Every CEREC practice has the clientele that it deserves

**RETURN ON INVESTMENT.** Is a dental practice a reflection of its patients. Or do the patients reflect the dental practice? The answer to this question is of direct relevance to investment decisions. Dentists exert a greater influence on their patients than they themselves realize.

The CEREC procedure is easy to learn and integrate into existing practice configurations. CEREC is scientifically tested and clinically proven. It delivers above-average aesthetic outcomes. And low-cost finance is available from your bank. Frequently, small changes can make a big difference. For example, in the way you approach your patients. The more you look for new job satisfaction, less stress, satisfied patients and a dental practice that is ideally equipped for the future.

Dr. Wilhelm Schneider
Head of CEREC product marketing of Sirona

**INTERVIEW.** CEREC in dental practices and laboratories, interview with Jürgen Pischel, Editor-in-Chief of the weekly journal “DZW Die Zahnarzt-Woche”.

CEREC Zeitung: As a journalist you are closely tuned to public opinion. What do patients expect with regard to ceramic restorations?

Pischel: Patients definitely enquire about the benefits of new treatment methods – for example, about all-ceramic restorations, CAD/CAM techniques and adhesive bonding. And due to the changes in Germany’s health insurance system it is in the patients’ and dentists’ interests to discuss the various treatment options and their clinical pros and cons.

CEREC Zeitung: Do the patients have specific expectations?

Pischel: In my view, biocompatibility is the most important argument in favour of all-ceramic restorations. But can patients really afford CEREC? On average, 1,000 patients have a combined disposable income in excess of 72 million. This money is spent on a wide variety of different things: cars, holidays, sporting activities, hair styling – and healthcare. No need to make compromises for financial reasons.

Time pressure and stress are not conducive to high-quality dental treatment. Numerous dentists and patients have had negative experiences in this respect. In an ideal world dentists should be able to take all the time they need to treat the patient. Only in this way can they achieve the quality that the patients – and they themselves – expect. CEREC users have more time at their disposal.

The German Society for Computerized Dentistry asked more than 1,000 patients why they had opted for CEREC. The prime motive was the desire for metal-free restorations. A surprisingly large number were aware of the tissue-conserving benefits of the CEREC procedure. The desire to preserve as much healthy tooth tissue as possible was the second most important motive for choosing CEREC, followed by aesthetic reasons and the advantage of treatment in a single appointment. CEREC offers the patient unique benefits in terms of comfort and convenience. The dentist can do without a conventional impression, which many patients find very unpleasant as it provokes a gagging reflex. Instead the dentist creates an optical impression using the CEREC intraoral camera. In addition, CEREC allows all-ceramic restorations to be created and placed in a single treatment session. There is no need for a temporary or for a repeat appointment. Busy professionals, in particular, greatly value this added convenience.

This is the secret of CEREC’s success: all-ceramic restorations, plus single-appointment treatment. Most patients are more than willing to pay extra for a CEREC restoration. From the dentist’s viewpoint CEREC paves the way to greater job satisfaction, less stress, positive feedback and – last but not least – to sustained profitability and a secure future.

"20th Anniversary Experience" in Las Vegas

Even if you missed the 20 YC events in Berlin and Cookim/Australia, you still have the chance to celebrate the 20th anniversary of CEREC in style. From 13 to 15 October 2006 CEREC users from the USA and all over the world will get together in Las Vegas/USA. Prominent members of the CEREC community such as Lee Cup and Professor Mifflern will be attending. The venue – Bell’s Hotel & Casino – offers a complete spectrum of amenities. The high-quality lecture program will be accompanied by a golf tournament at Rio Secco Golf Club and a series of entertaining get-togethers featuring celebrities such as the Tonight Show host Jay Leno.
In many cases dentists are in a position to deliver crown restorations – and not just single teeth. Digital imaging systems will be used to capture dental impressions. This is a logical consequence of the CAD/CAM technology. The CEREC chairside method is so versatile that it can be used in all conceivable cases where a temporary filling is a logical consequence of the CEREC technology. The CEREC chairside method has been widely published in the print media and electronic media. An inlay in a single appointment – without the need for a temporary filling – is a big hit with patients.

CEREC Zeitung: Is the CEREC chairside method a one-off case or do you predict that CAD/CAM technology will have a wider impact on dentistry?

Pischel: Digital technology has only just begun to take root. It will revolutionize dentistry, with especially dramatic consequences for dental laboratories. The computerized dental technician will work with the acquisition of the patient’s data digitally capable of designing biometric occlusal surfaces.

CEREC Zeitung: Dental technicians will require extensive IT skills in order to adapt their lab procedures to the new practical demands. What changes are in store for dental labs? Is it true that only the top laboratories can afford CAD/CAM technology?

