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Advanced Education in Prosthodontics

Moving on to the Next Decade, Century, and Millennium

Here are some questions you may want to think about on a cold winter's night!

■ What would you think if you were told that there was a move afoot to give up basic prosthodontics as historically taught in dental school? The question really is, what would you think if dental educators decided that the time given to prosthodontics in the dental school curriculum is now wasted? The future would hold that dental school curricula, repeat basic dental education, no longer would include prosthodontics.

■ Should the "traditions" of teachings in prosthodontics be realized and preserved? Can it be shown that they, the traditional teachings, form an essential part of dentistry as a whole? Or as the Playskool generations enter our dental schools, should we now assume that everyone has skills, and we should not damage their "freeplay" approach to learning by critiquing their treatments or trying to impose a discipline of technical mastery?

■ One might say that patients and their edentulous spaces and the hard and soft tissues around them have remained the same over the years -- a constant. In deciding how our curricula will be aimed at these spaces, have we decided that the laboratory technologists turned denturists have improved so much that the physiologic and scientific bases and the manual skills of dentistry are no longer needed? Or is that prosthodontic training is so complicated and so difficult that we no longer have time to begin at the beginning? Said another way, what is the value of teaching and learning simple things if they are to be bestowed on others; or what is the value of teaching and learning them if they seem so matter-of-factly easy that they are later discarded because the most involved treatments receive priority?

■ What would you think if you were told that your state's dental examining board was going to be weighted equally with dentists and dental technologists? Or further, that if you wished to carry out prosthodontic treatments, your capabilities (competencies) would be tested and measured by an examination derived and conducted by organized "denturists?"

■ Or better yet,what would you think if our leaders in prosthodontics embraced a philosophy toward the laboratory industry that says "if you can't beat 'em, have 'em join us!" Wasn't that the issue at the most recent American College of Prosthodontists annual session? What exactly was the message in that action? Did you hear it?

■ Or further yet, what do you feel your worth in prosthodontics is when the AARP (American Association of Retired Persons) tells their members that their insurances will reimburse their "providers" for their prostheses -- only if the member seeks treatment by a denturist? After all the AARP knows their members are only buying plastic (maybe porcelain) and metal, and that denturists can provide this dental "work" * in the same or better quality for a lesser fee than the dentist. And, is this what we will see as the end result of managed care in dentistry?

[* dental "work"--a term used by Mr. Kiplinger, the well known journalist, when he spoke to the American College of Dentists as the keynote speaker at their 1997 annual meeting in Washington, D. C.]

■ What will the applicant pool for advanced education programs in prosthodontics amount to when the dental student has never taken courses in prosthodontics, has accomplished no prosthodontic treatments, and has never talked to or heard of a prosthodontist?

■ Could it be that in the first decade of the new century the availability of resources for training in prosthodontics will be the key? Will the few who are trained come only from government and military programs? Can the best of dental students be directed to prosthodontics because it is challenging, satisfying, rewarding, constructive, and respected for what it is? But especially because it is supported by the existing prosthodontic community? Can prosthodontic organizations arrive at bold new agreements that will pool all of the resources that have been stagnated in their organization's Foundations? Can these resources be directed to support stipends and scholarships for the dentist with an interest and drive that far exceeds the athletes who will be receiving the big "easy money" at institutions of higher learning?

■ What can we do to channel prosthodontics correctly down the right road into the next millennium?

Fortunately, we can think, converse, contribute, interact, and lead into the next millennium, knowing full well that exciting changes and concepts will continue to evolve our specialty and prosthodontics and dentistry. In order to take a closer look at this great future, some outside contributors have been asked to give us their ideas on where we are, why we're there, and what is their prediction on how we can influence the future? Can we make a difference?

You bet we can, and here's a start! The first subject is:

Advanced Training in Prosthodontics: Recruitment Problems and Solutions

Tom Taylor,DDS, MSD, Professor and Chairman, Department of Prosthodontics, School of Dental Medicine, of the University of Connecticut Health Center

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The problems are simple. First, students are so overwhelmed by their undergraduate prosthodontic experience that they graduate convinced that prosthodontics is the last thing they would ever want to specialize in. They are simultaneously convinced that their undergraduate dental training has qualified them to treat any and all restorative needs of the their patients.

