

Alumni Bulletin

SCHOOL OF  
DENTISTRY

Spring Issue, 1981

Indiana University

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# Indiana University School of Dentistry ALUMNI BULLETIN

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*A free and non-profit bulletin issued by Indiana University School of Dentistry, Indianapolis, Indiana, for the purpose of keeping its informed of the activities and progress of the School.*

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## Message From the Dean

A seven-month period of intensive work and planning for the future of the School of Dentistry was climaxed on Sunday, November 2, 1980, with a day-long meeting at which plans were detailed for a five-year program of development for the Dental School. The program's theme was "It's 1985," and specific strategies were proposed and discussed for anticipated growth and change in the areas of physical facilities, research, curriculum, dental auxiliary education, graduate education, admissions and enrollment, continuing education, patient pool, and faculty affairs. Approximately 150 faculty members participated in the meeting which included workshops and reports.

Much of this issue is being devoted to reports of the various committees and

also the keynote speeches presented by Indiana University Vice President Glenn W. Irwin, Jr. and Mr. Jesse Smith, Director of the College Placement Council. We were also privileged to have with us at the "It's 1985" conference Dr. Thomas M. Schwen, Director of the Division of Development and Special Projects, Indiana University Audio-Visual Center, who provided summary comments at the close of the program.

It is hoped that our alumni will be interested in reading the account of this meeting and perhaps sending comments to the Dean, or other faculty members, related to long-range plans for the Dental School.

*Ralph E. McDonald*



**GRADUATE  
EDUCATION**

**RESEARCH**

**CURRICULUM**

**DENTAL AUX.  
EDUCATION**

**PHYSICAL  
FACILITIES**

**PATIENT POOL**

**ADMISSIONS**

**CONTINUING  
EDUCATION**

**FACULTY**

**AFFAIRS**









# Welcome to 1985

*Ralph E. McDonald*

We have a unique opportunity today (November 2, 1980) at Indiana University School of Dentistry to look ahead and consider the pattern that dental education in Indiana should develop in the next five years. Five years is a relatively short time and it is often difficult to achieve major new goals in that time frame. It is, however, appropriate to set educational and research goals and attempt to realize them by the end of a specific period of time.

As we attempt to look ahead it is also advisable to look back on the past decades and see what has been achieved and where we may have fallen short in achieving our goals.

Several major programs and goals have been realized during the past 10 years.

1. Our School has developed an effective governance program; a Faculty Council, with membership including all full-time faculty members, six elected part-time faculty members, and student representatives chosen by the Student Affairs Council. The Faculty Council elects standing committees, many with student representation.

2. The School has developed an innovative curriculum with the key characteristics being flexibility and early clinical experience. This curriculum for undergraduate students includes an extensive Extramural Program that is now in full implementation.

3. The Dental Auxiliary Programs at Indianapolis and at four University Centers have been redesigned and expanded. The Indiana University Dental Auxiliary Programs are unique and provide trained auxiliaries for dentists of major cities of our state.

4. Our School has realized major growth in funding. There has been an

increase in contributions from the State of Indiana and also in research funds. Contributions from alumni have increased dramatically during the past decade. In 1968 we received a total of \$13,000 from alumni. This record of giving has increased to more than \$120,000 during this past year with some major estate gifts. Within the last few weeks the I.U. Foundation and the Indiana Dental Association have launched a Pursuit of Excellence Program designed to attract major contributions for the specific purpose of faculty development. These funds will be available to reward the faculty for excellence in teaching and research and also to supplement salaries in an effort to attract new members to our faculty. Since September 1, of this year, seven members of the Indiana Dental Association have pledged a total of \$35,000 to this new fund.

5. We have realized major physical expansion and renovation projects during the decade. In 1973 we moved into a \$5.5 million addition to our building, doubling the size of our clinic, classroom, and research areas. Other major renovation projects have been completed, including modernization of the main clinic for use by the Departments of Operative Dentistry and Endodontics. A new TEAM Clinic has been established and is now a major part of our new Department of Dental Practice Administration. A large portion of the undergraduate Pedodontics Clinic has been renovated. The Oral Surgery Clinic has been completely renovated. We have a greatly expanded Dental Library, which is second to none in the United States and provides service not only to faculty and students but to alumni and friends of the School. A new Department of Periodontics, including 32 chairs and units, was com-

pleted approximately one year ago. A new Central Service to provide instruments for all clinics has been in operation for approximately five years and is receiving considerable attention by administrators and faculty in other schools who wish to copy our plan.

6. Modern facilities are now available at the Regenstrief Health Center for the Oral and Maxillofacial Surgery Residency Program. Within a few days the Maxillofacial Prosthetics Program will move to the Regenstrief Center. In addition, a new General Practice Residency Program is now in full operation and is providing not only an excellent postdoctoral training program, but also excellent dental care for a group of individuals who did not have this service available to them previously.

Two new research instruments have been added during the past year. The scanning electron microscope is now available to faculty and postdoctoral students as an aid to their research. In the library we are implementing a Computerized Bibliographic Retrieval system.

With this progress, one might ask, "Why have a conference of this type?" Believe me, there is still much to be done, and I am convinced that faculty members wish to play a role in the planning for the next five years, and indeed for the next decade. In the 1978 School of Dentistry publication, *Faculty Attitudes*, the culmination of a year-long study involving interviewing of the faculty by Dr.

Mary Deane Sorcinelli, there were several comments by faculty members to support this view. Statements included these: "I don't know what our mission or purpose is now, — there is a lack of interdepartmental communication" and "Members of the faculty are not familiar with the School's educational policy or even long-range plans."

Planning for today's conference began eight months ago. Nine important areas were selected for in-depth study by school committees: Admissions-Enrollment, Dental Auxiliary Education, Physical Facilities, Research, Curriculum, Continuing Education, Graduate Education, Patient Pool, and Faculty Affairs. Committee chairmen were encouraged to identify members of the faculty who had an interest and expertise in the individual areas, and also to appoint other persons to assure interdepartmental input. These committees have been working diligently and have developed excellent reports. These reports, while in good form, may be modified as a result of your individual participation in the workshop sessions, or as the result of comments made by our speakers.

This is your meeting, your chance to participate and discuss freely your views on these and other important subjects.

I do not anticipate that we will take formal action today on any of the reports or specific recommendations. Reports will, however, be the basis of future deliberation by standing committees and by our Faculty Council.



# A Look at the Future of the Indianapolis Campus

*Glenn W. Irwin, Jr.,  
IU Vice President, Indianapolis*

I am delighted to join all of you at this program, which features a five-year look ahead for the School of Dentistry. I want to share a few thoughts along those lines with you in the context of the Indianapolis Campus. Although the prospects of lower enrollments in the 1980's pose serious planning problems for many colleges and universities, we expect to continue to attract substantial enrollments at IUPUI through the 1980's. Our total headcount enrollment has exceeded 20,000 for the last five years, and we plan to maintain comparably large totals in the future, despite the lower birth rates that marked the period when the college-age youngsters of the next decade were being born. I would like to mention a few reasons for that relative optimism.

Most of our undergraduates come from the Indianapolis region. This year, about 16,000 young people were graduated from high schools in Marion and the seven surrounding counties. The comparable total in 1985 will decline to fewer than 13,000. Along with most other colleges and universities in the United States, we will have smaller freshman classes. But we also have special opportunities to serve older, employed, commuting, part-time students. We have a great deal of experience at doing this.

We have proved that innovative ways of delivering higher education can be successful. As outstanding examples, I call attention to our Weekend College and Learn and Shop programs, which have attracted some 3,000 students to IUPUI. At least half of those persons

would not be attending classes if these special programs did not exist.

Looking ahead a few years, other innovative ways of offering higher education can be anticipated. By 1985, Indianapolis should have a comprehensive cable TV system. This could provide the means for transmitting lectures and other instructional materials to homes and places of work. To be more specific in your particular situation, those places of work will include professional offices and clinics. Home communication centers, with computers and related devices connected to phones and TV sets, also are on their way. In a large metropolitan market, such as Indianapolis, the implications for this campus are highly favorable.

## **Professional Programs**

In addition, we offer the kinds of professional programs for which the hiring and salary prospects are excellent through 1985. Engineering, law, business, the health professions, and other areas that our students have available should continue to attract their full share of new students. We plan to establish some new academic programs in the next five years, all of which will be designed to meet demonstrated needs at regional or state levels. In the past 11 years, the IU and Purdue divisions at this campus have more than doubled the total number of academic programs, from 80 to 165. We do not expect to add that many programs in the 1980's, but we do anticipate some growth in the total number of degree options.



How will the campus look in 1985? By that year, we expect to have acquired all of the properties within the planned campus boundaries. We will have cleared most of that land, closed several streets, moved some utilities, and invested in more landscaping. A newly paved New York Street will match West Michigan. We also have scheduled the completion of various physical education and athletic facilities on the southern portion of the campus. In addition, there will be, for the first time, a southern entrance to the campus from Washington Street. And we look forward to the exciting developments that will take place nearby, as the plans of the White River Park Commission reach fruition.

### Needs Cited

Our anticipated needs for capital appropriations will include construction of new classroom facilities, so that we can bring the School of Science and the remainder of the School of Engineering and Technology to the main campus from their current location on 38th Street. By 1985 we also expect to be moving toward construction of more adequate central library facilities. And we will probably be looking at proposals for a fine arts center. One of the main thrusts of our campus planning will be to develop a full-fledged, comprehensive, central campus, where all of our academic divisions can benefit from being conveniently near each other and near sufficient parking.

We are keenly aware of critical needs. At the Medical Center, these include re-

placing federal capitation funds, strengthening our faculties, meeting inflationary and other unavoidable cost increases, maintaining appropriate accreditation standards, and providing functional, up-to-date facilities for instruction, research, and patient care. Working with the Deans and the faculties of the Dental, Medical, and Nursing Schools, we will continue to make the case for supporting our programs in the health professions.

But there's another side, too. One of my extracurricular activities has been to serve on an accreditation team, evaluating another urban campus in another state. We do have academic, budgetary, and other concerns here in Indiana. But I also know that we are better off than comparable universities in a number of other states.

As my predecessor in this post, Dr. Maynard Hine, has observed, we can perceive that a glass is half-empty or half-full. The latter reflects modest optimism. I hope we can do better. I know we can all agree that a proper goal for 1985 will be to fill the glass.

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# Perspectives on Dental Education

Jesse M. Smith\*

By way of background, let me tell you about being invited to speak at the Council of Deans meeting last year. Upon receiving the call, I asked: "What do you think I would be able to contribute to your organization? What is your problem?" I was told that the problem was a declining pool of qualified applicants for dental schools. That surprised me, because a person sitting outside does not get the impression that the health professions have a declining pool of applicants. I soon found that the number of students who are qualified for admission has indeed been going down, although the pool itself has not been declining drastically. The number of applicants within that pool who could meet all of the admission requirements of various schools was shrinking to the point that it was about even with the number of openings in the schools. If it continued to decline, as it had for the previous ten years, the concern was what would happen three, five, ten years in the future. Would admission requirements have to be revised downward to meet a less qualified applicant, or would class size have to be reduced due to the shortage of qualified applicants? These were some questions that we looked at last year.

## Degree Totals Cited

It is instructive at the outset to consider what has been happening in the area of degree conferrals, enrollment, and also in the job market. In 1964-65 about half a million baccalaureate degrees were

conferred and about 117,000 masters' degrees. Including Ph.D.'s, the total was 635,000. In 1974-75 that figure had grown to roughly 1.3 million degrees conferred, doubling itself in ten years. The projection for 1984-85 is that the total will continue to rise to 1,458,000, another very substantial increase (Figure 1). Clearly, our pool of potential graduates and thus of individuals to choose, as far as employers or graduate schools are concerned, has been increasing at a dramatic rate.

All phases of higher education need drastically to look forward, to plan in a long-range perspective, and to shape their own destinies instead of merely reacting to events. And I think that what you are doing is extremely valuable. My own organization has just recently launched a similar type of activity toward a five-year and ten-year projection as to where we see the future going.

In dealing with the future, one must first look at the past so as not to be forced to repeat it. Therefore we will look at what has been happening in the last several years and what we are currently dealing with in the areas of enrollment, admissions, and (very important) the job market. We will be considering this basic question: "What is happening in the en-

	EARNED DEGREES CONFERRED		
	1964-65	1974-75	1984-85
Bachelor's	501,248	944,000	1,076,000
Master's	117,152	291,700	339,800
Ph. D.	16,467	36,100	42,900
Total	634,867	1,271,800	1,458,700

Source: Projections of Educational Statistics to 1984-85, U.S. Dept. of Health, Education & Welfare, Education Division, 1976.

Figure 1

\*Mr. Smith is Executive Director of the College Placement Council. This article was adapted from his keynote address at the "It's 1985" program of the Indiana University School of Dentistry on November 2, 1980, in Indianapolis. The purpose of the day-long program was to chart a five-year plan of development for the School of Dentistry.

vironment that young people are reacting to as they choose majors and as they choose career paths?"

Enrollments in higher education are expected to peak in 1981-82 and then begin to drop, a trend which will continue for 15 or 16 years. If one looks at the population in general and at the birth rate in particular, it can be seen that the birth rate follows a 16-year cycling period and we are right now at the bottom of that birth rate per capita projection. Technically, we are right now entering another baby boom, which means that 16 years down the road those people will begin to impact the high school area. Approximately 18 to 19 years down the road they will begin to impact the higher educational realm.

We are in a definite downward trend, as far as enrollments in higher education are concerned, if one limits oneself to the traditional entering high school senior. However, some other aspects of this total picture are beginning to cloud the projections: namely, midlife career-changing individuals and especially women as they move from the home into career paths after their child-bearing years. These two population groups, which in many cases are one and the same, will be — I think — a major target for higher education in the future. I believe that Dr. Irwin was referring to this when he said that you have an older than average student body and that you have been appealing very strenuously in recent years to an older type of student. In my opinion, this is going to become the norm and we will see the mix of students on the campus change dramatically during the next 15 to 16 years. The average age right now of students on the campus is 29.5 years. That has changed dramatically in the last ten years and I think the change will continue.

### Supply and Demand

Regarding the important matter of supply and demand, the current job market can be roughly divided into three major sections. (1) career fields where the demand for graduates is greater than the supply of graduates; (2) fields where there is a reasonable balance between supply and demand; and (3) those where the graduates far outnumber the available jobs. The first of these sections, where job openings are abundant, is absorbing 29.5 per cent of the graduates coming out of our universities, and the academic majors involved are in computer information systems, physical sciences, accounting and other business-related fields, health professions, and engineering (Figure 2).

The middle section, encompassing some 23.2% of the graduates and reflecting a balance between number of positions and number of job-seeking graduates, includes such academic majors as library science, architecture, environmental design, public affairs, agriculture, natural resources, mathematics,

ESTIMATED SUPPLY AND DEMAND OF 1977-78 COLLEGE GRADUATES

BACHELOR'S DEGREE ONLY		
Demand Exceeds Supply	Number	Percentages
Computer & Information Services	6,610	0.7
Physical Sciences	21,610	2.2
Accounting	37,760	3.9
Health Professions	58,270	6.0
Engineering	58,510	6.0
Other Business & Management	103,810	10.7
Total	286,570	29.5
Supply and Demand About Equal		
Library Science	1,190	0.1
Architecture & Environmental Design	9,840	1.0
Public Affairs	45,990	4.7
Agriculture & Natural Resources	17,800	1.8
Mathematics & Statistics	17,300	1.8
Biological Sciences	56,530	5.8
Communications	25,170	2.6
Other	52,370	5.4
Total	226,190	23.2
Supply Exceeds Demand		
Foreign Languages	17,230	1.8
Fine & Applied Arts	42,480	4.4
Psychology	52,550	5.4
Letters	52,520	5.4
Education	165,540	17.1
Social Sciences	125,920	13.0
Total	456,240	47.1

Data adapted from National Center for Education Statistics to 1985.

Figure 2



statistics, the biological sciences, and communications. The bottom section, where jobs are few relative to the number of candidates, comprises roughly 47% of today's graduates. These are people who have majored in languages, fine and applied arts, psychology, letters, education, social sciences, and the like.

A further point: If one projects the new jobs that are going to be created over the next 15 years and also looks at the death rate and the retirement rate, which is going down in our society, the numbers of new jobs and vacancies are going to be increasing at a slower rate than the numbers of graduates coming out of higher education.

Thus the job market for college graduates theoretically is going to get worse every year for the next 15 years or so. In some areas there will be extreme shortages of people for the jobs available, but overall we may expect an increasing imbalance between the number of college graduates and the number of jobs commensurate with their degrees.

### **Job Offers Analyzed**

The figures I am going to give you now are from last June's graduating class and are based on recruiting programs that are conducted on campus by major employers nationwide. Of the offers that were made to college seniors last year through on-campus recruiting, 63% were made to engineers, who comprised 6% of the graduating class. Twenty-five per cent of the offers were made to business and related areas, such as accounting, marketing and finance. These majors comprised 18% of the graduating class. Eight per cent of the offers went to science and mathematics majors, who made up 19% of the class. If one discounts education majors, who tend to have a totally different job picture and means of acquiring jobs, we are essentially talking about 93% of the job offers that went to only 37% of the graduates.

Now, where does that leave us with, for instance, majors in humanities and social sciences? They comprise 43% of the graduating class and yet they received only 4% of the offers made through the on-campus recruiting programs. Again we see a very great imbalance between supply and demand, especially with regard to specific majors.

Why are these figures important to you? Based on an analysis that I undertook last year of admission requirements of the various dental schools, it appears that the type of student you are attempting to attract is exactly the same type of student that the engineering schools are attempting to attract, as well as the departments of physical sciences, mathematics and statistics. This means that the major demand areas of the job market are all competing for exactly the same individual, who is in very limited supply. So you are competing against every engineering employer in this country when you try to attract a person to attend dental school and move into the dental profession.

### **A Complicating Factor**

The situation is further complicated by another factor: an upgrading of the personnel function in corporations all across the nation. Again, a word of background is helpful in accounting for the altered situation. You may recall that the economic picture in 1969-70 was very similar to what we have today. The job market for engineering technology areas fell apart, with employers pulling out in wholesale bunches. Consequently, enrollment in the engineering schools dropped dramatically through the early 1970's as a reaction to the lack of jobs. This year, however, with the same economic conditions, the employers are not pulling out. Instead, they are coming back in greater numbers and redoubling their efforts because they learned a very important and costly lesson in the early



1970's. The lesson is that you cannot deal with people in an off-and-on situation and maintain any kind of flexibility or the ability to react swiftly to future changes in the market place. You can't let the stream of trained, competent people dry up; if you do, your organization will not have the talent that is needed to react promptly when the recession is over. Corporations that are caught in this bind are forced to go outside into the open market and compete for experienced people, which means that they triple or quadruple their recruiting costs.

Thus we have seen in the last 10 to 15 years a complete change in how corporations view the matter of hiring and employment generally. The dramatic upgrading of the personnel function is probably the most significant change that has taken place in the corporate world in the last 15 years. It used to be that if you had people you didn't know what to do with, or where to put, you stuck them in personnel — the dumping ground. That is not the case now. The personnel function today is the training ground. Every upcoming middle-manager who is destined for top-management positions will serve a stint in the personnel function of major employing organizations. These men and women are bringing new tools, new ideas, new concepts into the recruiting field and the employment sector and that poses, at least potentially, a competitive disadvantage for you.

### Employers Surveyed

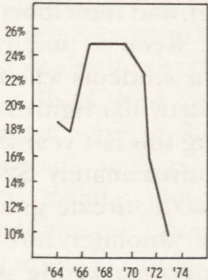
We surveyed some 600 major national employers to find out what they were going to do this year because we were concerned due to the recession. Were they going to drop back? The result: 51 per cent of those corporations said that they planned to hire at the same level this year that they hired last year, and last year was an all-time record for hires and offers to college graduates. Twenty-

seven percent of the corporations said they were going to increase the number of hirings this year over last year. This means that 78 per cent of these national employers were planning to hire at a rate equivalent to, if not higher than, last year's rate, and last year again was an all-time record. The last three years have seen consecutive records in terms of the number of offers to college graduates. Eighteen per cent of the firms in our survey said they probably would decrease their number of hirings; 4 per cent said they just didn't know.

So that is today's market place. We do not see the cycling effect in the job market that we have had in the past. It appears to be stabilizing and it is likely to remain stable long into the future. Companies will not allow themselves to go up and down.

What are we dealing with in relation to dollars with college graduates? It used to be, in the early sixties all the way up to about 1970, that the college graduate could expect to earn a much higher total lifetime income than a non-college graduate could. The differential between the two was increasing in favor of the college graduate, but look at what has happened since 1970 — how rapidly that differential has been dropping. (Figure 3). This is very significant to you people because it is at least one indicator of a shift in attitude on the part of young people. Fol-

STARTING SALARY ADVANTAGES OF COLLEGE GRADS OVER  
AVERAGE WAGE AND SALARY EARNINGS - 1964-1974



Source: Freeman, Richard and Hollomon, J. Herbert, "The Declining Value of College Going," *CHANGE*, September, 1979, P. 25.

Figure 3



lowing the Second World War a regrettable situation developed in which we allowed a seal of social acceptance to attach itself to a college degree: for one to be acceptable in society one had to go to college. And we saw great numbers of people moving into college who did not understand why they were there, except that their parents said, "You have to go." So they moved in in wholesale numbers. In the last five years we have noticed a marked trend, especially in the upper middle income groups, toward a turning-off to college, with many youngsters saying, "I don't want to be a college graduate. I want to be a mechanic. I want to be a plumber. I want to be an electrician." We are seeing students, who are from backgrounds typically associated with college entrance, now avoiding college, either not attending at all or attending a junior community college or vocational school to pick up skills that are directly employable. So a change is occurring within the students themselves which could influence statistics on relative income as these top potential wage earners pass up opportunities for higher education and move into the vocational areas. Of course, this will have a dramatic effect on the spread of earnings between the college degree holder and the non-degree holder.

### Salaries Compared

Let me share with you some of the average salary figures for the last job year (1979-80), and remember that these are averages. Keep in mind, too, that there are some students who receive far above these particular figures (Figure 4). In engineering this last year the average offer was approximately \$20,500 per year to the baccalaureate graduate with no experience, absolutely no experience. For the business/marketing student the average was roughly \$14,500 per year, again with no experience. Graduates in mathematics/statistics started at \$17,200

per year on the average. For the personnel-type of individual, \$14,700 was average. Public service work for the federal government yielded an average of \$14,100, again with those people being hired because they had college degrees and were put into professional or semi-professional roles within those types of organizations. All of these are averages for graduates without experience.

Now if one assumes that a college graduate in a technical major is going to be hired today at \$16,000 per year (which is not a ridiculous assumption because if they are in the engineering areas they're going to start at far more than that) and if one assumes that this individual will receive a 10 per cent increase in salary each year, compounded for the next five years, the salary in 1985 will be \$24,000. But what if that same individual, instead of going to work today with his new bachelor's degree, goes into dental school? First, that individual faces four more years of education, requiring an outlay for living expenses as well as tuition, which we must assume is going to cost the individual an average total of between \$80,000 and \$100,000 for four years. In addition, the dental student loses four years' worth of earning power before beginning to earn an income. A student who wishes to go

	Bachelor's Degrees				Master's	
	Mechanical Eng.		Chemistry		Electrical Eng.	
	Actual Offer	Real \$ Value	Actual Offer	Real \$ Value	Actual Offer	Real \$ Value
1977-78	\$1,404	\$722	\$1,191	\$612	\$1,557	\$798
76-77	1,286	709	1,102	607	1,410	777
75-76	1,197	702	1,028	603	1,319	774
74-75	1,122	696	956	593	1,228	761
73-74	1,001	678	884	599	1,149	778
72-73	922	693	826	621	1,066	801
71-72	897	711	783	625	1,018	812
70-71	881	727	795	656	1,018	840
69-70	867	745	825	709	1,015	873
68-69	820	745	775	706	967	881
67-68	768	737	729	700	917	880
66-67	720	720	689	689	868	868
65-66	670	689	644	662	816	839
64-65	635	673	605	641	780	826
63-64	614	660	580	624	769	827
62-63	592	645	559	609	751	818
61-62	569	623	N. A.	N. A.	711	785

Figure 4



into private practice faces an average cost of \$60,000-\$80,000 to establish that practice. This means that we are looking at a very heavy debt load on the potential dental student, compared to the person who did not go to dental school. When one tries to figure out how the new dentist is going to pay the interest on the debt, retire the principal, and establish some sort of parity with the non-dental graduate over a 10-year period, it appears that the dental graduate will have to be making about \$70,000 a year to be in the same relative position as the non-dental graduate who went to work.

Ask yourself how many of your starting dentists today can go out and make \$70,000. That is the kind of figure that you've got to find a way to deal with, because these young people are getting very sharp at figuring these economic equations out for themselves. The schools are providing them with career counseling services. Each campus will have an office of Career Planning and Placement and their job is to work with students and provide them with such figures. So students are up on these matters.

### **Declining Quality**

Another problem that today's educator must face relates to the quality of the high school graduate, which has been declining over the last 15 years with regard to mathematics and the biological and physical sciences. The ability of students to cope with these topic areas is less today than it was 15 years ago, and this must be having an effect on the pool of people who are capable of meeting your admission requirements.

In all of these areas that we have mentioned, there are some things that can be done to help you as far as the enrollment picture is concerned. First, since enrollments are expected to peak in 1981 and then decline through 1995, you must become marketing-oriented in recruiting students into this pool from

which you then can admit. You cannot just allow the system to function on its own. There must be an aggressive, out-reach type of marketing effort.

It is important to realize that you are competing for a particular type of individual that every other employer in the country is also competing for. There is a fantastic job market, with a potentially fantastic spread between supply and demand for the unique type of individual who has the ability to grasp and understand the sciences, mathematics and decision-making skills. Such brisk competition for the same person is going to keep that person from going past the basic four years in college. We have found this to be especially true with the minorities. It is extremely difficult right now to get minority students to go beyond the baccalaureate degree. There are so many people standing in line to hire every minority student who comes out with any kind of technical degree that the last thing they need to do is to go on into a higher degree program. We have seen minority engineers with bachelors' degrees coming out this year for \$30,000 - \$35,000 annual starting salaries, with no experience.

### **An Outreach Program**

All right, then, what can you do, and how do you go about doing it?

One approach would be to develop an outreach program into the high schools. You could start educating students who are now in math classes in the junior high school-high school area as to what a dental career is all about, why they should be looking at it. But I think you should also start looking at some of the less sought-after individuals, such as liberal arts or social science majors. A lot of these social science graduates can't find jobs in areas where they would like to find them. They would be naturals for you to go after, except that they don't have the science base that you might wish they had. Consequently, you might have to put in some



summer programs in the basic sciences, say at the junior-senior level of college, for social science and humanities students who want to go to dental school. With that kind of opportunity to pick up the needed background, a number of these students possibly could qualify for your programs.

During the next few years I believe that we will see a real challenge to the traditional calendar of higher education. The concept that one brings students in, sticks them into a 16-week semester, and 16 weeks later sends them on to the next class is going to be severely challenged. It is going to be challenged for two reasons: (1) the changing mix of the student body, with older students coming in; and (2) the fact that today the private sector is spending more dollars on education than the entire public sector combined. This year \$17 billion will be spent on education by the private sector. These companies may well start leaning a little bit harder on the educational establishment to become more responsive to some of their needs — and the way they will lean is through the funding element. They control tremendous numbers of dollars that can flow into higher education. All of that \$17 billion that they are now spending could flow into higher education, if higher education could meet their needs.

These corporations could not release an employee to become a student for a semester but they certainly could release one for a concentrated week or a concentrated two weeks. The typical 16-week semester course could very possibly be compressed into a two-week course meeting six hours a day, five days a week on one subject. Thus the student in two weeks could wipe out one entire semester course.

### **Flexible Scheduling**

Such an arrangement would also allow the institutions to begin to change some

things. You can see the impact if the higher educational system were to go to this kind of flexible scheduling. Instead of continuing the present system in which a faculty member has a teaching load that spans two semesters and then is given a summer off, the administrators might decide to really double up so that a faculty member could carry on a concentrated program for three months, take three months off, then come back in for three more months on a very flexible kind of scheduling arrangement. The research element, I think, could benefit greatly from a change in the calendar structure of higher education.

These kinds of questions are going to be raised over the next 15 years by more and more people and there is a very great possibility that we will see some changes in the conventional academic calendar. This would open up to you the whole market for the midlife career-changing individual and I think that is a market you have got to tap.

Another point is that there are a lot of people out there who received degrees in engineering and went to work because economic reality said that was what they should do, but they have been out there now 10-12-15 years and they don't like sitting behind a desk with a calculator, working on a part of something when they don't know what the rest of it looks like. Those people have made good dollars in 15 years, but with no people orientation, no people contact. They have a secure financial base and they are looking now for something to do that is more enriching and more satisfying. We are seeing a lot of movement in that group of people and I think they would be a prime group to go after and attract into dental school. For one thing, they could afford it without incurring tremendous debt loads, and they would definitely have the technical prerequisites. So you may want to concentrate on some midlife people who are already out there in the job stream and are unhappy for a variety of



reasons. You have good things that you can sell to them.

### **Competitors Noted**

These are some of the things that I feel you are going to have to consider in the admissions area. Your competition in the next five years is going to be coming heavily from the energy industry, the environmental industry, defense (we've been way down in defense spending and that will be coming back up at a fairly dramatic rate) and also one of the fastest growing new job sectors: medical education and information dissemination. The whole field of bio-medicine is going to explode and this explosion will be accompanied by a changing attitude on the part of the general public. They want to begin to control more and more of their own destinies; increasing numbers of people are going to be opting for self-diagnostic types of experiences where they could begin to say: "I don't really need to go to the doctor — I can take care of myself."

In regard to information delivery systems, Dr. Irwin has already mentioned the cable T.V. situation, and another phenomenon that is going to impact the American market this year is called "video disc." With a relatively inexpensive attachment to your T.V. set you will be able to run a video disc that is very flexible, very thin, takes up little room, and will allow you to run training programs on your own T.V. set, view current full-length movies, see demonstrations, etc., without the bulk and the problem of video tape. The disc does not wear out because there is nothing that touches it. It is read by an optical laser. So we see that the whole area of information dissemination, information flow, is going to be a major job market in the future and that is a people-oriented job market, which again will attract the very same type of person that you are trying to attract into dental school.

What about the dental profession itself? To start with, we see continued growth in the population. Not only are we on the fringe of another baby boom but we are also going to see population growth in the older generations because of improvements in health care. People will also work longer, so that with fewer jobs coming on stream, competition for the top quality individuals becomes even more severe. Dental fringe benefit programs are going to increase dramatically. The unions have already made clear that their major effort in negotiations is not going to be in salaries, it is going to be in fringes, and one of the areas that can grow the fastest is the dental fringe plans. Right now they are very much in the forefront with many major employers and are going to filter right on down to the small employers. We are looking at a dental package for our own association right now.

### **Increasing Demand**

So if the population increases, mainly because people live longer, and if dental services become more available to individuals through their fringe benefit packages at work, I don't see a decreasing demand for dentists. If anything, there should be an increasing demand for dentists. People will have the dollars to spend and there are going to be more people seeking the service. We expect a general growth in the whole health area, directed toward the self-diagnostic, self-care type of individual. You have seen clinics popping up in which the goal is not to cure people but to teach people to cure themselves.

As these fringe benefit packages become the norm, employers will be applying pressure to keep their costs down where they can at least have some measure of control. As part of this pressure to contain costs, we feel that dentists are going to have to use more and more dental auxiliaries in the delivery of services.



Perhaps the dentists will resort to a "before and after" check system with more and more of the services in between being turned over to the dental hygienist, or dental technicians. So that particular market area is going to grow much faster than the dentist market area is going to grow.

Now, I am infringing on all of your areas, but I am merely sharing with you some of the views coming from outside your profession as to the way we see some things happening.

This growth in the dental assistant, dental hygienist area is going to be accompanied by some human relations problems. Right now these two groups are competing in many states. The hygienists are scared to death of the dental assistants for many reasons. In some states the hygienists are regulated by law as to what they can do and the assistants aren't regulated. One of the things that we feel will probably come out of this is that the two groups will get closer and closer together to where they will probably link up because doing so will give them political and economic clout. They will probably end up as one group of people, a combined assistant-hygienist type, working under the dentist's supervision along with the dental technician-laboratory types of people.

Many people are predicting that some form of socialized medicine will be passed within the next five years and then will probably be thrown out because government will greatly underestimate its cost and the ability to deliver it. So it will probably be transformed very quickly into some sort of outside incentive or cooperative effort, with the private sector picking up the cost, and then will evolve further into a plan that will address itself to the economically deprived and the retired person, with the private sector again picking up on a shared basis the concerns of the person who is employed actively on a continuing basis. We're not sure yet how it is going to

be done but there is a consensus that something will be passed within the next five years.

If this happens, you can expect more and more pressure for "credentialing," or upgrading of one's education on a continuous basis. Continuing education will become a growing phenomenon in all aspects of professional life, not just in the dental profession.

The delivery mechanisms for continuing education present a real challenge. The concept of holding a program in one location and then having everybody travel there is probably going to erode dramatically. The education will move closer to the user, and that move will be spurred by a variety of things, such as closed circuit T.V., and video discs which can make it very easy to get into the home. There is also likely to be increased activity by the various state and local professional associations in assuming responsibility for continuing education.

