

Alumni Bulletin

SCHOOL OF  
DENTISTRY

Fall Issue 1978

Indiana University



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# Indiana University School of Dentistry ALUMNI BULLETIN

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# Dental Identification

## After an Air Tragedy

*Jack E. Schaaf, Assistant Professor of Oral Diagnosis/Oral Medicine*

On the stormy evening of April 23, 1978, a twin-engine aircraft carrying nine passengers, including officers of the United States Auto Club, crashed in Rush County, Indiana. The following day, Dr. Garry Bolinger, a pathologist, asked me to come to Rushville to assist in identifying the victims. The identification assignment was handed to me because Dr. S. Miles Standish, Chairman of the OD/OM Department and a leading expert in forensic dentistry, was out of town.

Although personal effects, jewelry, and monogrammed clothing were found on the passengers, officials needed more positive identification. The crash was to be investigated by the Rush County Sheriff's Department and Coroner's Office, Indiana State Police, F.B.I., and F.A.A.

The first objective of the dental investigation was to locate any specimens which would be useful in comparisons with antemortem dental records. The pathologists conducting the forensic examination and I searched the remains for teeth, tooth-bearing structures, and prosthetic appliances. These items were returned to Indianapolis where a thorough examination was conducted at the Dental School.

My actual investigation began the following day. A complete description of each piece of submitted evidence was dictated and later typed. This dictation included a description of jaws, teeth and prosthetic appliances. No piece of evidence or characteristic was omitted, regardless of how dentally insignificant it seemed at the time.

### **Radiographs Obtained**

The next step was to obtain radiographs of the individual specimens. Lateral jaw films were used for large or edentulous fragments. Teeth or specimens containing teeth were radiographed using the standard periapical films. These X-rays and the gross description of each specimen served as the basis of my postmortem examination.

As each set of dental records was received, it was labeled and compared to my existing material. Rarely was the identification immediate. Usually, new films of the postmortem material had to be made to duplicate the angulation and degree of exposure of the antemortem radiograph. A slide projector, used to magnify the radiograph, was invaluable. One postmortem film displayed a metal fragment in the soft tissue overlying the bone. This was initially thought to represent a piece of metal embedded at the time of the accident. However, magnification with the projector revealed a similar piece of metal in the antemortem film.

Extraction sites, in various stages of healing, also served as useful identification criteria. Two victims had undergone fairly recent extractions and postmortem radiographs confirmed the antemortem records of these extractions. Even comparison of trabeculation patterns aided in the investigation. Obviously the location, configuration, and type of dental restorations, as displayed on radiographs, were an invaluable aid in the comparisons.

### **Outstanding Cooperation**

The cooperation I received from the dentists of the victims was superb. The dental reports were received rapidly, and some were even hand-delivered by the dentist or



family of the deceased. Several follow-up phone calls to the dentists involved were often necessary to supplement the information I had received. These inquiries were all answered with sympathy, courtesy, and accuracy.

My investigation revealed the positive identification of eight victims. Indentification of the remaining victim was described as highly probable. Investigation of this tragedy has emphasized several important functions of the dentist in such an occurrence. First is the necessity of dental identification. Fingerprints, the standard means of comparison, are often not obtainable from the victims or are not on file with any agency. The F.B.I., using this method, was able to identify three of the victims. Also important is the cooperation between the deceased's dentist and the dental investigator. Without good antemortem records, an investigation of this nature can only yield a speculative guess, rather than a positive identification.

No type of record is without significance. Radiographs, letters, charts, and study models were all used to identify the victims of this particular accident. The need for keeping detailed written records along with accurate and up-to-date radiographs cannot be overemphasized. Of course, the dentist cannot predict when his information will be needed, and must therefore establish a complete record on each of his patients. An involved record accumulating and keeping system will allow the dentist to provide better service to his patients, protect him in case of legal action, and may allow the rapid and accurate identification of a patient in case the normal means of identification are not available.

### Principles Cited

The dentist confronted with the forensic identification of one or more victims need not feel unprepared if he or she keeps several principles in mind. Every dentist possesses the professional knowledge to make such an identification. The basis of each identification in this investigation was an understanding of teeth, restoration, alveolar bone and the pathologic and physiologic processes which affect these structures. Many times the comparisons were not easy, and much time and a little ingenuity were important added ingredients.

Accuracy is of prime importance in the description and accumulation of both antemortem and postmortem evidence, and no one can find fault with an accurate report. Some type of evidence-identification system must be maintained and documented throughout the investigation.

The coroner or medical examiner may require that anyone receiving or handling postmortem specimens sign a document which enables the "chain of evidence" to be maintained. Each set of antemortem records should be either mailed to the dental examiner or delivered to him in person. And as each record is received, the date and sender should be recorded.

Accurate postmortem radiographs *must* be taken of all dental evidence. These reveal periodontal conditions, root tips, impacted teeth, metal fragments, and endodontic treatments which are not visible upon gross examination of the materials. Also, they display the various types and designs of dental restorations. All of the above features are readily compared to antemortem records. I can say with certainty that most of the identifications in this instance could not have been made without radiographs.

I would like to express my gratitude to the dentists, pathologists, and members of the Rush County Coroner and Sheriff's Department involved with this investigation. Also, the faculty and staff of the Oral Diagnosis/Oral Medicine, Radiology, and



Animal Research Departments of the IU School of Dentistry deserve my thanks. Finally, I would like to especially express my appreciation to Dr. S. Miles Standish for offering his encouragement and expertise in the field of Forensic Dentistry. Without the aid of these dedicated people, this investigation would have been extremely difficult, if not impossible.

## Dr. Standish Plays Key Role In Forensic Dentistry

Dr. S. Miles Standish, Associate Dean of the I.U. School of Dentistry and chairman of the Oral Diagnosis/Oral Medicine Department, is well known in Forensic Odontology. His expertise in the area has been a valuable asset to the legal agencies of the state and he has imparted much of his knowledge to his students, preparing them to offer similar assistance in their communities after graduation from dental school.

Dr. Standish's first experience with this facet of dentistry was in 1968 when he assisted the coroner's office in the identification of an unknown drowning victim. Since that time he has been involved with dental identification and evidence on about 75 occasions. He feels that the most challenging and interesting case involved the use of bite marks found on a murder victim to convict the assailant. The bite-mark evidence provided a substantial portion of the State's case. The conviction was later appealed to the State Supreme Court and upheld. Dr. Standish has participated in two other cases with bite-mark evidence, which is considered novel and of limited application by the legal system at this time.

Besides Dr. Standish's experience gained in actual identification, he has expanded his expertise in the field of Forensic Dentistry by attending several seminars on the subject, including those presented by the Armed Forces Institute of Pathology, the American Academy of Oral Pathology, and the American Academy of Forensic Sciences.

He has given presentations on the subject to several dental groups, the Indiana School of Law, the Universities of Michigan and Colorado continuing education programs, and to police organizations including the Indiana State Police and the Harvard Associates in Police Sciences. Dr. Standish also gives an annual lecture on Forensic Dentistry to the students and faculty of the I.U. School of Dentistry, a 4th year elective course in Forensic Dentistry, and has presented an international seminar in Lima, Peru.

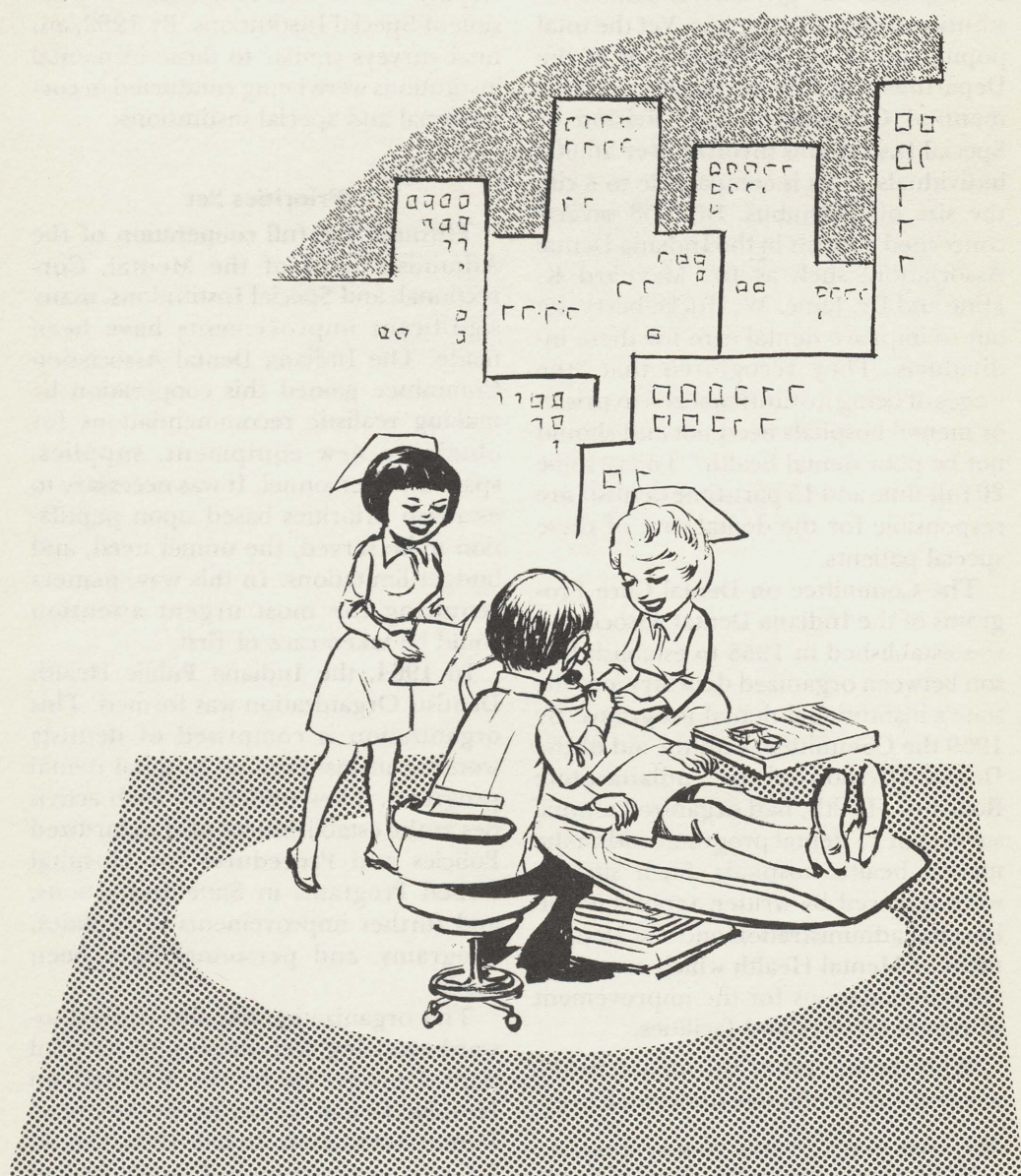
Dr. Standish has also published articles on this topic. He co-authored an extensive dissertation in the 1977 Dental Clinics of North America and has had an article published in the police journal, Law and Order. A chapter in the Indiana State Police Crime Scene Search and Physical Evidence Handbook on dental evidence, was written by Dr. Standish. He has recently been appointed an Honorary Lt. Colonel in the Indiana State Police.

Dr. Standish is a Fellow in the American Academy of Forensic Sciences. He is a Diplomate of the American Board of Forensic Odontology and serves on the Credentialing and Examining Committee of that organization. The American Board of Forensic Odontology is a division of the American Academy of Forensic Sciences.

J.E.S.



# Dental Services In State Institutions Of Indiana





# Institutional Dentistry: A Word of Background

*Charles E. Smith, Assistant Professor of Pedodontics\**

This is the first of four articles in this issue dealing with dental programs in our state institutions—programs of which Indiana can be justly proud.

The Editors

Until 20 years ago little significance or emphasis was given to Indiana's institutional dental programs. Yet the total population of the 24 institutions of the Department of Mental Health, Department of Correction, and Division of Special Institutions involves over 26,000 individuals. This is comparable to a city the size of Columbus. In 1958 several concerned dentists in the Indiana Dental Association, such as Dr. Maynard K. Hine and Dr. James W. Huckelberry, set out to improve dental care for these individuals. They recognized that "the wages of being institutionalized in prison or mental hospitals need not and should not be poor dental health." Today some 20 full-time and 15 part-time dentists are responsible for the dental care of these special patients.

The Committee on Dental Care Programs of the Indiana Dental Association was established in 1958 to establish liaison between organized dentistry and the state's institutional dental programs. By 1960 the Committee, with the aid of the Dental Division of the Indiana State Board of Health, had organized annual surveys of 11 dental programs within the mental health hospitals. Such surveys were followed by written reports to the hospital administration and the Department of Mental Health which contained recommendations for the improvement of dental services and facilities.

With the success of the mental health surveys, the Committee undertook to ex-

tend its services to the institutions in the Department of Correction and the Division of Special Institutions. By 1962, annual surveys similar to those in mental institutions were being conducted in correctional and special institutions.

## Priorities Set

Through the full cooperation of the Administrations of the Mental, Correctional, and Special Institutions, many significant improvements have been made. The Indiana Dental Association Committee gained this cooperation by making realistic recommendations for obtaining new equipment, supplies, space and personnel. It was necessary to establish priorities based upon population to be served, the unmet need, and budget limitations. In this way, matters requiring the most urgent attention could be taken care of first.

In 1964, the Indiana Public Health Dentists Organization was formed. This organization is comprised of dentists working in institutional hospital dental programs. They undertook such activities as the establishment of standardized Policies and Procedures for Hospital Dental Programs in State Institutions, and further improvements in facilities, programs, and personnel have been made.

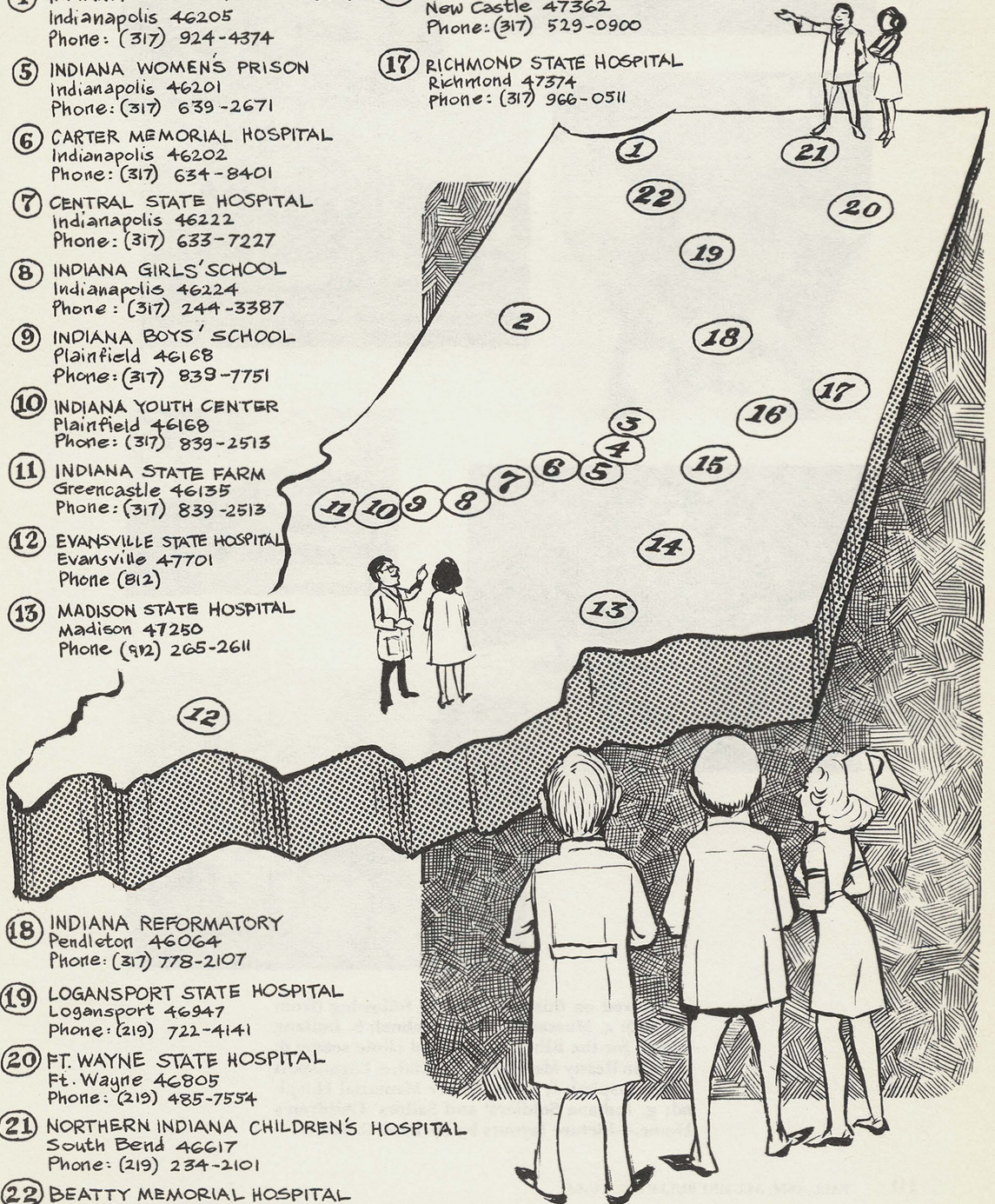
This organization has also worked toward receiving accreditation of hospital dental programs by the Council on Hospital Dental Service of the American Dental Association. In late 1966, Gerald J. Casey, secretary to the Council, kicked

\*Dr. Smith (D.D.S., 1961) is Director of Dental Health Services, Indiana State Board of Health.

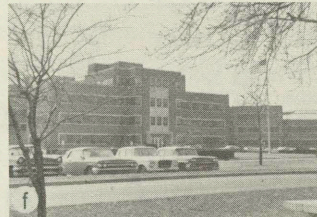
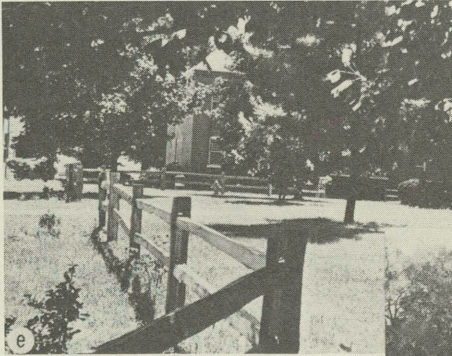
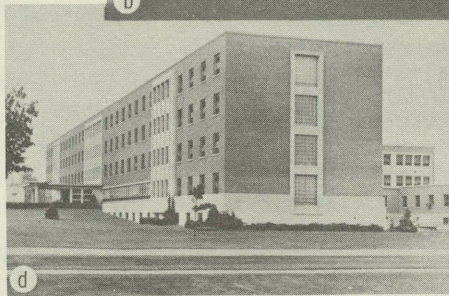
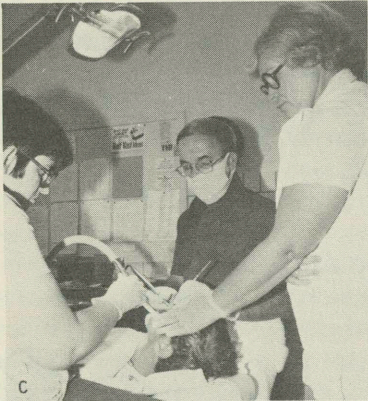
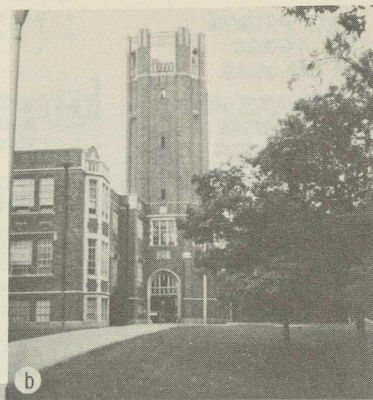
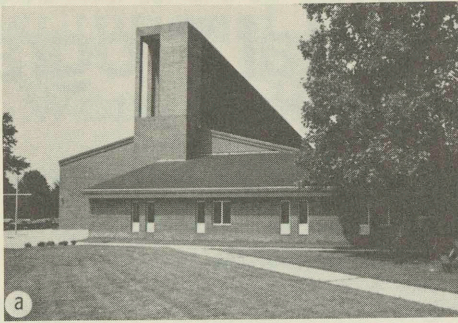


# Indiana Institutional Dental Programs

- ① INDIANA STATE PRISON  
Michigan City 46360  
Phone: (219) 874-7258
- ② INDIANA VETERANS' HOME  
West Lafayette 47901  
Phone: (317) 463-1502
- ③ INDIANA SCHOOL FOR THE BLIND  
Indianapolis 46240  
Phone: (317) 253-1481
- ④ INDIANA SCHOOL FOR THE DEAF  
Indianapolis 46205  
Phone: (317) 924-4374
- ⑤ INDIANA WOMEN'S PRISON  
Indianapolis 46201  
Phone: (317) 639-2671
- ⑥ CARTER MEMORIAL HOSPITAL  
Indianapolis 46202  
Phone: (317) 634-8401
- ⑦ CENTRAL STATE HOSPITAL  
Indianapolis 46222  
Phone: (317) 633-7227
- ⑧ INDIANA GIRLS' SCHOOL  
Indianapolis 46224  
Phone: (317) 244-3387
- ⑨ INDIANA BOYS' SCHOOL  
Plainfield 46168  
Phone: (317) 839-7751
- ⑩ INDIANA YOUTH CENTER  
Plainfield 46168  
Phone: (317) 839-2513
- ⑪ INDIANA STATE FARM  
Greencastle 46135  
Phone: (317) 839-2513
- ⑫ EVANSVILLE STATE HOSPITAL  
Evansville 47701  
Phone: (812)
- ⑬ MADISON STATE HOSPITAL  
Madison 47250  
Phone: (912) 265-2611
- ⑭ MUSCATATUCK STATE SCHOOL  
Buttleville 47223  
Phone: (812) 346-4401
- ⑮ INDIANA SOLDIERS & SAILORS' CHILDREN'S HOME  
Knightstown 46148  
Phone: (317) 345-4250
- ⑯ NEW CASTLE STATE HOSPITAL  
New Castle 47362  
Phone: (317) 529-0900
- ⑰ RICHMOND STATE HOSPITAL  
Richmond 47374  
Phone: (317) 966-0511
- ⑱ INDIANA REFORMATORY  
Pendleton 46064  
Phone: (317) 778-2107
- ⑲ LOGANSPORT STATE HOSPITAL  
Logansport 46947  
Phone: (219) 722-4141
- ⑳ FT. WAYNE STATE HOSPITAL  
Ft. Wayne 46805  
Phone: (219) 485-7554
- ㉑ NORTHERN INDIANA CHILDREN'S HOSPITAL  
South Bend 46617  
Phone: (219) 234-2101
- ㉒ BEATTY MEMORIAL HOSPITAL  
Westville 46391  
Phone: (219) 785-2511

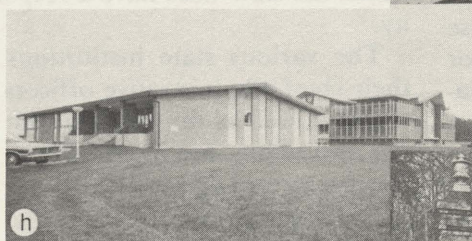
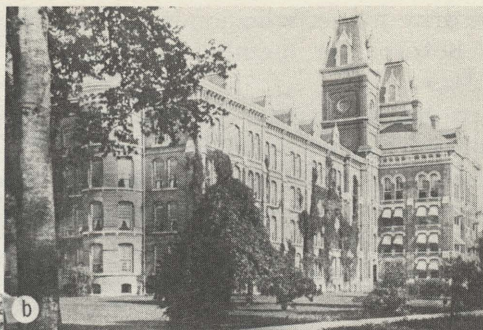






Pictured on this page are the following (from top left): a, Muscatatuck State School; b, Indiana School for the Blind; c, a typical clinic scene; d, Norman Beatty Memorial Hospital; e, Logansport State Hospital; f, Larue Carter Memorial Hospital; g, Indiana Soldiers' and Sailors' Children's Home.—Picture layouts by Richard C. Scott.





Shown above are: a and c, Dr. Norris Richmond, Indiana Girls' School; b, Central State Hospital; d, Indiana Boys' School; e, New Castle State Hospital; f, Madison State Hospital; g, Muscatatuck State School; h, Fort Wayne State Hospital; i, Indiana Veterans' Home.



off the drive for accreditation in an address before the members of the I.P.H.D.O.

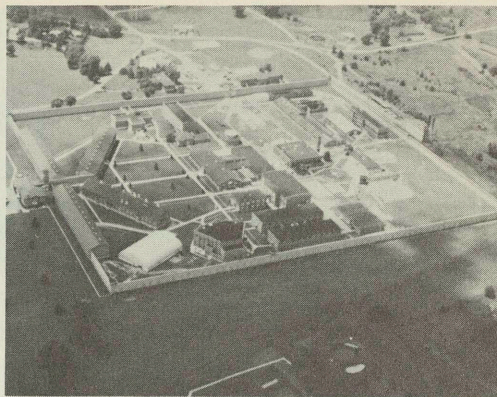
For a dental program to obtain accreditation, it must meet specific requirements in the areas of program, administration, procedures, personnel, patient care, recall, records, facilities, research, continued education, and general hospital staff participation. A written report of these activities is submitted in the form of an application to the office of the Council on Hospital Dental Service of the American Dental Association. An on-site visitation is then made by representatives of the local Council on Hospital Dental Service of the I.D.A. The findings and recommendations are reported to the ADA for final disposition.

### Accreditation Sought

In the first year after the drive for accreditation, nine of the 11 dental programs in mental institutions were in a position to make formal application. The two not applying were Larue D. Carter and Northern Indiana Children's Hospital, both having already received hospital accreditation.

The I.P.H.D.O. then pursued accreditation for dental programs within the Department of Correction and the Division of Special Institutions. All of these programs, whether large, small, part or full-time, are eligible for ADA accreditation.

As part of the total improvement in the



Aerial view of Indiana Reformatory at Pendleton.

program and service, there is a joint effort of all parties to establish uniformity of dental records. Standard dental forms were developed by the Records Committee of the I.P.H.D.O. with the aid of the Dental Division of the Indiana State Board of Health and are now used statewide. The adoption of standardized recording and reporting forms has simplified the transfer of patients and provides meaningful periodic reports.

The State of Indiana can justifiably be proud of what its institutional dental programs have done in providing care for segments of our population for which the state does have a responsibility.

The various state institutions, with their chief administrative officers identified, as well as the dentists who serve the institutions, are listed below:

### DEPARTMENT OF MENTAL HEALTH

William E. Murray—Commissioner

*Superintendent*  
Robert Heyne

*Institution*

Dr. Norman M. Beatty Memorial  
Hospital  
P.O. Box 473

Westville, Indiana 46391

Larue D. Carter Memorial  
Hospital

1315 West 10th Street

Indianapolis, Indiana 46202

*Dentist*

Harold D. Maxwell  
William C. Slemons

Donald F. Moore

David Amos



J. Eric Helmer	Central State Hospital 3000 West Washington Street Indianapolis, Indiana 46222	Charles Hazelrigg Cecil D. Rhoads
Spiro Mitsos	Evansville State Hospital Evansville, Indiana 47701	Robert L. Miley Urban L. Hermann
J. F. Frohbieter	Logansport State Hospital Logansport, Indiana 46947	William R. Finley Gregory C. Bell
Ott B. McAtee	Madison State Hospital North Madison, Indiana 47250	Raymond W. Beagles
Bernard Wagner	New Castle State Hospital P.O. Box 34 New Castle, Indiana 47362	James R. Babcock
Robert Crow	Northern Indiana Children's Hospital 1234 Notre Dame Avenue South Bend, Indiana 46617	William E. McCloughan
Eugene Darby	Richmond State Hospital Richmond, Indiana 47374	David Plotkin
Ora A. Ackerman	Fort Wayne State School 801 East State Street Fort Wayne, Indiana 46805	Glenn N. Brinker John David Yonkman
Hal K. Green	Muscatatuck State School Butlerville, Indiana 47223	Louis A. Holmes Vaughn Metz C. E. Hutton (Consultant)

## DEPARTMENT OF CORRECTIONAL INSTITUTIONS

Gordon H. Faulkner—Commissioner

Dorothy Van Brunt	Indiana Girls' School 2596 Girls' School Road Indianapolis, Indiana 46224	Norris L. Richmond
Harvey Combs	Indiana Boys' School Plainfield, Indiana 46168	Henry C. Heimansohn
Clarence E. Trigg	Indiana Women's Prison 401 North Randolph Street Indianapolis, Indiana 46201	Bernida Iqbal
Donald L. Hudkins	Indiana State Farm Box 76 Greencastle, Indiana 46135	Rodger Martin
Jack Duckworth	Indiana State Prison Box 41 Michigan City, Indiana 46360	D. Keith Higgins,
Norman G. Owens	Indiana Reformatory Pendleton, Indiana 46064	Thomas W. Ullrich Harold Ervin
William C. Elsbury	Indiana Youth Center Box 127 Plainfield, Indiana 46168	Louis Kelley



James McCart

Reception-Diagnostic Center  
Box 127  
Plainfield, Indiana 46168

Louis Kelley

### **SPECIAL INSTITUTIONS**

William Murchie—Director

Durward A.  
Hutchinson

Indiana State School for Blind  
7725 North College Avenue  
Indianapolis, Indiana 46240

Bernida Iqbal

Alfred J. Lamb

Indiana State School for Deaf  
1200 East 42nd Street  
Indianapolis, Indiana 46205

Glenn Swindel

S. William Brewer

Indiana Soldiers' & Sailors'  
Children's Home  
Knightstown, Indiana 46148

Bernida Iqbal  
Laura Kilgore

Stanley Arnold

Indiana Veterans' Home  
North River Road  
West Lafayette, Indiana 47901

Richard S. Michener

## **Dental Health Care In A State Hospital**

*Glenn N. Brinker, Chief Dental Officer,  
Fort Wayne State Hospital and Training Center\**

Dental care for mentally retarded residents in our state institutions and for those with multiple handicaps has come a long way since advocate groups such as the Indiana University School of Dentistry Alumni Association and Indiana Dental Association first became interested in and involved with the residents' dental needs.

For the Fort Wayne State Hospital and Training Center, institutional dentistry began in 1896 when interns from the Indiana Dental College, such as Dr. C. L. Hine (1904) and Dr. Howard R. Raper (1906), first came to facilities such as the Fort Wayne School for the Feeble Minded Youth to care for the residents' dental problems. These men and many others who were later to become leaders in our profession opened the doors of

institutional dentistry in Indiana. Dental care for the residents in state facilities was not a major concern of the superintendents.

These early institutional dentists were just students learning and doing what no one else would do for these patients. Opportunities in institutional dentistry were non-existent, so the interns seldom stayed longer than a year.

Even as late as the 1950's dentistry in state facilities provided little more attraction to the graduate dentist than to serve as a temporary stopping-off point. There was still little incentive from the institution to do otherwise for their patients who were considered second and even third class citizens.

Not until the late 1950's did the Indiana University School of Dentistry Alumni Association, urged by men such as Drs. Jim Huckelberry, Herbert Mason

\*Dr. Brinker is a member of the IUSD class of 1955.



and Maynard K. Hine, son of Dr. C. L. Hine, start working on plans for major improvements. With the interest and support of the Indiana Dental Association, yearly dental program and clinic facility appraisals were initiated. Through its drive for uniform improvement of equipment, personnel and program, the Association led the way to the present high state of dental treatment.

Today opportunities in institutional dentistry are getting new emphasis. Competent, concerned superintendents point out broad patient cure goals and support for dental care by a dental staff.

No longer is institutional dentistry the retirement ground of the private practitioner. No more do the patients "make do" with minimal care and the emergency relief of pain. No more do "contract" dentists serve on the basis of "pull for pay"—the practice long since discarded whereby the dentist was paid per tooth extracted. No more is inadequate service excused on the basis that funds were unavailable. No, today institutionalized patients are receiving complete and careful regular dental care of quality. Today endodontia, crown and bridge, and preventive dental care practices are the hallmarks of Indiana's dental treatment for its special citizens.