Pischel: One thing is clear: we will still need dental technicians, but different from those we have today. Not "craftsmen", but CAD/CAM-trained dental designers. They will have to adapt themselves to new working methods. The interface is the introral impression created by the dentist or an extrarow sawcut model. The technician will deliver the data for the design process. The dental technician can contribute his know-how to create a machinable restoration or framework. The laboratory’s specialist knowledge is also necessary in cases where functional articulation or facial arc measurements have to be taken into consideration. Many manufacturers of zirconium oxide — especially in connection with complex designs — are in a position to adapt CAD/CAM technology.

Pischel: Increasingly, dental technicians will require CAD/CAM skills. The Sirona inLab system has already revolutionized laboratory workflows. The interface is a computer-con-trolled milling machine which can be programmed to automatically generate the final restoration. The computer can’t replace the dental technician; he can contribute his know-how to the design process. Milling work and the sintering of oxide ceramics — especially suitable zirconium oxide (ZrO2) — offer considerable advantages. Unlike metal abutments, the all-ceramic material remains invisible even in cases where the esthetic aspect is very thin. The transition between the abutment and the ceramic crown likewise remains imperceptible, even in the event of gingival retraction. As a result of its white colour, ceramic provides a good basis for achieving natural staining and transparency. A ceramic crown is adhesively bonded to the ceramic bridge. A critical aspect is the screw connection between the crown and the abutment. For this reason most implantologists prefer to use con-traction screws in the absence of a vertical gap. A precondition for immediate implants is the availability of sufficient bone tissue to ensure prima-rily stability. As a rule this condition is fulfilled in the anterior region of the lower jaw. Caution is recom-mended in the case of edentulous gaps and free-end spaces. In upper jaws with pronounced resorption, spongy bone tissue immediately below the implant is the available bone tissue. The interface between the implant and the superstructure. A very important matter is the angular divergence of the superstructure. A critical aspect is the screw connection between the crown and the abutment. So far dentists have tended to use endosteal abutments made of titanium or cast zirconium dioxide crowns using metal superstructures. All-ceramic abutments and implant crowns offer convincing aesthetic advantages. Unlike metal abutments, the all-ceramic material remains invisible even in cases where the esthetic aspect is very thin.

CEREC Zeitung: Which factors limit the demand for all-ceramic restorations? For example, the additional costs incurred by the patient?

Pischel: The proportion of allceramic restorations in Germany is still less than 15%. This has to do with the public healthcare system. Patients are required to pay extra for ceramic restorations. If the reasons for the higher costs are not explain-ed properly, patients will be unwilling to accept this extra charge. In the USA an all-ceramic crown costs roughly the same as a conventional PFM crown. As a result the demand for ceramic restorations is much higher. Germany’s private health insurers are still unwilling to pay for all-ceramic implants. They claim that such bridges are not clini-cally feasible — despite the fact that numerous international scientific studies have come to the opposite conclusion. Quality is not the issue here. Instead, the insurers are only interested in saving money. They leave their customers in the lurch and are even prepared to ignore court judgments.

CEREC Zeitung: Let’s turn our atten-tion back to dentists. Do you think that CAD/CAM technology will lead to a shift away from the laboratory towards the dentists’ offices?

Pischel: You cannot halt progress — just as you cannot halt globalization. It is likely that many dentists will want to extend their high-tech skills and design occlusal surfaces on a PC. However, the decisive factor is that the digital revolution is paving the way to new diagnosis and thera-py methods. These liberate dentists from manual, "craft-based" tasks. They will have greater scope to apply their medical skills and more time to counsel their patients.

CEREC Magazine: Mr Pischel, thank you for talking to us today.

Manfred Kern
Successful start-ups – with CEREC

PRACTICE START-UPS. CEREC has a determining influence on the way patients perceive a dental practice – from the outset. Before setting up their own practices dentists should consider the best way to integrate CEREC into their treatment concept.

Setting up a dental practice is a complex business. In addition to finding a suitable location, the dentist has to choose suitable fittings and equipment, recruit staff and arrange the necessary finance. Must dental schools do not prepare students adequately for these tasks. Interviews with successful start-up dentists underline the necessity of having a clearly defined practice concept. As soon as the patient comes through the door he or she should be immediately aware of what the treatment team has to offer. Given the high concentration of dental practices in many towns and cities in Germany, it is essential that dentists differentiate themselves and gain a competitive advantage in terms of services and image.

Early decisions pay dividends

During their clinical training – at the latest dentists should start planning their future dental practice. It is important to acquire additional knowledge and skills in the area of endodontics, adhesive bonding, all-ceramic crowns, caries prevention, TMJ diagnostics, implant prosthetics and laser surgery. The dentist must likewise learn how to communicate these skills when counselling patients. Once the start-up enters the acute phase there is usually no time for such preparations. An early “business plan” is worth its weight in gold.

