It was 1983 when LensCrafters® first opened, bringing a clinician (optometrist) and a laboratory (lens grinding) together under one roof to offer control of the entire procedure and offering patient convenience like never before.1 Those of you who need glasses and are old enough to remember the days before LensCrafters and “glasses in an hour” likely remember visiting your optometrist, getting diagnosed, selecting choice “A” or “B” as the optometrist flipped through lenses, then picking out your perfect “lens-free” frames only to be told: “Come back in two weeks and we’ll have them ready for you.”

Today, unless we have designer frames, special coatings or a unique case, we get a little impatient waiting more than an hour to get our new glasses, and we don’t think twice about the quality of the end result. Instead, we watch in awe as machines create our customized lenses behind big glass display windows, and we immediately (or within the hour) gain all the benefits of 20/20 vision. In the same decade (’80s), three dental pioneers (Duret, Moermann and Andersson2) began work on a somewhat similar concept in dental care utilizing digital data for computer-assisted design with computer-assisted manufacturing (CAD/CAM).

In spite of the fact that it’s been more than 25 years since the successful introduction of a chairside restorative system (CEREC), only around 10 percent of dental practices in North America have embraced the technology. Why so few? Most of us have heard directly or indirectly the stories of the first couple decades of development where occlusion had to be created by hand. Or we’ve had cases show up in our offices and have attributed any less-than-ideal restoration to the evils of CAD/CAM dentistry, somehow forgetting that those restorations weren’t placed by the CAD/CAM systems but merely fabricated by them.

It seems those experiences and stories are forever imprinted in our dental minds and even today create prejudices against any possible improvement in the technology and possibilities. So it is nice to see the clinical successes of CAD/CAM documented and discussed in a wide variety of online forums, as well as read clinical documentation of the quality and efficiency of the entire system.3 But more than anything else, it is important that we as a profession take a clear 20/20 look at all that is possible with chairside CAD/CAM dentistry today and really see the difference it can make in our quality of care, patient satisfaction and entire practice motivation. Chaiseindentistry will open your eyes to all the possibilities that modern dentistry has to offer, and best of all, the return on investment with these systems provides you an even greater financial opportunity to see and take advantage of more technological opportunities (e.g., lasers, diagnostics, digital communication and record keeping) to enable a higher level of diagnosis and care.

I just celebrated the 10th anniversary of having my own private practice specializing in comprehensive care utilizing the latest in technology to provide
my patients state-of-the-art dentistry in a friendly, safe and cost-effective environment in Grandville, Mich., a suburb of Grand Rapids. I have always invested heavily in technology that would improve my diagnosis and care, incorporating intraoral cameras in 2002, hard- and soft-tissue lasers in 2004, digital radiographs and charting in 2008 and the E4D Dentist System in 2009. I made the decision for chairside CAD/CAM dentistry after seeing the quality of restoration possible combined with the ease of use of the software, powder-free scanning and unlimited on-line support via S.O.S (Support On Site). My patients might not be “main street” patients, but they immediately appreciate the fact that I offer them the latest technology, and they know if I’ve incorporated it, it will provide them a better solution. I made the investment because of the quality and control it would provide me, but it is amazing that once you incorporate chairside CAD/CAM dentistry into your routine care, patients also appreciate and see the difference. Few dental patients have actually experienced or witnessed the benefits of the technology at work during their dental appointments, whether for impression taking, planning their treatments or fabricating their restorations.

In my experience, when they do have that opportunity, they are engaged in the process. What’s more, the presence of CAD/CAM technology in the dental office gives patients a different perspective about the practice, one that says, “Wow, they’re on top of it and they’re willing to bring in new technology to better my care.” And chairside CAD/CAM does enable better

Fig. 2. Combination case maximizing conservation and effective utilization of technology with same-day IPS e.max restorations and direct composite restorations (PM #195). Direct restorations completed while ceramic was milling, thus maximizing production.

Fig. 3. Patient presents with chipped and unesthetic anterior conventional restorations (DW #7–81).

Fig. 4. With chairside CAD/CAM dentistry, simply “cloning” a composite mock-up over the fracture, providing IPS e.max restorations in one appointment, all-ceramic restorations on #7 and #6 (DW #7–82).

Fig. 5. Patient presents with an emergency esthetic dilemma, fractured all-ceramic restoration (TK #91).

Fig. 6. Offering an immediate solution rather than a temporary fix through chairside CAD/CAM dentistry (TK #92).
‘Few dental patients have actually experienced or witnessed the benefits of the technology at work during their dental appointments, whether for impression taking, planning their treatments or fabricating their restorations. In my experience, when they do have that opportunity, they are engaged in the process.’

But the CAD/CAM “wow” factor encompasses more than just patients. It extends to, but also radiates from, the dental team. Dental team members absolutely love in-office CAD/CAM because it reinforces their place on the leading edge of patient care and as part of the restorative solution. They take ownership of the fact that they work for someone who invests in technology and can provide services and treatments that other practices don’t.

For the dentist, it provides a complete sense of professional satisfaction in doing one’s job — and performing an aspect of it that’s fun. For me, the tooth repair aspect of dentistry sometimes isn’t fun, but custom designing a restoration, feeling it in your hand once it’s milled and characterizing it with stain and glaze to make it look its most natural — that’s fun, that’s rewarding and that’s a professional “wow” factor.

Take a new look with 20/20 vision (not hindsight) at what options are available with chairside CAD/CAM dentistry — and see the difference it can make in your own practice.

References
1. www.luxottica.com, Lenscrafters history

About the Author

Douglas Klein attended The Ohio State University College of Dentistry, earning his doctorate of dental surgery degree in 1997. Following dental school, Klein completed a one-year residency in advanced general dentistry in Columbus, Ohio, before coming home to West Michigan where he has been providing dental care since 1998. Klein is an active member of numerous dental societies, including the American Dental Association, Michigan Dental Association, Academy of General Dentistry and Academy of Laser Dentistry. He is a past-president of the West Michigan District Dental Society and Kent County Dental Society.

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Tel. : (616) 538-496