

Beyond Paperless Dentistry The Expanding Role of Computers in Modern Dental Practice

By Bruce A. Stephenson, DDS, FAGD

“Paperless Dentistry,” the storage, sorting and retrieval of computerized dental records, has provided not just a step forward, but a leap forward in the efficiency and quality of patient care. But we can continue to expand our uses of dental computers by adapting some additional easy, free, powerful strategies to make our practices more profitable and to provide superior treatment. This article discusses several simple computer strategies any office can easily incorporate and can be done without changing practice management software. They are user-dependant, not software-dependant. They require only changing a few practice habits, not a computer “Extreme Makeover.”

The goal of Paperless Dentistry has never been the elimination of paper from the dental office¹. The goal is to replace the use of paper when electronic media become more efficient, such as the storage, sorting and retrieval of information. And with more modern technologies, we need to re-think the way we do things. Did you ever notice that really old sinks, like the one in G. V. Black’s 1908 operatory, had two separate spigots for the hot and cold water? People were accustomed to washing in a pan of water so they ran hot and cold water separately into the stoppered sink, then washed in that “pan.” It took awhile for people to realize that it was nicer to wash in a mixed stream of warm water from a single spigot! Now sinks with separate hot and cold spigots have pretty much gone the way of the amalgam squeeze cloth! Similarly, there are now much better “computer ways” of doing things than the old “paper ways” we were forced to use in the past. Our habit of sorting everything solely by alphabet is an example of an inefficient hold-over from our paper-based days! With computers, it is usually much better to sort by other criteria because the computer does all the work!

For instance, G. V. Black used to have a ledger tray where he stored his accounts receivables. He had to file the patient ledgers alphabetically because he couldn’t find them any other way. But today, all the accounts can be sorted instantly by the computer by more useful criteria. But some offices persist in printing the A/R report alphabetically! No! Print it by “oldest balance first” or “largest balance

first.” This is a much more profitable way to work the accounts. Similarly, unscheduled treatment lists should be sorted by the value of the treatment plan or by the types of procedures the doctor likes to perform (I personally love doing “pontics!”). Not by the alphabet! Referral reports should not be sorted by the referring patient’s last name. They should be sorted by the number of people referred or by the value of the treatment completed. G. V. Black had to sort by the alphabet. We don’t. We can use more productive computer strategies.

The use of electronic insurance claim processing is an example where computers are much more productive than paper². It is no longer efficient to print and mail a paper claim when an electronic claim is cheaper, easier and gets the payment into the dental office much quicker. But in some cases, paper still has advantages as we transition to all-electronic media. Appointment cards (printed by the computer appointment scheduler, of course, so there are no mistakes) are still appreciated by most patients when they leave the office. But because 70% to 90% of our patients now have email³, all follow up reminders can be sent electronically and automatically. The system we use⁴ invisibly links to our appointment scheduler and sends reminders without any work by the staff. Electronic claims and email appointment confirmations provide economic benefits to the practice while benefiting patients by helping them keep their scheduled appointments.



The goal of Paperless Dentistry was never to eliminate the use of all paper in the office. The goal is to replace paper when electronic media become more efficient such as with the storage, sorting and retrieval of dental records.

In a modern office, it is more efficient and cost-effective to have our “digital employees” (our computers) do more of the work. We paid for those computers, but most of the time they just sit there idle! We wouldn’t put up with that from any other employee! G. V. Black’s receptionist used to have his patients address their own recall cards because she thought they responded better to a postcard in their own handwriting. (That’s probably how this “dental myth” got started!) However, if the patient did not respond to this single post card, they were often lost.

These days, we should make those lazy computers send out a series of reminders, either postcards or emails, automatically at 3 months, 6

months, and 12 months overdue. Little or no staff time is necessary, it maintains hygiene production, and ensures better periodontal health for the patients. Once this computer-based recare system is setup, it works forever without any more attention from the doctor.

