



# Quality Control

Five reasons you should purchase quality hygiene instruments



by **Andrew M. Goldsmith, DDS, FIALD, DICOI**

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I grew up with a stepfather who built hot rods for a living. I learned a lot about cars and how to perform body work, including one of the most valuable lessons: Have quality tools in your shop. If a tool breaks when you need it most, it can damage the vehicle, slow down your progress or damage your hands.

I carry that same thought process into my dental practice, where we use high-quality hygiene instruments in our offices.

Many dentists purchase cheap instruments in an effort to reduce overhead costs. We're often guilty of not taking care of our hygienists or—even worse—not partnering with them when buying quality tools and instruments. In my opinion, there are five reasons that you should purchase quality instruments for your hygienists and yourself:

durability, reliability, feel, long-term use and productivity.

## Durability

In the 1950s, W. Edwards Deming helped revitalize the Japanese economy with his enduring economic principles. It was said that Deming's teaching became the impetus that pulled Japan out of the ashes of World War II and made it the world's second-largest economic power—in a span of only 10 years. One of Deming's primary beliefs was that manufacturing higher-quality, more durable products allows a company to provide better service.

Durability of instruments is important for the rigors of dentistry. Cheap instruments have a tendency to break, dent or bend. How frustrating is it when your forceps tips no



This reasoning appalls me. I know firsthand that quality instruments cost more, but instruments that break add inefficiencies to the practice that cost time and money, and may even harm our patients. Think about what an instrument goes through in its life cycle—overuse, cleaning, handling, sharpening, sterilizing, etc. When you pick up that instrument, you want it to perform the same way it did the last time you used it. Durable instruments last longer and perform consistently throughout their life cycle, especially if they are housed in a cassette.

### Reliability

A well-known telecommunications company created a digital test board that it installed millions of times during the 1990s. Only 50 percent of the boards proved to be reliable, and the company spent millions of dollars on diagnostics, service calls, repairs and replacements. By the early 2000s, the company was bankrupt. Reliable products are crucial to the success of a business.

Reliability is an essential quality in the instruments we use to perform our trade. When you pick up a tool, you want to be sure that it will work for its intended purpose. For example, in a specialty instrument like a scaler, you have to be confident that it will maintain its edge and remain sharp. However, hygienists often spend their time sharpening an instrument with something like an Arkansas stone. Do you pay your hygienists to treat patients, or to sharpen instruments? I want my hygienists treating patients and spending time with them, building rapport. In my ideal practice, my hygienists would never take time from our patients to sharpen instruments.

In the study “The Effect of Multilayer Filtered Arc Coatings on Mechanical Properties, Corrosion Resistance and Performance of Periodontal Dental Instruments,” the authors wisely articulate that even if the sharpening procedure takes only a few

longer meet, or when a suture needle spins in the needle holder? What about when a 1/2 Gracey becomes an 11/12 because it now has a bend at the end (or has lost its edge altogether)?

When I was tasked with finding the best deals for hundreds of dental practices, I searched the globe for the products that provided the best value. About a year ago, while walking the exhibit hall at the UAE International Dental Conference & Arab Dental Exhibition in Dubai, I was astonished at the number of dentists buying cheap instruments. When I asked them why, I heard responses like, “It’s cheap, so when it loses its edge, I’ll just throw it away and get another one,” or, “I know they’re not as good, but I only use them to scrape calculus off the teeth.”

“Even if the sharpening procedure takes only a few minutes per instrument tip, the labor cost will outweigh the replacement cost of the instrument after only a few sharpening sequences.”

minutes per instrument tip, the labor cost will outweigh the replacement cost after only a few sharpening sequences. This doesn't take into account the loss of productivity by the dentist or hygienist.

And the constant resharpener of instruments has another, possibly more sinister, side effect: Every stroke of the sharpening stone removes a small amount of metal from the instrument. With repeated sharpening, the thinner parts of the instrument can become weak enough to break during function, creating the danger of the piece of metal becoming embedded in the surrounding tissue. Many instruments (especially scalers and curettes) are designed to be bulky in the beginning to minimize the possibility of future fractures.

I was curious about the effectiveness of sharpening and found a recent study by Lory Laughter, RDH, BS, who found that only 6.5 percent of hygienists were able to maintain original angles on instruments after sharpening.