Second, prosthodontics is perceived as being too expensive an undertaking with questionable benefit afterward. After all, it's now three years of horrendous tuition in most cases and is known to be among the most difficult of specialties to "get started" in.

The solution is equally simple. First, prosthodontics in dental schools needs to be taught by skilled prosthodontists. Unfortunately, too much of our undergraduate prosthodontic curriculum is being taught by general (or even super general) dentists with little or no understanding of what prosthodontics really involves. We perpetuate the misconception that the four year dental graduate is a master restorative dentist, even though s/he knows enough not to practice advanced periodontal, endodontic or oral surgical procedures for fear of complication. I would argue that the complex prosthodontic needs of our patients are the most complicated procedures in dentistry. We as prosthodontics are great at diagnosis and treatment planning but we're very poor at teaching the complexities of our specialty to beginning students. We try so hard to simplify everything that we end up over simplifying.

Third, institutions sponsoring prosthodontic training programs must be willing to support these programs financially. This means tuition reduction with stipends for our students. The reality speaks for itself. To charge five figures of tuition for three years and expect students already severely in debt to sign on is borderline insanity. Institutions must quit looking at prosthodontic training programs as "cash cows." I'm sorry, but in my opinion, education is not a commodity to sell. It is an obligation one generation has to the next.■

Howard M. Landesman, DDS, MEd., Dean and the G. Donald and Marian James Montgomery Professor of Dentistry, University of Southern California School of Dentistry

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The specialty of prothodontics *does not* appear to have problems recruiting students. Data from the 1994-5 Deans Briefing Book of the American Association of Dental Schools indicate that from the years 1971-1994 there was a 38% increase in the number of students enrolled in prosthodontic programs throughout the nation. This increase is second only to endodontics which had an increase of 45%. Periodontics had an increase of 4% while pediatric dentistry showed a 2% increase. All other specialties showed a decline with oral pathology being the worst at -67%.

In numbers, enrollment in prosthodontic programs increased from 144 in 1971 to 199 in 1994. This placed first year enrollment in prosthodontic programs in the #3 position, with orthodontics being #1 (262) and oral and maxillofacial surgery #2 (205). Interestingly, the number of enrolled prosthodontic students was only six less than those in oral and maxillofacial surgery programs. Thus, if there is a perceived recruitment problem, it is not manifested in the number of students enrolled in prosthodontic programs according to 1994 data.

The data should not promulgate complacency. The major responsibility should fall on full-time educators to recognize the talented students in prosthetic dentistry and encourage them through role modeling and elective/selective programs to seek specialty training in prosthodontics.

Will Rogers once said, "Even if you are the right track, you'll get run over if you just sit there." In a dynamic society where change has become the norm, to feel comfortable no longer means finding a safe place to conduct business and maintain the status quo. The only way to comfortable today is to become comfortable with and *make a friend with change.*

All prosthodontists, whether by individual effort, organizations, or by way of educational institutions must identify and motivate young and bright applicants who are willing to *make a positive change* in their lives and seek advanced education in the specialty.■

James R. Holtan, DDS, **Associate Professor, Chairman, Department of Restorative Sciences and Director, Graduate Program in Prosthodontics, University of Minnesota School of Dentistry.**

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I have been closely associated with the Graduate Program in Prosthodontics at the University of Minnesota for the past seven years, the first four of which Dr. Richard Goodkind was the Director. I have been the Director since he retired three years ago.

The problem: Although there may not be supporting data, it is fair to say that the recruitment pool has been diminishing slowly but steadily over this period. This is especially true for United States citizens.

What are the short term consequences of the problem? Even though the candidate pool has definitely diminished, we have been able to find the number of qualified applicants necessary to keep our program functioning in an acceptable manner. However, most of these individuals are foreign nationals, and even though they are particularly well qualified, the majority of them will return home and will not be practicing in Minnesota or elsewhere in the United States.

