The Changing Landscape of Dental Labs
With Fewer Options, Dentists Must Keep Several Factors in Mind When Choosing a Lab

By Erik J. Martin

From veneers, night guards and dentures to bleaching trays, surgical stents and diagnostic wax-ups, general dentists rely on dental laboratories for a number of crucial fabrications and services.

The dental lab industry, however, has been changing over the last several decades. On one hand, the number of dental labs has been declining. The National Association of Dental Laboratories (NADL), using data from the U.S. Department of Labor and Bureau of Labor Statistics, reports a 20 percent decline in the number of U.S. dental labs with multiple employees — from 7,800 in 2004 to 6,200 today. The largest drop, however, has been in the category of sole-proprietor labs.

“There was a time when there were almost 5,000 one-person dental labs run by sole proprietors,” said Bennett Napier, CAE, chief staff executive for NADL. “Now, that number is down to around 700.”

While the number of dental labs has decreased, the number of U.S. lab workers has not fluctuated as much — from around 47,000 in 2001 to 49,000 in 2009 and back down to 45,000 in 2017. This is due mainly to labs consolidating.

With fewer local labs with established reputations, today's dentists increasingly are working with out-of-state or foreign options. Because of the distance involved in these collaborations, it is more important than ever that general dentists ask the right questions of their dental lab.

Why Are Labs Closing?
The rising cost of technology is one of the main factors in the decline in dental labs.

“The proliferation of advanced digital technology in recent years has made it challenging for smaller labs to compete with larger labs that can afford costlier new equipment,” said Stephen Balshi, MBE, chair of the Dental Technician Alliance of the American College of Prosthodontics and president/CEO of CM Prosthetics, Inc., a dental lab in Fort Washington, Pennsylvania.

Keith Morris, CDT, senior director of laboratory operations excellence for Affordable Dentures Dental Laboratories in Kinston, North Carolina, agrees that the main culprit is improved technology — specifically the introduction of computer-aided design and computer-aided manufacturing (CAD/CAM).

“The cost of change in the dental laboratory is very expensive. Larger labs are able to eat up the expense associated
with implementing new systems, whereas medium-to-small labs may find themselves overextending and encountering pitfalls trying to keep up,” said Morris.

Napier says that 20 years ago, “you could have opened up a dental laboratory for around $10,000. But today that cost starts at $100,000.”

Another industry challenge is a lack of technical talent. “Educational programs for dental technology have declined in the U.S., and, therefore, we are not introducing as many younger technicians into the workplace,” said Balshi.

“Dental technology schools and programs have been closing, which has caused a decrease in the number of people entering the industry. That has directly impacted the number of employees and certified dental technicians in the country,” said Terry Fine, president of Fort Collins, Colorado-headquartered AMG Creative, Inc. The company focuses on marketing dental labs.

Even though many educational programs have closed, the number of U.S. lab employees has not declined accordingly. Napier attributes this to two factors — dental labs themselves stepping up to train employees and educational programs increasing enrollment.

“Some programs have doubled in size in terms of number of students,” he said.

Competition — in the form of corporate dentistry and overseas companies — also is contributing to dental lab consolidation.

“Many dentists have abandoned the traditionally small dental office in pursuit of a more secure and lucrative business partnership with a corporation,” Morris said. “As dentists close their offices, dental laboratories lose their accounts — which forces them out of business.”

“The almighty dollar is very powerful, and that is why so many restorations are made in countries like China, Vietnam, Indonesia and Pakistan,” said Balshi.

“You can get a ceramic crown made by a foreign dental lab for as little as $25, including shipping. Compare that to $100 for an average-priced ceramic crown in a domestic lab,” said Napier.

**The Effects on Dentists**

The changing dental laboratory industry has impacted practitioners. Now more than ever, they must be aware of the quality of their dental labs.

“Traditionally, general dentistry practices tended to do business with a local lab in order to get personal service. This led to a high number of small labs around the country that provided service practices in a close proximity. Often, the owner also was the lead technician, or even the only technician,” said Travis Zick, vice president/COO of Apex Dental Laboratory Group, Inc., in Eau Claire, Wisconsin, and NADL president-elect.

“Today, the reality is that it’s just as easy for a dentist to work with a lab three states away as it is to work with a lab down the street.”

Digital technology has made sending work and communicating easier than ever. “The utilization of technology in domestic labs, combined with new, man-made materials, has meant greater opportunity for American dentists to get competitively priced products domestically,” added Zick.

In the past, dental labs were often viewed as order takers or prescription fillers, much like a pharmacy.

“The role of today’s dental lab is so much different. The service and value a lab can bring is much higher than it has ever been,”

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### Number of U.S. Dental Labs with a Payroll*

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*In addition to the number of dental laboratories with a payroll indicated above, there are currently 735 single-person laboratories.

