crucial to the patient’s perception of the practice, this is the TC role. The TC also explains the financial options available to the patient, discusses these, answers any questions the patient may have, and clarifies proposed treatment. He or she also discusses the informed consent, shows before and after photographs of similar cases, and addresses any barriers or concerns the patient may have.

Too many new patients are lost due to lack of follow-up. A good TC follows up and provides monthly information on patient conversations to assist with strategic planning. All practices should have a patient journey tracker.

Filling the role: An internal solution?

There are no hard and fast rules. It depends upon the size and aspirations of your practice and the qualities of existing members of your team. If you have a team member who fulfills the characteristics of a TC and he or she wants the challenge, then the answer is yes. Keep in mind that you may well need to fill that person’s current position.

Some practices streamline job descriptions allowing them to create the new role without having to hire another staff member. Whether it is a full-time role or not depends upon various factors, including the size of the practice: the number of practitioners, chairs and patients; and the profit aspirations. Many practices implement the role and monitor its progress and impact. This often helps the team to accept the change and gives the practitioner the opportunity to assess any training needs of the TC and to access how remuneration will be affected.

The role of your TC should fit in with your practice’s culture and aspirations for patient care. However you choose to implement the role, the only guarantee is that you will benefit enormously. Augmenting your team with a well-trained TC can reap tremendous rewards for you, the team and your patients. A TC’s tailored and personal approach to care, follow-up and communication with patients fosters trust and increases patient satisfaction and retention.
BDA calls for radical action to lower Britain’s sugar intake

By DTI

LONDON, UK: Lately, there have been increasing efforts to curb Britain’s high sugar consumption. Although the British Dental Association (BDA) has welcomed Tesco’s recent announcement that it is banning high-sugar drinks from its shelves, the association has called for action that goes further than “symbolic” concessions and urged government to follow the recommendations of the report by the Scientific Advisory Committee on Nutrition (SACN).

“Finally we’re seeing big retailers waking up to the sugar crisis. That’s progress, but these symbolic gestures should not disguise the fact that supermarket chains are still banking on the nation’s sweet tooth,” Dr Nick Armstrong, Chair of the BDA, said.

Tesco’s plans echo recent recommendations in the Carbohydrates and Health Report, published by SACN in July, which advises reducing the daily energy intake of sugars from 10 to 5 per cent. The report also recommends that consumption of sugar-sweetened drinks be minimised and of fibre be increased.

According to the health experts, 5 per cent of daily energy intake is the equivalent of 19 g or five sugar cubes for children aged 4-6, 24 g or six sugar cubes for children aged 7-10, and 30 g or seven sugar cubes for those aged 11 and over, based on average diets.

The SACN findings, established by a group of independent experts that advise government on matters relating to diet, nutrition and health, offer the first wide-ranging look at the relationship between sugar consumption and health outcomes in the UK since the 1990s.

Other national statistics have shown that British children especially are consuming unhealthy amounts of free sugars—the nutrient-free refined sugar added to products such as sweetened drinks—in their daily diet. At 30 per cent, soft drinks accounted for the majority of sugar in the diet of 4- to 10-year-olds, the 2014 National Diet and Nutrition Survey found.

Soft drinks and juices are especially harmful to the teeth, since they tend to be very acidic, which makes the teeth particularly vulnerable to both dental decay and tooth erosion. Aside from posing oral health risks, a diet rich in free sugars has been linked to obesity and Type 2 diabetes, among other conditions.

With reference to the SACN recommendations, the BDA has called for radical measures to cut Britain’s sugar intake, including lowering the recommended daily allowance, and action on marketing, labelling and sales taxes. The BDA has launched an online petition addressed to Prime Minister David Cameron, inviting both health professionals and patients to lend support to SACN’s proposals at Change.org.

“We have an historic opportunity here to end Britain’s addiction to sugar. The government now has the evidence and a clear duty to send the strongest possible signal to the food industry that whole added sugar might be helping their sales, it’s hurting their customers,” Armstrong said.


Rare case of amnesia linked to root canal treatment

By DTI

LEICESTER, UK: In March 2005, a 38-year-old British soldier stationed in Germany lost his ability to form new memories after undergoing a regular root canal treatment. To this day, he is unable to remember anything for longer than a few minutes.

The doctors’ first suspicion was that a bad reaction to the anaesthetic had caused a brain haemorrhage. However, they could not find any evidence of injury. Finally, the patient and his family returned to England, where Dr Gerald Burgess, a clinical psychologist from Leicester, took over the case.

According to Burgess, a form of antegrade amnesia would have been the most obvious explanation for the man’s condition. In this case, the hippocamp, the brain region responsible for the consolidation of information from short-term memory to long-term memory, are damaged so that memories can no longer be formed and stored correctly. Yet, the man’s brain scans showed no abnormalities. Thus, another possible explanation would have been a psychogenic illness. Burgess conducted detailed psychiatric assessments in order to determine whether the man had suffered any trauma. However, Burgess found that his patient was emotionally healthy and his wife confirmed that there had not been any traumatic events in the man’s life prior to his dentist visit in 2005.

Burgess continues to research his patient’s rare case of amnesia, currently suspecting that the brain’s synapses might play an important role. Each time a memory is formed and transferred to long-term memory the synapses are rebuilt, which involves the production of new proteins.

This protein synthesis might be blocked in the case of Burgess’ patient, keeping him from generating any new long-term memories. In order to further research his hypothesis, Burgess is examining five similar cases of mysterious memory loss without brain damage from the medical literature. These cases might provide an answer to why the root canal treatment appears to have triggered the man’s memory loss. All of the cases are in some way related to a period of psychological stress during a medical emergency: “It could be a genetic predisposition that needs a catalyst event to start the process,” Burgess told the BBC.

“One of our reasons for writing up this individual’s case was that we had never seen anything like this before in our assessment clinics, and we do not know what to make of it. But if we were to inform the facts of the case as we assessed them was warranted, that perhaps there will be other cases, or people who know more than we about what might have caused the patient’s amnesia,” Burgess stated.

The case report by Burgess, titled “Profound antegrade amnesia following routine anesthetic and dental procedure: A new classification of amnesia characterized by intermediate-to-late-stage consolidation failure?” , was published online in the Neurocase journal on 15 May.
THE amazing NEXT STEP.
Black Is White Hydrosonic System

www.curaprox.com
**Research uses virtual reality technology to train dental surgeons**

By DTI

HUDDERSFIELD, UK: A University of Huddersfield researcher is harnessing the latest virtual reality technology to help oral and maxillofacial surgical trainees practise complex dental surgeries. His project aims to provide accurate 3-D visualisations of human anatomy and surgical procedures using Oculus Rift, a virtual reality head-mounted display.

Indian-born Yeshwanth Pulijala is a qualified dental surgeon. During his training, he was confronted with the problem of poor visualisation of dental procedures in the operating room. Being aware of these shortcomings in surgical training, as well as passionate about 3-D design and technology, he relocated to the UK to pursue postgraduate research on the use of advanced technology to improve health care.

During his master’s studies on 3-D medical visualisation at the University of Glasgow, Pulijala created a mobile app called SurFace that provides patient education in corrective jaw surgery. This inspired him to explore the potential of virtual reality for surgical education, using Oculus Rift. A commercial version of the device is expected to be released in the first quarter of 2016. However, Pulijala, who is currently studying for a PhD at the University of Huddersfield, was able to obtain the developer version for his research.

Learning through observation and hands-on participation is an important part of the education of surgical trainees, and medical and dental students, according to Pulijala. “During these sessions the trainees learn by observing the procedures in real-time,” he stated. “But the problem is that not everybody can see what is happening. This is especially the case in crowded operating rooms where surgical trainees perform multiple duties. Also in surgeries confined to oral and maxillofacial zone, as the structures are complex and densely enclosed in a confined space, it is very hard to observe and learn. Further, a reduction in surgical training hours is severely affecting the training of surgeons,” Pulijala pointed out.

As a result, he continued, four out of ten surgical trainees are not confident in performing a procedure. Therefore, he is developing a tool that enables them to participate virtually in an operation. His PhD project aims to provide trainee surgeons with close-up, unrestricted 360-degree views of a surgical procedure, yielding the potential to improve surgical training substantially.