## The Dental Program at Indiana State Prison

*D. Keith Higgins, Chief Dental Officer, Indiana State Prison*

Institutional dentistry is an area that traditionally has received little attention in the dental school curriculum, although in my opinion it should be presented as a viable career alternative to private dental practice.

We at the Indiana State Prison work under the direction of the Dept. of Corrections and not Mental or Public

Students in increasing numbers are learning important techniques in institutional dentistry from clinic personnel staff members who have been practicing in state facilities for a number of years.

Private practitioners also are calling on the experienced institutional dentists for advice on how to handle mentally retarded patients who come to their offices as part of a community residential program and may be difficult to manage. The institutional dentist's expertise also is sought in matters concerning pre-medication, treatment planning and even actual alternate dental treatment in the institution's clinical facilities.

Auxiliary community groups, dental assistant and dental hygienist organizations and wives of dentists play an important part in dental care in the state institutions. These supporters of good dental programs give many hours and gifts to enhance resident care.

Institutional dentistry has come a long way in the past 80 years due to the determination and work of early dental pioneers and the Indiana University School of Dentistry Alumni Association. Thanks to their efforts, these "special ones" now have the opportunity for good dental care.

Health. Therefore, by the very name of the department under which we operate, our facility is guided a great deal by the security staff and the warden of the institution. However, this at no time restricts our professional judgment in the treatment of inmate patients, except that our working time is somewhat limited as compared to a solo private practice or an



institution which does not house maximum security inmates.

Our staff is tabled for two full-time dentists, and yet the greatest problem is maintaining a full staff since eager young dental graduates tend to seek private practices of their own. I graduated from I.U. School of Dentistry in 1965, spent two years in the Army, nine years in private practice and began work at I.S.P. in June of 1976. I am married, have four children, one dog and three cats and live close to the beach area of Lake Michigan. The other dentists who have worked here have been recent graduates and have used the opportunity as a stepping stone to solo practice rather than a career opportunity.

The clinic has its own laboratory for fabricating full and acrylic partial dentures and for doing repairs. All casting for partial denture frames is done by an outside laboratory. The operative clinic has two new and two old chairs and units. The two new chairs are equipped with all the handpieces and attachments consistent with a private office setup. Traffic load is regulated by a pass system and an appointment book that is kept by each dentist. Therefore, the dentist can regulate his own schedule consistent with the operative procedure he has outlined for a particular patient.

Our clinic chair time is organized so that we do as much restorative and surgery procedures as a patient is able to tolerate at any one sitting, i.e. we do as much quadrant operative treatment and surgery as we can. Besides being more efficient, this approach cuts down on the traffic flow into the hospital where we are located, thus cooperating with the security of the institution. I should mention that the dental clinic is inside the walls of the institution in a building that is surrounded by a hurricane wire fence and houses the hospital complex.

We will treat on an average day between 10 and 15 patients, depending upon the procedures performed. We are

equipped to do all phases of dentistry here with the exception of orthodontics. Any gold crowns, veneer crowns, jacket crowns and bridges must be paid for by the inmate: that is, for the lab service only. As the dentists are salaried employees, all other prosthetic and restorative and surgical operations are free to the inmate. No services are available to civilian personnel except on an emergency basis.

The attitude of some inmates is that they are wards of the State and they have something coming and some of them are very demanding. They will not hesitate to misrepresent their oral condition in an attempt to gain admittance to the clinic and get ahead of someone else on the list we keep for each service rendered. The inmate needs to send a written request to the dental clinic stating his specific ailment so that he can be placed on the appropriate list, i.e. extractions, toothache, oral exam, prophylaxis, fillings, or dentures. Sometimes an inmate will feign a toothache in an attempt to get in to see us, and then try to get something else done such as a partial denture impression when he hasn't requested that service through proper channels. I will say, however, that most inmates are good, cooperative dental patients.

Our preventive dentistry is provided through an inmate who is trained to do prophylaxis and fluoride polishing. He also gives instruction in flossing. Inmates get free toothbrushes but must purchase floss and toothpaste. Commissary has ordered fluoride toothpaste which is available to inmates per their individual orders.

To me, this position for a dentist is both rewarding and challenging in the respect that there is a lot of latitude here for expanding your techniques in all phases of dentistry, depending upon your interest in these fields. Also, one has to be very accurate in his diagnosis of dental disease and must follow the best of procedures in all phases of dentistry due to



the characteristically poor oral hygiene background of inmates. Many of these men come from poor health backgrounds and frequently extensive drug addiction has affected their oral health. We see a lot of bone loss and periodontal disease problems here. We see 25-year-olds who have mouths of 55. We see users of "speed" who have ground down their teeth and damaged the periodontium due to attrition and abrasion grinding patterns associated with drug abuse and just plain ignorance of how to care for their mouths. Once taught, they do respond well, however.

Our clinic day is from 7:30 in the morning to 4:00 in the afternoon with a half-hour lunch break. When we arrive at the clinic after passing through five electric gates between the Administration building and the inside of the complex, our day begins with scheduling from one of the lists we have on hand. Monday, Wednesday, and Friday are prosthetic and restorative days and Tuesday and Thursday are surgery days. When a patient's work is begun, we carry him through as much of the restorative phase as needed and then if he requires prostheses he is added to the appropriate list and taken when his name comes up.

My clerk takes all the phone calls that come into the clinic and tries to handle things diplomatically and maneuver the calls to the appropriate list as the caller's request or complaint requires. There is also an inmate porter who keeps the floors, wastebaskets and counter tops

cleaned up. Our lab technician is an inmate who knows how to set and process full and acrylic partial dentures and to repair occasionally. As director of the dental clinic I attend meetings with the hospital administrator and the other physician on matters of related health care concerns; this helps establish rapport between the medical and dental staff and helps us share problems and work closely together.

I stress that the reason we have been able to achieve some degree of efficiency here in the dental clinic is our adherence to good diagnostic procedures and the fact that we operate on a "pass only" system of scheduling patients rather than an open sick call type of clinic.

With renewed cooperation from the administration relative to use of consultants and appropriate financing, the clinic should progress in the future to increased efficiency. The most important consideration in trying to maintain an adequate dental program in any institution is to keep in mind that without a competitive wage scale, it is very difficult to attract any one who can consider this phase of dentistry as a career. The old attitude that people seek a career in institutional professional health care due to some lack of ability to perform in a private sector practice belongs in the 19th century. This area of health care is as demanding as any I have experienced so far and I have been in both military and private practice.

## The Dental Clinic At Indiana Girls' School

*Norris L. Richmond, Associate Professor of Operative Dentistry\**

Indiana Girls' School is situated on a beautiful wooded campus on the northwest side of Indianapolis. Many people erroneously think that it is at Clermont, Indiana; but the address is 2596 N. Girls'

School Road, Indianapolis, Indiana 46224. The Superintendent is Mrs. Dorothy Van Brunt.

The average monthly inmate population is approximately 155 girls. There



are nine cottages, each containing individual rooms for each girl, separate offices for the housemother and counselor, and a recreation area. One of these is a maximum security cottage for girls with severe behavior problems. The facility also includes an administration building, an infirmary and dental clinic, central dining hall, a chapel, academic building with an attached activities building with swim pool, a green house, and a power plant.

Statutes establishing the Indiana Girls' School include Acts of the years 1869, 1899, 1903, and 1907. In the latter year the name was changed from "Indiana Industrial School for Girls" to "Indiana Girls' School".

Delinquent girls mainly commit offenses directed toward self and family rather than toward society. By law these young people, who range in age from 12 to 18, are separated from adult offenders. The correctional process begins in the community with involvement of local courts and probation procedures. The Girls' School uses data collected by probation officers, looks at the offender's prior history, the manner in which the correction process has been applied, and her response to it. After arriving at a diagnosis of the individual, the total institutional program is used to help the girl to develop to the maximum of her capacity, and to become a more mature, productive person. The philosophy of the Girls' School is based on the use of education, social services, psychological and psychiatric services, medical and dental services, homemaking services, offcampus jobs and volunteer services, proper nutrition, and religion to develop mental and physical health; and to learn attitudes and values that will

help each girl to live a satisfactory life in society.

It is the philosophy of the dental clinic at the School that all possible dental services will be made available to the institutionalized patients. The level of care offered is dependent on the patient's length of stay at the institution (the average being six months), the severity of the dental problems, and the complexities of the technique involved in rendering reasonable and needed dental care.

Good-looking, healthy teeth are an important part of a girl's improved self-concept. The more attractive a girl is, the better she feels about herself and her attitude toward others improves. Therefore, the Dentistry Department policy provides diagnostic, preventive, reparative, esthetic, and rehabilitative services.

Many of the young women arriving at the school show evidence of shocking and total dental neglect—a toothbrush and its use not being a part of their way of life. Within a week after admission each new girl receives a complete oral examination along with necessary radiographs. If immediate attention is needed, it is provided. Routine care and recall examinations are scheduled on an appointment basis.

The dentist (the present author) has a dental assistant who works with him on the three days per week that he is on the campus. Any emergencies are reported immediately and seen by the dentist with all expediency. Consultations and/or treatment, if needed, can be referred to the Wishard Hospital oral surgery clinic, or to one of the clinics at the Indiana University School of Dentistry. Priority is given to the relief of pain and the eradication of infection.

The dental clinic is air-conditioned and has two fully equipped operatories complete with X-ray units. All types of dental services including full dentures, partial dentures, periodontics, en-

*(continued on p. 104)*

\*Dr. Richmond, a 1963 graduate of IUSD, has headed the dental program at the Girls' School since 1964. In 1969 it became the first dental clinic in an Indiana correctional institution to be approved by the ADA Council on Hospital Dental Services.



# Considerations In Dental Care For The Elderly



COMPASSION... LISTENING... UNDERSTANDING ... PROPER  
INSTRUCTION... REGULAR EXAMINATION... ETC... ETC...



# Biology of Aging

*Abdel H. Kafrawy, Associate Professor of Oral Diagnosis/Oral Medicine\**

This issue of the Alumni Bulletin features three articles on Geriatrics. Besides Dr. Kafrawy's essay, they include one on oral problems in the elderly and another on the personal views of a dental professional who has become deeply concerned with various aspects of the aging process as it relates to her profession and its people.

The Editors

Any one who may think that I am planning to announce that biological evidence indicates the fountain of youth will soon be discovered, or that a means of constant rejuvenation will be at hand in the near future, will certainly be disappointed. For the thesis that I will support is that aging is inevitable and perhaps predetermined. It is well recognized that we all develop and reach maturity; our vigor then gradually wanes, until we succumb. In other words, "First we ripen, then we rot." But why? And is aging a biologic phenomenon or is it pathologic? Before addressing myself to this question, I would like to make a distinction between life expectancy and life span.

Life expectancy refers to the duration that an average individual of a given species is expected to live. Life span, on the other hand, refers to the maximal duration of life an individual of this species can attain. Progress in medical treatment and prevention of disease during the present century have resulted in an increase in human life expectancy, but human life span has remained unchanged.

It has been estimated that if cardiovascular diseases and their sequelae were entirely eliminated, 18 additional years of life expectancy would be gained. And if cancer were entirely eradicated, there would be a further gain of two additional

years: 20 years in all. What will happen when these goals are achieved? Barring accidents, individuals will be able to live out their life without concern of premature demise, but with the realization that the inevitable is bound to happen somewhere around their hundredth birthday.

## Three Views on Aging

A question that has faced biogerontologists for a long time, and remains unresolved, is this: Is aging a biologic phenomenon, or is it pathologic? Is there a relationship between aging and diseases that affect the elderly, and what is the effect of these diseases on the process of aging? Three principal views have emerged within recent years.

The first view maintains that aging is intrinsic within the individual, and that diseases that affect the elderly occur in this particular age group simply because these diseases require prolonged exposure to environmental factors, or because these diseases have a long latent period before they become clinically manifest. According to this view, aging is a biologic phenomenon. On the other hand, cardiovascular diseases and cancer are prevalent in the aged simply because of the long latent period needed for the ravages of these diseases to become clinically apparent.

A second view, taking an opposite tack, holds that aging is pathologic, and that diseases affecting the elderly may be a part of the intrinsic aging process. Thus mutations developing over the years lead to aging, deterioration of the immune

\*This article was adapted from a lecture that Dr. Kafrawy delivered during a Continuing Education course on "Geriatric Dentistry" at IUSD on June 7, 1978.



system, and in the unfortunate individual, the development of cancer.

The third view takes an intermediate position, maintaining that aging is primarily biologic, but that various diseases and environmental insults have a cumulative effect which will be superimposed on intrinsic aging, resulting in further biologic deterioration.

### **Biologic Clocks**

Evidence has been accumulating within recent years that aging is predetermined and that aging is a part of the genetic program carried by the cells of the individual. The concept of biologic clocks has been introduced, but the question remains as to where the clock is located. Is it within each individual cell? Is it within the hypothalamus, the master control of the endocrine system? Is it within the thymus that controls the immune response?

Evidence has been presented that the biologic clock is located within the cell. This evidence came from tissue culture studies in which cells could be maintained under controlled conditions and their behavior studied. Early in this century Alexis Carrel conducted studies which seemed to indicate that normal cells grown in culture are immortal. What he did was to grow fibroblasts from the hearts of chick embryos, and he kept reculturing the cells. He was able to maintain these cells in culture for 34 years, at which time he voluntarily terminated the culture. The conclusion reached was that normal cells grown in vitro are immortal, and that aging must then be due to factors outside the cells themselves, since the cells can be maintained in vitro for periods far exceeding the life-span of the species from which they are derived. Carrel was awarded the Nobel prize for his work.

### **"Immortal" Cells**

The concept of potential immortality of cells in vitro was given impetus by establishment of the HeLa cell line in 1952. However, further studies of cell behavior in culture showed that normal cells have a finite life span.

Work by Hayflick has shown that normal cells grown in culture undergo a definite number of mitoses, after which they die. Embryonic human fibroblasts undergo about 50 divisions. Cells from other species undergo a number of divisions that are characteristic of the species. It is of interest that the number of divisions that cells undergo in vitro correlates with the life span of the species. Thus in humans with a life span of about 100 years the cells undergo about 50 divisions. In mice with a life span of 3.5 years, the cells undergo about 20 divisions. And in the tortoise with a life span of 175 years the cells undergo about 100 divisions. The number of mitoses that cells can undergo in vitro has come to be known as the Hayflick limit.

All normal cells that have been grown in vitro obey the Hayflick limit. The only cells that have achieved immortality are the cancer cells. The HeLa cells alluded to earlier were derived from Henrietta Lacks, who was admitted to the Johns Hopkins Hospital in 1952 with the diagnosis of cervical cancer. The patient died in the same year with advanced cancer. However, cells from the tumor were grown in culture, and became known as the HeLa cells. These cells are being used in many laboratories around the world, even though the patient from whom they were derived has been dead for over a quarter of a century.

### **Procedural Problem**

What happened then in the experiment of Carrel which presumably



showed that normal cells were immortal in vitro? Carrel in his serial culture kept adding embryo extract to maintain cell growth, a procedure that was common at his time before modern culture media became available. What Carrel did not know is that he was constantly adding fresh fibroblasts to his culture, in the embryo extract he used. It is frightening to consider how our knowledge is influenced by the vagaries of experimental procedures.

The studies of Hayflick show that aging of individuals is the result of aging of individual cells. The question then arises as to where within the cell is the biologic clock located. Nuclear transplantation experiments showed that it is located within the nucleus. The suggestion has been made that cellular aging is a part of the normal genetic program carried by the cell. Another hypothesis which has been advanced is that aging is the result of mutation that affects the cellular genome.

At the level of the whole organism, the suggestion has been made that the clock is located in the hypothalamus. This suggestion is based on the known decline in endocrine function with age. It has also been suggested that the clock is locked within the thymus. The thymus is now

known to play an essential role in the development of the immune system. Decrease in the vigor of our immune system with age has been implicated in the process of aging.

Cross linkage of biologically important molecules has been implicated in aging. This can impair the function of enzymes. Increased cross linkage of collagen, resulting in increased density of connective tissue with impaired diffusion of nutrients to the cells, has been implicated in the process of aging.

Some aspects of the biology of aging have been summarized here. I support the thesis that aging is inevitable and perhaps is predetermined, in the sense that we are born to ultimately age. It is a sad fact that nature is not interested in maintaining individuals beyond their reproductive age. Nature is interested only in preservation of the species. It often happens that the aged lose interest in life, and may neglect their health and diet. It is the responsibility of members of the health profession to help and educate the aged, so that their lives will be worthwhile.

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## Detecting Oral Problems in Elderly Patients

*William Borman, Assistant Professor of Oral Diagnosis/Oral Medicine.*

Oral tissues, like the rest of the body, undergo many aging changes. We find many old people who are really aged: The chronically ill, the physically and emotionally aged and others who have poor resistance to disease and to environmental stresses. The late Dr. Arthur Elfenbaum referred to these people

Dr. Borman is President-elect of the American Society of Geriatric Dentistry.

as the "Broken Blossoms in the Garden of Life," as distinguished from the "Hardy Perennials." However, neither group will manifest aging changes in all cells, organs and tissues simultaneously.

Disease usually has an acute character in children and assumes a more chronic, or less dramatic form in the elderly. In examining an elderly person, we should remember that no two are alike and that



the geriatric person is not a copy of a younger individual. Treatment will vary, even if identical conditions exist, because one person may be capable of rational discourse and another may be senile. The basic principle taught by Dr. Elfenbaum for many years still applies: "Understand the patient before the oral tissues are examined." Also, we should all recognize the importance of having proper reception room furniture, examining chairs, lighting, etc. for the elderly patient. One important diagnostic point: if the patient seats himself on the edge of the chair for some time before he is able to lean back, he may have orthopnea, a condition associated with congestive heart failure. The assistant should seat all patients carefully to prevent falling and give them a comfortable feeling that we, the healers, are interested in them.

#### Clues Described

While the medical and dental History is being taken, the patient should be given a chance to talk reasonably as you gradually move toward your diagnosis. Remember, ask only what you want answered and note such clues as the masculinized voice of a post-menopausal patient, the pip-squeak voice of an older man whose vocal cords are calcified and/or whistling caused by ill-fitting dentures or loose natural teeth. A raspy voice may be a sign of smoker's throat, but should be checked for malignancy. Allow for slow perception and long answers—the patient may be just taking it slowly to help pass the time. Also, the laying on of hands is still effective therapy, if done sincerely (there is a difference). It is always important to note whether the patient has dyspnea, orthopnea, edema of hands and feet and a cyanotic complexion; if any of these are observed, a heart disorder should be kept in mind.

If the patient reports a toothache in a reasonable-looking left posterior molar and pain in the left arm, it may be a

prodromal sign of an impending angina pectoris.

The weary elderly have certain disorders which are related to their oral health status. Their chewing may be insufficient or ineffective, and thus they may eat mainly soft or fluid foods, refined carbohydrates and low residue edibles. Constipation follows and laxatives are used for relief. Vitamins A and D (fat-soluble) are lost when mineral oil is used and many of the nutrients in the food are forcibly ejected. The effects of this are seen in the mouth in varied ways. Atrophy of the lingual papillae and glossodynia (painful tongue) may occur.

Taste sensations diminish with age. Since the sensation of sweet may be depressed, the elderly tend to overindulge in sweets to make up for this taste loss and if teeth are present, excessive decay follows in a previously caries-free mouth. The excess calories can lead to obesity which may lead to heart disease, diabetes, etc.

#### Signs of Aging

In aged patients there are also signs of normal oral senescence. Muscles often atrophy with age. Masticatory force is reduced even if the person has his own teeth. Gastric juice is not as acid as formerly, digestion and absorption are somewhat less efficient, and healing is slower. An acid medium is thought to be necessary for proper absorption of vitamins C and calcium.

At the first examination, notes should always be made of the following:

1. Number of missing teeth.
2. Attrition on the occluding and approximating surfaces. Lack of the expected amount of attrition would indicate that there is no lateral excursion and the person may have had a TMJ dysfunction in his earlier life.
3. Excessive occlusal wear, a condition that may be due to a very thorough mastication of roughage in food, chewing tobacco or bruxism.



4. Problems due to hardening of the teeth, with age-stained cracks; cusps often break off, and roots will sometimes split.

(Note: an increase in fluorides in the enamel may give teeth a deeper yellow color. Fluorides in the enamel may result in some caries reduction in the elderly even with dietary changes.)

### Periodontal Problems

With few exceptions, periodontal disease begins earlier in life and proceeds painlessly until it becomes the major cause of tooth loss after middle age. However, many elderly persons have a healthy periodontium.

The oral soft tissues are symptomatic in the hemorrhage of blood dyscrasias, in the vesiculation of herpes, the pigmentation of Addison's disease, the bullae of pemphigus and pemphigoid and the peeling of desquamative stomatitis. Bearing in mind the old saying, "The mouth is the gateway to the body," it is not surprising that its tissues are subject to so many diseases.

Neglected periodontal soft tissues of old people often become fibrotic. The tissue becomes paler, there is a reduced blood supply and metabolic exchange is retarded. Normal stippling is lost and the peripheral nerve supply is diminished. Healing is often delayed.

As the buccal mucosa ages, it becomes thinner and less vascular. The surface appears to have a sheen. Tissue that is traumatized by chipped teeth, chemical and bacterial irritants, reacts by whitish keratosis of the epithelium. All white or gray lesions should be given attention by cytology or better by biopsy. If a lesion feels hard and cracked, microscopic examination will probably show squamous cell carcinoma. Always check.

A generalized cyanosis of the mucosa is seen in heart and lung disease and in polycythemia. An anemic person's mouth shows a noticeable pallor. Brown pigmentations are generally seen on the

mucosa in Addison's disease, although melanin spots are considered normal in dark-skinned people of all races.

Petechial hemorrhages in the buccal mucosa should always be closely regarded. In some cases they may be innocuous and due to slight traumatic injury. In other cases they may signify capillary fragility, as in scurvy, or subclinical vitamin C deficiency or an abnormality in the hemopoietic system, as in thrombocytopenia and leukemia.

### Possibilities Listed

The mucosa of the hard palate is keratinized and immobile and is subject to the same diseases that affect other parts of the mouth but these possibilities are also to be considered:

- Palate of heavy smoker-nicotine stomatitis.

- Inflammatory hyperplasia of palate may result from denture irritation.

- Torus Palatinus, an exostosis which has its onset early in life. The patient may become aware of it and develop cancerphobia.

- Complaints of swollen palate may be due to a nasopalatine cyst, a salivary gland tumor or malignancy in the maxillary sinus.

- The superior alveolar nerve which supplies teeth lies in the wall of the sinus and may be irritated by inflammation of the antral mucosa causing odontalgia.

Let us conclude our discussion with a short symptomatology of the tongue. The tongue was once an important indication of a patient's health, but with broadening of medical horizons it is now a minor aid.

As a person ages, a general decline in muscle power is reflected in the tongue. When an elderly person is asked to show his tongue, the mouth may hang limp with the tip of the tongue almost touching the chin. The borders may be indented by the pressure of the teeth against



it. In the edentulous mouth the tongue enlarges. Poor health in old age may result in atrophy of the papillae of the tongue. With the denuded dorsum, remember that it is the patient who needs treatment rather than the tongue.

The tongue may appear shrunken and the patient may report a burning sensation, frequently because he is skipping meals to economize. The patient who is consuming empty calories may become "fat with hunger." Other causes of burning tongue are pernicious anemia, hormonal deficiency and emotional upsets.

There are many more systemic disorders that have oral manifestations. By now it should be clear that the concerned practitioner has to be dedicated to human welfare as well as diagnostic tests. The total patient has to be considered, sometimes including even his family, social life, cultural status and genetic origin.

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## Dentistry, Aging, and Me: A Personal Perspective

*Shermie L. Schafer, Instructor in Dental Auxiliary Education*

My assignment for contributing to this issue was to "give an overview of aging," which seemed about as easy as trying to condense the entire Encyclopedia Britannica into a neat, 3-page review. The more I learn about aging, the more I realize how complex and vast an area it actually is. At this point, however, I feel that I can at least describe my own involvement in aging and some professional implications which can enhance the dental professional's relationship with older persons as well as one's own life.

My interest in aging accelerated two years ago when I became Project Coordinator for the Nursing Home Oral Cancer Screening Program at Indiana University School of Dentistry, Department of Oral Pathology. What quite honestly started out as a job change for a career challenge soon became a personal commitment as well. I discovered that people involved with aging in any way are often very special people . . . warm, sensitive, caring, openly human, and, surprisingly, more positive and en-

thusiastic about the process of aging than I had ever imagined.

In September of 1977 I was accepted in a two-year traineeship at Christian Theological Seminary at Indianapolis for the program, "Mental Health of Aging Persons." Funded by the National Institute of Mental Health, this program is designed to improve services among older people by strengthening the experience and skills of professionals in working with groups of older people and by researching the effectiveness of growth groups for improving an older person's well-being.

The training consists of a monthly session (Friday afternoons and all day Saturday) with an expert in mental health. Some of the topics covered to date have included group therapy techniques, peer counseling methodology, sexuality in widowed and aging persons, sensory losses and adaptive techniques, models of aging ("old and OK"), human potential models, and the effects of psychogenic drugs on the elderly, especially the institutionalized. These training



sessions are experiential whenever possible, and for all participants, the personal growth has been as great as the professional skills gained.

### **A Team Approach**

With this background, trainees work in teams with a group of no more than 10 elderly persons, serving as group leaders for at least 12 weeks, meeting weekly for 1-1½ hours. The settings vary from nursing homes to community centers, and testing measurements include the Havighurst Life Satisfaction Index, the Zung Depression Scale, and others.

In reading psychological or psychiatric histories of patients in nursing homes, I often wonder what preventive measures might have been successful in keeping people sane. Every human being has the potential for "breaking down" emotionally and psychologically . . . losing the necessary coping mechanisms for survival. Mental health disintegrates when one stops relating with other human beings, and that can occur at ANY age. The purpose of these group meetings is for people to *share* both their problems and their coping mechanisms. I have found in my own life that once one trusts enough to share feelings and problems, one finds that others have had similar experiences as well; therefore one feels less "abnormal" or unique in one's own situations.

While my involvement in both these programs (and any other seminar/course on aging that I have time for) continues to both challenge and excite me, I still find that most colleagues in dentistry react to the subject of aging with a less than positive response. (I personally think the title "GERIATRIC DENTISTRY" is terribly dull and unimaginative; for years I myself responded to that topic with merely a stifled yawn and glazed eyes.) Fortunately, at least in other disciplines, aging is now being given the excited attention it deserves. (A good introduction to gerontology is Dr.

Alex Comfort's *A GOOD AGE*, first published in the U.S. in 1976 by Crown Publishers, Inc., and now available in paperback.) Widely known for editing both the *JOY OF SEX* and *MORE JOY*, Dr. Comfort actually has as his life work human biology, with special reference to aging and its control. A native of London, Dr. Comfort now resides in California where he is a faculty member of three universities and edits the journal *EXPERIMENTAL GERONTOLOGY*, which he founded. He has written a textbook on biological aging titled *THE BIOLOGY OF SENESCENCE*.

### **"The Detroit Syndrome"**

America is still an extremely young country and culture when compared with other societies, and we tend to be very youth-oriented. Even the dental profession has fallen prey to "the Detroit Syndrome" which our economic structure seems to demand. We are programmed by the media and Madison Avenue to buy "the latest model", regardless of the fact that the older models are quite often still functioning and may actually be better than the new designs! This attitude has even pervaded our reactions to people; if it's old, dispose of it, or at least get it out of sight. Old people may exist only if they stay out of our way and don't slow us down.

Aged persons remind us of our own mortality, and many people would rather pretend that their lives are forever. The notion that "if I don't think about it, it won't happen", is a common reaction to any topic related to aging, particularly to death and dying. Often we fail to deal with our own feelings about that until we lose a loved one out of sequence, or ahead of "normal" time. Within the last year I personally shared the dying and death process of two very close, loved friends, both aged around 50. While Elizabeth Kubler-Ross is trying to educate Americans to accept the fact that death is in fact just one more phase



of growing in life, that is extremely painful and difficult to accept when it happens, especially to a young person . . . (and 50 is young!). However, I too have learned that the dying really do teach us how to live; they force us to look at our own life's priorities as they examine theirs in retrospect . . . and they also teach us the importance of working on our own spiritual dimension, whatever that may be.

For me, involvement in the field of aging has truly improved the quality of my own life. I have learned to appreciate each stage of life for the unique satisfaction that each can bring, building always on the experience gained along the way. I feel much more positive about my own growth and development as a person, having learned and observed that those who age beautifully are those who continue to grow, change, adapt, and fulfill themselves. (Often that demands taking an introspective look at what REALLY makes us happy, rather than what society may have programmed for us.) Older persons seem often much more comfortable about "doing their own thing", and are less uptight about prescribed roles and images.

### **A Wide Field**

Once one opens his/her mind to aging, one discovers that there is in fact a great deal happening in many areas of the field. One can choose to study any of a wide variety of sub-topics, including psychology, sociology, the arts, history, legal issues, religion, urban planning and architecture, communication, health, death and dying, just to name a few. One can begin with what one is more comfortable with, and work into more difficult aspects. (Working toward a Masters' in Nutrition, I hope to combine interests and do as my Thesis a correlative study dealing with depression or self-esteem and dietary habits of older persons.) One can learn more about aging in

a variety of places, such as churches, civic groups, professional meetings, and universities. Even theatre and television offer occasional welldone programs; for example, the television series "Over Easy", with Hugh Downs, and the film/drama "I Never Sang For My Father," with Gene Hackman and Estelle Parsons.

Having been a practicing member of the dental profession for 15 years, both in private practice and in education, I feel strongly that it is time for all health-care professionals to develop a more holistic approach to patient care. ("Holistic" meaning viewing the person as a whole person, not merely a "case" in whatever specialty we may be practicing.) My interest in nutrition came out of my practice as a dental hygienist when I realized that nutritional ignorance was not limited to the poor and illiterate. My interest in aging came out of a job change which I took for professional growth and advancement. My involvement in the mental health traineeship came out of the desire to be more competent in working with the aged, although the principles learned apply to persons of all ages. Out of this multi-dimensional involvement, I feel that I've learned a great deal about how one can prepare for successful aging in many ways. . . judicious dietary habits throughout life, body conditioning, exercise and weight control, education on a continuing basis, practice of mental health principles, development of one's own spiritual philosophy, etc. One cannot be fully involved in any facet of health care without consideration of the patient as a whole; the necessity for this philosophy is keenly felt when working with the elderly.

With increased public awareness, concern and involvement in aging, our society can overcome its current "ageism", the prejudice against age. In the words of John Donne, "Every man is part of the main"; the problems we solve for the elderly today will lead to a happier, fuller life for all of us.



# Tests of Some Sargenti Materials and Techniques

Samuel S Patterson, Abdel H. Kafrawy,  
B. D. K. Brown, C. M. Cohler, and C. W. Newton\*

Ever since Sargenti and Richter<sup>1</sup> published their book *Rationalized Root Canal Treatment* in 1959, there has been considerable confusion among a number of dentists in this country concerning the proper methods of treating diseases of the pulp and their sequelae. Dental educators have continued to espouse sound principles of endodontic therapy, based on time-tested pulp treatment procedures supported by voluminous research and backed by a firm foundation in the basic sciences. However, followers of the Sargenti approach have accused us of teaching tedious techniques with such rigorous standards that only the specialist could attain success.