Patients can watch the CEREC design process “live” and reap the benefits of single-visit treatment...

My dental practice in Frankfurt illustrates the importance of having a detailed concept. I was able to familiarize myself with the CEREC system while at dental school. I was particularly impressed by the possibility of creating and placing inlays during a single appointment. This eliminates the need for impressions, temporaries and planning their future dental practice. It is important to acquire additional knowledge and skills in the area of endodontics, adhesive bonding, all-ceramic crowns, caries prevention, TMJ diagnostics, implant prosthetics and laser surgery. The dentist must likewise learn how to communicate these skills when counselling patients. Once the start-up enters the acute phase there is usually no time for such preparations. An early “business plan” is worth its weight in gold.

The CEREC 3D software now enables two or more milling units to be connected to a single imaging unit. Configuring the system is child’s play. This is of particular benefit to users who specialize in quadrant restorations and veneers.

The update costs 450 euros. Members of the CEREC Silver Club will receive the update free of charge.

Of course, dentists can still opt for partial crowns made of metal. However, this requires the removal of additional tooth tissue in order to accommodate the cusps and/or to create retention surfaces. This is not necessary in the case of all-ceramic inlays, onlays and partial crowns. Instead, these restorations are permanently bonded to the remaining tooth tissue. The dentist merely has to remove hard carious tissue. Compared with metal restorations, this helps to preserve the natural tooth and simplifies the preparation process. If two metal restorations are in proximal contact, good dental practice dictates that both should be replaced. If a different type of metal is used, this could lead to a stress concentration. Dentists who use ceramic materials can restrict themselves to the restorative technique that actually needs replacement. Here again, this helps to conserve natural tooth tissue.

Preserving healthy tooth tissue

MINIMALLY INVASIVE TREATMENT. Many dentists claim that ceramic restorations are highly aesthetic but do not contribute to the preservation of healthy tooth tissue. Why does this prejudice still persist?

The old days dental technicians created inlays in the laboratory using the layering method. Despite their undeniably aesthetic qualities, these restorations lacked mechanical strength. This changed radically with the introduction of adhesively bonded CEREC restorations made of machinable ceramic material.

The combination of industrially produced ceramics and adhesive bonding paved the way for a defect-oriented treatment approach (even in cases of extensive caries). The high strength and reproducible quality of the ceramic materials allows the dentist to use a partial crown instead of a full crown. Long-term clinical studies indicate that CEREC permits the minimally invasive restoration of extensive cavities. Compared with conventional lab-produced restorations, CEREC has the special advantage that the dentist can dispense with a temporary. Temporaries pose critical problems, especially when the remaining tooth tissue is thin-walled. CEREC also allows the dentist to dispense with endodontic treatment necessary to create a secure stump.

Digital marriage

AMALGAMATION. Since 2006 the German Society for Computerized Dentistry (DGZMK) has been part of the German Society for Oral and Maxillofacial Medicine (DGZMK).

Many times in the past the German Society for Computerized Dentistry (DGZMK) organized the IG working party of the German Society for Oral and Maxillofacial Medicine (DGZMK) has successfully joined forces to organize seminars. At its 13th annual meeting the DGZMK decided to amalgamate with the DGZMK.

The DGZMK members will derive numerous benefits from this move. Firstly, DGZMK will publish scientific research relating to computerized dental practices and CAD/CAM applications. Secondly, the DGZMK members will be able to participate in the open scientific dialogue at DGZMK conferences and at events organized by the organization’s IT working party. Thirdly, the DGZMK will qualify for a seat on the executive committee of the DGZMK. And finally, DGZMK members will be able to quote the scientific opinions of the DGZMK with regard to billing items.

CEREC 3D update streamlines workflows

USABILITY. Almost every software update promises new features and enhanced ease of use. Is this also the true new version of CEREC 3D?

Version V.8 R.34.000 does indeed offer several new features which make CEREC even easier to use. One example is automatic computation of the occlusal surfaces with reference to the antagonists. This function saves valuable time during the design and milling phases. However, the update has a lot more to offer. It boasts a special articulation program based on a dynamic bite register which automatically eliminates the pre-results concerning from dynamic occlusion.

3D preview simplifies operation

The new 3D preview function likewise simplifies the operation of the CEREC software. All the acquired images are displayed three-dimensionally. With the help of the ultra-fast program algorithms it is now possible to combine several images from a three-dimensional model. This makes CEREC 3D even easier to learn and boosts the confidence in challenging situations.

The step bur is probably the most exciting feature of the new update. Despite its small diameter (1.6 mm) the step bur is at least as durable as the conventional cylindrical bur. It produces restorations with a much improved initial fit, even in the case of complex preparations.

