The Digital Revolution: Lab Digital IQ and Being the Dentist’s Best Resource

Elon Musk recently referenced, “The pace at which technology is evolving has never been faster in the history of our world, yet it will never again be slower than it is right now.” This is true for people’s personal lives and in this industry, as dental clients face the challenge of running their practices while juggling myriad technology options and material choices. Wherever there is a need for a product or a service, opportunities exist, and the challenges faced by dentists today create an abundance of opportunity for labs to grow by positioning themselves as their dental clients’ best resource.

In this article the author will provide examples of proactive strategies and tips for labs on how to be a strong resource for dental clients, along with providing an industry perspective on the topic by including thoughts and philosophies currently being utilized successfully by lab owners/operators and dentists from around the country.

Challenges and opportunities in the new Digital Revolution

In the current marketplace, many experienced dentists face the challenge of running their practices efficiently with shrinking dental insurance reimbursement and lack of knowledge of new materials/indications, lab production processes, and digital impressions/associated digital workflow. Dentists leaving universities and beginning their careers face these challenges with less practical hands-on dental lab experience than other generations of dentists, along with the pressures of increased student loan debt, competition from and
options for careers in corporate/group dentistry, and a patient base with a demand for and more access to simplified choices for their dental care. (Fig. 1)

Direct to consumer aligners are just one example of how the dental landscape has changed for patients recently, first with mail order aligners and now with locations opening in drugstores where patients can have their teeth scanned, treatment plans performed, and receive aligners quickly and at a lower cost than the traditional orthodontic workflow.

Challenges for labs include rapidly changing materials and technology, the commoditization of restorations such as full zirconia crowns and associated pricing pressure, and a shortage of experienced technicians in the workforce to name a few. It is becoming very difficult for labs to grow or even survive by simply filling prescriptions, but the labs with a proactive, supportive and collaborative mindset are not only surviving, they are thriving. Today every lab is a “digital lab” and every dentist is a “digital dentist” regardless if they are using an intra oral scanner (IOS) because of the restorations prescribed and the CAD/CAM production processes used to fabricate them. Examples are numerous and include full zirconia crowns, milled custom abutments and bars, digital dentures, CBCT surgical guides and many more. The Digital Revolution of our industry is moving production from reductive (milling) processes which have replaced labor intensive hands-on fabrication steps to additive (printing) processes replacing milling for many applications.

For example, many labs realize it is more productive and profitable to utilize their mills to produce zirconia crowns instead of dentures, which occupy a mill for hours to produce one arch, and in the same amount of time dozens of full zirconia restorations can be milled, and multiple denture arches can be printed. New resin development is quickly expanding 3D printed denture applications and increasing productivity exponentially. The denture market is one of the fastest growing segments of this industry and it is estimated to approach $3.5 - $4 billion by 2020, but with industry experts estimating that only between one and six percent of dentures are currently fabricated digitally, this is another massive opportunity for labs to differentiate their business model and increase profitability.

Marketing a lab as a “digital lab” is now white noise and to differentiate requires having a high Digital IQ, a high Customer EQ, and being a Digital Resource Center for your clients. This means providing a simplified process for dentists to send digital and traditional impressions, restorations of all types from basic crowns to very complicated cases, and quick access to knowledgeable experts when clients need basic or complex questions answered. Dental labs need to efficiently move and store digital data for their clients, be digital manufacturing and distribution experts, and provide personalized customer experiences centered on full support and training of clinicians and staff.

Lab Digital IQ; Your client’s perception is key

A lab’s Digital IQ is a measure of the ability to navigate the most current digital landscape, to increase productivity and efficiency in-lab and clinically by utilizing the latest technology in production for both reductive (milling) and additive (printing) processes, and to guide and provide dentists and their staff with comprehensive education and support. While this seems complex at first glance, keep it simple and concentrate on these four main areas to establish and increase your lab’s Digital IQ:
GUIDE

— Be proactive! Talk to your dental clients and help them understand the digital workflow and how it differs from traditional in restoration fabrication, price, turnaround time, etc. Build relationships with manufacturers and distributors of IOS systems and facilitate demonstrations for your dentists and staff so they are well-educated about the options and understand the key differences in the IOS systems on the market. This makes you an indispensable resource for not only your dental clients, but also for the reps that sell the scanners, and they will think of your lab when asked by clinicians to recommend a competent digital lab.

