



How 3D Printing Simplifies the Practice Workflow and Increases Patient Satisfaction

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The decision to transition a dental practice from primarily utilizing dental laboratories for appliance fabrication to implementing 3D printing is not always an easy one. For my dental practice, the choice was made once the COVID-19 pandemic hit. Shipping delays and challenges meant that instead of receiving retainers in two days, we were now always uncertain about delivery times and might wait over a week for delivery. Luckily, our interest in 3D printing allowed us to be one of the first practices to add the 3D Digital Printing Solution from DMG to our practice and encouraged us to 3D print devices that we would normally send to the lab. We wanted peace of mind and simplicity during such a tumultuous time.

Integrating An Intraoral Scanner and 3D Printer for Maximum Efficiency

Our desire to use a 3D printer began with an intraoral scanner. I loved how much easier it was to take a scan, but it was how impressed patients were seeing their dentition on the screen that made the difference. Patients were much more willing to accept treatment when they could see what was going on in their mouths. We wanted to make the best use of this scanning technology that we had been using primarily for retainers and nightguards and being able to 3D print models at the practice was the logical next step. We had an opportunity to try out the 3Demax high-speed printer and we took it. That was just the beginning of our journey.

Printing models with LuxaPrint Model from DMG is 90% of what we use our 3Demax printer for, but we also take advantage of the company's other LuxaPrint resins. We use LuxaPrint Ortho Flex to print bleaching trays (a patient favorite). The applications are limitless with LuxaPrint resins, from individual impressions tray to models to surgical guides and gingival masks. All these resins are designed to work ideally with their 3D printing system.

Simpler 3D Printing System Equates to Practice Productivity

What I like most about this system is how easy it is to use and understand. It is a simple three-step process. First, you can utilize the RFID sensor technology to quickly identify which material you are working with by scanning it into the system and use the touchscreen to select the print file and job details, like printing time. Next, the printed material is then placed in the 3Dewash unit, which also indicates duration based on the material. Then, you cure it in the 3Decure unit. The whole process may take about an hour but depends on how many items you plan on fabricating.



It is easy to get your team up to speed with the 3Demax printer. As soon as we received ours, we were using it regularly. Each element in the solution is connected, so it is simple to learn and does not take up too much space.

My key takeaway from using a 3D printer is that it is important to consider beforehand whether it is a good fit for your practice. If you want to get the greatest return on your investment, the technology must make work easier for you and your team as well as benefiting your patients. My practice has four dentists and a lot of staff. We make countless occlusal guards around the clock. This high production level means that our lives are easier if we can fabricate in-house some of what we would normally send to a laboratory. When we use the 3Demax, we know that whatever we are fabricating will be delivered on time and can reduce the scheduling confusion of sending so many cases to the lab.

One great example of how I use the 3Demax printer in my practice is when a patient with braces is about to need them removed. I can scan for the retainers right then and there and schedule the patient out a couple of weeks for de-bonding. I use free software to remove the brackets from the digital model, transfer the file to the 3D printer, print the models, and fabricate the retainers. It is then convenient and efficient to deliver the retainer to the patient.

I feel confident working with the 3D Digital Printing Solution from DMG because of their commitment to innovation. I appreciate their DentaMile connect design software, which simplifies the process even more. The 3Demax printer enables my practice to consolidate treatment into fewer appointments, guarantee timely delivery and ensure we both meet and exceed patient expectations. It has been a lifesaver during a time when fabricating models and appliances in-office ensures external forces will not get in the way of optimal dental care.