The long term consequences are: Two in particular: First, the American Dental Association looks at the number of individuals taking and successfully passing the American Board of Prosthodontics examination each year. This number is a measure of the viability of our specialty. An insufficient number may cause the ADA to revisit prosthodontics for yet another defense of the specialty. Simply put, if we are unable to attract enough candidates for our training programs, particularly American citizens who will take and pass the examination, then we may not have a specialty of Prosthodontics--and this may happen far sooner than anyone cares to think. Second, in state supported institutions such as Minnesota, if it is shown over time that at least a reasonable number of our graduates are not practicing in the state, funding will certainly become a problem; and our program may cease to exist.

Solutions--by individuals, organizations, and educational institutions: The problem of recruiting American citizens for graduate programs in prosthodontics is, more than anything else, related to cost. The average student leaves the undergraduate program at least $60,000 in debt. The University of Minnesota is able to offer a small stipend to prospective residents in graduate programs and the cost of tuition becomes essentially a wash. When that person considers the other costs associated with the thirty three month long program, and then adds that figure to their current debt load, we are just plain out of luck. In addition, when he or she looks at the income levels published by the ADA for the various specialties, prosthodontics does not fare well. Unfortunately, I have had any number of individuals over these last few years who I really wanted to attract to our program look me right in the eye and say, "Doctor, I just can't afford it." While there are certainly other factors in play, money is the primary concern and somehow, we have to able to improve that circumstance. It will take individuals, organizations, educational institutions as well as state and federal governments to deal with this issue. It would seem that an ideal role for the American College of Prosthodontists to play would be gaining the attention of these parties; and the sooner the better.■

Steven M. Morgano, DMD, **Director, Division of Postdoctoral Prosthodontics, Boston University**

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Historically, the prosthodontist has not been particularly visible as a specialist among the general population, and many general dentists fail to see the differences between their practices of general restorative dentistry and the specialty practice of prosthodontics. These two factors alone can explain much of the problem Many suggest that the enormous debt of recent graduates impedes their ability to pursue advanced specialty education-- but that is not the entire story. Specialty programs in orthodontics and endodontics have no trouble recruiting qualified candidates for admission.

I have been associated with postdoctoral education in prosthodontics for over 15 years. difficulty with recruitment of qualified applicants to specialty programs in prosthodontics has always been an issue; nevertheless we have seen an exacerbation of the problem over the last few years.

Our program is very large with a current first-year enrollment of twelve postdoctoral students; however, we have experienced an almost 50% drop in applicants. This reduced application pool coincided precisely with the revised standards approved by the Commission on Dental Accreditation that increased the minimal length of all programs to 33 months.

Our revised standards were a well meaning attempt to create programs that meet all visions of what an excellent prosthodontist should be, but they have placed undue burdens on educational institutions, program directors, and students. Revised standards have required *competency* in "multidisciplinary evaluation, treatment planning and management of geriatric patients" along with "multidisciplinary management of temporomandibular disorders with chronic oral facial pain." Despite these and other new requirements, obsolete standards have not been deleted. For example, *proficiency* (the highest level of skill) is still mandated in gnathological procedures such as extroral tracing techniques and the use of the fully-adjustable articulators.

With the rapid advances in implant prosthodontics combined with these "unnecessary or obsolete" requirements, it is understandable that the minimal length of the educational program needed to be increased. If we do not critically review our accreditation standards to make them realistic, we will see a further shrinking of our application pool. Also we will see a reduction in the number of programs because of loss of accreditation status of those programs that find it impossible to meet these standards.

Priority must be placed on streamlining the requirements for advance specialty education in prosthodontics and reinstating the 24-month minimal length of educational programs. This will allow our specialty to compete effectively with specialties such as orthodontics and endodontics that have a surplus of applicants, and complete their educational process in two years.■

Gary R. Goldstein, DDS, Professor and Director, Advanced Education Program in Prosthodontics, New York University College of Dentistry

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The problem is an inability to attract large numbers of qualified individuals into prosthodontics.

Its causes are: 1) the move to a three year curriculum, which places financial and time burdens into the deliberations of the highly qualified recent dental graduate or experienced practitioner who is contemplating specialization; and 2) the diminution in the time spent on prosthodontics in most undergraduate programs. Dr. Jack Preston's excellent editorial (Int J Prosthodont 1997; 10:109) "Rethinking the Curriculum Crunch" has adequately defined the problem and suggested many solutions.