### Summary

Let me review the problems that I think I would see if I were sitting on your side of the table. I will point again to the matter of changing your marketing approach: becoming more active all the way down into the secondary school system in delivering information and educating people as to the dental profession, the advantages of the profession, and what it takes to get into the profession. You may want to change the curriculum and requirements to allow you to go after students who right now are not perceived as being in the prime flow into the dental school applicant pool — the social science or liberal arts student who does not have a ready job market, but could be converted very readily — and the midlife career-changing person. This includes housewives who all of a sudden have finished raising their kids, or have got their kids into school.

*(continued on page 103)*



# Admissions — Enrollment

Join me, if you will, as we project ourselves into the year 1985. It is a warm sunny Tuesday afternoon, August 26, 1985, to be exact. We are standing in the parking lot of the Alumni Association Continuing Education Center at Monroe Reservoir, awaiting our bus to return to the dental school in Indianapolis. We have spent the past two days participating in a first year dental student orientation retreat. By "we," I mean the new first year dental students, representatives from upper-level dental classes, some of the dental school faculty, a few administrators and several guest speakers.

You may recall that a few years back we thought it important to expose the new students to mini-speakers from Student Health, Financial Aid, the Union Board, and many other service departments. We also indoctrinated them with large doses of how to relate to patients, the low cost of their high quality education, and their responsibilities to attend, achieve and excel. We were always imparting wisdom while they listened and presumably absorbed. In those days, student tensions would mount as speaker after speaker related the rigors of the dental curriculum. Suddenly on Wednesday morning, the blue light would flash on, as at a drag strip, and members of the new class would be accelerated into Act 1, Scene 1, of "The Life of a Dental Student." Their creative skills were as yet unhoneed, their assigned class time double or triple what they had experienced in their undergraduate program. There were also new faces, new expectations, achievement levels as yet undefined, and their stomachs in knots.

## Objectives Noted

The overnight retreat that we have just completed had several objectives: to reduce student anxieties; to identify the expectations that the students, faculty and alumni have for one another; and to develop an appreciation for professional responsibility. We wanted the new student to meet fellow students, interact with faculty on a one-to-one basis and rub shoulders with alumni in a friendly relaxed atmosphere. We hoped to put the "time/pressure syndrome" common to dental education in its proper perspective, and to develop the student's self-concept as a professional person. We wanted to identify our expectations of first-year students, and to counsel them on how to meet these expectations individually and as a class, but not in the competitive furor so familiar to them as undergraduates.

We have used small discussion groups, a keynote presentation by the Dean, a few short mini-sessions by people skilled in advising students on how to cope, but in a non-threatening way. The atmosphere has been relaxed, informal and congenial and they are now returning to Indianapolis and their first day in class in a non-stressful frame of mind.

We had originally wanted to call this an informal bull session, but since over one-third of this year's class are young ladies, such a reference seemed inappropriate, so we called it our Orientation Retreat.

Now that I have referred to the sexual composition of the class, let's review this group of young people individually and collectively for a moment. Who are they, and what are their qualifications?



### **Improving Image**

It has been a long struggle by many people, but slowly the applicant pool has begun to increase again. Dentistry as a career is enjoying a renewed appeal as some of the opportunities in business, computer technology, engineering and parahealth become more stabilized.

The profession itself has undergone much introspection and self-improvement, and we now enjoy a much better self-appraisal. With our continually improving technology, a growing supply of patients, a broader use of pre-paid dental care, and receding threat of the nontraditional marketing practices that once appeared imminent, dentists are once again saying, "I enjoy being a dentist." This, in turn, is improving the profile of the dentist within the community, and the profession is losing some of the tarnish accumulated a few years ago.

The credentials sought today by admissions committees have not changed substantially over prior years; we still look at grades, credit hours, and trends in performance. The Dental Admission Test is still with us, but it has been modified to delete the Verbal Competency section, and the two Perception/Motor Ability sections are now one. Also, there is a section of the test that explores such non-cognitive characteristics as self-confidence, personal adjustment, dominance and sincerity. We have developed and are field testing a hands-on digital dexterity test to substitute for the carving test that disappeared over a decade ago. It shows promise of being easier to administer and more uniform to assess.

### **Philosophy Outlined**

The Admissions Committee subscribes to the philosophy that it is primarily charged with admitting new members into the dental profession, and that dental school is one of the first steps toward the maturing of that person into

a qualified practitioner. Thus, much emphasis is placed upon the personal characteristics of the applicant, such as motivation, enthusiasm, maturity, ego strengths, community involvement, decision making, value judgment, the thoughtful investigation of a career in dentistry, and others.

The Admissions Committee relies in part upon the letters of recommendation it receives, the applicant's biographical sketch, and a personal interview. The Committee attempts to learn as much as possible about the person behind the grades, for they fear that the severely competitive attitudes that make acceptance into professional school an end unto itself, might be excluding the more selfless, more compassionate, more empathetic person. The question faced is this: "Should we try to mold the top level science student into a professional person who can work well with patients, when psychologists have shown that personal attitudes towards others are solidly established before college age?" Or might we do better to take the person whose personal characteristics more nearly reflect those described earlier, and teach that individual to be a dentist? How should an admissions committee equate a summer spent as a volunteer counselor at a day camp for handicapped children in comparison with an "A" in organic chemistry?

### **Summer Institute**

Using this theme, we began a Summer Institute in 1982 into which we introduced 20 specially selected young people whose background and experience gave evidence that they had the non-cognitive qualities we sought, but whose academic background was weak. By reinforcing their science preparation, they were able to perform satisfactorily as dental students. This program proved sufficiently successful to warrant its continuation, and it continues to enhance our program



significantly. Though not designed exclusively as a mechanism to expand minority student enrollment, it and other recruiting efforts now provide us with an applicant pool that has about 10 percent of the candidates from all the previously underrepresented ranks.

One of our greatest concerns since the early 1980's has been how to weigh all the factors that bear on class size. Some studies showed that enrollment should be rolled back sharply because of a predicted surplus of dentists, while others of equal reliability indicated that we weren't keeping up with the anticipated demand. We must also keep in mind that any enrollment change that is instituted requires four years to be reflected in the dental population. There are other influencing factors that must also be incorporated into projections of manpower needs, such as expanding dental prepayment programs, greater incentives for people to seek treatment, and preventive modalities that may bound over the horizon almost overnight and change our perspective.

In view of these considerations, we have gradually lowered our beginning enrollment over the last four years at

annual five percent increments (approximately six students) until today we have 105 students in the class. We are not certain yet of the optimum class size, and we continue to weigh all the influences. We perceive a much more stable balance now and the profession seems more comfortable with this level, but we must continually assess all the factors and be prepared to meet the demands for dental health care, whatever they might be.

Our bus is now pulling into the dental school parking lot. Classes start tomorrow and our cycle begins again. . . That reminds me, I need to get a memo out to the Admissions Committee members reminding them that our first meeting is in a couple of weeks to begin to discuss the selection of the 1986 entering class.

*Committee members: Drs. Charles Gish, Gerry Kaufman, David Allmann, L. Rush Bailey, Drexell Boyd, LaForrest Garner, Lawrence Goldblatt, Myron Kasle, Paul Lew, Melvin Lund, F.E. McCormick, B. Keith Moore, Scott McDonald, Ralph Phillips, John Risch, L. Michael Stropes, Profs. Bruce Mitchell, Myra Mason, Mrs. Barbara Lasho, Mr. Mark Bohnert, and Dr. Robert Bogan, Chairman.*

## Curriculum Committee Report

It's 1985, and the I.U.S.D. Curriculum has undergone a great deal of change during the past five years. The curriculum is still extended over four calendar years. Additionally, however, students are required to attend the summer sessions preceding and following the first year. Biochemistry and Physiology, respectively, are now taught during those two required summers, with the other basic science and preclinical offerings remaining in the regular fall and

spring semesters of the first two years. Besides shifting Biochemistry and Physiology to the summers, the overcrowded situation that previously existed during the first two years has also been relieved by an extensive reorganization of all basic science courses. They have been resequenced, and the time allotted to laboratories greatly reduced by extensive use of demonstrations, slides, films, microfiches, etc., during the lectures. The first and second years of the curriculum



are considerably less hectic than they were a few years ago.

The great potential of our multi-track curriculum is finally being realized because of the changes in the basic science offerings, and also because much more *organization* and *control* have been implemented within the entire curriculum. The clinical instruction system is based upon *realistic clinical requirements* (time available vs. time required) during the first three years to ensure that students gain experience in all clinical disciplines and then a *flexible fourth year*, during which students treat a certain number of patients on a comprehensive care basis, participate a minimum number of ½ days per month in the various clinics, enroll in a specified number of clock hours of elective courses, and complete extramural experiences and practice administration clinics. Advanced students still have the option of applying for early entrance into graduate programs during the fourth year as they have since 1974. The improvements in the system have made this a viable opportunity rather than a near impossibility as it has been in the past.

The key to our flexible fourth year is the fact that almost *all* students complete clinical requirements on time (i.e., by the end of the summer between the third and fourth years). Some of the important changes which contribute to students completing requirements on time are:

- 1) A very stringent and effective system of monitoring and controlling student progress has been established and is operated from the office of Director of Clinics. The establishment of an effective faculty advisor system and the acquisition of a computer by the dental school have been effective and useful.
- 2) The system of patient procurement, screening and treatment planning has been improved so that students are provided with the

necessary patients *at the proper times*. Once again, the computer has been very helpful in coordinating patient supply with student needs. Realizing that a system of clinical requirements and one of comprehensive care cannot be operated with the same students at the same time (and believing that both systems have an important place in dental education), patients are assigned according to the students' status (i.e., for requirements during the first three years and then on a comprehensive care basis during the fourth year).

- 3) Students are required to be present in clinics during the first three years. In addition, students now have more time to devote to patient care since they must do the laboratory work only one time for each procedure on their clinical patients. The dental school maintains a laboratory, staffed with trained technicians, which students may utilize after they have done the minimal required laboratory work. Besides increasing the available clinic time, this system also provides the practical aspect of teaching students to work with laboratories and technicians.
- 4) Clinical instruction techniques have been improved by a continuing series of inservice training programs for faculty members. Release time is made available, and all faculty members must periodically participate in these sessions. All new full and part-time faculty members must complete a special indoctrination course on school policies and instructional procedures *before* they can assume teaching responsibilities.
- 5) Organization and efficiency within the various clinics have been improved through the teaching of



management principles to the department chairmen and clinic directors. One result is that assisting staffs are more responsive to their jobs and to the needs of students and patients.

Since nearly all students are completing the established clinical requirements on time, the fourth year has become much more meaningful for the students and resembles an internship in many ways. As stated earlier, fourth year students are now able to benefit from the flexibility of the fourth year by:

- 1) treating a certain required number of patients on a comprehensive care basis;
- 2) participating at least a minimal number of times per month in the various clinics so that they do not neglect the continued refinement of their skills after completing requirements;
- 3) completing a certain number of hours of elective course study; and

- 4) completing extramural experiences and practice administration clinics.

An alternative to the regular fourth year schedule for a few of the most advanced students is the opportunity to apply for early admittance into graduate programs.

As a result of the numerous improvements that have been made in the curriculum during the past few years, including changes in the basic science courses and the addition of much greater structure and control during the third and fourth years, the curriculum is functioning very effectively.

*Committee members: Drs. David Bixler, James Dirlam, Leonard Koerber, Maurice Lord, Ralph McDonald, Chris Miller, Timothy O'Leary, John Risch, Glen Sagraves, John Sandlewick, Raymond Maddox, Ms. Eleanor Paunovich, Mr. Timothy Alford, and Dr. Donald Tharp, Chairman.*

## Patient Pool in 1985

It is 1985. We have enough patients for our students to gain the necessary experience and meet the requirements for graduation. Certain changes have taken place since 1980. The number of students is on a downward trend, though this decrease has not yet been reflected in the clinics appreciably, due to the lag time. The economy is recovering from a recession. More and more patients are starting to seek dental treatment once again. Approximately 70-80% of the people are now under some kind of third party payment program for dental care. Because of the impetus provided by the initiation of the program "It's 1985" in the year 1980, plans were made to meet

the challenge of maintaining the "patient pool" for our educational programs and the clinical experiences necessary for our students.

In early 1980 there was a waiting list of three months for screening. But because of changes made in the treatment planning system from a departmentalized, piecemeal approach to comprehensive treatment planning, the screening and diagnosis system was also changed. This change created a bottleneck and slowing down of the whole process of patient screening, diagnosis, and treatment planning. Thus we still had an inadequate supply of patients for assignment.



The "It's 1985 program" necessitated a closer and harder look at the patient pool for the future - for today - 1985 and a more efficient method of processing patients into the system.

### Problems Cited

A review of the literature in 1980 showed that other schools in the country were already experiencing problems and were concerned about maintaining adequate patient availability for clinical experiences for their students.

Here are some titles of articles which appeared in the Journal of Dental Education in the seventies: Current and Future Problems in Obtaining Teaching Patients (Minneapolis, Minnesota); Attracting and Retaining Dental School Clinic Patients (San Francisco, California); Solving Patient Admitting Problems in Dental School Clinics (Los Angeles, California); Factors Affecting Patient Completion of Treatment Within a Student Dental Clinic (Chapel Hill, North Carolina); Potential Sources of Teaching Patients (Boston, Massachusetts); A Profile of Prospective Patients at the University of Maryland School of Dentistry (Baltimore, Maryland); Why Patients Select Dental Schools for Treatment: Effects of Fee Structure and Student Appearance (Iowa City, Iowa); and Survival: Improving the Patient Pool and Clinic Revenue (Los Angeles, California).

The Patient Pool Committee's major concern was to insure the adequate supply of patients in order that the student experiences and the curriculum would not have to be compromised or jeopardized in any way.

The three primary thrusts for the committee were: Recruitment or procuring of patients, retention of patients, and communications and commitment.

In the procurement of patients, consideration had to be given to: Sources of

patients, getting patients into the system, and the factors affecting procurement.

There was a need to look at population trends, third party payment programs, competition from other clinics, alternative sources for patients and public relations and publicity about our clinics. The system needed to be refined in the areas of appointing patients, screening and records, patient assignment to students, examination, data base gathering and treatment planning.

To compete with private practice and other clinics and agencies, there was an obvious need for speed and efficiency, convenience, reasonable cost of treatment, proper atmosphere and outstanding professional attitude throughout the system by all personnel.

### A Second Concern

Regarding our second concern, the retention of patients once they are in the system, a review of the records of graduates in May, 1980, indicated an average of 47 assigned cases per student. Of those, 20 patients completed treatment and 27 patients were not completed for the work assigned. Over 1200 patients were on third party payment plan.

A review of 200 out of 500 dental records of patients who "dropped out" of the School of Dentistry patient system showed the following:

- 84 left because patient was going to private practice.
- 9 left because of financial problems
- 26 left because patient failed or canceled too many appointments.
- 8 left because patient was not interested in treatment.
- 43 left because patient moved and could not be reached.

In all, 114 patients (57%) left because it took too long for treatment, could not take so much time off work, had to make too many trips out here, or because the



patients had insurance and wanted faster service or had a bad experience. But the fact was that these patients had come to the dental school in the first place and we somehow failed to satisfy them.

In regard to the 43 patients (21.5%) who left because they could not be reached, too much time might have elapsed in making the assignment or in contacting the patient when the case was assigned.

Therefore in 78.5% of the "drop out" cases, it appeared that we might have been able to do something about the problem. The remaining 21.5% of patients who dropped out (for financial reasons, failed appointments, or simply because they were not interested in treatment prescribed by the dental school) might have been more difficult to keep in the system. Still, the number of dropouts due to canceled or failed appointments or lack of interest in treatment might have been reduced by better communication with the patients or by another or better approach.

The committee recognized the need for: efficiency of service, quality of service, communication with and education of patients, attractive atmosphere and professional attitude, and reasonable cost of service.

### Survey Conducted

A 21 - question survey dealing primarily with clinic operation and patient satisfaction was completed in July, 1980, by 191 patients being treated in our clinic. The patients had been coming to the clinic for periods ranging from 4 months to 30 years, the average being 2-3 years.

Here are some highlights from their comments:

- 147 came because it was less expensive.
- 123 cited quality of service.
- 91 said a friend or relative referred them to the clinic.

- 62 said they had no private dentist.
- 46 cited convenience.

They liked these things about the dental clinic:

- 143 quality of work
- 138 being treated as a person
- 103 comprehensive care
- 110 a chance to help student
- 87 latest techniques

If they had dental insurance, would they still come to IUSD?

- 163 said yes.
- 28 said no, mainly because it takes too much time (too many appointments), and too long per sitting.

Was the screening examination conducted soon enough after they called in?

- 156 said yes.
- 32 said no.

Were they assigned to the student soon enough?

- 162 said yes.
- 26 said no.

What about their attitude toward charges?

- 3% said treatment was too expensive.
- 17% said cost was low.
- 80% said we were reasonable.

Parking was considered a problem by 189 people out of 191.

- 183 said it cost too much.
- 7 said not enough space.
- 1 said it was difficult to get change.

Anyone interested in more details of the survey, may obtain them in the Clinical Dentistry office.

The third concern of the committee was Communication and Commitment. The goal was to make administration, faculty, staff and students aware of impending problems and to ensure that all are committed to whatever actions are needed, individually and collectively, to maintain an adequate patient pool.



So here we are, back in 1985. Competition for patients is fierce. Three-fourths of the patients are under some kind of third party program. There are free clinics and clinics based on ability to pay which have been set up by agencies of the government. Sears and Roebuck and other businesses have opened clinics in shopping centers. Industries are beginning to offer services in their own dental clinics as fringe benefits. Denturists are getting a foothold in various areas of the country.

The dental school has met the challenge and will continue to do so by attracting patients with a personalized, yet efficient approach to health care delivery, with quality treatment which is well supervised and monitored. We are publicizing the dental clinic and the services which are available. A brochure of patient information is available to anyone interested in dental care at IUSD. Students and other personnel at IUPUI and other University units are viable sources of patients. Patients of today are well informed, educated and involved in the treatment planning and treatment process. Closed circuit television monitors are in operation in clinic reception rooms with continuous educational programs. We are computerized

in terms of patient assignment, student progress and patient treatment progress throughout the system. The system is monitored continuously by the patient pool committee, which has been sensitive to the needs and attitudes of the patient population. This committee needs to continue to exist, to work closely with the Curriculum Committee, and to suggest innovative changes to attract and keep patients in the dental clinics for the education program.

As we strive to become more efficient, we must never lose sight of the importance of a very personal, concerned and humanistic attitude toward patients. Quality and the personal approach are our greatest assets, and we must continue to exert every effort to offer what others do not offer and to fill our needs while filling the needs of patients. We must continue to assess the needs and attitudes of our patient population and be prepared to change as their needs and attitudes change. The patient pool must never dry up!

*Committee members: Drs. Charles Gish, Glen Sagraves, Donald Tharp, Mr. Donald Booth, Mrs. Karen Raymond, Mrs. Maria Edwards, Dr. David Dickey, Vice Chairman, and Dr. Ray Maesaka, Chairman*

## Physical Facilities in 1985

1985 has been an eventful year for the School of Dentistry. Of paramount importance is recent approval by the University Board of Trustees of a request to the Indiana State Legislature for construction of a 60,000 square foot addition to the dental school which will be known as Dental Addition III. Completion of this facility will complement our existing physical plant which was last added to in 1971 when Dental Addition II was completed. That addition added 97,000 square feet to the original building and Dental Addition I, bringing the

total current space available to 206,000 square feet. When Dental Addition II was completed, badly needed space for expansion of our clinical areas to accommodate increased class sizes was provided. Often when it becomes time to occupy a new facility, space allocation has already become a significant issue. The suggestion that the various segments of our dental education program would be struggling for space which is not yet available, may sound strange but such a situation is not uncommon with new construction projects. I'm pleased to re-



port, however, that we are not facing such a situation. This is not to say that every portion of the new square footage is not needed or justified, but the planning for the facility which began in 1980 was accomplished in such a way that the new facility will not only serve our needs for 1985 but for a number of years to come.

In light of what you have heard today you may be surprised to learn that our current facility is going to be expanded, as our enrollment has dropped slightly during the last few years and is not likely to be increased dramatically in the near future; however, the new space in Dental Addition III is most justified. Major changes to improve our overall programs will be possible with the new facility.

### **Inflation's Toll**

The new structure, which will extend east from Dental Addition I, will be completed in late 1987 at an estimated cost of \$11,000,000. This cost includes \$3,000,000 for equipment. Inflation has continued to take its toll as the cost of this project five years ago would have been approximately \$6,500,000. Today's cost per square foot is approximately \$135 compared to \$85 five years ago. The majority of the basement level will be occupied by a multipurpose teaching laboratory and related space. This facility will be designed and equipped in such a way as to accommodate the teaching of the first year operative dentistry laboratory course and *some* basic science laboratories, such as biochemistry, microbiology, pathology and histology. Moving these teaching activities from the Medical Science building to the new Dental Addition III will alleviate long-standing problems related to space allocation and scheduling of the Medical Science building facilities. Space has also been identified for additional student, faculty, and staff locker and lounge areas in addition to a cafeteria facility.

Another major move from an outlying area will be the Oral Health Research Institute. The building currently housing this research group would need extensive renovation if it continued as a research facility. This move will also combine two separately existing animal room facilities. The current animal facility in Dental Addition II will be expanded into Dental Addition III. Adjacent to this area on the new fifth floor will be space for consolidation of *some* of our major research facilities and will include general purpose research laboratories suitable for use by several departments. These facilities will enhance our already successful investigative program. This floor will also house the necessary physical plant equipment to support the facility and will include sufficient air handling equipment to correct current problems in some existing areas, in particular, Dental Addition I.

### **Added Facilities**

The fourth floor of the new addition will be primarily comprised of a new academic program in Dental Laboratory Technology and a private practice clinical area which will enhance the intramural program which began several years ago but has grown only moderately because of the necessity to make arrangements within various clinical departments to treat private patients.

The third floor will house badly needed conference and seminar rooms as well as additional clinical facilities required to fully implement our recent curricular changes. Two additional large lecture areas will also be provided to accommodate 150 people which will hold complete class sizes and be available for larger special groups as well. These areas will be equipped with excellent audiovisual facilities.

The first floor will be occupied by a central computer-based support facility which will greatly assist all of our academic, research, student, patient and



administrative needs. The administration will also occupy space on this floor. The former administrative office area will provide new space for the expansion of our Dental Materials and Oral Pathology Departments. Some expansion will also be possible for the Library.

Space allocation for the second floor will include facilities to accommodate our Continuing Education Program which has been expanding rapidly during the past few years. The area will include both lecture and clinical demonstration areas and will complement the

recently completed campus continuing education facility. The remainder of this floor will be devoted to clinical expansion, including a specific clinic for our recently expanded Preventive Dentistry clinical program.

We all look forward with anticipation to the occupancy of this new facility.

*Committee members: Drs. Robert Bogan, Hala Henderson, Maynard Hine, Chris Miller, Ralph Phillips, Glen Sagraves, Prof. Juanita Chisler, Ms. Susan Crum, Mr. John Gebuhr, Mr. Neil Lantz, Mr. David Cleppe, and Prof. Michael Curtis, Chairman.*

## RESEARCH IN 1985

The School of Dentistry has made great strides in research during the past five years and continues to be recognized as one of the leading institutions in this regard. Much of this progress undoubtedly rests with the efforts which were made in 1980 to identify areas of deficiency and to rectify them. These may be listed as follows:

1. Availability of a research-motivated faculty
2. Availability of time for faculty research
3. Technical support regarding study design, data processing, and data analysis
4. Compliance with federal regulations governing dental research
5. Availability of funding for research and equipment and facilities

These basic deficiencies or problems were not unique to Indiana University at that time, but rather were characteristic problems which faced all dental schools.

In 1980 the timing appeared appropriate for implementing the action necessary to resolve certain of these deficiencies. The onslaught of federal regulations had exerted an enormous

impact upon dentistry, dental research, and industrial organizations supporting dentistry. For example, governmental programs were providing a mechanism of financing dental care for numerous types of under-privileged groups which had been unable to afford adequate dental care. Likewise, insurance programs were permitting more and more people to receive dental care. These and other measures made it incumbent upon the dental profession to identify more efficient and effective mechanisms for providing dental care. Further, federal regulations requiring thorough documentation of the safety and efficacy of various treatment procedures, preventive agents, restorative materials, etc. had greatly increased the demand for research data. Thus, by 1980 various circumstances were leading to increased needs, demands and opportunities for research.

Considering all of these factors, in 1980 the administration decided to begin working toward the ultimate development (over an anticipated 5-year period) of a Division of Dental Research whose primary objectives, simply stated, were to focus attention upon the following: (1)



to generate funds from outside resources; (2) to promote and assist, in appropriate manners, faculty and inter-departmental research activities; and (3) to implement the visibility of the research to the faculty, students and profession.

### **Faculty Involvement**

The greater involvement of the faculty in research since 1980 was achieved in a variety of ways. First, the stance of the administration (the University and the Dental School) regarding the role of research for full-time faculty became more clearly stated and recognized. While there can be no argument that the demand for clinical expertise has been and always will be great, selection of new faculty has not been limited to individuals who have only that competence. Major strides were made in that direction by the attraction and appointment of new faculty having a proved record of high potential for success in research.

It was clear in 1980 that the existing curriculum, along with the heavy teaching commitments of the faculty, had generally prevented any involvement in research. There was a pressing need to make time available for research, particularly for junior faculty. Resolution of that paramount issue depended upon a budget that would permit appointment of additional faculty.

Because the budget restrictions at both state and national levels that have inhibited major increases for staff still persist, we have not been able to make a total commitment to research via this mechanism. However, each department did analyze its own staffing responsibilities and requested the additional faculty and technical staff needed for implementing a realistic research program. The Administration has slowly but positively secured modest additional monies for this purpose. That funding, coupled with an

increase in extramural grants, has led to a significant improvement in the time available for research.

### **Sabbatical Leaves**

An additional mechanism for providing research time for faculty was the introduction of a new sabbatical leave program. In 1982 the traditional sabbatical leave policy of approximately one year was modified, making it possible to receive awards of shorter duration, e.g. 3 months. For faculty with heavy teaching commitments and other responsibilities, the shorter leave has worked to a great advantage in that time can be taken without seriously jeopardizing the departmental program. Many of our faculty have taken advantage of this new policy to carry out pilot studies, broaden their intellectual background, or to complete projects at other centers of excellence or at the school itself.

Thus it has now become possible for every department to have at least one individual with research motivation and expertise in that area. Upon the identification of that person, he has been designated as the Research Coordinator, Counselor or "stimulator" for that department. Sufficient time was made available to that faculty member so that he could assist in the direction of research within the area, establish collaborative projects with related disciplines and aid in securing supporting personnel. He also has the responsibility of reviewing and identifying the meaningful projects and proficiency of the investigator to handle the project. This has upgraded the quality and efficiency of our research.

Another major breakthrough was accomplished when the Research Committee implemented a departmentalized plan for promoting research. Each department identified one (and sometimes more than one) major area of concen-



trated research effort with high priority in which all faculty and graduate students in that department could participate. No new space was required for these projects, patients were readily available from those undergoing treatment in that department, and minimal department research funds were needed.

Lastly, to further stimulate faculty involvement and to emphasize the importance to our faculty, the School developed an annual "research awards" recognition program, similar to the various annual distinguished "teaching awards." This innovative acknowledgment of research expertise is now being considered by the University itself as one of its system-wide distinguished awards to faculty.

### **Research Support**

Since there were no funds immediately available in 1980 to implement and staff the proposed activities, the administration decided to temporarily divert the activities of one full-time faculty member, and an administrative assistant, in order that they might aggressively pursue collaborative research grant proposals from all available sources. During the first year a cost-accounting basis was developed whereby funds obtained for research would totally support those activities.

In other cases, some departments investigated means for providing extramural research funds. Some that proved effective were charges for testing and consultation services and special clinic income. Those monies were allocated to the general research funds of the department.

### **New Facilities**

At the moment our research facilities are deemed adequate, particularly with the additions covered by the report of Mr. Curtis.

However, with greater involvement of our faculty in research activities, thought should be given to the potential need for improved facilities by 1990. Such planning should focus even more on centralization of laboratories, equipment and supporting personnel.

### **Visibility of Research**

A number of methods were utilized to promote the research programs and make them visible to the entire faculty and to the student body, such as:

Expansion of the AADR seminars and circularizing of summaries of those seminars.

Monthly display of research reprints from our faculty in a conspicuous location on the first floor.

The fact that some \$3 million has been generated this year alone, the greater involvement of our faculty in clinical and basic research, the present existence of a skilled biometrical staff, the recently-acquired major items of equipment in several departments, and the refurbishing of research facilities during the past year clearly attest to the success of this endeavor.

However, the same problems that were pressing in 1980 are only magnified by 1985. With diminishing research funds available at the national level during the past 5 years increased emphasis has been placed upon the identification of other sources and mechanisms for support.

One approach was to take a critical look at the monies that would be required to support the ongoing research programs, and their expansion to include investigations particularly pertinent to the current state-of-the-art. It will be recalled that in 1980 there was *not* a line item for research in the budgets of individual departments in the dental school. Thus research money for faculty, and particularly graduate students, had to be secured in a collaborative effort



from some department that had outside support, pilfered from clinic income or requested from the Dean, via the Research Committee. The latter source for funding had already become minuscule due to the lack of General Research Support Funds. Therefore, faculty often became totally discouraged not only at the lack of time available but also by the absences of readily available financial aid.

In that context each department carried out a self-examination. The resultant estimate of research funds needed was then added as a specific budget item, with documentation as to usage, in the annual budget requested from the Dean. The Dean, and in turn the University, accepted the proposition and responsibility that some monies could and should be made available at the department level to provide both a base and security for funding on an annual and continuing basis. The amounts requested have been adjusted each year, depending upon the productivity and the research needs of the department and the profession itself.

That dedication by the Administration led to a mushrooming of small pilot investigations that in turn increased the number of proposals submitted to other extramural funding agencies.

Another potential for financial support exploited was the "special" research funds established for the specific purpose of supporting investigations conducted in a particular department.

Examples of such funds could be easily traced back to 1980; for example, a fund provided to the Pedodontic Department by an anonymous donor as a personal and private gesture in honor of his/her parents. Another was the major contribution by an alumnus to the Dental Materials Department for purchase of a Scanning Electron Microscope.

A periodic poster board presentation of a research project conducted by faculty or graduate student. The poster board, fashioned along the lines of the IADR poster sessions, was placed in a hallway adjacent to the lecture hall area.

### Summary

Emphasis has been focused more on upgrading the quality of research, not necessarily a mushrooming of total research effort. Research solves problems but it also creates them. This Committee has addressed itself to those matters. While they have not, of course, been totally resolved, positive steps have been taken to increase faculty involvement, provide a broader base of support, both intra-and extra-murally, and enhance the identification of the on-going research program to the faculty and student body.

*Committee Members: Drs. David Bixler, Chris Miller, Abdel Kafrawy, William Shafer, S. Miles Standish, George Stookey, and Dr. Ralph Phillips, Chairman.*

## Continuing Dental Education

In 1985 we find that the growing trend for state governments to pass laws making dental continuing education mandatory for relicensure of practicing dentists encompasses more than half of the states in the Union, with many more state legis-

latures studying the feasibility of mandating dental continuing education in the near future. We are pleased to report that the state of Indiana in 1985 continues to solicit continuing education participants on a voluntary basis, and



that our program is enjoying a record-breaking season regarding attendance and number of courses offered. We attribute our current success to a continuing reevaluation of our program. Priorities have been reexamined to include, as our primary concern, ways of motivating the private practitioner to involve himself personally in the continuing education system.

Based on the results of this year's efforts, it seems likely that we can continue, on a voluntary basis, to satisfy the various consumer groups represented in our state legislature by showing them that dental professionals in Indiana *do* recognize their responsibility to the public in providing quality, up-to-date dental care, and that they *do* understand the crucial importance of continually updating their knowledge and skills throughout their careers. We can prove to our communities that we comprehend our professional obligations by voluntarily turning out in large numbers at continuing education events—and we have done just that this season.

We would like to profile our current program for you, listing several of the changes that we feel have contributed to this year's dynamic turnout of course participation. The continuing education program of 1985 is a sophisticated one, offering promising solutions to problems which have plagued the system in the past.

### Questionnaires Sent

Nearly 18 months ago we sent questionnaires to all members of the Indiana Dental Association and to all Registered Dental Hygienists in the state, asking for their suggestions in two categories of course programming: topics of interest to them, personally, and topics reflecting areas of dentistry where they felt they could use further training. It was important to differentiate between the two so that the replies would not focus simply

on courses that sounded interesting and entertaining, but perhaps had little bearing on improving one's particular dental practice. We sent this same questionnaire to all known study clubs and dental societies in the state and asked for their assistance in determining course needs in each locale.

The large response we received to this questionnaire enabled us to put the collected information to practical use. From the feedback we received from all around Indiana we were able to select meaningful course topics and initiate a search for qualified instructors to present each program. By eliminating arbitrary course development and identifying the need for courses *before* planning them, we hoped to motivate most practitioners throughout the state to attend at least one course during the season. Because we solicited course ideas from potential registrants beforehand, we were able to compile a continuing education catalog offering a fine selection of courses tailored to meet the needs of the dentist and the dental health team, rather than forcing them to fit into the structure of programs arbitrarily selected for them.