“If you are a trainee surgeon, wearing an Oculus Rift, you will see the surgical procedure in an operating room environment and also be able to ‘touch’ the skull of the patient and interact with it,” Pulijala said. He is currently developing the project concept and producing working prototypes. In the longer term, he envisions a system that will enable surgical trainees to practice and perform virtual operations. “But at the moment it is about creating a high-quality visualisation, interacting with the patient’s data and seeing their anatomy in great detail,” he concluded.
CROIXTURE

PROFESSIONAL MEDICAL COUTURE

THE NEW 2014-2015 COLLECTION

EXPERIENCE OUR ENTIRE COLLECTION ON WWW.CROIXTURE.COM
“I do not see how the situation can improve”

An interview with Dr Stefanos Morfis, Greece

Educated in Manchester and a dentist at heart, Dr Stefanos Morfis opened his first practice in Athens five years ago, right at the beginning of the debt crisis in Greece. Five years later, he is selling it owing to the economic circumstances and is planning to register with the General Dental Council in order to start working as a dentist in Britain. Dental Tribune had the opportunity to speak with him recently about the situation of dentists in his home country and the reasons he has chosen to leave.

Dental Tribune: Dr Morfis, with the recent referendum on the austerity measures proposed by the EU and the resignations of Minister of Finance Yanis Varoufakis, the debt crisis in Greece has heated up again. Can you describe what impact the crisis has had on dentistry in your country?

Dr Stefanos Morfis: When one looks back 10–15 years, dentistry was quite high. What we have seen during the last ten years or so is that fewer people are visiting the dentist because of their financial situation and they only go when they are already in pain.

You have to know that, unlike in the UK or other European countries, most dental care here is private. Since many cannot afford treatment in Greece, they travel to other countries, like Macedonia, where they receive cheaper, but lower quality, treatment. Recently, I heard of two patients who died after undergoing a tooth extraction there.

Owing to the lack of money for treatment, caries levels are very high and, although we are fully aware of its benefits, there is very little money for any kind of preventive dentistry. This is only done at university level.

Consumer prices in Greece are soaring owing to the strict regulations. Have prices for dental treatment also gone up?

In contrast to everything else in Greece, prices for dental treatment have actually gone down in the last five years. While one could charge €50 or more for a composite filling in 2003/2004, today there are quite a number of dentists who are performing fillings for just €20.

This trend is facilitated by the majority of patients, who are only looking at price and not at what kind of material is being put in their mouth. Do not ask even me what kind of fillings they use sometimes! But how can one work professionally and ensure quality for patients at these prices?

With having to compete at such low prices, can you actually live on your income as a dentist in Greece?

Ten years ago, our income was almost double what it is now and the cost of living, materials and education were much cheaper. Living in Athens now is like living in London, but with five times less income. That is why many now meet their educational needs online by attending free webinars. What is really troubling is that more and more dentists are being forced to sell their practice for half the price. That includes me. Ironically, my practice will be taken over by a dentist from Britain. You are planning to work in the UK. When are you going to leave?

I am currently in the process of registering with the General Dental Council and planning to leave Greece in November. I did my postgraduate studies at the University of Manchester’s School of Dentistry and I have worked in several practices over there.

The austerity measures will allow Greece to stay in the EU. In your opinion, is there any possibility of the situation improving?

There are positive examples, like Ireland and Portugal who were able to recover from the recession a few years ago. I hope to be proven wrong, but I do not see how the situation can improve in Greece. Politicians come and go, but the people remain the same. If we do not drastically change how things are run in this country, in a few years I guess it will be impossible to recover.

Would you go back if things start to improve?

I would like to, but I think it will be very difficult. I have a family to look after now and want the best for my little son. At 35, I am at the best age to be productive and achieve things in my life. I have always felt a love for the dental profession and therefore want to dedicate my life to it.

Thank you very much for taking the time and all the best for your future.
Update on dental amalgam guidelines

European Commission recommends use of alternative materials for fillings

By DTI

BRUSSELS, Belgium: Many countries around the world, European countries in particular, have seen a shift away from the use of dental amalgam in oral health care and an increase in the use of alternative materials over the past years. The evidence for such effects due to dental amalgam is weak, according to the committee.

The new recommendation is also based on the findings that dental amalgam fillings may cause mercury poisoning in genetically susceptible populations. Some genetic variants appear to impart increased susceptibility to mercury toxicity from dental amalgam.

Studies involving dental health care personnel have indicated that mercury exposure from dental amalgam during placement and removal may cause or contribute to many chronic illnesses, as well as depression, anxiety and suicide. However, exposure of both patients and dental personnel could be minimised by the use of appropriate clinical techniques, the committee stated in its opinion report.

However, current evidence does not preclude the use of either amalgam or alternative materials in dental restorative treatment. The committee acknowledged that there is a need for further research, particularly with regard to neurotoxicity of mercury from dental amalgam and the effect of genetic polymorphisms on mercury toxicity. In addition, the committee concluded that there is a need for the development of new alternative materials with a high degree of biocompatibility.

European Commission recently acknowledged this trend and published an updated version of its opinion on the safety of dental amalgam and alternative restoration materials.

The new document is an update of the 2008 opinion and aims to assess the safety and effectiveness of dental amalgam and current alternative materials by evaluating the latest scientific evidence.

While in 2008 the European Commission and the Scientific Committee on Emerging and Newly Identified Health Risks concluded that both types of material are generally considered safe to use, they now recommend that the choice of material be based on patient characteristics. In accordance with the objectives of the Minamata Convention on Mercury, the committee now recommends using alternative materials in children and pregnant women.

The committee further stated that the systemic effects of elemental mercury are well documented and it has been identified as a neurotoxin, especially during early brain development by a number of studies. Mercury has also been associated with adverse health effects in the digestive and immune systems, and in the lungs, kidneys, skin and eyes. Nevertheless, the committee stated in its opinion report.

Where ideas take shape.

Information:
+49 711 61946-825
formnext@mesago.com

Get your free ticket here: formnext.com/tickets
“Bring more patients into practices”

An interview with Crown 24 Directors Rupa Shah and Sandy Shapira, London

Crown 24 UK has made a significant impact in the UK dental laboratory market since it started three years ago. Dental Tribune had the opportunity to speak with Rupa Shah and Sandy Shapira, directors of the company, about their unique marketing concept and how they manage to assure the highest quality at a significantly lower price.

**Dental Tribune:** With Crown 24 UK, you promise that dentists and patients are able to have dental prostheses fabricated at much lower costs. How do you achieve this price advantage?

**Rupa Shah:** Our concept is very simple. While we offer the premises of a fully equipped dental laboratory based in London, all the manufacturing is done in China. The production there allows us to offer a better price to dentists and patients. If the benchmark for the UK is £250, for example, we are able to provide laboratory work that is up to 60 per cent cheaper than comparable work done here in the UK.

**Sandy Shapira:** Since Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is a subsidiary of the company that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you manage to assure the quality of the products sent from China are of the same standard?

**Sandy Shapira:** Our concept is very simple. While we offer the premises of a fully equipped dental laboratory based in London, all the manufacturing is done in China. The production there allows us to offer a better price to dentists and patients. If the benchmark for the UK is £250, for example, we are able to provide laboratory work that is up to 60 per cent cheaper than comparable work done here in the UK.

**Sandy Shapira:** Since Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.

**Dental Tribune:** How do you assure quality that is comparable to UK standards?

**Sandy Shapira:** Crown 24 UK is the daughter company of a business that started in Switzerland five years ago, our dental laboratory in London can offer proven Swiss standards of control.

**Dental Tribune:** What kind of laboratory work does Crown 24 UK offer at present, and do you cover CAD/CAM too?

**Rupa Shah:** We currently carry out crown and bridge work, implantology and prosthetics. We even provide a CEREC machine free to dentists, so they can send us their digital data as they are used to.

**Dental Tribune:** What are the prospects for your business?

**Rupa Shah:** You probably know that dentistry, particularly in the UK, is a struggling business. Many practices are having difficulties sustaining their businesses.
Ivoclar updates dentists about latest materials and treatment protocols

By DTI

Leicester, UK: For years, the International Centre for Dental Education from Ivoclar Vivadent has been offering dental education and training for dentists and dental technicians in the UK. At its anniversary celebration in June, over 200 came to Leicester to celebrate the Centre’s achievements and update themselves on the latest materials and treatment protocols, such as the company’s IPS e.max system.

Focusing on innovation in dental design, renown dental technician and Ivoclar Vivadent Global Opinion Leader Oliver Brix from Germany presented a series of case reports involving the materials and ranging from single tooth restorations to full mouth rehabilitations. State-of-the-art protocols and critical steps to ensure long-term success were also presented by Dr Markus Lenhard from Switzerland.