**Partial year (through second quarter, 2017)

Sources: U.S. Department of Labor, Bureau of Labor Statistics; National Association of Dental Laboratories
said Zick. “For example, labs today can better assist with complex case planning. With the help of technology, we are able to work collaboratively through a full-mouth case with our clients to ensure a positive outcome at each step of the process — and much more quickly than in the past, when every step was done by hand.”

On the other hand, an increased reliance on foreign dental labs has led to greater uncertainty and risk.

“There’s no exact way of knowing that the materials they are using are up to code with American safety laws or are compliant with the Occupational Safety and Health Administration or Food and Drug Administration,” said Morris.

NADL President Robert Savage agrees. “It’s very tough to distinguish the good from bad labs. Being overseas, you have no way to go see that lab in person and observe what’s being done,” said Savage. “You could potentially get some very shoddy work that eventually will go into somebody’s mouth.”

Connie Feng, DDS, an AGD member in Apex, North Carolina, says many dentists forget the old adage: You get what you pay for.

“Prices charged by large labs that outsource overseas may have gone down. But, in my experience, quality control also goes down,” she said. “I’ve used both large and small labs, and I’ve noticed far fewer adjustments with ones that have a reputation for doing good work.”

### Improve Outcomes with Your Dental Lab

Even if you are satisfied with your current dental laboratory, it pays to shop around and evaluate the competition. To help you make a more informed choice, try these tips:

- **Get word-of-mouth referrals.** “Ask your colleagues what labs they use, how long they’ve used them and what their satisfaction level has been,” suggested Zick.
- **Visit the lab personally, if possible.** “See if they have the equipment to handle what they are offering, and determine if general hygiene and infection control protocols are being utilized,” said Morris.
- **Consider technical skill level.** “The technician should complete a few complimentary cases for you,” Morris said.
- **Ask for references.** “Most labs with solid reputations are more than willing to provide a list of client dentists whom you should contact,” recommended Morris.
- **Inquire about on-site support.** “Your case may require, for instance, that the lab technician come to the practice to finalize the shade matching to ensure the best esthetic outcome,” Balshi said.
- **Check with the FDA to learn if a lab is registered as an importer.** “[It] can help you determine if the lab is sending work overseas,” Zick said.
- **Value transparency.** “The lab industry is still lightly regulated,” said Zick, who added that currently only 12 states provide oversight for dental labs. “So it’s extremely important that you know your lab and require it to be 100 percent transparent.”
- **Assess your relationship regularly.** “Conduct a formalized quarterly business review to evaluate the last three months, and find areas of improvement that both parties can work on,” said Fine.
- **Think about adding some lab services on site.** “Gauge what your patient base currently desires, and cater to them. If your patients want low-cost products, investing in an on-site lab may not be beneficial. But if they are willing to pay for speed and flexibility, it may be worth it,” Morris said. Lastly, aim for regular dialogue. “Your practice and your lab need to have an honest, two-way channel of communication,” Fine said. “Each party has a unique perspective that must be respected and honored.”

“It’s important to generate a two-way conversation via phone calls, texts, emails, etc.,” said Savage. “Feedback is the key to successful collaboration between you and your lab.” —

### 10 Questions to ask Your Dental Lab

1. What are your costs for different services and materials, and what are your payment requirements?
2. What credentials do the lab and its technicians hold (e.g., ISO, DAMAS, CDT or CDL)?
3. Where do you get your materials from? Do you work with FDA-compliant suppliers and materials?
4. Do you fabricate your restorations in-house or outsource in any way?
5. If you outsource, is it to a U.S.-based or offshore lab? Where?
6. How many technicians do you have? Will I be able to communicate directly with the technician who is working on my case?
7. What are your quality control procedures?
8. Are you fully digital? Can you accept all digital scans?
9. How are recalls handled?
10. What warranties do you provide?

### Dental Labs by the Numbers

- 7,000 – approximate number of U.S. dental laboratories operating today
- $6 billion – annual dental lab sales in the United States
- $1.32 billion – annual dental lab sales offshore
- 17.2 – average number of employees at a dental lab
- 45,417 – total number of dental lab employees, down 8.5% since 2004
- $41,969 – average annual pay for a dental lab employee
- 73.3% – dental labs that are independently owned and operated
- 10.5% – dental labs that are part of a conglomerate
- 7.8% – dental labs that are located in dental offices
- 8.4% – dental labs that are in military/government facilities, dental schools, manufacturer enterprises, hospital/clinics or other facilities
- Leading dental lab services: implants (76.7%); crown and bridge (74.7%); ceramics (72%); complete dentures (61%); partial dentures (58%); orthodontics (35.2%); sleep apnea appliances/snorling devices (29.4%)
- 23% of dental labs are full-service

Sources: National Association of Dental Laboratories; NADL 2017 Materials & Equipment Survey; Food and Drug Administration; U.S. Department of Labor, Bureau of Labor Statistics

Erik J. Martin is a Chicago-based freelance writer, editor and public relations specialist. To comment on this article, email impact@agd.org.