Our 1985 dental continuing education catalog was sent to members of state dental associations in Indiana, Illinois, Michigan, Ohio and Kentucky. We attribute our large out-of-state participation this year to this mass mailing.

### New Format

The catalog has a new format this season. In addition to the traditional list of course offerings presented at Indianapolis, it contains a selection of less conventional ways to obtain continuing education credits. These methods are summarized in the following:

1. Courses have now been decentralized and one can enroll at locations all over



the state. Indiana University campus extensions, other university campuses and city auditoriums are being used as sites for the presentations.

2. Home study courses are being offered over a public educational television station, with study guide provided.
3. Attendance at specified state and national conventions warrants credit, as do presentations of table clinics or journal publications.
4. There are 26 outlets for closed circuit television located throughout Indiana on college campuses and at hospitals. We have used some of these this year in presenting satellite programs originating in Indianapolis and delivered simultaneously to specified sites throughout the state.
5. Self-paced refresher courses are now offered at the School of Dentistry as miniature courses-for-one, prepared for persons seeking individualized instruction. This mode of learning could include anything from observing an instructor while he performs a clinical procedure to viewing a videotaped program and following a study guide in the library. For this type of course the dentist must contact the School and identify his needs so that we can help him formulate a worthwhile study program and arrange appropriate credit.
6. We are offering several courses covering fields other than the strictly clinical. To balance our selection of practical, "how-to" programs, we are presenting several courses of a more theoretical nature, such as Psychology of the Dentist-Patient Relationship, and Discovering Your Own Personality.
7. Some multiple-day clinical participation courses are scheduling the final day of the course approximately three months after the first days, so that actual behavioral change (or failure to change) can be accurately mea-

sured and discussed by the participants and instructor. In a few cases, registrants have paid an extra fee to have an evaluating team come to their offices to observe office procedures and offer suggestions for improvement.

8. As an incentive for dentists to become continually involved in course participation, we are offering one free course to each participant who attends four courses during the 1985 school year.

### Goals Described

All courses in the catalog are clearly marked either "Refresher" or "Advanced," and objectives are outlined for each course, too, so that a potential registrant has a clear idea of the type of course being offered.

To stimulate the undergraduate students' appetite for continuing education, we are requesting that they attend, free of charge and on an elective basis, a minimum of three courses during their undergraduate dental training. We have learned that the students are our most severe critics and are willing to submit frank evaluations of how we can better serve the dental community. We have used many of their suggestions in modifying programs for the 1986 catalog.

Once the dental professional sends in a course application, we send him a variety of material so that when the meeting date arrives, he is very well informed about course content and objectives. He receives a brochure detailing the instructor's objectives, a syllabus of course activities, and a request from the instructor for all registrants to send him a list of *their* objectives for the course. We feel that each participant has a right to know what to expect from a course and should be given the opportunity to express his expectations before the instructor completes the presentation. When an instructor organizes his course material, it



should be done with the needs of the registrants in mind.

Participants are usually given pretests and posttests to measure the degree to which the predetermined objectives were achieved. Course content/ instructor evaluation forms are also filled in by the registrants in a continuing effort to receive feedback from registrants so that course problems can be noted and necessary modifications made before the course is given again.

The most dramatic change in our continuing education system has occurred at the Indianapolis campus, where construction of the IUPUI Communications Center was completed earlier this year. Since its opening, all dental programs have been presented in this complex, which is located on the Medical Center campus within walking distance of the Dental School. In addition to featuring a variety of seminar rooms, lecture halls and auditoriums, the Center provides overnight accommodations, restaurant facilities, and express bus transportation roundtrip from the airport and downtown. The Center houses a television studio, an audio-visual department, and even a dental clinic for clinical participation courses. Because of the Center's convenient location and the extra services it provides, the trip to Indianapolis for out-of-town registrants is virtually hassle-free and has attracted many participants who heretofore had been unwilling to undertake the trip.

### **Future Lecturers**

The best evidence we have had this year to assure us that our system is motivating the dental professional to continue his education came to our attention when several private practitioners asked for our help in training them to become future lecturers on the continuing education circuit. These dentists stated that, although they had subjects to teach, they were unsure about an effec-

tive method for delivering their messages. Our Department of Faculty Development has been able to accommodate these people and support their efforts in every way possible. Training is now being provided at the School for private practitioners aspiring to lecture or to present clinical courses. Training is also available in scientific writing for those seeking to publish articles in the dental journals. Audio-visual aids such as videotapes, slide series and audiotapes may be obtained on a temporary loan from our library.

Through a lot of hard work we feel we have brought many additional Indiana dentists and dental auxiliaries into our system, and that the system is enriched because of this wide participation. Nineteen eighty-five has been a banner year for Dental Continuing Education and we owe our success to three major changes:

1. We have learned to ask the potential registrants what they feel are important topics and issues before we even begin to plan our annual program, and we rely heavily upon this feedback when planning course objectives.
2. We have learned to bring continuing education to the dental professional wherever possible, instead of making him come to a centralized area for course participation. Our network of programming now covers the entire state, bringing postgraduate education within a comfortable reach of virtually everyone.
3. And we have learned the most important lesson of all: to serve the individual need. We realize, for example, that a refresher course in the biological sciences, scheduled for five dentists at their request, won't bring in much money for departmental operating expenses, and that a course like this probably will not go down in history as a dramatic statement in the



world of education. *But*, if that course meets the needs of these five dentists, who will return to their practices more knowledgeable than before and more motivated to provide a better service to their patients, then our goal

has been reached. That is all we ask of our continuing education system.

*Committee members: Drs. Ben Fisher, George Willis, Arden Christen, Mr. William Shonk, Ms. Susan Crum, and Dr. Robert Derry, Chairman.*

## Dental Auxiliary Education

It is necessary to preface our committee report by pointing out to you that the title "Dental Auxiliary Education" encompasses three distinct academic disciplines *and* an administrative arm, each of which must be considered individually when examining the role of "Dental Auxiliaries" in the future, particularly in light of the Indiana University School of Dentistry's State-wide system for dental auxiliary education. Representing these three disciplines and administration in our committee deliberations were: Dental Assisting—Marjorie Carr; Dental Hygiene—Evelyn Oldsen; Laboratory Technology—Herbert Reininger; and Dental Auxiliary Education Executive Council—Peter Zonakis.

### Dental Assisting

The year 1985 finds the demand for dental assistants nation-wide declining slightly. However, in Indiana the demand for certified dental assistants still exceeds the supply. Salaries paid to dental assistants have risen in proportion to the economy even though the hours worked have declined slightly, because the cost of utilizing auxiliaries is rising more rapidly than the fees the dentist can charge for services. These factors, along with the decrease in patient load per dentist, find him/her substituting more of his/her own time for that of auxiliaries in the delivery of dental care.

Class size at each campus has remained constant since 1980 to the present, and an effort has been made to fill these classes with students who intend to remain in the assisting field. This does not mean that students enrolled in dental assisting programs who wish to continue their education toward dental hygiene are not encouraged to do so. However, priority is being given by each dental assisting admissions committee to those applicants who wish to remain in the dental assisting field. In recent years significant numbers of assistants graduating from our state-wide programs have been lost to the assisting field by continuing into dental hygiene, thus reducing the number of those available for employment as dental assistants.

ADAA Certification or State Certification and/or Registration of the dental assistant is a required credential in the Indiana Dental Practice Act for employment of dental assistants who perform expanded functions or expose radiographs. The curriculum has been revised to teach these courses to a level of proficiency which enables the assistant to pass a written and clinical examination as required by the state. Academic courses have been kept to a minimum and include only those courses that would directly or indirectly affect the health of the patient if knowledge had not been provided. Practical and clinical instruction has been increased to provide a well trained assistant in all phases of dental assisting, particularly in the areas of



handling and manipulation of new dental materials, office practice management, processing of 3rd party transactions, chairside procedures and patient management.

The School of Dentistry, its satellite schools and Indiana State University at Evansville, after surveying the needs of the dental assisting community, have established continuing education courses in dental materials, chairside procedures, (including identification of instruments), CPR, radiographic techniques, and business procedures for assistants returning to the job market. They have also provided a variety of courses to update the employed assistant.

The curriculum for dental students now includes a course in the proper utilization of dental assistants in a clinical setting during the second semester of the sophomore year, taught and supervised by member/s of the dental assisting faculty.

Teaching supervisors in the dental assisting program on all campuses are currently certified dental assistants and hold a baccalaureate degree, including courses in education and have had at least 5 years of practical experience in the office and/or teaching. When vacancies arise in these positions the same requirements prevail in securing replacements. The dental assisting director at the School of Dentistry is a currently certified dental assistant and holds both a baccalaureate and master's degree. Courses in education, curriculum development and student teaching are required for this position. The director must have a minimum of 5 years of practical and/or teaching experience. When a vacancy arises in this position the same requirements prevail in securing a replacement.

Dental assisting faculty with 10 or 12 month appointments who teach courses in clinical science (chairside assisting) and office practice management are re-

quired to return to private practice to refresh their skills for approximately 100 hours within a 4-year period.

Consideration is being given to revise the dental assisting and dental hygiene curricula to require all applicants entering the auxiliary field to first complete the dental assisting program. Students could terminate at this level. Those wishing to continue with the expanded functions course would enroll in the first summer session following receipt of the dental assisting certificate. Students could terminate at this level. Those wishing to enroll in dental hygiene would make application and be selected by the Admissions Committee for acceptance into the program. An associate degree in dental hygiene would be awarded at the conclusion of the 2-year dental hygiene program. Students could terminate at this level. Those students wishing to enroll in the advanced 1-year dental hygiene course to learn limited periodontic procedures could do so. A baccalaureate degree in dental hygiene would be given at the conclusion of this fourth year. Two other options for this fourth year would be Public Health or Education leading to the baccalaureate degree. More time and study are needed before this type of program could be implemented but it would be exciting and innovative and provide the dental community with well qualified auxiliaries to fill their individual office needs.

*Marjorie Carr*

### **Dental Hygiene**

In the year 1985 licensed dental hygienists are performing additional functions, due to revisions in the Dental Practice Act. These practice act revisions have modified the dental hygienist's role to include a greater emphasis on periodontal functions which include gingival curettage, the administration of local anesthesia and the administration of nitr-



ous oxide. While the dental hygienist continues to perform the traditional functions, the greater emphasis in the area of periodontics broadens the scope and duties of the hygienist and thus enables him/her to assume a more active role as a primary deliverer of dental care.

An additional change in the Dental Practice Act allows for independent contracting as a practice option. This practice option provides an opportunity for the experienced hygienist to exercise his/her professional and business expertise as a dental care provider.

The over-all quality of the dental hygiene education programs has been maintained, and students continue to complete the general education courses as a prerequisite to the program. However, curriculum changes and modifications have occurred to incorporate the additional course content relevant to the practice act changes and to place a greater emphasis on scientific research. In addition each of the five programs has a baccalaureate program as an option.

Changes in the dental assisting, dental hygiene and dental curricula now allow for a possible career ladder, providing more flexibility and options for students pursuing a career in the field of dentistry. No increase in the number of dental hygiene programs has occurred. The five existing programs continue to meet the manpower needs and demand for dental hygienists. Enrollment in the individual programs has remained the same. The problem of maldistribution continues, with a possible greater demand for hygienists in rural areas being offset by hygienists seeking employment in urban areas of the state.

The administration of the dental hygiene programs includes both dental hygienists and dentists, with both having administrative and business background. All faculty are encouraged to participate in private practice employment (1 day/week). The use of computer technology in clinic grading has enabled

programs to more efficiently evaluate and determine student progress and competencies. Other uses include patient assignment, patient records and student clinic assignments. Such use of computer technology has equalized student clinic experiences and provides faculty with additional information on all students. In addition better patient care can be provided.

*Evelyn Oldsen  
For the Dental Hygiene  
Administrative Council*

### **Dental Laboratory Technology**

Changes in the Dental Practice Acts, which have caused rapid and evolutionary restructuring of both the dental hygiene and dental assisting programs and curricula in the past few years, have had no effect on the curriculum of the dental technology programs. The major change in the Dental Practice Acts that should have been enacted concerns the legalizing of surveying and designing of removable partial dentures in the laboratory. All evidence and statistics prove that the overwhelming number of these appliances are designed by the technicians.

In the five years since the turn of the decade, the only major curriculum change has been the incorporation of more business management courses into the associate degree program and the additional option for students to obtain a baccalaureate degree with either a major in business administration or the science of supervision and a minor in dental technology. This has been brought about by the ever-increasing demand for departmental supervisors in the larger full service laboratories and the better management requirements for the individual laboratory owner. Dental group practice management could also contribute toward this end.

The two educational degree options for students are still being offered: Den-



tal Health Education and Allied Health Occupations. Qualified and promising students are encouraged to pursue these careers.

The revised Guidelines issued by the Council on Accreditation which went into effect the beginning of 1981 have had little effect on the structural composition of our programs. Course content continues to change as new materials, methods and techniques are developed and accepted as standard procedures. Some examples are:

1. The on-going introduction of semi-precious and non-precious ceramic alloys and base metals used as alternatives to gold.
2. Improved acrylic veneering materials which have increased the demand for this technique.
3. A reduction in the firing temperatures of porcelain to reduce metal creep during firing and to allow the use of lower melting point alloys, which helps reduce stress at the metal-porcelain interface, has been introduced.
4. Techniques which have been developed in addition to lower cost materials to permit the construction of low priced removable restorations.
5. Various casting techniques (still in the development stages) for the new family of metals.

Enrollment in accredited programs has remained fairly constant over the years and job-placement has increased due to a variety of circumstances.

1. As indicated in the IDA Manpower Report, the employment of private technicians by the dentist has been slowly but steadily increasing since the mid-70's.
2. Dental group practices are hiring more technicians as this type of practice continues its slow growth.

3. The denture clinic, dentistry's answer to denturism, is rapidly expanding and employing more and more technicians. From all indications, denturism which caused such a legal and legislative furor, and financial expenditure during the 1970's seems to be withering on the vine.
4. Denturism, such as it is, never has had and should never have any impact on the dental technology educational system. Any continuing educational requirements that have and might be imposed on these individuals have no place in the dental technology educational programs.
5. With the continual expansion of insurance coverage the construction of prosthetic appliances has increased, placing a greater manpower burden on the laboratories.
6. Although statistics have indicated a slow but steady growth, the retail store dental clinics also reflect the need for more technicians.
7. The fairly brisk growth in the development of dental technology programs that was evident during the '70's, when the number of accredited programs jumped from 20 to 58, has slowed to some extent in the first half of this decade with the addition of twelve new programs. During the '70's enrollment jumped from 1,113 to 2,665 students, an increase of 1552 while the increase has been approximately 180 students in these past five years. Fortunately, four of these new programs have been established in dental schools, which is the most favorable and logical location for their operation. The trend in dental school curricula throughout the United States still continues to reduce the emphasis of training the dental student in the



laboratory procedures for the construction of restorative prosthesis. The projected implications of this will be the eventual greater demand for better educated and knowledgeable dental technicians.

At present, the majority of technicians receive their experience through on-the-job type of training. This will not suffice, nor will it meet the demands for the future. By having the dental laboratory technology programs associated with and located in the dental schools, both programs greatly benefit. This proposal has been endorsed and encouraged by the Council on Dental Accreditation as early as 1972.

The interdependency on the dental health team concept should be taught in the same educational environment in order to better correlate educational objectives and operational efficiency and not wait until both dental and technician student have graduated from their respective schools, and then expect this relationship to develop in an organized and communicative manner, which is a major problem within the profession today.

Training the dental student and dental technology student together will contribute to the improvement of communications, understanding of each other's particular problems and to the general improvement of the total health care delivery system.

8. The training of graduate dental laboratory technicians through continuing education courses in the correct and proper methods of impression taking has been initiated.

These technicians, to be employed by laboratories or self-employed, will make the rounds of dental offices to take impressions for the

working cast of restorative prosthesis.

Following the dentist's careful patient examination and preparation where required, the patient will be rescheduled for an impression appointment. Because of expanded functions, the dental assistant or hygienist can prepare the patient by removal of any temporary appliances.

As the technician is much better versed in the anatomical landmarks required for specific restorations and the required quality of the impression as a whole, it is more logical that he be responsible for performing this vital procedure. After all, he is the one that has to work with and on the final cast.

The quality of the "study models" taken and submitted by the majority of dental personnel is less than desirable, but the technician is the individual who either receives the blame when a prosthesis does not fit or who must remake it at his expense.

The employment and usage of this expanded function technician should greatly improve the quality and function of restorative appliances. To use the old adage, "A house is no better than its foundation".

*Herbert Reininger*

### **A Look Ahead by the DAE Directors**

The year 1985 sees a number of changes in Dental Auxiliary Education. The demands of state and federal legislation, the consumer, and the dental profession have altered the teaching of auxiliaries. There is an increased demand for expansion of continuing education courses, especially in the areas of:

- 1) Radiology—where licensure has been legislated;



- 2) Expanded functions in areas beyond those previously permitted for auxiliaries; and
- 3) Concentrated courses in insurance claim preparation.

There is a need for a major change in the curriculum to include a fourth auxiliary. It is beneficial to have the Dental Assisting course as a prerequisite for the Dental Hygiene Program instead of the 30 credit hours of general education previously required. The Dental Assisting Program has been altered to include more chairside procedures, materials handling, office management, etc. The students who qualify and continue into the Dental Hygiene Program receive more advanced hygiene procedures in the two-year hygiene curriculum. The Dental Assisting Program has been added to the Dental Laboratory Technology Program for the Dentist who employs his own lab technician to make that person an expanded lab technician who is much more helpful to the practitioner. Research is being done to determine whether it would be beneficial to carry this program into entrance into the Dental School, where the first year would be Dental Assisting, second and third years Dental Hygiene, fourth year completion of a B.S. and finishing requirements for Dental School. Results should reveal whether individuals with previous Dental Assisting and Dental Hygiene training make better dentists.

The auxiliary is trained as a salesperson as well as an efficient auxiliary. The need for salesmanship in Dentistry is obvious. Our auxiliaries receive additional training in the areas of case presentation and public relations. Instead of spending many dollars on TV and radio advertising, we are utilizing thousands of individuals throughout the state to spread the word for the need of complete dentistry.

*Dr. Peter Zonakis  
For the DAE  
Executive Council*

In summary let me say that in addition to the changes that have been noted today in the reports of the three disciplines and the directors, it has been interesting for me, and I hope for you, to note the parallels that surfaced particularly in the area of class size and additional programs where dental assisting, hygiene, and lab tech are all in agreement that there should be no increase. Consideration of a ladder approach in dental auxiliary education is envisioned as a reality by those in dental assisting, dental hygiene, and by the Directors of Dental Auxiliary Education. A real need for more Continuing Education is a priority item for dental assisting and the Directors of Dental Auxiliary Education and necessary curriculum changes, appropriate to existing conditions, were agreed upon by all.

*Dr. Ralph G. Schimmele*

## Graduate Education in 1985

In 1980 the Task Force on Advanced Dental Education\* released a document, "Advanced Dental Education: Recommendation for the Eighties," which contained a series of recommendations

based on projected developments in the dental health sector. The findings of the

\* Funded by a grant to the American Association of Dental Schools by the Kellogg Foundation



Task Force were based on a consensus of the members and those of numerous consultants, using existing resource data and an econometric model, and identified current and anticipated problems in advanced dental education such as the specialist: generalist work force ratio, manpower distribution, the future need and demand for dental health services, the financing of graduate education, and the governance and control of graduate education. These recommendations, which were subject to review by both the Executive Council of the American Association of Dental Schools and the profession at large, have provided some basis for our own planning during the past five years.

Also in 1980, the Committee on Graduate Education for the "It's 1985" conference attempted to identify trends in graduate education for the future and specifically relate these to recommendations for our own graduate dental education programs here at Indiana University. The present report will first summarize some of the data, predictions and recommendations of the 1980 AADS Task Force report and then outline the principal issues and recommendations of our graduate committee in the context of the Task Force report. Finally, our status in 1985 will be summarized.

#### **AADS Task Force Study:**

1. Of the total dental workforce, 12.6% are in specialty practice (1979). Of the active dental specialists, 64% are either orthodontists or oral surgeons.
2. There are approximately 13 specialists/100 general practitioners. By the year 2000, this ratio is expected to be about 19/100 at the present rate of training.
3. The current balance of specialist/GP is preferable to the specialty-dominated system in medicine.
4. The total number of first year specialty students has remained rela-

tively constant from 1972 to 1980 at about 1200 students/yr. There were 923 General Practice Residency students in 1979-80, an increase of 70% since 1972-73.

*Recommendation:* The total number of first year specialty students should be reduced by approximately one-third from the 1979-80 enrollment. These reductions should occur first in those specialties that have had the greatest expansion in the last 20 years and in the programs with the largest enrollments. The two non-clinical specialties (dental public health, oral pathology) are specifically excluded.

*Recommendation:* There should be an increase in the number of dental teacher training opportunities (for those preparing for careers in education, research, public service) through increased federal, state and private support.

*Recommendation:* Patient care revenues should be the major source of support for all advanced clinical education students.

*Recommendation:* The number of positions in general practice residencies and the new general practice programs should be increased to accommodate up to 50% of the dental school graduates by the mid 1980's.

5. Manpower projections anticipate that both specialist and GP workforces will exceed population growth over the next 20 years. The dentist will experience greater competition, work longer hours each week, make less use of auxiliaries and refer less often to specialists. Therefore, the general outlook will be increasingly stringent.
6. Dental prepayment plans are now available to about 25% of the population, or 60 million people. Dental benefits from a National Health Insurance plan (if passed) will be minimal.
7. Population shifts will also influence dental needs (and demand), with a



median age of 30.2 years in 1980 and with a median of 35.5 years predicted by 2000, accompanied by a corresponding decrease in those less than 25 years of age.

8. Dental schools will continue to experience shortages of patients, particularly for the predoctoral programs; however, this will be less acute for the advanced student.
9. Dental schools will continue to experience escalating program costs and less federal and state support. Thus, students will be expected to bear a greater portion of the cost of their education through higher tuition and fees. The number of dental school applicants and their quality will continue to fall and some schools will reduce class size, plateauing about 1982. There will be some reduction in the number of U.S. graduate applicants.

### Issues for the "It's 1985" Conference

#### 1. *Number of graduate students*

Should there be a planned and orderly reduction in the number of students accepted in the clinical specialty programs over the next five years?

a) Each program must maintain at least the minimum number of students to retain accreditation status. An across-the-board reduction of one-third as recommended by the Task Force is arbitrary and not indicated. Foreign student acceptances, solely to maintain program size, should not compromise quality. Benefits accrue, particularly if the graduate returns to his country of origin.

b) Factors such as specialist supply (needs), financial constraints, faculty support, facilities, number and quality of applicants, national trends, etc., must be considered by each program on an individual basis.

c) Selected specialty programs will voluntarily reduce the number of

students selected. There is no justification for increasing any program above current levels.

#### 2. *Core Curriculum*

Should a core curriculum or at least certain required courses be mandatory for all advanced students?

a) The two-year curriculum in most graduate programs is presently incompatible with a comprehensive core curriculum; further, the varying backgrounds, educational objectives and time constraints of the students (and programs) make a universal required core program impractical.

b) It must be assumed that qualified applicants have appropriate backgrounds in the basic and clinical sciences; remedial instruction must be provided on an individual basis if the student is to be retained.

c) Certain "core" materials *beyond* the predoctoral level seem applicable to all graduate disciplines: oral histology, oral pathology, physical evaluation, oral diagnosis, pharmacotherapeutics, hospital protocol, statistics, research design, etc. Some disciplines require these in depth whereas others consider them of low priority or not applicable.

d) Some "mini-courses" offered after hours, at noon, or by restructuring clinic hours (and providing credit or other documentation for a combination of courses) can be expected to be of value for both graduate students and faculty.

#### 3. *Research*

Should some research training/experience/exposure be mandatory for all advanced students, including certificate candidates?

a) All students should have some involvement in research: original research and thesis (mandatory for degree candidates), participation in departmental research projects and



journal clubs, collaborative studies with other students or faculty, course work (e.g., scientific writing, statistics), preparation of a scientific paper suitable for publication, library research, preparation of teaching materials, etc.

4. *Hospital Dentistry*

Should all advanced students receive instruction/experience in hospital dentistry?

a) Knowledge of hospital protocol and related matters is considered essential for virtually all advanced students. While some programs have strong hospital experiences, others are almost totally lacking. The latter should take immediate steps to provide students with instruction/ experience in these matters through arranged seminars, rotations, participation in delivery of care in the hospital setting, etc.

5. *Physical Evaluation*

Should the advanced student receive instruction/experience in physical examination/evaluation/diagnosis?

a) All students should receive didactic instruction in physical examination/diagnosis beyond the predoctoral level. Those disciplines which deal with hospital admissions and/or management of medically compromised patients should also have actual clinical experience in physical examination/evaluation.

6. *General Practice Residencies/General Dentistry Programs*

Should the number of General Practice Residency opportunities for dental school graduates be increased?

a) At least two general practice residency positions should be available at this center.

b) The recommendation by the Task Force to increase the number of General Practice Residencies to 50% of the dental graduates by 1985 is totally unrealistic.

c) A general dentistry program, based in the dental school, is not recommended.

d) The General Practice Residency is the most practical solution to the "knowledge crunch" of the predoctoral curriculum rather than a fifth year of dental school, as proposed by some educators. However, the predoctoral curriculum should *first* be revised and updated (on a continuing basis) to make it more relevant to the actual nature of general practice.

7. *Certificate/Degree Programs*

Should the programs leading to the Master's degree be of longer duration, in-residence, than the certificate programs?

a) It is essential that the research-thesis requirements for the degree *not* compromise the academic and clinical requirements for certification in the specialty. Therefore, programs wishing to award the Master's degree should inform candidates that a minimum of four months beyond the time requirement stated in the respective Guidelines for Advanced Dental Education Programs would frequently be required for completion of the degree.

8. *New Degree (Ph.D.) Programs*

Should programs in the graduate dental areas leading to the Ph.D. degree be developed?

a) The concept of a Ph.D. in *combined* basic sciences (e.g. microbiology, biochemistry, anatomy, etc.) plus a certificate in a clinical specialty is recognized as a reasonable alternative for those seeking careers in dental education and research.

b) While there is some precedent for professional Ph.D. programs (e.g., nursing), it is virtually certain that they would not be approved by the Graduate School. Also, the Commission on Higher Education has ap-



proved few, if any, new graduate programs in recent years.

c) Alternative pathways to the Ph.D. are available via a major in a basic science with selected credits in "dental science" which have been approved by the Graduate School.

9. *Uniform Graduate Acceptance Dates*

Should the graduate dental programs participate in a "matching program" (with uniform acceptance dates) sponsored by AADS?

a) Although this program previously failed to gain acceptance, it will likely be proposed again by the AADS in a somewhat modified form.

b) No particular advantages to this school are seen in such a program at the present time.

10. *Graduate Student Evaluation*

What evaluation procedures should be required of graduate and certificate students?

a) All students, whether degree or certificate, should be required to pass comprehensive Oral and Written Examinations by the beginning of their second academic year.

b) All students, in order to qualify for either the degree or the certificate in a graduate area, must maintain a "B" average in the major field as well as an overall "B" average.

## Graduate Education at IUSD in 1985

The past five years have seen evolutionary (rather than revolutionary) changes in graduate dental education at this school as well as other institutions throughout the country. The overriding factor in program size has been economic constraints rather than any deliberate attempt to maintain an optimum generalist: specialist ratio. In the early 1980's, the continued escalation of graduate education costs for both the university and the student caused some reduction in the number of qualified applicants and encouraged the development of more accurate cost accounting—the dental management information system (DMIS), now a reality. This system provides, at the department level, a fairly accurate estimate of the cost of educating a graduate student. Efforts to tie graduate student stipends (either resident or teaching assistant) to graduate student-generated patient income have been largely unsuccessful, however. During

the past five years, tuition and fees as well as personal expenses for the student have continued to rise overall despite fluctuations in the economy and inflation rate. State support of higher education has not fully kept pace with costs, and students in general have been expected to assume a greater share of their educational expenses.

In this period we have seen a gradual increase in the number of people covered by various forms of dental insurance, with an attendant reduction in dental school patient population. Although there has been no significant shortage of graduate level patients, it became imperative to increase efficiency in patient flow and the delivery of comprehensive care.

Other financial factors which have secondarily affected the graduate programs include the modest increase in the number of general practice residencies. Dental student indebtedness, the lack of



opportunity for military service (as a post-doctoral residency), and the costs of setting up a private practice have increased the competition for admission to these programs.

During this five-year period, there has been only a moderate increase in the number of multidisciplinary seminars, "mini-courses" (chiefly research related), and short hospital rotations for graduate students. Progress in these areas has

been somewhat less than originally envisioned in 1980 and is attributed to both the locked-in nature of most of our graduate curricula and plain inertia or reluctance to change.

*Committee members: Drs. Roland Dykema, LaForrest Garner, Charles Hutton, Jerry Nieten, Timothy O'Leary, Profs. Paul Barton, Marjorie Swartz, and Dr. S. Miles Standidish, Chairman.*

## Faculty Affairs Committee

It's 1985—and the prevailing attitude among faculty members at Indiana University School of Dentistry supports a continued course of excellence for the School, including the scholarly productivity of individual faculty members, and a positive feeling toward students as respected colleagues. Reflecting back to the year 1980, it is easy to see how the School's educational policies have continued to improve. As an example, the 16 members of the 1980 Faculty Affairs Committee for the program "It's 1985" pointed out in their reports that our faculty members in that year were stressing efforts to enhance our teaching effectiveness, as well as to make significant contributions to research and service activities that would bring credit to the University.

In the area of teaching, in this year of 1985, our faculty members are persevering in providing students with optimal learning experiences: Improving instructional methods continues to be a priority goal of each faculty member in our School for the current 1985-86 academic year. Most of our faculty members are periodically using student ratings to sample their teaching, and thereby improve learning opportunities for students in the various settings of classroom, clinic, and laboratory. This stu-

dent feedback helps the faculty member match the instructional strategy with student needs. The student rating forms are returned directly to the department chairman or program director. This information is particularly valued by the part-time and full-time faculty members in the clinical setting, as well as by faculty members who present portions of a class session or of a course which uses the team teaching approach.

### Ratings Discussed

In 1980, a Subcommittee headed by Dr. Myron Kasle recommended that student ratings of faculty members teaching in the various settings of classroom, clinic, and laboratory be required in the evaluation of faculty performance. Although the Faculty Affairs Committee supported that recommendation, strong opposition was voiced in the 1980, November 2nd, workshop seminar. Discussions within the Faculty Affairs Committee and the workshop seminar were focused on two questions: "Who would receive the completed student rating forms, i.e. the instructor or the Department Chairman-Program Director?" And, "How would the student rating forms be used, i.e. by the instructor for his or her own use in the major role of



improving teaching or by the Department Chairman-Program Director for promotion and salary consideration?"

Opinions on this issue continue to be mixed. The evaluation of all courses in the Dental School and the teaching performance of all faculty members are currently being reviewed in a joint effort by four School committees: Curriculum, Teaching, Faculty Affairs, and Promotion and Tenure. These activities are coordinated through the Dean's office. This joint venture was initiated by a 1980 Subcommittee chaired by Dr. Jerry Nieten. The accountability of teaching performance by faculty members within our School and plans to institute a more motivational faculty annual review program were the basis for offering this coordinated structure for course and faculty evaluation in the School of Dentistry.

### Time for Research

Since research continues to be an expected activity of each faculty member in our University, every person with a full-time appointment on the School of Dentistry faculty has a minimum of one-half day per week scheduled for research and other creative activity looking toward publication. This is in addition to the scheduled one day per week for personal or professional development by the full-time faculty member.

During 1980, a Subcommittee chaired by Dr. Chris Miller conducted a survey among 56 dental school deans. Most respondents to these questionnaires indicated that they required some degree of research or creative activity for promotion of faculty members. In a survey of Department Chairmen and Program Directors in our own School, more than 50 percent of the respondents said their faculty members needed more time to conduct research.

Making scheduled time available was achieved partly by having each Chair-

man and Program Director analyze the work load of the unit's full-time faculty members and then to conserve time by combining assignments, designing increased use of self-study programs for students, and in general developing more effective teaching approaches.

Gains in this area were also accomplished by shifting or reducing committee assignments or administrative responsibilities, and passing some teaching or service responsibilities along to other current or new faculty members.

### Communication Improved

Another 1980 Subcommittee, headed by Dr. Jack Schaaf, studied means of improving communication *within* departments or programs, as well as *between* departments and programs. Today in 1985, as compared to 1980, every faculty member *within* a department or program receives a continuous flow of information on grading policy, research projects, literature pertinent to the appropriate specialty, as well as memorandums concerning daily operation of the department or program. This improvement in communications came about partially because Department Chairmen and Program Directors placed a priority on becoming well informed and were interested in guiding the faculty members and staff under their leadership. Part-time faculty members are especially appreciative of this effort to upgrade communications.

