The New Dental Digital Workflow

PRACTICE > LAB > PATIENT



By Robert Elsenpeter Contributing Writer

Incorporating digital impression and fabrication systems is not an all-or-nothing scenario. In this guide we follow the digital pathway from chairside to benchtop to patient to help you determine where digital dentistry fits into your practice.





The Planmeca PlanScan System, driven by E4D Technologies, provides everything you need to deliver better dentistry. Create and design digital models with Planmeca CAD/CAM. Share cases with Planmeca Romexis Cloud. And bring your designs to life with the precision of the renowned Planmeca PlanMill 40. Learn more by clicking the image or visiting www.planmecacadcam.com.

Introduction

Few technological advancements have altered the dental practice and laboratory landscape as strongly as the introduction of CAD/CAM technology. CAD/CAM has changed the way dentists interact with their labs, their patients and their teams. The ability to scan, design and mill crowns chairside has reduced from weeks to hours the time required to create high quality restorations. Cases sent to labs can be turned around in as little as two days, all the while providing dentists and laboratory technicians with tools that provide benefits in terms of dentist-lab communication, efficiency, cost control, quality and patient experiences.

Yet for many dentists, hesitation remains surrounding questions of expense, learning curves and how to choose the right system. In this exclusive White Paper, the editors of *Dental Products Report* and *Dental Lab Products* teamed up to tell the full CAD/CAM story and explain the digital workflow from the practice to the laboratory through final seating and the patient experience. "Where it benefits both me and the lab is this: If we don't need models, it reduces the laboratory costs, which ultimately reduces my cost, which ultimately can be passed on to the patient."

Dr. Bryan Couch Coppell, Texas. t all starts in the mouth. Polyvinyl siloxane is probably not the first thing most people want to put into their mouths. But while the classic material used for making dental impressions has been around for decades, there is a new way to develop restorations—and it doesn't involve a mouthful of glop.



With video-rate scanning and Thunderbolt[™]* connectivity to your Planmeca PlanCAD laptop (or upgraded cart), Planmeca PlanScan captures and processes data almost as quickly as you move your hand. For more information visit www.planmecacadcam.com.

By utilizing an intraoral scanner (IOS), dentists can not only forgo creating a physical impression of a tooth meant for restoration, but they can create more accurate and cleaner scans that the lab can use to turn into quality restorations. Not only that, but the work is faster and can be done for less money. Best of all, that savings can be passed along to the customer.

Faster restorations, easier workflow for both the doctors and the labs, along with less cost for everyone along the way—what's not to love?

The all-digital workflow starts at the doctor's office with a scan of the patient's affected teeth. Dentists who perform digital impressions either send the digital files to their laboratory to have the restorations completed or process the restoration on an in-house mill.

"We use it on a daily basis—hopefully more than once a day," says Dr. Michael Young, DDS, from Detroit, Mich. "We do the majority of our crowns and partial crowns this way. I still have to send some to a lab to be made in a traditional fashion, but most of them are produced in the office."



The New Dental Digital Workflow

PLANSCAN DIGITAL WORKFLOW FOR SAME-DAY CROWNS



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Immediate benefits

There are a number of benefits to scanning the patient's mouth and then sending the digital file to the laboratory.

"There's a great deal of handling involved when you deal with a traditional case versus digital, starting with the doctor in the office," says Bob Belouin, Information Technology Supervisor at Biogenic Dental Corporation in Utica, NY. "With a digital workflow, however, the doctor takes a scan, hits the 'Send' button, and it comes to us. There's no packaging, no staff that has to package it, there's no shipping cost. It comes to us digitally. We open it up right into our software. For a lot of cases, that job starts the same day."

Once it gets to the lab, the process continues, expeditiously.

"Once we receive the scan file," Belouin continues, "we design it. If it's going to be printed, we send it to the printer that night. If it's going to be milled, it gets milled that day or maybe the following morning."