A review of the curriculum of endodontic education effectively rebuts the charge that our programs are designed chiefly for the potential specialist. As an example, the following subjects are offered in the D.D.S. program by Indiana University School of Dentistry:

The student must diagnose, plan, and treat at least six teeth. Of these, two must be molars and the sixth tooth (a molar) is treated and observed as a practical examination. If the student successfully accomplishes the goals set forth, he is either excused from further participation in clinical endodontics or he may accept one or more of the following:

1. Second year—Basic concepts of endodontics (weekly lecture course during spring semester)
2. Second year—Basic laboratory en-

dodontic procedures (weekly laboratory course during the spring semester)

3. Third year—Clinical endodontics (appointments arranged by the student with patients assigned by Director of Clinics)
4. Family Practice fourth year programs:
  - a. Surgical endodontics—6 weeks
  - b. Molar endodontics—8 weeks
  - c. Advanced endodontics—8 weeks
  - d. Advanced theory of endodontics—6 weeks
  - e. Cosmetic bleaching of pulpless and vital teeth—4 weeks
  - f. Teaching of endodontics—16 weeks
  - g. Research of independent study of endodontics

Thus the average pre-doctoral student has a background that should prepare him to treat average root canal problems. The same supporters of the Sargenti philosophy who accuse dental educators of not properly preparing students for endodontics in general family practice advocate technical procedures that short-cut accepted endodontic treatment. Some of these short-cuts claim outstanding antibacterial and healing qualities for the medicaments used. Other aids in treatment are said to facilitate rapid canal preparation and filling.

In the last five years the Graduate Endodontic Department at Indiana University School of Dentistry has undertaken investigations of some of the medicaments and methods advocated by Sargenti and the American Endodontic

\*Dr. Patterson is Professor and Chairman of Endodontics. Dr. Kafrawy is Associate Professor of Oral Diagnosis/Oral Medicine. Drs. Brown, Cohler, and Newton are former graduate students in the Department of Endodontics, IUSD.



Society. The research studies were directed by the two senior authors and performed by the other three authors, who were then graduate students. Each of these three had taken a prescribed one-day course directed by Sargenti or one of the leaders of the American Endodontic Society. The studies evaluated the connective tissue response to the materials used in Sargenti's endodontics, the instrumentation phase of the treatment, and the short-term and long-term responses of vital and necrotic monkey's teeth to the treatment.

### Reactions to the Material<sup>2</sup>

Polyethylene tubes containing either freshly mixed RC-2B, TCM or zinc oxide and eugenol were implanted under the dorsal skin of 25 Sprague-Dawley rats. The animals were sacrificed in groups of five at 2, 16, 20, 30, 90 and 180 days after implantation. Histologically RC-2B was like its N2 predecessor in producing coagulation necrosis of the connective tissue in contact with the material (Fig. 1). This effect was probably due mainly to the paraformaldehyde content of the material. However, unlike N2, RC-2B elicited a mild inflammatory response up to 180 days after implantation. This was attributed to the masking of inflammation by the corticosteroid in the RC-2B formulation. TCM produced a similar connective tissue response. Dispersion of the materials was evident in the connective tissue.

Incorporation of the corticosteroids into RC-2B has produced the effect of a "double-edged sword"; that is, on the one hand, the RC-2B produced tissue necrosis, and on the other hand it suppressed the normal biological processes designed to remove such necrotic tissue. Zinc oxide and eugenol, which was used in the study as a control, produced initially moderate inflammation that subsided with time.

### The Instrumentation Phase<sup>2</sup>

Root canals of three groups of ex-

tracted single-rooted human teeth were prepared by (1) Giromatic preparation and filled with RC-2B as prescribed by Sargenti; (2) conventional preparation using endodontic files and filled with RC-2B paste; and (3) conventional preparation using endodontic files and filled with gutta percha and zinc oxide and eugenol sealer. Specimens from each group were examined with scanning electron microscopy and were investigated for periapical leakage using  $\text{Ca}^{45}$  autoradiography. Scanning electron microscopy revealed an apical plug in most specimens. However, the plug in the specimens prepared by the Giromatic had a loose fibrous texture, in contrast to a more dense dentin chips plug in the specimens prepared by conventional instrumentation. Numerous voids were also evident in the RC-2B filling. Autoradiographic examination revealed moderate leakage in the specimens prepared by the Giromatic and filled with RC-2B. No leakage was evident when the canals were prepared by conventional instrumentation and filled with either RC-2B or with gutta percha and zinc oxide eugenol sealer. The difference in the leakage pattern was attributed to the difference in instruments and techniques used in preparing the root canals. The fibrous plug within the apical portion of the canals prepared with the

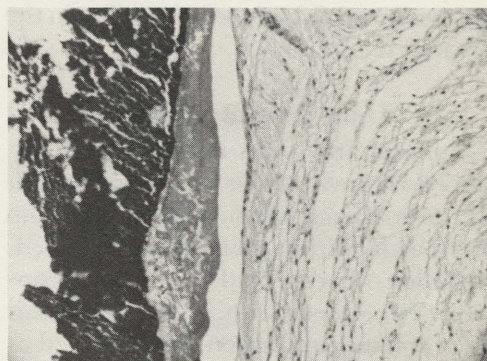


Figure 1: Coagulation necrosis adjacent to RC-2B (black material at left) at 16 days. Connective tissue peripheral to the zone of coagulation necrosis shows only mild inflammation.



Giromatic was ineffective in preventing leakage.

### Short-Term Response<sup>3</sup>

The short-term response to Sargenti's endodontics was evaluated in vital and non-vital teeth of two young adult *Macaca speciosa* monkeys. Pulpitis was induced in 12 teeth by exposing the pulps to the oral environment for 48 hours. Six teeth were treated, and the remainder served as untreated controls. Pulp necrosis and/or apical pathosis was induced in 12 teeth by exposing the pulps to the oral environment for two months and then sealing the cavities with amalgam for one month. Six teeth were treated and the remainder served as untreated controls. Endodontic treatment was done according to the procedures prescribed by Sargenti and the American Endodontic Society for pulpitis and necrosis, respectively. The monkeys were sacrificed one month after endodontic treatment.

Microscopic examination of the treated pulpitis specimens showed that all apices except one had lesions ranging from apical periodontitis to granulomas. The control pulpitis specimens had normal radicular pulps and no periapical inflammation. The treated and untreated necrosis specimens showed basically the same periapical responses, with no evidence of the onset of healing in the treated teeth.

### Long-Term Response<sup>4</sup>

Pulpitis and pulp necrosis were induced as previously described in 34 teeth of three *Macaca speciosa* monkeys. Nine teeth with induced pulpitis were treated, and nine others served as untreated controls. Nine teeth with induced necrosis were treated, and seven others served as untreated controls. As in the short-term study, endodontic treatment was done according to the procedures for pulpitis and necrosis prescribed by Sargenti and



Figure 2: Periapical region of a monkey tooth with induced pulp necrosis. The tooth was treated by the Sargenti method one year earlier. Severe periapical inflammation and destruction of the periapical tissues are evident.

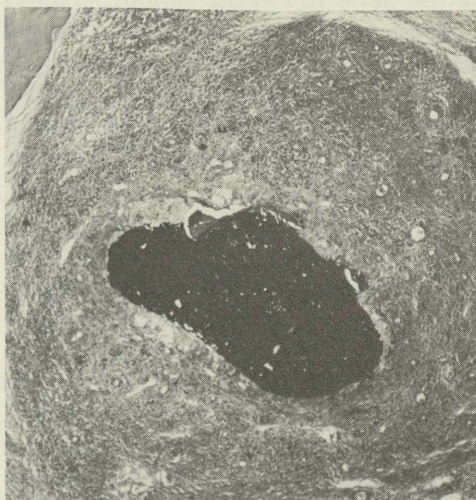


Figure 3: Severe inflammation adjacent to RC-2B which was accidentally extended in the periapical tissue during treatment of a monkey tooth, one year earlier.



the American Endodontic Society. The monkeys were periodically examined clinically and radiographically until sacrifice at six and 12 months following treatment. Little or no correlation could be found between any clinical or radiographic results and the microscopic findings. None of the pulpitis control teeth had any periapical inflammation. Periapical pathosis was evident in association with all pulpitis treated teeth at six and 12 months after treatment. The treated necrotic teeth showed no evidence of healing at either study period (Fig. 2).

### Discussion

Subcutaneous implantation of the materials used in Sargenti's endodontics revealed that the materials produced tissue necrosis that was associated with only mild inflammation. It was interesting to compare these reactions with instances in which the same materials had been accidentally extended into the periapical tissues in monkeys, producing a severe inflammatory reaction (Fig. 3). This difference could be attributed to differences in response between the periapical tissues of monkeys and the subcutaneous tissues of rats. Evaluation of the instrumentation phase of treatment revealed that Giromatic preparation of the canals is inferior to conventional instrumentation. In studies of the short-term and long-term response to Sargenti's endodontics on vital and pulpless teeth of monkeys, the vital teeth developed apical pathosis, and there was no evidence of healing of induced periapical lesions in pulpless teeth, even one year after treatment.

It is of interest to compare the findings of these studies on Sargenti's endodontics with conventional endodontics. Malooley<sup>5</sup> evaluated the response of induced periapical lesions in monkeys to conventional technique at varying periods up to one year. He found that the response to treatment was influenced by

the apical extent of the root canal filling, the time lapse between treatment and sacrifice, and the presence of bacteria in the apical portion of the root canal. New bone formation was evident as early as 15 days after treatment, provided that bacteria were eliminated. Complete healing was noticed at the end of one year when the root canal filling was well condensed and confined to the canal.

These studies have shown that proven principles of endodontics should not be sacrificed for the sake of speed and economy. The materials used in Sargenti's endodontics have been undergoing constant modification since the advent of the technique in 1959. The most recent version is a "white" formulation containing 6% paraformaldehyde. Studies are now in progress evaluating the reactions to this new formulation.

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**Recipients of the 1978 Omicron Kappa Upsilon membership.**



# Dentistry: A Dull Profession?

*James M. Souers, Class of 1978\**

Many people think of our profession as offering a pretty drab way of life, lacking much excitement. This is the story of a man who would have had to disagree with that. It is a personal story to me since the man was my grandfather, for whom I was named. His is the tale of a dentist from Indiana who went on to serve sultans and kings, as well as innumerable citizens of seven countries of Europe, Asia and Africa.

Dr. James Souers grew up on a farm around Huntington, Indiana. He graduated from Indiana Dental College in 1901. With a fascination for the Orient and a desire to travel that I'm sure many of us can relate to, he accepted a contract to teach in the Imperial University in Tokyo. At the time, Japan was attempting to establish a dental college and he was to aid in this. During the four years he spent in Japan, he established a practice and learned fluent Japanese. While he was there he also received an invitation to go to Korea to attend the King. He accepted, and was escorted there by royal attendants. This king paid him his highest single fee of \$3,000 for one bridge, and the fringe benefits included living in the royal palace for eighteen days where he was treated as a royal guest. While there, the crown princess, who had never seen a man from the Western world conveniently developed a toothache and asked to be permitted to see the dentist. Her request was conveyed to Dr. Souers by her English governess. When permission was withheld by the king, he gallantly obliged the young lady as best he could by walking past her courtyard. He was surprised when the young lady, not veiled, smiled from her window.

After his return to Japan, he went to Northern China for a while, then to Peking and later to Shanghai. Eventually he went to French Indo-China, (now Viet Nam) where he set up practice in Tonkin. Not being able to speak French, he experienced considerable difficulty until he found two Japanese sisters who spoke the language. With one acting as interpreter and one as receptionist, he practiced there for six years. He was also the official dentist of the King of Annam, the province he was in. He once traveled by boat and horseback to Hue, the capital city, to attend the King, and spent eleven days in the royal palace.

During his sixth year in Indo China, however, he was advised to leave the tropics due to ill health, and with his now fluent French, he moved to Paris for three years of practice. After his health improved he got the yearning to visit new lands again. He heard of the need for dentists in French Morocco and decided that should be his next move.

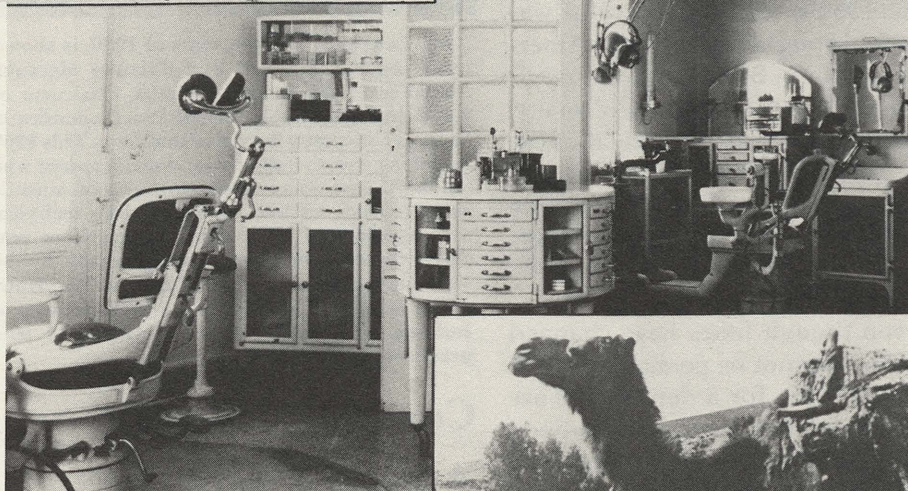
Dr. Souers went to Morocco at a historic time. It was just after the rising of the tribes began, following the formation of the French protectorate. For the next two decades the country was restless, with various uprisings. The throne changed hands several times. While practicing privately, Dr. Souers was first summoned to attend Moulay Hafid, who was then Sultan. He then went on to attend Moulay Youssef and Sidi Mohammed, who commissioned him as the royal dentist. As the royal dentist he was also permitted to see and attend the ladies of Sidi Mohammed's harem. The Sultan was so pleased with him that before his return to the United States, he was commissioned as an honorary general and given a citation of merit. He spent more than twenty years in Morocco and

\*Dr. Souers wrote this account of his grandfather's career as his Senior Essay at the School of Dentistry.

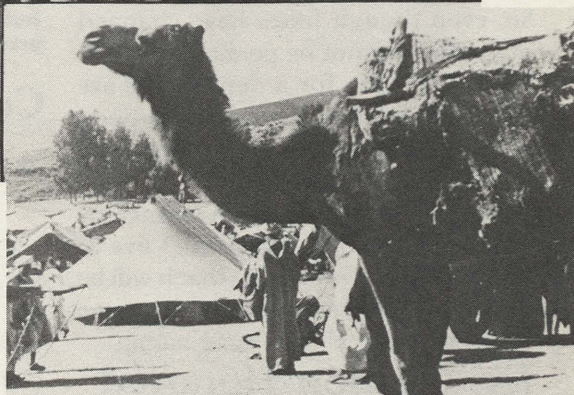




Tribesmen in Morocco



Dr. Souers' office in Rabat, French Morocco.



A nomadic community in the dessert.



this is where he met my grandmother, who was the daughter of the Spanish Consul there. She served as his assistant, and from what she told me, learned a lot of dentistry herself. With laws being a lot more lax there, she ended up doing a lot of the work.

Besides attending these royal people, my grandfather was also known for the good treatment he gave to street people—who would often trade whatever items they had instead of cash for his work. It was not uncommon for his servants to complain that he would show up for dinner with several children he had brought in from the street.

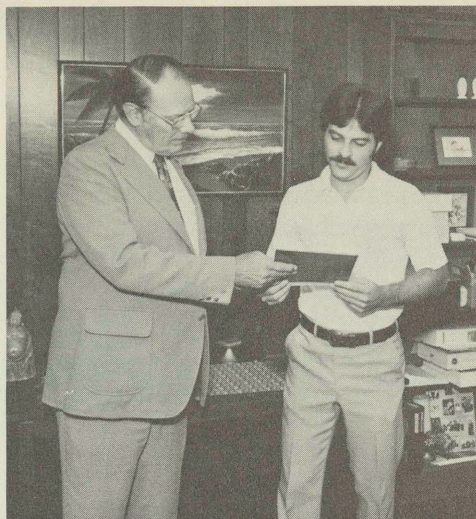
In the 1930's, with the worry of war coming, he brought his family to America. He went to Bloomington so his children could go to Indiana University. He hoped to return to Morocco after the war, but sickness allowed him just one more visit. He did not practice once he returned here, and he was too old to get his state license. Dr. Souers died in 1946 at the age of 75.

So, even though times have changed and all this may not be possible today, it shows quite a life for a dentist. We are part of a field that is needed everywhere, and we are lucky to be among the best-trained dentists in the world.

I was not lucky enough to have met my grandfather, and probably won't live as colorful a life . . . but I hope that it will be as full a life, as I start out in the same profession and with the same name.

## Dr. Mellion Honored

Dr Gilbert L. Mellion, Class of 1943, was the recipient last spring of the prestigious Annual Award of the Dental Society of Greater Waterbury (Connecticut) for his outstanding contributions in the field of nutrition in relation to dentistry, and for his work as Chairman of the Connecticut Joint Dental-Pharmaceutical Committee. Dr. Mellion practices in Rocky Hill, Connecticut, and resides with his wife at 76 Davenport Road, West Hartford, CT 06110.



Mr. Lawrence McAtee, class of 1980, is shown receiving the Howard and Shizuko Maesaka Award from Dr. Roland Dykema, Chairman of Fixed and Removable Partial Prosthodontics at Indiana University School of Dentistry. This \$200 award is given to a third year dental student who has demonstrated excellent professional attitude and decorum, as well as outstanding technical proficiency, and has earned an excellent academic record. The award, made available by the Maesaka family, is in honor of Dr. and Mrs. Howard Maesaka. Dr. Maesaka was a 1926 graduate of Indiana University School of Dentistry who practiced in Hawaii.

## Computer Cuts Author's % by 1/2

Computers are everywhere—banks, hotels, supermarkets, airports, and since last year at I.U. Publications in Bloomington, where the Alumni Bulletin is printed.

And they often seem to have a mind of their own. In Dr. Page Barden's article in the Spring issue on "Oral Manifestations of Gonococcal Infection," the percent sign (%) was uniformly converted by computer hocus-pocus into the fraction "1/2." The result was such odd references as "84 1/2" of 2,782 patients instead of "84%".

Our apologies to Dr. Barden, and a wag of the finger at the computer in the corner.



# "What Do You Do At the Board of Health?"

*Rita Martz, Dental Division, Indiana State Board of Health\**

During the past five and one-half years, I have been asked the title question more than any other question I can recall. This article is my personal response to the question.

I am a Public Health Dental Hygienist working in the Division of Dental Health at the Indiana State Board of Health. Of course, I am part of a team in this Division. Together we promote preventive dental health among the citizens of Indiana. We are one-fifth of the total preventive dental team, joined by the Indiana University School of Dentistry, the Indiana Dental Association, the Oral Health Research Institute, and certainly dental offices and clinics throughout the state.

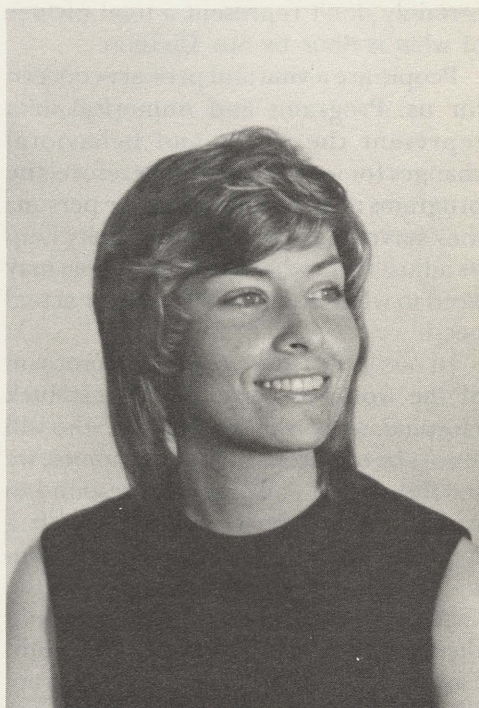
Well-known veterans and newcomers comprise our staff. Dr. Charles W. Gish, Director of the Division, has served the ISBH since 1949. He is supported by three other equally well-known dentists—Dr. Victor H. Mercer, Dr. Jack P. Mollenkopf and Dr. Charles E. Smith. Two Fluoridation Specialists, Mr. Allen B. Craven and Mr. Dan S. Cain, coordinate the School Water Fluoridation Project. The ranks of dental hygienists in the Division now include four people—Ms. Robin King, Mrs. Bernice Mills, Ms. Marsha McCullough and myself. No health team is complete without the efficiency of its secretarial and clerical people—people like Mrs. Marjorie Welker and Ms. Susan Byrd.

Though each of us has assigned areas of responsibilities, we also try to "keep in touch" with the programs our co-workers handle. Some of the groups we serve range from Head Start children

and teachers, to nursing home patients and staffs, from school teachers and pupils, to community health fair participants. Both student and graduate dental professionals also rely on us for guidance in the area of community dental health.

Our working time is divided between the office and the field. Due to travel factors, it is not uncommon for field days to be 10 or even 12 hours long.

Services we provide for the people of Indiana include: consultation; program planning, implementation and evaluation; writing and reviewing federal grants for dental projects; previewing new dental health audio-visuals; teaching community dentistry; writing articles; answering miscellaneous telephone



**Ms. Rita Martz, author of the accompanying article.**

\*Ms. Martz, R.D.H., holds Associate of Science and Bachelor of Science degrees from Indiana University.



inquiries; promoting good public relations; conducting clinical dental surveys for special populations; giving dental inspections at the Indiana State Fair; promoting water fluoridation; promoting fluoride self-applications; assisting with dental manpower studies; providing dental health education and giving oral prophylaxes to children of Migrant workers, as well as many more.

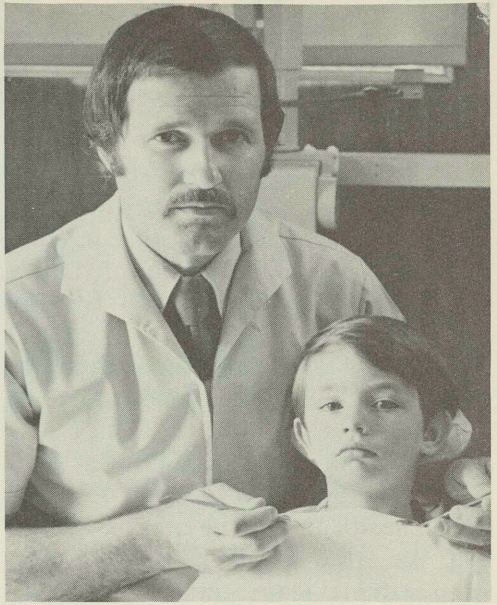
Public health dentistry has found its greatest preventive agent to be fluoride, of course. In Indiana, the number of persons receiving benefits from water fluoridation now exceeds 3 million. Last year, this Division was instrumental in adding 10 new communities to this category. The total for self-applied fluoride treatments in 1977-78 can boast 127,000 children using the APF paste and 30,000 with the weekly sodium fluoride mouth-rinse. Fifty-nine rural schools in Indiana are fluoridating their water supply.

I could continue listing statistics for dental program successes, but statistics certainly don't represent a total picture of what is done by our Division.

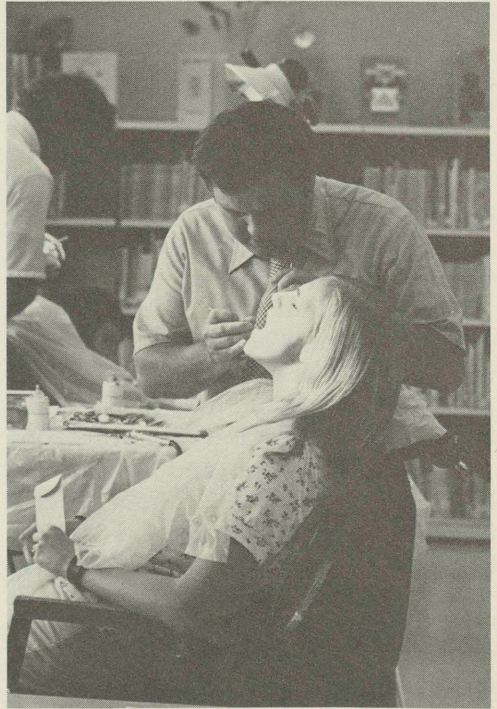
People are a vital and primary concern for us. Programs and numerical data represent the needs and behavioral changes for a population. Therefore, the programs must be tailored to the persons they serve. Flexibility and creativity help us adjust from what we think people may need to what we learn later is their actual need.

In our daily work, we see a microcosm of the world at large. At Muscatatuck Hospital, we work with children who will always be children. At nursing homes, we see the elderly and frail who respond to conversation eagerly and often with a toothless smile. Frequently, our best liaisons are nurses and teachers who go the "extra mile" to help educate children and their families about good dental health. Last May, I visited a Head Start Program where the teachers received telephone calls from parents considering suicide.

*(continued on p. 105)*



**Dr. Charles E. Smith and young patient are photographed at start of dental examination in mobile unit.**



**Dr. Jack Mollenkopf conducts school dental examination for plaque control study.**



# Achievement of a Goal:

## The Predental Assistance Program

Personal achievement is highly stimulating and a strong motivational force. If directed toward proper goals, this force can lead to a life-time of fulfillment and reward. However, this article is not intended to be a discussion of goals, motivation, or rewards—all much discussed and dissected topics. My purpose is to document some important events which eventually led to the achievement of a preplanned goal by student “doers” at the Indiana University School of Dentistry. Underlying the rather factual documentation, my intention is to emphasize the goal, the motivation and the individual contributions which led to successful conclusion of this project.

It is my hope that this article will stimulate future student leaders and others to direct their efforts toward the achievement of worthwhile goals and that it will otherwise influence the reader to reappraise his own motives and contribution to the profession.

### A Goal Emerges

When I was granted admission to Indiana University School of Dentistry in the Spring of 1974, out of mixed feelings of relief and elation I began to develop a plan that would in some way repay the school for placing their confidence in me. I felt that because of my background, I could and should make a personal contribution through my classmates that would ultimately reflect favorably on the school. At this point, the goal was vague, but thinking about it led me to a decision during the summer months to offer my name for the pre-

*C. Ronald Chamberlain, Class of 1978\**  
sidency of the class. The principal qualities that I had to sell were extensive organization experience and a willingness to devote considerable energy toward developing our various class functions. My basic thought was to tap the talents that each student brought with him to school so that all our activities would reflect our various interests, abilities and experiences. Through this approach I hoped that a class of 130 individuals could mold themselves into a compatible, active group of people who cared about each other's welfare as well as their own. With help, I was later elected class president.

Collectively, the area we were most knowledgeable about at that time was the predental student and what is required to be admitted to dental school. A plan evolved to give assistance to predental students by making ourselves available to them to answer questions, counsel them, and to otherwise make dental student life visible and real to interested candidates.

With my own personal goal in mind of repaying a debt, the idea of the Dental Aptitude Test Coffee was formulated with the approval of our class executive committee. We believed that such a program would benefit not only the applicants, but also the first year dental students themselves by giving them an occasion to remember where they had just come from and to discuss topics they knew something about. We believed that benefits would accrue to us as a class, also. We hoped that this activity would bring the class together and possibly even set an example for other classes to follow. Classmates responded favorably to the opportunity to help and this marked the beginning.

\*This article was adapted from the Senior Essay written by Dr. Chamberlain, who spent a number of years in a business career before entering dental school.



### **Dental Aptitude Test "Coffees"**

The first reception for D.A.T. participants was held on October 12, 1974 with about twenty members of the then first year class taking part in technique and equipment demonstrations, serving coffee and doughnuts or greeting people as they entered the reception area. Several first year faculty members made themselves available to answer more technical questions or to render advice on undergraduate preparation for admission to dental school. The first Coffee was held at the conclusion of the test, but in subsequent receptions, dental students made themselves available during the mid-test recess.

My classmates sponsored two more D.A.T. Coffees that academic year and later came to the conclusion that this project was a worthwhile first year dental class undertaking and should be continued. At the beginning of our second year, we asked to participate in the orientation program for the incoming freshman dental class in order to pass the project on to them, which we subsequently did.

With one exception, the D.A.T. Coffee has been held on all testing dates since 1974. Each new freshman class taking over the project has added features to their program which have expanded the effectiveness of the service as measured by the increasing numbers of predental students taking advantage of the opportunity.

Appreciative comments made by students to school administrators have contributed impetus toward continuing the effort in the future.

### **Dental Day**

An annual predental student meeting known as "Dental Day" and conducted by dental students was initiated by the Class of 1979 when they were in their first year of dental school. Their original purpose was to provide assistance to

those college students who were considering dentistry as a career and to promote the available predental activities and services throughout the university system in Indiana.

Through a panel discussion, a guided tour of the dental school and student-conducted clinical demonstrations, interested participants are given clear and practical information with which to make a career decision toward or away from dentistry. We believed this exposure to be an extremely valuable service that we would have taken advantage of had it been available to us as predental students.

Similar programs have been patterned after Dental Day to handle special student groups which request a tour of the dental school facilities through official Indiana University channels. We found that, because of the heavy student input and the accompanying expressions of enthusiasm and pride by dental student tour guides and clinical demonstrators, the tour of our facilities has rated exceptionally high in terms of value to visitors.

Dental Day is also a freshman class project, but because of the clinical demonstrations, a heavy contribution is made by upperclassmen.

As far as we know, this is the only program of its kind in the country and if continued may even attract interested students from neighboring states. Our interest in this possibility is to attract the most qualified and most highly motivated students to dental careers and to help maintain the high entrance standards of Indiana University School of Dentistry. By doing so, our credentials as graduates of the school are enhanced.

### **Off-campus Programs**

In an effort to support predental counseling services offered by the various universities around the state, members of my class first volunteered to participate in local campus meetings with predental students in the Fall of 1975.



Since that time, dental students and dental hygienists have participated in group meetings at Bloomington, Lafayette, Indianapolis, Fort Wayne, and Muncie. These programs require considerable advance publicity to be effective and the fact that students will have participated in nine such programs by the end of the 1977-78 academic year attests to the growing spirit of cooperation between I.U.S.D. and other university campuses.

The first Predental Counselors Day was held at the dental school on September 15, 1977. Student representatives of the Student Affairs Council and its Admission Activities Committee were major contributors to this program. This meeting and others like it will promote new dialogue and improved communications between the dental school and all predental counselors throughout Indiana.

#### **Student Interviewers Gain Vote on Admissions**

In the fall of 1975, students were granted permission to participate in interviews, with the understanding that they would have no vote in the dental student selection process. Those who participated summarized their interviewing experience by stating that to improve an already worthwhile experience future student leaders should pursue a course toward obtaining student voting participation on the Admissions Committee of the Faculty Council. Without the vote, the students felt that they had no voice in choosing desirable candidates and otherwise received no feedback as to who was finally selected for admission.

A committee formed of leaders of the third and fourth year classes as well as the Student Affairs Council made the interviewer selection from a list of interested junior and senior class volunteers for the 1976-77 academic year. Again, students were to have no voting privilege.

Probably because of the high sense of responsibility displayed by student in-

terviewers and because of the wide range of predental activities that dental students had already committed themselves to, the Faculty Council granted student voting representation on the Admissions Committee at their final meeting of the 1976-77 academic year. This extension of privilege to students represented an important milestone to those who had been actively promoting improved student-faculty communication and cooperation.

The academic year 1977-78 has marked the first time that students have participated in Admissions Committee deliberations. The student representative was carefully chosen by student leaders and has performed ably with a spirit of responsibility and cooperation. Members of the faculty and administration have commented that Admissions meetings have never progressed as smoothly as they have this year. I must assume that student presence on the committee played a role in this interesting development.

#### **Leadership and the Class of '78**

I had been advised prior to our 1974 class election that the class presidency had traditionally been a figurehead position and one which required no appreciable amount of time or effort. I did not seek the office to be a figurehead or to win popularity or personal political influence. Moreover, my strengths and interests were in positive constructive programs and were not necessarily in the conduct of daily routine business. As the year progressed, all responsibility for each class function was delegated and disseminated throughout class membership—in my view, the only way to accomplish such a huge task reliably. My job, as I saw it, was to manage, which was what I had been trained to do.

In the first of a series of memos written to class members, I said on September 15, 1974,



"I want to especially thank those of you who have already volunteered your services for immediate jobs and also those of you who have expressed interest and support for already-in-the-planning-stages projects. This kind of enthusiasm will give us the opportunity to be participants in a rather unique experience. Your willingness to make a contribution to this end will make it happen."