SUPPORT

— Provide comprehensive digital support because the IOS install and training provided by the distributor is the tip of the iceberg for clinicians and staff. Give constant feedback on impression quality, prep design and training on material indications. Don’t be intimidated if you are inexperienced with digital technology because the majority of your dental clients still are too; learn with them. Form a digital user group or study club with technicians from the lab and clinicians as a fun and collaborative way to provide information and to learn from each other.

In the role of Senior Manager of Dental Lab Applications at Carbon 3D, the author consults with labs of all sizes about digital workflow and digital strategy. A common theme among smaller labs is that it is not possible to have a high Digital IQ because they lack the resources to purchase expensive CAD/CAM software and hardware such as 3D printers and mills, and to employ experienced CAD/CAM staff.

NAVIGATE

— Know the technology and material trends in the industry. Research and test new products and materials so you are well-informed and then show your clients samples of the materials you feel are the best. Make it your lab’s goal to be the first to expose clients to new products and technology. This makes the lab an invaluable resource and increases confidence in you as their lab partner and their ability to make well-informed choices for their patients, providing a high level of care.

PROCESS

— Define your “Digital Strategy” and dial in the workflow and production processes in-lab and between lab-clinic. This is key to being easy to work with and allows labs to provide solutions and eliminate obstacles when they arise versus creating them by being inexperienced and unprepared. Explain to your clients how digital impression files are processed and digital restorations are fabricated and invite them to your lab to show them the steps involved. This helps clients understand the options and indications of materials as well as the possibilities and the limitations encountered when working digitally.

“W e let our clients decide how and when they prefer to interact with us given our multi-level personal service. For example, getting a case to us; they can request a pickup by calling, submitting a request through our customer portal, or simply having our driver stop at their office daily. As it relates to technical support, we have a dedicated manager in each of our full-service departments to case-plan from something as simple as a single-unit to a complex full-mouth rehab. Our dental expertise reaches outside the laboratory. Our technical managers, including six of our twenty-one CDT’s, can be scheduled for chair-side consultations and case planning.”

— Jim Caruso- President/CAO, Ottawa Dental Laboratory

“B e a ‘Solutions Provider’ for your clients. The laboratory has first-hand experience with the materials and resources available in this digital world. Highly trained technicians understand the parameters and limitations of materials and technology to ensure successful patient outcomes. Take the time to educate your clients whether it’s a phone call, onsite case planning or collaborating in a study club.”

— Martha Martin, CEO, Triad Dental Studio, CDL, DAMAS
Strategically partnering with companies who can complete steps of production for you and provide expanded services or programs allows smaller labs to offer many of the same services as the largest labs, while providing larger labs with expanded production capacity, and all labs with the ability to scale while hiring and training technicians during growth phases. Full Contour, Straumann, Core3d, Argen, Henry Schein and many others provide lab-to-lab services, products and training. Partnering is one example of an effective Digital Strategy that will create a dental client’s perception of a solid Digital IQ and keep them from looking for another lab. (Fig. 2a-c)

**Customer EQ; When dental clients thrive and grow, labs do.**

Consumers have many options when choosing which companies to patronize for products and services. They form an opinion of customer experience by the way they “feel” during the purchasing process and after the transaction by how potential issues are handled. Focusing on providing an experience that customers feel good about is how a lab can establish a high Customer EQ. Dentists are consumers of dental lab products and services, and in the current marketplace, the majority prefer to partner with and purchase from labs with a clear value proposition and who focus on the relationship over the business transaction. Dentists will do business with a lab they “like”, but that isn’t enough to keep an account long term if you can’t also help them be profitable. To demonstrate a high Customer EQ, labs need to shift the focus from “selling” a product to a dentist and instead position themselves as a “business consultant” and “industry expert” who is seeking a collaborative partnership.