Regarding communication *within* departments and programs, our School's Faculty Council directed departments and programs to hold faculty meetings at least once per month with the expectation that every full-time and part-time faculty member will attend and have a voice at the meeting. Agenda items are distributed in advance, including educational material such as synopses of classroom presentations, policy and operations, grading standards, educational



objectives, and scientific progress in the particular area. Minutes for these meetings are shared with the Dean's Office to ensure that the administration is aware of the progress being made, as well as the interests, concerns, and needs of each unit.

To improve interdepartmental and interprogram communication, invitations are frequently offered by departments and programs to join for a sharing of progress in teaching methods, specialty advancement, research, etc.

Lack of cooperation between faculty members, as identified in the 1980 survey, has been turned around, and we now have a group of cooperative dental educators who not only attend to their appropriate administrative, department, or program responsibilities, but also willingly share information and experience with colleagues elsewhere in the School.

### **New Recruiting Approach**

Today, in 1985, Department Chairman and Program Directors stress in their recruiting of part-time faculty members those candidates who have demonstrated the desire for a long-term position. Leaders of our School are no longer "writing off" certain part-time faculty members as "short-termers" or individuals who are expected to be extremely limited contributors to dental education.

Part-time faculty members are assigned one-half day per month for self-improvement or for research looking toward publication. Furthermore, each part-time faculty member at our School is assigned to a full-time member to develop teaching approaches and research projects. A change in attitude toward part-time faculty members has been largely due to the work by Dr. John Risch and his Subcommittee in 1980. Part-time faculty members enjoy equal stature with full-time colleagues and they are going the extra mile to qualify as

effective teachers in various settings and to contribute regularly to the dental literature.

In certain instances additional faculty have been requested from the administration, on the basis that scheduled time is being provided for research and self-improvement by part-time faculty members.

In 1985, Department Chairmen and Program Directors are rendering strong leadership regarding student performance in such matters as attendance, dress, and clinical procedures.

### **Leadership Stressed**

Dr. Hala Henderson and her Subcommittee in 1980 surveyed the literature on effective departmental administration in dental schools and recommended that unit Chairmen be encouraged to render strong leadership in such matters as student attendance, dress, and clinical procedure. This process has been facilitated by individual flowcharts which now delineate the individual faculty member's responsibilities. These responsibilities are made clear to new faculty members before appointment and during subsequent orientation sessions. In addition, experts on management procedures from business corporations, as well as management specialists in the academic community, provide periodic in-service training programs for Department Chairmen and Program Directors.

In 1985 monthly or even daily evaluation of the students' progress in clinical activities, as well as didactic work, is accomplished by use of computer technology. This system was recommended by a 1980 Subcommittee chaired by Dr. John Williams. Each individual's performance is reviewed at least monthly and compared to a "standard" so as to identify students who are not progressing at a satisfactory rate in overall accomplish-



ment. Students of below normal achievement are counseled on their deficiencies and ways are sought of helping them to achieve a satisfactory level. With this system, the student is always adequately apprised of his/her situation and thus we have avoided legal entanglements when it has been necessary to recommend dismissal of a student.

### **Sabbatical Leaves**

Making sabbatical leaves more available for full-time faculty members was recommended in 1980 by a Subcommittee chaired by Dr. Larry Goldblatt. This recommendation resulted from a survey of Dental School Deans in the United States and department heads at our School. Forty percent (40%) of the responding Deans indicated in 1980 that their School had a liberal policy on sabbatical leaves and that they felt the system was good. All of our department heads who responded said they approved of a proposed short-term sabbatical leave policy for their faculty members. A mini-sabbatical leave option for periods less than six months, but not less than one month is now in effect. This leave can be taken in multiple small segments over several years provided that the cumulative leave time allowed between sabbatical years is not exceeded. This policy was approved by our Faculty Council, the IUPUI Faculty Council, and the Indiana University Board of Trustees.

Our faculty members at the School of Dentistry now receive effective guidance in financial matters, such as TIAA and CREF. As recommended by a Subcommittee chaired by Prof. Nita Chisler, after a 1980 survey, speakers are now engaged to inform faculty members on financial matters, and current publications on TIAA and CREF are available in our Library. At a noon seminar next week, a representative from the National Office of TIAA and CREF will speak and

answer questions from individuals. Information on possible opportunities for faculty members to participate in the Keough Plan has also been made available.

### **Departmental Visits**

Based on another recommendation made five years ago by a Subcommittee directed by Dr. Michael Baumgartner, faculty members now spend one full day at least once a year visiting another department or program in our dental School. This rotational plan has kept our faculty members abreast of instructional procedures used in various departments, as well as methods of evaluating clinical progress of students, and identifying methods of peer evaluation of faculty members' teaching.

Also on the subject of communication, a monthly meeting is now conducted, with the Dean and the Chairman, Program Director, or a representative from each unit in attendance. In addition, a monthly newsletter is published, as well as a yearbook listing each faculty member, his background, his special expertise and his research interest.

During 1980, a Subcommittee chaired by Dr. James McDonald proposed that a special cadre of research workers be established to assist all faculty members in developing research ideas and securing funds for the projects. Of course, a basic group of researchers did exist in the School of Dentistry in 1980; however, since that time the availability of this special research cadre has been publicized to all faculty members and it stands ready to assist individuals who demonstrate motivation and initiative with regard to research projects.

### **Research Unit Formed**

Increased emphasis on research at our School came about partially because a Division of Dental Research was estab-



lished on recommendation of the Faculty Affairs Committee and partially because every full-time and part-time faculty member realized the value of participating in investigations leading to publication, particularly in view of the University's expectations of the faculty members' essential role in research.

The Dean for Research directs this Division with the main objective being to assist all faculty members in developing research ideas and to generate research funds from outside sources.

As we review our resources in 1985, we are pleased to realize that we have a computerized retrieval system in our Library for literature searches, in addition to CRT display terminals, which are like television screens, in each clinic for maintaining patient records. The 1980 Subcommittee, chaired by Prof. Marie Sparks cited the importance of cataloging all library materials on computer for use by faculty members and students. As the Subcommittee also recommended, patient records are not only maintained by computer with a CRT terminal in all clinics but a program has been devised to use and maintain statistical records on clinical procedures performed.

All faculty members at the School of Dentistry who are interested in intramural practice and wish to participate in decision-making groups regarding such practice may now submit suggestions or recommendations to the School's intramural Dental Service Plan Advisory Committee. A 1980 Subcommittee headed by Prof. Carla Totten investigated the concerns of faculty members who wanted to participate in this manner regarding the use of assisting staff or

other important matters pertaining to intramural practice. The Subcommittee won approval for its recommendation that all interested faculty members be encouraged to submit suggestions directly to the Plan's Advisory Committee.

In this year of 1985 faculty members at the School of Dentistry continue to be the most important resource in our Unit of higher education as they proceed with the essential mission of producing competent dentists and dental auxiliary staff members. Because of the dedication and cooperative attitude of our faculty members over the past one hundred years and more, our School is continuing on a course of excellence as manifested in teaching effectiveness, scholarly productivity, and services that bring credit to the University.

*Committee members: Drs. Michael Baumgartner, Lawrence Goldblatt, Hala Henderson, Myron Kasle, James McDonald, Chris Miller, Jerry Nieten, John Risch, Jack Schaaf, John Williams, Profs. Paul Barton, Juanita Chisler, Harold Shaffer, Marie Sparks, Carla Totten, and Dr. James Roche, Chairman.*

### Raising the Ante

Ten years ago scientists figured out that the human body's total worth in minerals and trace elements was about 98 cents. But like everything else in this inflationary period, our bodies have increased in value. A professor of anatomy at the University of Illinois says we are now worth about \$7.28. If you have gold crowns or amalgam fillings, well, your price goes up!



# Extramural Programs at I. U. S. D.

## . . . . .The Irish Connection

*R. G. Schimmele, Associate Dean for  
Program Development & Extramural Programs*

A number of good folks from the Emerald Isle, home of the Blarney Stone, medieval castles, exotic scenery, and the leprechaun (the little old man who, if captured, will reveal the location of a buried crock of gold) joined with their counterparts at the Indiana University School of Dentistry during the summer of 1980 to make possible an undergraduate student exchange program. The exchange was sponsored by the Dublin Dental Hospital and our own Dental School.

There exists a long history of post-graduate study at Indiana University by Irish dentists, primarily in the specialty of Pedodontics but also in Periodontics and Fixed and Removable Prosthodontics. However, this undergraduate exchange program, as a part of the Extramural Program is believed to be unique.

Its purpose was to offer the Irish and U.S. students an opportunity to observe the delivery of dental health care in a totally new and different environment, to compare teaching philosophies and methods, and to stimulate social aware-

ness of the impact of dental health conditions of the two societies within different political systems. The four students involved in the program were Sean Malone and Michael Fenlon from the Dublin Dental Hospital, and Patrick Dunigan and John Atkinson from the Indiana University School of Dentistry. Reports from each of the four concerning their experiences follow.

### Notes from Sean Malone

Michael and I arrived in New York on Wednesday, August 13, and spent the night in the students' hostel. We arrived in Indianapolis on Thursday, August 14, and went from the airport with Dr. Ralph G. Schimmele to the Medical Center. That evening we were dinner guests of Dr. and Mrs. James R. Roche. Friday morning we toured Indiana University School of Dentistry. I was struck by the facilities available for research, particularly the scanning electron microscope and animal facilities. Dr. Schimmele showed us around the various departments of the School. Of particular inter-



Confirming return flight plans to Dublin and home from Indianapolis International.



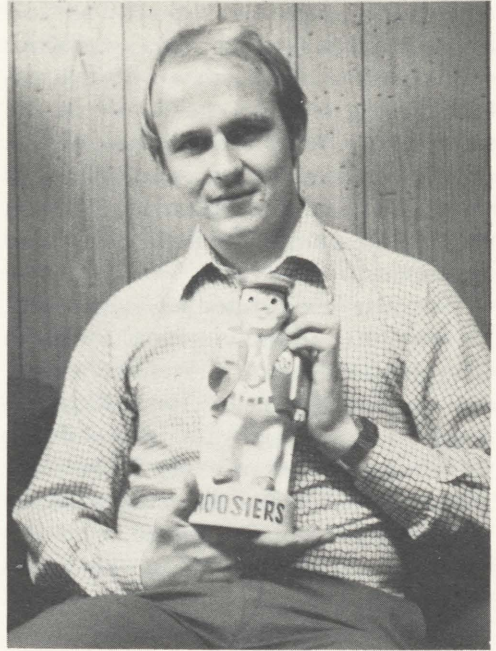
Dean McDonald and the Irish lads discuss the flight home.



est was the Radiology Department and I much appreciated the kindness shown to me by Dr. Myron J. Kasle, Department Chairman. Dr. Roche joined us during the tour and provided us with an extensive exposure to the Department of Pedodontics. Friday afternoon I went to Dr. Dan Rohn's office. He and his wife, Jackie, put me up in their home for the remainder of the two weeks. I cannot say enough for the generosity and kindness with which they treated me. They made me feel like a member of the family.

Over the weekend they took me to visit Indianapolis, organized games of golf and generally could not have been more welcoming to me. The following Monday Dr. Rohn had arranged for me to visit Dr. David McClure's office in Anderson. Dr. McClure is an excellent teacher. He took the trouble to emphasize certain points regarding children's dentistry, particularly the use of Demerol and Phenergan with the child patient as a means of calming them and making them more amenable to treatment; also the use of full mouth local anesthesia in a child, reducing the possibility of the child biting his lip because he will not compare the two sides. The importance of sending diagnostic reports to the parents before treatment was also stressed. This provides the parents with a better understanding of the dental treatment their child is to have and the approximate cost. I also had the opportunity to observe his skill as an operator when he did a pulpotomy on a central incisor of a less than cooperative 15-month-old child. Dr. McClure also provided me with some sage advice; he suggested that whenever you do not have the trust and confidence of the parents and patient, you should consider discontinuing treatment.

On Tuesday, I visited Dr. Steele, a young general practitioner in Alexandria with an interest in Crown and Bridge. He taught me three things: (1) the importance of determining as many static and dynamic jaw relations as pos-



**A convert to Big Red and Hoosier Pride—Michael Fenlon.**



**Hoosier Pride at its best! Dr. V. R. Williams**



sible when constructing crowns and bridges; (2) how to conduct a practice with maximum efficiency, with two patients being treated excellently at the same time; (3) how to communicate to a patient the need for a very complex and extensive treatment plan, by making them understand the benefits of this treatment to them.

The next day I visited I.U. again with Dr. McClure. In the morning, I went to Riley Hospital where I attended a General Anesthesia session for full mouth dentistry on a mentally retarded child. In the afternoon I went to the Pedodontic Department where I observed students treating children. Dr. Roche, who was there, very kindly showed me videotapes of behavior management problems that he and his staff and students had dealt with in children.

Thursday I visited the office of Dr. Worster and Dr. Culler; two practicing orthodontists in Anderson. I also visited the office of Dr. Worster's brother, who is a general practitioner. He impressed me with his ability to communicate with patients. On the following day I went to the office of Dr. Pierce, another general practitioner in Anderson. Dr. Pierce showed me a certain attitude to dentistry which I greatly admired. He gave himself plenty of time for his procedures, had rests when he felt he needed them, and thus achieved a standard of excellence without tiring himself. Dr. Pierce is also very successful in communicating with the patients.

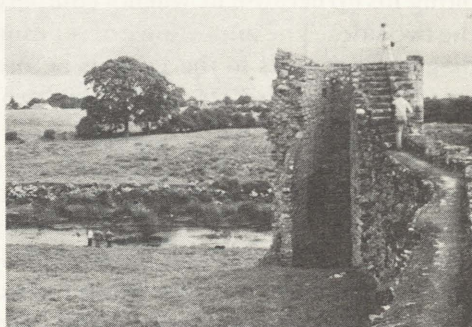
I flew to Chicago with Dr. Rohn on Saturday to see the city and on Sunday I flew to Michigan with Dr. and Mrs. Rohn for a meeting of the Flying Dentists Association. The next day included a visit to Dr. Rohn's office. Again, I was impressed by the importance of communicating with the patient. Dr. Rohn made a statement that has stayed with me when he said that the dentist must nearly adjust his personality to each individual patient as he treats them. On Tuesday I



**Panoramic view of picturesque Irish West Coast.**



**Castle ruins at Navon, Ireland, dating back 1000 years.**



**Another view of the castle.**



**The pioneers (from left): John Atkinson, Sean Malone, Michael Fenlon and Patrick Dunigan.**



visited Dr. Paul Van Dorn, a periodontist practicing in Anderson. I was very interested in how he arranged his patient schedules: three pre-surgery sessions to include scaling and oral hygiene instruction, two surgery sessions, two recovery sessions and recall every three to six months postoperatively to check on oral hygiene, and follow up scaling.

Finally, if the question, "How would you compare American dentistry to Irish dentistry?" were asked of me, I would say that American dentistry is more complete because the American dentist can offer a type of dentistry more closely approaching ideal dentistry than the Irish dentist for two reasons: (1) there are many more dentists per patient in America than in Ireland and therefore there are fewer patients who have been neglected over a long period of time; and (2) American people appear to have a higher dental I.Q. and are more inclined to place a higher priority on total dental treatment.

I would like to express my most sincere thanks to the following: Dr. Schimmele, Dr. Roche, Dr. McClure, Dr. Steele, Dr. Worster, Dr. Culler, Dr. Pierce, Dr. Rohn, and Dr. Van Dorn for their kind help to me. I especially want to thank Dr. Rohn and his wife for being so kind and hospitable to me during my stay at their home and also for organizing the schedule to see all the various practices that I visited while I was in America.

*Sean Malone*

### **Notes from Mike Fenlon**

On August 13, 1980, we arrived in the U.S. from Dublin aboard Aer Lingus Irish Airlines. After clearing through customs, which required approximately 70 minutes, we immediately went to a hotel which is recognized as a meeting place for visiting Irish students. Quite by accident and much to my surprise I met my first cousin and a former classmate of mine who were also visiting the States.

The following morning found Sean and me wandering about New York City. We were very much aware of the dramatic difference between the city of Dublin and the city of New York. Late that afternoon we arrived at Indianapolis International Airport and were met by Dr. Ralph Schimmele. What we all thought might be a problem of identification at the airport proved to be no problem at all. Identification for Sean and myself with Dr. Schimmele proved to require nothing more than eye contact and a smile. That evening we met Dr. and Mrs. James Roche and were their guests at an excellent meal and a very pleasant evening.

Dr. Roche gave us a tour of the Dental School the next day and introduced us to many faculty members. We were impressed with the excellent all-around facilities. That afternoon Dr. Schimmele introduced Sean to Dr. Dan Rohn of Alexandria, and I went on to Fort Wayne where I met the Schimmele family and was made very welcome. The following two days were spent seeing the sights of Fort Wayne, attending an amateur soccer game and visiting the I.U.-P.U. campus in Fort Wayne where I witnessed methods and equipment used in formulating experimental toothpaste and chewing gums. Next on the schedule came two days spent in the offices of Drs. Dumas, Bojrab, and Shambaugh in Fort Wayne. Besides having the opportunity of witnessing very efficient and well organized dental surgery practices, I attended a Rotary Club luncheon one day and had lunch with eight local dentists on the next. In addition to an exchange of professional information we enjoyed a lively exchange of political views. Late Tuesday afternoon, Dr. Schimmele and I left Fort Wayne for Winchester, Indiana, and the office of Dr. V. R. Williams where I was to remain until departure time. I was made very welcome by the Williams family.



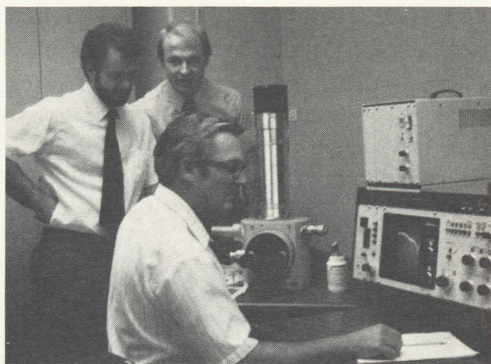
The next week (August 20-27) was spent with Dr. Williams and his family. Dr. Williams has a very impressive approach towards the practice of general dentistry and an excellent philosophy of dealing with and treating patients. In addition to being accepted as a part of the office team, which was most enjoyable, I visited Ball State University, saw a high school football game (my first), attended a horse show, toured a glass factory, moulding plant, and a plant that builds race cars. We also visited Wright Patterson Air Force Museum, which was well worth seeing, and Kings Island Amusement Park, which was most enjoyable. Likewise Dr. Williams and I spent several pleasant hours around the swimming pool discussing the political and economic systems of Ireland and the U.S., as well as the U.S. legal system and the impact of the I.D.A. and A.D.A. on the practice of dentistry.

All too soon my visit had ended. On August 28, we assembled in the Dean's Office at the Dental School where Dean Ralph McDonald presented Sean and me with mementoes of our visit to Indiana University School of Dentistry, and early that afternoon I was once more airborne and en route to my home in Ireland. As the airplane left New York I recalled the events of an exciting experience and the excellent hospitality of my new-found American friends.

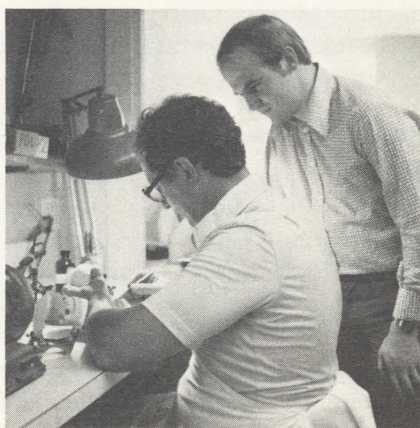
*Mike Fenlon*

### Notes from Patrick Dunigan

Our initial contact in Dublin was with the Irish Dental Students. John Tiernan, the Student Society President, and Mike Fenlon, senior dental student, met John Atkinson and me at the landing pier. Getting to know these young men was my first chance to contrast our two worlds. Before leaving for Ireland I had many preconceived ideas about differences there would be, and indeed there were differences. But I found many



**Dr. Keith Moore explains Scanning Electron Microscope to Sean and Michael.**



**The technique of "setting teeth" is discussed by Mike Fenlon and Mr. Peperak of Peperak Dental Lab.**



**Sean bids fond farewell to Dan and Jackie Rohn.**



similarities as well. For example, housing was provided by Mike Fenlon. We stayed in his apartment and it was quite similar to our own in Indianapolis: furnished with standard plumbing, heating, kitchen, TV, etc. etc. Also, transportation was provided by Mike Fenlon—we were very fortunate that Mike drove us to and from each office in his VW. Food was provided by the dental students and was not much different from what we have.

On the subject of dentistry, our knowledge of dental procedures was very similar. We could discuss endodontic, operative, oral surgery procedures without much difficulty. There were notable differences in the means of achieving a dental education, however. For example, almost all the students were financed by one bank (if they needed financing), and this bank held parties for the dental students. The bank provided many services for the students because it would be financing them as dentists in private practice. The bank even provided John Atkinson and me and a few Dublin Dental Students with a formal dinner.

In Ireland the dental education system is based on the "English system"; hence, students are selected for dental school directly from high school. They are involved in a five and one-half year curriculum and are approximately 22 or 23 years old when they finish. Their clinical experiences are also much different from ours. For example, their initial clinical experience is with a denture patient, as opposed to ours which begins with a prophylaxis or operative patient. Their crown and bridge requirements are less and they do none of their own crown and bridge laboratory work. Another difference involved communication and terminology. A dental office is called a "surgery." They do not use the universal naming and numbering of teeth. The maxillary centrals are both 1's, the laterals are 2's, canines 3's, etc. So there are maxillary and mandibular, left and right,

1, 2, 3, 4, 5, 6, 7, and 8. One final example: operative dentistry is termed "conservative" dentistry.

The experience I had with dental practitioners in Ireland was both interesting and instructive. John Tiernan arranged my itinerary with visits to eight dental offices, and I also had the opportunity to talk with several other practitioners. My contacts included those with seven graduates of I.U.S.D.: Drs. Nick Mahon, Derry Shanley, and Declan Corcoran, all M.S.D. in Perio; Dr. Billy Davis, M.S.D. in Crown & Bridge; and Dr. John Walsh, Dr. Martin Walshe and Dr. Liam Convery, all M.S.D. in Pedo. During my visits to various dental facilities I was allowed to assist with operative procedures, as well as with some periodontal procedures, including surgery; to serve as assistant in a five-hour procedure of restoring a woman's mouth; and to assist the anesthesiologist in preparing an oral surgery patient for general anesthesia (this last in a hospital).

The time that I spent with Dr. Billy Davis was very enlightening from the point of view of practice management. Dr. Davis's procedures were of the IUSD variety, but the office setting was unusual. He is in a group practice that consists of seven dentists and sixteen dental auxiliaries for a total of twenty-three personnel. It amazed me how this many people could be organized under one roof. The dentists consisted of two general practitioners, two crown and bridge specialists, and three periodontists (including Dr. Declan Corcoran, a 1980 M.S.D. graduate from I.U.). The auxiliaries included receptionists, "dental nurses," and dental lab technicians. This group practice certainly gave me much to think about for the time when I initiate my own practice. The dentists were very cooperative with each other and had an open door policy where they shared cases and discussed openly their thoughts and feelings. They were also encouraged to do postgraduate training

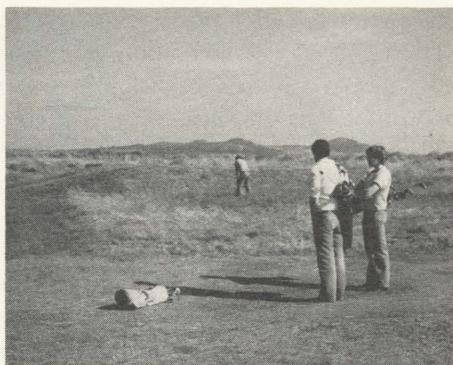


in their respective fields. This practice, in my opinion, was one of the highest quality in Dublin and probably of all Ireland.

One of the Irish dentists whose offices I visited was Dr. Barry Harrington, who taught me a valuable lesson about keeping dentistry in perspective. Dr. Harrington asked some very basic questions about dentistry, which made me re-evaluate the dental profession. Some examples of the type of questions that he would ask: "What is a dentist?" "What makes a dentist different from any other person?" "What is the objective of dentistry?" These are questions that are seldom asked of students and sometimes not considered. This man motivated me to re-evaluate some basic thoughts about the dental profession.

Dr. Martin Walshe, who is current President of the Society of I.U. Dental Graduates of Europe, is also a man of perspective who is well traveled and well educated. He gave me a perspective of dentistry and of IUSD that perhaps no other man could give. It is unfortunate that more students could not be influenced by a man such as this. Dr. Walshe portrayed a very positive image of I.U., Dr. Maynard Hine, and Dr. Ralph McDonald, for he holds these people and Indiana University in high esteem. He often talked of the historical and political development of dentistry, particularly that of Indiana University. Also Dr. Walshe impressed me by being well traveled; he spent two years at Indiana University and nine months in Norway teaching pedodontics, and has had experience with several other countries as well.

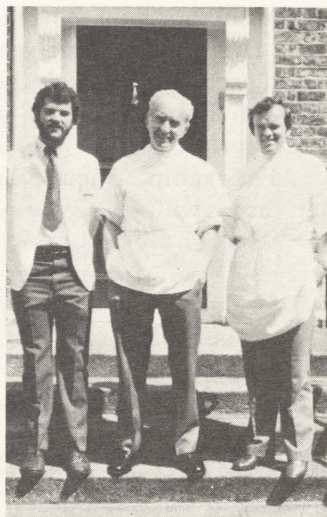
Dr. Shanley greatly expanded my concepts about dentistry and its diversity. He is a purist and feels that periodontics is the foundation of all dentistry. He is concerned with how dentistry can affect the largest number of people. He feels that education is one way, and we discussed teaching methods for developing these concepts in dentists. He is a man of very



**In the rough on the course where the Irish Open is held. From left, Kevin Malone, Sean Malone, Dr. Nick Mahon (I.U. Periodontic Program Graduate).**



**Pat Dunigan blasting from sand trap.**



**Pat Dunigan (left), Dr. O'Sullivan and Dr. Billy Davis (I.U. Fixed and Removable Prosthodontics Program Graduate).**



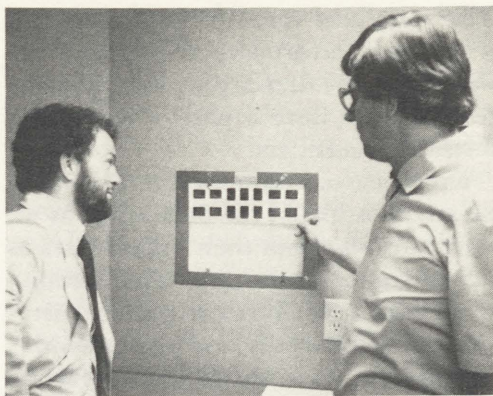
high standards (obviously the influence of Dr. Timothy O'Leary). One point that he impressed on me was that a dentist is not limited to technical or mechanical skills, but that a dentist can specialize in what he called Sociological Dentistry. This greatly expands the concept of what a dentist can do. With additional training a dentist could analyze epidemiologic, sociologic, genetic, psychological and various other factors related to dentistry. He definitely thinks of dentistry in a universal manner and is concerned with expanding the limits of dentistry. I felt that I was associating with a true pioneer in dentistry.

This exchange program was a valuable learning experience. Specifically, I learned how much influence Indiana University School of Dentistry has had on dentistry in Ireland and England. I.U. is fortunate that we have graduate programs, where the schools that I visited in England and Ireland did not. This was a common complaint, that they did not have graduate programs and that they sorely need specialists. Hence, some place like IUSD becomes a refuge for the needs of other countries. I would also like to point out that I did not learn that much about dentistry per se while in Ireland and the United Kingdom (I was also able to visit dental schools in Belfast and Edinburgh while overseas), but what I did learn was a matter of perspective; keeping dentistry and dental education in perspective. Hence, these countries were a "refuge" for me as well and one can learn much from them.

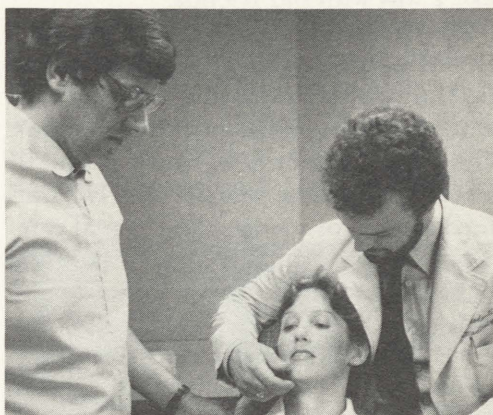
*Patrick Dunigan*

### Notes from John Atkinson

On Sunday, July 27, 1980, we arrived in Dublin on the ferry from Holly Head. We were greeted by John Tiernan, president of the Dublin Student Dental Society, and Michael Fenlon, one of the Irish students who visited practices in Indiana.



**Dr. Paul Van Dorn reviews patient radiographs with Sean Malone.**



**Dr. Van Dorn and Sean Malone discuss treatment with patient.**



**Dr. Martin Walshe, I.U. Pedodontic Program Graduate, and family.**



They provided very fine hospitality and it was very informal and pleasant. Always, from the first day, we were made to feel as if we were a part of the group instead of outsiders.

Everyone was interested in what dental school is like in the States, just as we were curious about their experiences as dental students. We discovered striking similarities with regard to faculty-student interactions and the pressures felt by the students. (I'm sure faculty members feel many pressures; we just haven't experienced them ourselves.) So after our first evening of trading stories of our experiences in dental school, I felt like I was with old friends.

On the second morning in Ireland I visited Crumlin Clinic, which is one of Dublin's public health clinics. Ireland has a number of public health programs. One such program is set up for people of a very low income bracket who can't afford to pay for medical and dental care. This program differs from England's national health insurance program in that only the very needy qualify for benefits. In England, everyone is entitled to public health care. At Crumlin Clinic I met a Dr. O'Hickey, director of dental concerns in the clinic. Dr. O'Hickey described other public health programs to me. School children qualify for free dental treatment through age 12, an age at which those who will continue to pursue a higher education (e.g. college preparatory) part company with those who will continue their schooling in some kind of vocational program (trade school). The college preparatory students qualify for more public health benefits starting at age 14 until age 18. The two-year gap between ages 12 and 14 was unintentional, as the programs resulted from two separate pieces of legislation. You know, politics. One of the problems with public health programs is the long waiting lists for treatment. Also, it is sometimes difficult to find dentists who are willing to work for the salaries provided.

Dr. O'Hickey has done graduate studies in statistics and is involved in a program utilizing computers which focuses on dental care, its availability in certain areas of the world and the efficacy of different public health programs throughout the world. Information that he and many of his colleagues compile may be valuable to committees in the United States which are looking into the possibility of instituting a national health insurance program here.

I also visited the office of a practitioner named Cormac Brady, who goes by the title of Mr. Brady. This man was very causal and relaxed. He had nice modern equipment and a nice roomy office. But although he was very casual, he was very professional toward his patients and a stickler for detail and quality in his work. He is apparently well liked by his patients and is well known. While I was in his office he greeted a patient who had "traveled a great distance to be with us." At one point his receptionist informed him that a Mrs. So-and-so from Luxembourg was on the phone. She had heard of his work from a friend and was interested in making an appointment.

Mr. Brady likes to do much of his own lab work. Good dental technicians are few and far between in Ireland. Most of the lab work that he sends out goes to Canada. He believes that since technicians and patients neither see nor communicate with each other, it is up to the dentist to provide the necessary refinements in prosthetic devices. This includes staining and glazing RJC's and bridgework. He seems to regard his work more as a hobby than a job. I would say that Cormac Brady is the man that made the biggest impression on me during my visit to Ireland.

Another place that I visited was the office of Dr. Barry Harrington. The thought that comes to mind when I recall my visit to his office is a question that he posed to me: namely, what did I consider to be the primary objective of a dentist



when treating a patient. I responded by saying that the dentist should determine what problems the patient has and then restore his mouth to a state of dental health. Dr. Harrington then pointed out that there are three variables that a dentist should take into consideration when planning a patient's treatment: (1) the patient's oral health and function; (2) social acceptability (the patient must be able to go out in public without being overly conscious of a dental problem which is unsightly); and (3) the economic factor (it makes little sense to provide the patient with the best dental care available if it puts him in the poor house in the process). According to Dr. Harrington, it is the dentist's responsibility to bring his patient to an equilibrium among these variables, based on the individual's personal needs.

At one point in our visit Pat Dunigan and I were included in a bachelor party for one of the graduating dental students who was soon to be wed. Now this was an experience. We had a chance to see some of the boys (lads) get together, talk about old times, tell jokes and so on. I was impressed by the way they took turns singing Irish folk songs. I was really embarrassed when I couldn't remember the words to any American songs. We were under pressure to make our contribution to the merry-making. That weekend we

attended the wedding reception where there was music and dancing. And afterward we went to the bride's parents' house where all the friends and relatives were gathered. One of the priests who was present was a good pianist and everyone sang songs. I really felt that we were lucky to be included in these events. I heard someone saying, "I think we should have our American friends sing 'Yankee Doodle'." Everyone tried to coerce us into singing. This was embarrassing at the time, but a fond recollection now.

