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THE *JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS* shall identify and place before the Fellows, the profession, and other parties of interest those issues that affect dentistry and oral health. All readers should be challenged by the *Journal* to remain informed, inquire actively, and participate in the formulation of public policy and personal leadership to advance the purposes and objectives of the College. The *Journal* is not a political vehicle and does not intentionally promote specific views at the expense of others. The views and opinions expressed herein do not necessarily represent those of the American College of Dentists or its Fellows.

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- A. To urge the extension and improvement of measures for the control and prevention of oral disorders;
- B. To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels;
- C. To encourage graduate studies and continuing educational efforts by dentists and auxiliaries;
- D. To encourage, stimulate and promote research;
- E. To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;
- F. To encourage the free exchange of ideas and experiences in the interest of better service to the patient;
- G. To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public;
- H. To make visible to professional persons the extent of their responsibilities to the community as well as to the field of health service and to urge the acceptance of them;
- I. To encourage individuals to further these objectives, and to recognize meritorious achievements and the potentials for contributions to dental science, art, education, literature, human relations or other areas which contribute to human welfare—by conferring Fellowship in the College on those persons properly selected for such honor.

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Professional Development, Part II

- 7 Finding the Evidence for Evidence-Based DentistryDaniel M. Laskin, DDS, MS, FACD
- 11 Evidence-Based Versus Experience-Based Decision Making in Clinical DentistryMark A. Cruz, DDS
- 15 CE Institute StyleChristian B. Sager
- 19 Postgraduate Educational Opportunities in the Military ServicesBoyd E. Robinson, DDS, FACD
- 21 Professional Growth, Learning, and the Study ClubFloyd R. Tanner, DDS

Issues in Dental Ethics

- 29 Welcome to "Issues in Dental Ethics!"Bruce Peltier, PhD, MBA
- 30 Dental Ethics as an Intellectual Discipline: Taking the Next StepDavid T. Ozar, PhD
- 35 Commitment to Community Service: The Story of Dr. Jack EchternachtJames T. Rule, DDS and Muriel J. Bebeau, PhD

Departments

- | | | |
|----|------------------------|---|
| 2 | <i>From the Editor</i> | Perspective |
| 5 | <i>Letters</i> | Fellows and Readers React |
| 26 | <i>Agencies</i> | ADA CERP |
| 41 | <i>Leadership</i> | Emerging Trends in Professional Development |

FROM THE EDITOR

Perspective

Perspective is wonderful. It is an ingredient in wisdom and the world has never known a leader who lacked it. Perspective is the ability to simultaneously perceive the nature of our circumstances and their meaning. In this editorial I will argue that it is imprudent to lose perspective in our clamor to consolidate power for the sake of unity or effectiveness.

Here is a story that helps thinking about perspective in a concrete sense. One of the ancient stories in the Theravada Buddhism tradition tells of an immensely popular king who determined to forsake the world and follow the life of a monk. In his early journeys he is followed by his wife and a huge retinue of courtiers who journey with him because of his beneficence and power. In the town of Daunu he meets a craftsman making arrows. He notes that the craftsman closes one eye as he inspects the straightness of the shaft. The craftsman explains "Should I look at this shaft with both eyes, my sight, distracted by several objects, could not perceive the defects of the wood, etc., but by looking on it with only one eye the least irregularity is easily detected."

The point of the story is that once committed to a course of action one

must accept all the consequences of that course and not expect the benefits from the alternative that was not chosen. In the Christian tradition we have the parallel admonition not to serve two masters.

But what about this business of closing one eye? Every dentist knows the advantage of binocular vision, especially with regard to depth perception—perspective. We teach dental

or for dealing with turbulent situations. (Knowing nothing about the art of arrow making, I personally would roll the shaft on a level surface such as a table as an operational definition of straightness.)

The mixed metaphor that has to be unraveled in this story is the difference between means and ends. There is indeed a danger in pursuing multiple objectives; likewise there is a dan-

*T*oday, choice rules and the number of voices proposing alternative approaches strains our capacity to process these conflicting and normally ungrounded claims.

students to use both eyes, often aided by magnification, and to supplement this by movement of the object or the operator's head and by visual comparison with known objects introduced into the field such as an explorer. We also insist that beginners borrow the eyes of experts such as their teachers. Learning and practicing dentistry are a matter of perspective; and the more of it the better. Having a look with one eye closed may be enough for the master, but it is not a sound strategy for becoming a master

ger in judging our goals or our progress towards them from a singular perspective.

Dentistry has entered the era of choice. There are more procedures available than ever before and more ways of performing them. Patients are defining oral health care more broadly than at any time in the past. And there are more ways to provide that care and to finance it than existed even a few years ago. When controlling the effects of caries pretty much defined the extent of dental practice

years ago, options were few and dentists established their own hierarchy based on technical skill performing the inevitable procedures. Today, choice rules and the number of voices

from multiple perspectives. If one's goal is to achieve certainty, that is most easily done by learning one thing and then bringing all inquiry to a complete stop. This is the profes-

Certainty comes from a lack of perspective; usefulness is derived from multiple perspectives.

proposing alternative approaches strains our capacity to process these conflicting and normally ungrounded claims. The concerns about fragmentation, devaluation of professional integrity, commercialism within the profession, and outside influence are all justified. The challenges cannot be escaped because they are the result of progress in other parts of society. But unless they can be addressed appropriately they will degrade the profession.

The strategic choice facing dentistry is whether it will address the emerging issues along the lines of unity of purpose or unity of perspective.

There is a difference between certainty and usefulness. Certainty is the absence of doubt and usefulness is the reasonable expectation that our action will produce the result we are seeking. Certainty comes from a lack of perspective; usefulness is derived

from multiple perspectives. If one's goal is to achieve certainty, that is most easily done by learning one thing and then bringing all inquiry to a complete stop. This is the profes-

points of view. The word expert, by contrast, means one whose knowledge has been forged in experience and who is willing to find the proof of knowledge in performance.

What about usefulness? Again, multiple voices are helpful. But when the question turns on whether a course of action will lead to predictably desirable results, what we seek is harmony of perspectives rather than a loud multivoiced unison. The richness, the diversity, the multiple perspectives on issues are what lead to useful decisions.

Effectiveness is not the same as efficiency. In fact, gaining a useful perspective tends to be a rather messy process. Mark Twain remarked that a person with one clock always feels confident regarding the time. A person with several clocks tends to be confused. Another, anonymous wag added that the person with multiple

What we seek is harmony of perspectives rather than a loud multivoiced unison.

The word sophomore has a prerogatives connotation of one who thinks he or she knows a great deal based on superficial exposure to limited

clocks tends to be on time more often. It costs time and money to study new implant procedures and alternative reimbursement plans. Keeping up

with the literature is becoming more and more demanding. I know of no delegate's manuals that are becoming more streamlined.

Increasingly I hear calls that the world is becoming too complex and "somebody" needs to step in and make things manageable. There needs to be a journal that summarizes the true things in every other journal so

Every ethical dentist chooses to treat the patient over performing the procedure—to sacrifice efficiency when necessary to achieve the needed result.

Efficiency is often the fallback position for those who do not understand the forces that are working on them from the environment. Efficiency is focusing on the methods rather than the result and, in general,

***E*fficiency is often the fallback position for those who do not understand the forces that are working on them from the environment.**

dentists won't have to read so much. Somebody needs to mark the valid CE speakers or the honest websites. We can't have more than one voice lobbying in our capitals for dentistry.

Waste is bad; but efficiency does not necessarily lead to effective results.

reducing the number of methods, much like using one eye to see if the arrow shaft is straight. As the saying goes, now and then as you scramble up the ladder of success stop to make certain it is positioned against the correct wall.

Mission or methods? Dentists must chose between whether they wish to be defined by what they do or what they accomplish. The same is true of the profession at large. There is a necessary vitality in both unity and diversity; but we have to make certain we get it right about how these are applied. Anyone who feels comfortable with the goal that dentistry should provide optimal oral health care to patients and maximal financial and other rewards for dentists and that there should be a single voice to bring about this goal needs to review the part about one goal and multiple perspectives of it—rather than two goals and one way to measure it. Unity is necessary in vision: diversity is necessary in the means to achieve it. We have a great deal of work yet to be done to create a single vision for dentistry and a great a deal of work to be done to open up to all those voices that will be needed to accomplish the vision.



Letters to the Editor

Dear Dr. Chambers,
Your editorial in the Winter 1999 issue of the ACD Journal addresses a sticky subject that was recently brought to my attention in a rude way. I was second in line at a traffic light, behind a high style young woman in a vintage Cadillac Coupe de Ville. You know, one of those aircraft carrier sized behemoths—the Cadillac, not the woman. This dazzling creature was talking into her cellular phone, applying cosmetics, smoking a cigarette, and dabbing at her eye shadow as her car started slowly rolling backward. In the nick of time the light turned green, she laid down her Egg McMuffin and moved forward. I was in my little 2000 pound roadster and could visualize myself trapped in that sucker after she had rolled back and flattened it like a Prince Albert tobacco can.

Last week I read an article that said the new cars were going to have PCs mounted in the dashboards so one may send e-mail, check stock quotes, work the AOL crossword puzzle, or play solitaire while driving to work. Fortunately, I am retired and live out in the country. Maybe it will be several years before these electronic marvels will be standard equipment on pickup trucks.

The owner's manual in my car specifies that no "aftermarket" electronic equipment may be used without the possibility of "extensive damage to the vehicle, compromising its safety, affecting

the operation of its electrical system, and jeopardizing the validity of the limited warrants." Therefore, when I get in my car I am in a comfortable little "no phone" booth, immune from calls about other things that didn't get on the grocery list or complaints from former patients about the dentist who bought by practice.

I am convinced that the reason the unemployment rate in the country is so low right now is that people draw good salaries shacking away on their computer keyboards, producing gobbledegook that their employers mistake for productive work. I still can't understand how information can contribute more to our gross national product than a steel mill or a cattle ranch can. I think you hit the nail on the head when you said that there is an important difference between information and knowledge.

There is a terrible threat, in my opinion, that our society may become so mired in the useless generation of bureaucratic boiler plate that it will be overthrown by modern-day barbarians who have a clear concept of what is practical and essential and what isn't.

Yours Fraternally,

Morris L. Barrington

Morris L. Barrington, DDS, FACD
Ransom Canyon, TX

To the Editor;
I would like to follow up your excellent and provocative (they seem to go together for me) editorial entitled "The Great Placebo" with a question about the other side of the coin. Do we teach more effectively those students we like (have affinity with, feel more aligned with, or in some manner of speaking are more connected to)? That's an easier question because the answer is likely to be yes. Try this one. Do we do better dentistry (particularly of the surgical kind referenced in your piece) on those very same people, the ones that we are better connected to? It's a funny question. Do our hands work better when they are more connected to our hearts? Our margins, are they better? Is the occlusion better balanced, contacts tighter?

These questions have perplexed me for a long time. It seems that I get better clinical outcomes with people I like. But maybe I just feel better about it and I'm kidding myself. As a professional, or maybe just as a person, is it legitimate to try harder with a certain set of patients? The nastier side of this coin could then pose this question: "Do I become less skilled with folks that I find less appealing in some way?"

Years ago in dental school Dr. James Pride, an instructor in the oral diagnosis clinic (no relation to the Pride Institute) told us that we shouldn't work on anyone

Letters



we didn't love. He said he wasn't using love metaphorically. He really meant love. Our work as dentists, he went on, was to find something in each and every patient that we loved. Only then, he believed, would we be able to provide the finest levels of treatment. And that, he said, is the challenge.

These thoughts have stayed with me for the past thirty-odd years.

Alan J. Goldstein, DMD, FACD
New York, NY

Hello Dr. Chambers
"Reducing Medical Errors" is such a prominent current topic. Interest in such errors seems to grow beyond regulators and academicians with the publication of

Michael Millenson's *Demanding Medical Excellence: Doctors and Accountability in the Information Age*. Subsequent signs of widening interest include the AMA's establishment of the AMA Patient Safety Foundation and the recent release of the National Academy of Sciences study *To Err is Human*.

Pardon me for missing it if you have already published an editorial or issue on this topic. However, if you have not, you might consider doing something on it. Although dentistry seems less "hazardous" to the patient than medicine, I wonder whether this error-reduction movement might eventually affect dentistry anyway. The rates of and human outcomes of errors in dentistry, methods for prevention, and principles of risk analysis and risk communication are possible subtopics. Could we provide some help for clinicians to see this as a way of improving the system constructively and

nonpunitorily, as the NTSB/FAA detects and corrects errors in air transport?

Best Regards,

Tom Deahl, DMD, PhD
San Antonio, TX

Editor's Note: You are correct in pointing out that error is a hot topic in medicine. The references you mention are worth pursuing by any professional who wants to drive down unwanted risk to patients by minimizing variance inherent in the delivery system. The Journal has addressed related topics from time to time. See Holes in Our Heads—WNL (Spring 1977), TQM: The Essential Concepts (Summer 1998), and The Roles of Evidence and the Baseline in Dental Decision Making (Summer 1999).

Finding the Evidence for Evidence-Based Dentistry

Daniel M. Laskin, DDS, MS, FACD

Abstract

Making sound clinical decisions about the proper use of materials, technology, and techniques in dental practice involves the correct interpretation of scientific data. Sources of such information include journals, textbooks, and the Internet. This article discusses the concept of evidence-based dentistry, the advantages and disadvantages of using the various media, particularly journals, for obtaining information, and how to judge the accuracy of what is presented.

world of information available to help us evaluate the safety and efficacy of our current procedures and to guide us into areas of improved therapy. However, the problem that we face is how to make logical decisions about the accuracy of this information. In recent times, a term has been coined to describe a useful concept for accomplishing what some practitioners have applied for years—evidence-based dentistry. Simply defined, evidence-based dentistry is the process of making diagnostic and therapeutic decisions on the basis of known facts rather than on opinion or anecdote. One method of finding such factual information about the latest advancements in our profession has traditionally been through the reading of journals. However, this requires the ability to be selective.

One of the first ways to become a sophisticated consumer of the dental literature is to evaluate the credibility of the journals that you read. In this regard, there are a number of dental publications in which the articles are not subject to critical peer review, but rather the decision about whether to accept or reject the articles is based solely on the opinion of the editor, who may or may not be in a position

to make a truly informed decision about the accuracy of their content. Many of these journals are so-called “throw-away” publications that we receive free of charge each month, where the emphasis is more on the promotion and sale of dental products than on the quality of the information provided. Rather than support their claims with sound references to the past literature, many of the authors of articles in these journals frequently cite their own work, refer to citations of irrelevant or unsubstantiated information, or reference obscure or outdated journals. The lack of critical review in these publications allows many unsubstantiated statements to be made about effectiveness that pique the curiosity of the readers.



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Professional Development, Part II

and often lead them enthusiastically into trying essentially unproven procedures on their patients, substituting authority-based dentistry for evidence-based dental care.

