## Paperless Dentistry...The Time is Now

Bruce A. Stephenson, DDS, FAGD

Transitions are tough. When my grandfather was making the transition from driving a horse to driving a Model T Ford, he would occasionally get frustrated and tend to revert to his more familiar, but no longer appropriate, behaviors. Witnesses reported that, just before his frequent collisions, he would invariably shout, "Whoa, Damnit, Whoa!" But he was determined to master his Model T so he could benefit from all the advantages it offered.  And he was smart enough to eventually realize that learning to drive was going to require a fewer dented fenders … and offended neighbors!

Dentistry is now making the transition from "paper" to "computerized", and the situation we find ourselves in is very similar to my grandfather's. We need to look at all the benefits, decide which ones offer the greatest advantages for the least amount of investment and training, and then try to reap those benefits with the fewest dented fenders possible.

"Paper" is still a very good "display device." It is portable, convenient, and familiar. But it is a poor "storage device" when very much information is involved, especially when that information was recorded in less-than-ideal handwriting. Computers are far better at information storage, sorting, and retrieving than either paper or people. Dentistry needs to embrace these benefits. The transition to paperless dentistry results in an easier way of doing things, lower practice overhead, and most importantly, better patient care.

## What is Paperless Dentistry?

Paperless dentistry is simply storing the most needed and most frequently used information by the best means currently available … a computer. It does not necessarily mean the elimination of all paper from the dental office, or even the elimination of a paper folder with a patient's name label attached. It means that, if such a folder exists, it is only used to store infrequently used data such as old radiographs. The paper folder is used as a convenience, not a necessity. The important information needed to treat a

patient is stored in a computer. This allows medical histories, current radiographs, treatment plans, and clinical notes to be instantly accessed from any networked computer in the office. This encourages a more thorough review of the patient's pertinent information because this review is so much easier and quicker to do than with a paper-based chart system.

With a paper-based system, information must be entered multiple times in multiple places. How many different places in a paper chart is the patient's name written? With well written software, a piece of information is entered only once in a paperless system. Forever after, it is "automatically" displayed or printed by the computer any other places it is needed. It never has to be re-entered again. A mouse click addresses an envelope, prints a chart label, or prints an appointment card … without any typing! Far easier! Far Quicker! Far less prone to error!

Other examples of the advantages of paperless dentistry abound. Recently in my office a patient who has not been seen for several years called to schedule a hygiene recare appointment. Because the computer chart was prominently "flagged" that the patient required pre-medication, our staff person inquired if the patient was aware of any changes in this requirement. "No, I still need to take it but the stuff he gave me last time made me puke." The staff person could immediately review all the medications prescribed by me for this patient in the past, then prepare a quick computer entry on my personal "to do list," then proceed to make the patient an appointment while informing him that someone from our office would call him back regarding the pre-medication. When I had a few minutes during an impression, I reviewed my to-do list, reviewed the patient's chart, and ordered a different antibiotic. The prescription was printed automatically at the front desk, although I could have just as easily faxed it directly to the pharmacy. I did this without leaving the operatory or even getting out of my chair. There was no spoken communication with the staff person who spoke with the patient, no one had to try to locate the paper chart or sift through it for old medical histories or prescriptions. Everything needed to deal with this patient was easily and immediately available. This lowered my office overhead, made everyone's life easier, and improved this patient's care.

Clinical charting for many common dental procedures is often very routine. We write the same things over and over again during the day. And we often write it in a less and less legible manner. Computers can easily improve this situation. In our office, we have about 15 different "canned" sets of chart notations for common procedures we do every day. For example, if I type "LA1" the computer types "One carpule of 2% lidocaine with 1:100,000 epinephrine." If I type "fgcr" the computer types my usual procedure for a full gold crown, including the type of retraction and the impression materials I use. Obviously, I do not always do things exactly this way, but minor changes in the procedure used can be quickly amended in the computer charting. This allows us to quickly, easily, and legibly do most of our procedure charting in just a few seconds. It is much faster than handwriting or even dictating directly into the computer. The best part of this method is that it is not dependent on a specific dental software program … it will work with any Windows-based system because it uses the "auto-correct" feature of MS Word and is entirely "user definable." (I am sure there is a comparable feature in Word Perfect but it may be time for you Word Star users to switch!) It is also essentially "free" because word processing programs are often included on new computers.

My last example from the pantheon of advantages of paperless dentistry involves imaging, and specifically dental radiography. In my case, this was the last "piece" of the paperless system I installed. I waited until about two years ago, because of both the expense and the rapid changes in the quality of the images, and the financial stability of the companies providing the technology. I now wish I had done it several years sooner because I needlessly denied my office and my patients all the benefits that I did not fully appreciate until I started using it.

Just as the clinical notes, treatment plans, and medical histories are stored and sorted by the computers, my images are now immediately accessible from any computer in the office. Without leaving my chair, I can see any x-ray taken on any patient in the last two years. I can see x-rays taken just a few seconds before by a hygienist – she doesn't have to leave her operatory and I don't have to leave mine. I can show my patient the extent of the caries or bone loss by putting their image on a 19-inch television in the corner of the room. This is a very big improvement over holding the 1 inch square of plastic up to the big viewbox in the ceiling that I once used! I get more information from the digital image because I can easily magnify it, or change the brightness and contrast to optimize viewing of either hard or soft tissues. If a colleague or an insurance company needs a copy of an image, we no longer have to duplicate a film or worry about the return of an original. A few mouse clicks are all that are required to send a "copy" with the same high quality of the "original." And the quality of digital radiographs far exceeds the quality of my previous conventional films.

**Making the Transition to Paperless Dentistry**

Is paperless dentistry here to stay? To ask that question is like asking if computers are here to stay. I think the answer is pretty clear. There are far too many advantages over paper-based systems. So the question is not IF you will convert to paperless dentistry, but simply what is keeping you from converting right now. And an obvious answer is cost … which brings me back to my grandfather and his Model T Ford.

As much as my grandfather wanted an automobile, and as much as he knew he would benefit greatly from the advantages, he simply could not afford to buy one when each of them still had to be "custom made." He needed to wait until Henry Ford developed an assembly line to lower costs. The good news is that this has finally happened with dental computing.

Not only are excellent, mass produced computers now readily available, but some companies are beginning to install dental components such as dental management software and radiography on software "assembly lines." But unlike the Model T, you get to choose several options. You choose the management software from "column A," digital x-ray from "column B" and cosmetic imaging from "column C" … all from different companies! A completed, fully tested, warranted system can be shipped to your office. The rest of the installation on-site is fairly easy … most dentists are fairly adept at drilling holes!

But, as my grandfather discovered, there is still that little matter of learning to do something in a little different way. And the changes required between driving a horse and driving an automobile are very analogous to the changes required of you … and your staff … when switching from paper-based records to paperless dentistry. But, just like

driving a car, you need to actually do it to learn it. No one ever learned how to drive a car by sitting still in a barnyard or a driveway!

If my grandfather were still alive, I think his advice would be to recognize the advantages, embrace the need for change, and get on with it as soon as you can afford it Understand that there will be a few occurrences of "Whoa, Damnit, Whoa!" during the learning phase, but it is time to say "Giddy Up" and get going!

Dr. Stephenson opened his practice in 1977 and bought his first computer in 1979. He has lectured and consulted on dental computers since 1986, and his articles have appeared in *Dental Economics, Dentistry Today*, and the *Journal of the California Dental Association*. He maintains a full-time "paperless" restorative practice in San Leandro, CA, and has been involved in computer system integrations for several hundred dental offices.