The members of the Class of 1978 are as widely diverse a group as may be found in any dental school class of its size. Their uniqueness lies in their individual contributions to their class and its members during their four-year association. Most people gave small amounts of time while others devoted many hours and much energy to planning, promoting and carrying out many different projects.

The fact that class members have acted as officers and committee leaders in the class, in student government and in the various dental fraternities does not illustrate any particular uniqueness. The important feature of their participation in any of these activities was the initiative, aggressiveness and imagination that they used to achieve outstanding and lasting results.

This class has been instrumental in bringing about wider and more organized participation in student government. In turn, the new Student Affairs Council brought about changes in school dress codes, rewrote its constitution, brought the predental assistance program under its auspices and expanded the program, participated in the founding of the Graduate and Professional Students Association, lent active voice to major organizations such as the American Student Dental Association and the American Association of Dental Schools, and other innovative projects.

These activities and the manner in which they were led and carried out by our classmates have been cited as the principal reason for the creation of a new

spirit of cooperation between student and faculty governments. Students now hold voting membership on virtually all Faculty Council standing committees as a result of their creative cooperation.

The people who participated in all previously mentioned activities and many others not mentioned are the "doers". Their enthusiasm will follow them into their future pursuits and many will become leaders in their communities and profession. I am proud to have been associated with them.

### Summary and Conclusion

By granting the students a voting voice on the Admissions Committee, the faculty of I.U.S.D. has made it possible for me to achieve the goal I originally sought. I feel that remarkable sense of accomplishment that comes so rarely to people during their lifetimes.

Even though the goal was not clearly defined at first, every element of student contribution in predental activities was, in effect, an achievement of the goal. Each accomplishment spawned new effort towards an even higher contribution to the school and the profession. The culmination of the effort came with the student vote in Admissions. Together with the other elements of the predental assistance program, which are not in themselves unique, the total project is not being duplicated anywhere.

The credit for these accomplishments rightfully belongs to the many students who participated in each of the activities and to the faculty and administration of I.U.S.D. who gave their support and trust. My reward is my own sense of accomplishment and it fills my spiritual cup.



# Dental Education in Syria:

## Some Comparative Observations

*Marwan Assaf, Graduate Student in Periodontics\**

The basis on which a student is accepted in the only dental school in Syria, located in Damascus, depends exclusively upon his grades in the so-called "Bacheloria" examination, which is given at the end of the last year in high school, regardless of the student's socioeconomic status or recommendations.

The college period (pre-dental stage) which students experience in the United States is not available in Syria. However, the basic sciences given in the last two years in the Syrian high school are somewhat comparable to those given in the American college. Foreign language is mandatory in the intermediate and high school, but students may choose either French or English. Thus, teaching in the university must be in Arabic. The Syrian dental school is the only school in the Arab world that teaches dentistry in the Arabic language.

Limited numbers of students are accepted every year in the dental school, medical school, and engineering school. Students who get the highest percentage in the "Bacheloria" exam, approximately 90%, are accepted in the medical school and have the option to choose any other school if they are not interested in medicine. The next in order are accepted in the dental school, and these students have to get a percentage of 85%. Around 100 students are accepted every year in the dental school.

### **Five-Year Program**

The Syrian dental school is a 5-year program. The first year is called the "PCB" in which the student studies the basic sciences such as physics, chemistry, and biology. The following four years

consist of dental and medical sciences. The student has to write a thesis, which is a research paper translated from the English or French language, in order to get his degree. This is usually done in the senior year.

The academic year in the dental school consists of a nine-month continuous term. There is a 10-day spring vacation and 3-month summer vacation, along with the national and religious holidays. The "week-end" holiday is only one day, Friday. There is no midterm examination; however, tests are given throughout the year and a comprehensive final examination is given by the end of the year. The final examination consists of oral, written, and practical tests. If the student fails one or more courses, he has to take them over again in the summer session.

Tuition and fees in the dental school are relatively low; however, the student has to buy his instruments and dental materials. Students who cannot afford these expenses may apply for a scholarship or other financial aid.

All dental students are full-time students, and part-time employment is not available; therefore, students can work only during the summer vacation.

### **Differences Noted**

In contrast to the American dental students, the vast majority of the Syrian dental students are single and do not own cars. The reason for that is probably the age factor, because most of the dental students when they are accepted in the dental school are in their teens and they graduate in their early twenties. In addition, the dental student at that age cannot afford the expenses of married life

\*Dr. Assaf received his D.D.S. degree from Damascus University in 1973.



and the high prices of cars in their country. However, married female dental students are in a relatively higher percentage than married males.

The dental school faculty includes professors with the M.S. degree who graduated from various American and European schools, along with clinical instructors. Books in the Syrian dental school are mostly made up of collected translations from English and French textbooks. The fact that the whole book is in Arabic does not encourage the student to read the references written in English or French which are available in the library. Therefore, students are rarely seen in the library reading the English and French books. Old and new dental textbooks and journals, American and European, are available in the library and they are mostly in English and French. No audio-visual devices are available in the library.

There are no research or graduate programs available except for Pedodontics, which was recently established. Usually three students are accepted every year in this two-year program, after which the student is offered a diploma in Pedodontics.

A so-called dental college has recently been established which offers a two-year program to train scientifically oriented laboratory technicians and dental hygienists and assistants.

Dental treatment in the school is generally free; however, the patient has to pay for the dental materials used in the prosthetic appliances. When the patient presents himself to the dental school, he passes first through the diagnostic clinic, from which he is referred to the other specific clinics depending on his chief complaint. Patients who are seen in the dental school are generally from the low middle class, along with high school and university students.

### **Student Activities**

Student activities such as parties, meetings, trips, are arranged by the student union. There is a whole dental school party in the beginning of the academic year at which the incoming students get the opportunity to meet each other and to meet the dental students in other classes. Other small parties are arranged by groups of students independent of the student union. Two or more trips are arranged every year to visit the different areas of the country or to visit the neighboring Arab countries. The most popular sport in Damascus University is basketball, and the dental school has one of the top three teams.

Since there is no graduate program available in the Syrian dental school (except for pedodontics), students who are interested in graduate studies usually start to apply to foreign dental schools in the senior year. The most desired foreign country for graduate study is the United States. The reason is that dentistry may be the most developed in the U.S., and more than 75% of the Syrian dental students have taken English as a foreign language. In addition, most of the courses given in the dental school follow the American philosophy in dentistry, namely in oral surgery, operative dentistry, orthodontics, and removable and fixed partial dentures. The other foreign dental schools that the Syrian dental student is interested in are in the following order: West Germany, England, and France. In addition, scholarships are offered by the government for graduate study in England, France, and Eastern Europe.

### **Language Is Problem**

Very few Syrian dental students get the chance to carry on graduate study in the U.S. This may be due to the difficult procedures upon which the foreign student is accepted in the American dental



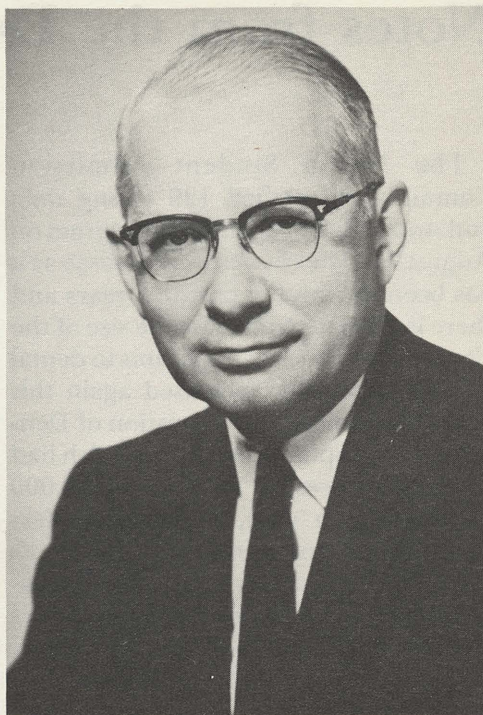
schools, such as the limited numbers accepted, expenses, and the TOEFL (Test of English as a Foreign Language) examination. This examination is the most difficult obstacle for the Syrian dental student because it requires a fairly extensive experience in the English language. Therefore very few students can pass this exam with the required grades.

Upon graduation, the dental student is directly drafted into the military service unless he is the only son. After military service, the dentist has to serve in the small towns or in the rural areas for two years before he is allowed to set up his practice in the cities. Specialists are exempt from the rural service. However, the dental service in these areas presents a problem to the practicing dentist, such as the low income the dentist can make and the fact that inhabitants of these areas are not adequately educated and do not believe in preventive dental treatment.

Once the dentist finishes his two-year practice in the rural areas, he moves to the cities. The problems the dentist encounters here include the expensive apartments in the cities, and the increasing prices of the dental equipment which he has to pay for in cash.

There are around 700 practicing dentists in the whole country. However, this is not proportionate to the population of the country, which is around 8.5 million. Moreover, the distribution of dentists in the country complicates the problem. Of 700 dentists there are around 600 practicing in Damascus, which has a 2 million population.

There are very few specialists in dentistry in Syria and almost all of them are practicing in Damascus and teaching part-time in the dental school. More dentists are needed to fulfill the needs of the increasing population of Syria. In addition, more specialists and research programs are needed to contribute to the development of dentistry in that country.



**Chancellor Emeritus Maynard K. Hine gave the keynote speech at the dedication of New York University's new Hall of Dental Science in New York City on September 21, and then flew to Madrid, Spain to attend the Federation Dentaire Internationale meeting. Dr. Hine, who is the immediate past president of the F.D.I., gave two reports during the meeting.**

## **Dentist Volunteers Sought For Developing Countries**

Dental Health International (DHI) is seeking volunteer dentists to serve 90-day tours in developing countries.

DHI volunteers work with a fully equipped portable dental clinic, treating patients at mission hospitals. The dentists train two staff members at each hospital in preventive dentistry and dental hygiene. Time is also spent in traveling to surrounding villages and schools to provide treatment.

DHI provides the volunteer's round-trip airfare. The mission hospitals provide food, lodging and in-country transportation. For more information, write Dental Health International, 847 S. Milledge Avenue, Athens, GA 30605.



# Notes from the Dean's Desk

*Ralph E. McDonald*

The Dental Student Admission Committee identified 129 young men and women who began their program on August 21. The class size is the same as it has been during the past five years and there is no plan to increase the size of the class. The number of applicants to dental schools nationally decreased again this year. The American Association of Dental Schools application service, which had formerly processed as many as 20,000 applications a year, experienced less than 10,000 applications in this year's cycle. At Indiana we had 512 applications that were almost evenly divided between resident and non-residents. Many reasons for this applicant decline have been offered. The decreasing availability of low interest government loans, combined with the escalating costs of attending professional school, has probably played a major role in the decrease. Also a swing toward renewed opportunities for engineering graduates has been suggested as a factor. Discontinuing of the military draft no doubt accounted for the loss of some of the less highly motivated individuals.

The entering class included five non-residents, 14 female students and six minority representatives. Only about 12 percent of the entering class members had less than four years of predental preparation, but the class included seven students with Master's degrees and one with a Ph.D. degree. The average student had an overall grade point average of 3.33. There were 23 different majors included in the class and 38 colleges. The entering class includes residents of 40 Indiana counties.

There were 191 applicants for the Dental Hygiene Program in Indianapolis and a class of 36 was selected. The grade point average was 3.50 and the appli-

cants had completed their pre-hygiene work at 11 colleges and universities.

In April, 1978, 42 applicants to the Dental Assisting Program took the required aptitude test and made application for the program. Thirty-nine candidates were interviewed and 24 were selected for the class.

During the past year Graduate Program application materials were sent in response to inquiries from 692 potential candidates. These responses resulted in 276 completed application forms and 30 new students were accepted for the program that began in August. Enrollment in the Graduate Program dropped from 92 to 84 full-time students. The number of part-time students dropped from 44 to 39. The number of graduate degrees awarded increased by five over the preceding year. This year to date, 23 students have been awarded the M.S.D. degree, five the M.S., and eight others plan to defend their theses and are expected to submit final copies early this semester. The number of international students accepted has remained constant, with a total of 28 enrolled last year and again 28 enrolled this year. These students represent 13 countries: England, Canada, Syria, Mexico, Iran, Japan, Ireland, Holland, Australia, Indonesia, Germany, India and Brazil.

## **Centennial Year**

1979 will mark the Centennial Year for dental education in Indiana. Chancellor Maynard K. Hine is serving as our Centennial Committee Chairman with the assistance of a very active committee in planning the activities of the year. The committee members include Dr. Robert Derry, Mr. Richard Scott, Dr. Jack Carr, Dr. Rolando DeCastro, Dr. Robert Bogan, Professor Paul Barton, Mrs. Helen Campbell, Dr. Ralph Phillips, Dr. James



Roche and Mr. Gale Coons. Initial planning includes development of a special expanded issue of the Alumni Bulletin. This issue will include the history of the dental education in Indiana from its beginning in 1879 through the present time. The Indiana Dental Association has indicated their interest in our program and will identify time to so honor this important occasion.

A keynote speaker for the opening session of the Indiana Dental Association has been identified and he will highlight the progress in dental education and dental practice during the past 100 years. Plans are also being developed to dedicate the mural early in the Centennial year. This dedication will be accompanied by a program on dentistry. Later in the year the School of Dentistry Alumni Association will have a special program during their fall conference and will honor the School for its achievement.

Dr. Roche is hopeful that we can originate another "Satellite Program" that will acquaint our alumni in various parts of the U.S. and perhaps the world with innovative research that is being conducted at the school.

### **Renovation Projects**

The renovation of the Undergraduate Periodontics Clinic with an expansion to 30 units is progressing well; in fact, the project is ahead of schedule. It is anticipated that the clinic will be ready for operation around the first of the year. The second stage of the project, namely renovation of the graduate area on the balcony, will be a future project and hopefully can be funded without too much delay.

A number of other projects are in the planning stage and the one with the highest priority is the renovation of the Dental Hygiene Clinic and replacement of the equipment. This equipment, which has been in use for almost 20 years and was originally designed for our

Crown and Bridge Clinic, is no longer serviceable and is not adequate for the needs of the Dental Hygiene Department or the Operative Dentistry Department, which uses the clinic during the summer session.

Other areas of the School that have a high priority for renovation include the Graduate Endodontic Clinic, the Dental Materials laboratory, the Operative Dentistry offices, and the Department of Radiology. It is also anticipated that there will be some changes in the administrative offices, which are very crowded and need to be redesigned for more efficient operation. It is possible that we will be able to use the present corridor space for reception and some new office spaces.

The extramural program for dental students that has been described in previous editions of the Alumni Bulletin was successfully implemented during the past summer. A total of 30 students participated in private office experience and five students worked in dental clinics in State Institutions. The new extramural requirement approved by the School of Dentistry Faculty Council will allow each student prior to graduation to spend six weeks in a private office, state institution clinic or Community Health Center. The Indiana University Board of Trustees has formally recognized these extramural settings as extensions of the School of Dentistry clinics and has approved the appointment of the participating dentists as faculty members. There are currently more than 100 dentists in Indiana and the professional staff of 12 State Institutions actively participating in the program. This new program will add an important dimension to our practice administration program. The program will also enable students to become acquainted with dental care programs in State Institutions. The program's support by dentists throughout the state is indeed gratifying.



### New Faculty

A large number of new faculty members have joined our ranks in recent months. These new people will have important roles in education and research, and we look to them to help us in our continuing pursuit of excellence. Among the new appointees are the following:

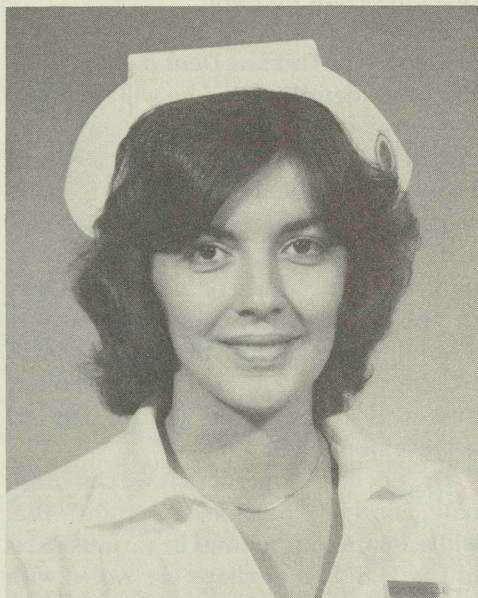
Mrs. Vicki J. Bowen has joined our faculty as Lecturer in the TEAM Program, effective September 1. Mrs. Bowen has been employed in private practice as a Certified Dental Assistant and Office manager for Dr. Robert L. Johnson,, of Carmel.

Dr. Michael A. Cochran, who was appointed Associate Professor of Operative Dentistry on May 1, 1978, was awarded the D.D.S. in 1969 from the University of Michigan and then began active duty in the United States Navy. In 1975 Dr. Cochran was awarded the M.S.D. degree from Indiana University School of Dentistry, with a major in Operative Dentistry. He then served as Navy Regional Consultant in Operative Dentistry and finally as Dental Division Officer aboard the USS Forrestal.

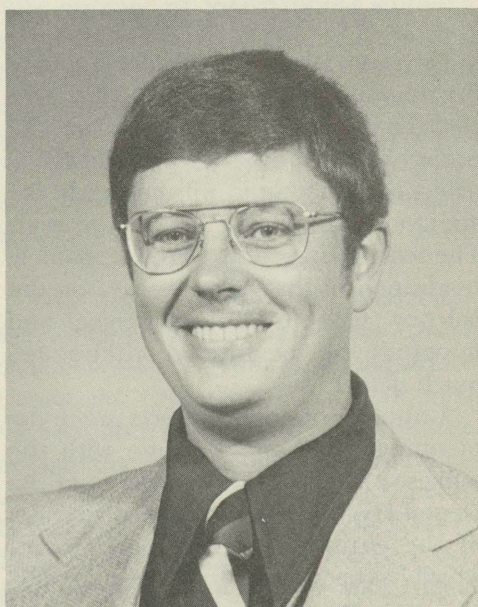
Dr. Leslie I. Davis has joined the faculty of the Department of Periodontology as Assistant Professor. A native of Johannesburg, South Africa, he earned his B.D.S. degree from the University of Witwatersrand, Johannesburg, and a certificate in Periodontology from Tufts University School of Dentistry this year.

Dr. William H. Davis, who was born in Wexford, Ireland, had joined our faculty as Assistant Professor of Fixed and Removable Partial Prosthodontics. Dr. Davis completed work for the B.D.S. degree at University College in Dublin, Ireland, in 1974, and received his M.S.D. here in August, 1978, with a major in Fixed and Removable Partial Prosthodontics and a minor in Dental Materials. Between 1974 and 1976 Dr. Davis was engaged in the private practice of dentistry in Ireland.

Dr. Kenneth K. Kaneshiro, who received his D.D.S. from Marquette University in 1956 and his M.S.D. here in 1965, has been appointed Associate Professor of Periodontology. Dr. Kaneshiro has been serving as Officer in Charge of the Branch Dental Clinic at the Marine Corps Base in Twenty-nine Palms, California.



Mrs. Vickie J. Bowen

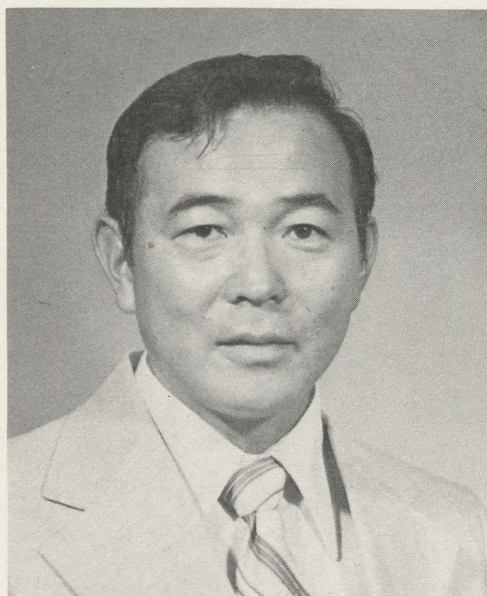


Dr. Michael A. Cochran

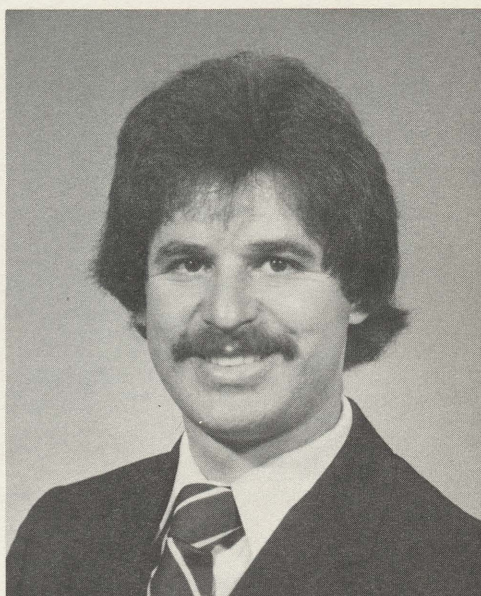


Mrs. Rosemary Kohut, newly appointed as an Assistant Professor of Dental Hygiene Education, will be Supervisor of Dental Hygiene at the Indiana University School of Dentistry program in Gary. She has been serving for the past four years as Assistant Supervisor and

Instructor in Dental Hygiene at Indiana University-South Bend. Mrs. Kohut was awarded the B.S. degree in Dental Hygiene from the University of Rhode Island in 1974 and the Master's degree in Education from Pennsylvania State University in 1978.



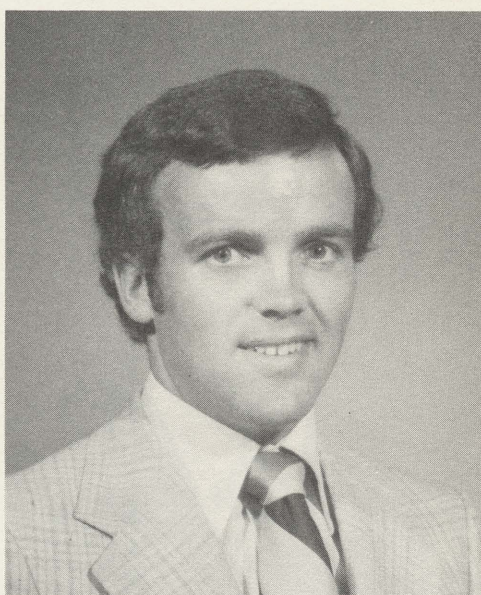
**Dr. Kenneth K. Kaneshiro**



**Dr. Leslie I. Davis**



**Mrs. Rosemary Der Hagopian Kohut**



**Dr. William H. Davis**

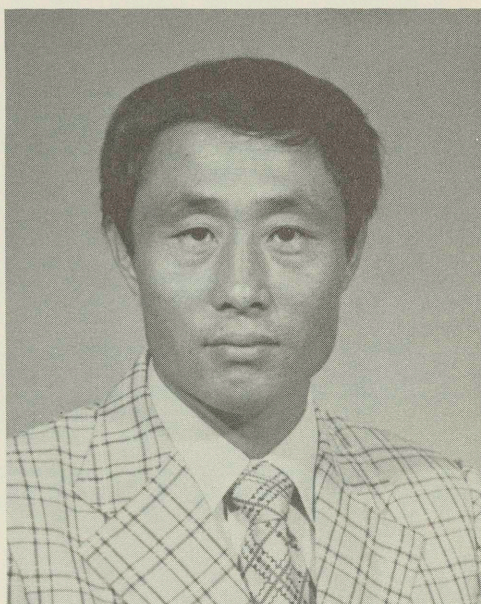


Mrs. Sheila W. Mordarski, who has been a part-time faculty member in Dental Hygiene, has agreed to become full-time at the rank of Instructor. Mrs. Mordarski holds the B.S. degree in dental hygiene education from Ohio State University.

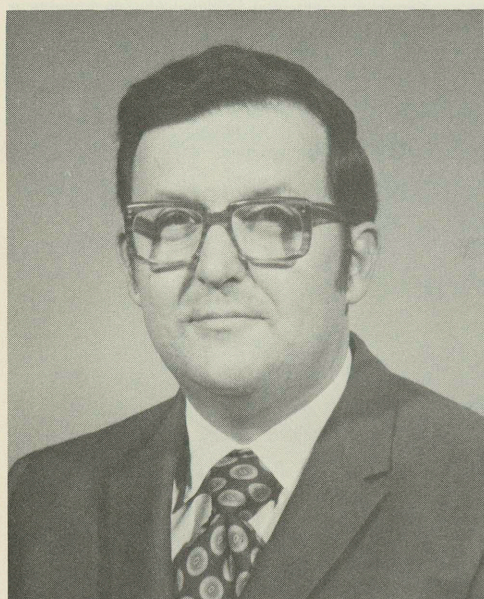


**Mrs. Sheila W. Mordarski**

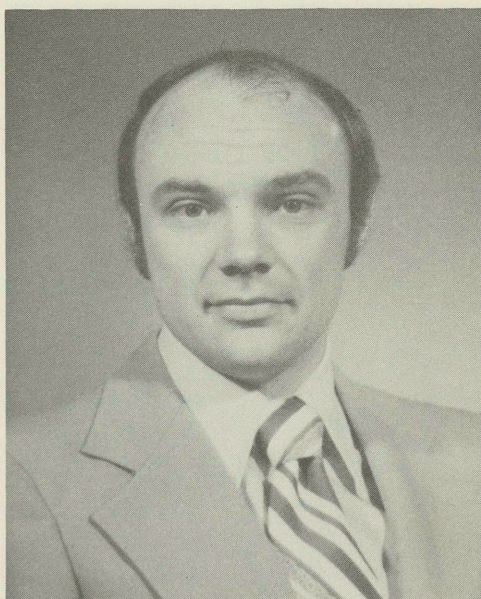
Dr. Drew F. Oldham, who earned the A.B. degree from Valparaiso University in 1949, and his D.D.S. degree from Indiana University School of Dentistry in 1963 with honors, has accepted a full-time appointment as Associate Professor



**Dr. Heung Y. Paik**



**Dr. Drew F. Oldham**



**Dr. Jack E. Schaaf**



in the Department of Fixed and Removable Partial Prosthodontics. Dr. Oldham is not new to our faculty, having served as Assistant Professor in the department from 1963 to 1972 and earlier as Lecturer and Instructor. He has been in private practice with his father and his uncle in Martinsville and Indianapolis.

Dr. Heung Yeul Paik, who earned his D.D.S. degree at Seoul University School of Dentistry in 1965, spent two years in advanced dental education at State University of New York at Buffalo and on June 30, 1978, completed his third year of residency training under Dr. Varoujan Chalian in our Maxillofacial Prosthetics Department. Dr. Paik has been appointed Assistant Professor of Maxillofacial Prosthetics on July 1, 1978.

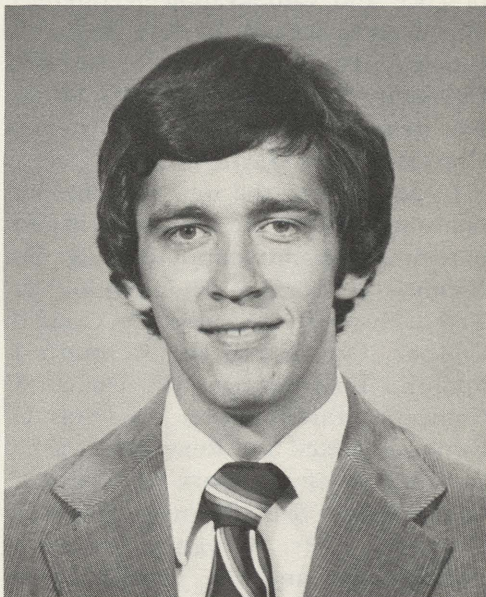
Dr. Jack E. Schaaf, who received the D.D.S. from Indiana University School of Dentistry in 1975 and the M.S. in 1978, has been appointed Assistant Professor in Oral Diagnosis-Oral Medicine. Dr. Schaaf had served as an Associate Instructor here since his graduation from Dental School.

Dr. Stuart A. Ferguson, who received his D.D.S. from Indiana University School of Dentistry this year, was appointed Clinical Assistant in Endodontics on May 15, 1978.

Mrs. Connie June Poston has been appointed Assistant Professor of Dental Auxiliary Education at Indiana University-Fort Wayne effective August, 1978. Mrs. Poston completed the dental assisting program at Omaha School of Dental Assisting in 1967; after completing her basic program and becoming certified, she continued her education on the Fort Wayne campus and received the A.S. degree in Dental Hygiene Indiana University-Fort Wayne; B.S. in Dental Auxiliary Education, Indiana University-Fort Wayne, 1977; and M.S. in Education Administration, Indiana University-Fort Wayne, 1978.

Mrs. Valerie Mullin joined our faculty at Indiana University-South Bend in

August, 1977 as an Instructor. Her duties include instruction in the fundamentals of dental assisting, clinical practice, radiology technique and the clinical application of expanded restorative techniques. Mrs. Mullin earned her Certificate in Dental Assisting at the South Bend Campus in 1975 and her E.D.D.S.



**Dr. Stuart A. Ferguson**



**Mrs. Connie J. Poston**



in expanded duties in 1976 at the School of Dentistry in Indianapolis.

Mrs. Pamela M. Nelson joined our faculty at Indiana University-South Bend as an Instructor in Dental Hygiene in August, 1978. Her responsibilities include instruction in the fundamentals of dental hygiene, oral anatomy, clinical practice and radiographic techniques. Mrs. Nelson earned the A.S. degree in Dental Hygiene from Indiana University-South Bend in 1976 and the B.S. degree in education from Indiana University-Fort Wayne in 1977.

In addition to the new full-time appointments there are a number of new part-time appointments including: Dr. Nicholas H. Watson, Endodontics; Dr. Ted L. Huppert, Operative; Dr. Craig D. Cooper, Operative; Dr. Kenneth J. Spolnik, Endodontics; Dr. Duane E. Compton, Endodontics; Dr. Nels O. Ewoldsen, Fixed and Removable Partial Prosthodontics; Dr. Gary Schinbeckler, Oral Surgery; Sally Bowman, Graduate Programs; Dr. Gregory Johnson, Pedodontics; and Dr. Joseph Tyree, Pedodontics.

### **Faculty Recognition**

The members of our faculty continue to be active in community and professional affairs and many have been recognized for their contributions to local and national organizations.

Dean James Roche served last year as an examining member of the American Board of Pedodontics.

Dr. Jack Showley is serving as President of the Indianapolis District Dental Society.

Dean Robert Bogan served a second term as President of the Marion County Cancer Society. He also served as secretary of our School of Dentistry Alumni Association and as Indiana State chairman of the Pierre Fauchard Academy.

Dr. Roland Dykema is President of the American Academy of Crown and Bridge Prosthodontics.

Mrs. Marjory Carr is president-elect of the Indiana Dental Assistant's Association.

Last year Dr. David Avery served as chairman of the Administrative Board of the Council of Faculties of the American Association of Dental Schools. He was recently certified by the American Board



**Mrs. Valarie Mullin**



**Mrs. Pamela M. Nelson**



of Pedodontics. In September he presented a series of lectures at the F.D.I. meeting in Madrid.

Dr. William Shafer was named an Honorary member of the Indiana Association of Pathologists. He shares this honor with only two previous honorary members. In addition Dr. Shafer is national civilian consultant in oral pathology to the Surgeon General of the United States Air Force. He has been reappointed Dental Consultant to the United States Army. Also he is consultant in oral pathology, National Naval Medical Center, the American Dental Association representative to the American Registry of Pathology and a member of the Scientific Advisory Board and Consultant to the Armed Forces Institute of Pathology.

Dr. George Stookey has been named to the Advisory Committee for site visits and review of proposals for the National Institute of Dental Research.

Dr. David Allmann was appointed Secretary of the section on Biochemistry and Nutrition for the American Association of Dental Schools.

