

Taking Advantage of the Data Deluge

Every literate individual is aware that the amount of information available is increasing geometrically. Not that all of this information is interesting or necessary, but how does one separate the essential, the desirable, and the inconsequential? This is certainly true for the health care provider. As soon as one might learn, for example, the list of nonsteroidal anti-inflammatory agents available, the list increases. Pharmaceuticals are only one example of the rapidly changing information base of which the practitioner must be aware. When students graduate from dental school and later specialty training, they are probably as current with their knowledge as they will be in their lifetime. Unfortunately, many continue to dip from this stagnant well of wisdom for their remaining years of practice, with only an occasional bit of fresh data being added to the decaying pool of knowledge. Clinical impressions, subjective and potentially inaccurate, begin to become the primary source of "knowledge" and constitute the basis for practice. There is a well-worn story of the young physician reporting the results of his controlled research at a medical convention, only to be challenged by a graybeard, confident in his practice experience, stating, "young man, that report of yours is nonsense. I've had over 30 years of experience to know you're wrong." The young physician, confident of his results, replied, "Dr, I take issue with your statement, you do not have 30 years of experience, you have had 1 year of experience and over 29 years of repetition." A bit cheeky, perhaps—but probably true. How many practitioners are willing to challenge their beliefs with new thought—or phrased another way, how many judge new thought solely on the basis of their own, limited experience?

Along with the flood of information there must be a way to access that information and put it to use. That "way," of course, is the use of electronic search engines and computer tools to give the knowledge relevance. Anyone who has seen Dr Lawrence Weed's "Knowledge Couplers"¹ at work knows that data can be assembled and given practical relevance. This ingenious program uses a complex literature base that is constantly being refreshed to ask relevant questions of the practitioner, and to arrive at a logical diagnosis based on data. The conclusion provides lateral options and the literature upon which the conclusion is based. Unfortunately, the program does not currently have a dental database, but such an option is open and assuredly possible.

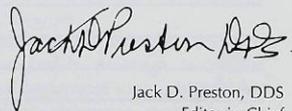
Although information acquired during practice may lead to some false conclusions, the accumulated observations of numerous individuals may provide a more stable basis for deductions. The accumulated data from a large enough set of practitioners could be invaluable. Today, third parties have taken it upon themselves to intervene in the practice of medicine and, to a lesser degree (fortunately, thus far), in dentistry. Practitioners are told what they may and may not do, and are even restrained from telling patients that the available care is not the optimal care. Whether the third party is a government, an HMO, or any other entity, the limiting decisions are based upon data that that entity has accumulated, assessed, and massaged, and from which it has

drawn conclusions relative to the financial impact of health care. Dentistry still has the opportunity to preserve its healthcare integrity, but only if it is willing to develop its own database and use those data for the good of the patient, rather than the profit of the intervening body.

If a third party payer were to withhold payment for a gold onlay in favor of a resin composite restoration on the basis that it is less expensive and would serve the patient equally well, we would all probably object and cite our experience as being contradictory to that impression. But, do we have any data? Has dentistry unified sufficiently to accumulate facts in a manner that allows scientifically sound conclusions to be drawn? With rare exceptions, no. Dentistry must take control of its data if it is to be able to offer any logical cost of care than the cost of neglect and inappropriate therapy. If the profession of dentistry in general and the specialty of prosthodontics in particular is to control its destiny, then it must seriously begin to acquire data.

DO NOT expect data gathering to come from the top down—organized by those agencies who theoretically represent us. Instead, data gathering must start from groups of practitioners with similar interests and a willingness to innovate. Don't worry about security or about negative aspects of contributing data. All personal delineators can be stripped from the data so neither the patient nor the care giver are identified. Will it be easy to set up a comprehensive database? No! Will it be worth the effort? Yes!!

If dentists locally, nationally, and internationally do not see the pressing need to work together to preserve the integrity of the profession they have trained to practice with caring passion, then we stand to lose autonomy and integrity. When the data are gathered and assessed, they will provide a dependable and logical basis for care that supersedes any individual subjective opinion, and will constitute a resource that is invaluable. No one person can know all they need to know to treat even routine patients. (Although no patients would think themselves routine—all are special). Prosthodontists have the opportunity to be the nucleus for gathering data through the bond of specialty organizations and, by example, encouraging other specialties to do likewise. It will take time and energy, but the rewards are greater than the effort—collectively and individually.



Jack D. Preston, DDS
Editor-in-Chief

1. Weed LL. Knowledge couplers. Burlington, VT: PKC Corporation.