Dental informatics: the right time to invest in training and research?

By Titus Schleyer, DMD, PhD

These days, technology appears to touch most aspects of our lives, and dentistry is no exception. The plethora of possibilities and questions is seemingly endless.

Should you invest in chairside computers, paperless records and/or digital radiology? Does it make sense for patients to have Web-based access to their appointments and dental record information? What is Health Information Technology (HIT) and what are the implications for your practice? Can computers really make you a better dentist and help improve patient health?

The last question is one worth pondering. If we look at all investments in our practices, we make them typically for two reasons: to improve patient care and outcomes, enhance efficiency, or both. Health information technology (HIT) is no different. One issue with HIT, however, is that it is often hard to gauge the true balance between costs and benefits.

Medicine has pretty much decided that the benefits of HIT outweigh its costs. Many studies have shown that HIT can enhance medical decision-making, reduce medication errors and improve care outcomes. This is why the recent federal stimulus plan, as well as other initiatives, contain measures to encourage the adoption of HIT by physicians, clinics and hospitals. But, what about dentistry?

Evidence for the benefits of information technology (IT) in dentistry can be found, but it is largely anecdotal. Practitioners report easy and nearly ubiquitous access to patient information. Electronic reports allow tracking of patient completion of treatment plans and even health outcomes. Digital information can be e-mailed and shared with patients and colleagues, for instance, to increase patient compliance or to get a second opinion. On the cost side, investments in IT appear expensive in the absence of good measures for the cost/benefit ratio. Sometimes, staff and colleagues are reluctant to change ingrained ways of practice. Unreliable, buggy or malfunctioning technology are the bane of even the most hardened enthusiast.

How can we find a way out of this dilemma? I would argue that we need a more systematic and fundamentally sound approach to conceiving, developing, implementing and evaluating technology. We need to focus on technology that has demonstrable benefits for practitioners and patients, not chase every single new gadget that is marketed with ambitious but ill- or unsupported promises.

While good ideas for new technologies can arise anywhere, many are the result of successful collaborations between dentists and engineers, computer scientists or IT people. We need to bring the best technical approaches to bear on the problems in our domain, and multidisciplinary collaborations tend to do that well.

As many examples from the IT industry show, it is possible to translate good ideas into great software and/or devices. Unfortunately, this is the exception rather than the rule. Individual dental software applications contain many good features and designs, but as a whole there is great potential for improvement of usability, as some of the studies conducted by our center have shown. Improved usability translates into day-to-day benefits for you, the practitioner.

Implementing clinical software applications in a practice is challenging but not impossible. Plenty of offices have a well-run IT infrastructure in which data quality is maintained, data is backed up regularly, and staff trained and productive.

Free training in dental informatics

The National Institute of Dental and Craniofacial Research (NIDCR), funds dental informatics training to qualified applicants for free (no kidding!). The NIDCR funds provide a stipend, tuition, fees and health insurance support, travel subsidies and a state-of-the-art computer.

These positions are highly sought after and admission is very competitive. Additional information about the program is available at *di.dental.pitt.edu/postgrad.php.*

For any questions, please contact the program director, Dr. Titus Schleyer, at *titus@pitt.edu.*

Unfortunately, our dental education and licensing system isn't well-positioned to provide practitioners with the skills needed to run IT well. A frequently heard comment from many of our students is: "Well, informatics is not on the national boards, so it can't be that important."

Finally, we need to do a better job of assessing what works and what doesn't with regard to IT in dental practice. To date, we do not have solid, empirical evidence for the cost-benefit ratio of implementing, for instance, paperless records. We don't know how patient outcomes change when a practice begins using computers.

Do more patients have better clinical outcomes? Are they more compliant in terms of getting their treatment plans completed? Yet, practitioners continue to invest millions of dollars every year in IT in their practice.

How do we get beyond these obstacles? In my opinion, we need to invest more in research and training in dental informatics. The discipline of dental informatics comprises many individuals who are very well qualified to help bring technology to the next level in dentistry. Many of them understand the domain of dentistry intimately and personally, especially if they are dentists with training in informatics. Due to their in-depth knowledge of computer science and information science, they are well positioned to come up with innovative and workable problem solutions.

Unfortunately, there are not enough dental informaticians, and their collective research activity is not intensive enough to address the pressing opportunities and challenges in leveraging IT for dental practices. For many years, the training program at the University of Pittsburgh has been preparing individuals for research and teaching careers in dental informatics. But, we produce a trickle where a flood would be needed.

Through the generous support of the National Institute of Dental and Craniofacial Research (NIDCR), we can provide dental informatics training essentially for free to qualified applicants. NIDCR funds provide a stipend, tuition, fees and health insurance support, travel subsidies and a state-of-the-art computer.

These positions are highly sought after and admission is very competitive. Additional information about the program is available at *di.dental.pitt.edu/postgrad.php.* We are currently looking to fill several trainee positions.

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If the patient says, *"I forgot my checkbook. Can you bill me?"* respond with, *"That is no problem at all, Mrs. Jones as we take Visa, MasterCard and Discover. Which would you like to pay with today?"*

If the patient says that she/he doesn't have a credit card and asks that a bill be sent, respond with, *"Mrs. Jones, we can do better than that. I can give you your bill right now along with a printout of the services Dr. Smith performed today."*

Give the statement to the patient along with a self-addressed, stamped envelope. Smile at the patient and say, *"Thank you Mrs. Jones, and if you would drop your payment in the mail to us when you get home, we would greatly appreciate it."*

Financial negotiations should be delegated to a trained financial coordinator. The dentist is the clinician, the primary income producer and the chief executive officer.

However, he/she is not the financial coordinator, and engaging in this role is often both inefficient and awkward for dentist and patient alike. It also can undermine the profitability of the practice.

Delegate financial discussions to trained members of the team. Those individuals most capable of succeeding in this position are typically assertive, tactful, confident and goal-oriented.

You may have excellent members of your team who are loyal, kind and truly dedicated to your practice. However, they may be entirely too passive or very uncomfortable asking patients for payment. It is not a job that just anyone can step into.

Some people are simply not suited for this responsibility. Pay attention to the personality type of the individual responsible for collections and secure training to ensure maximum success.

From time to time, as the dentist, you will feel that certain exceptions should be made to the policy for specific cases. Certainly, as the business owner, that is your prerogative.

However, be judicious in making those exceptions. Special arrangements that become common practice usurp the role of the financial coordinator and can quickly render financial policy useless.

Educate patients fully so that they understand the health care impact and the overall value of the care you provide. Review your collections policies, train those who discuss financial arrangements with patients and ensure that patients fully understand the options available.

Before long, we'll be well past the current economic crunch, and you will have kept your patients in your practice and your bottom-line intact. DT