Leading UK experts such as Chris McConnell, Rob Lynock, Alan Casson and Carl Fenwick, further provided live demonstrations to illustrate the revolutions that are taking place in composite dentistry with advanced products, such as the light-curing lab composite SR Nexco Paste, IPS e.max frameworks with the fully automated injection-moulding device Ivobase and the Tetric EvoCeram Bulk Fill system.

In addition to legal, ethical and practical issues surrounding the selection of patients for implants and the placement and management of the peri-implant site presented by dental hygienist Donna Shembri from Huddersfield. Oldham dental technician and Ivoclar Vivadent Opinion Leader John Wibberley addressed the aesthetic and functional needs of the patient when creating restorations, while he explored the principles and materials used in the customising of denture teeth, gingival contouring and gingival staining.

Following this, dental technician Phillip Reddington from Leeds further educated delegates on ‘high-performance polymers’ which are considered as a replacement for materials such as metal and zirconia in framework fabrication and are increasingly used to manufacture hybrid composite/ceramic restorations.

Since 2011, the ICDE has been offering education for dentists in its Leicester premises. Based close to the M1, the facility provides state-of-the-art dental surgery for live demonstrations and a fully equipped lecture theatre that can hold up to 40 participants. A full list of courses and seminars is available at the centre’s website.

Since 2011, the ICDE has been offering education for dentists in its Leicester premises. Based close to the M1, the facility provides state-of-the-art dental surgery for live demonstrations and a fully equipped lecture theatre that can hold up to 40 participants. A full list of courses and seminars is available at the centre’s website.

Since 2011, the ICDE has been offering education for dentists in its Leicester premises. Based close to the M1, the facility provides state-of-the-art dental surgery for live demonstrations and a fully equipped lecture theatre that can hold up to 40 participants. A full list of courses and seminars is available at the centre’s website.
Common reasons for choosing dentistry as a vocation in the UK include having a fulfilling career where, after five hard years invested at dental school, one could be rewarded with a high probability of employment and the opportunity to marry scientific knowledge with practical hand skills to provide for the public, either on an NHS or private basis or both. A-level students have high standards to achieve and maintain to gain admission to undergraduate programmes. Towards the end of their training, young dentists may feel like they are about to enter a minefield on graduation.

In the last year of dental school, those wishing to enter vocational training are pitted against each other, then ranked nationally and allocated a training position according to their performance in that selection process. Whatever happened to being interviewed by a future employer and performing at that more personal, mutual assessment level? It appears that the system is becoming increasingly mechanistic, a conveyor belt if you will, where a college student enters, is educated in a cost-effective manner, and is rewarded financially in an effect on premiums for all.

There is so much overt dental disease to the level it merits, and because of that perception such individuals may hunt for more sup- poses adverse: "defensive dentistry" can occur without satisfactory treatment, as opposed to educ - forces the situation. Young dentists may feel or be told to feel they want to achieve are not routinely what they probably need most or possibly what potential employers really want and likely what the public requires. Recently, a colleague in practice called me about the CV of a young graduate with only four years of experience. He had gained "qualifications" in facial aesthetics and cosmetic dentistry, had completed a course in super-quick orthodontics and was studying for an MSc in metal screws. My friend commented, "If I take him on, who's going to do the dentistry, the therapist?"

Again, the NHS UDA system may be blamed for not rewarding the management of plaque-associated disease to the level it merits, and because of that perception such individuals may hunt for more supposedly with high-end, high-risk opportunities to supplement their income and skill set with high-end, high risk procedures more likely to lead to litigation well before the basics of proper, proven dentistry have been learned, attained and honed. Unfortunately, the skills they may feel or be led to feel they want to achieve are not routinely what they probably need most or possibly what potential employers really want and likely what the public requires. Recently, a colleague in practice called me about the CV of a young graduate with only four years of experience. He had gained "qualifications" in facial aesthetics and cosmetic dentistry, had completed a course in super-quick orthodontics and was studying for an MSc in metal screws. My friend commented, "If I take him on, who's going to do the dentistry, the therapist?"

As such, "defensive dentistry" can occur without satisfactory treatment, as opposed to education. When young dentists are pitted against each other, they are more likely to have had improper, proven dentistry have been learned, attainted and honed. Unfortunately, the overall experience and skill set within these shares is likely to decrease as a result of much of this postgraduate effort, with the net increase for countries abroad where they will then bring that expertise.

Positive aspects of globalised dental education include the im-

Graduation: A minefield for the younger generation of dentists
By Aws Alani, UK

Common reasons for choosing dentistry as a vocation in the UK include having a fulfilling career where, after five hard years invested at dental school, one could be rewarded with a high probability of employment and the opportunity to marry scientific knowledge with practical hand skills to provide for the public, either on an NHS or private basis or both. A-level students have high standards to achieve and maintain to gain admission to undergraduate programmes. Towards the end of their training, young dentists may feel like they are about to enter a minefield on graduation.

In the last year of dental school, those wishing to enter vocational training are pitted against each other, then ranked nationally and allocated a training position according to their performance in that selection process. Whatever happened to being interviewed by a future employer and performing at that more personal, mutual assessment level? It appears that the system is becoming increasingly mechanistic, a conveyor belt if you will, where a college student enters, is educated in a cost-effective manner, and is rewarded financially in an effect on premiums for all.

There is so much overt dental disease to the level it merits, and because of that perception such individuals may hunt for more sup- poses adverse: "defensive dentistry" can occur without satisfactory treatment, as opposed to education. Young dentists may feel or be told to feel they want to achieve are not routinely what they probably need most or possibly what potential employers really want and likely what the public requires. Recently, a colleague in practice called me about the CV of a young graduate with only four years of experience. He had gained "qualifications" in facial aesthetics and cosmetic dentistry, had completed a course in super-quick orthodontics and was studying for an MSc in metal screws. My friend commented, "If I take him on, who's going to do the dentistry, the therapist?"

Again, the NHS UDA system may be blamed for not rewarding the management of plaque-associated disease to the level it merits, and because of that perception such individuals may hunt for more supposedly with high-end, high-risk opportunities to supplement their income and skill set with high-end, high risk procedures more likely to lead to litigation well before the basics of proper, proven dentistry have been learned, attained and honed. Unfortunately, the skills they may feel or be led to feel they want to achieve are not routinely what they probably need most or possibly what potential employers really want and likely what the public requires. Recently, a colleague in practice called me about the CV of a young graduate with only four years of experience. He had gained "qualifications" in facial aesthetics and cosmetic dentistry, had completed a course in super-quick orthodontics and was studying for an MSc in metal screws. My friend commented, "If I take him on, who's going to do the dentistry, the therapist?"

As such, "defensive dentistry" can occur without satisfactory treatment, as opposed to education. When young dentists are pitted against each other, they are more likely to have had improper, proven dentistry have been learned, attainted and honed. Unfortunately, the overall experience and skill set within these shares is likely to decrease as a result of much of this postgraduate effort, with the net increase for countries abroad where they will then bring that expertise.

Positive aspects of globalised dental education include the im-
Live Surgical Training

Location: 27462 Portola Pkwy, Suite #205 Foothill Ranch, CA 92610
Date: September 12-13, 2015
Credits: 26 CE Hours: ADA CERP - AGD PACE

Curriculum - Day 1&2
7:30 am – 8:00 am: Check-In
8:00 am - 9:30 am: Lecture and Orientation
9:30 am - 7:00 pm: Live Surgical Course
12:00 pm - 1:00 pm: Lunch

All Inclusive ($5500) Service
• Hands-on 2-day Course (Live Patients)
• All Materials, Instruments, and Supplies
• Breakfast, Lunch & Group Dinner
• Online Course Series
• Hotel Included For Distant Travelers

Please bring:
• Proof of Malpractice Insurance
• Proof of CA License
• A Fresh Mind!

For more details visit www.ExtAcademy.com
Email: cferret@dsstudyclub.com Phone: (504) 909-0099

Faculty

Dr. Thomas Wiedemann
DDS, PHD, MD

Dr. Gregory Greenwood
DMO, Prosth D, MArCD

Dr. Kianor Shah
DMO, FCOI, RAPPE, MICOI

Dr. Charles Zahedi
DDS, PHD

Joseph Krajekian
DMO, MD

Dr. Eric Schuetz
DDS

Dr. Arash Hakhmahian
DDS
It looks increasingly unlikely that a UK graduate with five years of debt in tuition fees will be able to afford to train and develop comprehensively...
6 Months Clinical Masters™ Program in Aesthetic and Restorative Dentistry

8 days of intensive live training with the Masters in Dubai (UAE)

2 sessions, hands-on in each session, plus online learning and mentoring.