"One of the major attributes of CAD/CAM dentistry is the patient experience," says Dr. David Fantarella, DMD, PC, North Haven, Conn. "It's like any surgical procedure: The least invasive procedure usually leads to the best outcomes. So, for a vital tooth you're going to do a crown on—if you don't need to take an impression, put a temp on it, wait for the patient to come back for the impression and then do the insert, that tooth tends to be less traumatized, and we see fewer irreversible pulpitis or root canal situations afterwards."

While the old method of taking impressions with polyvinyl siloxane is tried and true, there is another a big motivator for dentists to move to an all-digital workflow—money.

"Where it benefits both me and the lab is if we don't need models, it reduces the laboratory costs, which ultimately reduces my cost, which ultimately can be passed on to the patient," observes Dr. Bryan Couch, DDS, of Coppell, Texas.

Keeping it in-house

For doctors who have an in-house mill, the digital workflow can mean a same-day turn around on restorations.

"Typically, if you send something to the laboratory, it takes two or three weeks," observes Dr. Young. "We are now doing crowns in about two hours. Some of them take 90 minutes."

And the relationship between the doctor and the lab can be very dynamic, each taking more or less of the project, as the case demands.

"While most of what we do is milled in-house, we can also send a scan to the lab for design," Dr. Young says. "They can design the restoration then send the file back to us and we can mill it right here."

DO AS MUCH OR AS LITTLE AS YOU LIKE

With the PlanScan System by Planmeca, driven by E4D Technologies, you are not locked into one workflow. On a case-by-case basis, you can:

- Scan an impression and send it directly to your lab
- Scan an impression and design the restoration and send it to your lab
- Scan an impression, send it to your lab for design, then mill it in your practice
- Scan, design and mill the restoration in your office to deliver it in one visit.

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 When to involve the lab
 Adopting a digital workflow doesn't mean that the doctor has to mill it in-house. The work can still be sent to a lab, where they can complete

cases that the doctor doesn't want to handle.

"The nice thing with the digital impression, versus the physical impression, is the dentist is able to see the model in 3D immediately in the office before being sent to the laboratory," says Adam Coyle from Patterson Dental in Eagan, Minn. "And sending the file happens so quickly that, while the patient's still in the chair, the laboratory can pull up the file and evaluate the model. And if there are any corrections or changes that need to happen, they can take place while the patient is still numb."

Whether or not a case is milled in-house depends on how complex

a case is. In some cases, esthetics are an important consideration. "Some dentists, including us, have been hesitant to do many front teeth with

them," Dr. Young says. "If I have a really high-end esthetic case, I've

sent those to a lab in the past. We're starting to do some of that on our

Which system?

There are plenty of systems on the market from which to choose. Which one should you buy? There isn't a hard and fast rule about which system is the best—each one offers its own features and capabilities that will appeal to doctors differently.

An important factor to consider is whether the system will work with the components made by other manufacturers. An openarchitecture system, such as PlanScan by Planmeca, allows seamless integration with other systems. In contrast, closed systems work only with components made by the same manufacturer.

"The key for the doctor who's thinking of purchasing these things, is really if you're going to expand the services you offer through the use of technology, is it open architecture enough that if you've already purchased something, it'll work with the new system?" Dr. Couch asks. "You need to be inclusive. As a doctor, trying to provide the best to my patients, I need open architecture with an inclusive attitude from manufacturers. I can't keep buying new equipment, when the equipment I have is good. I need it all working together."

E4D TECHNOLOGIES

Patient preparedness

Once the doctor decides to invest in an intraoral scanner—and possibly a mill—how can patients be prepared for the work? One approach is to make the patient as involved in their care as possible.

"I'm a big proponent of the idea that knowledge is power," Dr. Fantarella says. "I feel that when patients are brought into the decision making process, they become more invested in their dental health. And when I say 'decisions,' I mean just about all of them, because if they understand why we're doing things, if there is a hiccup on the procedures, we can adjust, and they understand why. It's a better patient experience with better outcomes."

Understanding what patients want—be it a traditional treatment, a same-day procedure, or some combination of treatments—naturally results in happier patients.