However, although gaining information from peer reviewed journals is clearly superior to relying on those that do not use the peer review process, the former are also not infallible. Therefore, the critical reader should be aware of the many pitfalls that can lead to misinterpretation of the evidence, even by well-meaning authors. One of the first things about which to be wary is the possible unreliability of clinical studies based solely on personal observations. As point out by Brunette (1996), such information may be reliable when the treatment under consideration has a large effect that occurs quickly and has a clear outcome, but its reliability declines markedly in instances where the symptoms are variable, the time course is long, the effects of treatment are complex, and the outcome measures are ill-defined. A lack of defined patient selection criteria can also influence the ultimate results. Another factor that needs to be considered is that certain conditions may undergo spontaneous remission or that they may be characterized by long, asymptomatic periods. Moreover, other conditions may be self-limited by the body's own natural defenses and reparative processes. Finally, one must be aware of the concept of disease regression. Patients generally come for treatment when their symptoms are at their worst and, in a condition in which the symptoms vary naturally. Anything that is done for the patient may be interpreted as being responsible for the improvement that is observed. The bottom line in evaluating studies based on personal observation is to always remember that anecdotal information is not synonymous with scientific data.

Another important consideration in evaluating the effectiveness of any clinically-observed therapeutic intervention is the influence of the placebo

effect. Both the expectations of the patient and that of the practitioner can markedly alter the final outcome, and the optimum result is achieved when both believe strongly in the effectiveness of the therapy (Roberts, Kewman, Mercier, & Hovell, 1993). Thus, treatment outcomes can also be influenced considerably by the strength of the doctor-patient relationship (Laskin & Greene, 1972). Whereas, it may not be objectionable to take advantage of these factors in the clinical situation, provided that the clinician is aware of their influence on the outcome, it is objectionable to overlook their influence when doing a clinical study of a particular therapeutic modality. In such circumstances, the investigator needs to use a placebo-treated group of patients as a control. However, this must be done in a blinded fashion, because the placebo effect can be magnified or dimin-

from carefully done retrospective studies, as well as detailed clinical case reports, because they allow one to determine whether the findings are consistent and can be generalized across differing populations, clinical settings, and minor variations in treatment.

Richards and Lawrence (1995) have divided the levels of scientific evidence into various categories. The strongest evidence comes from a systematic review of multiple, well-designed, randomized, controlled, clinical trials, particularly as one finds in a meta-analysis, which uses the data to produce a single, objective estimate of clinical effectiveness. Such reviews not only can substantiate the appropriateness of certain therapies, but also they can lead to a more rapid rejection of less effective modalities (Chalmers, 1991). The next strongest evidence comes from a single, properly designed, randomized, controlled study

*T*he gold standard is obviously the prospective, randomized, controlled, double-blind, clinical trial, and such studies can only be found in peer reviewed journals.

ished when the treatment is offered to the patient in a manner different from the actual therapy (Goodman, Greene, & Laskin, 1976).

Good evidence comes from what can be termed scientifically based studies, which avoid the previously mentioned confounding factors. Such studies provide sufficient information to allow the reader to critically assess the observations, to repeat the procedure, and to evaluate the intellectual process used by the author and analyze the soundness of the conclusions. The gold standard is obviously the prospective, randomized, controlled, double-blind, clinical trial, and such studies can only be found in peer reviewed journals. However, some useful information can also be obtained

of an adequately large patient population in an appropriate clinical setting. Somewhat weaker evidence comes from retrospective pre-post, clinical trials without randomization or controls, and the weakest evidence comes from opinions of respected authorities based on clinical observations, descriptive studies, or reports of "expert" consensus committees.

Carefully done, systematic reviews of the literature not only provide the strongest evidence for evidence-based dentistry, but also they solve the issue of the clinician having to read and interpret the large volume of material available in diverse publications. However, one still is faced with the problem of assessing the quality of the review (Milne & Chalmers, 1993;

Bulman, 1988). Unfortunately, until recently, although clinical studies were carefully scrutinized for scientific accuracy by the peer review process, authors were given greater editorial freedom with their selection and interpretation of information gleaned from a review of the literature, and frequently these reviews were used to support a point of view rather than to present the facts in an unbiased manner. Over thirty years ago, Cochrane (1972) emphasized the importance of using only randomized controlled trials for guiding clinical decision-making, and there are now world-wide centers devoted to assembling and disseminating evidence derived from such systematic, critical reviews, including two focused on dentistry (Jokstad, 1998). However, until stricter criteria for the acceptability of review articles are put into place by journal editors, readers will still have to use some judgement regarding the accuracy of what is being presented in the literature. Among the questions to be answered by the reader in this regard are whether comprehensive search methods were used to locate all the relevant studies, whether there were explicit methods used to determine which studies to include in the review, and whether the conclusions are supported by the evidence cited (Oxman & Guyatt, 1988).

With over five hundred dentally-related journals being published, there is often a tendency to turn to textbooks or monographs rather than journals for readily available, concise information on various subjects. Although such sources do serve a useful purpose, the reader must remember that they also can suffer from some of the same fallibility as non-peer reviewed or poorly peer reviewed journals. Even though the authors may use evidence from the literature to support their viewpoints, much of the information still reflects a personal bias and should not always be accepted at full face value. Moreover, even when the evidence provided appears to be strong, textbooks tend to

be no more current than their most recent citations, and thus what may have once been acceptable may no longer represent the present state of

highest accuracy (Hersh, 1999). Although these issues will ultimately be resolved, and the Internet will become the primary source of up-to-date, reli-

Until stricter criteria for the acceptability of review articles are put into place by journal editors, readers will still have to use some judgement regarding the accuracy of what is being presented in the literature.

the art. Textbooks, therefore, are not always the best source of information to form the basis for evidenced-based dental practice.

A more current source of new information that is becoming increasingly popular is the Internet, which has the potential of providing convenient, easy access to recent relevant data at a minimal cost. However, as Clark (1983) has indicated, it is not the technology that is important, but rather the quality of information provided that determines its value. Thus, while computer-based programs have the unique potential for not only providing information as text and images, but also as videos and interactive exercises—something that cannot be done with journals or books—they currently are generally open to some of the same criticisms as these media forms. How, for example, does one determine the quality and accuracy of the material provided when there is no peer review process and when the sponsors of the website have a product to sell or a dubious position to support (Schleyer, 1999)? Knowing the reputation and interests of the host may be helpful, just as it is with print media, but even well-intentioned sources such as health-related governmental agencies, academic health science centers, commercial health information providers, and professional society websites may not always have the level of review necessary to ensure information of the

able information on which evidence-based dentistry will operate, currently the best source is still the peer reviewed journal.

Once there is an understanding of how to evaluate the literature and obtain reliable information, the next question is how to put that information to good use in our practices. The concept of evidence-based dentistry is more than a technique; it is an attitude. Not only do we have to apply the principle to any new technology, procedure, or treatment that we adopt, but also we need to question what we are currently doing to be sure that there is a rational basis for it. For example, a careful meta-analysis of the literature has shown that whereas sealants are effective in preventing dental caries, their effectiveness decreases with time, and periodic reapplication is advisable (Lodra, Bravo, Delgado-Rodriguez, Baca, & Galvez, 1993). It has also been shown that autopolymerized sealants are more effective than ultraviolet light polymerized sealants. Another meta-analysis, which addressed the controversial orthodontic question of whether expansion or extraction therapy in the lower arch provides the most stable inter-canine width, found that there was no difference (Burke, Silveira, Goldsmith, & Yancey, 1998). These examples clearly demonstrate the value of using such scientific evidence rather than opinion to provide reliable answers to important clinical questions.

Professional Development, Part II

In a world where we are constantly bombarded with promotional literature to try a new material, medication, or method, it can be difficult to resist when one is faced with a clinical problem or is offered the hope of better results. However, we owe it to our patients to provide them with only proven, effective therapy. That means that we need to wait until there is sufficient positive evidence before making a change. Perhaps Alexander Pope provided the best advice when he said "Be not the first by whom the new is tried, yet not the last to cast the old aside."

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Evidence-Based Versus Experience-Based Decision Making in Clinical Dentistry

Mark A. Cruz, DDS

Abstract

Evidence-based dentistry has become a frequent topic of conversation because good practice must be based on good evidence. This article explores some of the characteristics of "best" evidence. It is concluded that a blending of sound science and practice experience is needed and it is proposed that such evidence can be generated in clinical study groups and the recently funded Centers of Discovery.

to a long-term solution. In order to understand the issue with more clarity, perhaps it would be helpful to look at the big picture by posing a few questions.

The first question might be: What is the purpose of dentistry? If we go back to the basics and in time, unencumbered by third party entities, government and legislative bodies, and thoughts of personal gain either financial or otherwise, we would find a rather simple answer. This is our starting point. Yes, the purpose of dentistry is to prevent disease first and to treat or restore stomatognathic health when disease or dysfunction has stricken, thus helping to make the individual whole again or at least improve his or her quality of life. In other words, to help our fellow man. This is the naked truth that becomes confusing when a few confounding factors or issues are thrown in.

In order to perform and further the aforementioned noble cause, we must consider the financial reality of making a living, the esoteric nature of dentistry, and the learning and practice of the art and science of modern dentistry. For example, does insurance cover the treatment or are there alternatives that are not based on best

evidence that would minimized patients' out-of-pocket expense? It is the fifty-cent word "practice" that seems to stimulate the million-dollar question. Why is there a conflict between the art and science in dentistry? There certainly seems to be a division between the academician or researcher and the clinician or "wet-gloved" dentist. These entities ought to be one and the same, but unfortunately are not typically. Here is our segue to our second question.

What is evidence-based dentistry? The first definition by Sackett et al is "The conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients." Another characterization by Richards and Lawrence has EBD as "a process that restructures the way we think about clinical prob-

The term "evidence-based dentistry" (EBD) seems to be the buzz these days. It also seems to conflict with experience-decision-making, otherwise known as anecdote. Increasingly, there are editorials and articles dedicated to defining the problems with how the general dentist in the trenches makes his or her decisions on materials used and procedures performed by discussing EBD. The discussions are always interesting, sometimes confusing, but never with a clear-cut answer. With such an important issue, there ought to be a clear answer or at least a plan that would lead



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Professional Development, Part II

lems. It is an approach to clinical problem solving that has evolved from a self-directed and a problem based approach to learning rather than the more traditional didactic form" (Sackett, Richardson, Rosenberg, & Haynes, 1997).

As an example, one might ask the questions:

- What is the clinical problem?
- What is the intervention proposed?
- What is the outcome or what should the result be?
- Does the outcome justify the time, cost, risk etc.?

Looking for the Best Evidence
EBD is the process of making decisions based on known evidence. Both these definitions are shades of each other with a common focus on the word "evidence." What is *evidence* and more specifically, what is *best evidence*? This distinction in terms must be made for it is here that the waters become muddied in the eye of the common general dentist who daily is "in the trenches" attempting to solve clinical problems. Evidence comes in many forms. A proposed hierarchy can be seen here to include:

- Original articles (refereed or peer-reviewed)
- Literature summaries of original articles
- Consensus statements
- Text books
- Lectures and seminars
- Consultations with colleagues who have special expertise
- Conversations with manufacturer representatives
- Editorials
- Practice guidelines
- "Throw-away" journals
- Advertisements in dental journals

Other than the first two sources of information, the rest often amount to no more than just opinion or advertisement. There is nothing wrong with this so long as the information is recognized for what it is. We must remember that consensus statements coming from experienced, respected

sources can be of significant value in contributing to the "well of knowledge." A problem begins when the information comes from sources that are disguised as science. The top of this list typically represents deductive or inductive logic while the bottom of this list is categorized most accurately as seductive, feeling.

What is often cited as "best" evidence is the randomized control trial (RCT) otherwise dubbed the gold standard of evidence. But is this evidence, which by definition is biased through inclusion or exclusion criteria, really the best evidence with clinical meaning to the dentist in the trenches? In other words, can the information gathered translate into sound clinical decisions? Do we use a radiograph or mounted study casts or even a clinical examination by itself as evidence to render a solid, reliable diagnosis and best solution? As the asso-

ter G. V. Black. Thankfully, standardization via the scientific process began which saved the profession from pure anecdote and elevated it to the respected profession it is today. From this was the move from apprenticeship to formalized, structured education.

Theoretically, when dental students in the United States are trained to become dentists through the process of dental education, they receive scientifically driven fundamentals resulting in specialized training. The American Dental Association Commission on Accreditation requires the development of tools in students in managing scientific information with critical thinking skills as part of the accreditation process of dental school curriculum (Maxwell, 1996).

Too often this inculcation somehow seems to be greatly diluted once the dentist begins practicing this com-

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ciate editor of *Evidence-Based Dentistry* (published as a supplement to *The British Dental Journal*) Jostad states: "The experts on clinical dentistry are, and have always been, the clinical practitioners. Basic problem formulations and identification of grey areas should come from the front line health workers and not from bureaucrats, physicists, or statisticians. This implies further that the ideal environment for producing evidence-based research is the general dental practice, not in the dental schools, not in the laboratories, and not in institutions."

Historically in the U.S., some of the confusion regarding evidence began in the 1800s when charlatans roamed the streets of Chicago selling their restorative materials and solutions known today as "snake oil." En-

bination of art and science we call dentistry. It is obvious that the post-graduate student typically retains more of the science driven mind set in treating patients as a direct result of the continued reinforcement of the evidence-based approach through further inculcation with literature reviews, research projects, etc. Still, there is a drifting away from this approach in making sound clinical decisions in part due to the dynamic change in the knowledge base of biomedical and materials science which continues to grow exponentially. A significant problem also lies in part with the fact that most of this information is tainted with opinion, misinformation, and misguided research protocols (Maxwell, 1996). The U.S. National Academy of Science's Institute of Medicine estimates that less

than half of the health care provided in this country is evidence based (Field & Lohe, 1992). Dr. Robert Califf, director of the Duke University Clinical Research Institute, as reported in the October 12, 1998 issue of *TIME* magazine, estimates that less than 15% of U.S. health care is evidence based. How does the dentist then make his or her clinical decisions that result in the best, most predictable, consistent outcome?

As our profession continues to evolve, we become more dependent on this information on which to base our clinical decisions. The environment has been set to create the "Thalidamide effect" in dentistry, though obviously with less dramatic results but nonetheless with significant ramifications. The Thalidamide effect was the disastrous result of a pharmaceutical intervention being released into the market place prior to rigorous testing, resulting in tragic iatrogenic birth defects. It is incumbent on us as a profession to take concrete steps in better managing the "well of knowledge" that we continue to add to and draw from in treating our patients reliably. The tainting of this well by flawed research, opinion articles driven by hidden agendas, and expedient manufacturers of dental products must

appreciation of the complexity of our profession is alarming. Therefore, it is up to us.

Some Possible Positive Steps

The good news is that it is not too late. We are hearing more about the evi-

jective aspect of dentistry that counterbalances the science or more objective side of our professional endeavors can be explained by science. The art of clinical experience or clinical wisdom, what is often referred to as anecdotal experience, is founded on

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dence-based approach held dear by the medical community from individuals and entities who recognize the need for more stringent controls. Also, the federal government has made it a mandate through the Agency for Health Care Policy and Research (AHCPR) to develop evidence-based tools in response to the report: *Quality First, The President's Commission on Consumer Protection and Quality in the Health Care Industry*.