Learn from the Masters of Aesthetic and Restorative Dentistry:

Dr. Panos Bazos
Dr. Stavros Paleokos
Prof. Francesco Mangani
Prof. Angelo Petignani

Registration information:

8 days of live training with the Masters in Dubai (UAE) + self study

Curriculum fee: €6,900
(Based on your schedule, you can register for this program one session at a time.)

Details on www.TribuneCME.com

contact us at tel.: +49-341-484-74134
email: request@tribunecme.com

Collaborate on your cases and access hours of premium video training and live webinars.

University of the Pacific
you will receive a certificate from the University of the Pacific.

100 C.E. CREDITS

Tribune Group GmbH is the ADA CERP provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Tribune Group GmbH is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing dental education programs of this program provider are accepted by AGD for Fellowship, Mastership, and membership maintenance credits. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement.
“Patients tend to go to court more often nowadays.”

An interview with Dr Andy Wolff, Israel

Dr Andy Wolff talking to Group Editor Daniëlle Zimmernann. © Kristin Hubner/DT

Be it a careless error or a case of misjudgement, even the most experienced practitioner can make a mistake. In fact, statistics indicate that it is likely that every general dentist will be involved in a malpractice suit at some point in his or her career. Israeli-based dentist Dr Andy Wolff has worked as a medical expert in dental malpractice litigation for many years and has seen almost everything, ranging from slight negligence to severe overtreatment. Dental Tribune had the opportunity to speak with him recently about the steady increase in litigation in the field and simple measures that can help prevent many malpractice incidents in the first place.

Dental Tribune: Dr Wolff, you have been a medical expert in dental malpractice litigation for many years now. Why is it so important to increase awareness of this topic?

Dr Andy Wolff: So much literature out there tells dentists how to do things—whether it is placing implants or improving efficacy with the newest technology—but there are no hooks on how to do things or, more precisely, what can happen when something has gone wrong. This aspect is no less important, both for the patient affected and for the clinician, who might be facing legal consequences.

Many may think that it is not relevant to them, but every smart physician knows that things occasionally go wrong and no one is immune. By documenting dental malpractice incidents and by talking and writing about these, I aim to raise awareness and therefore help prevent future incidents.

In your experience, what types of malpractice are most common?

There are definitely many cases in the neurological field. As a medical expert, I am confronted with many instances of damaged nerves caused while placing an implant, during tooth extractions or through an injection. It is common and it happens quickly. Typically, it is an inadvertent mistake, because the clinician was either in hurry or impatient. However, the consequences for the patient are mostly very dramatic and often beyond repair.

Aside from nerve damage, is there an area where mistakes are more likely?

If I had to choose one, I would say it is implants. I recently had a very disconcerting case where an oral surgeon did all the preliminary exams—cases like this show that mistakes really can happen to anybody.

So expertise does not preclude mistakes, but there are undoubtedly also cases that result from negligence and hubris.

I certainly see many cases in which dentists have carried out a treatment for which they were not qualified. I remember an incident in which a general practitioner injured nerves on both sides of the mouth during an implant treatment. That is truly unbelievable. I have seen many cases over the years, but nothing quite like that.

In another case, a dentist extracted a third molar without the requisite training. He should have referred the patient to a specialist, but he chose to do it himself—possibly because it earned him another US$200 to 300 ($300 to $450) with the result that the patient now has to live with chronic pain for the rest of her life.

Can injuries to a certain area be prevented?

In my opinion, build-up of the alternatives—and one of those alternatives is not proceeding with treatment at all. In my opinion, the patient should always understand both options: the risks of a particular treatment and what could happen if nothing is done. Only then should the patient be asked to sign a declaration of consent.

Unfortunately, the reality is often quite different. Patients are often asked to sign declarations of consent on their way into surgery or while already on the dental chair. Even if they had questions then, there would be no time to answer them properly. Although it should be of major concern for every dentist to thoroughly inform the patient of the risks, as well as alternative treatment methods, before he or she is asked to sign a consent form, I am constantly confronted with the opposite.

So, you are saying that consultation should be of similar importance to treatment?

Absolutely. In my opinion, building mutual trust between doctor and patient is key to avoiding malpractice and consequential charges. If patients feel that their condition is…

These cases have an almost equal occurrence. Of course, overtreatment leaves the dentist in a bad position. It raises the question: why did he or she treat the patient unnecessarily in the first place and did so poorly in the second? It leaves him or her doubly guilty. If a mistake occurred after a reasonable treatment plan had been formulated, it is computationally less bad. Sometimes, even a patient dies while undergoing therapy, this does not need to involve a distinct fault of the clinician.

An American dentist was recently charged because his patient died after he extracted 30 teeth in one procedure. I have performed such extensive treatment in the past, it depends on the need for the treatment and how it is done. Probably, that case in the US was the result of a combination of many things: for instance, did the dentist act in accordance with state-of-the-art practice? If not, is it at fault? If he did, one has to remember that dentists cannot rise above today’s level of knowledge and technology. Let us say an impaired patient files charges for something that happened to him 20 years ago that would have been preventable with the latest medical treatment. He can, of course, make a claim, but the dentist could not be sued for it if he or she treated the patient according to the best knowledge available at that time.

That is a very important aspect when writing expert reports on dental malpractise: did the dentist act to the best of his or her ability and according to the current knowledge or gross negligence? That is what makes the difference.

What can medical professionals do to protect themselves against legal disputes arising from high-risk procedures they intend to perform?

Patients should not only be warned of the possible consequences of a certain procedure, but also be advised of the alternatives—and one of those alternatives is not proceeding with treatment at all. In my opinion, the patient should always understand both options: the risks of a particular treatment and what could happen if nothing is done. Only then should the patient be asked to sign a declaration of consent.

Data shows that most patients do not understand the treatment they are asked to undergo: in some cases, they may not even realise it initially, losing their ability to smell. Sometimes, even if a patient dies while undergoing therapy, this does not need to involve a distinct fault of the clinician.

As Alternative treatment methods, of course, there are some microsurgery procedures that may improve the situation. Interventions like this, however, carry extremely high risks to themselves and might even aggravate the situation.

With the consequence that patients partially lose sensation in the mouth and face. Yes. Another consequential damage, of which I only recently learnt, is loss of sense of smell. Patients whose sinus has been injured often lose their ability to smell. Sometimes, they may not even realise it initially, because the sinus runs on both sides of the face and the unaffected side often functions normally. Injuries like this may cause anosmia—cases like this show that mistakes really can happen to anybody.

So expertise does not preclude mistakes, but there are undoubtedly also cases that result from negligence and hubris.

I certainly see many cases in which dentists have carried out a treatment for which they were not qualified. I remember an incident in which a general practitioner injured nerves on both sides of the mouth during an implant treatment. That is truly unbelievable. I have seen many cases over the years, but nothing quite like that.

In another case, a dentist extracted a third molar without the requisite training. He should have referred the patient to a specialist, but he chose to do it himself—possibly because it earned him another US$200 to 300 ($300 to $450) with the result that the patient now has to live with chronic pain for the rest of her life.

Can injuries to a certain area be prevented?

In my opinion, build-up of the alternatives—and one of those alternatives is not proceeding with treatment at all. In my opinion, the patient should always understand both options: the risks of a particular treatment and what could happen if nothing is done. Only then should the patient be asked to sign a declaration of consent.

Unfortunately, the reality is often quite different. Patients are often asked to sign declarations of consent on their way into surgery or while already on the dental chair. Even if they had questions then, there would be no time to answer them properly. Although it should be of major concern for every dentist to thoroughly inform the patient of the risks, as well as alternative treatment methods, before he or she is asked to sign a consent form, I am constantly confronted with the opposite.

So, you are saying that consultation should be of similar importance to treatment?