*John Atkinson*

As with all projects, programs, and visits there is a beginning and an end. The end to the saga of the "Irish Connection" came on August 28 when Sean and Michael left Indianapolis for New York and the return flight to Ireland. As



Dr. Cormac Brady and family at the door of his office. Dr. Brady's dental nurse stands to his right, behind Mrs. Brady.



Dr. Barry Harrington and dental nurse, Katherine, at entrance to his office.



I watched our new friends depart Hoosierland, many situations and occurrences that I had shared with Sean and Mike during the past two weeks ran through my mind. I remembered most vividly those humorous things that happened in the first two days we were together. I remember that the trunk space and the overall size of the Chevy Malibu University car that I was driving was most impressive to the lads when I first picked them up at the airport. During that evening in our motel room, the three of us watched President Carter accept the Democratic party nomination for re-election, and it was interesting to watch their reactions to a political convention.

Last, but certainly not least, was again the University vehicle which provided their transportation. As the result of a collision in its past, 'ole I.U. car #315 had some peculiar wiring. I had discovered, soon after I started driving the car, that it was possible to turn the car radio on or off by any of three ways. It was possible to use the conventional method of the "off-on" button on the radio, or you could depress the horn and achieve the same result, or better yet you needed only to push the windshield wiper button to "on". I had great fun demonstrating the uniqueness of this "exceptional" automobile to our guests and they in turn welcomed the opportunity to test their engineering talents with technical comments as to the basic problem.

So many people contributed in one way or another to this international exchange of dental students that I hesitate to single out anyone, but I must offer my personal thanks to Dick Williams, his family and office staff, and to Dan and Jackie Rohn also a big THANK YOU.

My thanks also to the four student "pioneers" who I believe would agree that this was an enjoyable learning experi-



Pat Dunigan (left), Dr. O'Hickey, Sean Malone and Bill Anderson at entrance to Dublin Health Centre facility.

ence for all of us, resulting in an even stronger bond between the Sons of Erin at the Dublin Dental Hospital and the Hoosiers at Indiana University School of Dentistry.

## Dr. Hunley Gets Honorary Degree

Dr. Theodore R. Hunley, Professor of Operative Dentistry at the Indiana University School of Dentistry, was awarded an honorary Doctor of Science degree by Oakland City College at recent commencement exercises. A 1938 graduate of the College, Dr. Hunley received his D.D.S. from St. Louis University in 1945. Upon his retirement in 1970 as a career dental officer in the U.S. Navy Dental Corps, he taught at Georgetown University School of Dentistry, where he was Chairman of Oral Diagnosis and Continuing Education. Now a resident of Spencer, Indiana, Dr. Hunley accepted a part-time appointment at the I.U. Dental School in 1979.



# Mercy Mission in Hong Kong

John Meier

*A 1976 graduate of the Indiana University School of Dentistry, Dr. John Meier, traveled half-way around the world last summer on a mercy mission, sponsored by Rotary International, to provide dental treatment in Hong Kong to refugees among the thousands of "boat people" and other dispossessed persons from war-torn areas of South-east Asia. Dr. Meier, who practices in Columbia City, Indiana, was accompanied by his wife, and the following comments are excerpted from the report he filed upon their return.*

Our flight from San Francisco to Hong Kong was fourteen and one-half hours. Upon arrival at Hong Kong's Kai Tak airport, we received a message from Dr. George Choa giving us directions to the Salisbury Road YMCA, where we stayed. The YMCA is at the tip of the Kowloon peninsula (easy access to Hong Kong Island), and at the start of one of the world's most fantastic shopping areas. Hint: Any shopping should be done with the advice of local friends or experienced shoppers. And adjacent to the "Y" was the Peninsula Hotel, world renowned for its cuisine and service.

Our daily transportation to and from the camp was by a Red Cross minibus. Kai Tak North Refugee Camp is a converted Royal Air Force Barracks and compound which borders on the Northeast edge of Kai Tak Airport. It is completely surrounded by high fencing or stone walls. Each gate entering the compound is guarded. The largest building inside the camp is a cement five-story dormitory type building housing two to four families per room. Connected to the first floor of this building is a one-story wing housing the Medical and Dental clinics, as well as a small Hospital with OB

and Nursery wards. Several two-story cement buildings (about 60 X 120) are also used to house the Refugees. Most of the people, however, live in metal huts (approx. 40 X 80), with the roof height 25 feet and slanted. These huts are extremely overcrowded and hot. One centrally located metal building is used as the Administration Office.

According to Dr. David Muir, senior medical officer in charge of the hospital and clinic, the typical medical patient has rather routine complaints, "exotic" tropical diseases are almost nonexistent. There is, of course, a high incidence of tuberculosis and hepatitis among the refugees. Intestinal parasites are something of a problem. But malnutrition is rare, and the vast majority of medical patients at Kai Tak North are seen with the same colds, aches, and pains as any other population. Probably the most annoying maladies encountered are scabies and boils.

In spite of the aforementioned problems, one gets the feeling, after a few days in camp, that these people really are quite healthy and that it is their overcrowded living conditions that are complicating the medical treatment.

## The Typical Patient

The typical dental patient has severe dental caries and/or periodontal disease that necessitates removal of the tooth. We saw approximately 280 patients during our four weeks in camp. Seventy percent of them required oral surgery (extraction). The remaining 30 percent were exams, light periodontal scalings, alloys (fillings), acrylic resin fillings, and an occasional patient who refused treatment. Those few who refused treatment were usually referrals from the Medical



Clinic who thought they were coming to pick up medication to cure their bad tooth. This was typical of the communication problem.

Another complicating factor among the dental patients was that they came in only when there was pain, and the pain was all that they wanted taken care of. For every tooth we removed or treated, we saw three to five others that needed help. But no amount of explanation could convince them to get those other teeth treated. They preferred to wait until they had pain. A recent survey reported that there were 61,000 permanent teeth among Hong Kong's refugees that needed removal. During our time at the camp, we removed 285 teeth. At that rate, with that same population remaining constant, it would take over 16 years to just handle the extractions that are (according to the survey) necessary.

### **Limited Equipment**

Equipment at the clinic is fairly limited. There are two dental units and accompanying chairs in the clinic. One chair is a 1950 vintage hydraulic base and the other is a 1940 vintage pump-up base. Either one is quite adequate for oral surgery procedures. The newer unit has an air-rotor handpiece with water spray, but no adequate saliva ejector or high speed suction. The compressor used to drive the unit is very noisy and located at the foot of the chair. Any attempt to suppress this noise while doing fillings ended in failure. So we just got used to it.

There is no X-ray unit in the clinic, but in certain cases we could get a film taken at a local clinic. Transportation and red tape made this an inconvenience, so it was not done too often.

The lack of matrix bands for doing large surface alloys was annoying. This problem will be much easier to solve, however. The pre-mix alloy capsules that I took along worked very well. The

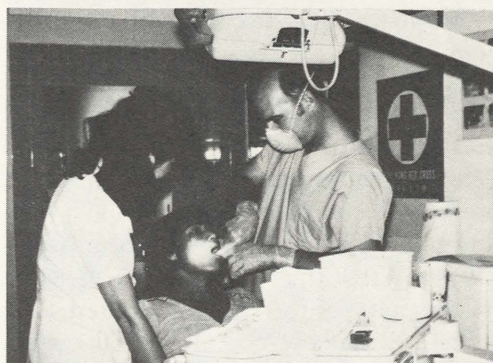
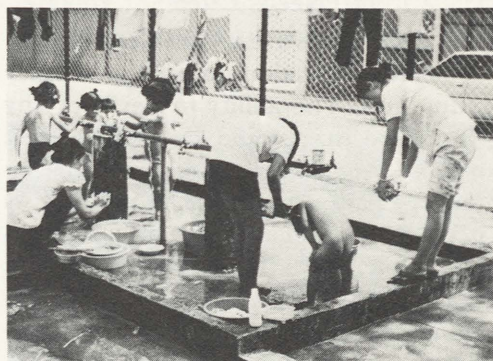
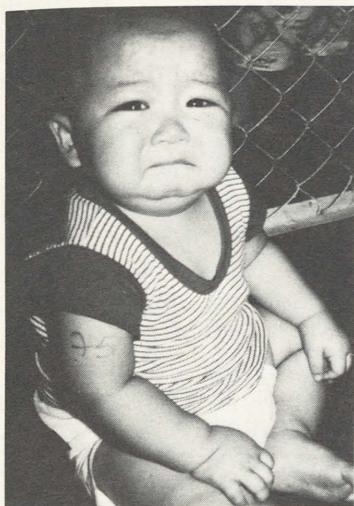
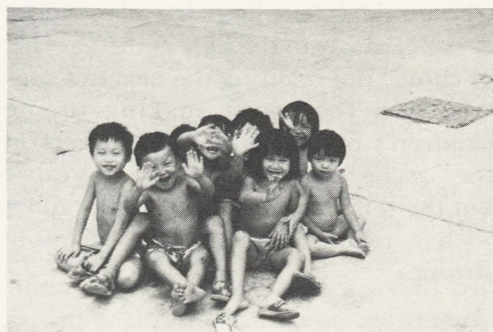
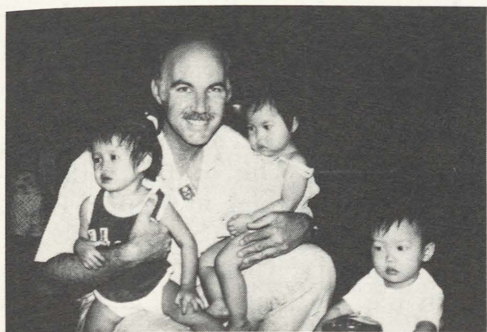
alloy-mercury proportioner in the clinic was not functioning, and the pre-mix capsules took the guess-work out of mixing the alloy. A good selection of friction-grip carbide burs would have been nice also. I think all 50 teeth we restored were prepared with the same bur.

### **Interpreters Used**

The dental assistant at Kai Tak North is Kelly Chu. Kelly is Cantonese, and quite capable of assisting in any procedure, and of course, acts as interpreter for the Cantonese-speaking patients. Although the statistics state that over 80 percent of the refugees in Hong Kong are ethnic Chinese, approximately half of the 280 patients we saw spoke only Vietnamese. Therefore on those occasions, still another clinic interpreter (Vietnamese-Cantonese) was needed. Kelly would then convert the Cantonese into English. Two interpreters weren't always needed. When an extraction was indicated, a simple flex of the wrist crossed two language barriers in a hurry, and the problem was quickly solved. But when a mother would bring in a child with a loose deciduous tooth, not requiring treatment, we sometimes needed both interpreters to communicate adequately.

Since my wife had joined me on our trip, we had planned on working together. However, due to the physical layout of the dental clinic, and Kelly's expert assistance, as well as the presence of Anisa, a woman dentist from Pakistan, any extra person in the room was unnecessary (the entire clinic was just a 10 X 15 room). It was mentioned on the bus that first morning that they were setting up a day care center at the camp, so my wife investigated and it was here that she found a definite need. The "Creche", as it was called, was set up to take care of small children (age range about six months to three years), while their par-





**Dr. John Meier and Friends**



ents worked outside the camp. The Creche was located just across the central courtyard of the camp from the dental clinic, and my wife spent the vast majority of her time there.

Because of what I was seeing in the dental clinic, I tended to protect "our kids" from what I call "Do-Gooders," who would donate large barrels of sticky caramel candy to the kids in the Creche, of course not realizing the negative contribution they were making to the children's oral health. The workers in the Creche were sympathetic to my cause but the temptation to keep Junior quiet with a piece of candy was certainly strong.

### Needs Cited

The Refugees are in dire need of dental health education, as well as dietary counseling. The ability to perform any procedure that would be in their best interest, regardless of presence or absence of pain, would also be helpful. As mentioned earlier, for every tooth removed, three or four others needed treatment. We routinely passed out Oral Hygiene Kits, but since we saw only 280 patients in a population of 10,000 refugees, we hardly made a dent in the problem.

Someone is needed who understands needs and prevention, from an oral health standpoint, who is also fluent in Vietnamese and Cantonese, and can work with the people. And when a program is set up, it should be strongly emphasized that the refugees take an active part in it. Once they are repatriated, they will find that the cost of dental care is very high, and if the problem is partially alleviated now, it will just be one more step in making their transition smoother.

I was asked recently if I thought a dental X-ray unit (possibly donated here in the U.S.) would be of any help over there. Of course it would, but I think a

donated unit could be found in Hong Kong and thereby eliminate the shipping costs. Most Hong Kong dentists are trained in England, Canada, and the U.S. Consequently, new offices that are being built and old offices that are being modernized would produce a source for an X-ray unit right there in Hong Kong.

In my opinion, a dietary counselor or an oral hygiene instructor would be of greater value than an X-ray machine. When one walks around the camp, candy bars, popiscles, suckers, and soft drinks are everywhere. This, coupled with poor oral hygiene, is going to produce disastrous results.

In summary: Change their dietary habits (i.e., no junk food), and initiate oral hygiene instruction, accompanied by preventive oral surgery, and you will do more for the refugees, in my opinion, than five to ten thousand dollars worth of equipment.

Once we returned home, many people congratulated us, saying what a big sacrifice it was and so forth. But they don't understand or realize that we actually feel just the opposite. We feel that we gained much more personally and privately than whatever amount we were able to help the Refugees. We did a service for some people less fortunate than ourselves. Rotary did a service by sending us over there, and really, that's what it's all about.



Thanks, Jack!



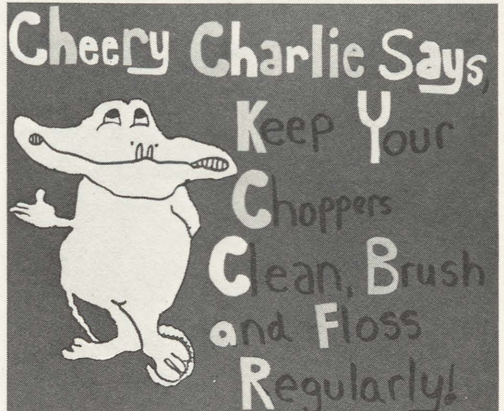
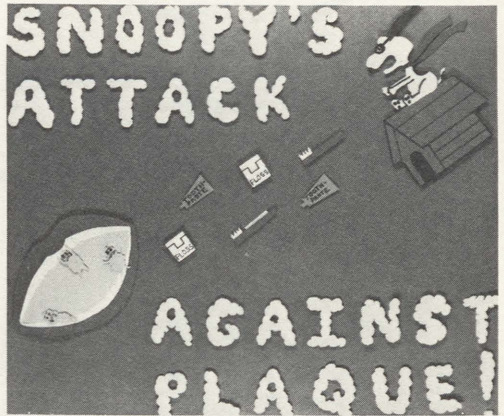
# Impact of Visual Aids In Dental Health Education

*Rolando A. De Castro, Associate  
Professor and Director of Art*

Not long ago, skill in creating visual aids of many kinds may have been considered a frill insofar as education is concerned—perhaps its purpose was thought of as decorative and not essential to education, especially scientific education. We still may not have become accustomed to considering this kind of art to be of critical importance in dental education. However, there are now many persons who emphasize that lecturing alone is not sufficient to promote

learning and that art has finally gained a functional status in our schools.

Even outside the schools, the theory behind visual aids as used in instruction is sometimes applied in a most practical and effective way. For example, one afternoon in 1968, as a newcomer in Indianapolis, I took time to visit the Monument Circle. I walked around and around this magnificent monument. Nobody there was delivering a speech and nobody said anything to me, but I



Posters by Dental Assisting Students



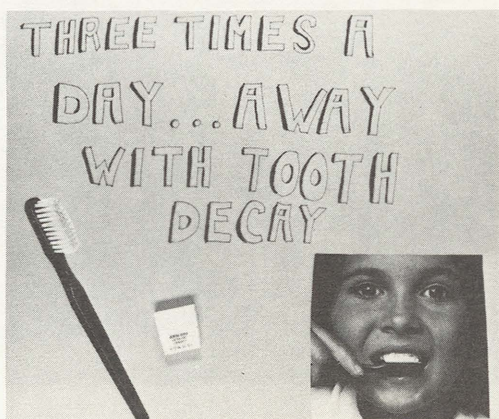
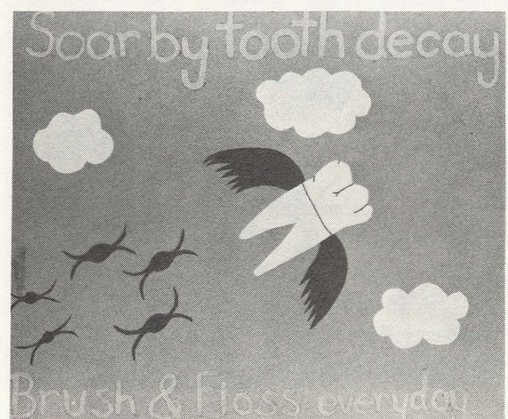
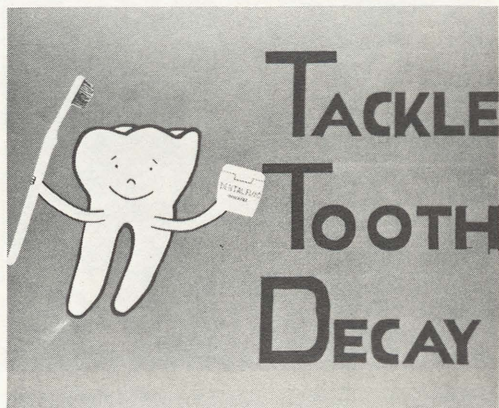
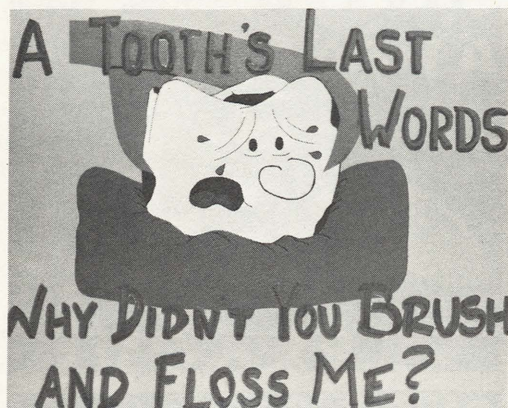
learned a bit of history and a bit about the greatness of the people of Indiana that afternoon. The monument was cold and still, but it showed heroism, struggle, defeat and victory in three dimensions. Then, in the World War II Memorial I saw halls and rooms bedecked with images of the glorious past of America. Nobody there said anything to me, but I had learned! And this was made possible by all those visuals—they were all mute, but they spoke eloquently of the past to me.

Extending the point about the impact of visual aids a bit further, let me paraphrase and update an experiment recounted by Stephen Baker in his interesting book, "Visual Persuasion." This is essentially what happened in the experiment. Two hatcheck girls in a downtown restaurant performed an experiment to determine the strength of a little visual aid. The first girl placed a quarter in her

plate (it was a dime in the original, pre-inflation version) to entice tips from her customers. Her counterpart did the same thing but "sweetened" the exhibit by using a half-dollar instead of a quarter on her plate. When they counted their take later, the second girl had collected twice as much as her friend. In this case the visual aids proved truly rewarding!

And rewarding, indeed, will be the use of these graphic aids to both the teachers and the students of today, who definitely need their power to ease the difficult and tedious job of equipping young minds with the tremendous amount of information and insights required in modern education.

Another example of the potential impact of visual aids may be seen in the posters that accompany this article. They were produced by members of the Dental Assisting Class of 1980 on the Indian-



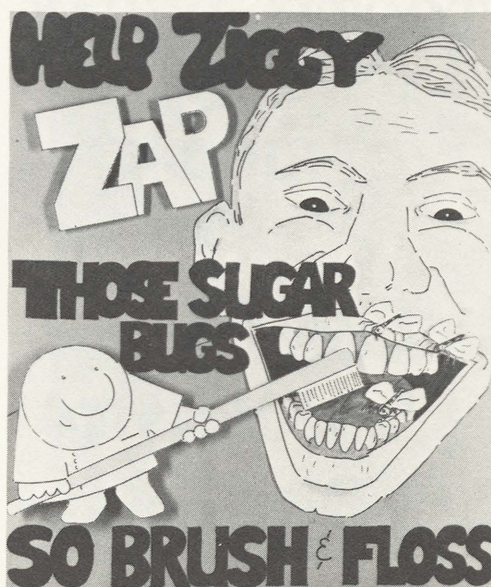
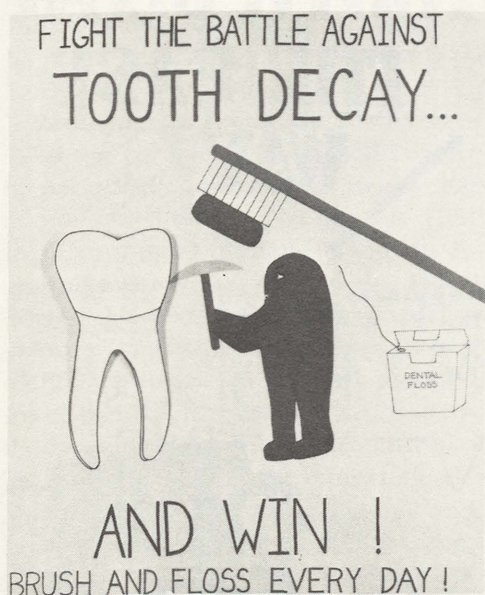
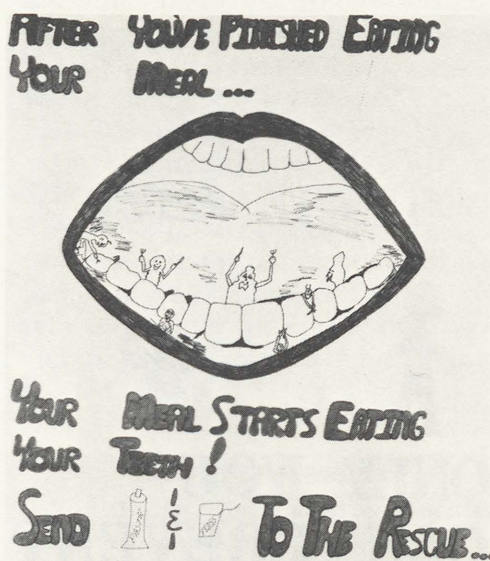
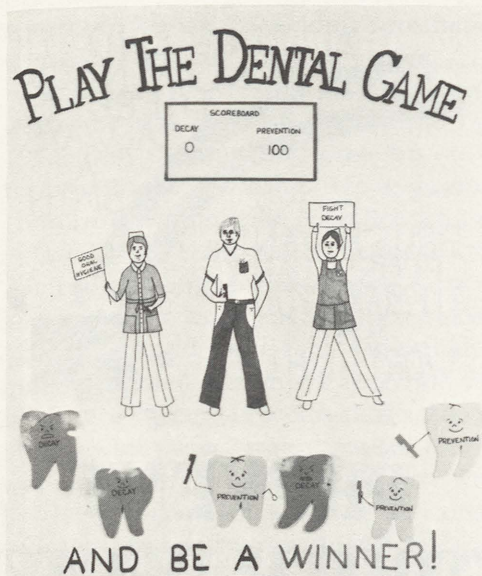


apolis campus, after the students had received less than three hours of art instruction from the author. (The instruction consisted mainly of exercises in lettering, basic cartooning, color schemes, and layout) These posters suggest that the message of dental health education for the public can often be effectively communicated in graphic, attention-getting form, even when the pictures are

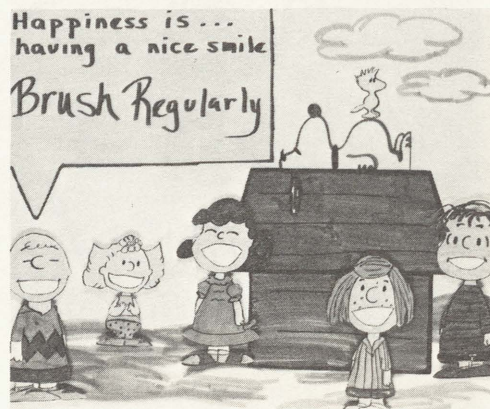
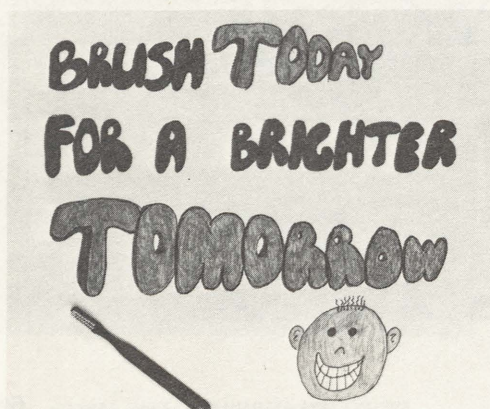
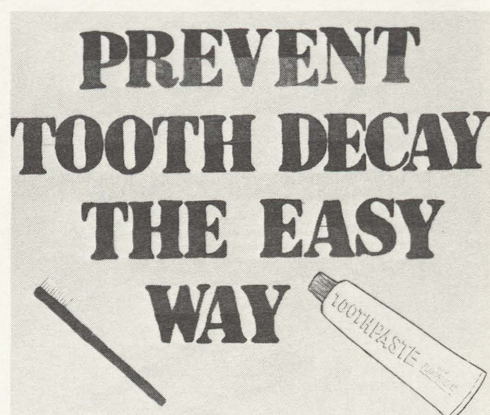
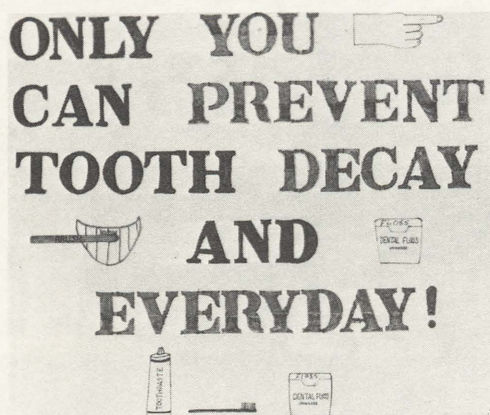
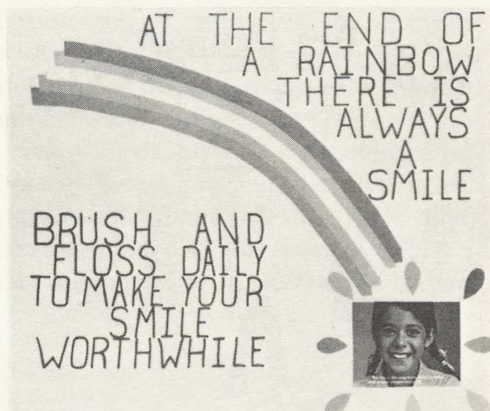
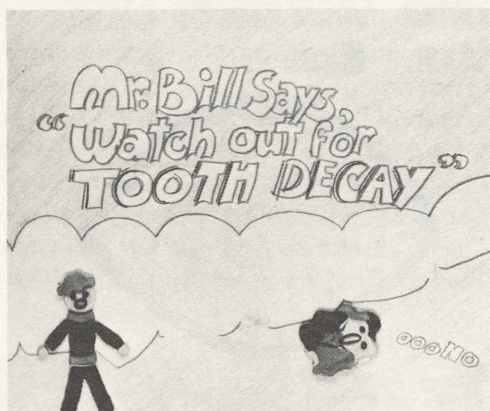
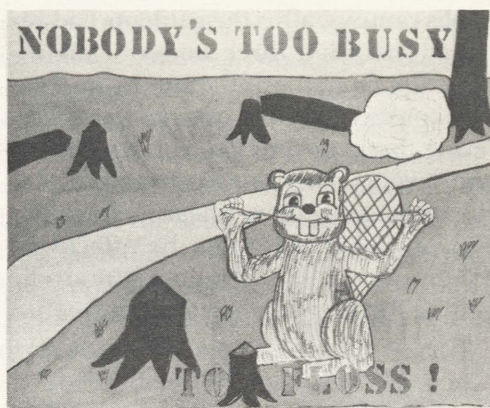
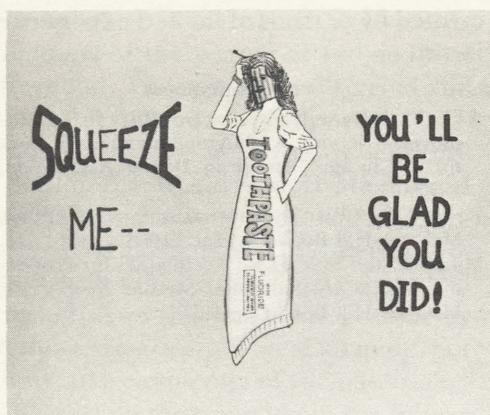
created by persons of limited experience in art.

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# Notes From The Dean's Desk

*Ralph E. McDonald*

Dr. Donald M. Cunningham, Professor of Fixed and Removable Partial Prosthodontics at the Indiana University School of Dentistry, died on December 7, 1980. With his passing the dental profession lost one of the most capable and dedicated of dental educators, as well as a practitioner who had earned the highest respect in his special field of prosthetic dentistry.

A native of Alexandria, Indiana, where he was born on September 11, 1923, Don Cunningham grew up on a farm in Boone Township. Upon graduation from Summitville High School, he enlisted in the U.S. Navy at the age of 18. After completing recruit training, he was assigned as an orderly at the Great Lakes Naval Hospital, and that assignment quickly pointed him in the direction of his future career. It seems that a Navy dentist who was a surgical patient there was impressed with the initiative shown by the young sailor who was assisting with his care and later arranged for him to receive Dental Technician's training in Idaho. When Don completed the course, he was assigned to sea duty aboard the battleship U.S.S. Washington.

Receiving his honorable discharge in 1946, he completed predental requirements at Indiana University in two years and obtained his D.D.S. degree in 1952. Dr. Cunningham then stayed on for graduate study and earned the M.S.D. degree. He accepted a faculty appointment in the Crown and Bridge Department (later to become the Department of Fixed and Removable Partial Prosthodontics) under the Chairmanship of Dr. John F. Johnston, an eminent leader in the field.

During his illustrious academic career, Dr. Cunningham rose through the ranks to Professor and served at various times

as Chairman of the Department of Oral Rehabilitation and Co-Chairman of the Department of Fixed and Removable Partial Prosthodontics. While teaching full-time, Dr. Cunningham also distinguished himself as a part-time practitioner in the specialty of prosthodontics, wrote numerous articles, served as co-author of a textbook on removable partial prosthodontics, and lectured widely in the United States, Canada, Latin America, and Europe.

Dr. Cunningham was known at the School of Dentistry as a "Teacher's Teacher" who upheld standards strictly while earning the admiration of faculty members and students alike. The current and former students of our school and the faculty have lost a true and respected friend.

## **Fellowship Awarded**

For the twenty-second consecutive year, the School of Dentistry has been awarded a Clinical Fellowship in



**Dr. Donald M. Cunningham**



Pedodontics by the United Cerebral Palsy Research and Education Foundation. This year's award provides a \$12,500 grant to support a Fellow who will continue his postdoctoral program in pedodontics into a third year and give special attention to treatment of cerebral palsied children and research in the area. The Department's application received the highest rating of all applications for United Cerebral Palsy Clinical Fellowships in both dentistry and medicine, and the award has been designated the "H. Houston Merit Clinical Fellowship." Dr. David Avery and his faculty are to be commended for receiving this prestigious award.

### **3 Deans Appointed**

Three former IUSD postdoctoral students have been appointed dental school deans. Dr. Henry M. Cherrick, who received his M.S.D. degree in Oral Pathology in 1968, has been appointed Dean of the School of Dentistry, University of Nebraska. Previous to this appointment Dr. Cherrick served for a short time as Dean of the School of Dentistry at Southern Illinois University, and prior to that served as Professor of Oral Pathology at the University of California at Los Angeles.

Dr. Dioracy F. Vieira, a former student of Dean Ralph W. Phillips, who completed his M.S.D. in Dental Materials in 1960, was appointed Dean of the Faculty of Dentistry, University of Sao Paulo, in Brazil. Dr. Vieira has been a Professor of Dental Materials at that University for a number of years, has written numerous articles, and recently published a textbook. Dr. Vieira is a respected teacher and researcher in Brazil and will bring considerable clinical and administrative experience to his new assignment.

Dr. Diarmuid B. Shanley, who received his M.S.D. degree in Periodontics from our School in 1970, has been appointed Director "Dean" of the Dental

School at Trinity College in Dublin, Ireland. In a recent letter to the Dean, Dr. Shanley wrote in part, "The Directorship of the school is not quite the same as the dean in an American school. Here it is a term of office of three years which can be renewed for an additional three years. I hope by the time I come to the end of my term of office some of the major problems might be resolved so that the next occupant of this position might find it to be more rewarding and fulfilling. My primary objective is to keep the option open on the possibility of a new dental teaching hospital, presently being planned on the South Side of the City."

We send our best wishes to these three former graduates as they undertake their very important responsibilities.

### **New Service Offered**

Dr. Chris H. Miller, Chairman of Oral Microbiology in the School of Dentistry, has offered a new sterilization monitoring service to Indiana dentists. His Department recently began a new testing service which determines if instrument sterilization procedures performed in the dental office are really effective. The purpose of the program is to provide dentists in private practice with a simple and convenient way to routinely monitor sterilizing procedures. The main guarantee of sterilization is to demonstrate the death of bacterial spores but very few dental offices have the equipment necessary to perform these spore tests. To date, more than 200 Indiana dentists and others from nine states have taken advantage of the new program.