So what's wrong with the traditional, experience-driven approach to decision making? Our clinical concepts and professional roots remain well entrenched and founded to a

the "gut feeling." It is difficult to describe and quantify because of its intricacies. The brain stores different aspects of experience in different areas or regions of the brain. The almond-shaped structure called the amygdala is one of the sights where the emotions an experience evokes are stored. Our clinical experiences evoke an emotional response however subtle and are stored in the amygdala and elsewhere. The amygdala and areas of the cortex, as a resource of "information," constantly signal us with thoughts that we base our decisions on. It is through the amygdala's and other area's related circuitry, particularly the nerve pathways that run into the viscera that allows for this somatic response. This response is known as "gut feeling" (Goleman, 1998). Obviously, these feelings can become stronger with greater experience. Each clinical success or failure is stored and can enhance our clinical expertise if interpreted correctly. Thus, the art of dentistry is formulated by a myriad of information bytes accumulated over time and indispensable in clinical judgment. Even the savvy researcher uses his gut feeling in drawing from his or her experiences in objectively assessing decisions on investigation design, statistical assessment, etc.

The most recent problem is the modern day, sophisticated type of

Based on the preceding discussion it seems that perhaps a synthesis of both quality, research generated information (RCTs, basic and applied research) with experience-based evidence would generate the "best" evidence.

stop yesterday. To remain cavalier about this important issue only sets us up as a profession to be continually monitored by non-trusting outside entities e.g. public watchdogs, third party payers, and the ever-present legal profession whose lack of

great extent on this approach. Remembering that dentistry is both an art and a science, we ought not to throw out the baby with the bath water. So exactly what does the "art" side of dentistry mean in clinical practice? Ironically, the "art" or seemingly sub-

Professional Development, Part II

charlatan appearing on the scene. Although not all dental manufacturers can be labeled as such, many, given the opportunity, certainly threaten to be. These are strong words, however appropriate, to describe the wolf dressed in sheep's clothes. Any time you have the seductive power of financial gain without the proper checks and balances, you have an environment fraught with problems. One of the reasons why EBD is such a buzz term these days is because of the recent "thalidamide" type of effect with many of the untested materials released in the market place vowing to provide the solution of the day. Few to no rigorous, clinical trials are performed with many of these expensive new-age materials and procedures. This certainly looks like a flashback to our past. The big difference is the sophisticated marketing schemes and astronomical budgets.

So what is the answer if any?

Based on the preceding discussion, it seems that perhaps a synthesis of both quality, research generated information (RCTs, basic and applied research) with experience-based evidence would generate the "best" evidence. With this approach, the research generated would become more clinically relevant as it would be based on real world dynamics versus contrived, artificial circumstances. Experience generated evidence would conversely be tempered, and perhaps at times be challenged, by the research evidence by stimulated critical thinking versus pure observation. In what form of in-

formation transfer or continued education can such a synthesis of evidence occur?

The concept of clinical study groups certainly represents a practical approach. By treating patients in a clinical group environment with an experienced mentor, the best of both worlds would exist. The mentor would share his or her years of clinical experience while the "student" would stimulate growth in the mentor. One learns best by teaching. Clinical discussions and literature reviews would identify weaknesses in the research evidence in the context of clinical practice in a controlled environment. Variations in clinical ability, patient selection, experience, etc. would be accounted for more meaningfully. The ongoing evidence generated from these clinical groups or centers could be collected and shared in a general data center and analyzed for future research. The issue of competence would also be addressed, as this will become an important issue in the near future. The manufacturers would be held to a higher standard as their claims would be collectively challenged by the evidence generated. The result could, it is hoped, generate more rigorous testing.

Recently, the National Institute of Dental and Craniofacial Research announced the award of six grants to fund "Centers of Discovery" based in university settings. These centers will integrate not only laboratory investigations and clinical trials, but also community education, screening, and

counseling, coupled with continuing education for health professionals. These six centers are part of a network of twelve evidence-based practice centers in the U.S. and Canada established by AHCPR to provide clinicians and patients with state-of-the-science information on common diseases and clinical conditions. Perhaps an integration of clinical evidence generated in these centers with the clinical study groups would represent "best" evidence as a melding of research and clinical experience.

No doubt the aforementioned discussion represents a complex problem with many facets. Clearly "best" evidence is not necessarily represented by a double blind clinical trial or clinical wisdom by itself but collectively both sources of information may represent useful information that can translate into positive decision making with benefits to the patient. The answer may be in developing an infrastructure bridging the gap between experience and research generated data.

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CE Institute Style

Christian B. Sager

Abstract

This article describes the philosophy and operation of The Pankey Institute for Advanced Dental Education as one example of the "institute" approach to professional development for dentists.

I think everyone will agree that the basic definition of an educational institute is an organization established to provide an intensive course of instruction on selected topics relating to a particular field or profession. On top of that definition are our personal expectations for longevity, effective dissemination of substantiated knowledge, and integrity. Along with these qualities are additional ones that The Pankey Institute and others take pride in claiming. I will attempt to describe these special attributes and discuss the benefits of institutes, in general, but it will be difficult for me to talk about the *institute experience* without making some reference to precepts we have come to understand during The Pankey Institute's twenty-eight-year history. Our vision of what constitutes an institute may be different from another's, so I ask for your forbearance at the outset and truly hope this discussion will inspire and promote high quality, relevant continuing dental education.

Let's start with the question "How do people learn?" For decades, MBA students have examined business case studies to learn *what did and did not work* for various businesses. Why? Because this is an educationally effective method for learning the causes of success and failure and developing an understanding of the circumstantial differences in which businesses flourish, stagnate, or die. We can learn from the successes and mistakes of others. And, we have demonstrated that dentistry can and *does* learn from different professional disciplines and types of service providers. We also believe that true learning results in changed behavior and that the philosophical congruence woven throughout the fabric of a purposefully designed course of study leads to greater application of what is learned—ultimately resulting in increased patient education, participation, ownership, and trust.

Years ago, The Pankey Institute examined the use of case studies in business schools to understand this mode of retrospective learning. We learned that individuals, who are *not* in close competition, more willingly share with one another those types of experiences that are less successful or satisfying. Early in our program, we saw first hand that dentists from a diverse geographic mix evinced a greater willingness to relate experiential data and interact openly with colleagues. We took particular note of the fact that individuals were uncomfortable

revealing any degree of less than perfect clinical competence in a *hands-on* learning environment if another participant was from their home area. We determined it would be in the best educational interest of students to bring them to an institute setting from many localities, rather than travel out to local communities of dentists who attract patients from the same population. Institutes bring people together from across the country and around the world to learn through self-disclosure and the narrative of others in non-threatening and non-judgmental surroundings.

Additionally, greater self-disclosure occurs when the classroom facilitator is primarily interested in helping the student experience growth and is not constrained by the realities of a *for profit* enterprise that ostensibly requires extolling one's own virtues and successes to achieve commercial appeal. The non-profit nature of our institute helps us accomplish our mission through allowing us to endorse the axiom that growth is a process and not an event. Our highly experienced



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Professional Development, Part II

visiting faculty members receive very modest recompense for their time and are motivated to teach because they have a desire and talent for helping others in their profession. We postulate that a non-commercial educational institute affords both the teacher and student freedom to concentrate on the

virtue of the institute's ability to create a multi-faceted curriculum providing systematic guidance in *all* areas of professional practice. Although dentists certainly can take a series of individual seminars from multiple sources, on multiple subjects, and intellectually sort out the information directly ap-

ences, than any temporary venue can. The learning process has proven to be significantly enhanced and application more immediate through this integration of *see and do*. Seminars and lectures are generally precluded from using a meaningful hands-on component to their efforts because of the logistics of providing suitably equipped individual learning stations.

Institutes pass on their mission and leadership from generation to generation. They are there for the long run, with their longevity enabling and motivating them to gather quantitative data and conduct long-term research that will scientifically authenticate the relevance of the curriculum. Years of observation help us speak with authority on learning systems that yield long-term, predictable—and positive—results.

In the realms of staff satisfaction, development, and retention; patient satisfaction, case acceptance, and retention; and practice financial health—we've developed surveys and feedback tools that assist dentists in taking snapshots of their practice over multiple years to measure change and growth. The combination of these tools with management systems—developed specifically for this style of practice—has been statistically proven (through our collaboration with scientifically validated research organizations) to result in the practitioner

highest and best educational objectives, rather than being limited by the constraints of time or commercial sponsors which require a highlight focus or product application bias.

There are those who have a penchant for learning from a dominant voice and personality in continuing education. These individuals elect to be primarily enlightened by a single accomplished and persuasive speaker—generally from a podium, and sadly too often their interaction is limited to hearing and seeing only the splendid results of what was likely a complex case. Those who choose this modality of continuing education do not have the same opportunities for unbiased learning as those who are exposed to many teachers. Unlike medical physicians with their group practices and hospital privileges, most dentists spend their days in relative professional isolation. Exposure to a large number of dental leaders enables the individual student to develop his or her own vision and objectives for growth, in sync with his or her unique circumstances and temperament. The large faculty of an institute (in our case, a visiting faculty of over a hundred instructors) ensures exposure to a wealth of knowledge and familiarity with the realities of the processes used in achieving splendid results.

Substantial benefits accrue to the participant in an institute setting by

plicable to their own circumstances, the practitioner foregoes the opportunity to be supported in a systematic assimilation of the material into a personal vision and growth plan.

Since our inception, we have believed and taught that growth and learning are a *journey* through a series of varied types of experiences. An institute, with an established curriculum such as our Continuum, leads the student in an organized, building block or step-like fashion, through a series of educational exercises experientially verified to have significant impact on each dentist's personal development. An institute, with total immersion format, helps students create a vision for their practice and a logical, pro-

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gressive growth plan, along with a timetable for implementation.

While the investment in a permanent learning facility is capital intensive, institutes with appropriate facilities are better able to provide illustrative hands-on clinic and lab experi-

gaining control and confidence in a sequential and predictable manner.

When a student returns to an institute for multiple weeks, over the course of several years, resident faculty members come to know each individual personally. At Pankey, our vis-

iting faculty and resident faculty combined provide for a maximum student to faculty ratio of seven to one, further enhancing the opportunity for meaningful, personal interaction that is obviously absent in a crowded seminar format. An institute is able to individualize each student's experience to some extent commensurate with the frequency of attendance. Because 80% of our first-time students continue to return for successive classes in the Continuum, knowledge of each individual dentist increases with each visit, thereby enabling a more specific focus on each participant's development.

Extending the learning environment beyond the formality of the classroom and labs, in the off hours, greatly expedites the assimilation process. Our students can choose to stay

demic to the non-group form of practice predominant in dentistry.

A regional mentor program, teaming new students with those who have had a few years to grow and implement new knowledge and techniques learned via the institute experience, has also proven to be a meaningful benefit. Combined with regional study clubs, the institute mentors link supportive alliances that encourage growth, build confidence, and speed the application of new ideas and methods in the individual's own practice environment.

An institute has access to the expertise necessary to address and explore, not just advanced or new clinical methods, but also practice management, ethics and personal philosophy, human behavior, and the big picture

big picture, without extensive support. Focused time...help learning from the trials, failures and successes of many others in *all* aspects of dental practice...encouragement and ongoing support to envision and implement change...these can be handled exceptionally well in the institute environment. Institutes are in an excellent position to welcome the student back to the well, again and again, for encouragement and help in improving all aspects of practice for the duration of one's career.

We have also come to believe that the single biggest stumbling block that most dentists experience is their lack of understanding the significance of the behavioral component of dentistry. Evidently, dental schools are not given sufficient time to prepare dentists to understand the psychological aspects or motivational drivers of their patient reactions to recommended therapy. Accordingly, many dentists are not comfortable or enthusiastic about engaging patients in conversations that build relationships, provide feedback, and gather information needed for optimal diagnosis and treatment planning. Then, when they are faced with communicating a treatment plan or discussing the cost of a procedure with their patients, they are generally too technocratic and defensive in their narrative. This invariably impacts their case acceptance rate, patient retention, referrals, and self-esteem.

Many other types of businesses fall short when it comes to the "softer skills" of building relationships and communicating service value with their customers. Dentistry is not unique in this area. Institutes can offer dentists, not only the opportunity, but also the time to learn from others who have climbed the ladder of emotional awareness enabling them to commit to the behavioral changes that will increase patient satisfaction, practice financial health, personal fulfillment, and quality of care.

In summary, an institute can and should offer a supportive educational

The daily tyranny of the urgent makes it nearly impossible for professionals to step back and look at the big picture, without extensive support.

overnight in one of the institute's lodges which also house the visiting faculty and other students in the program. Most take advantage of this opportunity and informally carry discussion back to the lodges where considerable enlightenment occurs with their colleagues in scheduled after hour sessions. Perhaps one of the most remarkable occurrences is the recognition that other dentists encounter the same experiences. What affects the practice of dentistry in Kansas on a daily basis is very similar to what affects the practice of dentistry in Toronto, New Orleans, Los Angeles, and Buffalo. Increased awareness of shared circumstance, common interests and goals lead to the development and enjoyment of new friendships. We have found this to be an added value of the institute experience because it is an antidote to the isolation many perceive to be en-

of comprehensive oral health care. What problems do dentists face? Insurance-driven expectations of dental care, financial problems, dissatisfied patients, professional isolation, staff shortages, uncomfortable relationships, lack of personal fulfillment, lack of confidence in their own technical competence, and long hours—to name a few. How do they find time to analyze concerns and find effective solutions to these problems? Institutes present the opportunity to take a step back from the daily pressures of conducting a practice to spend time addressing concerns and clarifying substantive issues in an organized, effective manner—and then provide support as the student enters into self examination and development over months and years.

The daily *tyranny of the urgent* makes it nearly impossible for professionals to step back and look at the

Professional Development, Part II

community without hidden agendas or pressure to advance the cause of commercial sponsors. Students are not promised a magical pill in the form of a ten-point checklist or extraordinary materials that will change their life and practice overnight but, rather, time to learn and grow with encouragement from familiar teachers to pursue a proven pathway for development. An institute setting creates an engaging environment, where real life conflicts and problems are discussed in a risk-free atmosphere. There's growth without grades and concurrent expanding self-accountability.

Institutes have a core set of values and objectives that are shared by those who orchestrate their curricula. Because of these values and objectives, the multiple dental leaders

who come together to work as a team tend to develop strong leadership positions. If they are structured to provide an independent board of directors or provost oversight committee, they have the freedom to examine and discuss their portions.

Dental institutes, by and large, have a central, fully-equipped facility for hands-on training in the complex components of a relationship based private practice. They have opportunities to make long-term observations and perform quantifiable studies that lead to improved heuristic and instructional methods—with predictable outcomes. I think it is safe to say that they offer the most diversified and scientifically validated learning opportunities of any of the dental continuing education venues.

Individual classes from varying sources, particularly those from sources headed by a single authority, are less likely to provide an interactive faculty, big picture orientation, validated instructional methodology, and plan for each individual participant's long-term sustained growth. When personally researching the various types of continuing education available today, one is apt to agree that an institute environment offers very distinct advantages. Why dash through subject matter that will be easily forgotten without reinforcing exercises and ongoing conversation with those who have mastered it? A wiser investment could be an extended course of study that incorporates a plan and support for applying newly acquired knowledge and skills in each individual's own practice environment.

Postgraduate Educational Opportunities in the Military Services

Boyd E. Robinson, DDS, FACD

Abstract

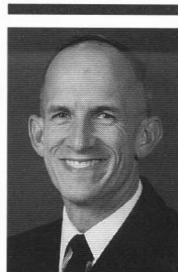
The three branches of the service provide advanced training to about 450 dentists each year. Approximately one-third of these positions are in postdoctoral general dentistry and the remainder in specialties, distributed as needed by the various services.

for dentistry are what make your time in the service special. It just doesn't end there, but many postgraduate education opportunities are also available.