Dean Ralph W. Phillips again received many honors. He was reappointed consultant to the Director of the National Institute for Dental Research, reappointed as a member of the drug panel of the food and drug administration, was made an honorary member of the Belgian Dental Association, the first American to be so honored, and was the recipient of the Henry Spanadel award from the New York Dental Society.

Dr. Charles Hutton was awarded the Governor's Voluntary Action Program Health Care award in appreciation of outstanding efforts, support and participation in the practice and promotion of voluntary action.

Dean S. Miles Standish was appointed to the Board of Directors, the American Board of Forensic Odontology, served as President of the Board of Directors, American Board of Oral Pathology, is

Cochairman of the clinical cancer education committee, National Cancer Institute, and was appointed an honorary Lieutenant Colonel in the Indiana State Police in recognition of his contributions to Forensic Dentistry. He has also been named to an American Association of Dental Schools Task Force to study the future of graduate education in dentistry.

Dr. Maynard K. Hine continued to add to his long list of honors. He will serve as Chairman of the professional division in the United Way campaign and also is Dental Division Fund Drive Chairman for the Indianapolis Museum of Art. An exceptional honor was his appointment to the Indiana Academy. Also he was named a member of the Royal Canadian College of Surgeons. Recently Dr. Hine was given the title Chancellor Emeritus and Emeritus Professor of Periodontics by the Indiana University Board of Trustees.

Dr. Victor Mercer was elected to the Board of Directors of the Indianapolis Indians and was named Secretary Treasurer of the Indiana section of the American College of Dentists.

Dr. Charles Tomich served as Editor of Oral Pathology, in Oral Surgery Oral Medicine, Oral Pathology.

Dr. Timothy J. O'Leary served as Editor of the Journal of Periodontology. At the recent meeting of the American Academy of Periodontology he was named President of the National Foundation for the Prevention of Oral Diseases.

Dr. Malcolm Boone was elected Secretary of the American Equilibration Society and also Secretary of the Carl Boucher Conference.

Dr. Myron Kastle was awarded Fellowship in the American Academy of Dental Radiology. He had two books published during the year: *An Atlas of Dental Radiographic Anatomy* and *Exercises in Dental Radiology*.

(continued on p. 105)



# Dental Auxiliary Education

## DENTAL HYGIENE INDIANAPOLIS

*Evelyn Oldsen*

Forty new dental hygiene graduates received their diplomas at the Commencement Program May 10, 1978. We were pleased and proud to recognize all graduates at the School of Dentistry Honors Program and to present the special awards. Honor graduates included Luanne DeBruhl, Melinda Greene, Robin Hougland, and Nancy Murray. New members of Theta Chapter, Sigma Phi Alpha, are Luanne DeBruhl, Linda Eber, Melinda Greene, and Robin Hougland. Julia Wilson received the Rossya Kaufman Memorial Scholarship and was also chosen by her classmates to receive the Harriett Hine Award. The A. Rebekah Fisk Award was presented to Patricia DeBoni and Carolyn Wire received the C.V. Mosby Award. Many proud parents, husbands and friends of the Class of 1978 attended the Commencement Activities and shared this happy occasion.

Fall signaled another academic year and we welcomed 36 new students to our program. Amidst much excitement, some apprehension and possibly some cultural shock they have started their careers toward becoming dental hygienists. The students accepted represented approximately one-fourth of the total applicants. All have had one year or more of college and received their pre-dental hygiene education at 10 different colleges or universities.

An alumna and faculty member was recently honored. Mrs. Carla Totten was elected president of Supreme Chapter, Sigma Phi Alpha, and will preside at the next annual meeting held in conjunction with the American Association of Dental Schools Annual Session in New Orleans.

## DENTAL ASSISTING INDIANAPOLIS

*Marjory H. Carr*

Graduation ceremonies were held Thursday evening, May 11, 1978 for the 24 members of the 1978 Dental Assisting Class.

Susan Johnston, Richmond, Indiana, was presented with the Outstanding Dental Assistant Award by Becky Tidemann, President of the Indianapolis Dental Assistants Society. The Indiana School of Dentistry Table Clinic Award for Dental Assistants was shared by Kim Budke, Beth Kyle and Patti Luehring for their clinic entitled "Lead It Be." This table clinic also received the first place traveling trophy presented at the May meeting for the winning Student Clinic Award of the Indiana Dental Assistants Association. The trophy is on display in the trophy case in the Oral Diagnosis patient reception area.

The Dean's List for the first semester included: Elaine Ludwig 3.83, Sue Schaffer 3.70, Kimberly Budke 3.63; Second semester: Elaine Ludwig 3.91, Sue Schaffer 3.88, and Susan Johnston 3.78.

Fifteen 1978 graduates enrolled in the EFDA summer course. The new Expanded Function Dental Assistants are Kimberly Budke, Linda Davis, Kathy Grant, Anne Higgins, Susan Johnston, Lesley Jones, Beth Kyle, Sheryl Lewis, Elaine Ludwig, Patti Luehring, Rochelle Major, Debra Mayse, Sue Schaffer, Libby Stewart and Amy Tishner.

We have been notified that Deborah Roberson (class of '77), and Sally Phillips (class of '74) have been accepted in the Dental Hygiene Program at the School of Dentistry. Congratulations to you both!

Ms. Jeri Gruner, C.D.A., EFDA, Research Associate in Pedodontics, has



been appointed to teach in the Dental Assisting Program on a limited basis. We are so pleased to have Jeri join our faculty, because of her excellent background and experience in chairside procedures both in private practice and in the Undergraduate Pedodontic Department. Welcome aboard, Jeri!

Again this year we are happy to have the daughter of an Indiana University School of Dentistry graduate enrolled in our program, Miss Erin Engleman. Erin's father, Dr. Jack L. Engleman, is a practicing oral surgeon in Indianapolis.

The first semester has started for 24 new dental assisting students. As always, they are overwhelmed by the newness of it all, and the mountains of homework, but we are certain their enthusiasm will sustain them.

## DENTAL AUXILIARY EDUCATION NORTHWEST

*Edward W. Farrell*

On May 11, 1978 the dental hygiene graduation banquet was held at the Cameo Restaurant in Shererville, Indiana, and this proved once again to be a splendid affair. The graduating class members under the leadership of Mrs. Linda Moore were largely responsible for the success of this annual event. This year attendance of students, parents, guests, alumni and faculty very noticeably had increased and provided an indication of the amount of interest being stimulated in the dental hygiene program at Gary. Students singled out for special awards included: Christy Shevchenko, Cynthia Kirby, Linda Hufford and Cheryl Goodman. In addition to the full-time faculty members, those associate faculty members in attendance included: Drs. Altenhof, Coburn, Graden, Holm, Moon and Rumas. Chancellor Danilo Orescanin and Miss Diane Holom were present representing the I.U.N. campus. A great joy was experi-

enced in welcoming back new IU alumni and graduates of the first dental hygiene class: Miss Janelyn Creamer, Mrs. Mary (Shimko) Feller, Mrs. Kathy Hinshaw and Miss Sarasue Robb. Dr. Eugene Rumas was the main speaker for the evening.

The third dental assisting graduation ceremony took place on May 19, 1978 for 14 students. Much credit must be paid to our dental assisting faculty for this memorable evening. Those students recognized included: P. Bostic, J. Elia, P. Fleming, C. German, C. Glines, J. Leaming, L. Mattozzi, D. Metro, C. Olszewski, D. Sapone, K. Sodo, B. Spitler, M. Strehl and L. Volner. Honored guests included: Chancellor Orescanin, Dr. Leonard Koerber, Reverend J. David Drummond and Dr. Gilbert Carter.

The IU Northwest twelfth annual commencement was on Friday, May 12, 1978. Students who received the Associate of Science degree in Dental Hygiene included: S. Franchimont, C. Goodman, J. Gore, C. Gray, C. Gregoline, L. Hufford, C. Kirby, A. Machkovech, L. Moore, T. Neible and C. Shevchenko.

We are most pleased to announce that Mrs. Rosemary (Der Hagopian) Kohut has joined the Gary full-time faculty ranks and assumed the position of Dental Hygiene Supervisor. Rosemary comes to us from the I.U. South Bend campus where she served as the Assistant Supervisor of their dental hygiene program since 1975. Rosemary originally is from the East Coast, having received her A.S. and B.S. degrees from the University of Rhode Island. In May 1978 she received her M.S. degree in education from Pennsylvania State University. Needless to say, we all join in wishing Rosemary much success in her new assignment. Many thanks are also acknowledged to the dental hygiene faculty search and screen committee who worked many long hours toward the acquiring of such a suitable hygiene program supervisor.



In reviewing the status of the DAE program faculty rosters since the start of instruction of 1975 and through school year 1978-79, 30 instructors have been affiliated with the school. Six instructors have completed four years of instruction. These "ole timers" include: Jennifer Dancisak, Edward Farrell, Leonard Koerber, Robert Moon, Eugene Rumas and Robert Talian. Seven instructors have longevity of three years. Nine have two years and eight have one year. A warm welcome is extended to the newest additions to the faculty: Dr. Robert Angerman, Mrs. Jennifer Gregoline and Rosemary Kohut.

The Dental Advisory Committee continues to be active in providing counsel and direction to the auxiliary program. Chancellor Orescanin very graciously serves as chairman and is ably supported by his committee that includes: Dr. C. R. Altenhof, Dr. R. Moon, Dr. N. Novak, Dr. P. Stephens, Mrs. K. Burton, R.D.H., Mrs. P. Phillips, R.D.H., Mrs. A. Dixon, C.D.A. and Mrs. B. Bland, C.D.A.

Since September of 1975, the dental assisting program has graduated 11 students in 1976, seven in 1977 and 14 in 1978. The dental hygiene program has graduated nine students in 1977 and 11 students in 1978. In summary, this amounts to 32 dental assistants and 20 dental hygienists.

### **DENTAL HYGIENE NORTHWEST**

*Rosemary D. Kohut*

I.U.S.D./Northwest held its second graduation ceremony May 12, 1978. The students' families, friends and faculty were very proud of the eleven graduates. They were: Susan Franchimont; Cheryl Goodman (recipient of Clinical Faculty Award for Professionalism); Juanita Gore; Cynthia Gray; Cynthia Gregoline; Linda Hufford (recipient of C.V. Mosby Book Award); Cynthia Kirby (recipient of C.V. Mosby Book Award); Audrey Machkovech; Linda Moore; Trudy Nei-

ble; and Christy Shevchenko (recipient of A. Rebekah Fisk Award and graduated with highest distinction).

The program is very happy to announce that all graduates have found employment in the Northwest area.

The Expanded Restorative Functions course has been a big success this spring semester. Many of the 1978 graduates are practicing as E.F.D.A.'s as well as R.D.H.'s and are thoroughly enjoying their new roles and responsibilities. The course has gained popularity among the Dental Auxiliary Education faculty. Instructors' Gerald Wennerstrom and Katherine Mikrut successfully completed the Expanded Restorative Functions along with the Dental Assisting graduates this past Summer Session I.

The Dental Hygiene program held its fall semester orientation and registration on August 25, 1978, for the first and second year students. The faculty are looking forward to this coming academic year and are welcoming the students with many changes and much organization.

### **DENTAL AUXILIARY EDUCATION EVANSVILLE**

*Gordon Kelley*

Our faculty members are now quite experienced and eager to begin a new year, confident that last year's mistakes will not happen again. Actually we all know that they will reoccur but we always hope that we have learned how to cope with these inevitable problems. This year we would like to welcome Mrs. Phyllis Maddox as our new instructor in dental hygiene. Phyllis is a 1974 graduate of our program. She also received a B.S. degree in dental hygiene in 1975 and did her student teaching here, so we already know how good she is. Since graduation, Phyllis has been employed full-time as a clinical hygienist and has become very proficient and well known in the community.



The hygiene class is up to full strength, but this year we are down in actual dental assisting students. The twelve students we do have appear to be super candidates and will probably challenge our assisting faculty to keep up with them. We have ten new dental lab students this year as we have increased our enrollment somewhat. The lab students are already working quite hard this fall and they appear to have chosen the correct profession.

Our joint hygiene-assisting capping ceremony has been scheduled for December 9. This will be the second year for this combined ceremony and we have received numerous compliments on how effective this procedure is.

## DENTAL ASSISTING

*Glenda Miller*

This year's dental assisting class is composed of twelve Indiana girls. They are Terri Benton, Sharon Bogan, Cheryl Buckman, Susan Fulkerson, Mary Ann Grannan, Margaret Hardesty, Jane Katterhenry, Nancy Mann, Jody McFatridge, Angela Schott, Lauri Sheridan, and Jeannie Southard.

Our students will be getting better acquainted at a party to be held on September 15, at the home of Dr. Gordon Kelley. The dental lab technology students will also be present at this meeting.

This year, our small number of students are enthusiastic and are looking forward to a good year. It will be unusual to begin the year with only twelve students but we will be able to give lots of individual attention.

## DENTAL LABORATORY TECHNOLOGY

*Paul Robinson*

The Dental Laboratory Technology Program at Evansville graduated its first

class in May. The inaugural class of eight students completed the course of study with no telltale signs of psychologic or physiologic deterioration. My congratulations to these stalwart scholars. Special bravos are extended to Ms. Mary Jo Adler who completed the ninety semester hour course with a 4.0 average and Mr. Jack Elliott, who, in addition to receiving his Associate in Science in Dental Laboratory Technology, received a Bachelor of Science in Health Services.

The 1978 graduates are: Mary Jo Adler, Haubstadt; Timothy Dunigan, Mt. Vernon; Jack Elliott, New Albany; and Donna Bayer, William Hames, Thomas Megar, and Tamara Stone of Evansville. The academic and craftsmanship standards of excellence established by these students are a credit to dental technology and in keeping with the intellectual excellence of a professional.

In June the seniors had a farewell party for the graduating class, and in July they had a welcome party for the entering class of ten new and eager dental laboratory technology students.

## DENTAL HYGIENE

*Catherine Niederhaus*

The dental hygiene students at Indiana State University Evansville are back and in full swing. The second year students had a welcome party for the first year students at Dr. Kelley's house. They cooked out and did a little swimming in the lake. One student even swam in her clothes (accidentally). Events for the semester are already being planned, such as capping. The first year girls have experienced being an operator on mannikins and "real people" and are building enthusiasm like a snowball. The second year girls are sending for information on regional and state boards. They want to be prepared well ahead of time.



Our program has a new instructor, Mrs. Phyllis (Michael) Maddox, who has a B.S. degree in Dental Hygiene Education. She is enthusiastic and handles her classes, like a veteran even though this is her first year in teaching. All of the girls and faculty are glad she has joined us.

## **DENTAL AUXILIARY EDUCATION SOUTH BEND**

*Frank N. Ellis*

Our reputation as a training ground for faculty was surely enhanced by the promotion and transfer of Ms. Rosemary (Der Hagopian) Kohut to the Gary campus as Assistant Professor and Supervisor of Dental Hygiene and Ms. Rosemary Monehen to the Fort Wayne campus as Assistant Professor and Supervisor of Dental Assisting. We were fortunate in replacing them with two very promising faculty members in the persons of Ms. Pamela Nelson, R.D.H. and Ms. Valerie Mullin, C.D.A.

We survived a blizzard in January and an accreditation visit in September. The latter was less traumatic in that it endured for only three days. Preparation for this visit had the benefit of causing us to look long and hard at our programs, and we found we had good cause for pride in what had been accomplished.

Our program this school year includes four continuing education courses.. Shermie Schafer, R.D.H. presents "The Geriatric Dental Patient" on October 28th. Maureen Janesheski, C.D.A., Nanci Yokom, R.D.H., C.D.A. and Valerie B. Mullin, C.D.A. present "Health Questionnaires and Oral Inspection for the Dental Assistant" on November 4th. Dr. Lawrence Goldblatt and Bonnie L. Hassel, R.D.H. present "Oral Inspection for the Dental Hygienist" on February 17. Mr. Louis Gillespie and the American Red Cross staff present "Cardiopulmonary Resuscitation for the Dental Assistant" on March 10th.

We have welcomed 19 entering dental assisting students and 20 fledgling hygienists to our programs.

## **EXPANDED RESTORATIVE FUNCTIONS**

*Keith W. Dickey*

With the completion of the new five-chair Expanded Functions Clinic, the clinical portion of our course has greatly improved. In addition to our new facilities, I am pleased to announce the following new instructors: Carla Gunn, R.D.H., Chris Hood, C.D.A. and Nancy Keller, R.D.H.

Dr. Greg Moo has returned again this fall to instruct in the clinical area of Expanded Functions.

Although our hygiene class completes this six-month course in December, the clinic will remain open through the Spring semester for students who desire additional clinical experience.

The staff wishes to thank Dr. Jack Showley for his tremendous help from Indianapolis, and Mrs. Judy Pozzi, our secretary at I.U.S.B., for her continued vital assistance.

## **DENTAL ASSISTING**

*Maureen S. Janesheski*

Graduation ceremonies for 14 members of the Dental Assisting Class of 1978 at Indiana University at South Bend were held Friday, May 12, on the I.U.S.B. Campus.

Dr. Frank N. Ellis, Director of Dental Auxiliary Education at I.U.S.B., presided. Chancellor Lester M. Wolfson offered welcoming comments and presented certificates to the class. Dr. Michael R. Johns, Pedodontist and Adjunct Lecturer at I.U.S.B., gave the address. Reverend Ray Tucker, First Church of the Nazarene, gave the invocation and benediction.



The Ralph G. Schimmele Award for academic achievement was presented to Myra Sobecki of Michigan City. The instructor award for clinical and scholastic achievement was given to Christy Hood of Elwood, class president.

Clinical awards went to Janice Treadway and Sharon Van Buren, both of South Bend. Cindy Baney, class secretary, of Bourbon, received the student award. Myra Sobecki also received the award for Expanded Restorative Procedures.




















Other class members are Beth Canary, Joan Chabot, and Anne Novak of South Bend; Melody Zeese of LaPorte; Christy McFarland of Knox; Lynn Bixler of Michigan City; Sandy Pierce and Julie

Tobolski both of Mishawaka; and Cindy Schrader of Bloomington.

Five members of the graduating class also completed the Expanded Restorative Procedures course. They are Cindy Baney, Beth Canary, Joan Chabot, Christy Hood, and Myra Sobecki.

We would like to welcome our new faculty in Dental Assisting:

Patrick McCormick, Ph.D. Candidate/Microbiology-University of Notre Dame, *Microbiology for Dental Assistant*; Thomas F. Tanner, D.D.S., *Radiology*; Jerry Nieten, D.D.S., Assistant Professor/Operative Dentistry, Indiana University School of Dentistry—*Dental Anatomy*; Don Sloan, *Oral & Written Communications*; Gregory Moo, D.D.S., *Ex-*

 Maureen Janesheski Supervisor	 Catherine Deranek Treasurer	 Christy Hood President	 Melody Zeese Vice President	 Cynthia Baney Secretary	 Rosemary Monehen Instructor
 Myra Sobecki	<h2>DENTAL ASSISTING PROGRAM</h2> <h3>INDIANA UNIVERSITY</h3> <h3>SCHOOL OF DENTISTRY</h3>  <h3>SOUTH BEND CAMPUS</h3> <h3>1978</h3>				 Cindy Schrader
 Julianne Tobolski	 Sharon Van Buren			 Christy McFarland	 Sandy Pierce
 Janice Treadway	 Lynn Bixler	 Beth Canary	 Anne Nowak	 Joan Chabot	



*panded Restorative Procedures*; Ms. Carla Gunn, R.D.H., E.F.D.A., *Expanded Restorative Procedures*; Ms. Chris Hood, C.D.A., E.F.D.A., *Expanded Restorative Procedures*.

A special welcome goes to Mrs. Valerie Mullin, C.D.A., E.F.D.A., who has joined our staff as Instructor in Dental Assisting. Mrs. Mullin is a 1975 graduate of the Dental Assisting Program at South Bend and has taught in our Expanded Restorative Procedures Program this past year.

## DENTAL HYGIENE

*Bonnie L. Hassel*

We would like to welcome Pamela Nelson to our Dental Hygiene Program. Ms. Nelson will be filling a void left by Rosemary Kohut who is now Supervisor of the Dental Hygiene Program at the Northwest Campus. Both faculty and students were saddened by the loss of Ms. Kohut, but knowing her capability, are extremely pleased with her advancement. We wish her happiness in her new (July 15, 1978) marriage and success in her new position.

Ms. Nelson, a 1976 graduate of the Dental Hygiene Program at IUSB, received her undergraduate degree at Indiana University-Purdue University, Fort Wayne. She was an adjunct lecturer in the Dental Hygiene Program Spring semester, 1978, and returns this academic year as Instructor in Dental Hygiene. We look forward to working with her.

Our Third Annual Dental Hygiene Alumni Day was held April 15, 1978. Chancellor Lester Wolfson and the Director of Alumni Relations, Ms. Anne Pyle, gave us a tour of the newly acquired Administration Building after which we retired to the Executive Dining Room for lunch. Music and dancing by the Washington High School Swing Choir topped off a most enjoyable and rewarding day.

On Sunday, April 16, 1978, the following students were honored: Nancy L.

Biltz, Sigma Phi Alpha Scholastic Society Award—Mosby Scholarship Book Award; Karen R. DePoy, Clinical Faculty Award in Patient Education—Mosby Scholarship Book Award; Judith A. Ertel, Elkhart Dental Auxiliary—Outstanding Dental Hygiene Award; Karen M. Getty, Sigma Phi Alpha Scholastic Society Award; Geraldine A. Gorney, Dorothy Fromm Preventive Dentistry Award; Amelia T. Hazlewood, Excellence in Dental Hygiene Award; and Karen A. Zakrzewski, A. Rebekah Fisk Award.

We were so proud of these students. Their class was an especially hard-working class, and the students who received honors were truly outstanding among the outstanding. True to form, one group of these students won the Second Prize for their table clinic on Child Motivation at the 1978 Dental Meeting in Indianapolis. On Tuesday, May 9, 1978, the class graduated. A happy day and yet a sad one. We wish them well and hope they will come back to see us often.

## DENTAL AUXILIARY EDUCATION FORT WAYNE

*Peter Zonakis*

As we start a new year on campus, we welcome three new members to our full time faculty. Ms. Rosemary Monehen, Mrs. Jacque Heine, and Mrs. Connie Poston. Ms. Monehen joins us as Assistant Professor and Supervisor of Dental Assisting; Mrs. Heine as Assistant Professor and Clinical Supervisor in Dental Hygiene and Mrs. Poston as Assistant Professor in Dental Auxiliary Education. All three join our staff with a wealth of experience. Ms. Monehen and Mrs. Heine gained their experience at South Bend and as Dr. Ellis constantly reminds us "We train them and you hire them." Thanks Frank, keep it up!

We look for a very productive and rewarding year with the addition of these new faculty members.



Our expanded functions program under the able leadership of Dr. Michael Duch, is starting its second year on our campus. Our first year was a little hectic but the results were very gratifying. The experience was very beneficial for our students, giving them a greater understanding of operative dentistry. Our graduates were absorbed very rapidly in the dental community, which indicates the growing demand for expanded function auxiliary personnel.

## DENTAL HYGIENE

*Gloria Huxoll*

The entering Dental Hygiene class consists of 20 students from the areas of Kokomo, Muncie, Culver, Indianapolis, Bloomington, Columbus, Auburn, Hamlet, Kendallville, Bluffton, Huntington, Warsaw, Fort Wayne, and one from our neighboring city of Payne, Ohio. Nineteen students make up the Second year class.

Students pursuing their Baccalaureate Degrees in Education who will graduate in May are Mary Bacon Dunn, '76; and Rene Sieradski '77; and Linda Schaffer '74, both graduates of the South Bend Dental Hygiene Program.

The graduating class of 1978 had collected "roast" ideas for months and pulled the "Prof Roast" off in good fashion on May 9. It was discovered that they were good cooks as well as students and the "Roasts" were well received by attending faculty.

There were wedding bells for two: JoEllen Detwiler to Dan VanAnda and later Judy Aumiller to Vincent Lochbihler. Sandra Chappell returned to her home town of Columbus, Indiana, to work for a periodontist and Mary French moved to Indianapolis (there is a reason—Jeff, right?), and commutes to Anderson, Indiana, to work for periodontist Dr. Paul VanDorn. Janneen

Friend travels to North Manchester and Dr. Early McKinley, while Laura Harlan, Leslie Charles and Debra Shanayda selected jobs with Dr. James Taylor, Dr. Harold Bohnke, and Dr. Roger Thompson, respectively, in Decatur, Indiana.

Deborah Brownell, of California, decided to stay in the Hoosier State and remains very busy working part-time with Dr. Gregory Glassley, and as a teaching Laboratory Assistant in the Expanded Functions Course, and working on courses to complete her B.S. degree in Education next year. JoEllen VanAnda (Detwiler—remember?) also is employed part-time in the Dental Hygiene Program as a Laboratory Assistant in Expanded Functions and a part-time dental hygienist with Dr. Robert Vollmer. Beth McCallister returned to her home town of Huntington, Indiana, to work with Dr. Thomas Steinmetz, as did Ellen Wease who came from Warsaw, Indiana, and returned to work with Dr. Jame Bohlin.

Fort Wayne claimed Susan Williams with Dr. Darrell Alexander, Joyce Wagaman with Dr. Robert Gebfert; Kathleen Tullis and Shiela Murphy with Dr. James Frey, Judy Rondot with Dr. Daniel Urban, Robin Smith with Dr. Cameron Newby; Sheryl Metzger, Dr. David Burns and Dr. Greg Ladd, Terri Bock part-time with Dr. Irwin Weinrobb and Judy Aumiller Lochbihler with Dr. Ronald Slyby. God's richest blessings to all our graduates and may they find their chosen profession to be very rewarding as well as challenging!

The wedding of Lea Ann Powers '76 and Robert Gebhard brought together over one-half of the class. To see the beautiful bride and each other was truly a happy reunion. Old memories and moments were relived by Lea, Marsha May LeClere, Nancy Rowe Spitznagle, Mary Bacon Dunn, Linda Hockenmeyer Messman, Patti Cook Haduck, Debbie Hayes, Mary Mason, Debbie Glassley,



Shelly Stroup, and Connie Clair Poston. Lea and Bob will live in Bloomington while he finishes his master's in Physical Education and she will be taking classes also.

Those who finished their Baccalaureate in Education this past spring were Roberta Domke '77, Cheryl Renn Elser '74, Debra Maxwell '71, and Diane Burns and Gerry Wennerstrom of the South Bend Campus.

Diane Ulrich McGregor '67, a faculty member, completed her Master's Degree in Education as did Connie Clair Poston '76 who is now a member of the Dental Hygiene Faculty, and also Gwendolyn Munger '71.

Another new faculty member, Assistant Supervisor and Clinical Supervisor, is Mrs. Jacqueline Heine, '66. Mrs Heine comes to us with much experience and expertise as she was Supervisor of the Dental Hygiene Program at South Bend until the birth of her twins, Dameon and Diedre, four years ago. Being a Clinical Supervisor and seeing that the clinic facilities continue to improve with new equipment and curriculum improvement are all exciting and pleasing to Jacques as well as to other dental hygiene faculty.

The "Awards and Honors Night" was again a joint caring and sharing by the Indiana University students and faculty and the members of the Isaac Knapp Dental Hygiene Association. This event is held in the Student Union Building each year to recognize students, honor students and to present awards and a scholarship.

The "Gloria H. Huxoll" award was presented by Mrs. Jacque Heine, originator of the award, to Mary Margaret French. Mary French received the Maynard K. Hine award presented by Dr. Phil O'Shaughnessy. Mary French and JoEllen Detwiler (now VanAnda) were elected to Alpha Iota Chapter of Sigma Phi Alpha. The "A. Rebekah Fisk" award was presented to Judy Rondot.

Two C. V. Mosby Book awards were presented, one to Kathleen Tullis and one to Ellen Wease. The Isaac Knapp Dental Hygiene Association presented an "Outstanding Educators" award to Leslie Charles and a \$250.00 scholarship to a first year Dental Student, Nancy Zion. Dr. Timothy Shambaugh, a faculty member and practicing Oral Surgeon, established a new award, "The Dental Hygiene Oral Pathology Award." The first recipient of the award was Deborah Brownell.

Fourragers were presented by Dr. Peter Zonakis to Deborah Brownell, Leslie Charles, JoEllen Detwiler VanAnda, Mary M. French, Laura Harlan and Beth McCallister.

## DENTAL ASSISTING

*Rosemary Monehen*

Transferring from one campus to another required leaving many close and dear friends in South Bend. However, Dr. Zonakis, the faculty and staff here at Fort Wayne have made the transition less saddening by extending me a hearty welcome.

The Dental Assisting Program at Fort Wayne graduated twenty-one eager new assistants on May 18, 1978 under the able leadership of Mrs. Hilda Nofzinger. Nine students graduated as Expanded Duty Dental Auxiliaries. The Isaac Knapp Dental Assistants Society Scholarship Award was presented to Sandra Freon. LaDonna Taylor was presented the Dr. Maynard K. Hine Award. Karen Koontz graduated with highest distinction, Sandra Freon and LaDonna Taylor with high distinction and Debbie Daniels graduated with distinction.

With the advent of a new academic year twenty-two students have been accepted into the program for 1978-79. We have high hopes for their success at Fort Wayne.



As the new supervisor of the Dental Assisting program, I have two very capable and experienced assistants returning to work with the program in Ms. Colleen Smith and Ms. Judy Van Gheluwe.

We would like to acknowledge our associate faculty who will be with us for the fall semester. Drs. Phillip O'Shaughnessy, Cameron Newby and Benjamin Becker generously give us their time and expertise.

## DENTAL LABORATORY TECHNOLOGY

*Herbert Reininger*

On May 15, 1978, eighteen students were graduated from this program with an Associate of Science degree. All eighteen have been placed in the following manner: fourteen in laboratories, three in private dental practice and one is attending dental school at the University of Texas.

In late April seventeen second year students took the Recognized Graduate examination administered by the National Board of Certification for the National Association of Dental Laboratories. The Department has been notified that all seventeen passed the exam. This is the first step for individuals to become certified. Unlike hygienists and assistants who can take their full certifications at the time of graduation, the dental lab tech graduates must now obtain three more years of experience before they can become eligible to take the final practice phase of the examination in order to become fully certified.

Prior to graduation, an honors ceremony was held by the Department. Mr. Joe Wright was awarded a plaque by Mr. Dan Link, President of Fort Wayne Dental Depot for the highest academic achievement. Mr. Craig Leland was awarded a plaque given by the Dental Technology faculty for outstanding lab-

oratory achievement. Mr. Leland also graduated with high honors. Messrs. Tom Amon and Robert Jagers were both recognized for graduating with honors (a tie).

Mr. Wright also received a certificate and a check given by the Isaac Knapp Dental Auxiliary Society for the outstanding dental auxiliary student at the Fort Wayne campus. This award was presented by Mrs. Diane Williams.

Fourteen second year students have returned, seven of whom worked in laboratories during the summer vacation. Eleven are from Indiana, one from Michigan, one from Connecticut and one from Vermont. One is the son of a dentist.

For the first time in the Program's history, twenty-two students began their first semester on August 28th. In the past only twenty students have been accepted. For these we have the following statistics: 15 from Indiana, 3 Colorado, 2 Pennsylvania, 1 Illinois, 1 New York. College records: 4 with B.S. degrees, 1-3 years, 4-2 years, and 3-1 year. Two are sons of dentists, one is a son of a hygienist, one is a son of a laboratory owner, one has two brothers who own laboratories, three girls have worked in a dental office and eight have done varying degrees of work in a dental laboratory.

The general curriculum is being strengthened and expanded by the addition of a course in General Chemistry, the lengthening of the hours for crown and bridge as well as the addition of advanced orthodontic prosthesis construction for those desiring to concentrate in this area. The latter two are possible by the addition of two new associate faculty specializing in these types of construction.

The purchase of some new equipment both as replacement and for expansion in the form of new articulators, ultrasonic cleaners, high speed lathes and air rotor handpieces has greatly ex-

*(continued on p. 105)*



# Continuing Education Courses

C.E. 113 December 11 & 12, 1978

ORAL PATHOLOGY FOR  
ORAL SURGEONS

Airport Hilton Inn  
Indianapolis

Fee: \$135

Dr. William G. Shafer

South Bend Campus

Fee: \$25

Dr. Lawrence I. Goldblatt

Bonnie L. Hassel, R.D.H.