### **New Residency Accredited**

The School of Dentistry has received notification that its new one-year General Practice Residency Program, based at the Regenstrief Health Center of Wishard Memorial Hospital, has received "Full Accreditation" status by the



American Dental Association Commission on Dental Accreditation. The Dental Service at the Regenstrief Health Center includes a 12-chair oral surgery suite, where the Oral and Maxillofacial Surgery Residents and the undergraduate dental students receive experience in exodontia and oral surgery, a four-chair Maxillofacial Prosthetics Clinic, and the new General Practice Residency Program. In July, 1981, the General Practice Residency Program will be expanded to two residents each year. Hospital dental programs of this type are in great demand by our graduates and those of other schools.

### **Sabbatical in Spain**

Dr. Simon Katz recently completed a one-year sabbatical leave at the University of Madrid. Dr. Katz, a graduate of the University of Buenos Aires School of Dentistry, came to Indiana in 1963 to study with Dr. Joseph C. Muhler. He completed his Ph.D. Program in Preventive Dentistry and enrolled in many pedodontic courses as electives. Dr. Katz reported several accomplishments during his one-year stay in Madrid. While at the University of Madrid, he participated in the teaching program of preventive dentistry in the Departments of Prophylaxis, Pedodontics, and Orthodontics. He developed a preventive dentistry program for the dental clinic stressing the concept of total patient care. Dr. Katz also conducted a research project concerning the use of fluoride and chlorhexidine for the prevention of radiation caries. He was actively involved in the promotion of fluoridation in communal water supplies and was instrumental to a considerable degree in the initiation of community fluoridation in Spain. Dr. Katz's year-long program was conducted under a Fogarty International Senior Research Fellowship. He plans to make short annual visits to Spain

to help achieve the objectives of the program he initiated.

### **Extramural Experience**

The School of Dentistry Extramural Program for dental students has been reported previously in the *Alumni Bulletin*. This program, involving six weeks of experience in private dental offices and state and federal institutions prior to graduation, is progressing in a very fine manner. This year, at least three students completed a portion of their extramural experience in facilities far distant from the School of Dentistry. In this issue, there is a detailed report of the experiences of two second-year dental students, Patrick L. Dunigan and John P. Atkinson. Senior student Orest G. Komarnyckyj had a very fine experience during six weeks of service on a Navajo Indian Reservation in the Southwest. Mr. Komarnyckyj received an appointment in the U.S. Public Health Service Dental Co-Step Program (Commissioned Officer Student Training and External Program). He found the dental clinic very modern, with equipment similar to that in our own Operative Dentistry Department. The patients, however, were quite different. The older Indians, he reported, tended to live in wagons in much the same way that their ancestors did. The younger people tend to live in more conventional Government Housing. These houses serve well in the heat of the summer and the cold of the winter. The patients demonstrated oral conditions ranging from those with meticulous care to absolute neglect. Almost without exception, however, his patients were appreciative of the care that they were receiving and accepted well the "outsider" who had come to live with them for a brief period of time.

Dr. Michael A. Olivotto, a 1976 graduate of our School, and currently a resident in the Oral and Maxillofacial



Surgery Program, has been awarded the Army Commendation Medal by the Secretary of the Army. The Award was for meritorious service as a Dental Officer in the United States Army Dental Activity at Fort Carson, Colorado. The Commendation indicated that Dr. Olivotto displayed a range of clinical competence that was truly exceptional for his grade and time in service. It cited his exemplary performances of duty which reflected great credit on him, the Army Medical Department, and the United States Army.

### **"Pursuit of Excellence"**

This year, through a program developed by the Indiana Dental Association, Indiana dentists and alumni around the world are expressing their support of I.U.'s outstanding dental faculty with major gifts to the "Pursuit of Excellence Campaign." Started by the

Indiana Dental Association, the Endowment Program is intended to guarantee the continued excellence of the School of Dentistry faculty and to replace declining federal funds. Contributors will become members of the Dean's Council for Pursuit of Excellence. Membership on the Dean's Council is granted to those who make \$5,000 pledges, a \$20,000 one-time gift, a \$100,000 life insurance policy, or deferred gifts totaling larger amounts. In the short time since the launching of the Pursuit of Excellence Program, 13 dentists have made contributions entitling them to be members of the Dean's Council. The administration and the faculty of the School of Dentistry are indeed grateful to our loyal alumni for their generous support.

### **Retirements Announced**

Mrs. Marjory H. Carr has announced her retirement as Director of Dental As-



**Dean Ralph E. McDonald congratulates Dr. Michael A. Olivotto, resident in Oral and Maxillofacial Surgery, on the Army Commendation medal awarded to Dr. Olivotto for meritorious service as a dental officer at Camp Carson, Colorado, in 1978-80.**



sisting at Indiana University School of Dentistry. Mrs. Carr earned her A.B. degree from Butler University in 1937; her Teacher's License in 1950; and the Master's Degree in 1974. She became a Certified Dental Assistant in 1956 and worked in a private dental office for a number of years. In 1956, Mrs. Carr was appointed Director of Dental Assisting at the Harry E. Wood High School. Also in that year, she was appointed Consultant in Pedodontics at the School of Dentistry and as a part of the Wood High School Program, brought her students to the School of Dentistry for on-site observation and training with dental students. In 1972 the School of Dentistry offered for the first time on the Indianapolis Campus a one-year certificate program in dental assisting. Mrs. Carr became the first Director of this program and has served faithfully in this capacity for the past nine years. She is a Past President of the Indianapolis District Dental Assistants Association and a Past President of the Indiana Dental Assistants Association.

She has also been active in the Soroptimist Club of Indianapolis, serving as President in 1971-72. We wish Mrs. Carr well as she begins her new career in retirement and continued public service.

Mrs. Vivian Haggard will retire April 1, after serving as Assistant Director of Records and Admissions for the Graduate Dental Program for the past 12 years. In a typical year, Mrs. Haggard responds to more than 700 requests for application materials, and specific information about the postdoctoral education program in 14 separate disciplines. In addition, she has maintained all clerical and statistical records related to the postdoctoral students' schedules, including oral, written, and thesis examinations, and the preparation of the paper work related to certification. She has become an expert in counseling students regarding their academic program and has served as "house mother" for many of our foreign students who need help in so many ways. During her retirement Mrs. Haggard will be able to devote more time to her hobbies of gardening, flower arranging, and collecting antique paperweights.

We thank her for her many contributions to our postdoctoral programs.



**Army Commendation Medal**



**Mrs. Marjory Carr**





**Mrs. Vivian Haggard**

**Gertrude Katzenberger**  
1899-1981

Every student who attended Indiana Dental College and Indiana University School of Dentistry between the years of 1916 and 1966 knew and learned to respect Miss Gertrude Katzenberger, office manager and cashier at the Main Dental Clinic. Miss Katz liked to recall that when she started work at the Dental School, she made change out of a cigar box. For over fifty years Miss Katz worked diligently and effectively with students and faculty members. She was always cheerful and polite to patients and students alike; many graduates in this era have commented that they appreciated her services very much.

Miss Katz enjoyed "reading fortunes with cards" and earned a reputation for making some rather shrewd prophecies (guesses?). She was a very faithful employee and never missed work because of illness. She never knew what a headache was. She did find it necessary to stay home for a while when she broke her

shoulder, but was back to work long before she was released by her physician.

Miss Katz was honored at a banquet given in her honor when she retired in January, 1966. Many former students, some from quite a distance, came to pay their respects and reminisce with her.

In recent years she resided in Greenwood, Indiana, and enjoyed reasonably good health. She died in her sleep on Friday, February 13, 1981. Her survivors include a sister, Sue Hamlin. Memorial contributions may be made to the Greenwood Christian Church or to Indiana University Foundation, in care of Dean Ralph McDonald, 1121 West Michigan Street, Indianapolis, Indiana 46202.

*M.K.H.*



**Gertrude Katzenberger**  
(1966 photo)

Pictures of Miss Katz are rather rare, since she always resisted having her photograph taken. "Scotty", the dental school photographer, reported that if he would even walk through the Main Clinic carrying a camera, Miss Katz would duck.



# Spanish Vignettes: Recollections Of a Wonderful Sabbatical

*Simon Katz, Professor  
of Preventive Dentistry*

Spain is a wonderful country, and Spaniards are marvelous people. The first impression you get upon arriving in Spain is that people really enjoy living. They are friendly—with that warm, open, no-strings-attached type of friendship that characterizes Latins. They have a sharp sense of humor, love singing and dancing, like jokes (give and take), go out a lot. . . .and blame government for whatever goes wrong. This of course allows them to go on with the show.

I had direct proof of their friendship as soon as I arrived at the Madrid airport to begin my one-year sabbatical. Two colleagues were waiting for me. It was 7:20 a.m. on a cold January day in 1980. After customary greetings, one of them—whom I had met at our School when he came to Indiana to investigate possibilities of advanced training here—said: “Listen, my parents are staying in the Canary Islands for the winter. Would you like to use their apartment in Madrid while you look for housing? I asked my father and he said it would be O.K.” And so I had for my sole use a fabulous apartment in one of the best sections of Madrid. In the following days my friend helped me to look for, and find, a comfortable and well furnished apartment 10 miles north of the city, close to a superhighway connecting almost directly with the University and in a development with lots of yards, plenty of trees and flower plants, a swimming pool, a tennis court, and so on. When my wife and son arrived in Madrid one week later, we went directly from the airport to our Spanish home for the year to come. Who

could have dreamed of such hospitality and good fortune?

## **Approach Differs**

Dental education in Spain follows the stomatological approach, which means that the students must first obtain a medical degree—which takes six years—and then go through two more years in their specialty field of stomatology. Requiring the medical degree as a condition for admission to the School of Stomatology is based upon the assumption that physicians have a broad biological and medical training and thus are better prepared to understand, diagnose and treat oral conditions beyond the domain of “simple” dental diseases. It was said, for instance, that by virtue of his medical training, a stomatologist was better prepared to detect early signs of oral cancer and orient the patient to proper treatment than the dentist with pure “odontological” training.

Paradoxically, I found during my research on prevention of radiation caries that in only a few cases had the diagnosis of cancer been arrived at in an early state of tumor development. Most of the patients I saw had extensive lymph node involvement. Quite a few had had total laryngectomies, and some distant organ metastases. In talking with chiefs of oncology services about the reasons for the serious problem of late tumor diagnosis, they tended to divide the responsibility for it in three equal parts. In their opinion, one-third rested with the patients who, perhaps hoping for a magical cure, waited too long before asking for pro-



fessional help. The second third was attributed to the medical profession, whose members were not well prepared to make an early diagnosis. For example, one of my patients, who had an epidermoid carcinoma of the nasopharynx also involving one of the maxillary sinuses, was treated with antibiotics for "sinusitis," thus wasting some precious time before starting adequate cancer therapy. The final third of the responsibility belonged to the dentists, whose training had not prepared them to make a differential diagnosis of questionable lesions.

### **"No Man's Land"**

Another problem with the stomatological approach—at least as I saw it in Spain—is that it leaves a no man's land between medicine and dentistry, an area that neither the medical nor the dental curriculum covers. The existence of this no man's land defeats the very purpose upon which the stomatological approach is based. Although the medical curriculum includes training in such basic areas as physiology, biology, microbiology, anatomy and the like, no emphasis whatsoever is devoted to such subjects in relation to the mouth. Likewise, operating under the assumption that such training belongs in the medical school, the curriculum of the School of Stomatology does not contain courses in oral biology, oral microbiology, oral physiology, and so on. The so-called better overall biological training attributed to stomatologists (dental physicians) existed only in the minds of the program planners and defenders.

Available teaching time is a serious problem at the Madrid School of Stomatology. The whole dental curriculum is jam-packed into two academic years. To compound the problem, Spaniards—as another example of their enjoying life—make use of every oppor-

tunity to take a vacation. The academic year starts by October 15, and ends at the end of May. Christmas vacation is 3-4 weeks long, and so forth. The school opens at 9:00 A.M. and closes at 2-2:30 P.M. etc., etc. Do I need to comment that it is impossible to cram a decent dental training into such a time frame?

Let's look at a practical example. My headquarters in Madrid was the Department of Preventive Dentistry, Pedodontics, Prosthodontics and History of Dentistry. Yes, you read right, the four fields are the domain of a single department. There were only three or four paid faculty members; the rest were volunteers who came mostly out of friendship with the department chairmen. As a result, it was common for a student not to find a faculty member to advise him about a laboratory or clinical procedure he was performing, or to supervise his work.

One-half of the academic year—from October 15 to the end of January—was devoted to laboratory and preclinical training. The other half (February through May) was given over to clinical treatment of children in the three areas composing the practical portion of the department curriculum. History of Dentistry and the theoretical parts of the other areas were taught in lectures throughout the academic year.

It may appear from the foregoing that the possibilities of obtaining a good dental training are non-existent. There was, however, a lot of dedication and effort by the chairman of the department and many of his faculty to do the best possible job within the available resources. They most certainly understood the problem, and are working hard to find solutions. It may not be easy. But I am certain that through their dedication and hard work, along with cooperation from those who, like ourselves in Indiana, have had the opportunity to obtain an outstanding training, they will be able to bring about



the changes in Spanish dentistry that the Spanish people most certainly deserve.

### Comparing Programs

We may not realize how outstanding our training is until we have a chance to compare it with what others receive. I tended to take for granted what I learned through my years in Indiana. This encompassed not only dental and related subjects, but educational matters as well, such as all that we learned by participating in our Teaching Conferences, and attending seminars and lectures on how to prepare behavioral objectives, write a test, conduct a small group teaching session, prepare a lecture, use audiovisual aids in a proper manner, and so on.

During my experience in Spain, I had the tremendous satisfaction of putting the entire preventive program of the departmental curriculum in terms of behavioral objectives. When I presented them to the students, and explained what that meant for them in terms of knowing exactly what they were expected to learn, and what they were going to be tested on, they loved it. I am not so sure that my fellow faculty members loved it, because the reaction of the students forced them to put their parts of the program in terms of objectives too. In all candor I should say, however, that they did a most commendable job.

I also had the opportunity of learning first-hand how the students liked the approach. Several weeks before my departure back to Indiana, the student representatives asked me if I would be willing to postpone the final test on prevention from early December to early January. They explained that they had several other examinations to take and needed more time to prepare themselves properly. I told them that, subject to approval by the Department Chairman, I had no objections. But I warned them that I would not be there for the exam,

because I was scheduled to leave Spain on December 30. Their immediate response: "Then we will take the exam as scheduled, because we know that you are going to test us on the objectives you gave us the first day of class."

I experienced a warm feeling of pride and satisfaction. The names of Paul Starkey, who started the Teaching Conference, and Jim Roche and Paul Barton, who followed his steps, came immediately to my mind, as well as those of Bruce McQuigg, Meryl Englander, and so many others from whom I learned what objectives were, how to prepare them, and how to put them to work. Isn't it great to have been a product of such fantastic education?

### More Vignettes

Spain has about 40 million inhabitants and a little less than 4,000 dentists, about one dentist for every 10,000 people. Compare this to 1:1900 in the U.S. and 1:2,300 in the countries of the European Economic Community and you may be getting the picture. To make it a little more vivid, let me add that if all Spaniards were to visit their dentists regularly, the mean available chair time per inhabitant/year would amount to less than nine minutes. Add to the 40 million people mentioned above another 30-35 million tourists who go to Spain every year, and you'll have the entire picture.

The net result of all this can be summarized as follows:

1. More non-dentists (laboratory technicians, quacks and the like) than dentists practice "dentistry" in Spain.
2. There are lines of people waiting for dental services, the fees for which are so high that Spanish practitioners have on the average higher incomes than their American colleagues.
3. The dental health of the population is, in general terms, very poor.

To further compound the situation, the level of dental health education of



the population at large is low. More so when the children of the population are considered. ("Why do you want to fix baby teeth when they are going to fall?") Unfortunately, for many people the first permanent molars are also baby teeth.

Surveys during the last few years have consistently shown that only 1 to 5% of dental treatments needed by children are actually performed. To put it more directly, 91 to 95 out of every 100 carious teeth in children are left to deteriorate to the point where extraction is the only possible solution.

### **Action Needed**

The remedy to this situation is not simple, and must include long-term measures such as increasing the available dental manpower, creating auxiliary professions, and improving the level of health education of the people. Until this happens—and it may take many, many years—immediate action is needed to decrease the incidence of dental diseases via prevention. As is true everywhere—and even more so in Spain due to the scarcity of resources—the best approach is fluoridation of communal water supplies. However, there is a catch. For reasons that do not need to be discussed here, fluoridation is not popular in Europe, and Spain is no exception. To a large extent, resistance to fluoridation stems from inadequate knowledge of the basic characteristics of the procedure, particularly safety and economy. There are also dentists who fear that fluoridation will take their business away!!

Be that as it may, the fact remains that fluoridation is resisted by many members of the Spanish dental profession. So, when in a previous visit to the country I was invited to talk to the members of the Seville College of Dentists about mass preventive procedures, I decided to present fluoridation as the best, but certainly not the only option available to them. Weekly sodium fluoride rinses in School

were presented as another very reasonable alternative. My strategy in doing this was simple. From talks with Spanish colleagues I knew that they felt that something had to be done, and done soon. The contrast between their very high incomes and the poor health conditions of the people was creating an image problem that they wanted to correct. In the extremely politicized post-Franco Spain, such an image could bring political action against the manner of free professional practice that they so ardently wanted to maintain.

Therefore, my thinking went, if they reject water fluoridation, and that is likely to happen, they will have to pick up the rinses because, as already said, something had to be done. Well, it didn't work that way. What I had not taken into account was that the audience included three pioneers, two of whom had been introduced to the advantages of fluoridation during a course I had given the preceding week. They thought that if fluoridation was the best, then fluoridation had to be. And to learn more about it, they asked lots of questions and also asked me to send written material on the subject. They obtained additional information from the World Health Organization.

### **Crusade Begins**

One of these pioneers, Dr. Anibal Gonzalez Serrano, started a personal crusade for fluoridation. His wife was born in El Pedroso (Rocky Town), a little mountainous town about 40 miles from Seville. His father-in-law was the village physician. And he knew everybody in town. He also had a tremendous enthusiasm, and knew first hand the dental condition of the El Pedroso children, whom he had examined at school in preparation for a thesis.

Anibal started his campaign by talking to the mayor, school principal, teachers, and members of the Town Council. He



approached them not just as city or school officers, but as parents as well. "Listen," he would say to the mayor, "it's your children's teeth we are talking about. It is also your children's children's teeth. Besides, can you think of the political master stroke you would score if El Pedroso becomes the first fluoridated community in all of Spain?"

Anibal and his friends, Dr. Manuel Luque—Manolo, for us—and Dr. Cesar Herrera, president of the Seville College of Dentists, talked also to neighbors and neighborhood groups, as well as to politicians of different parties. "It took a lot of pestering them," Anibal chuckled once, "They nicknamed me *el pesao* (the heavy one), but it was worth it."

A few things remained to be done. One was to obtain government approval, and that was not difficult because the regional delegate of the Health Ministry was a professor of Preventive Medicine at the Seville Medical School who knew what fluoridation was about and was all for it. Another point was to obtain funds for the project. Part was appropriated by the town, but I learned that a major portion was contributed personally by the three fluoridation pioneers I mentioned earlier and several of their colleagues. Finally, the monitoring of fluoride levels in the communal water supply after fluoridation was undertaken as a volunteer project by the College of Pharmacists of Seville. And so, on February 16, 1980, El Pedroso entered the public health map of the world by being the first fluoridated town in Spain. And that was the way it was.

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The dedication ceremony of the first Spain fluoridation plant took place in El

Pedroso in the presence of the Civil Governor of the Province of Seville, the mayor, city and military authorities, and neighbors. The installation was blessed by the Parish Priest and was followed by a luncheon in which fluoridated water (and perhaps unfluoridated wine) was served. The preceding night there was an academic function in Seville, sponsored by the Town Council of El Pedroso. I had the honor of delivering a speech on "The Advantages of Fluoridation". As a reward for my effort in favor of fluoridation, the Seville College of Dentists presented me with a beautiful silver plaque with the inscription:

To Simon Katz

Promoter of Fluoridation in Seville

It is a present that I will treasure all my life, and if in fact I deserved it, it was exclusively on the basis of the education I received at our School.

The political savvy of Dr. Cesar Herrera, president of the Seville College of Dentists, became obvious to me during the dedication ceremonies of the fluoridation plant in El Pedroso. He sent, or had someone send, invitations to the mayors of neighboring communities. During the function he gave the mayor of El Pedroso a beautiful diploma awarding him honorary membership in the College. At the end of the celebrations he would approach the other mayors and ask, with a wink: "Are you going to let them have fluoridation and not try to get it for your town?" And that is how before I left Spain there were three fluoridation plants in the Province of Seville, and plans for the fluoridation of the capital city—one million people—were well underway.



# Dental Auxiliary Education

## DENTAL ASSISTING INDIANAPOLIS

*Marjory H. Carr*

The Dental Assisting Program at Indianapolis accepted 23 students for the 1980-81 class. The members of the class have come from near and far: Anderson, Alexandria, Bedford, Carmel, Centerville, Danville, Greenfield, Indianapolis, Kokomo, Lapel, Marion, New Castle, New Palestine, Orestes, Valparaiso, and San Jose, Costa Rica.

The 1980-81 class officers are: President, Daniela Duncan; Vice President, Stacy Harrington; Secretary, Stephanie Beiswenger; Treasurer, Belinda Dennis; and Student Representative, Laurie Shettle.

The following students were named to the Dean's List for the first semester: Stacy Harrington, 3.84; Betty Jean Pritchett, 3.80; and Laurie Shettle, 3.69. Congratulations to each of you for your excellent academic achievement!

Class members are busily preparing for the annual open house April 15 for applicants of the 1981-82 class. A tour of the dental school facilities is planned along with observation of the dental assistants working chairside in their clinic rotations. The tour will be followed by an informal get-together to acquaint the applicants with details of the program and the dental assisting profession, as well as to answer questions about campus life and class activities. This particular experience has proved to be extremely popular with the applicants who are able to attend. The climax of the school year will be graduation which will be held Monday, May 11, 1981.

Mrs. Marjory Carr has announced her intentions to retire July 1, 1981 after 25 challenging and rewarding years in dental assisting education.

## DENTAL HYGIENE INDIANAPOLIS

*Evelyn Oldsen*

The entire dental hygiene area on the third floor of the School of Dentistry has had a face lift! Pictures of our newly remodeled clinic appeared in the Fall issue of the Alumni Bulletin and we have been using our new clinical area since the beginning of the Fall semester. Both students and faculty are happy to have this new facility and seldom think back to the "old days." In addition, a new coat of paint has done wonders for our office area and everything appears much brighter.

Two students, Dawn Arbuckle and Lori Lipps, represented our school at the ADHA annual session in New Orleans. To help finance the trip, the students were busy with various money-making projects. Other student organization activity has included volunteering at the Southside Clinic where they have worked with dental students and faculty.

The annual Capping Ceremony was held Saturday, January 17, and the speaker was one of our dental hygiene faculty members, Mr. R. Hunter Rackley, Jr. Another student function is being planned for April 10 as the students participate in Dental Hygiene Day. This event involves inviting all recent applicants to the school and enabling them to tour the school and talk with students. Students can be some of our best recruiters and past participants have found this program to be very helpful and informative.

The second year students have worked very hard in developing their table clinics which they will present at the state meeting in May. With studying for national boards and planning for state board examinations, they have been busy and



all are looking forward to their first job as a dental hygienist.

## DENTAL AUXILIARY EDUCATION FORT WAYNE

*Peter Z. Zonakis*

As this article is being written, the temperature is rising and spring has officially arrived in Fort Wayne. It makes us realize that another school year is quickly approaching its end.

Spring starts a flurry of activity for honors programs, graduations, and alumni meetings. We are looking forward to our fourth annual Dental Hygiene Alumni luncheon. This annual event sponsored by the IUSD Alumni Association gives everyone an opportunity to renew old friendships. This year the classes of 1966 (our first graduating class), 1971, and 1976 will be honored.

The nice weather also brings increased activity in the construction of two new buildings on our campus. Though Dental Auxiliary Education will remain in Neff Hall, completion of the buildings will open up additional space in our building. This will allow us to expand our laboratory facilities and give us more office space. So we anxiously watch the construction.

This spring is the kick-off of a health screening project (Focus on Health). The Isaac Knapp Dental Society will have an oral cancer screening during this week. This will be done at several sites throughout Fort Wayne and surrounding communities. Our students will be assisting the local dentists in this massive undertaking. Hopefully, it will become a yearly project.

Graduation on May 13 will terminate another school year. We will graduate 16 students in Dental Laboratory Technology; 20 in Dental Hygiene; and 22 in Dental Assisting. The approaching graduation makes us all reflect on how these students received their education.

Special thanks must go to all the faculty, the three dental advisory committees, and the many full-time practitioners who give of their time to teach in our programs. Dental Auxiliary Education really appreciates the tremendous support received from the Isaac Knapp dental community.

## DENTAL LABORATORY TECHNOLOGY

*Herbert Reininger*

The 1980-81 academic year has been a very active and rewarding one thus far. In late September eight second-year students accompanied by Mr. Reininger and Mr. Perez attended the Mid-America Conference in Chicago for two days. Everyone attended several constructive and informative clinics and viewed the manufacturers' exhibits.

A two-day Vita porcelain workshop was given by Mr. Tom DeVaux of the Unitek Corporation for the second-year class in early October. This extremely busy presentation has again proven to be very popular with the students as it has for the past three years.

Later that month, an interesting clinic on "Non-Precious Metals in Dentistry" was presented to all dental technology students by Dr. A. Prasad, Director of Research and Development for the Jeneric Gold Co., and his chief technician, Mr. Grant Day.

Ms. Marcy Britigan, Denar Corp. Technical Representative, was invited to this campus to demonstrate and explain all phases of the Denar Instrument System.

Our most rewarding news came in late October when we were informed by the National Board for Certification that our Class of 1980 (16 students) placed third nationally on the Recognized Graduate Examination, which is the first phase of national certification. The final portion of this examination cannot be taken until



the individual has worked as a dental technician for an additional two years. Fifty-five ADA accredited programs participated in 1980 and 778 students were tested in 17 identifiable subject areas of dental laboratory technology. The class average was well above the national norm in all categories.

Mr. Albert Bydalek, Technical Representative for the Ceramco Co., presented a two-day workshop for all second-year ceramic specialists in mid November.

This Spring Semester is racing by all too rapidly for the number of laboratory requirements still to be completed. Seventeen first-year students are all spending up to 35 hours per week at the bench.

Fifteen second-year students are fulfilling their practicum requirements this semester in the Applied Laboratory Experience course. One has been placed in the Fixed Prosthodontics Department at IUSD, two are working in private dental practices and 12 are with various commercial laboratories throughout the State.

On the afternoon prior to graduation on May 13, all of these students will take this year's version of the Recognized Graduate Examination.

In March Mr. Champion and Mr. Reininger attended several Section meetings during three days of the annual American Association of Dental Schools session in Chicago.

## DENTAL ASSISTING

*Rosemary Monehen*

The Dental Assisting students have been busy with a variety of fund-raising projects this year. Their objective is to finance their trip to the 1981 Indiana Dental Association's Annual Convention.

Organization and leadership have been exemplified by the class officers:

Michele Harris, President; Celeste Gast, Vice-President; Lisa Seibt, Secretary/Treasurer; and Katie Cordes, Class Representative, all of Fort Wayne.

Duke's Day Scholarships were once again presented to Dental Auxiliary Education students by area physicians, dentists, pharmaceutical salesmen and druggists. E. Katherine Mildred and Deanna L. Bovine from Fort Wayne and Julie M. Hill from Van Wert, Ohio, were the Dental Assisting students who received the scholarships.

The Dental Assisting students, in conjunction with the Isaac Knapp Dental Assisting Society, participated in elementary school presentations during Children's Dental Health Month.

I am sorry to announce that Judy VanGheluwe has resigned from her position as Assistant Professor in Dental Auxiliary Education, effective at the end of the 1980-81 academic year. I thank Judy for her dedication and assistance and wish her well.

The Dental Assisting Graduation Ceremony will draw an exciting year to a close on Sunday, May 10, 1981. Our congratulations and best wishes go to all the Dental Auxiliary Education graduates.

## DENTAL HYGIENE

*Gloria Huxoll*

On March 28, 1981, returning alumni will gather for the fourth annual Dental Hygiene Alumni Day in the Walb Student Union Building at Indiana University-Purdue University at Fort Wayne. Connie Poston ('76) and Diane McGregor ('67) are co-chairpersons for the event.

Within the past few months several graduates have visited us. It was such a great joy to see and visit with Jill Sunday ('69) from Anchorage, Alaska. She and her employing dentist, with other dental personnel of the area, make regular air flights into the bush country to treat pa-



tients. She visited our clinic and stated "what a change from the old stand-up dentistry." Nancy Ertzinger Ossenford ('70) and two-year-old son, Adam, visited from Iowa prior to her luncheon date with classmate Sue Boerger Bellum.

Cathie Roane ('80) became Mrs. Gall on September 13 and honeymooned in San Francisco and Los Angeles and returned to Columbus, Indiana to work for Dr. John Shawin. Cathy Etter Hall ('76) dropped in from Pueblo, Colorado, and it was a great reason to call other classmates for a get-together. Sorry I missed her but found that she and hubby toured the West via a motorcycle recently. Wanda Klus Bell ('66) will soon be board-certified in Lancaster, Pa. Beth Schaefer Clauser ('77) and hubby, Rod, will be moving to Florida with their new baby boy soon. Becky Brown Alles ('73) has just had a wee little girl—both mother and Amanda are doing fine.

Also Jody Weimer ('77), now from Doraville, Georgia, gave an update on all the exciting things in her dental hygiene life. Denise Coyne Wilson ('79) and husband, Jim, are back from Arizona and Uncle Sam and living back in Decatur where she is employed. Another '79'er, Denise Denning Nation, was at the dental school one day when I was there. It was good to see her and by now I am sure she is a happy parent. Lori Klinger Blair ('79) and hubby are back from Hawaii and are waiting the stork also. Judy VanGheluwe ('76) will be leaving our faculty for new horizons in Colorado at the end of the semester. We wish her the best of everything, including her many trips down the slopes.

Capping Ceremony for the first-year students was held on December 14, 1980, with Dr. Tom Winans, a member of the faculty, as Master of Ceremonies. This is always an exciting time for the first-year students as it marks a new beginning for them as they begin providing care to patients.

The second-year students took time out from their National Board reviewing sessions to participate in the National Children's Dental Health month. The class members are presently checking out patients who qualify for state board requirements. Job interviews are beginning, and students are looking forward to the future as practicing dental hygienists. We wish them much success and happiness as they pursue their careers.

## DENTAL AUXILIARY EDUCATION EVANSVILLE

*Gordon Kelley*

The spring semester finds the dental programs hard at work helping the students complete their coursework. This semester has a special meaning to all of us in Evansville because we are completing our first 10 years of bringing quality dental auxiliary education to Southwestern Indiana. We owe a deepfelt vote of thanks to Dr. Ralph Schimmele for his tireless efforts and many trips to Evansville during the early planning stages. Perhaps Ralph would have had better luck had he not stopped to answer some of my questions back in 1971. It is probably significant that he has not been able to get any new programs organized since that time, and I'm sorry I was so hard on him. We also owe much appreciation to Dean Ralph McDonald for his faith in us and his constant support. The cooperation of the faculty and staff of the dental school has consistently been given us whenever we have asked and has helped us to continue to provide meaningful education. We hope Dr. McDonald has enjoyed working with us as much as we have working with him. By conservative estimates I have travelled at least 25,000 miles by automobile between ISUE and the dental school since our programs began and am looking for-



ward to a few thousand more. Now, if only the state would remember that Evansville is a part of Indiana and put in a decent road.

## DENTAL LABORATORY TECHNOLOGY

*Paul Robinson*

The Dental Laboratory Technology seniors are culminating their two years of study by working in dental laboratories and dental offices in Indiana and Kentucky. Three of our students, Richard Buchanan, Thomas Lock, and John O'Hern, are doing their Preceptorships at I.U. School of Dentistry.

This year's graduating honor student is Mrs. Susan Arno. Susan completed 61 hours of dental laboratory technology subjects and 29 semester hours of academic courses consisting of Physics, Chemistry, English, Communications, Sociology, Psychology, and Business with an overall average of 3.90 from a possible 4.00 scale. Susan resides in Evansville with her husband John, an instructor of Radiologic Technology at Indiana State University, Evansville. Congratulations, Susan.

Those receiving their Associate of Science in Dental Technology are: Susan Arno, Mark Kincaid, and Richard Ubelhor, Evansville; Melanie Andrews, Oakland City; Richard Buchanan, Bedford; Darryl Koll, Houston, Texas; Thomas Lock, Chelsea; John O'Hern, Syracuse, New York; and Paul Robinson, Jr., Mount Vernon. The faculty and staff wish to extend their hearty congratulations to these fine additions to the dental health team.