Absolutely. In my opinion, building mutual trust between doctor and patient is key to avoiding malpractice and consequential charges. If patients feel that their condition is…

TRENDS & APPLICATIONS

Dental Tribune United Kingdom Edition | 4/2015

Displacement of dental implant into the maxillary sinus of a 20-year-old male patient. © Dr Andy Wolff
Exhibition  Live Product Presentations  Hands-on Workshops
Printed Reference Guide  Coffee With the Experts

28 Sep 2015  01 Oct 2015
Moscow

01 Oct 2015  03 Oct 2015
Budapest

30 Oct 2015  01 Nov 2015
Istanbul

27 Nov 2015  29 Nov 2015
New York

www.DDSWorldShow.com
being properly treated, and that money is not the dentist’s first concern, this alone can prevent litigation in many cases. Of course, if a nerve is damaged, there needs to be a settlement of some kind, but if a bridge fails, for example, instead of filing charges the patient will return for further treatment if there is a solid, trust-based relationship.

Time, communication, trust—what else is important when it comes to preventing malpractice?

One more basic rule every dentist should follow is adhering to evidence-based dentistry. This means not performing a certain treatment just because in the dentist’s experience it is considered to be right. External scientific evidence should be implemented. Also, every single finding should be taken into account in determining how to treat the individual patient: diagnosis, radiographs, periodontal analyses, age, health status, literature and so on. Neglecting these related aspects can very likely lead to misconduct.

If you add up the time those patients invest only to have a poor outcome, it is striking. However, it is not possible for there to be elite dental practices solely. For legal purposes, dental treatment does not need to be exact, but it has to be reasonable.

Maybe it is a problem of today that patients have increasing expectations regarding the service or technologies their dentist should be using. That is certainly part of the same problem. Advertising that promises people a new Hollywood smile in two hours forms the basis of patients’ beliefs or expectations regarding treatment. Dentists should not be tempted to involve themselves in this kind of misguided pressure. Honest communication is key when aiming to avoid disappointing patients.

Measures to prevent malpractice should begin as early as possible, but where should prevention start?

Personally, I think legal regulation should be extended, such as specific laws or by-laws concerning the amount of experience and training, for example, required in order to perform certain procedures. Basically, it is just what common sense calls for and everybody will agree if they think about it: should one be allowed to place an implant after attending a speaker’s colloquium or looking over a colleague’s shoulder? No, yet this is often what happens.

A second measure could focus on undergraduate education. Dental schools should devote more time to prevention of lawsuits. This aspect is neglected in the curriculum, although it is an essential part of dentistry. General awareness of the subject needs to be raised and this alone would help prevent mistakes. As I said earlier, mistakes are not always avoidable, but they should at least not arise out of negligence, hubris or greed. Apart from that, there will always be cases of medical malpractice. Dentists are humans too; only if he who does nothing makes no mistakes at all.

Thank you very much for the interview.

Bilateral mental and labial paresthesia in a 62-year-old female patient due to bilateral mandibular canal perforation. © Dr Andy Wolff

Join the largest educational network in dentistry!

www.DTStudyClub.com

→ education everywhere and anytime
→ live and interactive webinars
→ more than 500 archived courses
→ a focused discussion forum
→ free membership
→ no travel costs
→ no time away from the practice
→ interaction with colleagues and experts across the globe
→ a growing database of scientific articles and case reports
→ ADA CERP-recognized credit administration

Register for FREE!
The demand for cosmetic dentistry is a growing trend globally. Increased media coverage, the availability of free online information and the improved economic status of the general public has led to a dramatic increase in patients’ aesthetic expectations, desires and demands. Today, a glowing, healthy and vibrant smile is no longer the exclusive domain of the rich and famous; hence, many general practitioners are now being forced to incorporate various aesthetic and cosmetic dental treatment modalities into their daily practices to meet the growing demand of patients.

Cosmetic dentistry is a science-based art guided by the desire of the patient. Many young clinicians who plan to incorporate it into their practices are confused about what they and their patients actually wish to achieve. It is to be noted that the treatment modalities of any health care service should be aimed at the establishment of health and the conservation of the human body with its natural function and aesthetics. However, it is worrying to note that the treatment philosophy and techniques adopted by many cosmetic dentists around the world tend towards macro-invasive protocols, and millions of healthy teeth are aggressively prepared each year for the sake of creating beautiful smiles.

The practice philosophy adopted by the clinic and the professional team members generally guides the overall output of the practice. Minimally invasive cosmetic dentistry (MiCD), a do no harm practice philosophy, has four fundamental components: level of care, quality of operator (dentist), protocol adopted and technology selected, which must all be respected in daily clinical practice. Adopting this holistic medical science practice philosophy is not an easy task, as it requires a change in the mindset of professionals.

In Parts I and II, I explain MiCD, do no harm cosmetic dentistry, based on my Vedic Smile concept, which I have been practising successfully in Nepal for the last 20 years, and advocating globally since 2009 as the MiCD Global mission. It is to be noted that both parts are based on fundamental science (truth and available evidence), clinical experience and the common sense required in holistic dentistry.

Cosmetic dentistry, a global trend

The prevalence and severity of dental decay have been declining over the last decades in many developed countries and this trend is shifting towards developing countries as well. With increased media coverage, the availability of free online information, public awareness has fuelled the demand for cosmetic dentistry globally. Now, a glowing, healthy and vibrant smile is no longer the exclusive domain of the rich and famous. The population of beauty- and oral health-conscious people is increasing every year and data from various sources shows that the coming generations of children, especially from the middle-to-higher income population, will have fewer decayed teeth and will need less complex restorative dental care as they age. These changing patterns of dental care needs will bring about a major shift in the nature of dental services from traditional restorative care to cosmetic and preventive services.

The increased market demand for smile aesthetics among patients is forcing general practitioners of today to incorporate the art and science of cosmetic dentistry into their practice. Cosmetic dentistry is not yet recognised as a separate clinical specialty like orthodontics, periodontics or paediatric dentistry. Cosmetic dentistry is synonymous with multidisciplinary dentistry, as its success and failure are related to the patient’s psychology, health, function and aesthetics. Ethical, high-standard cosmetic dentistry skill training of clinicians is essential for the increased global market of cosmetic dentistry and its promotion. It is widely seen that the treatment modalities of contemporary cosmetic dentistry are tending towards more-invasive procedures with an over-utilisation of full crowns, bridges, dental veneers, and invasive periodontal and aesthetic surgery, while neglecting long-term health, actual aesthetic needs and the characteristics of the patient.

These aggressive treatment modalities are indirectly degrading social trust in dentistry, owing to the trend of fulfilling the cosmetic demands of patients without ethical consideration and sufficient scientific background and promoting the “the more you replace, the more you earn” or “more is better” mindset in dentistry.

Changing the professional mindset of the practicing clinicians is not an easy task. It is just like quitting smoking for a heavy smoker. In order to practice healthy dentistry, one must be groomed, starting from dental school education, with moral values, a high ethical standard, a positive attitude and a patient-centred practice philosophy. A student reflects the mindset of his or her teachers, and a teacher or mentor with comprehensive knowledge, clinical skills, honesty and humanity is difficult to find in today’s business-oriented dental education. I believe that knowledge should be free and skill training must be useful and easily affordable to our young practising clinicians around the world. Compromised university dental education and expensive private skill training with biased mentoring have been promoting health-compromising treatment protocols and costly diagnostic, preventive and treatment technologies. This highly business-oriented trend will promote a change in the mindset of practising clinicians to adopt more aggressive and invasive dental treatment modalities, leading to the practice of unhealthy dentistry in the long term.

Aesthetic versus cosmetic dentistry

The words “aesthetics” and “cosmetic” are viewed as synonyms by many cosmetic dentists. However, it is necessary to understand the core difference in meaning. The Oxford dictionary defines “aesthetics” as “the branch of philosophy which deals...”
Cosmetic News

TABLE I: Treatment options, treatment procedures and biological cost in cosmetic dentistry.