C.E. 114 December 15, 1978

DENTAL RADIOLOGY FOR  
DENTAL ASSISTANTS

School of Dentistry  
Indianapolis

Fee: \$30

Dr. Myron J. Kasle

C.E. 119 February 28, 1979

LABORATORY & CLINICAL  
PROCEDURES FOR INDIRECT  
BONDING OF ORTHODONTIC  
APPLIANCES

School of Dentistry  
Indianapolis

Fee: \$100

Dr. Stephen K. Bailie

C.E. 115 January 27, 1979

CLINICAL PROGRAM FOR  
DENTAL LABORATORY TECH-  
NICIANS

School of Dentistry  
Indianapolis

Fee: \$25

Dr. John R. Risch

C.E. 120 March 7-10, 1979

COMPLETE DENTURE SERVICE

School of Dentistry  
Indianapolis

Fee: \$150

Dr. Malcolm E. Boone

C.E. 116 January 31, 1979

MUCOSTATIC DENTURE  
TECHNIQUE

School of Dentistry  
Indianapolis

Fee: \$250

Dr. Ray K. Maesaka

C.E. 121 March 10, 1979

CARDIOPULMONARY RESUS-  
CITATION FOR THE DENTAL  
ASSISTANT

South Bend Campus

Fee: \$25

Mr. Louis B. Gillespie

C.E. 117 February 7, 1979

MEDICAL EMERGENCIES  
IN THE DENTAL OFFICE

Howard Johnson's-Downtown  
Indianapolis

Fee: \$45-dentist

\$20-each auxiliary

Dr. James H. Dirlam

Dr. Charles H. Redish

C.E. 122 March 14-16, 1979

SURGICAL ENDODONTICS

School of Dentistry  
Indianapolis

Fee: \$250

Dr. Samuel S Patterson

Dr. Harold Gerstein

C.E. 118 February 17, 1979

ORAL INSPECTION FOR THE  
DENTAL HYGIENIST

C.E. 123 March 15, 1979

THE DIFFICULT SECOND  
DENTURE SYNDROME

Evansville Campus

Fee: \$50

Dr. Malcolm E. Boone



C.E. 124 March 21, 1979  
USE AND ABUSE OF DRUGS  
IN DENTISTRY

Howard Johnson's-Downtown  
Indianapolis

Fee: \$50

Dr. James H. Dirlam

Dr. Charles H. Redish

Dr. Clarence E. Deane, Jr.

C.E. 125 March 28, 1979  
DENTAL INSURANCE AND  
RELATED OFFICE PROCEDURES

Classic Motor Lodge

Indianapolis

Fee: \$40

Mr. Gale E. Coons

Mr. J. Michael Quinn

C.E. 126 March 28, 1979  
MEDICAL EMERGENCIES IN  
THE DENTAL OFFICE

Holiday Inn

Merrillville, Indiana

Fee: \$45-dentist

\$20-each auxiliary

Dr. James H. Dirlam

Dr. Charles H. Redish

C.E. 127 April 3-6, 1979  
CLINICAL PEDODONTICS

School of Dentistry

Indianapolis

Fee: \$150

Dr. David R. Avery

Dr. Paul E. Starkey

C.E. 128 April 11, 1979

CROWN & BRIDGE AND  
ELECTROSURGERY

Howard Johnson's-Downtown

Indianapolis

Fee: \$50

Dr. Joseph C. Morganelli

C.E. 129 April 16-20, 1979  
MAXILLOFACIAL PROSTHETICS

Airport Hilton Inn

Indianapolis

Fee: \$200

Dr. Varoujan A. Chalian

C.E. 130 April 21, 1979  
PIT & FISSURE SEALANTS  
WORKSHOP

School of Dentistry

Indianapolis

Fee: \$45-dentist

\$25-auxiliary

Elizabeth A. Hollan

Dr. J. Keith Roberts

C.E. 131 April 22, 1979  
THE RECOGNITION & TREAT-  
MENT OF HEAD, NECK AND  
TMJ PAIN & DYSFUNCTION

School of Dentistry

Indianapolis

Fee: \$75-dentist

\$40-auxiliaries

Dr. Harold Gelb

C.E. 132 April 26-28, 1979  
RELATIVE ANALGESIA

School of Dentistry

Indianapolis

Fee: \$175-dentist

\$ 80-auxiliaries

Dr. Harry Langa

C.E. 133 May 7-10, 1979  
ADVANCED PERIODONTICS

School of Dentistry

Indianapolis

Fee: \$250

Dr. Timothy J. O'Leary

C.E. 134 May 16, 1979  
A RATIONAL & BIOLOGIC  
BASIS FOR CONSERVATIVE  
PERIODONTAL THERAPY

Howard Johnson's-Downtown

Indianapolis

Fee: \$60

Dr. Perry A. Ratcliff



C.E. 135 May 24 and 25, 1979  
 VARIATIONS IN ORTHOG-  
 NATHIC  
 SURGERY EMPHASIZING  
 CO-ORDINATED PATIENT CARE  
 School of Dentistry  
 Indianapolis  
 Fee: \$100  
 Dr. A. Howard Sather  
 Dr. Bruce A. Lund

C.E. 136 June 6, 1979  
 GERIATRIC DENTISTRY  
 Howard Johnson's-Downtown  
 Indianapolis  
 Fee: \$50  
 Dr. William Borman  
 Shermie Schafer, R.D.H.

C.E. 137 June 20, 1979  
 WHAT ORAL DIAGNOSIS/ORAL  
 MEDICINE MEANS TO THE  
 DENTAL TEAM  
 School of Dentistry  
 Indianapolis  
 Fee: \$35  
 Dr. David M. Dickey

C.E. 138 July 16-19, 1979  
 DENTAL RADIOLOGY FOR  
 DENTAL HYGIENISTS AND  
 DENTAL ASSISTANTS  
 School of Dentistry  
 Indianapolis  
 Fee: \$150  
 Dr. Myron J. Kasle



The fifth floor office of Mrs. Midred Redford, Supervisor of the Animal Research Quarters at IUSD, gives ample evidence of her green thumb. Besides the terrarium (below the world map) and 16 African violet plants, she has nurtured the philodendron which is seen along the ceiling. Mrs. Redford, who has been at the school 12 years and a total of almost 25 years at the Medical Center, told her assistants (Clifford Hall and Arthur Johnson) that she planned to retire when the philodendron vine reached all the way around the ceiling. However, the two men during the night caused the vine to make a "U-turn" and head back toward its starting point. No retirement is now in sight!



# Awards Given at Honors Program

The Indiana University School of Dentistry Honors Program was conducted on May 10, 1978, with Dean Ralph E. McDonald presiding. The following awards, certificates and honors were given.

The American Association of Endodontists Award of a certificate to the senior showing interest and proficiency in the field of endodontics was presented to Dr. Stuart A. Ferguson; the Indiana Society of Oral Surgeons—Glenn J. Pell Memorial Award (top 10% in oral surgery and upper one-third of class; must have internship) went to Dr. Dennis A. Block; and the American Academy of Oral Pathology, presented to the dental student who has shown the most interest, accomplishment, and promise in the field of oral pathology, plus a subscription to the Journal of Oral Surgery, Oral Medicine, and Oral Pathology was given to Dr. Robert D. Windsor.

The C.V. Mosby Awards for scholastic excellence in Complete Denture were presented to Dr. Timothy J. Carlson; Preventive Dentistry to Dr. Ronald W. Stewart; Operative Dentistry to Dr. James W. Fisher; Dental Hygiene to Carolyn C. Wire; and Maxillofacial Prosthetics to Dr. John F. Knapp. The Rossya Kauffman Memorial Award in Dental Hygiene for proficiency in patient education went to Julia L. Wilson; the A. Rebekah Fisk Award (one year membership in state and national organization) by Indiana State Dental Hygienists Association to the dental hygienist showing the greatest proficiency in clinical practice during her senior year was given to Patricia A. DeBoni, and an Award of Certificate for proficiency in radiology from the American Academy of Dental Radiology was presented to Dr. Carey B. McLaughlin. A certificate from the American Academy of Oral Medicine for achievement, proficiency and

promise in the field of Oral Medicine was won by Dr. Glenda S. McCabe.

The American Academy of Periodontology Award of one year's subscription to the Journal of Periodontology for proficiency in periodontology went to Dr. Robert M. Grace; an Award and plaque of Indiana Society of Pedodontics (\$50) to the senior who plans to continue in graduate pedodontic program was presented to Dr. Anita C. Murray; a Certificate of Merit from the American Society of Dentistry for Children and membership in the Society for one year, plus a one year subscription to the Journal of Dentistry for Children (plus a cash award of \$25 from the Indiana Unit) were awarded to Dr. Jed M. Inman.

An Indiana Academy of General Dentistry Award (plaque plus one year's membership) was presented to Dr. Glenda S. McCabe; an award of a certificate to the senior showing interest in development of the orofacial complex from the American Association of Orthodontists went to Dr. Timothy J. Carlson.

Senior Essay Awards were as follows: First (\$200) to Dr. Richard A. Horstmeyer, "A Stereochemical Analogy of Propoxyphene as it Relates to the Opiate Receptor and Some Physiologic and Social Consequences."; Second (\$50) to Dr. Stephen A. Cook, "Prophylactic Use of Antibiotics in Today's Dental Practice."; Third (\$25) to Dr. F. Richard Robertson II, "Two Anesthetics Used in Modern Dentistry: Their Mechanism of Action and Possible Complications in the Healthy Patient."; Fourth (\$25) to Dr. Gerald A. Levin, "Dentistry and the Nursing Home Patient."

Table Clinic Awards were as follows: First Place (\$50) to Dr. Anita C. Murray, "Oral Electrical Burns: Scar Contraction Management."; and Second Place (\$25)



to Dr. David A. Llewellyn, "Reinforced Resin Post and Core." The Best Dental Hygiene Table Clinic (\$10 each) to Melinda L. Greene, M. Therese Hehmann, Kim J. Lampert, Elizabeth A. Smythe, and Jo Ellen Osborne for the clinic entitled "The Great Pretenders."

Winners of the Dental Assistant Table Clinic competition, announced at their graduation ceremony (\$15 each) were: Patty Luehring, Kimberly Budke and Beth Kyle for their clinic entitled "Lead It Be."

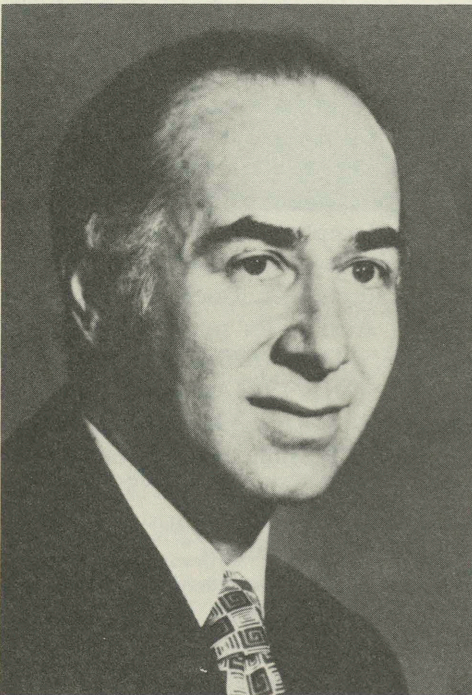
The School of Dentistry Alumni Association Plaque (The Maynard K. Hine Award) plus membership in the Alumni Association was presented to Dr. Timothy J. Carlson; the Harriett F. Hine Award to a dental hygienist to Julia L. Wilson; the International College of Dentists Award for outstanding achievement during his years of dental study to Dr. Gregory P. Pfau; an Award of a plaque and \$50 bond by the Indiana Dental Association in recognition of services to organized dentistry through student A.D.A. to Dr. Mark I. Thompson; a

plaque from National Chapter of Alpha Omega to the student who earned an outstanding scholastic record for four years of dental study at Indiana University School of Dentistry to Dr. Timothy J. Carlson.

Sigma Phi Alpha, Dental Hygiene Honorary Society, certificates and pins were presented to Luann DeBruhl, Linda K. Eber, Melinda L. Greene and Robin E. Hougland.

The Omicron Kappa Upsilon certificates were presented to Dr. Timothy J. Carlson, Dr. Daniel S. Bennett, Dr. E. Michael Ozment, Dr. Stephen A. Cook, Dr. David M. Fairchild, Dr. Charles L. Steffel, Dr. Karl F. Frey, Dr. Dayn C. Boitet, Dr. Robert D. Windsor, Dr. Dennis A. Block, Dr. Allan C. Knapp, Dr. Anita C. Murray, Dr. Steven S. Latimer, Dr. Jeffrey D. Starr and Dr. Jerry R. Davis.

The James L. Maus Memorial Scholarship Award (\$250 and a Permanent Plaque that is displayed in the School of Dentistry) was presented to Mr. Ronald W. Mikaloff; the Academy of Operative Dentistry Award to Dr. Daniel S. Bennett; and the American Academy of Gold Foil Operators Award went to Dr. Dean T. Sueda.



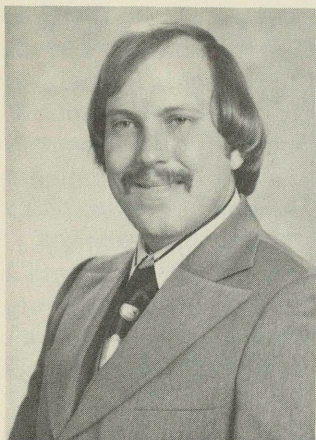
Dr. Daniel M. Laskin, a 1947 graduate of Indiana University School of Dentistry, received the Research Recognition Award of the American Association of Oral and Maxillofacial Surgeons at the organization's annual meeting in September.

Dr. Laskin is professor and head of the Department of Oral and Maxillofacial Surgery and Director of the Temporomandibular Joint Center at the University of Illinois College of Dentistry, Chicago. He received the award for his investigations of temporomandibular joint (TMJ) disorders. Past president of the AAOMS, Dr. Laskin is editor of the Journal of Oral Surgery and AAOMS Forum. He is the 1972 recipient of the AAOMS Distinguished Service Award, past president of the Chicago Society of Oral Surgeons and current president of the American Dental Society of Anesthesiology.

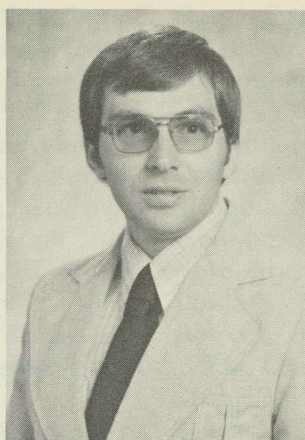


## 1978 Graduates

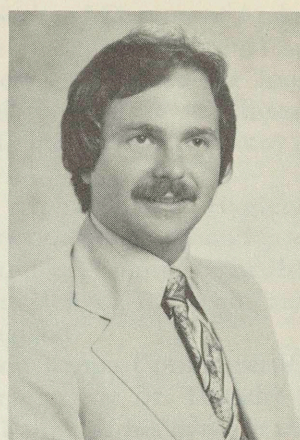




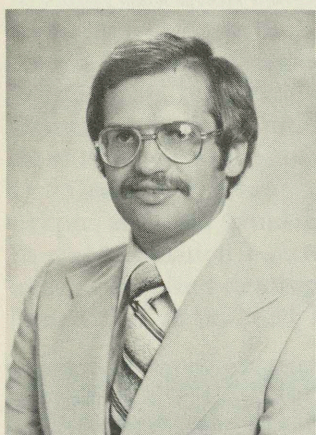
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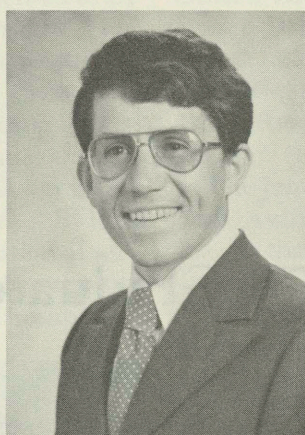
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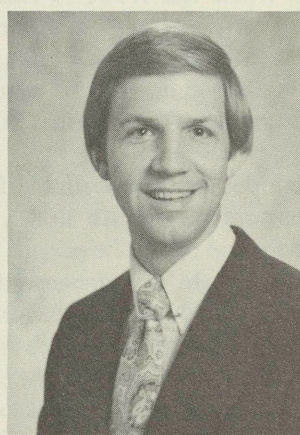
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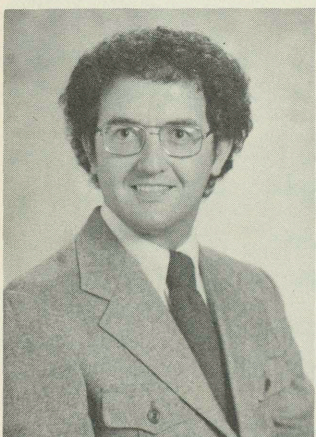
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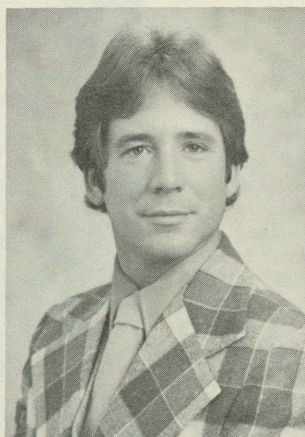
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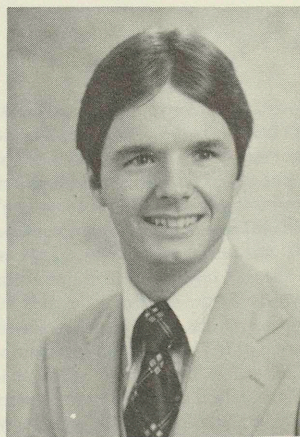
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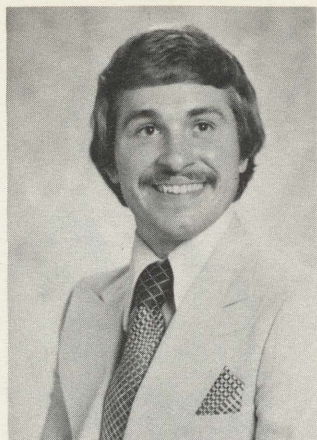


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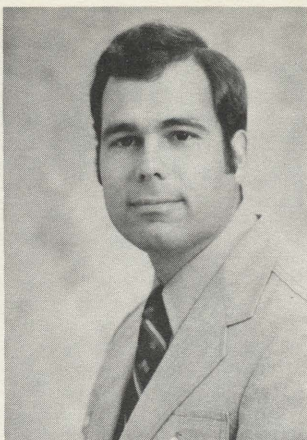


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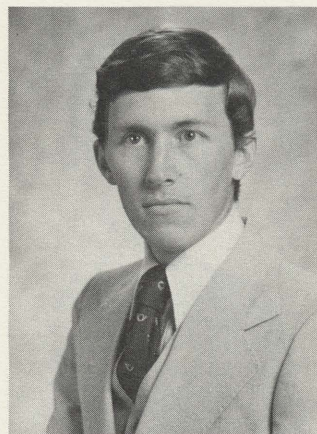
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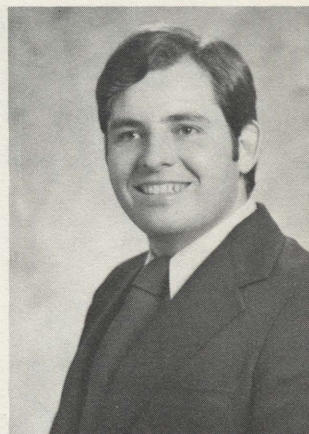
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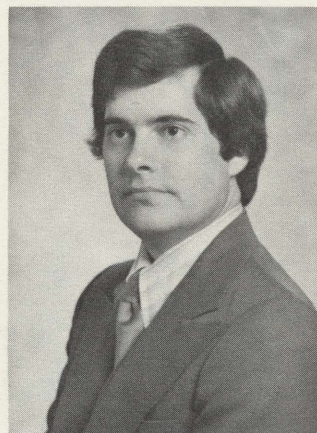
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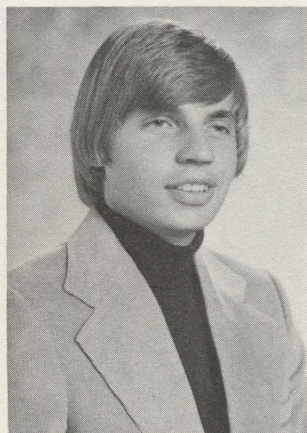
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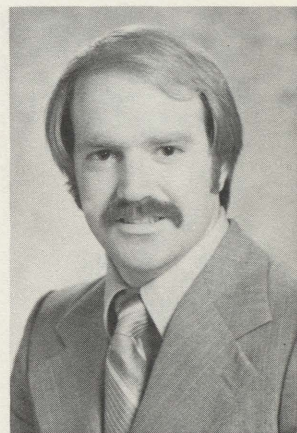
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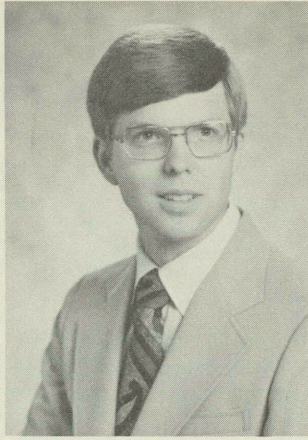


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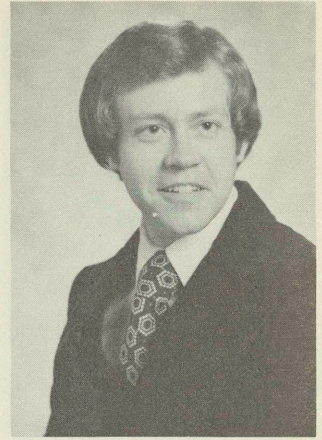




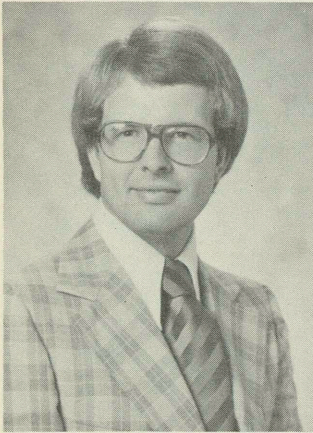
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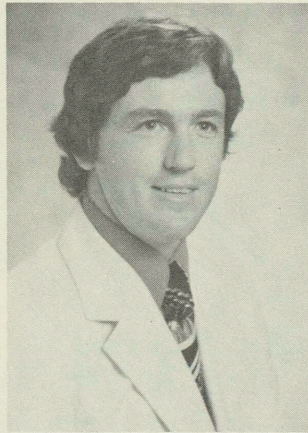
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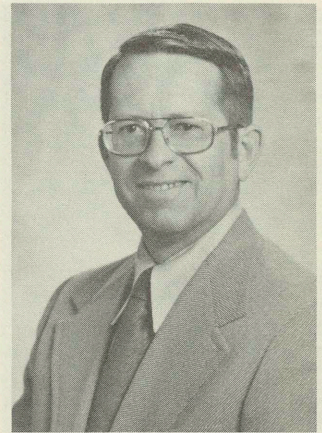
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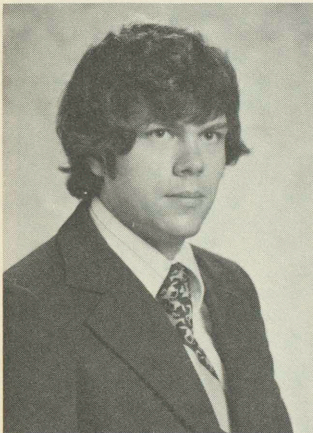
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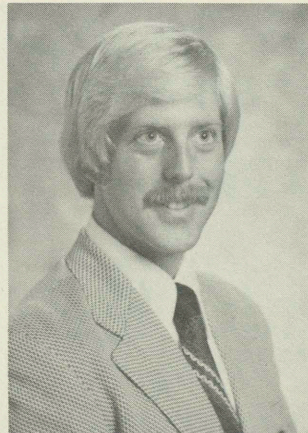
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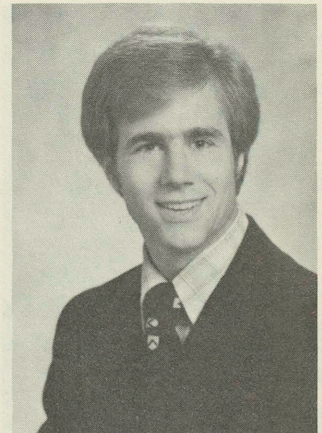
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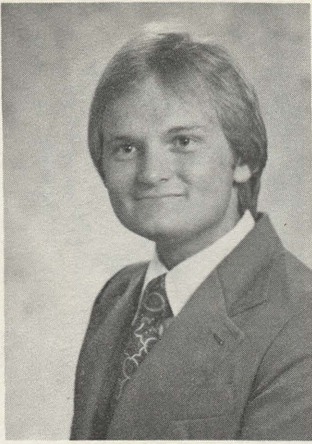


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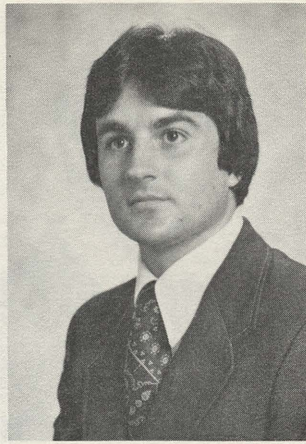


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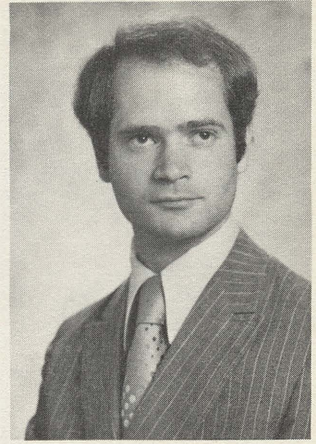




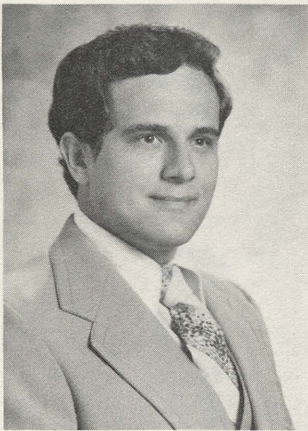
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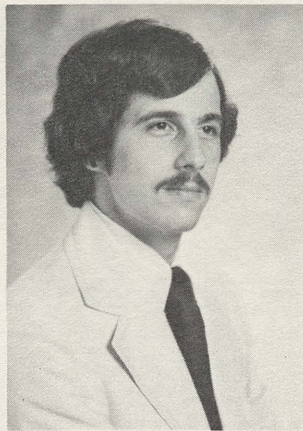
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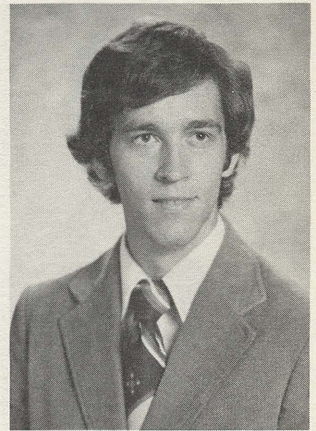
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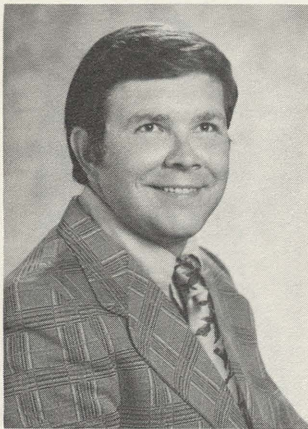
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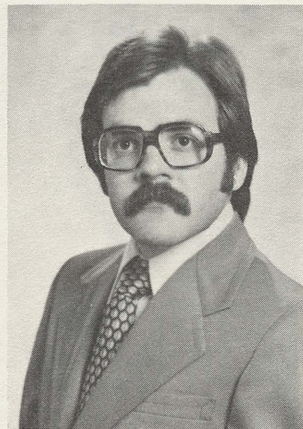
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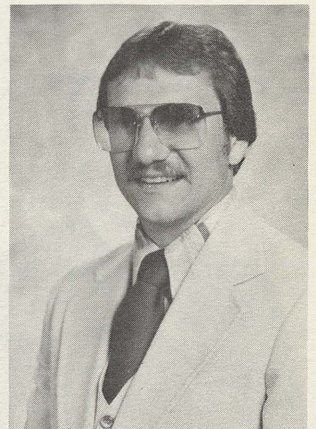
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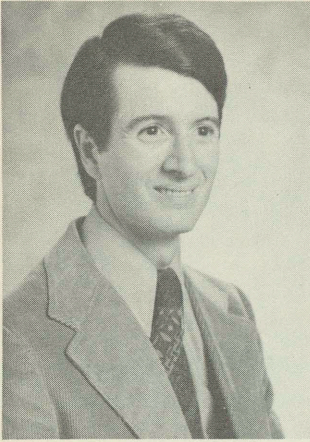


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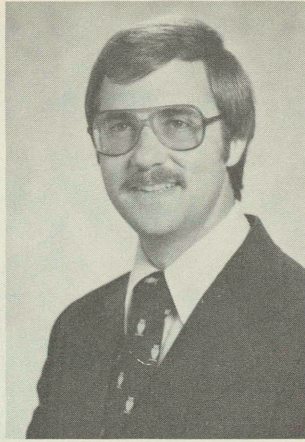


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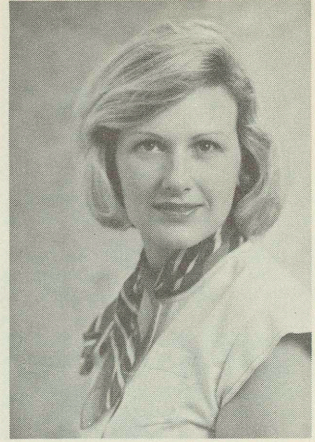




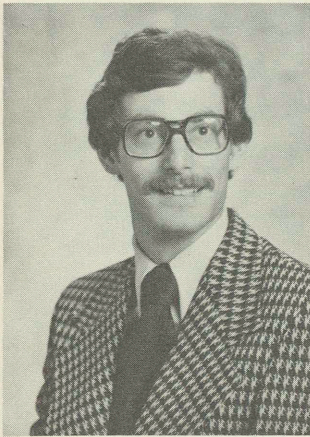
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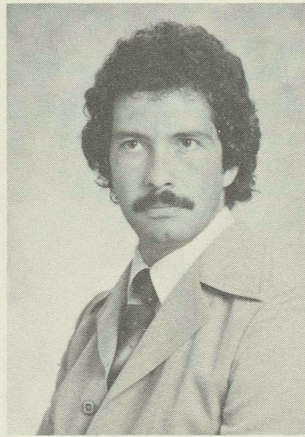
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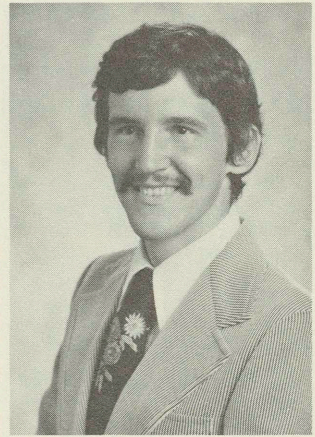
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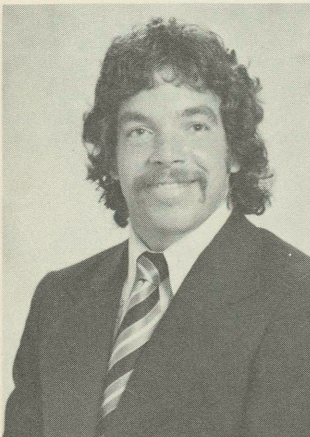
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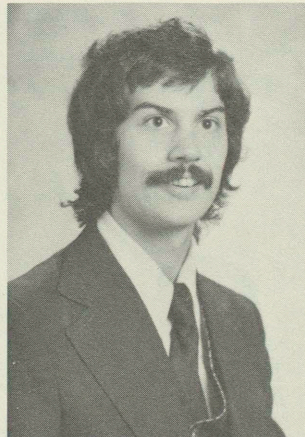
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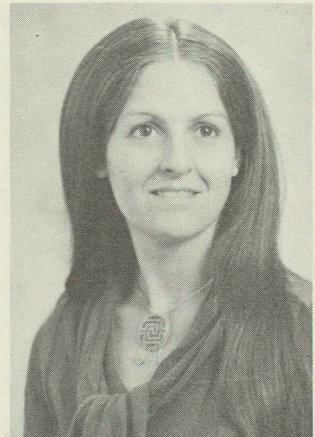
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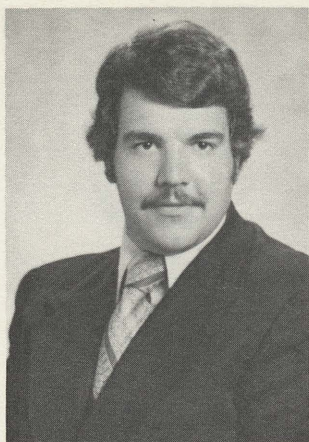