Have conversations with your accounts about their pain points and inefficiencies in the restorative process and provide solutions for them from your product list or service menu. Suggest products and services they aren’t currently providing their patients and make samples of restorations and appliances as visual aids and tools to help them educate patients, treatment plan, and increase their production. When dental clients thrive and grow, labs do; so help them grow!

When discussing adopting digital technology with dentists, consider doing so with a patient-centric approach. For instance, when consulting with clients about IOS systems and transitioning from traditional PVS impressions, avoid incentivizing your clients to “go digital” with talking points only about lower restoration prices and quicker turnaround.

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“...In the group dental space, clinicians have realized price is only one part of the equation and to operate productively, efficiently and profitably, they are seeking out relationships with labs that understand how to cultivate a culture of teamwork, collaboration and support from bench level QC and training to high level business strategy.”

—Jeremy Dixson, DMD, MBA – Founder, The DSO Project
A dental lab, in order to be viable in the future, will need to be a resource to the clinicians they service; part of a three-pronged team with expertise in complicated cases that might not be able to be completed without that knowledge. The single crown will become such a commodity that the production of those alone will not be sufficient to provide an ROI and complex, full mouth implant cases and similar complicated restorations will be a lab’s value proposition.

Instead, discuss the benefits for their practice and patients, such as a digital record of gingival and dentition wear during hygiene appointments and the fact that when prepping/impressing restorations they can clearly see the margins, occlusal reduction, bite, etc. before sending the impression to the lab. This streamlines case production, improves their efficiency, productivity, and profitability with quicker seat times while providing an improved patient experience. This approach positions the lab as a business consultant focused on making the client more productive and profitable, and the lab as a Resource Center with a patient-centric focus versus simply a source of inexpensive commoditized restorations. This approach also mitigates the perception the lab is trying to cut costs for their benefit. Quicker turnaround times and lower crown prices then become the icing on the cake versus the reason to purchase the cake.

Being a Digital Resource Center; there is no substitute for experience and knowledge.

In an increasingly digital and automated dental market, building and maintaining strong relationships with clients rooted in technical support, education and training is a lab’s best value proposition. Instead of technology replacing the dentist’s need for collaboration and guidance from skilled technicians, it has actually created more demand and allows labs the ability to create a niche as digital and technical consultants and restorative material specialists; a Digital Resource Center.

Being a Digital Resource Center involves developing and maintaining relationships with clients, and a key component of this is understanding and managing clients’ expectations. The foundation of every relationship is trust. When dentists are entering a partnership with a lab, trust is established as they decide two key things early on; do they find the person/lab to be competent? Can they trust this person/lab to be reliable and consistent? Having experienced technicians consult with your dental clients about material indications, esthetic qualities, prep design, etc. is crucial to set both parties up for success, and allows a lab to keep a client's expectations of materials and technology accurate and in-line with what the lab provides. What is their expectation of fit and esthetics? If a dentist prescribes a monolithic full zirconia crown on a single central and wants an “exact shade match”, is this a realistic expectation? An experienced technical support rep can educate the dentist on materials and recommend alternatives that will create a successful outcome.

Digital production processes improve efficiency in-lab and can increase profitability dramatically by eliminating the need for labor intensive fabrication steps to be completed at the bench by highly skilled, experienced technicians. It does not, however, reduce the need for highly skilled, experienced technicians in the lab. Labs that are effectively transitioning into the digital workflow realize that one of its biggest benefits is the ability to move the highly skilled, high-wage technicians out of production roles at the bench, performing labor intensive steps, and into roles as trainers for less skilled or unskilled employees to address the shortage of qualified technicians in the industry. One example of this is the dramatic increase in productivity and profitability achieved by transitioning skilled removable technicians from labor intensive production roles...
at the bench fabricating traditional dentures into roles as digital denture designers, digital denture workflow consultants for dentists, and trainers for team members.