The emphasis on continual improvement throughout the services can best be illustrated by the efforts that are taken to have postgraduate training opportunities for all officers. A total of 469 (Air Force—145, Army—107, Navy—217) one-, two-, three-, and four-year training positions are available. Each service may train a different combination of residents depending on individual needs. A common philosophy is shared that there are two distinct areas of postgraduate dental education that need to be emphasized. First are the programs that meet the need of most of the recent graduates. These are the Advanced Education in General Dentistry and the General Practice Residencies. Secondly are the specific specialty programs that lead to board certification.

The Tri-services have been very proactive in their approach to one-year Advanced Education in General Dentistry (AEGD). All are trying to expand the opportunity for recent graduates to have an additional year of training. This Postgraduate Year (PGY)-1 training is an important part of the career training plans in the service. Out of the 469 training positions offered there are 163 positions

(Air Force—59, Army—70, Navy—84) for PGY-1 training. The services are trying hard to have a training slot for every new accession. These opportunities are spread throughout the world. Along with the U.S., opportunities are available in Germany, Japan, Okinawa, and Hawaii. You can truly "see the world" in the services and also get valuable training. The Navy also offers 24 General Practice Residency positions at five of their major hospitals across the continental United States. This hospital-based training provides a very broad education in emergencies and treatment of the compromised patient. With the operational missions our officers face from Bosnia, to Kuwait, to the at sea deployments,



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Professional Development, Part II

this training helps the dental officer augment the medical team.

"To broaden the knowledge of dental officers, increase their proficiency, and to acquaint them with the latest advances in dentistry." It was with these aspirations that the U.S. Naval Dental School opened its doors on February 3, 1923. Seventy-six years later the Naval Postgraduate Dental School (NPDS) is still committed to training Naval Officers to enhance the health of our Sailors and Marines.

The mission of postgraduate specialty education described above for the Naval Postgraduate Dental School is just a reflection of all the services and their desire for these residencies. The opportunity for training in any of the specialties is excellent with training available in General Dentistry, Oral Maxillofacial Surgery, Periodontics, Prosthodontics, Orthodontics, Endodontics, Pediatric Dentistry,

Oral Pathology, and Public Health. There are also fellowships available in Dental Materials, Orofacial Pain, Oral Maxillofacial Esthetic Surgery, Oral Maxillofacial Reconstructive Surgery, and Maxillofacial Prosthetics. The number trained in each of these specialties varies each year depending on need. This year there are 220 positions (Air Force-91, Army-37,

opportunity when you are able to go to a training program and still receive full pay and allowances. There are no other programs that provide an equivalent stipend.

A career in the Armed Forces is very rewarding. Not only can you serve your country, practice your art, see the world, but also train and develop your skills in a

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Navy-97) available to the dental officers in two-, three-, and four-year residencies and one- to two-year fellowships. The training is either in the service or through a civilian institution. This is a wonderful

number of specialties. The postgraduate education opportunities are excellent and all the services are focused on training our officers to be the best.

Professional Growth, Learning, and the Study Club

Floyd R. Tanner, DDS

Abstract

The imperative for human growth and the need for continuous professional development are related. This article describes some of the practical decisions about forming a study club and finding a leader that promotes professional growth. Thoughts are offered about learning in this context as contrasted to school learning and about the psychology of growth.

The truly healthy person wants to improve and get better in whatever he or she does. However, growth is uncomfortable. It requires stretching into unknown, not previously experienced, areas. Growth can be separated into horizontal (items) and vertical (quality) vectors. Quality means different things to different people. In this article quality refers to a superior degree of excellence in the dentistry you do. Understanding quality requires learning from someone who truly understands excellence. Not everyone is born with the abilities to produce a painting like Renoir, but with training and learning from others, an artist can become quite accomplished. All professionals can be

better at what they do by constantly improving, growing. They can become very accomplished.

The purpose of this article is to create some thoughts regarding individual professional growth, the process of learning, and how participation in a study club can relate to professional development.

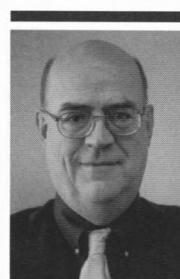
The Need for Professional Growth

If growth is uncomfortable, safety is comfort. Developmentally, every individual has a need for safety. Respect can be satisfied only by other people, e.g., only outside the person. This means having considerable dependence on the environment and the people around us. Perhaps the best method of causing the expansion of oneself (growth) is within the confines of a study club, a group of one's professional peers, whose role will be to help create learning experiences. There are many types of formats used by study clubs. Most formats will provide a source of learning. In this paper we will examine what type or structure for a study club will create maximum learning opportunities. There are methods of maximizing growth, of improving our skills.

The profession of dentistry has proposed that understanding, knowl-

edge, and ability occur on various levels and that there is a level termed "minimum competence." Increased experience and understanding brings you to a higher level until, with years of experience, training, and knowledge, you become an expert. This simply is not the case. Many educators have indicated to me that the best technical dentistry many will do is on the day an individual graduates from dental school. Results of entry level practical examinations demonstrate this to be true. How can a study club change the dentist to improve abilities, motivation, understanding, and professional expertise?

I am a (theoretical) recent graduate from an accredited dental school, whatever that means, and I find myself as an associate in a fast-paced practice buried in attempting to maintain ideals I learned in my education. However, I am struggling to maintain



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the required pace, oftentimes forced to do procedures I was only exposed to in school, and most of the time feeling inadequate in the services to my patients, hiding my feelings of inadequacy in the many procedures forced upon me. I try to cover myself by being the omniscient doctor, however the quality of work that is being produced in this fast-paced practice bothers me. How can I improve? How can I provide better quality of care and learn about the new products and techniques that I don't understand?

Do many dentists ask themselves these questions? There is something inherent in human growth that allows us to constantly reinforce who we are and what we are doing. Most dentists feel they are among the best practitioners in their communities and they are treating their patients to the best of their abilities...doing no harm. The

learning can occur. Teaching and learning are not the same process. Teaching is the giving of information and if unaccepted by the recipient, no learning or understanding occurs. Learning is the acceptance of material by the recipient. When individuals are willing to question themselves about what they are doing and how they can get better outside of the educational or teaching environment, they can make tremendous strides in personal growth.

Structuring a Study Club for Professional Growth

Enter the study club. What is a study club? It has been my observation that structurally, all types of study groups and clubs exist. A study club is merely a group of dental allies, fellow practitioners, who meet periodically to do something. These could be few

more intense study on a particular subject. This group has found an "expert," or leader, and that individual presents his or her material in a clinical setting, while the group attempts the procedure presented with directions on how the techniques are accomplished. This can also be repeated and reinforced over a period of time by bringing the "expert" back to give evaluations. One problem with this method is the evaluation. Recalling a study group of this type, the "guru" had us set extracted teeth in plaster and do an MOD onlay prep. Most of the preps would not have passed a sophomore introductory course, and these were seasoned professionals. And the "guru" smiled, swallowed and said, "nice prep." Aaaaaargh!!! So much for learning.

So let's start a study club; a study club to maximize learning, to cause accelerated professional development. How?

1. List your personal wants and needs. What do you want to accomplish?
2. Call five fellow practitioners whose opinions you could value over a long period of time. If you are new to the area, try getting some names from your local dental component.
3. Determine their interest in learning and growing. Commit each individual to the following:
 - Set aside their feelings of superiority
 - Be willing to drop personal defenses
 - Commit time to help develop common criteria of evaluation with the seminar leader for what you choose to study
 - Be willing to openly and non-defensively participate with evaluation of techniques (Remember, a reduction of defensive rigidity causes the possibility of change to become less threatening. You don't need people in your group who exhibit outward egos or this defensive protective rigidity.)

The problem is that there is no mechanism for feedback in a cottage industry like dentistry.

problem is that there is no mechanism for feedback in a cottage industry like dentistry. In reality, just like the schools they graduated from, some dentists are better than others. There are "A," "B," "C," "D," and yes, "F" dentists in practice. Remember those in your class whom you wouldn't let work on you if your life depended on it? They are in practice today somewhere. All the hype and hoopla about how good we are is to reinforce our personal self worth, to defend ourselves instead of giving us an accurate picture of where we are, where we need help, and how we can grow.

In school, we went through a process where we were taught and learning occurred because of the pressures of grades, achievement, money invested in education, outside personal pressures, and probably other reasons. Once we leave these educational pressures, teaching stops, and true

in number to dozens of participants. These groups can be homogenous in nature, could have a social component, or could be strictly for learning. Many large groups are formed to pool their financial resources to bring in an "expert" to present information. We recognize the teaching format that we grew up with. It makes us feel safe, comfortable, but this type of group is less effective for true learning because of the fact that after a week we retain less than 10% of what we hear, 15% of what we see, and 80% of what we do. Some people are auditory, some are visual, and some are conceptual. Looking at another person's slides may allow an individual to come away from an all day meeting with a few "gems," a satisfaction of some CE credits, but that's about all.

Another format is to have a smaller group that joins together for

4. Meet. Plan an evening when everyone can come. Lay out your desires, bring out the things you want to achieve. Listen to what others want. Study clubs can have a social element to develop interpersonal understanding, but look for ways to maximize growth.
5. Decide...
 - Do you want to emphasize management or technical skills? A combination of both will work.
 - How often do you want to meet...monthly, quarterly, or once a year? How many days are you willing to commit to? One format is to have a group decide on a subject, find an "expert" or a leader who will work with you in developing evaluation criteria. Then in a clinical setting, or several smaller facilities, attempt the procedure presented with direction and by evaluation according to the pre-determined criteria. This can also be done over a period of time by bringing the "expert" back to give further evaluation of the ongoing process.
 - How many people should be in your group? If your intent is to work in clinical situations, your facilities will determine your numbers. Sometimes the expenses for your facilitator will dictate bringing in extra participants.

Looking for a Leader

Where can your study club find a leader to demonstrate quality? The horizontal vector is easy to find leaders for, the vertical vector is more difficult. For maximum professional growth, your study club must find a facilitator who knows and understands quality. This leader must be able and willing to dialogue individually when each individual member is attempting to understand the criteria of quality. This will be a difficult task for your study club to find an individual willing to provide that feed-

back. The facilitator wants to be liked by the group. Human nature is such that the honest perspective is not often given or wanted. To learn this vertical vector, it is essential that feedback be given non-threateningly and reception wanted by the one attempting to grow.

For maximum growth, it is essential that your group dialogue this with your proposed leader. Clear criteria must be determined and written by this facilitator and understood by the group. Remember, only by working with a guru who understands excellence can your group learn this vertical vector. Your leader must understand and be able to demonstrate excellence and give feedback to the learner. These qualities should be found in a study club leader for they are of great importance:

- This individual cannot be phony or fake, trying to be something other than the real person he or she is.
- Watch out for a leader who is unwilling to address the criteria of the group and is pushing for his or her own program or methods and has an inability to stay focused on the project.
- Look for someone who is a facilitator, who wants to dialogue and is not threatened by the group. It should be someone who is a participant with the group and interacts and functions when needed.
- Choose a leader who accepts the study club exactly where it is, even if defensiveness and rigidity arises. This person should be able to handle the situations and help the group work through each situation.

Now comes the critical question for your proposed leader. "Will you be willing to help us formulate the criteria that members of our group will be evaluated by, and will you be willing to provide an honest, no holds barred evaluation to each member on those criteria?" If there is hesitation to either question, find another "guru." Years ago, there was a great book on education and learning by Postman and Wiengarten entitled, *Teaching As*

a Subversive Activity. One of the chapters talked about each individual having a built in "crap detector." If your leader doesn't fit your direction, if it doesn't sound right, find another leader. Trust that still small voice inside yourself.

Where should you look? Dental education is a good source for horizontal growth, but you will have to search for the right person for vertical leadership. You might be able to find someone in private practice who could help your study club, but watch out for super egos or a tie to commercial ventures. You will have to search for that person who will act as a facilitator for learning rather than provide the function of teaching. The decision is yours. This is one of those moments of choice, to grow or to regress. Your study club must make that decision as you ask yourself, "What am I striving for?" You must decide on vertical or horizontal growth. If you want to reach higher levels of quality, look for that "guru" to take you there.

Some Thoughts About Measuring Professional Growth

Planning how to accomplish evaluation of your individual members is as important as the formation of your group. You must understand a little about learning and human growth to assess how your study group can form and function. Remember that still small voice that tells us how won-

You have to verbalize what you want to get out of a study club.

derful we are. That voice resists change. As we get older and more independent in our thinking, change becomes less of an acquisition of habits and more a change of the total person. This kind of character change means rearranging a very complex,

Professional Development, Part II

very set, organized individual who is more rigid, more autonomous, more resistant to change from life's impacts.

Abraham Maslow termed maximum human potential as self actualization. This is not a self-serving, do-your-own-thing level, but a level of frequent "peak experiences" brought on only by a high level of human growth. Self actualization via being a dentist means being a good dentist,

be. Self evaluation does not allow this to occur. Carl Rogers once said, "The only man who is educated is the man who has learned how to learn, the man who has learned how to adapt and change, the man who has realized that no knowledge is secure, that only the process of seeking knowledge gives a basis for security."

Let's talk for a minute about dentistry, learning, and quality. The hu-

emotions, capabilities, potentials, etc. We do all that we can to protect ourselves, where we are in life, who we are, by avoiding that discovery. This kind of fear is defensive in that it is a protection of our self esteem and our respect for ourselves. We tend to fear knowledge that could cause us to feel inferior by a demonstration of lack of knowing. We seem to protect ourselves and preserve that image of ourselves by repression and any defensive method available to us.

You have to verbalize what you want to get out of a study club. What are you striving for? What are you trying to achieve with a study club? Is it professional growth, improvement?

The club's purpose must fill your personal needs and hopefully move you in a positive direction. Learning occurs in stages or processes, so called building blocks which are layer upon layer of knowledge. Feedback from what we have done will facilitate that layering process. An individual is free to accept or reject that feedback. If personal defenses are put aside, the ability to learn is accelerated. Without this ability and willingness to accept feedback, our only means of understanding is by self-critique, which is seldom accurate. Each member of the study club, in order to work towards maximum professional growth must have this desire and understanding.

Learning in dentistry appears to occur in two different dimensions, vertical and horizontal. Vertical growth is quality or how well procedures are done. Horizontal growth is

not a poor one. This ideal is partly created from feedback of the culture and partly by discovery within oneself. What the individual thinks a good dentist should be is determined by his own needs, abilities, and talents. Ask yourself what qualities do you like in other people? What qualities don't you like? Your answers will probably be what you like within yourself and strive for and what you don't like about yourself. Life is a process of these choices, one after another, choosing to progress or regress, growth or safety. Therefore, you must be willing to ask yourself, "What do I need a study group for and what do I want to get out of it?" To be a second rate dentist is not a good path to self actualization. One wants to be as good as he or she can

man being is so constructed that he or she presses toward fuller being and this means working towards those things people would call good values such as honesty, kindness, unselfishness, goodness. There is within each of us an inner nature that is good rather than bad. It is better to bring it out and to encourage its growth rather than suppress it. If this essential core of person is denied or suppressed, we get sick, sometimes in obvious ways, sometimes immediately, sometimes later. Does that sound like the type of dentist each member of your group would like to become? What direction do you want to go to learn?