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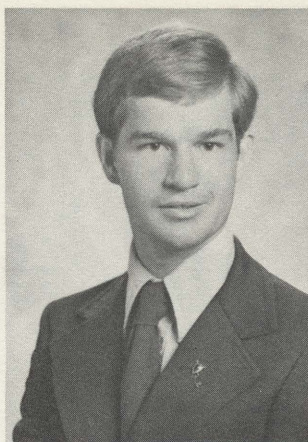


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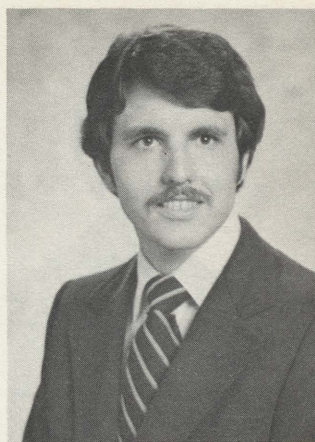




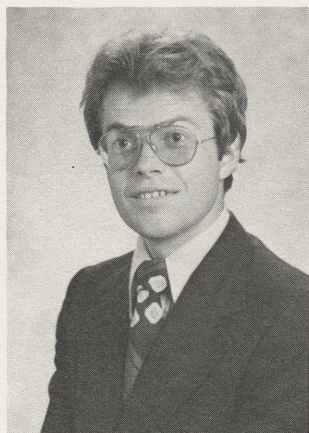
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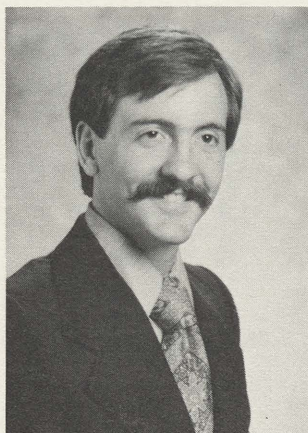
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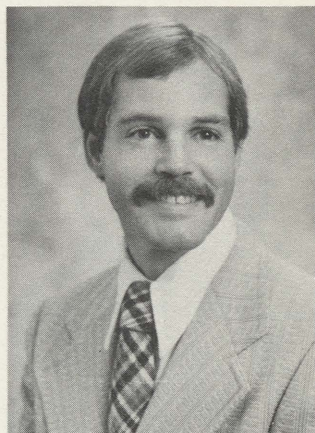
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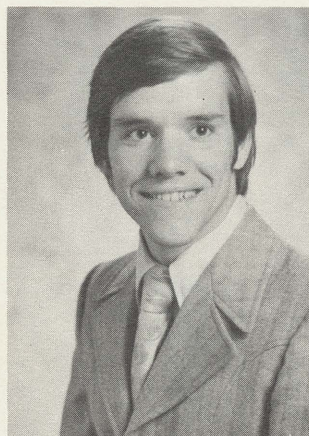
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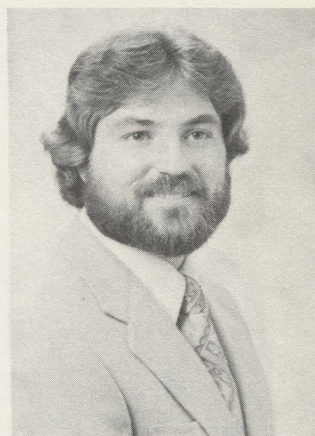
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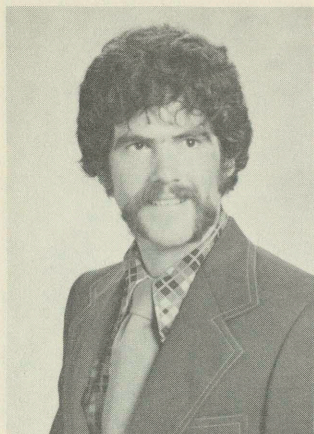


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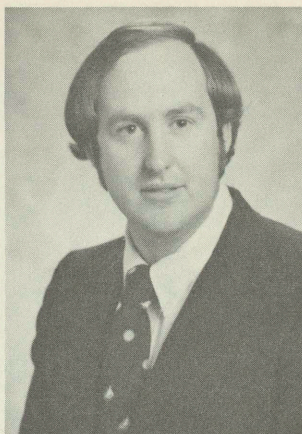


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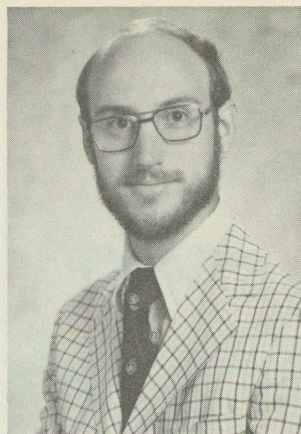




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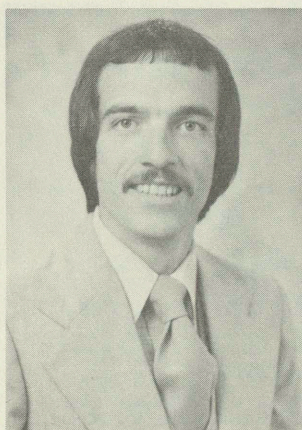
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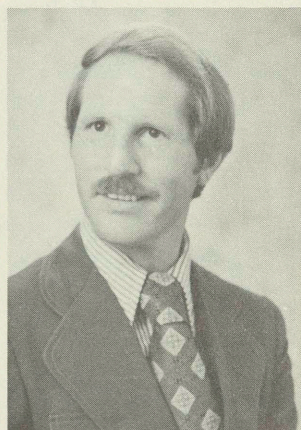
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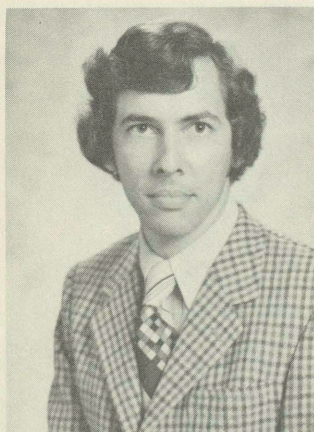
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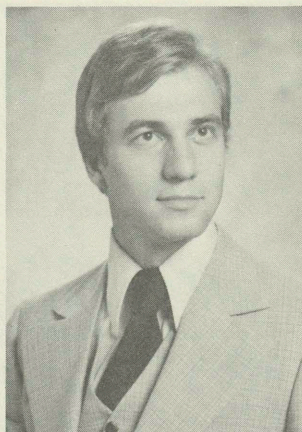
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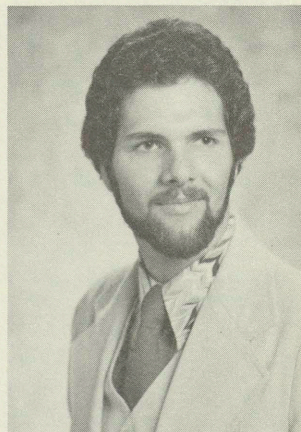
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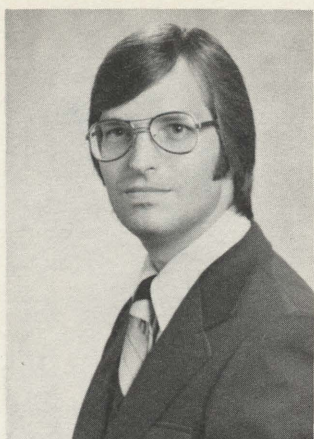


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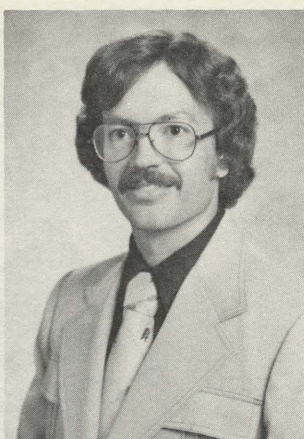


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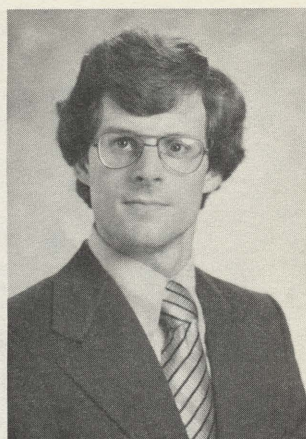




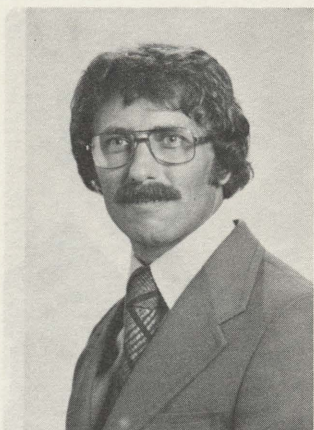
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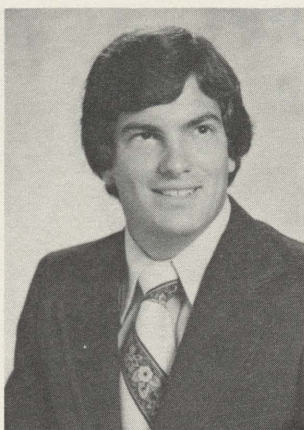
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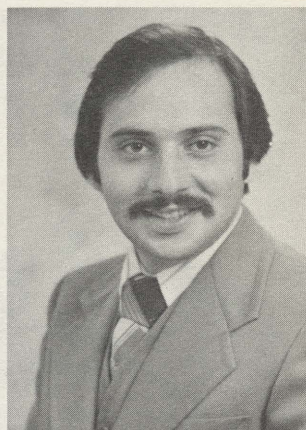
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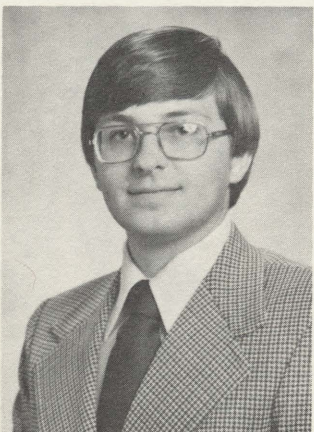
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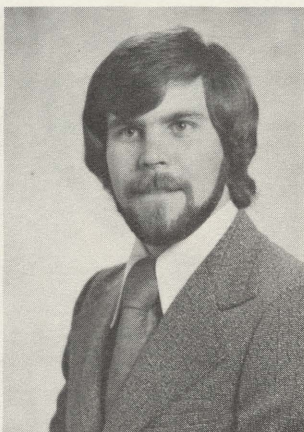
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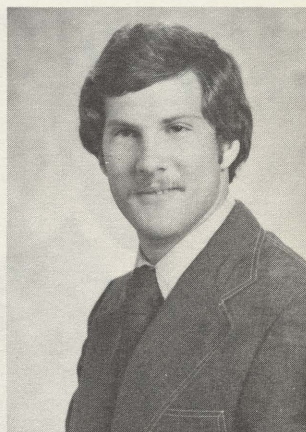
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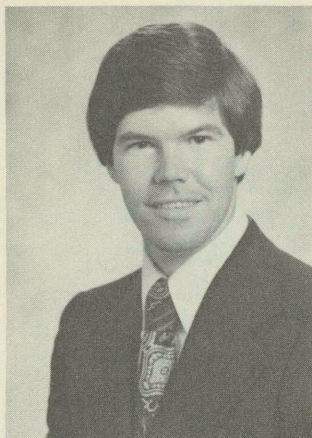


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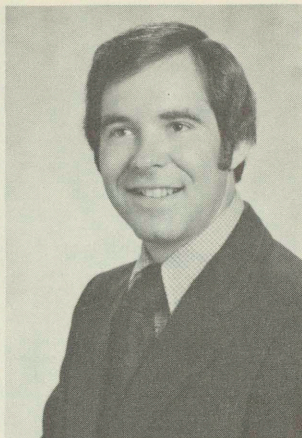


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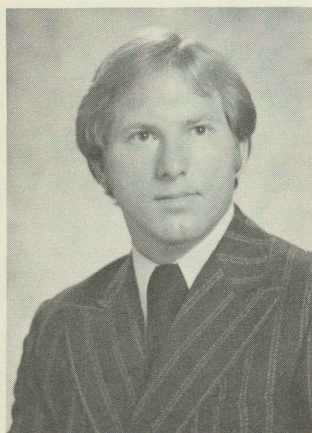
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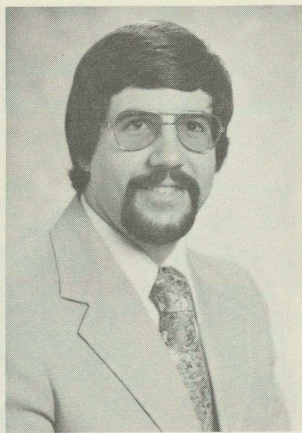
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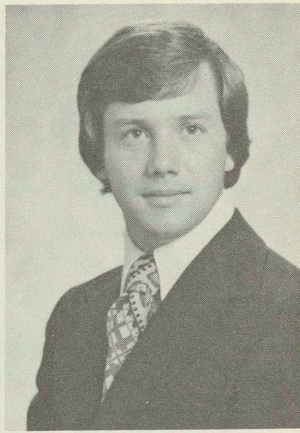
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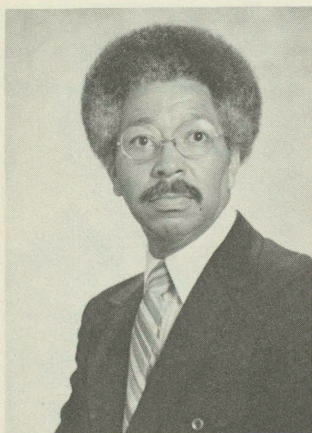
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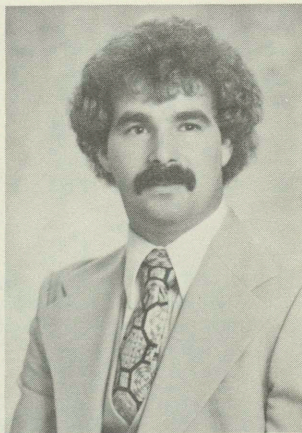
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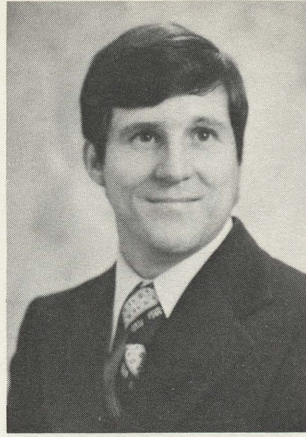


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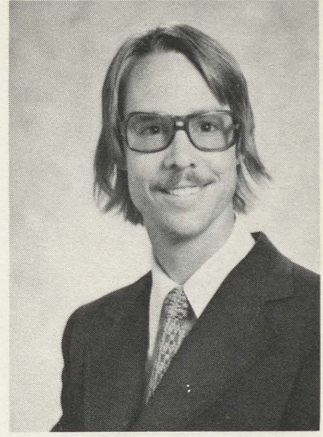




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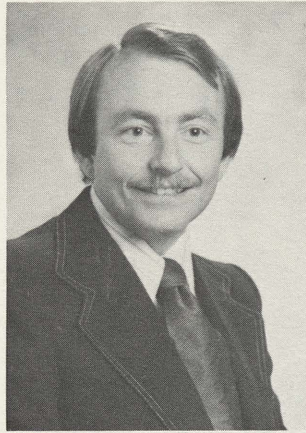
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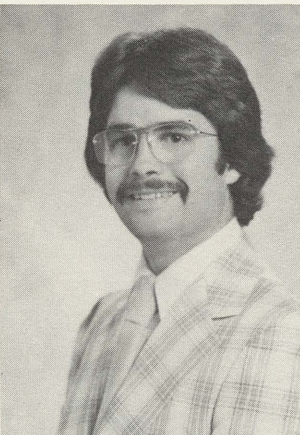
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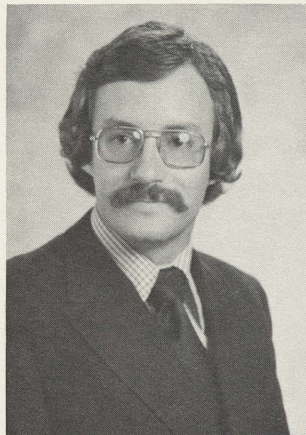
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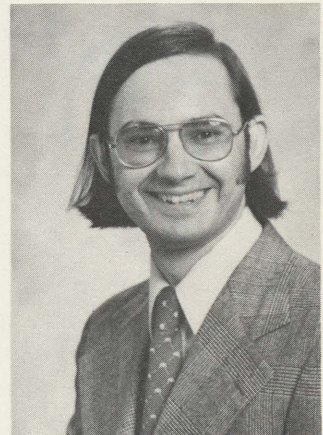
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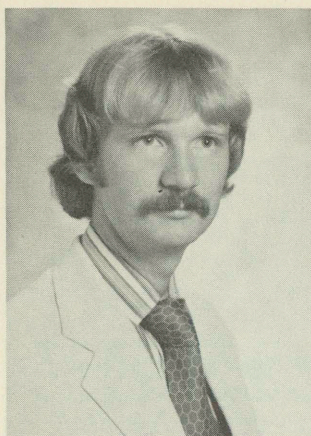


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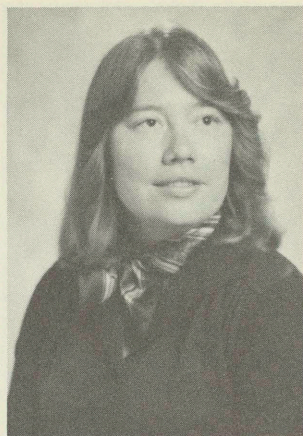




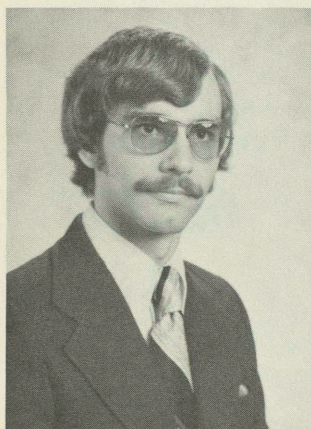
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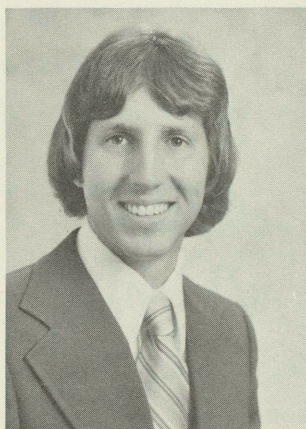
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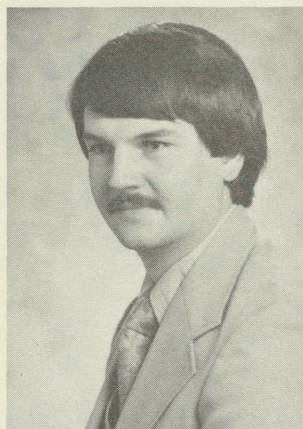
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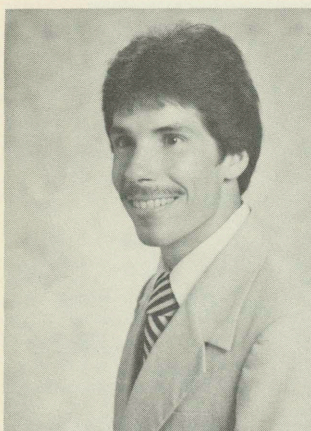
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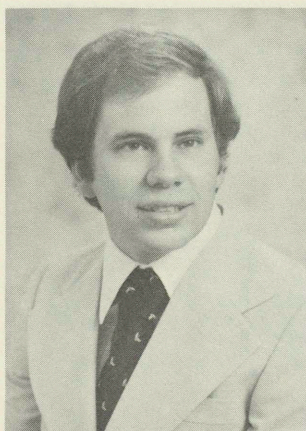
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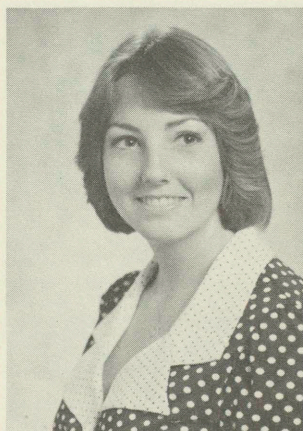
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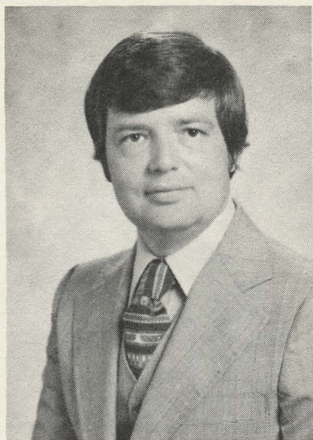


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**Schemehorn, Tisa E.**





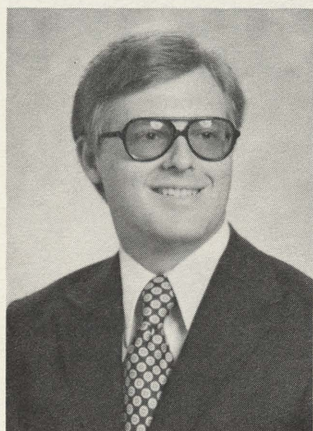
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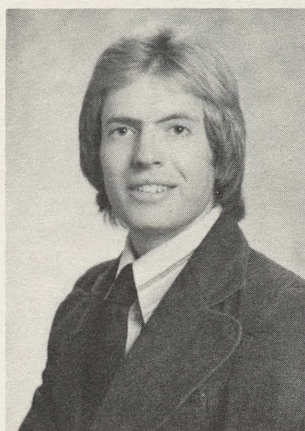
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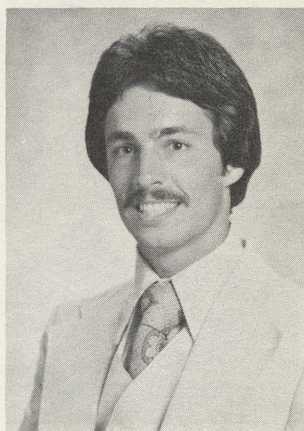
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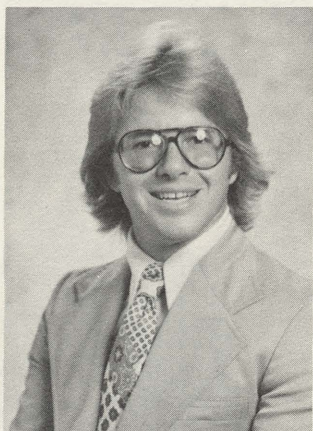
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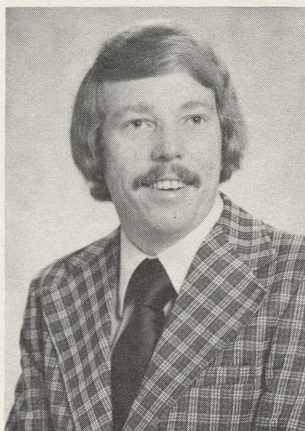
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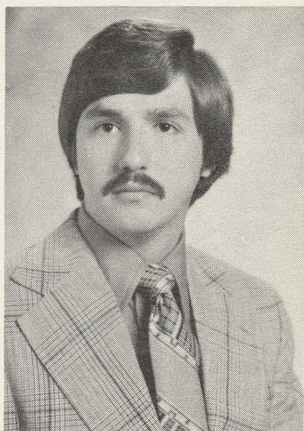
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**Souers, James M.**

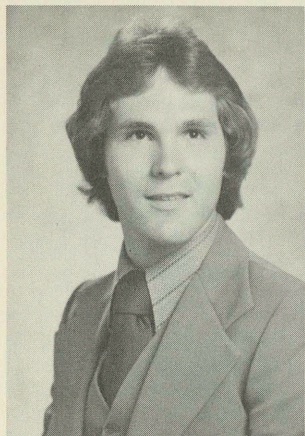


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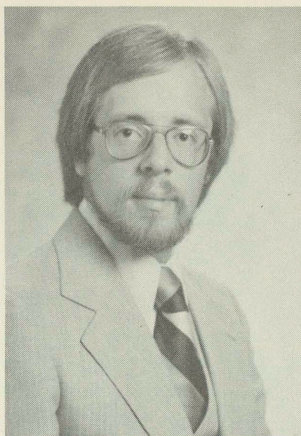


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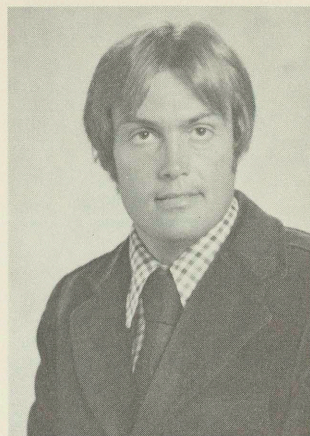




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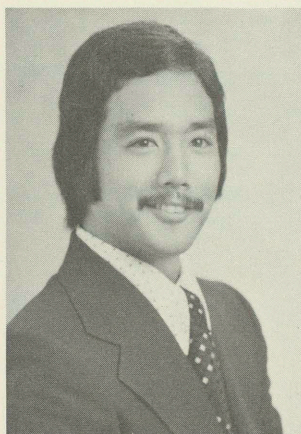
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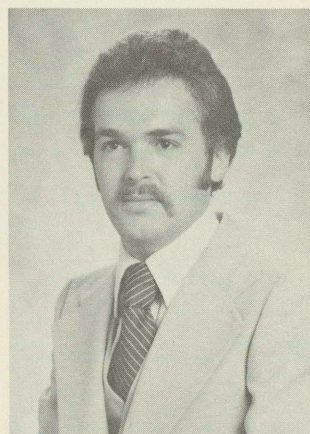
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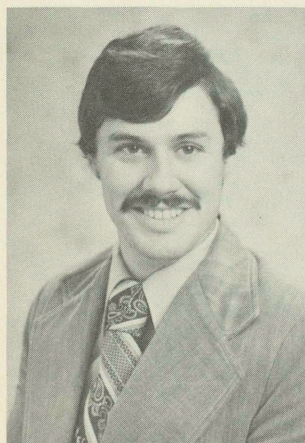
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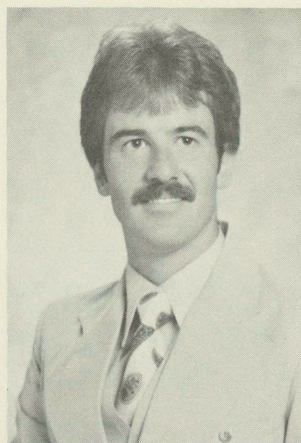
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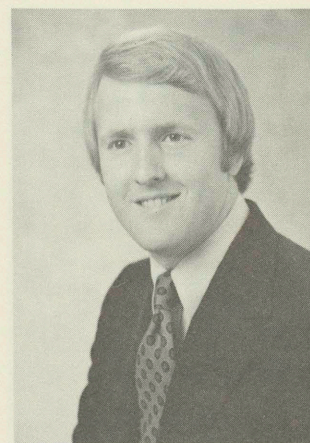
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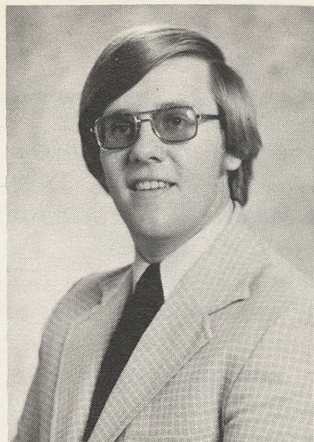


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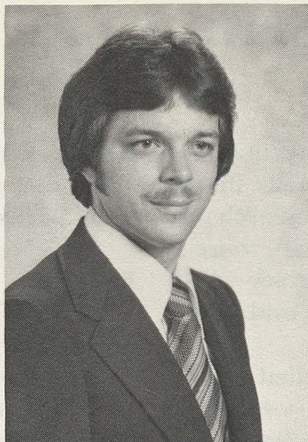


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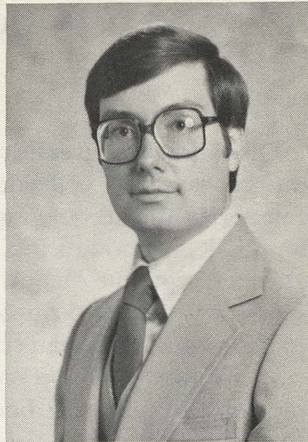




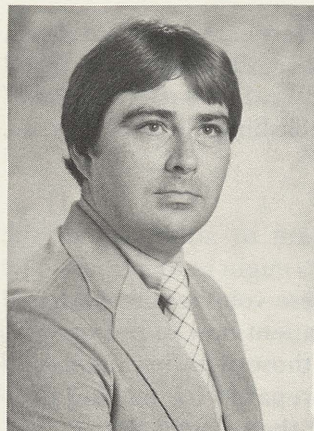
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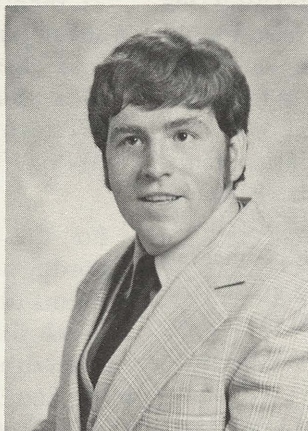
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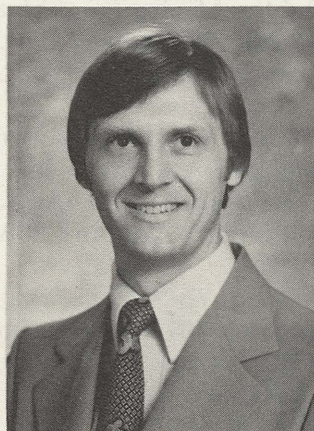
**Wilhere, Alan**



**Windsor, Robert D.**



**Woodruff, Judith R.**



**Zorawski, G. Joseph**

## Not Pictured

**Logmann, Matthew B.**



# THE BOOKSHELF

Mrs. Helen W. Campbell, Librarian

Obviously the greatest percentage of our monograph collection falls in the categories of textbooks and research materials. Even though it is small, there is another segment of our Library which serves a very useful purpose and that is patient education materials.

In August, 1967, we compiled a bibliography of juvenile books which the dentist could add to the reading materials in his waiting room or donate to the children's collection at his local library. We had every intention of updating this list every five years, but we are suddenly faced with the reality that 11 years have elapsed without a more current list being made available to the Alumni.