"If I concentrate on patient experience, the patients push me to the right treatment," Dr. Fantarella notes. "They tell me, if I'm listening, what they would desire, and I try to make sure the outcomes are good and accommodate them. Many patients say, 'I want to come in, be numb once, do the drilling once, and place the restoration.' They bring some work, we have an area where they can work or use the phone, and then place the restoration."

And in 2014, many patients are starting to get used to intraoral scanners, so much so that doctors can't dismiss their usefulness.

Beginning the process

Starting an all-digital case is deceptively simple and something that the doctor doesn't even have to do him or herself. Dr. Couch even involves the patient in the process.

"We'll place a little camera in their mouth and it'll take a video of all of this. I walk them through and I let them see it," Dr. Couch says. "Then we let the assistant design it right there in front of them. So now I have an assistant who's an integral part of taking over a procedure that I can delegate once I've trained them. After the assistant designs the crown, she can walk the patient to the mill. We have the patient put the block in, and they get to see the designing and all the steps involved in making their crown."

The ease and speed of a same-day visit has great appeal to patients.

"If the patient has never had a crown before, they don't know the difference," Dr. Young says. "But if the patient's had a crown the tradtional way but they haven't a same-day visit, we tell them the appointment is going to be about two hours. Most of the time is going to be sitting here while we design the crown on the computer. While it's being milled right in the office, they can watch TV, read a book, or they can bring their laptop and do some work. That's really all the

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Same-day CAD/CAM restoration using the PlanScan system.

Total time: 1 to 2 hours Total visit: 1 Average DDS time: 40 minutes





Before and after photos of a crown created with the PlanScan System. Photos courtesy of Dr. Mike Moroni of Castle Rock, Colo.

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preparation we give them. It's only going to be one visit. You don't have to come back. You only have to take a short time out of your life."

Training

As seemingly simple as intraoral scanners are to use, there is still a learning curve, and these systems can't be used without some upfront training.

"There's definitely a learning curve," Dr. Young says. "I think a lot of [dentists], especially older guys and gals that aren't technologically inclined, would find this to be quite a step for them. My experience with E4D (now PlanScan by Planmeca) was that you go to Dallas for training before you even get the unit in your office. So you get trained on it before they'll deliver it to you. I think that cuts down on problems significantly."

The doctor isn't the only person who receives training on the equipment.

"The other great thing is that they trained my staff," Dr. Young adds. "I took both of my assistants with me. They both learned how to do the scanning. They both learned how to do the designing. They both learned how to maintain the milling unit. Since we got back from Dallas, I haven't had to do anything except prepare the tooth. Everything has now been delegated to a staff person—they love it; it's empowering. It frees me up to be more productive with other patients. It's really a win-win situation."

Working digitally with the lab

For the doctors who send their digital files to a lab for production, the next steps involve further digital manipulation of the file before the restoration is manufactured and sent back to the doctor for final placement.

When looking at the all-digital workflow, labs are no strangers to its benefits. Dental labs comprise the largest portion of CAD/CAM work, with only about 12 percent of digital cases being scanned by doctors.

"In the last few years, the rate of CAD/CAM adoption has been faster on the laboratory side than on the dentist side," says Dr. Robert Gottlander, VP, Global Prosthetic Solutions at Henry Schein in Melville, NY. "Most dentists take the impressions and send the impressions to a laboratory. The laboratory produces a scan and sends the scan to a milling center or produces the restoration in-house."

While many labs are embracing CAD/CAM, those who aren't using it are missing out.

"If labs aren't accepting the digital impressions right now, that

Q&A with Dr. Bryan Couch



Dr. Bryan Couch is a cosmetic and general dentist in Coppell, Texas. He has been using the PlanScan/E4D System since 2009.

Q: How did you get involved in CAD/CAM?

A: Initally I was looking to cut down on my lab costs.

Q: What has been the biggest surprise since incorporating CAD/CAM?

A: The cost savings were just the begining. The true value is the incredible level of patient experience I am able to offer using the PlanScan system.

Q: How important is CAD/CAM to your practice?