When scaling and growing a lab the business model of hiring “off the street”, meaning hiring people with no dental/dental lab experience and training them, is an effective method to combat a lack of skilled applicants. This is most effective when you have an established system in place for training and have transitioned your most experienced technicians out of production roles at the bench and into roles as trainers, educators, quality control specialists, and technical support members that consult with clients about any aspect of the restorative process. Without this transition out of production, the experienced techs lack the bandwidth to train the unskilled employees and they languish instead of quickly becoming a productive member of the team.

The ratio of CDT’s and experienced dental lab technicians to technicians without or with minimal dental lab experience should be carefully considered and closely monitored. Labs that have too high a ratio of inexperienced and unskilled technicians and rely solely on digital production to fill in the gaps struggle with high internal remake percentages, which lead to workflow and production blocking issues and a high cost of goods sold, high overall operational costs, and less profit. Workflow blocking issues also affect the quality of the restorations as the required production time is used inefficiently and technicians finishing the restorations are overloaded with too many cases and inadequate time to complete them. This affects the customer experience with issues such as less accurate crown fit, prescriptions not being followed, and case delivery date reschedules which consistently rank among the top reasons dentists will switch labs.

“If you always do what you’ve always done, you’ll always get what you’ve always got.”
—Henry Ford

“Over the last few years we have seen the eradication of waxing, casting, PFM and now layering ceramics seems to be next. I believe it is imperative for the modern-day lab to evolve with the market or face certain extinction. Historically, Absolute was marketed as a “full-service” lab but that has since changed to a “full solutions” lab. The laboratory of the 21st century needs continual R&D combined with investments in relevant technologies and an effective way to implement and communicate these workflows to their customers.”
—Conrad J. Rensburg, owner and Head of Implants and Jack Marrano, Director of Signature Prosthetics – Absolute Dental Services

“At Castable we have a “coaching mentality” that supports the dental teams we work with so they can focus on dentistry and patient care while we help them grow by being a business partner instead of simply their lab partner.”
—Sean Siegel – Owner, Castable Ceramics

It’s time to think differently….again

The future of this industry will be rooted in data acquisition and management, material science and development, collaborative partnerships, and education. Just as dentists need to partner with labs who are indispensable resources and value the relationship, labs need to partner with companies to provide software, hardware, materials, training and a high level of customer service. Companies that are true partners who value the relationship and act as business consultants, helping labs maximize their production efficiency and grow their businesses with proactive individualized support.

Labs should seek out partnerships with companies that understand their pain points and unique needs and want to earn business by being team members and collaborating versus companies that focus only on the tired tactic of incentivizing labs to send them the majority of their business to get a better price point on their products. Gone are the
As a lab that’s been around the last 40 years we have seen many changes in our industry, and one of the biggest changes is today labs are primarily used as a means to an end, send your case and get it back without connecting or a personal touch. The way we differentiate ourselves is by re-igniting that personal connection with the clinician by being a resource of knowledge, experience, and ultimately sharing a common goal/vision of providing the patient with the highest level of care. Ultimately, stay current, stay sharp, and stay open to any and all possibilities."

—Andrew Sedler, COO, Burbank Dental Lab

About the Author

Jamie Stover, CDT is a Senior Manager of Dental Lab Applications at Carbon 3D. Previously, Jamie was Chief Operating Officer of Ziemek Laboratories and has been a dental laboratory technician for over 20 years. He has written over 20 articles for publication in national dental trade journals, and lectures regularly on myriad dental topics. In his role at Carbon 3D Jamie is a consultant for partner labs and dentists on streamlining production with the digital workflow and implementing strategies for business growth and utilization of new applications. He is a member of several professional organizations including: The Dental Technician Alliance of the American College of Prosthodontists, the NADL Business Management Committee, the Straumann Speaker Bureau, he is on the team of professional contributors at Dentalcompare.com, is an Align Dental XP Lecturer, a Key Opinion Leader for Juvora, and is a Special Section Editor at Inside Dental Assisting.

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