Treatment options | Treatment procedures | Biological cost |
--- | --- | ---
Non-invasive treatment: when hard and soft tissue is not prepared during similar enhancement procedures | | None
| | | - Smile exercise
| | | - Bruxism of white spots
| | | - Oral appliances and bruxism guard
| | | - Dentists engaging in tissue preparations
| | | - Gingival mask
| | | - Gingival depigmentation

Micro-invasive treatment: when hard and soft tissue is prepared at a superficial level during similar enhancement procedures | Very low | - Cosmetic dental treatment, such as: implantology and crown and bridge restoration, deep veneers, and deep inlays
| | | - Enameloplasty
| | | - Enamel removal
| | | - Enamel replacement

Maximally invasive treatment: when hard and soft tissue is prepared at a deep level during similar enhancement procedures | Low | - Cosmetic contouring (for soft and/or gingival tissue)
| | | - Cosmetic restoration with minimal tooth preparation, such as for the removal of carious lesions, partial crowns, partial dentures, and partial bridges
| | | - Multiple implant surgery
| | | - MG post-treatment
| | | - Maximal tissue replacement (keratinised gingival tissue)

Stressful treatment: when hard and soft tissue is prepared at a deep level during similar enhancement procedures | High and unpredictable | - Tooth preparation for crowns, bridge abutments
| | | | - Orthodontic treatment with tooth extractions
| | | | - Fracture treatment
| | | | - Antibacterial procedures, such as periodontal or orthopaedic and surgical techniques

**TABLE II: Smiles Design Wheel approach**

Question for your conscience:

With questions of beauty and artistic taste and “cosmetic” as “improving only the appearance of something.”

In dentistry, “aesthetics” explains the fundamental taste of a person concerning beauty, whereas “cosmetic” deals with the superficial or external enhancement of beauty. Therefore, aesthetic dentistry falls under need-based dental service, and is generally guided by the sex, race and age (SRA factors) of the patient. However, cosmetic dentistry, which is influenced by perception, personality and desires (PFD factors), can be categorised as want or demand-based dental service. For example, a patient’s request to replace old amalgam restorations with tooth-coloured restorative materials can be considered an aesthetic requirement or demand. The request of an old woman for perfectly white teeth and the ideal smile design is far more than an aesthetic requirement, and must be considered a cosmetic demand or requirement.

In my clinical practice, I divide aesthetic and cosmetic clinical cases into three different categories:

1. Preventive, or support based: treatment prevents or intercepts the diseases, defects, habits and other factors that may adversely affect the existing or the future smile aesthetics of the patient.
2. Non-motivational, or need based: treatment is carried out to restore or mimic the natural aesthetics, bearing the SRA factors of the patient in mind, and the treatment generally enhances the health and function of the oral tissue.
3. Cosmetic, or desire based: treatment is performed to enhance or supplement the aesthetic components of the smile; hence, the treatment outcome of cosmetic treatment may not be in harmony with the patient’s SRA factors as in nature-mimetic dentistry, and cosmetic treatment may not necessarily be beneficial to the health and function of the oral tissue.

**Practice philosophy in dentistry: The mindset**

The majority of dental schools around the world focus on teaching knowledge and skills in dental medicine that are based on contemporary dental science and art. Dental education does not give due consideration to healthy dental practice philosophy, which is obvious to everyone, since science and art in dentistry have no meaning if practiced by an unethical operator, who does not respect the overall health of the patient. Any scientific advancement in technology has positive and negative sides; hence, if not applied properly, it may adversely affect the profession and may become a threat.

1. I believe that a clinic or treatment centre must establish its practice philosophy according to its objectives. What a clinician wants and the kind of services he or she wants to deliver to his or her patients guides the clinic. Practically, the practice philosophy in dentistry can be classified into two different categories, depending on the mindset of the operator.
2. Patient-centred:
   - Clinicians with this kind of mindset generally have a no harm dental practice (Fig. 1). Professional honesty and humanity are the fundamental principles of such a practice. Oper- ators with this mindset enjoy sharing their clinical knowledge and skills with their professional friends and junior colleagues to promote patient-centred clinical practice in society.
   - This group of clinicians firmly believes in the word-of-mouth approach to practice marketing and always thinks of the patient’s long-term health, function and aesthetics. Clinicians practic- ing no harm dentistry are generally cheerful, happy and healthy in their professional life.
3. Financially focused:
   - Clinicians with this kind of mindset practice a financially focused dentistry and adopt various kinds of direct marketing approaches to sell their dentistry like a commodity in the market rather than a health care service.
   - Practitioners in this group generally achieve a secure financial position quickly; however, it is frequently seen that they develop chronic stress, burnout syndrome, depression, frustration and professional guilt, leading to compromised health and happiness in their professional life.

**Dentistry and professional stress**

Dentistry has long been considered a stressful occupation. Dentists perceive dentistry as being more stressful than other occupations.1 Dentists have to deal with many significant stressors in their personal and professional lives. There is some evidence to suggest that dentists suffer a higher level of occupational stress related stress.1, 2 A study has found that 83 per cent of dentists perceived dentistry as “very stressful”1 and nearly 60 per cent perceived dentistry as more stressful than other professions. Stress can elicit varying physiological and psychological responses in a person. Professional burnout is one of the possible consequences of ongoing professional stress: the effect of burnout, although work-related, often will have a negative impact on people’s personal relationships and well-being.3, 4 Hence, dentists need to take care of their health and focus on professional happiness in daily practice.

A clinician has full right to adopt the practice philosophy that he or she prefers. However, it is always advisable to apply oneself to understanding, analysing and comparing this philo-

**Three-way test: Questions for your conscience**

Cosmetic dentists can make errors in practice in two ways, first owing to a lack of the required professional knowledge and skills, and second owing to a lack of professional honesty and humanity. The first one can be reduced by good education and proper training, but the second one demands a moral shift in mindset, with a high level of consciousness in professional ethics, attitudes and respect towards the patient’s long-term health, function and natural beauty.

I apply a simple yet very powerful test to keep myself stress- and guilt-free and within the boundaries of professional ethics, honesty and humanity when planning my dental treatment plan to my patient. Clinicians can apply the three-way test
mentioned below just by taking a deep breath and closing their eyes for a moment and analysing their answers (the true response that comes to mind) with professional honesty and humanity. By giving your correct responses positively to all the questions, then it is advisable for you to propose the treatment plan and take up the case if you give negative re-
sponses to the questions, then you should rethink your proposed treat-
ment options, such as patient factors (mind, body, behaviour and surroundings), opera-
tor factors (knowledge, skills, hon-
esty and humanity), protocol factors (the truth, evidence and common sense), technology factors (health, reliability, affordability and simplicity). The use of science and technology requires consciousness in operators and awareness in patients, hence, the operator must use his or her professional knowledge and skills with honesty and humanity to select the least invasive procedure, protocol and technology in treatment, so that restorative dentistry is always mini-
mal, safe and healthy.

The effectiveness of procedures se-
lcated in cosmetic dentistry depends on the level of smile defect, type of smile design, proposed treatment option and the treatment complexity. For a minimally invasive cosmetic dentistry, the word “extension” can be classified into four types, namely non-invasive, mi-
cro-invasive, minimally invasive and invasive, and the treatment options vary among various treatment procedures and their biological cost for each are pre-
sented in Table 1. There is only one principle in selecting treatment mod-
ality in MiCD—always select the least invasive procedure as the choice of the treatment. Treatment proce-
dures mentioned under non-invasive, micro-invasive and minimally invasive are used selectively in MiCD.

Extension: Invasive dentistry

If we look carefully at the history of restorative dentistry, the word “exten-
sion” (or “invasive”) has always been a point of focus among clinicians.24
The concept of “extension for preven-
tion and retention” was pronounced by Dr G.V. Black 100 years ago and it was developed as a concept in relation to the restorative materials available at that time. However, with the development of porcelain-fused-to-metal technol-
gy in the late 1990s, the concept of “extension for functional aesthetics” was advocated which is still popular pop-
ular in clinical practice. In the early 1980s, the concept of the “Hollywood smile” had been introduced, which estab-
lished the concept of “extension for cosmetics” in dentistry.

In 2002, the FDI World Dental Federation endorsed the approach of “Minimal invasive dentistry”, which has basically focused on the conservative management of carious lesions, applying the concept of “minimal invasive dentistry” and the “LDI-Removal”. History clearly shows that, since Dr G.V. Black era to the present
day, we have been applying the concept of “extension in dentistry” in the name of prevention, retention, func-
tion, aesthetic need and cosmetic de-
sire, and caries removal. It is a clinical fact that this concept will remain the focus because each clinical situation is different, as its treatment modalities are guided by multifactorial influences such as patient factors (mind, body, behaviour and surroundings), opera-
tor factors (knowledge, skills, hon-
esty and humanity), protocol factors (the truth, evidence and common sense), technology factors (health, reliability, affordability and simplicity). The use of science and technology requires consciousness in operators and awareness in patients, hence, the operator must use his or her professional knowledge and skills with honesty and humanity to select the least invasive procedure, protocol and technology in treatment, so that restorative dentistry is always mini-
mal, safe and healthy.