## DENTAL ASSISTING

*Glenda Miller*

The dental assisting program is very proud this year to graduate 13 students:

Laurie Anslinger, Trina Birdwell, Susan Bottorf, Joanie Brummel, Karen Ewin, Julie Ham, Lisa Hope, Sharon Lindsay, Kelly Merrill, Cindy Owen, Tracy Smith, Debbie Statham, and Lana Vanover. Graduation is scheduled for May 12 on the ISUE campus.

Awards presented this year at ISUE Honors Day included Susan Bottorf for Highest Grade Point Average; Joanie Brummel for Outstanding Clinician; Cindy Owen for Most Improved (an award presented by the dental assisting faculty); and the award for Professional Attitude is shared by Julie Ham and Sharon Lindsay.

The students have been preparing for the Clinic, Paper, and Poster competitions at the IDAA Annual May Meeting. Many money-making projects have helped to defray most of their expenses. They have also managed to organize a team for the ISUE Eagle Grand Prix Bike Race.

Interviews for next year's class will be in May and we are in hopes of having another good class.

## DENTAL HYGIENE

*Deborah Lux*

The Indiana State University Evansville dental hygiene students are preparing for a very busy spring.

The second year women are studying for National Boards and searching for patients for the various state boards which they are planning to take. They are also spending a great deal of time in community activities, including oral cancer exams in local nursing homes, brush-ins, oral hygiene instructions in the Evansville-Vanderburgh School Corporation, in-service programs for nursing home personnel, and oral hygiene instructions at the Evansville State Hospital and the Earle C. Clements Job Corps Center.



The first year students participated in Children's Dental Health Month Activities held at the Washington Square Mall. They provided entertainment for the children by showing films and playing the "Tooth Fairy."

Both groups of students are busy preparing a joint table clinic to present at the May Meeting. They are looking forward to attending the scheduled events and meeting other professionals from around the state.

Graduation is scheduled for May 9, 1981. We congratulate the second year women on their achievement and wish them the best of luck in their future endeavors.

## DENTAL AUXILIARY EDUCATION NORTHWEST

*Edward W. Farrell*

The fall semester began with orientation/registration of students on August 25 and it has been a mad race ever since.

Faculty was intact except for one of our regulars, Dr. Robert Moon. Dr. Moon's activities as current president of the Indiana Dental Association prevented him from instructing this year. We have missed Dr. Moon's involvement with the program and certainly look forward to his returning real soon.

Meanwhile, we are happy to recognize and thank the following associate faculty, made up primarily of dentists and dental hygienists from the surrounding area, who are with us this academic year: C. R. Altenhof, D. Bade, W. L. Carroll, G. Carter, C. Coburn, M. Detert, M. Enzer, H. Feinberg, H. Frank, G. Gleason, S. Henderlong, S. Holm, R. Jones, D. Kozlowski, A. Largura, R. McMahon, A. Ochstein, J. Roquet, E. Rumas, R. Stine, T. Surber, S. Tauras, R. Waite, J. Walsh and E. Witkin.

The past enviable performance of our students on the certification exams, na-

tional boards, northeast regional boards, and state boards is a glowing tribute to our faculty and they may all share in being proud of their efforts as educators.

Each year we are fortunate in receiving monies in the form of donations to our I.U. Foundation Fund, student scholarships or student fund raising activities. This year was no exception. The Women's Auxiliary of the Northwest Indiana Dental Society, represented by Mrs. George Bacho, presented two scholarships to students within the DAE programs. Contributions to the I.U. Foundation Fund at Northwest included those from C. F. Aton, C. E. Bend, G. Compton, W. Enzer, J. Evans, G. Gleason, J. E. Lambert, E. A. Martin, R. F. Ooms, R. A. Roche, and K. E. Truelove.

We are pleased to publicly recognize this group and to thank them once again for their continued support of our activities.

One concluding remark: our building which was extensively damaged by a wayward city bus and in disrepair for some nine months is now restored to its former functional status. Hopefully we will not have to witness a repeat of this sort of thing.

## DENTAL ASSISTING

*Jennifer Dancisak*

The school year opened last year with 12 Dental Assisting students. On December 21, 1980, all 12 participated in the Capping Ceremony. Carla Flatt, Class President, was recipient of one of the Northwest Women's Auxiliary Scholarships.

All year the students have had fund raising projects, which have been very successful, so they can go to the Indiana Dental meeting.

This year's class will be in a summer Expanded Functions Clinic until May 29;



on June 5, 1981, the Certification Exam will be given and on Sunday, June 7, 1981, Graduation.

## DENTAL HYGIENE

*Rosemary D. Kohut*

The 1980-81 school year started with a great splash!! The second year students held a Poolside Welcoming Party for the new first year students at Joni Kurley's home. The rumors and pictures portray it as a soaking day for many.

The fall semester is always such a busy one: first year getting acquainted with new schedules, new policies and new faces, and second year facing the inevitable National Boards!

Both classes held a fruit sale as a fund raiser which turned out to be "fruitful"!

On December 21, 1981, 15 proud dental hygiene students received their caps at the D.A.E. Capping Ceremony. Lanica Claxton was the recipient of the Northwest Women's Auxiliary Scholarship. Our guest speaker was Kathleen Hinshaw, a 1977 graduate of our dental hygiene program.

The Alumni Day Committee has been planning for the Second Annual Dental Hygiene Alumni Day which will be held on Saturday, April 11, 1981. This year's committee members are Sarasue Henderlong, class of '77; Linda Moore, class of '78; Eileen Fitzpatrick, class of '79; and Karen Neiner, class of '80.

The second year students are counting down 'til National Boards and graduation. Best of luck to them and all the I.U. Dental Hygiene Graduates.

## DENTAL AUXILIARY EDUCATION SOUTH BEND

*Shant Markarian*

Fall, 1980 produced authors at the South Bend Campus: Valerie Mullin has

been advised by the *Dental Assistant Journal* that her article entitled, "Communication or Calamity," will appear in a forthcoming issue. We're really looking forward to reading it, Val.

Also, Nanci Yokom's article, "The R.D.H. Has an M.B.A.," appeared in the January, 1981 issue of *R.D.H. Magazine*. It was very well written and provoked much favorable comment. Congratulations, Nanci and Val!

Last October Nanci, Val and Judy Kliejunas presented a Continuing Education program, "Effective Communication Skills for the Dental Team." It was a day-long workshop and was well received by the dentists and auxiliaries who attended.

Janet Olson, our new hygiene instructor, and Barb Pasioneck, our assisting instructor, have had extremely busy, productive first semesters. In addition to their many assignments, Janet is on the Budget Committee and is a member of the South Bend Dental Hygiene Association, and Barb is serving on the Student Affairs Committee and has become a member of the South Bend Dental Assistants Association. They are well liked by their students and we are very happy to have them on our faculty.

The following doctors are making their offices available for extramural assignments: Douglas Bateman, James Douglas, Gilbert Eberhart, Frank Ellis, Michael Feltman, Michael Freid, Michael Griffee, Michael Gasko, Gerald Glass, John Harrington, David Harris, William Paul, Timothy Kulik, C. Port Laderer, Edward Lawton, Jack Stenger, John Lehman, James Macri, John Nyberg, Michael Rader, Robert Austgen, Doug Barton, Gary Pippenger, Charles Rosenbaum, Thomas Tanner, Daniel White, Jack Wright and Edward Molenda. Their cooperation is invaluable to our students, and we are grateful for it.



## DENTAL ASSISTING AND DENTAL HYGIENE

Valerie B. Mullin  
Nanci G. Yokom

School year 1980-81 has been exciting, fun and *challenging*! Students began the year with a Big Sister-Little Sister party to acquaint new dental assisting and dental hygiene students with life in Riverside Hall. Faculty began the year at the IUSD Teaching Conference at McCormick's Creek State Park.

As always, Fall Semester ended with a Capping Ceremony on Sunday, December 14. Again this year, Dental Assisting and Dental Hygiene students were capped in a joint ceremony. Dr. Lester Wolfson, Chancellor of IUSB, gave a delightful presentation entitled "Caring and Caries."

Spring Semester has kept us busy with the routine. Dental Assisting students are doing their internships and finding out that there are "other ways" to do procedures. Dental Hygiene students still seem to think that finding Class III and IV patients is like finding a needle in a haystack.

Graduation for 16 Dental Assisting students will be on May 15, and 18 Dental Hygiene students will graduate on May 12. We have enjoyed our time with these students and send them off with best wishes.

Judy Kliejunas, Instructor in Dental Hygiene, will be leaving in July after two years. She is moving to Alaska after her marriage on July 18 to Ric Schaffer, who is the Hockey Coach at the University of Alaska, Fairbanks. Judy has contributed much to our programs and she will be sorely missed.



Members of the Eastern Indiana Dental Society, shown with their pledges ready to deposit in a special container, recently pledged a total of \$47,000 to the School of Dentistry's Pursuit of Excellence Fund.



# Alumni Notes

*Ruth Chilton*

Once again—Hello to all of you! We send greetings from our fair city of Indianapolis and Mrs. Harvey extends to you her love and best wishes from the Sunny South (Escondido, California, to be exact). She reports that she is feeling wonderful, is very busy teaching Bible in her church, and is VERY happy to be in Southern California, which she has grown to love.

We are so pleased to hear from those of you who can find the time to drop us a line or two, but we would so much love to hear from all of you with some notes about your practice, your family, your hobbies. You write us, we'll tell your classmates! They would be so pleased to hear what you are doing, and to rejoice in your achievements, and join you in sorrowing when you have lost loved ones. . . . your faculty here at the dental school too would like to hear about you all! Why don't some of you class secretaries write us long letters about your class? We'd love to hear from you!

The long arm of coincidence stretched from Central Indiana to the West Coast during the Christmas Holiday Season and set up a chance meeting between a Hoosier visiting in California and a distinguished alumnus of the School of Dentistry, Dr. I. Lester Furnas, a 1910 graduate and a former faculty member. Mr. Bob Siefert of Indianapolis, an uncle of Mrs. Sarah Manion in Dr. Bogan's office, was vacationing in LaJolla, a suburban community north of San Diego, when he decided to take some pictures of Pacific Ocean scenes from his vantage point on a residential street. As he snapped the photos, a housewife of the neighborhood struck up a friendly conversation and asked him where he was from. When Mr. Siefert said he was from Indianapolis, that was all it took! The

housewife (Mrs. Furnas, of course) immediately greeted him warmly and invited him up to the house for more greetings and a most pleasant visit with Dr. Furnas. A native of Lynn, Indiana, Dr. Furnas cherishes his memories of Midwestern days and makes an annual trip to Indianapolis for a reunion with old friends. The recent incident in LaJolla demonstrates that Hoosier hospitality is not restricted by state boundaries.

Dr. Furnas was also the subject of an extensive feature article in the Richmond (Ind.) Palladium-Item for December 28, 1980, calling attention to his Indiana background and his professional accomplishments, including long service as a dental educator at IUSD and at Western Reserve University.

## **The Hostage "Uniform"**

Amid all the excitement and patriotic fervor that erupted across the nation in January when the 52 American hostages were finally released from captivity in Iran, the name of a 1968 graduate of the Indiana University School of Dentistry was frequently mentioned in news accounts. It seems that a T-shirt designed and distributed by Dr. Robert Angerman, of Dyer, Indiana, had become the official "uniform" of the hostages. In fact, during the staged telecasts from Teheran at Christmas time, 1980, several of the Americans had appeared wearing the shirts. The following excerpt from a story in the ADA News for Feb. 2, 1981, tells how it all came about.

Dr. Robert Angerman originally designed the shirts—which bear an eagle's head above the word "America" lettered in a mountain shape—to sell to raise money for the US Olympic team. His plans were altered by the



Embassy raid and the subsequent Olympic boycott. Dr. Angerman's wife, Sarah, suggested the shirts be sent to the hostages as Christmas gifts in 1979.

This past Christmas, it became apparent how well-received the gifts had been. In televised greetings permitted by Iran, several hostages were wearing the T-shirts. One of the hostages said he hadn't received a shirt and apologized for being "out of uniform."

"I went right to the post office and mailed three more shirts to the Embassy in Teheran, in his (the hostage's) name," Mrs. Angerman said.

"Thank God, they're coming home," was the Angermans' first reaction to the telecast from Algiers, Mrs. Angerman said. "We were very proud. I think the T-shirts had become a symbol of unity for the hostages, bringing them closer to the people in the United States." . . .

And now for news of the

#### **Class of 1919**

We are sorry to report the death of Dr. Jay W. Hammer, Middletown, Indiana, on October 16, 1980.

#### **Class of 1923**

We are sorry to report the death of Dr. Thomas F. Amey, Fort Wayne, Indiana, on July 9, 1980.

#### **Class of 1926**

We regret to report the death of Dr. Anton Gerster, Springfield, Illinois, on June 1, 1980.

We are also sorry to report the death of Dr. William B. Currie on Feb. 20, 1981, in Fort Lauderdale, Florida. An Indianapolis orthodontist for 46 years, he had spent his winters at Fort Lauderdale since his retirement in 1972. He was a

former president of the Indiana State Board of Dental Examiners and a retired Army colonel. A member of the Class of 1926 at the I.U. School of Dentistry, Dr. Currie was also a graduate of the Dewey School of Orthodontia in New York. He was active in professional and civic organizations and was co-founder and first president of Indianapolis Fire Buffs. Survivors include his wife, former Indiana State Auditor Mary Aikins Currie, and two sons, Dr. William B. Currie, Jr., and Dr. Robert E. Currie.

#### **Class of 1927**

We have a change of address for Dr. Walter A. Crum  
411 S. 27th Street  
Richmond, Indiana 47374

#### **Class of 1928**

We are sorry to report the death of Dr. Harry H. Smith, Little Rock Arkansas, on June 26, 1980.

#### **Class of 1929**

We are sorry to report the death of Dr. Paul A. Allen, Greenfield, Indiana, on November 9, 1980.

#### **Class of 1931**

Mrs. Harvey shared with us a Christmas Greeting letter she received from

Dr. Marvin S. Cochran  
12160 S. W. Imperial Ave., Apt. 15  
King City, Oregon 97223

in which he reported *In July Betty and I decided to move closer to Beaverton near to our son and his family. . . We put our home in the hands of a realtor and we sold it within 24 hours but it took about three weeks to get everything ready to sign it over. A few days before that we had the movers in to pack and on the day we signed the movers loaded and left for King City. We left for Beaverton on the 27th and stayed overnight with our son. . . We had*



*looked at this retirement center in King City when we were here visiting in July and liked it very much. King City is less than 20 years old and the cottages, apartments and condominiums are built around a 9 hole golf course. . . We are very happy with our new home and are glad we made the move; as to the matter of keeping house, Betty wishes we had made the move sooner.*

*I still hear from Harold Buses, George Goodman, Fred Fugazzi, Roy Clinthorne and Francis Reid. Buses still lives alone in Greenfield and Goodman visits him whenever he goes to Indianapolis. Goodman finds his move to Louisville, Ky., where he and his wife Helen live in a new house, very enjoyable for he is closer to near relatives. Fred Fugazzi and his wife enjoy South Carolina at Seneca much nearer one of their sons. They got real tired of the smog while they lived in California. Ferguson still lives in Richmond, Indiana, but I very rarely hear from him. Francis Reid still lives in Windsor, Vt. and is not able to go to Florida every winter as they used to do. However, he has been holding his own. He works in his yard every summer and I believe he still has a cottage in Vermont. Roy Clinthorne is doing very well in Indianapolis but I have not heard from Ed. Temple for a long time. Once or twice a year I call and talk to most of them whose numbers I have.*

#### **Class of 1933**

We have received a change of address for

Dr. Gilbert D. Quinn  
3600 Galt Ocean Drive, Apt. 6  
Fort Lauderdale, Florida 33308

#### **Class of 1934**

We are sorry to report the death of Dr. Ralph J. Miller, Seymour, Indiana on June 8, 1980.

#### **Class of 1936**

We are sorry to report the death of Dr. Robert L. Peden, Seymour, Indiana. Dr. Peden was president of the IUSD

Alumni Association from 1963 to 1963 and a former senior dentist with the Indiana State Bureau of Maternal and Child Health. He died in November, 1980.

#### **Class of 1937**

We have received a change of address for

Dr. Joseph C. Hannon  
572 Lakeside Drive  
Wildewood Springs  
Bradenton, Florida 33507

We are sorry to report the death of Dr. John B. Long, Indianapolis, Indiana, on June 23, 1980.

#### **Class of 1938**

We are sorry to report the death of Dr. William R. Franklin, Syracuse, Indiana. We did not receive any other information, such as date of death, etc.

#### **Class of 1939**

Following is the informative newsletter which Dr. Jack D. Carr, Class Secretary, distributed to his classmates in January. We hope other classes will take note of this excellent means of communication.

The reunion during the fall conference was small but didn't lack in enthusiasm. Those present were: Binkley, Campbell, Carr, Davis, Mintz, Pell, Vandes, Yoder and honorary member Boyd, Tess Davis, Hine and McDonald.

Wilbur and Margo Boren joined us for the Alumni banquet but due to a family reunion missed the Saturday night reunion. The reunion dinner was great and we helped Scotty and Elinor Campbell celebrate their wedding anniversary.

A rundown of the class follows:

Beck—haven't heard from him.

Boren—Wilbur and Margo are fine. Wilbur was hunting birds in Iowa this last October—got his limit. Margo's Mother



was in a big auto accident. Totaled her car and she was badly bruised.

Binkley and Ruth are still driving their mobile home. Plan to be in Florida this winter and may not be back in time for the May meeting.

Campbells suggested that we have a class reunion at Alpine Lake in West Virginia. Scotty says it's an ideal vacation spot: golfing, swimming, fishing, beautiful scenery, and a beautiful Lodge.

Sarah Carr has had her parathyroid and thyroid removed and is getting to feel a little better. The Doctor has told Jack to slow down but he still doesn't plan to retire.

Pid and Tess Davis still look young and healthy.

Last I heard from Dyer he is still in practice and Anita is still teaching.

Received a nice note from Ginny Eastman thanking us for the flowers and contribution to the alumni fund.

Phil Fichman and his wife are both in poor health.

Haven't heard from Forney for some time.

Last news from Francis mentioned that he was reducing his time in the office and that his son was in the practice with him.

I just missed seeing Gainey at the Dallas Meeting. He indicated that he might get back to a May meeting.

No news from Gamble.

Understand that John Geisel is expecting to sell his practice this summer.

Dick Glassley is retired. Has some circulatory problem that is under control with medication.

Manny Green seems to be enjoying retirement. Received a Christmas card from him.

Charlie Gregg's widow sent Walt a note thanking us for the flowers. Understand he died of a massive coronary.

Haven't heard from Groher, Harvey, Irizarry, Jordan, Lieberman, Segal, Tade.

Saul Herman is still in the hospital. He had a stroke about 6 months ago and is undergoing physiotherapy. He is in the

Drake Memorial Hospital  
Extended Nursing Care Station  
Galbraeth Rd. at Vine  
Cincinnati, Ohio 45216

Received a Christmas card from Livingston, Bud and Betty are fine and still enjoying Florida. Their children were down to visit them during the Holidays.

Vangie Luthemeier is moving to Florida this summer. Her father died this last fall and she has sold her office to John James. He is a fine young man who will graduate this May.

I understand Margaret McPheeters is not well at all.

Harold and Eva both look good. Harold's health problem seems to be under control. Their daughter has moved to a good job in Illinois, after finishing a T.V. job in Indianapolis.

John and Evelyn Pell are as busy as usual.

Haven't heard from Prentice recently. I didn't get to see Perry Ratcliff at the New Orleans ADA meeting; however, he was one of the main speakers.

The last I heard, Rutledge is feeling better.

Walt and Mary Ruthyne looked great and Walt indicated that he expects to continue in practice.

Harry and Emma Whetstone took an extended tour in the Orient. Visited all the main areas including China. Hope to get a report from them.

Al and Tink enjoy trips to Bloomington so they can see their granddaughter.

Ed and Dorma didn't make it to the Fall meeting. They don't miss many but Ed is busy with politics and civilian defense.

If you want a class dinner during the May meeting please let me know.

Jack



We received the following change of address for

Dr. Richard C. Glassley  
1224 Huffman Street  
Fort Wayne, Indiana 46808

#### **Class of 1941**

We are sorry to report the death of Dr. Frank S. Mitchell, Marshall, Illinois, on August 5, 1980.

#### **Class of 1942**

We regret to report the death of Dr. Richard S. Mischener, Kokomo, Indiana, on June 21, 1980.

#### **Class of 1947**

We have received a change of address for

Dr. John W. Pentecost  
2153 Foxwood Drive  
Orange Park, Florida 32073

#### **Class of 1950**

Dr. Howard M. Stein  
17660 Lakewood Blvd.  
Bellflower, California 90706  
was appointed to the California Board of Dental Examiners by Edmund G. Brown, Jr., on January 16, 1981. Dr. Stein operates two large dental clinics, one in West Covina and one in Bellflower.

#### **Class of 1951**

We received a change of address for

Dr. Roland C. Sheridan  
115 Jupiter/P. O. Box 2203  
San Padre Island, Texas 78597

#### **Class of 1953**

A change of address for

Dr. David G. Lehman  
255 W. Bristol Street  
Elkhart, Indiana 46514

#### **Class of 1956**

A change of address for

Dr. David Lehman  
23905 Myers Avenue  
Elkhart, Indiana 46517

#### **Class of 1957**

Mrs. Harvey shared with us her Christmas greeting from

Dr. and Mrs. Garcia Pedro Colon  
P.O. Box 1222  
Caguas, P.R. 00625

Dr. and Mrs. Waldo S. Scales  
160 Marine St.  
St. Augustine, Florida 32084

also sent Christmas greetings, along with their very welcome Christmas letter:

*Well, it will soon be Christmas, and another year will have passed. It does seem the older we get the faster the year passes, and to me, the less we accomplish. As a family, we have had a healthy year, and that is a lot to be thankful for.*

*Let me tell you about our family members. Elizabeth has had a happy healthy, busy year. She complains of a pain here and a pain there, but I think it is a combination of doing too much, arthritis, and old age. She tries to do too much: still works full time at the office, tries to run her home and see after lessons with the kids. She has got Bill and Raymond pretty well on their own as far as lessons go, but I am not sure Jane will ever grow up. I think she will be a twenty year old baby. Personally, I don't think Elizabeth wants to see her last get out on her own too quickly. I guess she will go ahead running things with a minimum of organization like she has for the past 23 years for as long as she is able. Maybe that's why we all love her, and if she got organized, she might be hard to live with.*

*Jane, who is 13 years old, towers over her mother and outweighs her by several pounds. She thinks that the world exists for boys, football games, playing in the band, and lastly, her lessons. As you remember, Bill graduated from Episcopal High in Jacksonville with honor*



grades—he never had much fun because he was always too busy studying. Jane does not have the honor grades, but she is having a ball. . . .

Raymond is our 17 year old, and a long slender boy. He is so long legged that in any tight fitting pair of jeans, he almost looks deformed. He still has the little Datson I bought him a couple of years ago; he has fixed it up until it is immaculate, and he keeps it that way. . . . He is always saying, Dad, don't slam the door too hard, or don't get in my truck with dirty feet. . . . He still wants to go to Flagler College next fall, finish up at North Florida University in Jax., and become a vocational teacher, teaching in our Vocational Technical High School, of which we have one of the finest in the country. . . .

Bill is 20 years old—a sophomore at J.U. He is working hard to keep up his grades as he would like very much to go to dental school. . . . Between his school work, helping out at home and hunting, Bill's time is fully occupied. I would like to say that we have absolutely no trouble with our boys. They know what they want out of life, and they know it's going to take time and money to achieve their goals, and they are dead set to make it. We hope that they achieve what they have set out to accomplish.

I almost forgot about myself. As you all know, I am diabetic. To me this is no problem. Elizabeth sees that I get my medicine when I should, and that I have the proper diet. To me, diabetes is not a big thing if you take your medicine properly and watch your diet, you merely control physically what nature used to control for you. I still work 7 days a week as I have all my life, and if the 'Good Lord is willing,' I hope to continue to for many years. My work and first love is still dentistry. There isn't anything I would rather do—I enjoy dentistry as much now as I did 20 years ago. My fun is still heavy equipment. I love to watch one of our operators on a big diesel tractor, pushing dirt, or bucking a stump, and listen to the rhythm of that big diesel motor giving you its all.

Well, I have about rambled long enough. We love you all, and would love very much to see you and hear from you. May God give you

His richest Blessings and care for you for another year.

Waldo, Elizabeth, Bill,  
Ray and Jane Scales

### **Class of 1958**

We have received a change of address for Alegria C. Zita (M.S.D.)

Dr. Alegria C. Zita  
33 Sta. Catalina St.  
Bo. Kapitolyo, Parig  
Philippines

### **Class of 1961**

We received a change of address for

Dr. James H. Hornberger  
4974 Tufts Street  
Sacramento, California 95841

### **Class of 1963**

Mrs. Harvey shared with us a Christmas greeting she received from

Dr. and Mrs. Peter Leonard  
3680 Woodside Drive  
Columbus, Indiana 47201  
in which they reported *We are all fine. . . . Cathy is now in 7th grade and still enjoying gymnastics very much. Hap is in 4th grade and trying basketball, soccer and ice hockey. Needless to say they keep us very busy and we love it. Pete's younger brother passed away this spring very unexpectedly—coronary. Happy Holiday Season.*

Pete, Alice, Cathy and Hap Leonard

### **Class of 1964**

We wish to report a change of address for:

Dr. John J. Stropko  
4009 N. Flowing Wells  
Tucson, Arizona 85705

Also a change of address for:

Dr. Malcolm K. Lewis  
700 N. Alabama St., Apt. 916  
Indianapolis, Indiana 46204



### Class of 1965

Also we received changes of address for:

Dr. Rodney P. Swantko  
7040 Forest Avenue  
Hammond, Indiana 46324

and

Lt. Col. Arden Gale Christen (M.S.D.)  
7112 Sylvan Ridge Road  
Indianapolis, Indiana 46240

### Class of 1966

We received changes of address for:

Dr. Ronald B. Blackman (M.S.D.)  
13235 Hunters Spring  
San Antonio, Texas 78230

and

Capt. Leonard Yuknis  
2601 Boniface Pkwy.  
Anchorage, Alaska 99504

### Class of 1968

We are sorry to report the death of Dr. Joseph Pesut of Mishawaka, Indiana on October 18, 1980. Dr. Pesut was a board member of the Dental School Alumni Association from 1977 to 1980 and had been a faculty member in the dental hygiene program on the IU South Bend campus. He served on the advisory committee to the school's auxiliary dental education program also.

### Class of 1970

Dr. Arthur Kamisugi  
1060 Young St., Suite 201  
Honolulu, Hawaii 96814

was featured in an interesting article in the Honolulu Star Bulletin last fall, and we are pleased to quote the entire article for you:

*"After winning a major race on his first try with his new yacht Libalia Too, what's left for Waikiki Yacht Club's Dr. Arthur Kamisugi?*

*'To keep the winning streak alive,' he said.*

*"'Libalia's shakedown cruise was a rough Molokai Channel crossing in high winds and huge seas on the very day of launching,' Kamisugi said. 'And Libalia's first victory came in its first major Island race, from Maui to Honolulu, on Labor Day. The early race win is hopefully a good omen of things to come.' Kamisugi, a 36-year-old Honolulu orthodontist, spotted the sleek 41-foot New Zealand sloop, then named Brother Dominic, as it was being prepared for last month's Pan Am Clipper Cup Yacht Series off Waikiki. 'I liked its fast design even then,' said the trim athlete, who fishes and plays tennis with equal zest as sailing.*

*"After considerable negotiations, the conditions of purchase were agreed upon and Kamisugi found himself the owner of a new racing yacht. 'Things were so rushed to start racing,' recalled the Punahou School graduate, 'that at Libalia's launching, the paint depicting its new name was still wet.'*

*"With the wind howling through the rigging and with a crew having never sailed the boat before, Kamisugi cast off for the Valley Island.*

*"'Considering the rugged weather,' he said, 'I was more than pleased with Libalia's performance. Not only was the channel crossed quickly, but the boat was relatively dry and comfortable.'*

*"Libalia Too arrived at Lahaina minutes before the start of a short triangular heat held between Maui and Lanai, and even with a pick-up crew sailing an untried boat, Kamisugi's new racer placed second.*

*"I entered the race rather informally, as a tuneup for Libalia's real test, the Lahaina-to-Honolulu classic on Labor Day,' Kamisugi said.*

*"Beginning near the Kaanapali resort area, Libalia Too sailed off to a fast start and performed well—that is until arriving at Molokai's windless Laau Point.*

*"We must have drifted at Laau for two hours before finally catching a breeze,' Kamisugi recalled, 'but when the wind did arrive, Libalia charged off for Diamond Head.'*



*"Across the churning channel, Kamisugi's new racer staged a dramatic bow-to-bow battle with Tuia, a longer and theoretically faster yacht, representing Hawaii Yacht Club.*

*"'First Tuia would catch a wave and surge ahead,' said Kamisugi, 'and then we'd slide down a comber and surf into the lead. This competition went on all the way to the Waikiki finish.'*

*"When the results were tallied, Libalia Too had won the prestigious Class-A on handicap, while Foo Lim's KevFlyer topped Class-B and won overall fleet honors. While Kamisugi was setting the pace among the big boats, Maui's Peter Daniels, sailing a 12-foot Windsurfer Rocket sail-board, was making waves of his own."*

(We hope you all enjoy reading this fascinating report—we did!)

#### **Class of 1972**

We have the following changes of address for this class:

Dr. David B. Clem  
5574 Conroy #B  
Fort Knox, Kentucky 40121

Dr. Gary L. Drury  
19265 Farmington Lane  
South Bend, Indiana 46614

Dr. Donald Smitha  
1820 Barrs Street, Suite 134  
Dillon Professional Bldg.  
Jacksonville, Florida  
32204

#### **Class of 1973**

The A.D.A. News reports that Lt. Col. Robert B. Brannon (M.S.D. 1973) was one of the 14 dentists at the U.S.A.F. Hospital in Wiesbaden, Germany, who examined the recently freed hostages who had been held by Iran. Dr. Brannon is in charge of Oral Pathology at the base.

Dr. Brannon's address is:

Lt. Col. Robert B. Brannon  
Box 562, USAF Hospital  
Wiesbaden, Germany  
APO New York 09220

We have received a change of address for:

Dr. Stephen O. Raibley (M.S.D. 1980)  
310 8th Avenue  
Rochester, Minnesota 55901

#### **Class of 1974**

Change of address for:

Dr. Raymond G. Kubisch  
1746 89th Pl.N.E.  
Bellevue, Washington 98004

Dr. Frank A. Kyle, Jr.  
PSC #3/PO Box 15721  
APO San Francisco, CA 15721

#### **Class of 1975**

We received a change of address for:

Dr. Neal E. Lambert  
3503 Riverside Avenue  
Muncie, Indiana 47304

#### **Class of 1976**

Change of address for:

Dr. Tom Allen  
3755 Hidden Oak Drive  
Pensacola, Florida 32504

Dr. William E. Paul  
62555 Diamond View Drive  
Cassopolis, MI 49031

#### **Class of 1977**

A change of address for

Dr. John Crisler  
1117 Rio Rancho Drive  
Rio Rancho, New Mexico 87124

#### **Class of 1978**

Changes of address for

Dr. James W. Cahillane  
R.R. 2  
Hobart, Indiana 46342



Dr. John J. Cash  
924 S. Forest  
Brazil, Indiana 47834

Dr. George E. Kirtley  
156 E. Market Street  
Inland Building, Mezzanine Floor  
Indianapolis, Indiana 46204

### **Class of 1979**

Change of address for

Dr. Mark R. Pefley  
3201 Knight Street  
Shreveport, Louisiana 71105

### **Class of 1980**

We have the following changes of address for this class:

Dr. Mary Ann Bean  
403 Timber Lane  
Lafayette, Indiana 47905

Dr. Robert H. Berghoff  
P. O. Box 342  
Warren, Indiana 46792

Dr. Steven W. Buedel  
1254 Shiloh Square  
Evansville, Indiana 47715

Dr. Stephen J. Fairchild  
3348 Lincoln Road, #121  
Indianapolis, Indiana 46222

Dr. Gary L. Gotsch (M.S.D.)  
5522-4 Old Dover Blvd.  
Fort Wayne, Indiana 46815

Dr. Nancy Zona Halsema  
1181 West 73rd Street  
Indianapolis, Indiana 46260

Dr. Joseph HeideIman  
1925 N. Emerson Avenue  
Indianapolis, Indiana 46218

Dr. Charles F. Hill  
10067 E. Washington Street  
Indianapolis, Indiana

Dr. G. Robert Horton  
643 Westchester Circle  
Pinehurst, North Carolina 28374

Dr. Gary A. Hunt  
11821 No. 28th Dr. #287  
Phoenix, Arizona 85029

Dr. Aaron E. Ison  
1301 W. Commerce St.  
Brownstown, Indiana 47220

Dr. James S. Jansen  
115 E. Williams St.  
Kendallville, Indiana 46755

Dr. Rick Journey  
241 West Main Street  
Bellevue, Ohio 44811

Dr. William D. Kenfield  
9 Crane Ave.  
Spencer, Indiana 47460

Dr. Ronald Lehman  
123 W. Colby, P. O. Box 70  
Whitehall, Michigan 49461

Dr. J. Michael Libke  
1101 W. Moana Lane #2  
Reno, Nevada 89509

Dr. Michael L. Mark  
Ft. Defiance I.H.S. Hospital  
P. O. Box 91  
Ft. Defiance, Arizona 86504  
(Indian Health Services Branch, U.S. Public Health Service) (Lieutenant rank (Navy) in the Commissioned Corps and Senior Assistant Dental Surgeon.)