A: I can honestly say CAD/CAM is the single most important tool I've incorporated in my 29 years of practice. It is the most important development I've seen in terms of making it financially feasible to offer excellent care. I use it every day, and it paid for itself in the first month.

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could be an issue," observes Dr. Michael DiTolla, DDS, FAGD, Director of Clinical Research and Education at Glidewell Labs in Newport Beach, Calif.

"We've made a lot of progress in regards to complexity of cases," says Brent Haar, CDT, CAD/CAM Manager of Keller Laboratories in St. Louis, MO. "Even though it's making great strides, it cannot do everything. There are just some things here at Keller that we know work very well in CAD/CAM, and there are some things that if we work pretty hard, we can make work. Then there's some things that just don't work in CAD/CAM that we still have to do traditionally. In going through that, Keller has decided to keep a smaller crown and bridge department that, where there are things that are harder or we need it faster to meet a doctor's needs, we have that flexibility to do so."

Once the case gets to the lab, it's a matter of performing some design work on the computer before producing the physical incarnation of the restoration.

"We get a prep scan, we get an opposing scan, and we get a buccal scan, so we can merge them all, and see the model rendered digitally, and we build the prosthetic right on top of that," says Belouin. "The design aspect is really limitless when it comes to fixed restorations. There are a lot of options there. We take it to completion for them."

Encouraging Doctors

Working digitally is easier, less expensive, and faster for labs. So more labs have begun encouraging doctors to start taking their own intraoral scans, and in many cases labs are leading this education.

"Dentists are not yet fully aware of the advantages of intraoral scanning on the quality of restorations," Dr. Gottlander says. "The more precise the restoration, the less likely dental restorations need to be redone or repaired. Thus, the overall time investment per restoration comes down a lot. This time savings has to be pointed out to dentists for them to see this as a key advantage."

Ensuring doctors are educated has the potential to help both the laboratory and the doctor.

"It's important to keep the laboratory's dental customers informed, and to use this as an opportunity to urge dentists to invest in new technology, while also promoting the laboratory and their services," Dr. Gottlander continues. "This is a service industry and, depending on how much information and support you give to your dentists, they may want to adopt intraoral scanning. Dentists would then be able to send digital impressions directly to the laboratory."

Dentists and labs learning together

Good communication between practices and laboratories is a great way to share the benefits of digital work.

"I have good relationships with my doctors and that allows me to discuss which machines to buy," Dr. Pigliacelli says. "I'm working with a doctor now. He just bought a machine, and we're sort of experimenting, so he's been taking some impressions, traditional and digital, and we've been playing with it together. We're working on a couple of cases to get the flow down. There is a learning curve. It's different for them on how to scan; it's different for both of us. We do a little experimentation."

Labs can also help dentists determine which system is right for their practice.

"If we know the work that they do and the work that they're trying to accomplish, we may recommend or say, 'Look at these,' but the main piece of advice that we give our clients is: Look at them all," says Bob Savage, CFO at Drake Precision Dental Lab in Charlotte, N.C. "You see what's going to work in your practice. The scans themselves, the data, at least the leaders in the marketplace right now provide a good quality scan. The data points are there for us to do what we need to do. We just try to tell real-life stories for what we have, and say, 'Look, our remakes are down for everybody who use these particular systems.' We'll push them in a sense, especially if we're having trouble meeting a doctor's expectations."

Money Talks

Passing along cost savings can be another motivator for doctors.

"The 12 percent of dentists who send us digital impressions save us a lot of time and energy," Dr. DiTolla observes. "We don't have to pour out the model. We don't have to pin it. We don't have to trim it. We don't have to articulate it. We've estimated that they save us \$20 worth of time, materials, salaries, things like that. One of the rewards of going digital is that if they send us a digital impression for a Zirconia crown, for example, we give them \$20 off, because they're really saving us \$20 on the manufacturing side. And we want to recognize the dentists who are doing that, because they're the ones who spent \$25,000 on this digital unit. So if they're saving us time and money and effort, they should be rewarded for that, because there's no reason for us to get off easy and then just pocket the extra money."