The invasiveness of procedures se-
lcated in cosmetic dentistry depends on the level of smile defect, type of smile design, proposed treatment option and the treatment complexity. For a minimally invasive cosmetic dentistry, the word “extension” can be classified into four types, namely non-invasive, mi-
cro-invasive, minimally invasive and invasive, and the treatment options vary among various treatment procedures and their biological cost for each are pre-
sented in Table 1. There is only one principle in selecting treatment mod-
ality in MiCD—always select the least invasive procedure as the choice of the treatment. Treatment proce-
dures mentioned under non-invasive, micro-invasive and minimally invasive are used selectively in MiCD.

MiCD treatment protocol and clinical technique

Minimally invasive dentistry was developed 60 years ago by restorative experts and founded on sound evidence-based principles.17–19 In dentistry, it has focused mainly on prevention, remineralisation and minimal dental intervention in caries management and given insufficient attention to other oral health prob-
lems. For this reason, I developed the MiCD concept and its treatment pro-
tocol in 2000. This protocol integrates the evidence-based minimally invasive philosophy into aesthetic dentistry in the hope that it will help practitioners achieve optimum results in terms of health, function and aesthetics with minimum treatment intervention and optimum patient satisfaction. The MiCD concept and treatment protocol are explained in an article titled “Minimal invasive cosmetic—dendistry—Concept and treatment protocol” (Fig. 1). In the current article, I dis-

cuss the MiCD core principles (Table 1). MiCD treatment protocol and clinical technique (Fig. 2).

MiCD clinical technique: Rejuvenation, restoration, recontouring, rejuvenation, and restoration

The MiCD clinical technique focuses on the aesthetic pyramid of the Smile Design Wheel (Fig. 3). Aesthetic components in dentistry are divided in to three broad groups:

1. macro-aesthetics,
2. mini-aesthetics; and
3. micro-aesthetics.

Each aesthetic group deals with dif-

ferent smile aesthetic components (Tab. 1) and each component must be harmonised at the end of treatment. According to the smile defect and pa-
tient’s desire, there are four different techniques in MiCD to enhance smile aesthetics:

1. Rejuvenation: to rejuvenate in MiCD to enhance smile aesthetics with minor modifications in tooth position, colour and form, also known as the MiCD ABC principles, namely align, brighten and contour (Figs. 4–9).
2. Align: minor discrepancies be-
tween the facial and dental mid-
lines are acceptable in many in-
stances.23 However, a canonical line would be more obvious25 and therefore less acceptable in cos-
metic dentistry. Similarly, the discolouration of enamel or discoloration of the dentine can affect the smile. The correction to the midline and axial inclination pro-
cedures are integrated in to the MiCD protocol to enhance smile aesthetics.

3. Micro-aesthetics: the precise anterior tooth position are carried out using cosmetic orthodontic procedures with fixed or remov-
able aligners. Once the anterior teeth are in an aesthetically accept-

able position, the aesthetic con-


cern of the patient generally shifts towards the colour enhancement of the dentition. It is to be noted that a well-aligned tooth generally requires no or less tooth prepara-
tion during tooth contour (shape and size) modification. This helps the clinician to achieve aesthetic smiles with micro- or minimally invasive procedures with very low biological cost.

4. Mini-aesthetics: to rejuvenate in MiCD to enhance smile aesthetics with minimal modifications in tooth position, colour, form and also known as the MiCD ABC principles, namely align, brighten and contour (Figs. 10–14).

Each component is divided in to three broad groups: MiCD—Minimal invasive cosmetic dentistry—Concept and treatment protocol. Aesthetic components in dentistry are divided in to three broad groups: macro-aesthetics, micro-aesthetics, and mini-aesthetics. Each aesthetic group deals with different smile aesthetic components (Tab. 3) and each component must be harmonised at the end of treatment. According to the smile defect and patient's desire, there are four different techniques in MiCD to enhance smile aesthetics: rejuvenation, restoration, recontouring, rejuvenation, and restoration. MiCD treatment protocol and clinical technique (Fig. 2).
Introduction: Smile analysis and aesthetic design

Dental facial aesthetics can be defined in three ways.

Traditionally, dental and facial aesthetics have been defined in terms of macro- and micro-elements. Macro-aesthetics encompasses the relationships between the face, lips, gingiva, and teeth and the perception that the colour and form are pleasing. Micro-aesthetics involves the aesthetics of an individual tooth and the perception that the colour and form are pleasing.

Historically, accepted smile design concepts and smile parameters have helped to design aesthetic treatments. These specific measurements of form, colour, and tooth/aesthetic elements aid in transferring smile design information between the dentist, ceramist, and patient. Aesthetics in dentistry can encompass a broad area—known as the aesthetic zone.

Further classification identified five levels of aesthetics: facial, orofacial, oral, denotingival, and dental (Tab. I).

Initiating smile analysis: Evaluating facial and orofacial aesthetics

The smile analysis/design process begins at the macro level, examining the patient’s face first, progressing to an evaluation of the individual teeth, and finally moving to patient selection considerations. Multiple photographic views (e.g., facial and sagittal) facilitate this analysis.

At the macro level, facial elements are evaluated for form and balance, with an emphasis on how they may be affected by dental treatment. During the macro-analysis, the balance of the facial thirds is examined. If something appears unbalanced in any one of these zones, the face and/or smile will appear unesthetic.

Such evaluations help determine the extent and type of treatment necessary to affect the aesthetic changes desired. Depending on the complexity and uniqueness of a given case, orthodontics could be considered when restorative treatment alone would not produce the desired results, such as when facial height is an issue and the lower third is affected. In other cases—but not all—restorative treatment could alter the vertical dimension of occlusion to open the bite and enhance aesthetics when a patient presents with relatively even facial thirds.

Facial aesthetics  Total facial form and balance
Orofacial aesthetics  Maxillomandibular relationship to the face and the dental midline relationship to the face per-taining to the teeth, mouth, and gingiva
Oral aesthetics  Labial, dental, gingival; the relationships of the lips to the arches, gingiva, and teeth
Denotingival aesthetics  Relationship of the gingiva to the teeth collectively and individually
Dental aesthetics  Macro- and micro-aesthetics, both inter- and intra-tooth

Table 1: Components of smile analysis and aesthetic design.
1 Year Clinical Masters™ Program in Aesthetic and Restorative Dentistry

Three sessions with live patient treatment, hands-on practice, plus online training under the Masters’ supervision.

Learn from the Masters of Aesthetic and Restorative Dentistry:

Dr. Edil Milanesi
Dr. Francisco Bapaci
Dr. Maurizio Frisiani
Dr. Silvano Polièanesi
Dr. Didier Delcroix
Dr. Gianfranco Poltronio

Registration information:

12 days of live training with the Masters in Athens (GR) and Geneva (CH) + self study

Curriculum fee: €9,900
(Based on your schedule, you can register for this program one session at a time.)

Collaborate on your cases and access hours of premium video training and live webinars.

University of the Pacific

You will receive a certificate from the University of the Pacific.

100 C.E. CREDITS

University of the Pacific

ADA CERP®

Tribune Group GmbH is the ADA CERP provider. ADA CERP is a service of the American Dental Association to assist dental professionals in identifying quality providers of continuing dental education. ADA CERP does not approve or endorse individual courses or instructors, nor does it imply acceptance of credit hours by boards of dentistry.

Tribune Group GmbH is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing dental education programs of this program provider are accepted by AGD for Fellowship, Mastership, and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement.
Evaluating oral aesthetics

The dentolabial gingival re-

The midline should be vertical

Can the ideal position be achieved

The midline only should be moved

Dentogingival aesthetics

Gingival margin placement and the scalloped shape, in particular, are well discussed in the literature. As gingival heights are measured. heights relative to the central incisor, lateral incisor, and canine in an up/down/up relationship are considered important landmarks. Follow this strategy to create a false perception that the gingival line is incisal to the central incisor. However, this can be helpful in aesthetic tooth relationships, the gingival line of the four incisors is approximately the line (Fig. 6), with the lateral incisor perhaps being slightly incisal. The gingival line should be relatively parallel to the horizon for the incisors and the lateral incisors symmetric on each side of the midline. The gingival contours (e.g., gingival scallop) should follow a radiating arch similar to the incisal line. The gingival scallop shapes the teeth and should be between 4.5 mm and 5 mm (Fig. 7).