It has been said that Freud's greatest discovery and the cause of one's great psychological illness is the fear of knowledge of oneself: of your

quantity or the different procedures you learn to do. A study club can help you in both dimensions, but true growth and personal fulfillment comes with striving for excellence or vertical growth. Also, vertical growth occurs with experiential development; you have to be shown excellence or quality and be able to demonstrate it. Not everyone has gifted hands and the ability to understand, but quality cannot be achieved without this feedback on the vertical vector. This is true for any procedure on the vertical vector. Growth on each vertical vector does not magically appear. The individual has to have a level of comparison, feedback from someone who has understanding. So an individual dentist's ability would look like a bar graph...some dentists have grown while others have not. Some professionals would have a narrow horizontal bar graph, others would be a wide graph from the many learned processes. An individual dentist could have many tall bars while others would have minimal blips in a vertical dimension.

And so we ask, Where is the "expert" and where is minimum competence? The answer to these questions is that it does not matter. What matters is the continual growth of both vectors. The individual should learn and understand his or her own limits on each vector and decide where they want to grow. Peak experiences come not from the horizontal vector but from the abilities achieved on the vertical vector.

We can consider the process of healthy growth to be a never ending series of free choice situations confronting all persons. At every point throughout their life they must choose between the comfortable delight of safety and the disquieting unknown of growth. These points are regression vs. progression choices. Developmentally, we don't stand still. Curiosity and exploration are higher needs than safety. Looking within oneself for answers, questioning oneself, implies assuming responsibility. Assuming that responsibility is a step toward actualization. Human nature would want you be as good as you can be. Often growth consists of peeling away inhibitions and constraints. The behavior of actualization is unlearned, created, and released rather than acquired. It is expressive rather than coping.

With this type of understanding, can you see how a study club could assist you in your professional development? You want that group to not only assist you in developing on the horizontal vector in learning different techniques but think what knowledge and professional growth can be achieved by learning quality in a vertical vector. This requires demonstrations of both learning and understanding.

Remember growth is uncomfortable. It takes a lot of expenditure of time, effort, and money to form a study club that is going to function to the maximum. Do you want to settle for less? Look for a study club

that is already functioning and try to move it into more growth. Willing to settle for even less? Join a study club that looks at slides. Whatever works for you is the key, but every practicing dentist should be in a study club. Maximizing growth will

R emember growth is uncomfortable.

be an individual decision. Good mental health and human growth demands such interaction. Why is it that human nature desires the "best?" Carl Rogers said "It is, I believe, because we hope to develop the 'best' of human beings." Perhaps it should be looked at as the fully functioning professional.

Note: The author is appreciative for the writings of those individuals who have looked at and studied the growth of healthy humans. While there are volumes written, he sites here the principal writing influencing the preparation of this paper. Lawrence Kohlberg: *The Philosophy of Moral Development*; Abraham Maslow: *Farther Reaches of Personality, Motivation and Personality*, and *Toward a Psychology of Being*; Carl Rogers *Freedom to Learn* and *On Becoming a Person*.



ADA CERP

William F. Wathen, DMD

It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness...

— Charles Dickens, *A Tale of Two Cities*

The latter decades of the twentieth century can lay their own unique claim to the best and the worst of times for the American dental profession: the best because of an explosive increase in health sciences knowledge and the dramatic shift from need-based to want-based dentistry; the worst because of rapidly changing materials and techniques, and the emergence of proprietary “journals,” self appointed continuing education “experts,” and the wonderful world of the Web with limitless sources of information—much of which is untouched by measured human intellect. Inconvenience, difficult access, and rising costs (both direct and indirect) of quality continuing education add to the difficulties of maintaining professional competencies that allow practitioners to routinely deliver evidenced-based “best practices” to their patients. ADA CERP is meant to assist in this process.

The profession in general and the American Dental Association in particular, along with the Academy of General Dentistry and other professional groups, has a long history of interest in assisting individual members with selection of the best life-long learning experiences available. At the same time, academic freedom in a free society demands that room be given to divergent views. Indeed, much of modern science has risen from divergent views. Joseph Lister was scorned by his colleagues for suggesting that the accepted practices of his day spread disease through the contaminated hands of “learned” physicians and surgeons.

In 1993 the American Dental Association House of Delegates voted to establish a voluntary program of continuing education recognition for those providers who agreed to adhere to selected “best practices” standards in continuing education. The ADA Continuing Education Recognition Program, ADA CERP, was created under the ADA Council on Dental Education and Licensure. Currently three hundred and twenty-two CE providers are recognized by ADA CERP at the national level. In addition, the program authorizes ADA

constituent dental societies and participating specialty organizations to extend approval to their component societies and affiliates. Over a hundred components and affiliates are approved at this level. To be recognized by ADA CERP, providers must meet specific eligibility requirements and demonstrate compliance with fourteen standards relating to mission and goals, needs assessment, program objectives, evaluation, commercial or promotional conflict of interest, educational methods, instructors, facilities, administration, fiscal responsibility, publicity, admissions, patient protection, and recordkeeping.

Dental continuing education providers who show compliance with ADA CERP standards and criteria are granted a status of “ADA CERP Recognized Provider” by the Council on Dental Education and Licensure upon recommendation of the ADA CERP Committee. This committee is responsible for evaluating CE provider applications and reporting their findings to the council. The committee also considers policy related to the

Dr. Wathen currently serves as a member of the ADA CERP Committee.



ADA CERP program and makes related CE policy recommendations to the council.

The committee is composed of dentists from the broad communities of interest: fourteen members serve staggered four-year terms. Representatives from the recognized dental specialties sit on the committee, along

ria must be made to the committee. When recognition is granted, information about the effective dates of recognition is sent to the provider, along with reminders of proper wording and ADA CERP logo usage on promotional materials, requirements for documentation of adherence and attendance, and any recom-

provider's status according to the council's policy on complaints.

The necessity for continuing professional development has never been more pressing than now, at the threshold of the "Information Age." Concurrently, information has never been so readily available as it is now, at the threshold of the "Information

Age." The need for individual critical thinking and good judgment in course selection is a fundamental need. It is up to each of us, individually, to decide whether to make this an age of wisdom or an age of foolishness. Remember, ADA CERP is only meant to promote selected standards of "best practices" in the creation, educational methodology, promotion, delivery, administration, and fiscal management of courses through the evaluation of CE providers.

ADA CERP does not approve individual courses or credit hours and does not maintain a registry for CE credits.

For more information regarding this program, contact ADA CERP, 211 East Chicago, Chicago, IL 60611; (800) 621-8099, ext. 2869; or e-mail Stevens-BrownM@ada.org.

I t is up to each of us, individually, to decide whether to make this an age of wisdom or an age of foolishness.

with three members appointed by the American Dental Association and one representative each from the American Association of Dental Schools, the American Association of Dental Examiners, the Canadian Dental Association, and a chair appointed by the Council on Dental Education and Licensure.

Recognition is granted for a minimum period of three years, at which time reapplication showing continued adherence to the standards and crite-

mendations or requirements necessary for improvement of the programs offered by the provider. Providers pay an application fee of \$300 and an annual renewal fee of \$200.

Recognition can be withdrawn for reason. Written complaints may be submitted to the council or the committee by various parties, such as course participants, interested parties, state boards of dentistry, faculty, or other CE providers. Such submission initiates a formal review by the committee of the

Issues in Dental Ethics

Professional Ethics in Dentistry Network

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Welcome to "Issues in Dental Ethics!"

This issue of your journal inaugurates a special section on ethics. The American College of Dentists has decided to reserve a section of its journal for the discussion of ethics in dentistry. The Professional Ethics in Dentistry Network (PEDNET) will take responsibility for this section. This addition to *JACD* represents a special opportunity for PEDNET and for you, the journal's readers. It's a chance for PEDNET to develop a regular forum where important aspects of the ethical dimensions of oral health care can be explored and dialogue can take place. It's also an opportunity for you to expand your knowledge in dental ethics and to get to know what others are thinking as well.

You may wish to contribute your own articles and essays.

First, an introduction to PEDNET. We are a national organization of dentist, hygienists, ethicists, behavioral scientists, and others who have a special interest in the exploration, study, and promotion of high quality reflection on ethical issues of importance to dentistry and dental education. We have been active in dental education for about a decade, and we currently have a membership of approximately two hundred. Our founding president, Professor David Ozar of the Department of Philosophy and the Center for Ethics at Loyola University of Chicago is our Executive Director. The board members include Drs. John Gilbert (Uni-

versity of Missouri-Kansas City), Tom Hasegawa (Baylor/Texas A&M), Don Pathoff (private practice in Martinsburg, WV), Alvin Rosenblum (USC), and Gary Chiodo (Oregon Health Sciences University).

Let me also introduce you to the editorial process of the Issues in Dental Ethics "micro journal" in the event that you might like to contribute. We would welcome that. This section will be managed and refereed through a process of "blind reviewing" by an Associate Editor and Co-Editor from PEDNET and an Editorial Board composed of PEDNET members. The Editor and Editorial Board of the *JACD* will still maintain overall responsibility for the contents of the journal. Submissions to the Ethics in

Dentistry section must meet the regular *JACD* criteria. Our section is scheduled to run about eight pages in each journal. PEDNET will pay a fee to help offset costs of publication of this section, and PEDNET members who are not members of the American College of Dentists will be able to get the journal at a reduced rate.

Let me also preview the kinds of issues that we have been discussing at PEDNET to whet your appetite. Our members have published scholarly works on a wide variety of ethical issues in dental care, including managed care, AIDS and Hepatitis, gift-giving and receiving, multiple-level relationships, cheating in dental school, advertising, esthetic dentistry, informed consent with adolescents, and

patient selection. Members have authored textbooks and casebooks on ethics in general dental practice, and two are at work on a book about heroes of dentistry. Increasingly in recent years, ethics scholars in dental hygiene have contributed to this dialogue. Every two years PEDNET sponsors a four-day workshop on the application of formal ethics tools to dental problems and issues. We enjoy critical thinking and are not afraid of disagreement or controversy. We are firmly anti-boredom and anti-pretentiousness in our reflective process and writing. We are on a search for good, clear ideas that will guide dentistry through the next round of challenges.

We welcome your ideas and invite you to join our group. Submissions

to the Issues in Dental Ethics section and correspondence about PEDNET may be sent to:

PEDNET
Center for Ethics,
Loyola University of Chicago
6525 North Sheridan Road
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Bruce Peltier, PhD, MBA
President, PEDNET

Dental Ethics as an Intellectual Discipline: Taking the Next Step

David T. Ozar, PhD

Abstract

The development of ethics education in dental and dental hygiene schools is traced. In the early 1980s curricula were informal, often incorporated with jurisprudence or practice management courses, and there were few effective educational materials. Over the next decade formal guidelines for teaching ethics had been approved by the American Association of Dental Schools, several texts and journals featuring ethics columns had appeared and PEDNET, the Professional Ethics in Dentistry Network had been created. The next step is to develop a regular forum for publication of papers in ethics in dental care.

from training in dental law and practice management, the ethics program consisted of a random set of lectures either by faculty members or by dentists from the community who were appreciated for their eloquence and admired for their integrity.

Few dentists or dental hygienists educated in that era have any clear recollection of the ethics lectures they attended. This is not to say that formation of these students in professional ethics did not take place. The single most important process of professional ethics formation in any profession was and is the same process by which most of a profession's skills are transmitted to the next generation: the process of *observation, imitation, practice-with-feedback*, then finally *habituation*. In the area of ethics formation, the young men and women who enter schools of dentistry and dental hygiene have already observed and admired ethical characteristics of practitioners whom they have known and as students they observe their faculty closely and begin to imitate in their own conduct what they have observed.

If the models of ethical motivation and conduct that a student observes and imitates are truly admirable, and if the student's powers of observation and imitation are fairly accurate, the

formation of the student as an ethical professional will ordinarily have a happy outcome. This has clearly been the case for the vast majority of dentists and dental hygienists over many years.

But this process is largely an unconscious one, and that makes it difficult for the learner to carefully evaluate those whom he or she is observing and imitating. The process is, to that degree, much less dependable than if learners also developed an articulate understanding of what they are learning about ethics and appropriate conduct. What is needed for this additional learning to take place is for faculty and students to make explicit efforts to bring the process of observation and imitation to consciousness; and that requires in turn that they develop the relevant intellectual resources, the sets of concepts and the modes of reflection that are specific to ethical matters.



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Part of what Odom determined from his research was that very few of the faculty assigned to manage ethics education programs had any training in the study of ethics; and so they were ill equipped to create appropriate teaching materials out of whole cloth. He also determined that there were very few published resources available to these educators to guide them. Teachers who did ask students to do reading assignments as part of their ethics course work found they had to depend on materials about professional ethics in general or on materials in medical ethics, which had begun to develop its own literature by the early 1980s. Dental ethics as an intellectual discipline was practically non-existent.

To be sure, many of the professional organizations of dental practitioners had adopted and published codes of ethical conduct; and some efforts to educate students by means of these codes were under way. But, particularly twenty years ago, such codes rarely revealed the thought processes that had led to the aspirations or strictures on conduct that they expressed; and they rarely related explicitly to broader discussions of ethical matters in the academic or the public communities. The codes were not, in other words, effective teaching resources standing on their own; and those who found themselves responsible for ethics education in the schools rarely had any other resources specific to dental care to supplement them.

What of the professional journals and professional meetings and conferences? There were many journals that published editorials on ethics themes from time to time; but like the motivational keynotes of many a professional conference, most of these were chiefly hortatory. They were no doubt effective frequently enough in contributing to practitioners' motivation to carry out what they judged to be ethically correct. But they rarely provided their audiences with effective education in the concepts of ethics, whether professional ethics or

more generally, or in the modes of reflection employed in careful ethical decision-making. That is, they were rarely effective in helping a person determine what ought to be done in hard cases, when the person's previous observations and accepted habits

Curriculum for Dental Education by Muriel Bebeau and her associates at the University of Minnesota in 1982 was such a godsend for dental ethics educators. The Minnesota curriculum included a number of carefully wrought cases portraying dental stu-

The next step in the development of dental ethics as an intellectual discipline requires a venue in which thinkers can debate, can propose and respond to one another, can actually have ongoing conversations on issues of importance.

of conduct did not resolve the matter. Notable exceptions are several journal articles at the time on informed consent and on ethical issues in dental research involving human subjects. But these, by themselves, covered only the two topics named and usually did no more than hint at the more general foundations of ethical conduct in dental practice on which their conclusions depended.

Another missing resource for teachers of professional ethics in schools of dentistry and dental hygiene was carefully constructed case scenarios for students to reflect on, discuss, and analyze in written assignments. It is difficult to overestimate the importance of case-based instruction in professional learning, not only for motivational reasons, but because so many details of professional practice are determined by the professional judging by analogy from cases previously experienced to the case at hand. Effective ethics education is education that brings together the intellectual resources mentioned above—sets of concepts and modes of reflection that are specific to ethical matters—with cases from daily dental and dental hygiene practice that highlight the common kinds of ethical issues that practitioners face.

This is one reason why the publication of *A Professional Responsibility*

dents and practicing dentists in realistic, ethically complex situations. It also provided educators with many other assists in using these cases to create a formal dental ethics curriculum. Odom's research had made a strong case that effective ethics education would require more than lectures by local dental heroes; and Bebeau's curriculum, and the extensive research supporting it, demonstrated that effective professional ethics education could be done if educators put their minds to it.