Making it all digital

Once the lab has all of its pieces in place, it is time to create the restoration. For some labs, the work can be a continuation of a dentist's intraoral scans. For others, a physical impression can still be added to



"The doctor takes a digital scan, captures that scan, hits the 'Send' button, and it comes to us. There's no packaging, no staff that has to package it, there's no shipping cost. It comes to us digitally. We open it up right into our software. For a lot of cases, that job starts the same day."

> Bob Belouin Information Technology Supervisor Biogenic Dental Corporation Utica, NY

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the digital workflow.

While only a small percentage of dentists send digital files to labs for completion, labs can still integrate CAD/CAM into their work and reap the benefits afforded by digital dentistry.

"At our lab, we're doing 100 percent of our crowns CAD/CAM," Dr. DiTolla says. "So even though only 12 percent of impressions come in as digital impressions, for the other 88 percent, we pour out traditional impressions as stone models, and then we take the stone models and we scan them, like a dentist scanning it in the mouth. By bringing those into the digital environment, that allows our designers to design a crown on the screen, and then we can send it to a mill and mill it out of zirconia, or we can mill a different material, then invest it, and press that and get our restoration to final glazing and staining. Even though dentists are only participating at the 12 percent level, we've gone to 100 percent because we find it to be such an efficient way to do things."

Materials

While discussions of CAD/CAM usually revolve around the computers and machines, materials have been a critical factor in the evolution of CAD/CAM. Those materials are an important consideration.

"We all talk about CAD/CAM, and we all talk about the technology, but probably the most important factor contributing to the growth of this industry is the development of the material," Dr. Gottlander says. "When we discuss chairside, blocks from different manufacturers have suddenly made it possible to do high quality restorations in a short period of time. If we look at the laboratory industry, we have seen the growth of full-contour zirconia. This growth will continue as more colors and mixed shades are developed. Thus, new material is a very important factor, and we will see an increase in the development of material going forward, which will enhance the growth of the digital dentistry."

The materials that the lab uses in its restorations are just as important as the equipment that they are made with. And labs must know how to properly manufacture with those materials.

"Labs have to have a good knowledge of what materials are meant for what, what's indicated and what's contraindicated," Haar says. "With milling systems and zirconia, sometimes if there are concerns on a case with unclear margins or the path of insertion, just because of a possible poor prep or a bad IOS scan or something like that, and maybe we didn't get all of the data. From a milling side, depending on if you have a three-axis mill or a five-axis mill, you may not be able to mill properly. So understanding that there may be cases that will work better for you in zirconia if you have a five-axis mill, but may not work for you if you've got a three-axis mill."

"With things like e.max," Haar continues, "do you want to press it and get that extra 40 megapascals of strength from pressing, or is it something that you want to mill? From the machining side, do you have the ability to mill it, or do you get a mill that you can just mill wax and then press it? Or do you buy a Planmeca PlanMill 40 or another mill where you can mill e.max? It's just understanding the materials and what they're indicated for."

If a lab doesn't have correct equipment to handle a given material, that is not necessarily the end of the case.

"Do you have a relationship with a vendor that allows you to outsource those types of cases, because they have a five-axis mill, versus a three-axis mill, and an understanding how the material, the scan, and the design relate to each other?" Haar asks. "And all of them can be very positive, or one step in the process can be a roadblock, depending on the type of case."

How different manufacturers' machines utilize varying materials is an important subject for labs to consider.

"For labs, it's just understanding that each system has slight nuances to it," Savage says. "There are certain material differences that you can do in those machines. If it's a true acquisition unit or a digital impression machine, do you need a model? Can you go modeless? And if so what materials can you do it with? Again, it's knowledge. It's just understanding what's available in the different systems."

Collaboration, consultation and communication

In a perfect world, the lab would receive the case digitally, work would commence, and the final restoration would be flawlessly and beautifully produced. In reality, that's not always the case, and there will come a time when it is necessary to consult with doctors on the restoration. Happily, there are many options that make communication with the doctor more fruitful.