Related to normal gingival form is midline placement. Although usually the first issue addressed in smile design, it is not as significant as tooth form, gingival form, tooth shape, or smile line.
Once activated, zoom in (Fig. 16) and trace the teeth with the lasso tool.

To create a pencil outline of the tooth, with the transparent layer active, click on the pencil tool in the menu bar; in the edit drop-down menu, select "stroke"; choose black for colour, and select a two-pixel stroke penciller (Fig. 17) which will create a perfect tracing of your selection. Click "OK" to stroke the selection. To trace with the lasso selection tool one tooth at a time and then stroke (Fig. 18) Select and stroke (trace) the teeth in the second premolar (the first molar is acceptable, (Fig. 19). The image should be sized now for easy future use in a smile design. In the author’s experience, it is best to take the size of the image to a height of 720 pixels (Fig. 20) by opening up the image size menu and selecting 720 pixels for the height. The width will adjust proportionately.

At this time, the tooth grid tracing can be saved, without the image of the teeth, by double-clicking on the layer of the tooth image. Adobe®’s ‘new layer’ (new layer) will appear, click "OK". This process unlocks the layer of the teeth so it can be removed. Drag the layer of the teeth to the trash, leaving only the layer with the tracing of the teeth (Fig. 20). In the file menu, click "save as" and choose "png" or "psd" (Photoshop) as the file type. This will preserve the transparency. You do not want to save it as a JPEG, since this would create a white background around the tracing. Name the file appropriately (e.g., 75% W/L central).

By tracing several patients’ teeth that have tooth size and proportion in the aesthetic zone and saving them, you can create a library of tooth grids to custom design new teeth for your patients who require smile designs.

The Photoshop smile design technique

The Photoshop Smile Design (PSD) technique can be done on any image, and images can be combined to show the full face or the lower third with lips on or lips off. This article demonstrates how to perform the technique on the cheek-retracted view.

The first step in the PSD technique is to create a digital conversion of the actual tooth length, width, and proportion. To determine the proposed new length and proportion of the tooth.

**Determining digital tooth size**

To determine digital tooth size, follow these steps.

• Create a conversion factor by dividing the proposed length developed from the smile analysis by the existing length of the tooth.

• The patient’s tooth can be measured in the mouth or on the cast (Fig. 22) if the length measures 8.5 mm but needs to be at 11 mm for an aesthetic smile, divide by 8.5. The conversion factor equals 1.29, a 29% digital increase length-wise.

• Open the full arch cheek-retracted view in Photoshop, and zoom in on the central incisor.

• Select the eyepodder palette.

• A new menu will appear. Select the ruler tool (Fig. 23).

• Drag and click the ruler tool from the top to the bottom of the tooth to generate a vertical number, in this case 170 pixels (Fig. 24). Multiply the number of pixels by the conversion factor. In this case, 170 x 129 = 21,930 pixels; 219 pixels is digitally equal to 1 mm (Fig. 25). Determine the digital tooth width using the same formula.

• Create a new layer, leave it transparent, and mark the measurement with the pencil tool (Fig. 26).

**Applying a new proposed tooth form**

Next, follow these steps.

• After performing the smile analysis and digital measurements, choose a custom tooth grid appropriate for the patient. Select a tooth grid based on the width-to-length ratio of the planned teeth (e.g., 80/70/90 or 80/65/80). Open the image of the chosen tooth grid in Photoshop and drag the grid onto the image of the tooth to be smile-designed (Fig. 27).

• If the shape or length is deemed inappropriate, press the command button (control button for PC) and ‘x’ to delete and select a suitable choice.

• Depending on the original image size, the tooth grid may be proportionately too big or too small. To enlarge or shrink the tooth grid created (with the layer activated), press command (or control) and ‘x’ to bring up the free transform function. While holding the shift key (holding the shift key allows you to transform the object proportionately), click and drag a corner left or right to bring up the free transform function. In this case, digital increase length-wise.

• Areas of the grid can be individually altered using the liquify tool (Fig. 29).

**Digitally creating new aesthetic teeth**

Next, follow these suggested steps.

• With the new tooth grid layer and the magwand tool both activated, click on each tooth to select all of the teeth in the grid (Fig. 30).

• Expand the selection by two pixels on each side of the tooth image menu, click “select” modify “expand” (Fig. 31).

• Note that the selection better approximates the grid. You can expand the selection or contract as necessary using the same menu.

• Activate the layer of the teeth (cheek-retracted view) by clicking on it (Fig. 32).

• Next, activate the liquify filter (you will see a red mask around the shapes of the proposed teeth). The mask creates a digital limit that the teeth cannot be altered beyond. This is similar to creating a mask with tape for painting a shape (Fig. 30).

• Use the forward warp tool by clicking on an area of the existing tooth and dragging to mold/shape the tooth into the shape of the new proposed outline form (Fig. 34).

• Repeat this for each tooth. If you make a mistake or do not like something, click command (or control) and “z” to go back to the previous edit (Fig. 35).

• Adjusting tooth brightness

The following steps are recommended next.

• Select the whitening tool (dodge tool) to brighten the teeth. In the dodge tool palette, click on “mid-tones” and set the exposure to approximately 3. Click on the areas of the tooth you want brightened (Figs. 36 & 37).

• Alternatively, with the teeth selected, you can use the brightness adjustment in the brightness/contrast menu, click “image” adjusts > brightness/contrast.

• Performing the changes on only one side of the mouth allows the patient to compare the new smile design to his/her original teeth before agreeing to treatment.

Create a copy
To save the information you have created for presentation to the patient, follow these tips.

• Go to "file" and select “save as.”

• When the menu appears, click on the “copy” box.

• Name the file at that step.

• Save it as a JPEG file type.

• Sign off where you want it saved.

• Click “save.”

A file of the current state of the image will be created in the designated area. You can now continue working on the image and save again at any point you want.

**Conclusion**

Knowledge of smile design, coupled with new and innovative dental technologies, allows dentists to diagnose, plan, create, and deliver aesthetically pleasing new smiles. Simultaneously, digital dentistry is enabling dentists to provide what patients demand: quick, comfortable, and predictable dental restorations that satisfy their aesthetic needs.

**The Dental Tribune International C.E. Magazines**

www.dental-tribune.com

I would like to subscribe to

- [ ] CAD/CAM
- [ ] cone beam
- [ ] cosmetic dentistry*
- [ ] DT study Club (tissue)**
- [ ] gums*
- [ ] implants
- [ ] laser
- [ ] ortho
- [ ] prevention*
- [ ] roots

**Prices for 2 issues/year are €22 and €20 respectively per year.**

**€44 magazine (4 issues/year, incl. shipping and VAT for customers outside Germany)**

Your subscription will be renewed automatically every year until a written cancellation is sent to Dental Tribune International GmbH, Holbornstr. 29, 10179 Berlin, Germany, six weeks prior to the renewal date.

**Subscription now!**

[ ] Yes **[ ] No

Fax: +49 30 482484 173 E-mail: subscriptions@dental-tribune.com

Dental Tribune International GmbH, Holbornstr. 29, 10179 Berlin, Germany

This article was originally published in the Journal of Cosmetic Dentistry, spring issue, No 5/2015, Vol 29, and the Clinical Masters Magazine No1/2015.

[ ] Yes **[ ] No

Fax: +49 30 482484 173 E-mail: subscriptions@dental-tribune.com

Dental Tribune International GmbH, Holbornstr. 29, 10179 Berlin, Germany

This article was originally published in the Journal of Cosmetic Dentistry, spring issue, No 5/2015, Vol 29, and the Clinical Masters Magazine No1/2015.

[ ] Yes **[ ] No

Fax: +49 30 482484 173 E-mail: subscriptions@dental-tribune.com
CROWN 24 will bring you new customers and save you up to 60%.

E-MAX CROWN: £89.90
£145.00

PFM CROWN: £54.90
£115.00

✓ Our advertising will bring you new patients
✓ Best prices from us
✓ Lower costs for you
✓ 5-year guarantee
✓ Free shipping

BECOME A PARTNER AND ORDER YOUR CROWN24 STARTER KIT.

Call us: 0800 152 2338
Email us: info@crown24uk.co.uk
Download pack: www.crown24uk.co.uk

We advertise on your behalf!
Through a large scale Google Ads campaign we market our dental crowns and put interested patients in contact with partner dentists.

Don’t lose out to your competition and become a Crown 24 partner today.