Dr. Lawrence McAtee  
(presently at Luke Air Force Base, Phoenix, Arizona)  
Home address 4320 N. 106th Dr.  
Phoenix, Arizona 85039

Dr. Tillman E. Miller  
236 Simpson Avenue  
Elkhart, Indiana 46516

Dr. Roger Murphy  
2196 W. Sycamore St.  
Kokomo, Indiana 46901

Dr. Barry W. Ray  
2038 Lincoln Ave.  
Evansville, Indiana 47714



Dr. John W. Reichle  
210 West 7th Street  
Connersville, Indiana 47331

Dr. William Shideler  
8 Garfield Street  
Valparaiso, Indiana 46383

Dr. Steven A. Staton  
2206 N. Wheeling Avenue  
Muncie, Indiana 47303

Dr. Richard Weber  
5699 E. 71st St., Suite 6 B  
Indianapolis, Indiana

## Dr. Thomas McKean Promoted to Admiral

Dr. Thomas W. McKean, a 1953 graduate of Indiana University School of Dentistry, has been promoted to the rank of Rear Admiral in the U.S. Navy Dental Corps. He is the son of Dr. and Mrs. Gorman F. McKean, and his father is a 1926 graduate of the I.U. Dental School.

Dr. McKean is married to the former Marilyn R. Kimberlin, a 1950 graduate of I.U. They have three children: Thomas W. McKean III., Randall K. McKean, and Dana K. McKean.

In July Dr. McKean will succeed Rear Admiral Julian J. Thomas, Jr. (M.S.D. 1967) as Commander, Navy Regional Dental Center, San Diego.

A native of Adams County, Indiana, Dr. McKean was commissioned an Ensign in the Naval Reserve in 1949 and came on active duty during his last year in Dental School. He has served in various capacities aboard ship and at shore stations, most recently as Commander of the Navy Regional Dental Center, Pensacola, Florida.

Dr. McKean received postgraduate training in Oral Surgery at the National Naval Medical Center in Bethesda, Maryland, and was a resident in Oral Surgery for two years at the Naval Hospital, Great Lakes, Illinois. He is certified by the American Board of Oral and Maxillofacial Surgery and is a Fellow of



Dr. Thomas W. McKean

the International Association of Oral Surgeons, the International College of Dentists, and the American Dental Society of Anesthesiology.

Dr. McKean holds the National Defense Medal, Navy Occupation Service Medal, Navy Unit Commendation, Vietnam Campaign Medal with bronze star, Humanitarian Service Medal and Vietnamese Presidential Unit Citation.





Dr. Dioracy F. Vieira

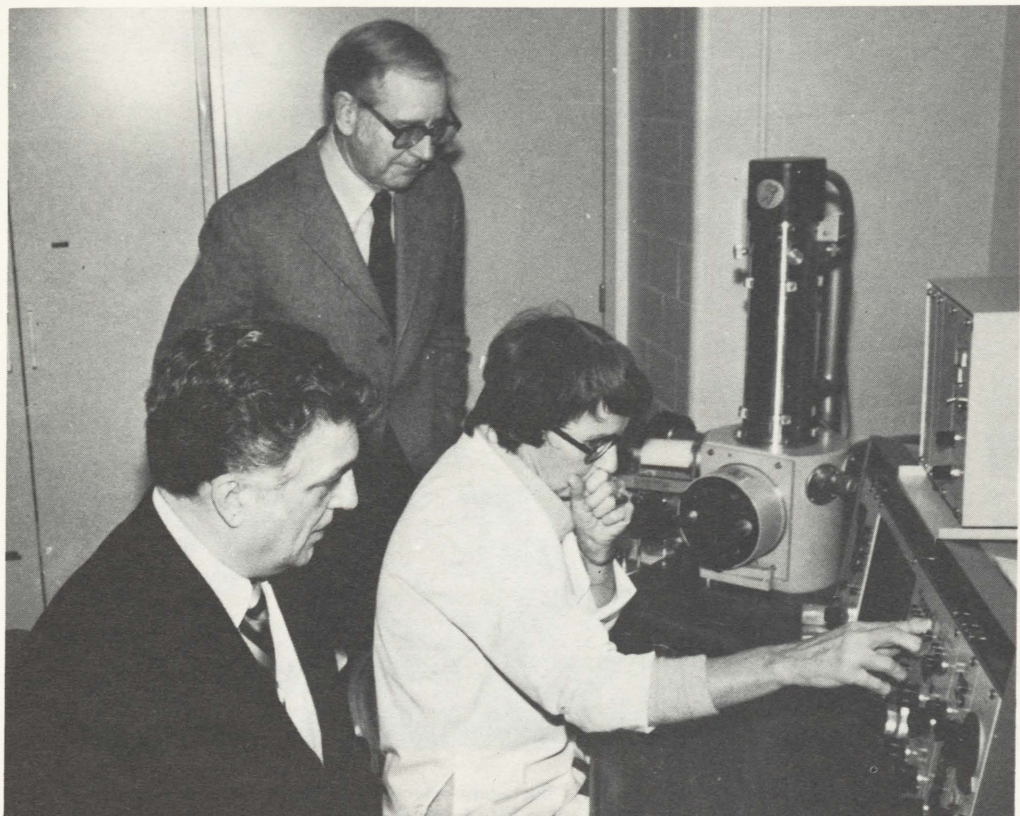
## Dr. Vieira Named Dental Dean at U. of Sao Paulo

Dr. Dioracy Fonterrada Vieira, who received his M.S.D. degree from Indiana University in 1960 with a major in Dental Materials, has been appointed Dean of the Faculty of Dentistry, University of Sao Paulo, Brazil.

Dr. Vieira also delivered the Sixth Annual Skinner Memorial Lecture recently at the Northwestern University Dental School. The Lecture honors the late Dr. Eugene Skinner, a pioneer in Dental Materials and the author of the classic text in the field which is now authored by Dr. Ralph W. Phillips, Associate Dean for Research and Research Professor of Dental Materials at Indiana University.

After completing his graduate program here, Dr. Vieira returned to Brazil and has served his University for a number of years as Professor and Chairman of Dental Materials, and also as Vice Dean of the Dental School. According to Dr. Phillips, Dr. Vieira has brought the status of dental biomaterials in Brazil to the highest level of any Latin American nation. As Dean McDonald points out in *Notes From the Dean's Desk* elsewhere in this issue, Dr. Vieira has written many articles and recently published a textbook. Our School has reason to take pride in the far-reaching accomplishments of this distinguished educator.





Dr. Aaron Kimche, and Dr. R. W. Phillips, Associate Dean for Research, watch as Ruth Doherty, Supervisor, SEM Facility, adjusts the controls of the microscope.

## Dr. Kimche's Gift Aids in Acquisition Of SEM Facility

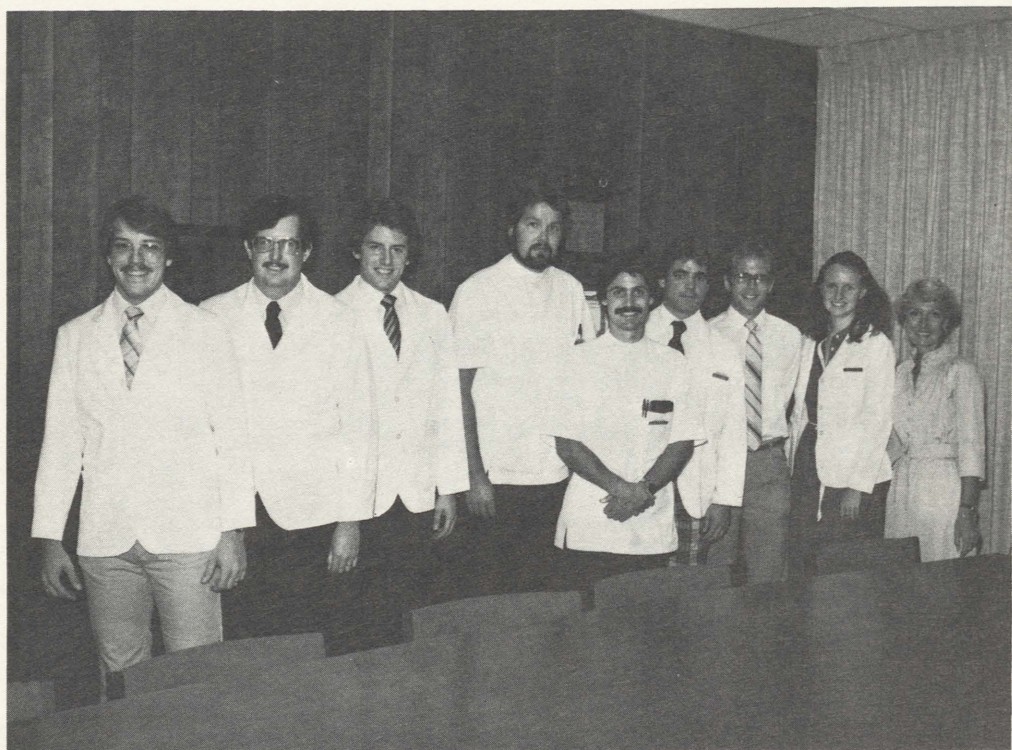
In the fall issue of the Alumni Bulletin we carried an article describing the new Scanning Electron Microscope Facility. This facility, which adds a new dimension to our research program, was made possible largely through a gift from a loyal alumnus, Dr. Aaron Kimche, Class of 1955, Washington, D.C.

In December a dedication day and evening ceremony were held, at which Dr. Kimche was the honored guest. The illustrations accompanying this article were taken at that time. We are extremely proud of this new addition and of our loyal alumni such as Dr. Kimche.



Dr. Kimche with Dr. Rolando A. DeCastro hold a caricature of Dr. Kimche. This "DeCastro Original" was presented to Dr. Kimche at the dedication. In addition, he received a beautiful plaque from the I.U. Foundation, as designed by Jerry Keller. Another plaque commemorating the support of Dr. Kimche is placed on the wall at the entrance to the three-room laboratory.





The Dr. Stephen D. Slavin Memorial Fund has again selected several dental students to receive a scholarship award. This award is made annually to students who have graduated from any of the three Muncie, Indiana high schools. The 1980 recipients are pictured with Mrs. Linda Slavin Needham, who presented the scholarship checks. They are (left to right) Daniel Wheeler, Kevin Klinedinst, David Harrison, John Marconnit, Brian Sowatsky, Daniel Reno, Jaime Lemna, and Karen Hays. The Slavin Memorial Fund was established in memory of Dr. Stephen D. Slavin, a 1967 graduate of Indiana University School of Dentistry. He was a practicing dentist in Muncie, Indiana, and a member of the Muncie Community School Board at the time of his death on November 9, 1975.

#### PERSPECTIVES

(continued from page 20)

I hope that I have at least shared with you some ideas and projections that you will find challenging. However, I also hope that you question them, that you don't accept them all too readily. Again, that is one of the advantages of being involved in a futurist type of program. You can say anything from one point of view and no one else has to agree with you. As long as you understand that and don't get all bent out of shape when they don't agree with you, then you're safe. In your preparations for the future I would

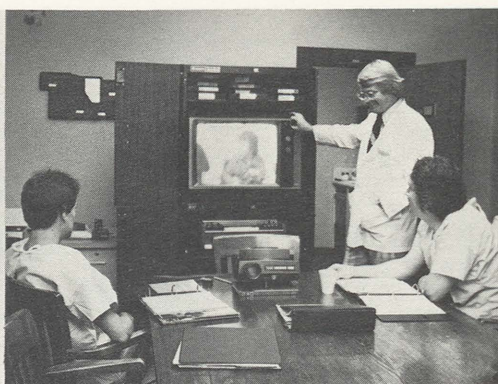
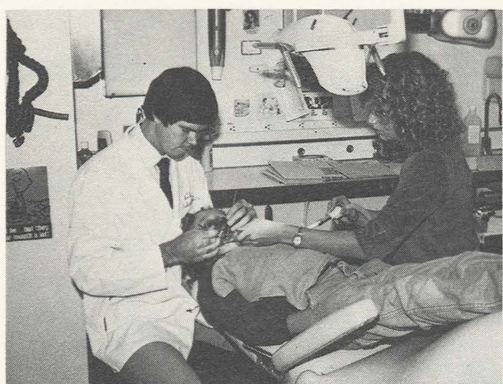
be most willing to assist you in any way I can. In our College Placement Council we have found those occasions when we have worked with the professional areas very satisfying to us because we see them as a means of opening up greater opportunities for greater numbers of students, and that is our role. Our role is to work between the educational elements and the employers to create greater opportunities for college graduates. Through your educational programs for dental students and dental auxiliary students, you are in an excellent position to offer those kinds of opportunities, and we would like to work with you to do it.





The student body at the Indiana University School of Dentistry recently presented a plaque to Dr. Ronaldo A. DeCastro, Director of Art and Professor of Oral Anatomy, as a token of appreciation for the mural depicting dental history that he painted in the School's foyer. The plaque is on display alongside of the mural. Students with Dr. DeCastro, from left, are Diane Buyer, President of the Student Affairs Council, Roy Blake, and William Thompson.





For the 22nd consecutive year, the Indiana University School of Dentistry has been awarded a clinical fellowship in pedodontics by the United Cerebral Palsy Research and Educational Foundation. This year's recipient of the award is Dr. Theodore R. Lynch, a 1978 graduate of the Dental School, who is shown with a patient in the left photo. His fellowship is one of 20 educational grants by the Foundation this year to support training for health care professionals working with disabled children and adults. Dr. James A. Weddell, Class of 1977, who received the fellowship last year, also is a faculty member in the Department of Pedodontics. He is shown in the right photo directing a seminar for undergraduate dental students on dental care for the handicapped.

Indiana University's participation in the fellowship program was initiated by Dr. Ralph E. McDonald, then Chairman of Pedodontics and now Dean of the school. Dr. David R. Avery, present Chairman of Pedodontics, has been notified that a similar clinical fellowship has already been approved for next year. The department's application received the highest rating of all applications for UCP clinical fellowships to begin in 1981 and has been designated the H. Houston Merritt Clinical Fellowship.



The IUSD Class of 1935 celebrated the 45th anniversary of its graduation with a reunion dinner on Saturday, October 4, 1980, during the 36th Annual Dental Alumni Conference in Bloomington. Those present were: Row 1 (from left), Joseph E. Cockerill; Ralph E. Gieringer; Dean Ralph McDonald; Philip P. Haft; LeRoy F. Sacks; Row 2, Frank L. Traster; Hoyt S. Kuhns; Ralph H. Brown; Leo J. Pancoska; Donald J. VanGilder; Arthur Stone; Drexell Boyd; James F. Favorite; William E. Smith; Robert Raughley; Louis C. Siegel; Pearl A. Schwartz.



## **Abstracts of Theses By Graduate Students**

Continuing our custom, we are reprinting the abstracts of theses which have been filed in the Library in partial fulfillment for the M.S. and M.S.D. degrees:

### **A QUESTIONNAIRE DEVELOPED TO PREDICT PATIENT INTEREST AND COOPERATION IN PERIODONTAL TREATMENT**

**Marwan E. Assaf**

A questionnaire was developed and tested on the patients attending the graduate and undergraduate periodontal clinics at Indiana University in an attempt to predict patient cooperation and interest in periodontal treatment. The questionnaire consisted of 36 subjective-type questions dealing primarily with certain personality traits and oral health attitudes.

Originally, the questionnaire was given to the patients at their initial visit before having received oral hygiene instructions. In addition, the questionnaire was also tested on patients who were already undergoing periodontal treatment and had received oral hygiene instructions. Only patients who had a minimum of four plaque score readings were included in the study. Patients who achieved a consistent decrease in their plaque scores of 75% or more by the fourth visit were classified as cooperative.

The questionnaires of 119 cooperative and uncooperative patients were analyzed statistically in order to find out which of the 36 questions were valid in discriminating between these patients in terms of cooperation in oral hygiene procedures.

Based on the statistical analysis of the data the answers to only four of the 36 questions were different (at the 0.05 level) between cooperative and uncooperative patients while the answers to 25 other questions differed between patients at less predictable levels ( $P = >0.1, >0.2, >0.3$ ). The results are suggestive of statistically significant relationships between dental anxiety, skill, oral health attitude and patient cooperation. They are also suggestive of some relationship between introversion-extraversion, dependency, achievement motivation and patient cooperation. The results are not suggestive, however, of significant relationships between internal-external locus of control, self-image, hypochondriasis, deference and patient cooperation.

The results indicate that predicting patient cooperation through the use of a questionnaire given at the first visit may be a useful approach but requires further investigation.

### **PATHOLOGIC CHANGES AND ANATOMIC VARIATIONS IN A SERIES OF 380 PANORAMIC RADIOGRAPHS**

**Birute Antonia Balciunas**

Panoramic radiography has been used extensively for screening patients because it provides a rapid and effective method for evaluating radiographic changes in the maxilla, mandible, temporomandibular joint, maxillary sinuses, and associated structures. The purpose of this thesis was to examine a series of panoramic radiographs for pathologic changes and anatomic variations.

A total of 380 panoramic radiographs of routine patients in the Oral Diagnosis Clinic at the Indiana University School of Dentistry were examined. Of these, 81.8% showed evidence of one or more types of pathologic change. The most frequent findings included: 1) impacted teeth (30.5%); 2) alterations of the condyles (19.2%); 3) ossification of the stylohyoid chain (15.5%); 4) pneumatization of the sinuses (15.2%); 5) radiopaque lesions (18.9%); 6) radiolucent lesions (10.2%); and 7) antral mucous retention cysts (9.5%).

The high incidence of pathologic changes noted was primarily due to the fact that all types of pathologic changes, excluding missing teeth, caries and periodontal disease, were included in the survey. The relatively high percentage of younger patients in this study also contributed to the high incidence since several types of pathologic changes, such as impacted teeth and antral mucous retention cysts, occurred more frequently in younger individuals.

Normal anatomic variations were also included in the study because they may frequently be mistaken for pathologic changes.

### **AN EVALUATION OF AUTOGENOUS GINGIVAL GRAFTS FOR THE PRESENCE OF HYPERTROPHIC SCAR TISSUE FORMATION**

**Page P. Barden**

This study was designed to determine if autogenous gingival grafts placed from 11 to 47 months previously acquired the characteristics of a hypertrophic scar.

Twenty-three biopsies of grafted and adjacent collagenous tissue were obtained from a total of 15 persons. India ink was used to tattoo the graft-adjacent tissue interface *in vitro*. Twelve biopsies were considered histologically acceptable. Statistical analysis was done to determine if significant differences occurred between the epithelial thicknesses, blood vessels, and fibroblast nuclei in each type of tissue. Correlation analysis was done to determine if the epithelial thickness, blood vessels, and fibroblast nuclei displayed any change over a period of time.

In eight of the 12 biopsies selected for evaluation, the epithelium of the grafted tissue was significantly thicker at the .05 level. A weak negative correlation was found between the epithelial thick-



ness of the graft and the length of time the graft had been in the mouth.

No statistically significant differences were found in the number of blood vessels or fibroblast nuclei in the grafted and non-grafted adjacent tissues. An almost zero correlation was found between the length of time the graft had been in the mouth and the number of blood vessels and fibroblast nuclei in the tissue.

Autogenous gingival grafts placed from 11 to 47 months previously did not fulfill the histologic criteria of a hypertrophic scar, as the connective tissue layer closely resembled the adjacent control tissue. However, the grafts did have a statistically thicker epithelial layer than the adjacent tissues.

### **EFFECTS OF CLASS II PREPARATION DESIGNS ON THE FRACTURE STRENGTH OF TEETH**

**Paul K. Blaser**

This study was an attempt to compare the strength of 100 extracted maxillary bicuspid which were prepared with different class II cavity designs. Fifty of the teeth had combined mesiodistal and buccolingual sizes of 16 mm or more, and 50 were smaller than 16 mm. Five groups were tested and each contained 10 teeth from the large sizes and 10 from the small. One group consisted of intact non-prepared teeth, and four groups had the following class II preparation designs: (1) design 256S—narrow isthmus (size 256 bur) and shallow pulpal floor (1.5 mm); (2) design 256D—narrow isthmus (size 256 bur) and deep pulpal floor (3.0 mm); (3) design 560S—wide isthmus (size 560 bur) and shallow pulpal floor (1.5 mm); and (4) Design 560D—wide isthmus (size 560 bur) and deep pulpal floor (3.0 mm). All teeth were mounted in acrylic and fractured with an Instron machine using a crosshead speed of 10 mm per minute.

The mean fracture loads in kg for the five groups were recorded as follows: intact teeth = 114.3; Design 256S = 119.2; Design 256D = 95.68; Design 560S = 106.3; and Design 560D = 73.0.

Statistical analysis was made comparing the differences among the groups. Design 560D showed significant differences between the intact teeth, Design 256S, and Design 560S. All other comparisons showed no significance.

The large and small size categories of teeth in each group were compared. Design 256D and Design 560D showed significant differences in fracture loads, with the smaller teeth requiring a smaller load. This suggests the importance of size when studying fracture strengths of teeth.

The average load strengths showed that the amount of weakening caused by a wide isthmus was much less than previously reported. The results also showed a greater weakening of the teeth by increasing the depth of the occlusal step as compared to increasing the width.

The study showed the difficulty in testing the strength of extracted teeth. Size of teeth, cusp

angle and height, shape and size of loading device, and different individual strengths of teeth could be influencing factors.

### **THE EFFECTS OF DICHLOROMETHYLENE DIPHOSPHONATE ON PERIODONTAL BONE LOSS IN SYRIAN HAMSTERS**

**Janet Lois Dorey**

The effectiveness of dichloromethylene diphosphonate ( $\text{Cl}_2\text{MDP}$ ) in inhibiting experimentally induced periodontal bone loss in Syrian hamsters was studied. Ninety six-week-old male hamsters were maintained on a soft, high carbohydrate diet. They were divided into three equal groups and given daily subcutaneous injections of either saline or  $\text{Cl}_2\text{MDP}$  at doses of 1 mg/kg and 4 mg/kg body weight five times a week. The animals were sacrificed at three and six months. The maxillae from 10 animals in each group were autoclaved and defleshed and a 10-power dissecting microscope was used to measure the bone loss on the palatal surface of the maxillary molars using Keyes' method. At three months, the mean alveolar bone loss for animals receiving 1 mg/kg  $\text{Cl}_2\text{MDP}$  was 2.26, for those receiving 4 mg/kg it was 2.17, and for those with saline it was 2.16. At six months the mean alveolar bone loss for the three groups was 2.75, 2.63 and 2.69, respectively. The results from the three groups were compared using the factorial analysis of variance. The maxillae, mandibles and femurs were also examined histologically.

Statistical analysis revealed comparable mean alveolar bone loss measurements for all three groups. Unlike the effects seen with EHDP,  $\text{Cl}_2\text{MDP}$  at the dosages used did not produce molar ankylosis. Metaphyseal bone accumulation was noticed in the femurs of the experimental animals at both time periods, with the greatest accumulation at six months in the 4 mg/kg group.

It was concluded that  $\text{Cl}_2\text{MDP}$  did not inhibit periodontal bone loss in Syrian hamsters although it did retard bone turnover in the femur.

### **EFFECTS OF SALINE CONTAMINATION ON ZINC AND ZINC-FREE HIGH-COPPER AMALGAM ALLOYS**

**Salomon Fainsilber M.**

Two high-copper alloys, Dispersalloy and Indiloy, and one conventional alloy, Fine Cut, were selected for testing the effects of moisture contamination on dental amalgams. With the exception of Indiloy, the alloys were tested in their zinc and zinc-free versions. Except for the contamination, which was produced by mixing mechanically the alloys and mercury together with 20  $\mu\text{l}$  of a 0.5% saline solution, the amalgams were prepared as specified in A.D.A. Specification Number One (1968). The specimens then were stored in saline solution at 37°C until they were tested.

It was observed that the compressive and tensile strengths decreased for the contaminated zinc- and indium-containing amalgams as compared to their



corresponding noncontaminated specimens. This was true for all the test times. With the exception of Fine Cut zinc, no significant difference in creep were observed between the contaminated and noncontaminated amalgams. The contaminated Fine Cut zinc specimens bent at the 20 week tests so that creep value could not be measured.

Likewise, no marked difference in the five-minutes to twenty-four hours dimensional change was observed with any of the tested alloys. Delayed expansion was observed with the two contaminated zinc-containing alloys during the twenty-four hours to twenty weeks interval. Indiloy contaminated did not show delayed expansion during the study time.

Noncontaminated zinc containing alloys exhibited slightly better properties than their corresponding zinc-free versions. When the alloys were contaminated, the effects of moisture were drastic with the zinc-containing alloys. With the exception of Indiloy, no marked changes were observed between the contaminated and noncontaminated zinc-free alloys. Significant decrease in the strength of contaminated Indiloy as compared to the noncontaminated counterpart, appeared during the first hour after the completion of the mix. No further reduction in strength was observed with this particular alloy during the following test periods.

No marked changes of the corrosion current, measured by means of the anodic polarization resistance technique were observed between the contaminated and noncontaminated specimens at the various periods of time, the same was true when the zinc and their zinc-free counterparts were compared.

In general, the effects of contamination with saline solution were more pronounced with the conventional than with the high-copper amalgams. The findings of this study suggest that an alloy like Dispersalloy zinc-free or Indiloy should be considered whenever the problem of moisture contamination in the operative field is unavoidable.

## THE EFFECTS OF ENAMEL WEAR ON THE METAL-PORCELAIN INTERFACE

**Ronald Marvin Fisher**

This investigation was designed to determine the effects of passing enamel over porcelain bonded to metal, using a wear testing machine.

Opaque and gingival porcelain powders were bonded to two types of metals: a precious alloy and a base-metal alloy. Three types of interfaces were used to bond the porcelain to the metal. The angles of the metal were 135°, 90°, and 60°.

Twenty-eight enamel specimens and 28 metal-porcelain specimens were studied. A circular motion was used, with a constant static load of three kilograms being applied and water as a lubricant.

Crack propagation of porcelain was observed in some specimens with an angle of 60°. These findings suggest that crack propagation of porcelain is less likely to occur with metal angles of 135° and 90°. Cracks were seen more often with the base-metal specimens than with the gold alloy specimens.

Base-metal specimens which developed cracks during porcelain finishing and were repaired by grinding out and rebuilding the porcelain failed when subjected to wear testing.

Tooth enamel wear was not affected significantly by the type of metal. More wear depth was observed in the gold than in the base-metal and the wear track of the gold was significantly wider.

The exact cause of the crack propagation is unknown, and further investigation seems warranted. In addition, standardized enamel and metal-porcelain specimens should be used in later studies of this kind, so that a more precise calculation of volume loss can be obtained.

## AN EVALUATION OF THE BOND STRENGTH AND FAILURE SITE OF TWO ORTHODONTIC DIRECT BONDING SYSTEMS

**Kenneth R. Hyde**

Two commercially available orthodontic direct bonding systems were evaluated for ultimate tensile strength and failure site. Both Endur (Ormco Corp.) and Solo-Tach (L. D. Caulk Co.) are Bis-GMA resin adhesives, but only Endur required the use of a sealant prior to bonding. Metal brackets intended for use with Endur are backed by a thin stainless steel pad and fine wire mesh. Bracket bases for use with Solo-Tach were fully perforated stainless steel pads (GAC International, Inc.).

Two hundred human bicuspid teeth were divided into four groups to test the four combinations of bracket and adhesive types. Half of each group was tested 30 minutes after bonding and half was tested after 3 weeks, with thermocycling in the final week.

Failure sites were completely opposite for these two adhesives regardless of which bracket type was used. Endur (sealant and adhesive) failed primarily at the bracket-adhesive interface, while Solo-Tach (adhesive only) failed primarily at the enamel-adhesive interface. The sealant-adhesive seems to form a more tenacious bond to enamel.

Mesh bracket bases formed a significantly ( $p > .025$ ) stronger bond than fully perforated bracket bases with either adhesive. Some difference was still apparent after correcting for the difference in base area between mesh and perforated base types. No significant difference in ten-



**Find yourself?**



sile bond strength were found between the two adhesives or between 30-minute and 3-week tests.

It was noted that several other factors, such as protection of oral tissues, working time, and ease of manipulation must be evaluated in choosing a satisfactory bonding system.

## **DEVELOPMENT OF AN *IN VITRO* PIT AND FISSURE CARIES MODEL AND ITS TESTING FOR SCREENING DIFFERENT FLUORIDE TOPICALS**

**Rahimah Abdul Kadir**

This study comprised two parts. In the first, attempts were made to develop and test a model for the *in vitro* formation of pit and fissure caries. In the second, the most suitable method was used to compare the cariostatic ability of different fluoride topicals in order to determine if the model produced results comparable to those obtained when the same topicals were tested clinically.

Two methods for producing pit and fissure caries were compared in part I of the study. Both consisted of placing an artificial plaque composed of a semi-solid agar-glycerin-sucrose culture medium inoculated with *S. mutans* 6715 on the pits and fissures of extracted premolars and molars clinically and microscopically (15X) free of caries. The "plaque" was covered with a filter paper disk over which a thin layer of collodion was painted. This was done to: (1) protect the plaque from being washed off, and (2) allow the diffusion of acids toward the enamel surface and dissolving ions away from enamel. In the first model, the circulation model, the specimens were placed in ad-hoc containers through which one of three types of liquid media, a so-called "Artificial saliva", deionized water or a 0.5% sucrose solution, was circulated. In the second model, the agitation model, the specimens were placed in containers along with the respective media, and the containers were then agitated in a shaker bath. In both cases, the specimens were maintained at 37°C for eight weeks, with changes of innoculi and containers and brushing of the teeth being performed twice a week. Evaluation of occlusal caries was made clinically at intervals of two, four and eight weeks and microscopically at 20 X at weekly intervals.

It was found that the use of the circulation method and "artificial saliva" for bathing the teeth was the most suitable of the models tested, as it produced both clinically and microscopically detectable caries while producing only slight surface and subsurface decalcifications.

In part II of the study, ten teeth per group were treated for 4 minutes as follows: (1) APF Gel II, (2) 1.23% APF conventional gel, (3) 1.23% APF solution, (4) 8% stannous fluoride solution and (5) Control. After eight weeks of exposure to the cariogenic challenge, it was found that all the fluoride systems produced caries reductions numerically comparable to what one would expect from past clinical studies. However, because of fac-

tors such as small sample size and the use of a single topical application, none of the observed differences was statistically significant. Further studies to correct these and other problems are suggested. In general, the model which was developed proved that it has potential for the screening of the anticariogenic value of different fluoride preparations on pit and fissure caries formation.

## ***IN VIVO* PLAQUE pH STUDIES INVESTIGATING SOLID MIXTURES OF POLYOLS AND SACCHARIDES**

**Carl J. Kleber**

The purpose of this thesis was to determine *in vivo* the plaque acidogenicity of sorbitol or xylitol tablets combined with various levels of dextrose, fructose, or sucrose in order to provide information which might contribute to the formulation of more acceptable noncariogenic candies and snacks.

Polyol:saccharide ratios of 1:0, 7:1, 3:1, 1:1, 1:3, and 0:1 by weight were evaluated. The changes in the pH of the two-day-old plaque in children following ingestion of the tablets were measured *in situ* with antimony microelectrodes. The extent of the plaque pH drop as well as the plaque pH minimum value were both used as a measure of the potential cariogenicity of the tablets. The sorbitol and xylitol tablets per se (1:0) caused a slight rise in the plaque pH, indicative of increased saliva buffering and flow. The 7:1 and 3:1 ratios of sorbitol or xylitol with dextrose or fructose caused little or no acid formation in the plaque. This indicated that nonacidogenic or hypoacidogenic candy could be prepared with such ratios. The 3:1 ratio of sorbitol or xylitol with dextrose or fructose was a critical ratio since further increasing the ratio to 1:1 resulted in a significant amount of plaque acid formation. A 3:1 ratio of sorbitol-sucrose, however, was also very acidogenic and demonstrated that sucrose was potentially more cariogenic than dextrose or fructose. All the 1:3 and 0:1 polyol-saccharide ratios evaluated significantly lowered the plaque pH to values similar to the 1:1 ratios.

A chocolate coating compound, peanut brittle, hard candy, and grape taffy were formulated using the hypoacidogenic 3:1 sorbitol-dextrose mixture as the sweetening system. Only the grape taffy formed a significant amount of plaque acid, probably due to the food acid present in it. Corresponding commercial candies all greatly lowered the plaque pH. Children enjoyed all the experimental candies, except the hard candy, just as well as the corresponding commercial candies.

These data demonstrated that potentially noncariogenic, good-tasting candies can be prepared using sorbitol or xylitol combined with dextrose or fructose up to a 3:1 ratio as the sweetening system. Making such hypoacidogenic confections available as a substitute for conventional snacks and candies may offer a better means of preventing dental caries than do conventional sugarless candies.



Indiana University School of Dentistry

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