"One of the things the design software gives us is the ability to take a screenshot, so we can show the doctor what we see on-screen, and I think it's very similar to traditional practices," Haar says. "You're communicating with the doctor; the doctor has the end decision on what to do on this individual case, so it can be done by screen-sharing or e-mailing the pictures on a case. It's not all by phone saying, 'I have this impression in front of me, and we see this,' 'We want to reduce this,' or 'How do we want to handle this?' We can get to a point that we can show them a scan of the model all the way through to the final esthetic."

Technology makes the process of communicating with the doctor much easier and more productive.

"There's a great feedback loop that we see now with dentists,"



"Communication is still key whether it's a digital process or the traditional way."

Bob Savage CFO, Drake Precision Dental Lab Charlotte, N.C. Dr. DiTolla says. "We can help them in ways that we couldn't help them before. For example, when a dentist sends us an impression that's digital, or even if it's a conventional impression and we pour it in stone, when we scan those stone models and bring it into the digital environment, now we can measure exactly how much reduction we have between the upper lingual cusp, and the central groove on the lower tooth."

Advancements in technology don't just make it easier to connect with doctors—it also helps take subjectivity out of troubleshooting communications.

"Instead of saying to the doctor, 'It doesn't look like we have enough room there,' we can actually measure it and say, 'We have .65 millimeters here,'" Dr. DiTolla observes. "You prescribed an e.max crown. That needs at least a millimeter, and prefers 1.5 millimeters. This is going to need a little more preparation or a reduction coping, or you're going to have to adjust the opposing, or we can do that for you and mark it on the model.' But it's nice because now instead of it being subjective and saying, 'It doesn't look like there's enough room,' we can show them exactly where it's under-reduced and by exactly how much it's under-reduced."

Working together through technology

Technology even allows labs to work interactively with doctors in the earliest stages of the digital process.

"We've had dentists who are done with the preparation of the teeth call us on the phone and say, 'What do you think of my preparation?"" Dr. DiTolla continues. "We watched live on a computer screen through the camera as the dentist was showing us the different preparations. The technician was sitting there, and she said, 'That looks really good. Wait ... Go back to tooth number eight.' And he went back to tooth number eight, and she said, 'Can you take a little more off the distal line angle right there?' And he said, 'Sure.' He set down the camera; he prepped it a little bit more; put the camera back up; and she said, 'Perfect. That's fantastic. You're all done prepping.'"

But no matter what form it takes, communication is critical between the doctor and the lab.

"Communication is still key whether it's a digital process or the traditional way," Savage says. "Very often what we'll see, if it's a new dentist, is if it's new technology in their office, there's still that learning curve to get over that just requires communication between the laboratory and the office. What the digital space allows us to do is enhance communication a bit, because we're able to take a screenshot or do some sort of online meeting so they can see what's going on with a particular file or a particular case. You have those options to do it.



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Before, you would, maybe, take still photographs of a model because they didn't have it physically in front of them. Now, the digital space allows for a little bit higher level of collaboration if need be."

Know your craft

Ultimately, while CAD/CAM tools are making it possible to create fast, efficient, and less expensive restorations, there is still a level of expertise that lab technicians need to make anything of quality.

"There's a misconception in our industry that you can train monkeys to do this job," Dr. Pigliacelli says. "Both the dentist and the technician went to school and learned how to be what they want to be. Yet some seem to have the mindset that you just let the machine do it for you. I don't get that. As an extension of yourself, the dentist—rather than using impression material—will use the machine. He will still interact with the lab. The lab will still use their equipment, as well as the machine and their own talents, and it all together gives you a great product."

After the Mill

That level of consistency and reliability makes digital dentistry a safe bet when it comes time for final placement.

"There's usually minimal to no adjustment that needs to be done," Coyle says. "A lot of times, it's just placing in the restoration, doing a final test and letting the patient go."

In the event there is a problem with placement and fit, that's when the doctor and the laboratory have to work together to find a solution. But thanks to digital solutions, the process can be done very quickly.