We also can also probably thank G. V. Black's receptionist for starting another deeply engrained dental



Our operatories appear more modern but often our techniques for handling information remain antiquated, based on old fashioned paper-based habits and dental myths.

myth: the need to "confirm" patient appointments by telephone. In G. V. Black's day, telephones were novel and it might have seemed like a good idea. However, in our busy group practice, **when we stopped telephone confirmations, the number of missed appointments went down!** Our computers carefully track missed appointments and we graphed the results so we are not "myth-based" but "fact-based." We did not just suddenly stop telephone confirmations, however. We made a point of telling each patient we were discontinuing this behavior and asked them to, "Please be sure you don't make an appointment you are not sure you can keep and be sure to keep each appointment you make." Worked like a charm! We do continue to do our automatic email confirmations and, for patients without email, we send out a computer-generated postcard two weeks ahead of pre-booked recare appointments. We also never charge

for missed appointments but we do send out an (automatically generated) missed appointment letter asking the patient not to miss any more. If the patient misses three appointments with three warning letters, all tracked by the computers, we "fire" them. This also works like a charm. (I'm psychic! I can hear you thinking, "That won't work in my practice!") Yes, it will, if you handle it properly. You would be surprised at the number of dentists in our seminars who confirm this. Computers help us become "fact-based" instead of "myth-based." You can see more examples "myth vs. fact" on our website, www.PaperlessDentistry.com .)

I mentioned making graphs to illustrate trends, such as failed appointments, that are sometimes difficult to see as just numbers. For G. V. Black, making a graph was time-consuming and difficult. For us, it is almost instant and very simple. With a spreadsheet program such as Microsoft Excel⁵ or OpenOffice Calc⁶, you just drag and click a mouse. Instant, colorful, informative graph! If you are intimidated by the prospect of learning to use a spreadsheet, let me assure you it is really very easy and intuitive to do the basics such as making a graph. There are lots of helpful on-line "tutor"

websites⁷. You might also ask you staff if one of them already knows how. I was quite surprised to learn that one of our hygienists is very accomplished with Excel. We now use her "expanded duty" to help administer our practice.

Graphs let you productively exploit something that was unknown to G. V. Black and is actually little known in dentistry even today. It is the observation from industrial psychology known as the "Hawthorne Effect." The Hawthorne Effect predicts that, "People's behavior and performance change (usually improve) following any new or increased attention."⁸ We nagged at our staff for two years to collect email addresses when patients came into the office. The computers showed about 70% staff compliance. But when we graphed compliance over time and shared this with the staff, their compliance im-

proved to close to 100% in about two months. We had a similar improvement with the collection of referral sources for new patients. So we started tracking the use of topical antibiotics in perio pockets and graphing this by hygienist. We now graph the number of porcelain veneers and implants we do each month. We want to increase these procedures in our practice. We graph the number of new patients each month and the percentage of these patients that have appointments at the end of three months (i.e., who didn't just "walk out the back door"). It is still early, but all of these have shown positive changes and take only minutes per month to accom-

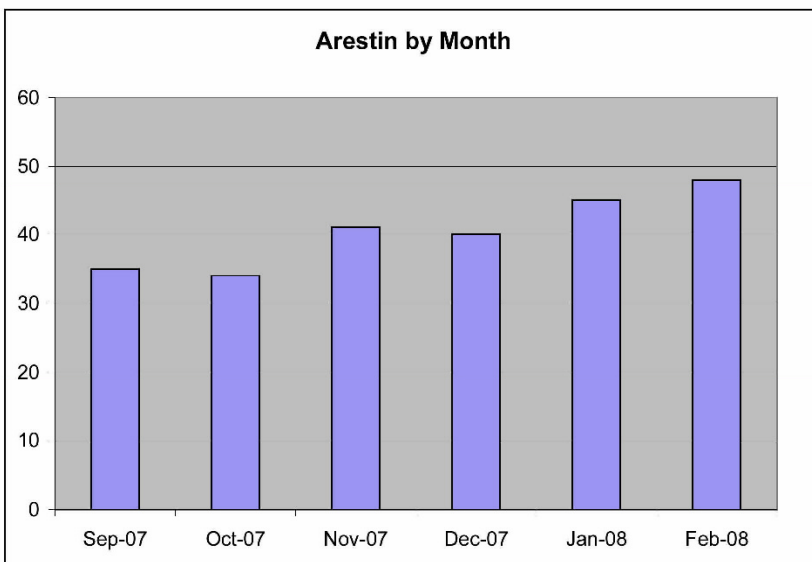
plish. The computers do almost all work! And because we use a computerized payroll program¹⁰ that can export all reports to a spreadsheet, we can instantly graph the percentage each employee's bonus has contributed to his or her take home pay for the year. Now, our computerized bonus program is simpler to administer and provides more motivation for the staff.