The following consequences have become evident:
In the academic year 1993/94, there were 1509 applicants for 201 prosthodontic positions. Out of the 427 total enrollment, 257 were U.S. citizens, 25 were Canadians and 145 were "others." In 1996/97 year, there were only 1033 applicants and 162 first year enrollments. Of the 418 total students, 192 are U.S. citizens, 22 are Canadians and 204 are from other countries. (Source: ADA Survey of Advanced Dental Education.) Similarly, periodontics has experienced a decrease in enrollment since moving to a three year program. This trend is not seen in other programs remaining at two years. During the past six years, orthodontics has continued to attract over 7,000 applicants for its 270+ positions. Endodontics is attracting over 2700 applicants (up from 2008 in 1991/92) for its 171 positions.

It is evident that undergraduate students who have not been exposed to prosthodontics or prosthodontists are not stimulated to pursue a difficult and costly (not only in tuition, but in lost earnings) three year program in prosthodontics, especially when the financial reward at the end may be no better than that for a general practitioner. Certainly endodontics and orthodontics are offering more attractive career options.

Possible solutions are:
1. The American College of Prosthodontists should develop and recommend to deans and chairpersons a "minimal curriculum for prosthodontics" in undergraduate dental training. The College should rapidly pursue this goal in order to stem further loss of prosthodontic departments and training.

2. Prosthodontics should be promoted in dental schools. We need to continually stress the value of our specialty in undergraduate teaching. A proven method that emphasizes the specialty is to have the students in the advanced education program in prosthodontics teach in the undergraduate program. In addition, we must continue to ask administrators to give the same emphasis to recruitment for prosthodontic training as is given to the other specialties.

3. We should return to the two-year Certificate Program. Students interested in seeking a master's degree could have an additional year for its completion. Many of the reasons for expanding to a three-year program have lost their validity. For example, over the past five years, the implant retained prostheses has actually become easier to perform. A body of clinical evidence is more readily available; manufacturers have expanded their restorative options; and laboratories have increased their skills and technical knowledge in this field. The additional time thought necessary for this training may now not be justified.

4. The amount of money allocated by the American College of Prosthodontists Foundation for scholarships is inadequate. This Foundation and others in prosthodontics should reassess the effect of their scholarship allocations, the objective being increases in numbers and amounts of awarded scholarships.

Summary: The curriculum of any program must a nonrigid, malleable reflection of the future needs of the specialty. Prosthodontics doesn't need additional time, it needs optimal use of available time. Such compression is difficult and tests our abilities as educators. It is up to us to rise to the task and show our mettle, and I'm proud to say most of us have.■

There you have it, the beginnings of discussions related to recruitment for the advanced education (specialty) programs in prosthodontics. I sincerely thank each of the five contributors, all among the most respected educators in the field. They have been candid, forthright, visionary, and without question spoke from the heart. The value in and from their remarks lies in the future, and I see only positive future development coming from their many suggestions. NDW

Editor Comments:

■ Common threads are seen running through all of the above comments. Is the crisis numbers, quality of applicant, origin of the applicant, the recognition of the program and its worth by the school's administration, the loss of the discipline in undergraduate training, a lack of compensation for training, the three year program or some of all?

■ Future contributors will be asked to provide insights into the following:

What is the true value of the specialty of prosthodontics related to patient care? Is a specialty of prosthodontics useful to the dental patient? Why?

What is the value of teaching prosthodontics at the undergraduate level?

Why did I want to be a prosthodontist? Has the effort directed to specializing been worth it -- monetarily; from a "job satisfaction" standpoint??

We are very much in a global economy, with a global communications network, and we have a global mind set in supply/ demand/ and control of resources! Why not a global mind set in advanced dental education programs? Has it helped or hurt or changed the specialty (any specialty) because some students originated in foreign countries and were trained in the United States.

If I trained in continuous consecutive years why was that of advantage? If I trained in a part-time program (half the time and double the years) why did that help me?

Why shouldn't a practitioner or finishing dental student just turn to the AGD programs or hit the Panky-Mann ladder for any advanced education needed in prosthodontics?

■ We started with questions! We end with questions! Because of these questions I promise you we will enter the next millennium with some well planned strategies for success!

Have a very very happy and thought provoking New Year!