"If another digital impression had to be taken and sent to the laboratory, that could be done, Coyle says. "Maybe there was an issue with the prep side of things. Maybe it was a reduction side that needed to be handled. That could be taken care of and another digital impression sent over to the laboratory."

Doctors who mill their own restorations will have to perform some final steps themselves. Those steps depend, largely, on the type of material being used.

"For Lava Ultimate, for instance, the internal surface would be prepared for bonding and the external surface would be polished," Dr. Fantarella says. "For Empress, [it's] the same, but it does lower the strength, slightly, so it's better to fire it and then prepare the internal surface. E.max has to be fired, because it is milled in a precrystallized state which is not the final shade and a quarter of its fired strength."

In-house restorations also have to be colored appropriately.

"Ceramic crowns are chameleons," Dr. Fantarella explains. "If you pay attention to the shade of the surrounding teeth, and pick the appropriate block, they really take the hue and translucency of the surrounding teeth. It's not like selecting the shade like you would for a PFM crown. With PFM crowns, you have to opaque the metal, you lose the translucency, and you manipulate the shade. With ceramic restorations, if you take the conditions that I just described and come up with the correct block, the restoration tends to blend in the mouth over time with the other teeth."

Spreading the Word

Amazon.com founder Jeff Bezos once said, "If you build a great experience, customers tell each other about that. Word of mouth is very powerful." And that is certainly true of care at the dental office. If the doctor does a poor job, patients make sure that word gets around. By the same token, if a doctor does a great job, people will hear about that, too.

Dr. Young, for instance, helps the process along by soliciting patient testimonials for his website, helping spread the word to potential patients.

But even without a formal mechanism to share opinions about doctors, word still seems to spread. "The whole time they're waiting, nine times out of ten, they're on the phone telling people, 'You won't believe this. They're making the crown while I'm waiting," says Dr. Couch. "Or they're texting or sending pictures to friends. The whole thing becomes a 'Wow' experience, and it all started with me putting the little video camera in there and they say, 'I don't have to have all that other stuff in my mouth?""

And when patients have work done digitally, often they don't want to go back to the old way.

"Once I've done a crown on a patient, most of the time, if they break another tooth, they don't want it done the old way," says Dr. Couch. "They say, 'Good thing I don't have to wear that temporary or maybe get another shot'. 'It looks good'. 'It feels great.' They have some time and can wait. We have plenty of treatment rooms, so we can get them some bottled water or a coffee or something. We make them feel comfortable. Because they have laptops or iPads, they may do work. They bring their [e-readers]. They sit there and read a book. It's all done start to finish and they don't have to worry about coming back."

Words of Advice

Adopting the digital workflow is a process that can't be ignored.

"For the dentists who aren't using it, I would encourage them to investigate it and open their minds to it," Dr. Fantarella says. "Not only will it be better for their patients, it'll get them invigorated about their career again."



Dr. Young observes that younger patients are likely to expect their dental work to be completed all digitally. "Just dismissing it out of hand would be a big mistake," Dr. Young notes. "I think it's definitely the wave of the future. There's no denying it now. It's been around a long time and it's not going away. You're going to see it more and more. In fact, with the younger generation, the Millennials, are going to expect this. In order to keep your practice cutting edge, this is one technology you should definitely consider."

"This is where it's going," Dr. Couch adds. "The minimum you're going to see is that dental offices need to look into scanning capabilities. They're going to have to be aware of whatever they purchase—will it be able to work open architecture-wise as they grow into some more of the high-tech, 3D technology and procedure/services that they might go into? It has to at least be able to work with their specialists if they don't want to do some of those procedures. The key always boils down to how do you deliver the highest quality product and service to the patient. It's amazing what it can do now."

The technology has proven itself, and not learning about it is potentially detrimental to a doctor's practice.

"If you're afraid of technology, afraid of change, and you don't think you can master the computer, then you can delegate it to your assistant," Dr. Young says. "By now, we've shown that the quality of these restorations are excellent. Digital technology is here to stay."