I've become more focused on providing the highest-quality dentistry possible. In doing so, our practice uses the highest-quality instruments. We've embraced XP technology for our instruments, which embeds layers of cermet (ceramic-metallic composite) in the metal substrate to make them harder, yet less brittle. Our instruments are more reliable and deliver a sharp edge every time we pick them up, which helps us to reliably remove calculus. Research has shown that if 17–64 percent of calculus remains after scaling and root planing, persistent inflammation will remain. That is not good for our patients, and we need to do all that we can to eliminate it.

## Feel

One of my friends spends weekends in a meadow with watercolor paints, creating beautiful interpretations of landscapes and wildlife. He's very particular about his paintbrushes and swears that a good brush is all about feel. He prefers Kolinsky sable brushes, which are so expensive, they cost more per ounce than gold. When I asked him if the expense was necessary, he said yes without hesitating—his brushes are an extension of his fingers and his mind, and when he's in his element, the brush just seems to know where to go.

The tactile feedback of a good instrument provides a sensation that's difficult to explain, so we often simply say, "it just feels right." When a surgeon holds an instrument with good feel, less force is required and the tactile sensation afforded the surgeon is that of a good-quality paintbrush in the hands of a painter.

My composite instruments must be reliable when I use feather strokes to smooth the material. I'm very particular about what I use, and strongly prefer lightweight instruments with thicker ergonomic handles and nonstick-treated tips. In our practice, we've given our hygienists the freedom to test multiple products, and they most frequently choose higher-quality instruments that maintain their sharpness. When I find a quality instrument that has a great feel, I know that I'll provide a great outcome for my patients.

## Long-term

Our family has the funniest sayings and idioms. For example, I had an uncle who "smoked like he was on fire and drank like he was trying to put it out," and had a "cast-iron stomach" because he could eat "everything but the kitchen sink." One of his top sayings was, "The bitterness of buying poor quality remains long after the sweetness of low price is forgotten." This stuck with me and echoes in my head every time I think about buying something cheap.

On a well-known dental blog, a colleague

recently shared that he'd found a website that sold curing lights for \$79. Of course I purchased one, too, and it turned out to cure composite if you held it directly on a very thin layer and continuously cured the composite for a minute.

When our local dealer representative visited the office, I asked him to check the wavelength on the lights. The verdict was that these lights were more like green lights, coming in about 500 nanometers. They ended up in the lab for curing block-out resin and for oddball projects, but mostly they rest in a drawer with other mistakes we've made.

If you buy dental instruments that function properly for a long time, they provide greater long-term profitability. To evaluate this concept, we performed a retroactive evaluation on instruments across 10 practices. We identified instruments using Easy ID Rings—one color designated the

month it was purchased, one represented the year, and one was used for the usual purpose of procedure type. In our informal study, we found that instruments purchased through cheaper, no-name sources had a 63 percent shorter life span than premium brand-name instruments.

Obviously, this wasn't formalized research. Nonetheless, if an instrument is half the cost but lasts only one-third as long, your business assumes a greater ongoing expense with a lower ROI.

### Productivity

Do you pay your hygienists to sharpen instruments? In the United States, a hygienist's average hourly rate is about \$42. As a business owner, I break down each person's role by determining objectives, goals, strategies and tactics; for a dental hygienist, I wouldn't include instrument sharpening in any of those categories.

Some people suggest that sharpening is a duty that allows hygienists to provide good periodontal care, but I think this is faulty logic because the instruments that hygienists use should be adequate before performing their primary task. (Imagine if a carpenter had to sharpen all of his nails before building a house.)

Let's take it a step further: If a hygienist spends one hour per week sharpening instruments, over the course of a year she'll spend 48 hours just sharpening instruments. If she's making \$42 an hour, that's \$2,016 you spent just to have her sharpen instruments. But the time she spent sharpening was time spent not seeing patients—at an average billing rate of \$200/hour—which works out to about \$10,000 in lost earning potential over a year. (Those are only hard numbers that don't take into account any anticipated/diagnosed work or elective services that come from hygiene.)



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The bottom line: You shouldn't be paying your hygienists to sharpen instruments, and having them do so is a poor business decision—it leaves them with less time to perform tasks that align with their objectives, goals, strategies and measures. Provide your hygienists with the proper

tools so they can have greater efficiency. Cheap instrumentation causes unnecessary workload. Focus on increased efficiency and quality dentistry, and everybody wins. Do quality dentistry and use the best-quality instruments to perform your job, and the money will follow. ■

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