The idea of "Front Deskless Dentistry" has probably been around almost as long as Paperless Dentistry but it is now becoming more common. Again, the goal is not necessarily to eliminate the physical front desk from the

office, but to reduce or redistribute the tasks that were formerly done at that front desk. Clinical charting, posting, treatment plan entry, insurance claim submission, lab slip generation, and of course appointment scheduling are all much more efficient from chairside¹¹. Our office is front desk-less in the sense that fewer tasks are performed by fewer people in the front desk area. But two other practices I recently visited have gone much farther.

In one office, the doctor works with only two staff people, both clinical assistants. They process all patient transactions at chairside. All three people, including the doctor, wear wireless telephone headsets and the phone is answered by whoever is free. While one assistant is with the doctor, the other takes care of administrative tasks such as account follow up and supply ordering. They have a computer in their lab area but the only thing on the

front desk is a vase of flowers! In the other practice, there is not only no front desk, there is no human staff! The doctor does everything by himself. All appointments, charting, treatment planning, collections, billing ... every single thing ... is done by the doctor. If the phone rings and he cannot answer it, his answering machine takes the message and he returns the call when he has time. His only employee is his "digital" one: his computers! He admits this may not be the most efficient way to practice but he really likes the fact that everything is in his direct control and he has no staff salaries, sick days, vacations, holidays, training, complaining, quarreling or any other staff "issues." These two practices may not represent ways most of us would like to practice but they show what is possible. For the rest of us, more practical strategies allow us to use our computer systems to expand our management capacity while reducing everyone's work load and profitably decentralize tasks that formally could only be done at the front desk.



Easily made graphs share information with staff to help promote desired changes by taking advantage of the Hawthorne Effect from industrial psychology.

plish. The computers do almost all work! The Hawthorne Effect provides practice enhancements for free with almost no time or effort. G. V. Black would be green with envy!

Staff bonuses, based on some combination of production and collections, are usually a good idea⁹. They encourage staff participation, improve morale and tie salary increases to actual office profitability. But I often see two problems with them. First, they are frequently so complicated that they are labor-intensive to calculate ... and this is often the dentist's labor! Second, while staff may be motivated by this month's bonus, they sometimes forget just how much the bonus has contributed to their paychecks over the last year. Our computer strategies have eliminated both these problems. Using a simple spreadsheet that is updated by our practice manager in two minutes at the end of each day, the month-to-date bonus for each person is calculated and updated for each staff person. This number is automatically linked to our "Morning Meeting" report so each person knows each

G. V. Black and his receptionist might have been wonderful, productive people but they practiced 100 years ago! It behooves the modern dentist to dispense with the inefficient paper-based habits and myths of the past and embrace the advantages that computer-based strategies bring to our practices. Computerized scheduling, email appointment cards, electronic insurance submission, replacing alphabetical sorting with more productive criteria, multiple recare reminders, eliminating counterproductive telephone appointment confirmations, using

graphs to take advantage of the Hawthorne Effect, an effective staff bonus system, and decentralizing tasks away from the front desk to areas such as the operator where they can be done more efficiently ... these are just some of the ways computers allow us to move beyond Paperless Dentistry to gain more benefits for our staff, our patients and for our selves! And these are not only very easy to do, but most of them are free!



The trend toward the “Front Deskless” office may not mean the elimination of the physical front desk but rather the transfer of tasks to other areas such as the operator where they can be done quicker, easier and more accurately.

References for this article are available at www.PaperlessDentistry.com



Bruce A. Stephenson, DDS, practices and is the managing partner in the highly computerized, paperless, front deskless, wireless adult group practice he founded in 1977. He bought his first dental computer in 1979 and has consulted, lectured and written about dental computing since 1985.

You can find lots of useful information about dental computing, the schedule of his seminars or contact him directly at his website,

www.PaperlessDentistry.com or email him at Bruce@PaperlessDentistry.com.