The '80s and '90s

Both the volume and the quality of work in dental ethics grew steadily from the early 80s through the end of the 90s. Through the efforts of Odom, Bebeau, and others, many of the schools began to take the need for a formal ethics curriculum more seriously; and faculty from these schools began to communicate with each other about how to do this. The "Curriculum Guidelines in Dental Professional Ethics," published by the American Association of Dental Schools in 1989 and more recent emphases on ethics competencies within the accreditation process have helped motivate administrators and other faculty to support this effort. Ethics faculty from some of these institutions began to write cases for classroom use;

and some of them began to contribute articles on ethics cases, on substantive ethical issues in dental care, and on foundational concepts in dental ethics to the journals, especially *Journal of the American Dental Association* and the *Journal of the American College of Dentists*. In addition, a regular ethics feature authored by Chiodo and Tolle began appearing in each issue of the *Journal of the Academy of General Dentistry*; and Hasegawa authored a long series of case and commentary articles in the *Texas Dental Journal*. Articles on curriculum issues and other aspects of ethics education also became more numerous, especially in the *Journal of Dental Education*.

Initially as a network of those teaching ethics, the Professional Ethics in Dentistry Network (PEDNET) came into being, first in 1982 as the mailing list for an informal newsletter on dental ethics education. But by 1987 it had become a formally constituted organization whose members came to include not only educators in dentistry, dental hygiene, and other dental care fields, but also full-time practitioners interested in ethics, ethics scholars interested in the dental professions, social scientists, association officers and the members of ethics committees and licensing boards, and others. Since 1987, PEDNET has held at least two and sometimes three meetings each year and grown slowly but steadily in membership. PEDNET has also sponsored three-day workshops on dental ethics and dental ethics education every two or three years since 1994; and it frequently collaborates with other professional associations interested in focusing on ethics in oral health care in their annual meetings and other educational programs.

Additionally, in 1993-1994, three books on dental ethics appeared. *Dental Ethics* (Lea & Febiger), a collection of essays edited by Bruce Weinstein that is now out of print, and *Ethical Questions in Dentistry* (Quintessence), a case-book by James Rule and Robert Veatch now in its second printing,

both appeared in 1993. David Ozar and David Sokol's *Dental Ethics at Chairside: Professional Principles and Practical Applications* was published in 1994 (originally by Mosby, now in a second printing from Georgetown University Press). The American Dental Association Council on Ethics, By-Laws, and Judicial Affairs also revised the ADA's *Principles of Ethics and Code of Professional Conduct* to emphasize a set of general principles and make the document a more effective instrument for ethics education.

By the end of the 90s, both those who teach professional ethics in the schools of dentistry and dental hygiene and those in professional associations or in private practice who simply want to become more thoughtful about the issues of dental ethics have begun to have access to a body of literature created by more than a handful of thinkers on a goodly variety of

titioners, does not ordinarily reach very far outside the professional schools and association headquarters. What is needed for the field of dental ethics to continue its growth is first of all a venue for the discussion of dental ethics that is easily accessible to larger groups of active contributors and to a much larger audience of readers/listeners. The offer by the American College of Dentists to dedicate a regular section of its quarterly journal to articles on dental ethics is an excellent response to this need. A regular ethics section in this journal will provide opportunity for publication to a larger group of contributors as well as a much larger audience, including a much larger group of practitioners to participate in the conversation.

Secondly, the next step in the development of dental ethics as an intellectual discipline requires a venue in which thinkers can debate, can pro-

The Minnesota curriculum included a number of carefully wrought cases portraying dental students and practicing dentists in realistic, ethically complex situations.

relevant topics. It certainly seems fair to say that dental ethics as an intellectual discipline has finally come into being!

The Next Step—and What is Needed for It to Happen

Especially for those of us who have been close to the process, the growth of dental ethics in the last decade and a half has been very exciting. But there are important limitations that still characterize it. First, the circle of most active participants in this conversation is still quite small. The number of those who regularly write for publication and who lead workshops and conferences is not great, and their regular audience, although it sometimes includes a wider group of prac-

pose and respond to one another, can actually have ongoing conversations on issues of importance. This is not realistically possible when ethics articles are competing in a journal with important technical and administrative material, as they inevitably must in most journals. It requires a venue that is not limited to the length and format of a particular feature piece, even though the existing ethics features in other journals have proven very valuable; for the give and take of creative discussion will often not fit tidily in a feature piece. It also requires a venue within which the discussion of ethical questions can turn theoretical without losing its appeal to editors and readers, since the questions of professional ethics in dental care that

have been least carefully examined up till now are the foundational questions. In a nutshell, what dental ethics needs to advance to the next step is a journal dedicated to dental ethics, or in the present instance a "sub-journal," a section of *JACD* dedicated to dental ethics but without any other constraints on where its conversations will lead.

Third, the next step in the development of dental ethics as an intellectual discipline requires that the dialogue broaden not only to be more inclusive of American dental professionals, but more widely in two other directions as well. The dialogue needs to be more accessible to the international dental community, where there are many dental educators, association leaders, and practitioners equally concerned about issues in dental ethics, as was vividly demonstrated at the Third International Congress on Dental Ethics and Law, hosted in London by the British Dental Association, in October, 1998. And the dialogue needs to be more in touch with the larger health care ethics community in North America and abroad, so that lessons of professional ethics learned in other health professions are not lost to the dental community and lessons learned about dental ethics can assist our colleagues in other professions as well. But neither of these steps forward is likely until there is a regular forum for the discussion of ethical issues in dental care and, ideally, one

with sufficient visibility that our international colleagues and ethicists of other health professions can be readily referred to what is going on in our intellectual community. Here again, the offer of the American College of Dentists to dedicate a regular section of *JACD* to scholarly work on dental ethics is an excellent beginning in the establishment of this broader dialogue.

What then is needed for the new ethics section of *JACD* to contribute significantly to the development of

cause of this journal, will now consider *writing* for it. The editors and the editorial board that will be established by PEDNET to supervise the ethics section welcome submissions not only from faculty in the schools of dentistry and dental hygiene who are familiar with writing for publication, but from every corner of the oral health care community. The ethical issues that arise in the provision of oral health care take many shapes and forms; and none of them are out of bounds for this section.

Since 1987, PEDNET has held at least two and sometimes three meetings each year and grown slowly but steadily in membership.

dental ethics as an intellectual discipline? We need *active readers* and we need *contributors*. First, we hope the articles on dental ethics that will appear in these pages will produce readers who actively participate in the dialogue through their own reflections on the articles and by discussing them with their colleagues and, we also hope, by some of them putting pen to paper as contributors themselves.

Secondly, we hope that everyone who has been thinking and reading about dental ethics, and all those who begin to do so more actively be-

Submissions will be evaluated through a process of "blind reviewing" (names of authors omitted from manuscripts to reduce bias in the process) to assure the scholarly quality of what is published. *JACD* has committed about eight pages to the ethics section for each issue, so submissions should ordinarily aim to be no longer than 3500-4500 words so the typical issue can contain at least two articles. But the editors welcome the opportunity to work with prospective authors on any ideas they have for articles for this section.

Issues in Dental Ethics

What sorts of contributions are needed? The case-and-commentary format is familiar and useful and may also be easier for many new contributors. It is sometimes especially helpful when raising new kinds of issues that have not been carefully discussed before. Moreover, the stories from which we learn about living ethically are not only stories in which the protagonist does not know how to act or in which the protagonist acts wrongly. Without cases and stories in which people do things well and act admirably, we would be much less able to determine what we ought to do in problematic situations or to say what is wrong when someone has acted badly. So stories and cases about complex or challenging situations in which things go ethically well can be very instructive; and so can the stories of our heroes, when these are told in ways that can help others understand and grow from them. An example of this kind of ethical learning, authored by Jim Rule and Muriel Bebeau, accompanies this essay to inaugurate the new "Issues in Dental Ethics" section. Readers are also invited to let the editors know what sorts of contributions they will find helpful from their own experience. Ethical issues that arise in the work of state boards or peer review groups or in the dental trades, for example, might prove to be of broad interest. In due course, we hope to include ethical issues in oral health care from other countries as well. And "packages" of two or three

articles taking different points of view on the same issue are also welcome.

As was mentioned above, the existence of a journal focused on ethics also provides a new opportunity for discussing *foundational* questions about ethics in oral health care. What are the core values that ought to guide the judgments of those who provide oral health care? How ought esthetic values be ranked in comparison with such values as the patient's oral health and the patient's overall health? How overriding of other interests and concerns is a health professional's commitment to the patients' well being? What are the characteristics of an ethical relationship with a patient who is a child or whose decision-making abilities are partially or wholly compromised in other ways? In the rationing of time, energy, and other resources among one's patients, which patients ought to come first and why? How ought the requirements of business success and professional ethics be balanced when they conflict? What considerations of justice or rights are at stake in issues of access to dental care? What economic and business arrangements are most consonant with the optimum provision of oral health care in a world of limited resources? What are the proper modes of ethical reflection for dealing with these and other issues in the ethics of oral health care? And so on.

The editors of the "Issues in Dental Ethics" section will try to stimulate readers' ethical reflection by probing

the foundations of dental ethics, by drawing out the practical implications, by providing contrasting points of view, by revisiting familiar issues, by broaching new ones, and by including, as much as possible, the perspectives of parties throughout the oral health community in the conversation. This new effort will not take dental ethics to the next level single-handedly; but we hope it will make a major contribution to the continued development of dental ethics as an intellectual discipline, and we hope that you will join us in the process.

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Commitment to Community Service: The Story of Dr. Jack Echternacht

James T. Rule, DDS, FACD and Muriel J. Bebeau, PhD, FACD

Abstract

Using the criteria developed by Colby and Damon, the authors identified Dr. Jack Echternacht as a moral hero. This paper describes his thirty-year fight to fluoridate the drinking water of Brainerd, Minnesota. Family influences on his character are also presented.

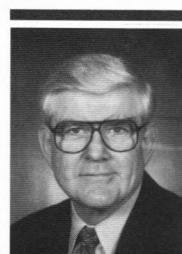
conversations to explore the nominee's conception of the factors that influenced his or her development. Our methods of analysis took seriously our nominees' conscious articulation of their beliefs, values, and life histories. Our interest was in the meaning they themselves assigned to events in their lives, thus each version of the story was returned to the nominee for comments, corrections, and final approval. For a detailed description of the selection process, interview questions, consent process, and analytical methods, see Bebeau and Rule (1999).

What follows is an abbreviated version of the story of one exemplary dentist who during his professional life made an unusual and sustained commitment to benefit his community. What inspired him to go to extreme lengths—often at great personal risk—in order to benefit the lives of others? What factors shaped his life? Who were his exemplars? What virtues and values did they demonstrate that set an example that motivated him to go so far beyond the ordinary expectations of the individual who is given a license to provide dental care? We expect you will find the answers to these questions as the story unfolds. As you read the story, you may be reminded of other dentists who

have likewise lead exemplary lives. You may wonder, as we did, what set this individual apart? In the commentary following the story, we share our impression of a special quality that seems to have prompted his peers to so enthusiastically nominate him as an exemplary professional.

The Echternacht Story

For Minnesota dentists with long memories, Dr. Jack Echternacht is a legendary figure. He graduated from the University of Minnesota School of Dentistry in 1943. Except for a three-year enlistment in the Navy



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during World War II, he has made his home and his professional life in Brainerd, on the edge of Minnesota's lake country. A few years after he started his general practice, reports began to appear about the striking reduction of dental caries in children's teeth when fluoride was placed in the drinking water. Excited by these benefits, Dr. Echternacht led a Chamber of Commerce initiative to introduce fluoride into Brainerd's water supply. What seemed at first an easy victory turned into a thirty-year struggle. Dr. Echternacht's determination, persistence, and leadership led to his selection as a moral model in dentistry.

The Brainerd Fluoridation Story

When Jack Echternacht was discharged from the Navy in 1946, he and his father drove through Minnesota looking for a place to practice. They first considered New Ulm, a German community in the south-central part of the state, judging that with a name like Echternacht, it would be a plus. Their judgment was sound, but their timing was wrong. There just was no available office space. Proceeding northwest to Fergus Falls, they likewise found nothing. But in Brainerd, right on the edge of the lake country, they discovered a suitable office. Jack, who loved to fish and had always wanted to live on a lake, couldn't have been happier. And so he began his professional life.

In a few short years, Dr. Echternacht was an established figure in the Brainerd community. His practice was thriving, and he had quickly built a reputation for community involvement. That reputation and his outgoing manner earned him an invitation to join the Junior Chamber of Commerce, and he readily agreed. In the early '50s, published research began to appear showing that fluoridated drinking water offered huge benefits. Public health agencies across the country were formulating policy, and some local jurisdictions had already

Table 1. Criteria for moral exemplars (Colby & Damon, 1992)

- A sustained commitment to moral ideals or principles that include a generalized respect for humanity
- Displays a disposition to act in accord with their moral ideals or principles, which would imply a consistency between their actions and intentions and the means and ends of their actions
- Expresses a willingness to risk their self-interest for the sake of their moral values
- Shows a tendency to be inspiring to others and thereby to move them to moral action

fluoridated their drinking water. Dentifrice manufacturers also had been at work. The first tube of Crest was about to be sold.

In 1954, the national Junior Chamber of Commerce chose for its annual project the fluoridation of all municipal water supplies in the United States. Since Jack was an active member, it was logical that he would lead the effort in Brainerd. Expecting an easy acceptance, he drafted a proposal to fluoridate the water supply and took it to the town council. Without much discussion, it was approved. Temporarily, as it turned out. For months no word came from the City Council about the implementation phase. Finally, Jack called the council and learned that the idea had been shelved because the Water and Light Board, which represented the community power structure, had said no. The council had no interest in overriding the Water and Light Board.

Dr. Echternacht was dumbfounded. In response, he initiated a campaign to educate the council on the benefits of water fluoridation. He attended Council meetings, wrote letters to the Brainerd Daily Dispatch's Open Forum, gave talks at PTAs, and handed out literature in his office and wherever else he could find willing re-

cipients. Nothing happened. His efforts, he learned, were stalled by the work of a small but effective group of antifluoridationists.

The leader of the Brainerd antifluoridationist movement was Irene Johnson. Possessed with dedication, an independent spirit, and what the newspapers would later call "a legendary will," she made Jack Echternacht's life memorable for most of the next thirty years. Dr. Echternacht and Mrs. Johnson became polar figures in the fluoridation fight. The conflict attracted both statewide and national interest. At one point, NBC News did a story on Brainerd's fluoridation controversy, featuring interviews with both Jack and Irene Johnson. The air of antagonism was so sharp that at no time did they appear together.

Newspaper accounts had Irene Johnson asserting that Jack Echternacht had been dispatched to Brainerd as a "pusher assigned by the American Dental Association" to smooth the way for the introduction of fluoride. "There's one in every community," she said. "Good looking, respectable, a community leader. Just like Echternacht." To make matters worse he was of German descent. "Just like all Germans," she said, "Jack Echternacht is going to get his way. Or else."

For Irene Johnson and the group she led, Jack's efforts to put fluoride in the water were both infuriating and alarming. From their perspective, besides killing rats, fluoride caused cancer, kidney failure, nail biting, hypertension, loss of hair, mongolism, skin rashes, sterility, miscarriage, brittle bones, and disfigured teeth. Furthermore, Irene added, it was all a part of a communist plot to introduce harmful mass medication.