In addition, the software displays the preparation model in a higher resolution. It is no longer necessary to switch to the grey-scale mode in order to view the epigingival margin.

The tool change dialogue now includes icons that tell the assistant which instrument belongs to which side of the milling unit. This is particularly important when the step bur must be replaced. (The step bur must be inserted on the left-hand side, and the tapered bur on the right-hand side.)

The CEREC 3D software now enables two or more milling units to be connected to a single imaging unit. Configuring the system is child’s play. This is of particular benefit to users who specialize in quadrant restorations and veneers.

The update costs 450 euros. Members of the CEREC Silver Club will receive the update free of charge.

The DGZMK is committed to fostering scientific research in the field of dentistry. In response to the growing trend towards computerization, the organization’s IT working party has set up a special working group for applied IT in oral and maxillofacial medicine. Following the amalgamation the DGZMK will work closely with this working group.
ICELAND. Dr. Elin Sigurgeirsdóttir is a real pioneer. She’s the first dentist in Iceland to use CEREC 3D. In the first two months she welcomed 35 new patients to her practice.

Iceland is famous for its geysers and fjords – and for its elves. More than half of the 300,000 inhabitants believe in the existence of these supernatural beings. The capital Reykjavik even has its own state official responsible for the well-being of the elf population. Before the so-called “altaitoguasafni” has given his approval, road building and other construction projects cannot go ahead. Reportedly, the elves react sensitively to noise and other disturbances in their environment. The Icelanders are convinced that wells can dry up and fjords can disappear if “the elves are not taken care of.”

In spite of their belief in the supernatural, the Icelanders are anything but backward looking. Twenty-seven percent of the population have broadband Internet connection. This puts Iceland at the top of the development league table. Iceland is a pioneer in many areas: Icelanders are the first in the world to have been privy to an online encyclopedia. The Global Encyclopedia is freely available. The Encyclopædia is read by 80,000 people a day. Iceland’s national newspaper, Morgunblaðið is read by 140,000 people a day.

“Icelanders are definitely a people of today,” says Dr. Elin Sigurgeirsdóttir, who is convinced that successful dental practice requires an avant-garde approach.

It is now three years since she purchased CEREC 3D. In the first two months she had already attracted 35 new patients who were interested in CEREC restorations. After only a few weeks she had already attracted 35 new patients who were interested in CEREC.

Elin Sigurgeirsdóttir uses “before” and “after” pictures in order to illustrate successful cases. And when she explains that treatment can be completed during a single appointment, most patients decide immediately in favour of CEREC. Biocompatibility and outstanding longevity are further convincing arguments. News of the adhesive bonding of the ceramic wing with the aid of a cingulum rest and attachment grooves.

“This provided the basis for the adhesive bonding of the ceramic wing with the aid of a cingulum rest and attachment grooves. The master model was digitized using the Eos scanner. The design steps were performed on a computer. Using the Sirona in-Lab system the framework was milled out of a pre-sintered zirconium oxide (ZrO₂) block and then fired in a sintering furnace. Dr. Sailer chose the veneering material e.max Ceram.

Sirona ORTHOPHOS XGPlus X-ray system. A specialist in prosthetic dentistry, she operates a group practice together with three other dentists in the Icelandic capital Reykjavik. Three dental hygienists and five assistants belong to the team. Implants are vital part of the practice portfolio. Icelanders and other disturbances in their environment.

In March 2005, the island’s dental practices. Before she purchased CEREC 3D Dr. Elin Sigurgeirsdóttir was already the proud owner of a low-radiation CAM procedure. Iceland lies north of the Arctic circle. The long nights of the midnight sun are an ideal opportunity for open-air parties and get-togethers. A major topic of conversation this summer was Dr. Elin Sigurgeirsdóttir and her dental practice at Grensásvegi 48, Reykjavik, where patients are fitted with natural, tooth-coloured dental restorations in less than an hour.

When she explains that treatment can be completed during a single appointment, most patients decide immediately in favour of CEREC.

For more information, contact your specialized Sirona dealer or visit www.sirona.com/siropure

TREATMENT CENTRES | HANDPIECES | HYGIENE SYSTEMS | X-RAY SYSTEMS | CAD/CAM SYSTEMS

COMING SOON

04 - 06 October Espomedtal, Milan/Italy
05 - 07 October Dental Showcase, London/UK
12 - 14 October NoDental, Stavanger/Norway
13 - 15 October The 5th World Dental Meeting, Yokohama/Japan
13 - 15 October 20°C Congress, Las Vegas/U.S.A.
19 - 21 October Dentex, Brussels/Belgium
26 - 28 October Swedenental, Stockholm/Sweden
16 - 19 November Advanced CEREC Course in Moscow/Russia (English language)