Antifluoridationists were especially irritated about having no choice other than to drink fluoridated water. It was, they said, but another example of the loss of political liberty. When Mrs. Johnson first heard about Dr. Echternacht's success in getting fluoridation approved by the City Council, she was alarmed. In response, she circulated a petition against fluoridation that was supported by more than 4,000 signatures, approximately 40% of the town's population at the time. Typical of this feeling was the message on a sign on the main route into town reading: "World's Best Drink: Brainerd's Pure, Cold, Deep Well Water." For the Brainerd citizenry, the slogan was reality, and they did not want their water ruined by Dr. Echternacht. Letters opposing fluoridation began to appear in the Open Forum section of the newspaper. It seemed that for every profluoridation letter that was published, three appeared in opposition. Mrs. Johnson was in full gear.

Looking back at the activities of the antifluoridationists, Jack realizes how naive he was. He saw the issue strictly from the standpoint of fluoride's benefits. The reduction of caries was dramatic. The addition of such small amounts of fluoride to the water, and at such small cost, produced almost unbelievable results. Most people, however, were not convinced, and showed it by backing the already formidable antifluoridationists.

The personal attacks on his name that appeared in the Open Forum were of great concern to his wife. In one form or another, the struggle

dominated his thoughts and competed for time that was important to him in raising his three children. Even in his college days, he had dreamed about the importance of family commitments in his future life. In fact, the availability of time for family was a key reason why he had chosen dentistry over medicine, the other career option he had considered. The life of a country physician in rural Minnesota could be burdened by routine off-hour obligations. His life might not be his own. The irony of his current situation was that, as a dentist, he now faced the same issue.

The ugliness of the conflict increased. Jack received anonymous calls at all hours of the night. His visits to the City Council were charged with hostility. Later, when the fluoride issue was considered by the Minnesota State Legislature, Jack attended one of the critical meetings. As he walked down an aisle to testify, a man from Brainerd absurdly stuck out his foot to trip him. On another occasion, while Dr. Echternacht was sitting at his lab bench working on a crown, a stranger walked in and suggested that he be careful which streets he walked on. One snowy night, when he could

prove of fluoridation, Jack got a letter from its president saying they did approve. When his opponents stated that the Minnesota Medical Association was opposed to fluoridation, Jack showed that the MMA had gone on record favoring it on May 27, 1952. It was the same with the American Dental Association and the American Public Health Association. Jack always went to the source. When MOFF declared that J. Edgar Hoover was against fluoridation, Jack telegraphed the FBI Director. An airmail letter reply dated November 28, 1961 stated:

Fluoridation is a legislative matter and I have always followed the policy of not injecting the FBI or myself into situations involving local or Federal legislation. Therefore, I want to assure you that I did not make the statement attributed to me which you quoted.

The opposition suggested that fluoride pills be given voluntarily by those parents who chose to do so. Jack presented the studies that showed the poor compliance rate with such approaches. In preparation for a trip to the City Council, Jack asked a druggist to add the proper amount of fluoride to a big jug of the city water.

A s you read the story, you may be reminded of other dentists who have likewise lead exemplary lives.

not drive home, he slept in his reception room. In the middle of the night he heard a loud noise. He thought the furnace had backfired. In the morning he found a bullet hole in his reception room window.

Jack continued to work for fluoridation. He was constantly on-call to set the record straight. When anything was said against fluoridation, Jack would find evidence to refute it. When the opposition claimed that the American Medical Association did not ap-

He brought the jug and some wax paper cups to the meeting. He also had a jug of the pure, unfluoridated, "world's best drink." Everyone was served both drinks, and no one could tell the difference. Jack thought that his lesson in objectivity was going to do it. But, no opinions were changed.

At one point, Jack filed a complaint with the Minnesota Press Council against his friend, the editor of the Brainerd Daily Dispatch, charging that more press space was

given to the antifluoridationists than to the profluoridationists. The Press Council agreed. The ruling had no effect whatsoever on the editor. Jack, however, lost a friend.

Fluoridation in Brainerd was put to a vote in 1961, and Jack was there to advocate for fluoride. It lost, 2,846 to 1,427. By 1967, fluoridation of the public water supplies became a state law, but Brainerd refused to comply. In 1971, the State Health Department formally requested that Brainerd comply with state law. Brainerd again refused to comply. An attempt was made in the state legislature to exempt Brainerd from the law. The attempt was unsuccessful. Another referendum was held in 1974, and fluoridation lost again. Later that year, a District Court ordered that Brainerd's water be fluoridated. The State Supreme Court heard an appeal, but upheld the judgment. The appeal was subsequently taken to the U.S. Supreme Court, which refused to hear the case.

Under pressure from the Department of Health, a judge set a deadline of October 19, 1979 for the City Council's decision to fluoridate. The council took no action. Finally on October 24, 1979, the council's opposition folded under a contempt citation that carried penalties of \$250 per day. The fines were too much to handle. The council voted to fluoridate, and three months later fluoride was in the water. Ultimately, Mrs. Johnson was correct: Jack Echternacht did get his way.

The Jackson County Freelance

When I (Dr. Rule) first called Dr. Echternacht about his participation in our project, I told him that we wanted to understand both the people in his life and the circumstances that led ultimately to his nomination as a moral exemplar. Knowing something about the extraordinary length of his involvement, I was particularly interested in what gave him the taste for engagement and the stubbornness to persist.

When I arrived at his home two months later, he told me almost immediately that he had been thinking about his father ever since my call. Estell Ira Echternacht was a memorable man, the type of person about whom stories were told. One of these stories was what kept Jack going.

When Jack was seven, his family moved from Estherville, Iowa, to Alpha, Minnesota, population 200, and some twenty-five miles from Estherville just across the state line. Mr. Echternacht had been a salesman who aspired to be a farmer. He

town telephone operator, always current on the activities of the citizens, overheard someone giving Jack's dad the good news about the stock. Before long the rumor spread around town that his father had come into some big money. This news was unsettling to Alpha's self-appointed power structure: the owner of the bank, one of his clerks, and the proprietor of the hardware store. These three saw the rumored Echternacht affluence as potentially disrupting the equilibrium of their authority. Adding to their concern was their belief that Estell was

Jack tells this story of his father's initiative and aggressiveness with relish and pride.

first worked for the Reed-Murdoch Grocery Company and then became a salesman with the Buster Brown Shoe Company. The job kept him on the road, and he hated it. Consequently, when the opportunity came to buy 260 acres of prime farmland in Minnesota, he didn't hesitate. After only a brief taste of farming, Estell told his wife, "If I ever had to go back on the road again, you'll find me swinging from the hay mow."

The Echternachts' home in Estherville was comfortable, but their new place in Alpha was not much more than "a chicken shed with a pot bellied stove and bed bugs." Though Jack's father had invested in some Oklahoma oil stock, which had turned a modest profit, the proceeds went directly into the farm, and money was in short supply. Once when Estell could not pay their utility bills, their electricity was turned off, adding to the distress of his older sister, Jean, who had a patent foramen ovale, a manageable cardiac anomaly in today's medicine. Life was not easy. Jean grew increasingly ill and died two years later.

As it turned out, the Echternachts' inability to pay their electric bills was not entirely of their own doing. The

Jewish. Echternacht sounded Jewish to them, and Estell had a prominent nose, dark eyes, and dark hair. Their anxiety was misplaced. Mr. Echternacht was not Jewish. Nevertheless, to set things right, they put pressure on the electric company to charge his dad exorbitant rates. When Jack's father discovered that he was being charged three times more for electricity than anyone else, he was furious.

Mr. Echternacht confronted the electric company and the Alpha power brokers with the inequity, but they refused to back down. He went to the county attorney who refused to take a stand on Estell's behalf. Angry and energized by the injustice, he fought back. He paid every electric bill under protest. More importantly, believing in the power of public opinion and public pressure, he decided to publish a newspaper, his grade school education notwithstanding. An editor friend in Estherville gave him advice, and Estell got it rolling. He called the newspaper, *The Jackson County Freelance*. It was four pages long, and its theme was expressed in the following unattributed quotation:

Truth, crushed to earth, shall rise again; the eternal years of God are

hers. But error, wounded, writhes in pain and dies among its worshipers.

The "Freelance" was short on news and long on editorials about honesty and public responsibility. Seven year old Jack and his father drove all around the county distributing the papers. In less than a year, the electric company lowered his rate and the "Freelance" went out of business.

Jack went through high school, college, dental school, a stint in the U.S. Navy, and his first eight years of practice without ever thinking of *The Jackson County Freelance*. The memory had not surfaced until he himself was under fire. He felt great admiration for his father. For the first time he fully appreciated his father's position and the principled stand his father had taken. This story from his childhood became a reservoir of tenacity and fortitude that he drew upon twenty-five years later.

A More Subtle Contributor

Jack tells this story of his father's initiative and aggressiveness with relish and pride. He loves to tell it. Nevertheless, he is troubled that his father's self-fulfilling behavior was hard on his mother, Nelda. Nelda, an outgoing person, thrived on friendships with others. Estell, however, loved his home and that's where he wanted to be. So they stayed at home. Nelda was religious and enjoyed going to church. Estell, however, remained home on Sundays because the church leaders were the ones who had given him trouble. Consequently, Nelda rarely went to church.

During all of the hardships associated with their new life in Alpha, Jack never saw his mother angry or resentful. In fact, she hated conflict of any kind. Jack remembers her as a fair-minded, peace-loving person who was also an effective peacemaker. When Jack needed comfort and understanding, he headed for the kitchen. She was a wonderful mother. Estell Echternacht was Jack's hero, but Nelda was the parent he adored.

Jack sees himself as more like his mother than his father. He characterizes himself as peace loving. As for conflict, he avoids it. "But, if there's a just cause involved," he says, "that's another matter; then we go to war."

Views and Satisfactions About Dentistry

Jack conducted a general practice, and he loved it. When he entered his office, his absorption with his patients and the procedures themselves was complete. The concerns of the outside world would vanish. Jack said, "I just felt at peace. I liked my patients. I had a good relationship with them. And I felt I was doing something for them. I think that's the wonderful thing about dentistry. You can relieve people of pain and discomfort, and you can prevent it." Part of what satisfied Jack was the technical activity itself. He enjoyed lab work, and he waxed and cast all his own gold crowns. "If a patient canceled," Jack said, "or if I had a little time between patients, I always had something to do. Go into the laboratory and carve a crown, or cast one, or polish one. It was just great, and I loved to work with it."

When Jack thinks about the beliefs and moral values that describe him

thinks those four qualities are the essence of him personally as much as professionally.

Jack thinks the requirements for honesty assume an expanded meaning in practice. "You have so many opportunities where you could take advantage of a person. Patients don't know what is going on most of the time, even though you explain it to them. And there are so many times you could take a short cut or not do something the way it should be done. You just have to do things the proper way. When there's money involved, you can easily take advantage of patients. It is just a terrible thing when a professional man takes advantage of a patient."

Another essential value pertained to helping others. One of Jack's joys in practice was, as he put it, "the thrill of helping people out of difficult situations. You know, dentists and physicians are servants of the people. We really are. We provide a service that should be beneficial to people. There's a great deal of satisfaction derived from that, in addition to the monetary return." Sometimes he thought it would be wonderful if he could just concentrate on the treatment and not have to worry about charging his pa-

A value that emerges with special conviction is the obligation to pay back the community for what it has provided.

best, his frame of reference is his profession. After fifty-two years of it, how could he think otherwise? In fact, Jack feels that one's personal and professional value systems must be integrated. "You can't have two sets of values and be consistent in what you do." He feels most strongly about the obligations for honesty, helping others, community payback, and commitment. The fluoridation struggle illustrates all four values, but is a paradigm lesson in commitment. Jack

tients. In fact, Jack felt that the details of ordinary business life were sometimes beyond him. Without the help of his staff, there is no telling how much free dentistry he would have provided.

A value that emerges with special conviction is the obligation to pay back the community for what it has provided. "I believe that if one lives in the community and makes his livelihood from it, he should return that benefit by participating in the activi-

ties of the community to better it in any way that he can." Although Jack speaks quietly, in everything he says there is a rock-like base of force, sincerity, and often humor. Nowhere does he show more force and less humor than when he talks about obligations to the community. This energy comes from his frustration that many others do not share his commitment. The majority of people go through their lives without even a glimmer of what is of such vital concern to Jack. "I've been on so many fund drives in my community. I get so disappointed with what people do, when I know what they could do. And that just bothers the life out of me. If all the professional people would do something, all these projects and things that you'd like to better the community with, would be so much easier to accomplish. I just don't understand how you can take, but not give."

Jack's beliefs about community service are an outgrowth of his professional commitment to benefit the oral health of the community. Involvement in the profession has enlarged his values. He says he never thought about community involvement before he entered dental school, nor when he started his practice. His family provided no prior encouragement in that direction. Jack merely felt gratitude to his community and to his patients for the good living that his family enjoyed. The satisfaction he receives from community projects parallels the satisfaction he received from dentistry. In both there are tangible benefits: "Like putting a filling in a tooth," Jack says.

Jack specialized in mega-projects: a Civic Center, a YMCA building, a golf course. He found that he had a special talent for fundraising and put it to use in helping to create a golf

course at the Brainerd Golf and Country Club and in transforming a floundering YMCA organization, with few useful functions and no building, into a vital organization with a new activity center. He later became president of the Brainerd YMCA, and also served, for a time, as its national director.

The project that pleases Jack the most is the Brainerd Civic Center. It is an imposing building on the edge of town, big enough to hold a regulation ice hockey rink, locker rooms, a balcony, and concession stands. Because it was there, the high school was able to field a hockey team. It is also used for ice shows, countywide ice hockey lessons, automobile shows, and other trade shows. Jack conceived the idea, organized the corporation that would own the building, and raised more than a million dollars. It was a private effort. He was part owner of the Civic Center and was President of the Corporation. From his own funds, he bought enough seedless ash and other trees to beautify the building. Neither Jack nor any other directors received any compensation. After a few years, when income exceeded operating expenses, the corporation gave the Civic Center to the city outright.

Commentary

Dr. Echternacht's vision of responsibility to community is extraordinary. He begins his professional life with a more minimalist view of professional service: to provide care for those who can pay for services. As he engages in community activity, his conception of professional service broadens to embrace a duty to engage in public action to benefit the oral health of the community. He persists in activities to

benefit the oral health of the community, and as he matures as a professional and citizen, his vision and activity are further enlarged to encompass a responsibility to benefit the community above and beyond what might be expected of a health care professional.

As we completed the story of Dr. Echternacht, I (Dr. Bebeau) talked again with peers who initially nominated him and who knew him well during the activist period of his life. From those conversations, the last of Colby and Damon's (1992) criteria (Table 1) emerged: a sense of realistic humility about their own importance relative to the world at large, implying a relative lack of concern for their own ego. As I discussed progress on the project and expressed our delight with the Echternacht story, one colleague remarked: "I knew it would make a good story, but in retrospect, I'm surprised he agreed to be interviewed. When we tried over the years to honor him for his achievements--either at the local and state dental societies--he would decline, declaring that he was merely doing what was expected." Such "effacement of self-interest" is undoubtedly a reason why the nomination of Dr. Echternacht as a moral exemplar was so enthusiastically supported by his peers.

References

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- Colby, A. & Damon, W. (1992). *Some do care: Contemporary lives of moral commitment*. New York, NY: Free Press.



Emerging Trends in Professional Development

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Abstract

The shape of professional development in dentistry can better be guessed from imagining the emerging needs of practitioners than from the technology of education. Four predictions are offered: professional development is likely to involve a greater blend of learning and doing, customized to individual dentists, emphasizing value added rather than evaluation of dentists, and to be distributed in the sense that dentists will take their learning in smaller doses and at their own convenience.

that we will be pulled into the future than pushed there.

At the turn of the last millennium, formal dental education was not in an organized and respectable condition. Dentistry had as much shared knowledge and status as breadmaking does today. And formal education was not to be invented for another three or four hundred years. Almost all of the progress has come in the last seventy-five years, the period of time since the founding of the American College of Dentists. In 1920, dentists used primitive methods to partially restore the damage caused by acute infections and trauma. Dental education was just emerging away from apprenticeship proprietary models. Practicing professionals who shared their knowledge with aspiring dentists in exchange for economic consideration began to organize around central facilities (schools) for the sake of efficiency.

It is instructive to consider the state of dental education in the ten or fifteen years before and after the year 1900, because some of those features have become familiar again. Apprenticeship is on the rise—we now call it associateship or the employment of

young professionals. America is once again a land of immigrants seeking freedom and opportunity. The rapid exchange of ideas that transportation opened up a century ago is being mirrored today on the Internet. The pluralism of immigration and the rapid exchange of ideas caused by communication and information technology put more emphasis on the merit of performance than on one's family or professional connections. Women are reassuming the title "Doctor" in larger numbers. There were many of them in medicine and dentistry a hundred years ago until the concerns that they dilute the economic viability of the professions led to structural changes codified in the Flexner Report that drove them out of the market.

The one thing that is not as it was a hundred years ago is the enormous expansion in the professional knowledge base of dentistry. Our understanding of the disease process and even of the number of diseases appropriate to the profession, the variety of therapies available, and the social and economic contexts in which dentistry is practiced as a business, regulated by government, and conducted in partner-

The professional ball player Dan Quisenberry had this to say about the world we are entering: "I have seen the future, and it's a lot like the present, but much longer." Not much vision there, nor is there in those prognosticators who foresee that we will be doing today's jobs with new techniques and materials. The powerful insights come from guessing right about the new dreams that will animate us. It just seems more plausible



ship with financial intermediaries such as insurance carriers has exploded useful and necessary knowledge for dental practice beyond anything that could have been imagined ten decades ago. It might have been meaningful for a dentist to say one hundred years ago that he or she possessed the skill and knowledge required of a practitioner. That is not possible today. Now the task of an ethical practitioner is to limit his or her practice to those areas of oral health care where reasonable competency can be assured and to navigate through the vast and expanding field in a rewarding and responsive fashion. Formal education is based on a model of taking the required courses and getting a high percentage of the material in each. That is an inadequate metaphor for what practicing dentists must do in these rapidly changing times.

It is too bold to forecast what we will be doing even a few decades from now, but following the trajectory of some prominent trends tells us where we can look for interesting developments. Four of them will be mentioned here: (a) professional development in the future is likely to be a blend of doing and learning, (b) based more on customized diagnosis than on "one-size-fits-all," (c) less concerned with evaluation and more so with value, (d) and distributed.

Doing is Learning

The line between learning and practice will become blurred. This is inescapable, in part because of the quickening pace of developments in research and technology that make yesterday's practice of dentistry unacceptable today. As the new dentistry comes on line, dentists must learn to use it. The cycles of learning and practice will become shorter and alternate more frequently.

But there is another and much more exciting sense in which learning and practice will blend. Dentistry, perhaps more so than most professions, is tied up in its technology and

its environment. Most dentists would feel comfortable visiting an office, learning what the daily routine looks like, and examining the equipment and materials used and then predicting the kind of dentistry performed. In most cases, they would not be far off. Change the technology dentists use and you will change the way they practice. Not only is the technology of dentistry changing more quickly, it is also getting smarter. Smart materials are already being developed; side chair equipment can be customized; and the computer is wandering back from the front desk into the operatory.

Customized Learning

All of this intelligence in the technology of dentistry creates a different kind of partnership with the practitioner. It won't be long before the computer reminds a dentist that the last three inlays all required adjust-

see yellow page advertisements giving away that part of dental care. The same is true in professional development. Increasingly there will be partnerships between dentists and others offering support in diagnosing what kind of learning would produce the most benefit to a dentist and to his or her patients. Regardless of how sexy or educationally sound a continuing education course might be, it is of little value if it does not represent increased knowledge or increased skill a dentist can use to make a better practice. It is probably a good beginning assumption that dentists know something about what they want by way of practice enhancements. It would be wrong, however, to assume that this process cannot be improved. It is likely in the future that there will be groups or individuals who do learning diagnoses for practices but are not engaged in providing such learning. That will certainly remove one ethical

I t just seems more plausible that we will be pulled into the future than pushed there.

ments or that the dentist is performing half as many implant cases as other dentists in the area just like the accountant reminds the dentist today that his or her pension program is under funded. The new model will not be technology that replaces existing functions, either those of educators or of practitioners, but technology that will extend the capabilities of the practitioner in constantly changing ways. What the dentist knows must be upgraded constantly; the technology must also be upgraded constantly. Dentists and technology will form a partnership to accomplish this.

Moving Away from Evaluation to Value Added

The value of dentistry has always been in the diagnosis. It is sickening to

barrier that exists in the present system where the same providers try to tell dentists what they need and then offer to provide it. Much of this consulting could be done on-line through electronic access to treatment records and patterns once the ADA releases a working version of the SNODENT dental disease classification system. Web-page front ends may even make this diagnostic tool available for use by dentists in the privacy of their own offices.

The focus in professional development will shift from evaluation to valuation. The CEU will lose its meaning and hours of credit will no longer be counted. We will gradually stop worrying about pre-and post-test gain scores or sending in the answers to multiple guess tests at the end of



journal articles. Such evaluation has been useful to this point only because there has been no direct way of measuring the value of professional development. We have settled for a proxy, exposure to teaching given by qualified instructors, since we could not measure effective learning by involved users.

Valuation in the sense used here means an assessment by the practicing dentist of the benefit derived from learning. In the future, this will become the driving force in professional development rather than mandated participation. Diagnosis of learning needs will help in this regard. In the end, dentists will compare in their own minds the value of a practice given their current abilities to the value of their practice with enhanced abilities. If the expected increase in value exceeds the cost of learning, dentists will engage in professional development. It may even become possible to charge for learning rather than for participation. Management consultants have longed billed clients such as General Motors or the Pentagon more for the same advice than what they charge small businesses or the YMCA. This is not a matter of the large organization being able to afford to pay more, it is a matter that they get more from the same advice.

Learning partnerships in the future may feature benefit sharing. This would take the form of a small up-front fixed fee and royalties equal to a small fraction of the increase in value of a dental practice resulting from professional development programs. Such a system would quickly separate the show biz from the real thing. Technology already exists and is being developed commercially which would allow individuals to "pay per play" music over the computer. This represents an alternative to the current "pay per ownership" which is a rather ineffective market

approach to managing intellectual property.

Currently dental schools compete with each other for candidates who are easy to teach because of their educational aptitude. Traditional continuing education competes for audiences on an undifferentiated basis since there is no difference between one paying customer and another. In the future, both dental education and professional development are likely to compete for individuals who will make the most of the learning opportunities that are provided.

Distributed Learning

Professional development in the future will be more distributed than it is now. This means that more media will be used, more venues employed, smaller segments used as the module size, and more distributors will be available. The Internet is a perfect

Learning partnerships in the future may feature benefit sharing.

metaphor. I can now listen to my San Francisco concert music station in Chicago or Zurich over the Internet. The net connects me with more people and more information from more locations than I have time to understand let alone use, but the real power of the metaphor of the Internet in distributed learning may not be as apparent as all of the examples just mentioned. The Internet was developed twenty or thirty years ago for military purposes as a means of protecting communication in the event of war or sabotage. A message is decomposed into packets that are sent by multiple channels of connection to

the recipient where they are reassembled. A malfunction or destruction of one or even several of the channels will not disable Internet communication. This is the sense in which professional development will be distributed learning in the future.

Dental education will still be a concentrated experience at a single location for the foreseeable future. But professional development will be gathered from multiple sights and reassembled at the point where it is needed by the practicing dentist. Developing better traditional continuing education programs, with a focus on meaningful content and interesting delivery is an important part of this process. But it is insufficient. The intelligent blending of work and learning, appreciation of the true value of learning, and enhanced diagnosis in the hands of practitioners are all required to take maximum advantage of improved continuing education. In a parallel fashion, professional development centers will shift from being providers of CE to being brokers of professional development opportunities by providing a structure for dentists to increase the value of their practices.

About a hundred years ago the American philosopher John Dewey criticized our education system as being too insulated and remote from the needs of society. He said "Education is not preparation for life, it is life itself." As we go into the next millennium, perhaps we can make sense of this perspective by remembering that learning is not preparation for dental practice, it is one of the ways value is added by dentists to their patient's oral health.

Acknowledgment: Parts of this column formed the basis for a paper entitled "The Future of Professional Development" which appeared in the December 1999 issue of *Contact Point*.



Recommended Reading

Allee, V. (1997). *The knowledge evolution: Expanding organizational intelligence*. Boston, MA: Butterworth-Heinemann.

In a world with so much information, it matters less than ever how much one knows. What does matter is the ability to get the information one needs and to put it to use.

* Bridges, William (1994). *JobShift: How to prosper in a workplace without jobs*. Reading, MA: Perseus Press.

The job—a person-sized package of tasks that can be passed from one properly trained individual to another—was an invention of the industrial revolution. As that era is being replaced by the information era, jobs as a form of employment, are being replaced by self-managed careers. Dentists have managed their own development for centuries; the importance of the trend becoming more widespread is that it will generate technologies, expectations, and markets throughout the economy that dentists can then take advantage of.

Galegher, J., Kraut, R. E., & Egido, C. (Eds.) (1990) *Intellectual teamwork: Social and technological foundations of cooperative work*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Collection of interesting but rather technical papers about the way computer technology and the social dynamics of group work influence each other.

* Naisbitt, John, & Aburdene, Patricia (1990). *Megatrends 2000: Then new directions for the 1990s*. New York, NY: William Morrow and Company.

Some forecasting by the pros: (1) global economic boom, (2) renaissance in the arts, (3) emergence of free-market socialism, (4) global lifestyles and cultural nationalism, (5) privatization of the welfare state, (6) rise of the Asian Pacific Rim, (7) decade of women in leadership, (8) age of biology, (9) religious revivals, (10) the triumph of the individual.

Popcorn, F. (1991). *The popcorn report*. New York, NY: Doubleday Currency.

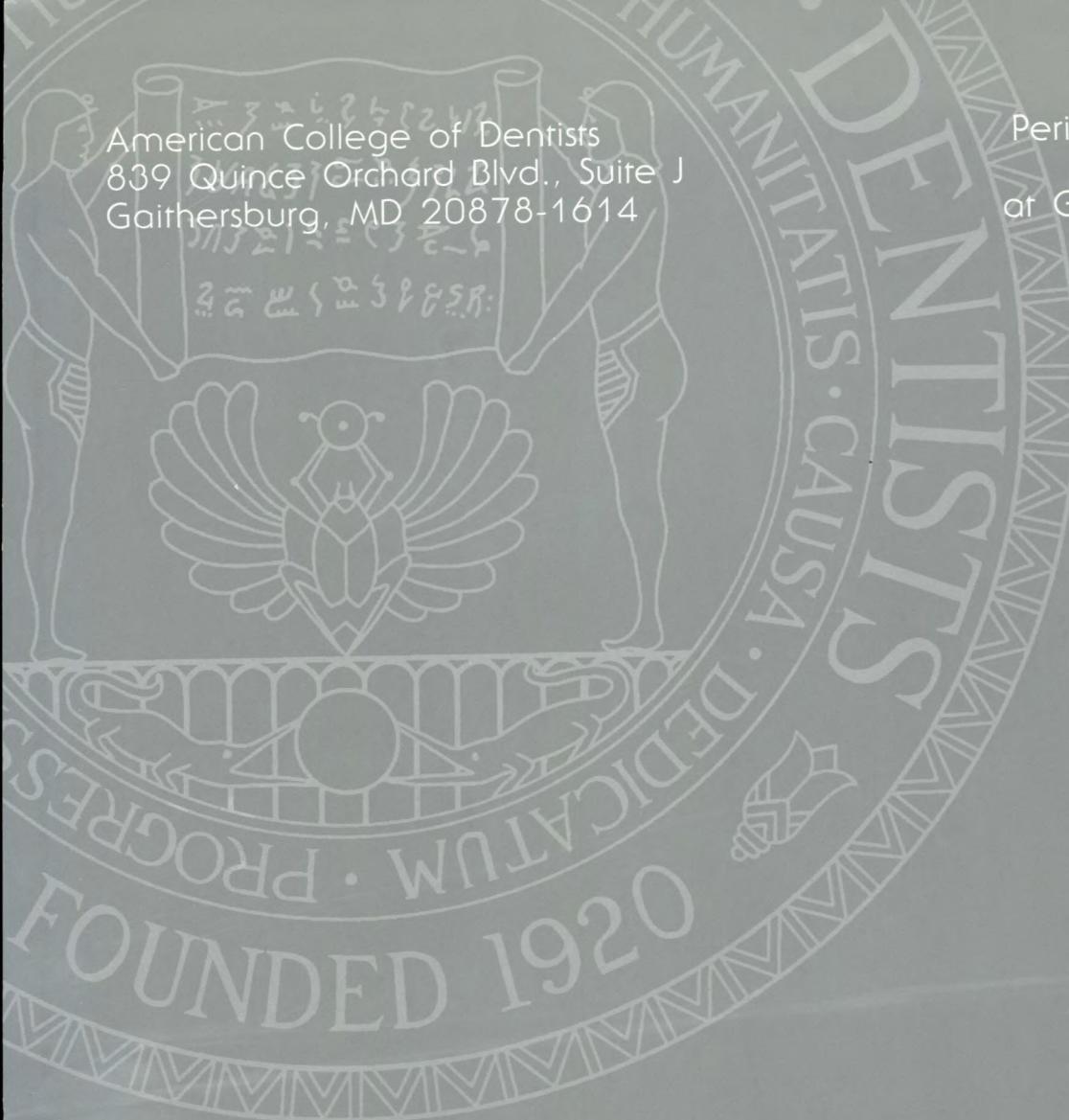
A futurist with another list of predictions, but a clever way of expressing them and some practical advice on how to read and benefit from emerging trends.

* Whitehead, Alfred North (1929). *The aims of education*. New York, NY: The New American Library.

An English philosopher defines education as the art of learning how to put knowledge to practice.

Editor's Note

Summaries are available for the three recommended readings preceded by an asterisk (*). Each is about four pages long and conveys both the tone and content of the book through extensive quotations. These summaries are designed for busy readers who want the essence of these references in fifteen minutes rather than five hours. Summaries are available from the ACD Executive Office in Gaithersburg. A donation to the ACD Foundation of \$15 is suggested for the set of summaries on predicting the future of professional development; a donation of \$50 would bring you summaries of all the 2000 leadership topics.



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