As we did with the 1967 list, we are noting only those books which we believe to be in print and available for purchase. The complete address of the publishers is given as an aid in ordering any of the books. It should be noted that most publishers will pay postage if your check accompanies your order.

Adamson, Jean and Adamson, Gareth: *Topsy and Tim visit the dentist*. 1977. \$2.95 (British Book Center, 153 E. 78th St., New York, NE 10021)

Barr, George: *Young scientist and the dentist*. 1970. \$4.72 (McGraw-Hill Book Co., 1221 Avenue of the Americas, New York, NY 10036)

Bate, Lucy: *Little Rabbit's loose tooth*. 1975. \$5.95 (Crown Publications, Inc., 419 Park Avenue, S., New York, NY 10016)

Doss, Helen Grigsby & Wells, Richard L.: *All the better to bite with*. 1976. \$7.95 (Julian Messner, Inc., 1230 Avenue of the Americas, New York, NY 10020)

Hammond, Winifred G.: *The riddle of teeth*. 1971. \$4.69 (Coward, McCann & Geoghegan, Inc., 390 Murray Hill Pkwy., East Rutherford, NJ 07073)

Kessler, Ethel and Kessler, Leonard: *Our tooth story; a tale of twenty teeth*. 1972. \$4.95 (Dodd, Mead & Co., 79 Madison Ave., New York, NY 10016)

Rockwell, Harlow: *My dentist*. 1975. \$6.95 (Greenwillow Books, Div. of William Morrow & Co., Inc. Wilmore Warehouse, 6 Henderson Drive, West, Caldwell, NJ 07006)

Shay, Arthur: *What it's like to be a dentist*. 1972. \$5.95 (Contemporary Books, Inc., 180 N. Michigan Ave., Chicago, IL 60601)

Watson, Jane Werner, Switzer, Robert E. and Hirschberg, J. Cotter: *My friend the dentist*. 1972. \$2.50 (Golden Press/Western Publishing Co., Inc. Racine, WI 53404)

For the parent or adult, any of the following books might be of interest. The contents of these volumes are designed to teach the patient how to preserve his own teeth and those of his/her family and to be better prepared for making decisions affecting their dental health.

Berland, Theodore: *How to keep your teeth after 30*. Public Affairs Pamphlet #443. 50¢ (Public Affairs Pamphlets, 381 Park Avenue South, New York, NY 10016)

Comstock, John A.: *Your teeth all of your life, the dental patient's answer book*. 1977. \$5.95 (Dorrance & Company, 35 Cricket Terrace, Ardmore, PA 19003)

Cranin, A. Norman: *The modern family guide to dental health*. 1973. \$2.95 (Stein and Day, 122 E. 42nd Street, Suite 3602, New York, NY 10017)

Denholtz, Melvin & Denholtz, Elaine: *How to save your teeth & your money, a consumer's guide to better, less costly dental care*. 1977. \$8.95 (Van Nostrand



Reinhold Educational Publishers, Inc., 450 W. 33rd St., New York, NY 10001)

Friedman, Albert W.: *The tooth of it all*. 1977. \$6.95 (Oramark, 779 Arbolado Drive, Fullerton, CA 92635)

Himber, Jacob: *The complete family guide to dental health*. 1977. \$7.95 (McGraw-Hill Book Co., 1221 Avenue of the Americas, New York, NY 10036)

Lewis, Thomas E. & Griffith, H. Winter: *Instructions for dental patients*. 1975. \$22.50 (W. B. Saunders Co., W. Washington Square, Philadelphia, PA 19105)

Pratt, Alexander M.; *Your Children, their teeth and their health*. 1974. \$5.00 (Exposition Press, 900 South Oyster Bay Road, Hicksville, NY 11801)

*The tooth survival book*. 1977. \$3.30 (American Dental Association, 211 E. Chicago Avenue, Chicago, IL 60611)

Moss, Stephen J.: *Your child's teeth, a parent's guide to making and keeping them perfect*. 1977. \$8.95 (Houghton Mifflin Co., 2 Park St., Boston, MA 02107)

The last three titles we are mentioning are unusual dental pamphlets. Because cookbooks usually are not found in a list of dental materials, we have included a summary statement about each one.

Abbott, Mary Hartnett & Couret, Virginia J.: *The look ma, no cavities cookbook*. 1974. \$3.50 (Cookbook, c/o Women's Auxiliary to the New Hampshire Dental Society, 59 Exeter Road, North Hampton, NH 03862) "A cookbook of low-sugar and sugar-free recipes"

King, Wilma N.: *Blend and mend*. 1973. \$1.95 (Blend and Mend Publications, c/o Wilma King, P.O. Box 548, Redwood City, CA 94064) "For patients on the kind of special diet which has been prescribed by your physician or dentist"

Metropolitan Denver Dental Society. Women's Auxiliary: *The goody book*. . . creative food ides. rev. ed. \$2.00 (Mrs.

R. S. Junge, 3855 Estes Street, Wheat Ridge, CO 80033) "A collection of creative food ideas which are nutritious and compatible with good dental health . . ."

In a more scholarly vein, we are including the abstracts of some of the theses which have been written recently at Indiana University School of Dentistry in partial fulfillment of the requirements for the M.S. or M.S.D. degree:

#### **A CLINICAL EVALUATION OF THE EFFECT OF POLISHING PROCEDURES ON THE MARGINAL BREAKDOWN OF TWO DENTAL AMALGAMS**

**George A. Adams**

The investigation was undertaken to determine the effects of the polishing and finishing of dental amalgam in relation to its marginal breakdown. The study was also conducted to make clinical comparison of the marginal integrity of Dispersalloy restorations as compared to Twentieth Century Fine Cut Alloy restorations in both the polished and unpolished state.

Forty patients with a total of 131 Class I amalgam restorations were used as the study group. The two alloy systems and polish or unpolish techniques were selected from a random table. Photographic evaluation of the restorations was used to judge the degree of marginal breakdown.

The results of the study at the one-year evaluation show two main findings: (1) the Dispersalloy restorations showed less marginal breakdown than the Twentieth Century Fine Cut Alloy restorations, and (2) there was no significant difference between the polished and unpolished restorations overall.

#### **MAXILLARY COMPLETE DENTURE STABILITY PART I: IN VITRO DIMENSIONAL ACCURACY PART II: IN VIVO STABILITY**

**Martin T. Barco, Jr.**

The laboratory investigation compared the accuracy of heat cured resin bases without teeth, heat cured resin bases with teeth, and relined resin bases. The clinical study compared a heat cured resin base and relined base for stability under function.

The in vitro investigation used a light bodied silicone impression material compressed between the test denture base and master steel die to evaluate the total adaptation of the base to the die. The Kinesiograph, with the Dual Magnet system was used to evaluate maxillary denture stability when chewing a food substitute on the right and left side.



The in vitro results have shown the relined denture base to be more accurate than the heat cured denture base with teeth. The heat cured denture base without teeth fit as accurately as the relined denture base. The method of measurement was quite accurate and fulfilled the requirement of measuring the total adaptation of the denture base to the master die.

The in vivo results indicated a definite trend of improvement in maxillary denture stability when the relined base was compared to the heat cured resin base. These results challenge the idea that heat cured resin bases cannot be clinically improved upon.

The correlation of improved in vitro dimensional stability with in vivo stability of maxillary dentures under function is significant.

#### **THE EFFECTS OF VARYING VERTICAL ANGULATIONS ON THE DIMENSIONAL ACCURACY OF RADIOGRAPHIC IMAGES PRODUCED BY THE PARALLELING TECHNIQUE**

**D. Rodney Bassham**

The radiographic effect of altering the vertical angulations of the central ray and/or film plane were studied regarding linear change, dimensional distortion and diagnostic information. Three objects were used: (1) a steel wire, (2) an extracted maxillary molar, and (3) the left side of a human maxilla (dry specimen) with artificially produced osseous lesions in the periapical area and the central portion of the interdental crest. Four combinations of vertical angulations that might be used when altering the paralleling technique were produced and controlled by a special device (angulator) which permitted changes in the central ray and film plane in 5° increments up to 25°. A total of 163 radiographs were made and measurements of image variations were made to the nearest 0.1 mm. Analysis of the data resulted in suggestions for the dental radiographer who finds it necessary to compromise the principles of the paralleling technique:

1. If the film plane must be changed, the central ray should be maintained perpendicular to the object.
2. The central ray should be maintained at right angles to the film with the vertical angulations to the object not to exceed 20°.
3. When the object and film are parallel, the vertical angulation of the central ray should not exceed 15°.

#### **A CLINICAL STUDY OF TWO RESTORATIVE MATERIALS USED IN THE NON-OPERATIVE TREATMENT OF THE CERVICAL WEAR LESION**

**Luis F. Camara**

Two restorative materials were evaluated clinically for use in the non-operative treatment of the

cervical wear lesion: Cervident, a composite resin system and ASPA, a glass-ionomer cement.

Fifty-four restorations were placed in 13 patients. No cavity preparation was made. The U.S. Public Health Service criteria were used to evaluate the restoration. Two independent examiners performed the evaluation.

At the baseline evaluation (within one month after insertion) one of the ASPA restorations had been lost. After three months another had been replaced because of sensitivity. At baseline examination two of the Cervident restorations had to be replaced because of sensitivity, and at the 3 month evaluation two others had been lost.

There was some difference between examiners with respect to evaluation of color match but this difference was not statistically significant. However, there was a statistically significant difference in color match between materials at both evaluations. Cervident matched the tooth color better than ASPA, which is an opaque material.

Both materials scored very high and without differences, in regards to cavo-surface marginal discoloration, anatomic form, marginal adaptation and caries. However, it should be recognized that the restorations have been exposed to the oral environment for a rather short period of time. A longer term evaluation (two years), should provide more conclusive data.

A recommendation for adoption of this treatment in clinical practice must await these long term evaluations.

#### **ORTHODONTIC MANPOWER: DISTRIBUTION ACTIVITY AND NEED IN THE GREAT LAKES SOCIETY OF ORTHODONTISTS**

**Donald P. Darbro**

A manpower survey was conducted by the Great Lakes Society of Orthodontists in early 1977. Permission was obtained from the Society to use a portion of the survey for this thesis, namely: Years since graduation of the respondents, community size in which the respondents practiced, busyness of their practices, number of new patient starts in 1976, change in patient load, and the respondents' opinion of the need for more orthodontists.

Statistically, the data was compiled as to percent response by state and as a Region. Mean and standard deviation were obtained and the above factors were then correlated yielding the following findings:

The number of orthodontists has increased for the Great Lakes Region, but this increase is showing a leveling off. Except for the province of Ontario and the State of Indiana, the community size in which orthodontists practice is dispersed and not located in large communities. Most orthodontists are starting 90 or more patients per year. Most orthodontists report an increase in their practices, but feel they are seeing fewer patients than they could accommodate comfortably and are less busy than they would like. Few orthodontists in the



United States section of the Great Lakes Region feel increases in the numbers of orthodontists are warranted.

### **A COMPARISON OF THE PRIMARY CLOSURE AND INTERPROXIMAL DENUDATION FLAP PROCEDURES**

**Eiji Funakoshi**

This study compared the effectiveness of two surgical flap approaches commonly used for pocket elimination in periodontics. Thirty segments in 11 patients (seven males and four females ranging in age from 26 to 51 years) with moderate periodontitis of equal severity on each side of the dental arch were treated by flap surgery. All teeth were thoroughly root planed and patients achieved a plaque score of 10% or less at least one month prior to pocket elimination procedures. Primary closure was used in 15 segments, and interproximal denudation in the 15 contralateral segments. The techniques were evaluated from the standpoints of post-therapy gingival health, residual pocketing, loss of soft tissue attachment, amount of recession and alveolar bone loss. The follow-up evaluations were made three and six months later. There were no significant differences ( $p < 0.05$ ) between the two flap techniques in pocket reduction, postsurgical recession, changes in attachment level or loss of crestal bone height. Statistically significant improvement ( $p < 0.001$ ) in gingival health status occurred in both groups over the six-month postsurgical period. The reduction in pocket depth for both groups was significant at the 0.001 level at the three- and six-month postsurgical assessments.

### **A CLINICAL STUDY OF REST POSITION USING THE KINESIOGRAPH AND MYOMONITOR**

**James P. George**

This clinical study was designed to show rest position of occlusion and closure to maximum intercuspation before, during and after relaxation on 14 subjects with stable dentitions. The usefulness of measurement by the mandibular Kinesiograph and the effectiveness of the Myomonitor as a muscle relaxing tool was also noted.

This study was an observation of rest position of occlusion in all three dimensions. The vertical range could be influenced by light myopulse exercise to a significant degree. The anteroposterior and lateral movement of closure to maximum intercuspation was not significantly altered by relaxation. This was discussed in relation to the possible changes in the rotational axis during function. A lateral component of movement was found to be significantly present in asymptomatic subjects and was considered an important quantitative finding.

The effectiveness of the Myomonitor was shown. The light myo-pulse from the Myomonitor resulted in a greater interocclusal distance, which was

maintained to some degree. The mandibular Kinesiograph was found useful as a measuring instrument in studying the freely moving mandible. The Sweep mode for measurement of segmented movement in a time frame was invaluable in this study.

The sample may have been too small to make many definite statements; however, it is interesting to note the potential of both the Myomonitor and the Kinesiograph for research and clinical use, the physiologic need for flexibility of rest position of occlusion and the importance of measuring all three dimensions when examining rest position of occlusion.

### **THE INFLAMMATORY CELL RESPONSE AT THE TUMOR SITE IN ORAL CARCINOMA**

**Mark J. Kutcher**

The present study histologically examined the inflammatory infiltrate at the tumor site in squamous cell carcinoma of the oral cavity to determine whether a relationship existed between the amount of the inflammatory infiltrate and the grades of tumors. A total of 231 slides were used, divided by grades and location into lip, tongue and floor of the mouth carcinomas.

Findings showed that the degree of inflammatory cell response was significantly related to the grade of the tumor, the more highly differentiated cancers having the denser infiltrate.

When the types of cells predominating in the stroma were analyzed, lymphocytes were found to be the most common predominant cell type across all three grades and locations. A mixed population of lymphocytes and plasma cells was next in frequency, followed by plasma cell predominance. Eosinophils and PMNs were observed occasionally. There was no significant relationship between the types of cells and the grade of tumor.

The degree of individual cell keratinization was significantly related to the amount of inflammatory infiltrate and to the grade of the tumor. No consistent relationship was found between the presence of plasma cells in a lesion and the degree of keratinization.

The findings showed that better differentiated tumors had a more intense inflammatory response at the tumor site and supports the concept that an intense cellular reaction at the tumor site may be indicative of a better prognosis.

### **WEAR TESTING OF HUMAN TOOTH ENAMEL VERSUS DIFFERENT TYPES OF DENTAL PORCELAIN OF VARYING SURFACE FINISH**

**Martin F. Land**

This investigation evaluated the reproducibility of a method to test the wear characteristics of opaque, dentin and enamel porcelain, and human tooth enamel.



Opaque, dentin and enamel porcelain specimens of different surface finishes produced by 240, 400, and 600 grit silicon carbide paper, both glazed and not glazed, were worn against tooth enamel. The enamel specimens consisted of intact lingual cusps of human upper bicuspids.

The sample size per group was 10. The type of motion was circular ( $V = 6.3$  cm/sec.), resulting in a multiple pass sliding over a total distance of an average of 251 meters. A static load of one kilogram was applied, and water was used as a lubricant. The results, expressed in volume loss, were standardized mathematically.

Tooth enamel wear was not affected significantly by the type of porcelain or its surface finish. Large variation in tooth enamel wear was found, which in part probably resulted from the measuring method.

Opaque porcelain wore significantly less (.05) than all enamel porcelain groups. At higher confidence levels there were still some significant differences between individual groups.

On the basis of these findings, it appears likely that opaque porcelain would wear less when opposing human tooth enamel than dentin porcelain would, which in turn would wear less than enamel porcelain.

Although no dependence on porcelain surface finish could be demonstrated, a possible correlation between it and tooth enamel wear should be investigated further. Also, increased loading should be attempted to evaluate material response.

#### **A COMPARATIVE STUDY OF GINGIVAL HEALING USING A FIRM VERSUS SOFT PERIODONTAL DRESSING**

**J. G. Larson**

The purpose of this study was to compare the postsurgical healing of the periodontal tissues when dressings of a soft rubbery consistency versus a rigid consistency were used to cover periodontal flaps after surgery. Nine patients who exhibited a total of 11 segments of equal severity of periodontal pocketing and bone loss bilaterally in the same arch were selected. A total of 80 teeth were included in the study.

Following initial therapy these segments were treated bilaterally with a mucoperiosteal flap procedure which included thorough curettage of the granulomatous tissue. Adhesive foil was applied over the sutures and the tissues involved surgically. Firm or soft periodontal dressings were then applied to the appropriate segments. Measurements were taken of the pocketing before and after surgery using a special fabricated cast aluminum stent and a calibrated periodontal probe. Other measurements included the Gingival Index of Loe and Silness (GI), the Modified Index of Green and Vermillion (M-OHI), and the O'Leary Plaque Control Record (PCR).

Using the Student *t* Test, it was found that there was no significant difference presurgically between the two segments of the same arch of each patient

in terms of pocketing. Similarly there was no significant postsurgical difference in pocketing between the two segments of the same arch having the firm and soft periodontal dressing. Using the Student's *t* Test, no significant differences could be found between the firm and soft dressing sites when pocket depths, recession values, and bone loss were compared.

#### **DIMENSIONAL ACCURACY OF THREE CONSECUTIVELY POURED STONE DIES USING A SINGLE ELASTOMERIC IMPRESSION**

**Alfredo A. Locht**

The dimensional accuracy of consecutively poured stone dies, three from each elastomeric impression, were compared with one another and with a master tapered full crown preparation with a shoulder. Nine impressions and therefore 27 stone dies were made from each impression material.

The impression materials used were: (1) a lead peroxide cured polysulfide polymer, (2) a condensation polymerizing silicone, (3) a polyether, and (4) an addition polymerizing silicone. These were cured for 10 minutes at  $36 \pm 1^\circ\text{C}$ . A type IV gypsum was poured into the impressions at a temperature of  $24 \pm 2^\circ\text{C}$  and at time intervals of five, 40 and 80 minutes, measured from separation of impression and master die. The stone dies were measured at  $24 \pm 2^\circ\text{C}$  with a slide micrometer microscope after standing for not less than 24 hours. Occlusal and cervical diameters and height of the 108 dies in micrometers were converted to percent deviation from the master die.

None of the impression materials yielded stone dies that had mean values for the three dimensions (occlusal, cervical, and height) which were statistically the same as the equivalent dimensions of the master. Only the cervical diameters of the three groups of dies from the addition polymerized silicone and the heights of the 40 minute and 80 minute polyether derived dies were statistically the same as those dimensions of the master die. The deviations from the master of stone die dimensions can be attributed to thermal and polymerization contraction of the impression material, modified by setting expansion of the dental stone and water sorption by the polyether.

Both impression material and pouring time influenced die dimensions for occlusal, cervical, and height at 40 and 80 minutes. No statistical differences were found among the dies poured at five minutes.

Dies from all impression materials except the polyether showed progressive loss in height as pouring time was extended. Second and third pour dies from polyether showed an increase rather than a decrease in height when compared to the master. This phenomenon, which can be attributed to the absorption of water from the setting stone, caused the 40 minute polyether die group to be the most accurate of the 12 groups.



The addition polymerizing silicone had the greatest dimensional stability of any of the four impression materials, but because of the technique and sequence of use of the three consecutively poured full crown dies and general handling and physical properties, the polysulfid polymer could be considered the most desirable of the four impression materials.

#### **RESPONSE OF PERIAPICAL PATHOSIS TO ENDODONTIC TREATMENT IN MONKEYS**

**James Malooley, Jr.**

This study evaluated the response of induced periapical lesions to conventional endodontic therapy. Periapical lesions were induced in four monkeys by exposing the pulp of the experimental teeth to the oral flora for one week and then sealing the cavities with zinc phosphate cement to enhance the development of the lesions. Root canal therapy was then done according to conventional endodontic principles. Radiographs were taken at each stage of treatment and at sacrifice. Eight infected roots were not endodontically treated and served as controls. Procion Brilliant Red H-8BS was administered to verify hard tissue deposition. Semi-serial paraffin sections 7 microns thick were prepared. Alternate slides were stained with hematoxylin and eosin. Unstained sections were examined with fluorescent microscopy for Procion labelling. Selected slides were stained with the Brown and Brenn method for bacteria.

Response to treatment was found to be influenced by the apical extent of the root canal filling, the time lapse between treatment and sacrifice, and the presence of bacteria in the apical portion of the root canal. Optimum response of the periapical tissues occurred when the root canal fill was well-condensed and confined to the canal. In cases that were slightly overextended, healing ensued but was hindered.

The presence of residual bacteria in the apical portion of the canal appeared to preclude healing in 11 of 12 roots in which the bacteria were present. Thus, it is important to remove or destroy bacteria even from the inaccessible areas of the root canal.

There was little correlation between the radiographic and histologic diagnosis of the condition of the periapical tissues.

#### **MANDIBULAR MOVEMENT DURING SPEECH IN ANGLE'S CLASS II INDIVIDUALS**

**Assad F. Mora**

The purpose of this study was to measure the anterior and superior range of mandibular movement during speech in Angle's class II—division I and division II individuals and compare it to the same range in Angle's class I individuals.

Thirty-nine individuals were selected for this study, and the Mandibular Kinesiograph instrument (MKG) was used to measure the range of mandibular movement during speech.

Statistical analyses based on a division of the subjects according to Angle's classification did not show any statistically significant differences between the three groups.

When the distance between the anterior closest speaking point and the incisal straight protrusive path was compared for all subjects, the range was found to be from 0 to 0.3 mm except for two readings of 0.6 mm and 0.7 mm. Differences between the three groups were not statistically significant, indicating that mandibular movement during speech is related to the pattern of the incisal occlusion, regardless of Angle's classification.

This study also showed that the vertical distance between the most superior point of mandibular movement during speech and the maximum intercuspation position ranged from 0—5.7 mm in all subjects, while the anterior translation of the mandible ranged from 0.9—4.7 mm, except for two cases of 6.5 and 7.0 mm anterior to the voluntary maximum retrusion position.

Skeletal pattern classification did not exert a statistically significant influence on the pattern of mandibular movement during speech, but the results indicate a tendency for more anterior translation associated with the increasing convexity of skeletal profile.

#### **EFFECT OF TONGUE SUPPORT AND AN ADHESIVE ON DENTURE STABILITY AND RETENTION**

**Richard J. Persiani**

The purpose of this study was to determine the effectiveness of the tongue and a denture adhesive in improving the retention and stability of well-fitting dentures in 20 patients selected on the basis of a subjective and objective clinical examination. Clinical effectiveness of the tongue and denture adhesive was evaluated with the aid of the Kinesiograph.

The objective evaluation method for determining tongue support in denture patients was found to be accurate and reliable in this test population. Clinically, neither the tongue nor the denture adhesive had any significant effect upon retention and stability in a well-fitting denture.

The data suggest that the tongue need not be considered a critical factor in evaluating a well-fitting denture for stability and retention. A denture adhesive does not significantly affect a well-fitting denture; however, in some instances it may be of benefit to certain patients.

#### **THE MARGINAL REPRODUCTION OF TWO ELASTOMERIC IMPRESSION MATERIALS**

**Stephen F. Rosenstiel**

This study compared the ability of a polysulfide polymer and a polyether impression material to reproduce the critical marginal area of a full



crown preparation. A master die assembly was constructed to approximate a full crown preparation with a subgingival margin. The area apical to the margin was undercut in respect to the path of withdrawal.

Stone dies poured into impressions of the master assembly were analysed as to their accuracy. The width of the shoulder was measured with a travelling microscope and the cavosurface line angle was derived from photographic prints.

Differing treatments were undertaken as to the time the impression was stored before pouring, multiple pours from the same impression, the curing time of the impression and the effect of removal of the stone die from the impression.

The data were analysed with a two-way analysis of variance followed by Duncan's multiple range test.

The results showed that stone dies from the polyether impression always had a shoulder wider than, and a cavosurface angle greater than the master die. Polysulphide impressions produced stone dies with a shoulder closer to or narrower than, and a cavosurface angle closer to or less than the master die.

The study did not confirm studies that showed that dies from polyether impressions were more accurate than those from polysulphide polymers.

#### **A STUDY OF THE EFFECTIVENESS OF TOPICAL FLUORIDE TREATMENT FOLLOWING THE REMOVAL OF DIRECT BONDED BRACKETS**

**Steven T. Short**

In this investigation an attempt was made to determine what effect direct bonded attachments have on the post-treatment uptake of topically applied fluoride. Thirty-two freshly extracted mandibular central and lateral incisors were used. The teeth were cleaned, labeled and an adhesive tape window applied to the crown exposing a circular area one quarter inch in diameter on the labial surface. An initial enamel biopsy was performed to determine the fluoride content of the labial surface. Fifty percent phosphoric acid was applied for one minute to condition the teeth for bonding. A polycarbonate orthodontic bracket was then bonded with Sevriton resin and each tooth was stored for one week in water. After storage, the brackets were then removed and residual resin was cleaned off with a dental scaler. Half of the teeth were pumiced with flour of pumice for ten seconds. The teeth were observed microscopically to determine the condition of the labial surface. A 2% solution of sodium fluoride was applied to the teeth for eight minutes and the samples were then individually stored in water for one week. An enamel biopsy was performed and analyzed for fluoride, calcium, and phosphorus. A great deal of fluoride was taken up by the enamel surface on all the specimens. It was found that pumicing the teeth prior to the application of topical fluoride results in

a significantly greater uptake of fluoride by the enamel surface. The results of this investigation indicate that a pumice wash following bracket removal facilitates a greater and more uniform uptake of topically applied fluoride on the surface of the teeth.

#### **RADIOGRAPHIC MANIFESTATIONS OF RENAL OSTEODYSTROPHY IN THE JAWS OF PATIENTS WITH END STAGE RENAL DISEASE**

**Kenneth J. Spolnik**

This radiographic investigation was undertaken to determine the incidence of jaw abnormalities in 30 patients with end stage renal disease who were undergoing chronic hemodialysis. Each patient received a dental and skeletal radiographic examination, oral soft tissue examination, and comprehensive laboratory tests. The 18 control patients received the dental radiographic examination and SMA-6 and SMA-12 laboratory tests.

The dental and skeletal radiographs were graded by criteria established for patients with renal osteodystrophy. The dental radiographic scores did not correlate significantly with the skeletal radiographic scores, mean laboratory values, duration of renal disease or duration of dialysis. However, the sample size was probably too small to draw definitive conclusions from these linear regression analyses.

Twenty-two of the 30 patients showed dental radiographic evidence of bone disease, and three of these had disease only in the jaws. Decreased jaw density was the most frequent jaw abnormality (21/30) followed by absence of lamina dura (9/30), increased jaw density (6/30), brown tumors and loss of cortical bone delineating the mandibular canal (3/30), loss of cortical bone surrounding the maxillary sinus (2/30), and oral soft tissue calcifications (1/30). Twenty-three of the 30 patients showed skeletal radiographic evidence of bone disease, and four of these had disease only in the extragnathic skeleton. The hand was the most frequent site (23/30) followed by the shoulders (11/30), and the pelvis (4/30).

The dialysis group displayed dental radiographic abnormalities that were significantly different from those of the control group. On the basis of these findings, it appears that dental and hand radiographs would be the safest and most efficient means of screening patients for renal osteodystrophy.

#### **THE ATTITUDES OF DENTISTS IN INDIANA TOWARD THE TREATMENT OF PATIENTS WITH CEREBRAL PALSY**

**Thomas J. Wickliffe**

The attitudes of Indiana dentists toward the treatment of cerebral palsied patients were investi-

*(Continued on page 108)*



# Alumni Notes

*Mrs. Cleona Harvey  
Mrs. Ruth Chilton*

We have been so impressed by the continuing newsletter that Dr. Jack Carr runs for his Class of 1939 that we thought we would run it at the head of this column—perhaps this will encourage members of other classes to take steps to keep their classes similarly informed.

## **Class of '39 Newsletter—August 1978**

"Dear Classmates:

"We are fortunate that we have a knowledgeable member and also one with a son in the Alumni Office in Bloomington. Al Yoder is our man, and his son Pete can help us with the plans for our 40th. Al's opinion is that the best accommodations in Bloomington are the Union Building, Ramada, and Howard Johnson's as far as rooms are concerned. Frank Jones, the Alumni Secretary, has suggested the Federal Room at the Union Building as a great place for dinner and would keep the party in a central location. The Alumni board has had great dinners in the past in the Federal Room. The Fireside has good food but the rooms aren't so great.

"At this time, I think that a committee of Yoder, Boren, Pell, Young and Vendes should be the ones to decide where and when. Anyone else is welcome to send suggestions.

"Pell has offered to be the host at the Fall Conference for a meeting to finalize our reunion plans. We are trying to get a large room in the Union Building for this. The Fall

Conference is September 28-30. Plan on this date and help us. Get your reservations early.

"I attended the services for Jerry Timmons at Valpo last Monday. Dr. McDonald, Jerry Leer, and I drove up from Indianapolis. Dr. Hine and many other dental friends were there. Past Executive Director Harold Hillenbrand and Executive Secretary Gordon Watson of the ADA were present, as well as many other American Dental Association friends. Jerry's sister appreciated the floral piece we sent. It was very appropriate, and I have a photograph of it to show to you all.

"Received a note from Manny Green thanking us for our contribution to the Heart Fund.

"John Pell sent a large check for our class fund, and also sent some information about his family. Their youngest is in his second year at Law School at IUPUI; son Don, one of the twins, is moving his medical practice to St. Pete, Florida. Son John is still in Hollywood, Florida. Sounds like John and Ev have a built-in winter vacation.

"Just received a bit of news about Harry Whetstone. He is going to retire from active practice as of August 1st. He is looking forward to freedom from confinement.

"Sarah and I saw Wilbur and Margo Boren recently. We were on a trip to the Angel Mound site near Evansville. I'm working on a project at the Dental School photographing and X-raying the teeth of the Indians of this prehistoric period.



"Margo and Wilbur surely kniw a great steak house that we enjoyed tremendously. They are great hosts. Now come to Indianapolis soon!

"Walt Vendes and I are trying to get a list of home addresses and the names of the wives of all of our class. We have the names and addresses of many, but not all of our class. The general idea is that the wives can help us with information and suggestions better than you guys that forget to take the Newsletters home.

"So, enclosed is a return postcard for those that we don't have on record. We will have a list completed and sent to all as soon as you get the information to us.

"Please keep us informed.  
Jack."

As if that contribution were not enough, Dr. Carr also has kept his classmates informed with a communication in June about the May meeting. Our readers will find that with the Class of 1939 news notes.

And now for the

#### **Class of 1907**

Deceased: Dr. George Vernon Underwood, Indianapolis, Ind. 11-11-77

#### **Class of 1912**

Dr. S. Edith Davis  
700 N. Alabama Street

Indianapolis, Indiana 46204  
retired from the practice of dentistry last December after 65 years of service. She first started her practice in Jamestown, working five days a week 8 a.m. to 5 p.m. and often had to hire a horse and buggy from the livery to serve patients too ill to come in to her office. Since there was no

electricity, she ran the drill with a foot pedal. After three years in general practice she studied periodontics and in 1915 opened her office for the practice of periodontics in Indianapolis. She taught at Indiana University Dental Clinic for 25 years, where she was loved and respected by students and faculty. She is now enjoying her retirement at the above address.

#### **Class of 1914**

Deceased: Dr. Troy Leo Babcock, Culver, Indiana, 11-27-77.

#### **Class of 1915**

Deceased: Dr. Earle W. Reynolds, Grand Rapids, Mich., August 1977.

#### **Class of 1919**

Deceased: Dr. Jean S. Reese, Indianapolis, Indiana, 11-22-77.

#### **Class of 1921**

Deceased: Dr. Forrest C. Hammond, Farina, Illinois, 4-20-78.

#### **Class of 1922**

Deceased Dr. Rudolph E. Martin, Pe-kin, Illinois, 2-24-78.

#### **Class of 1923**

Deceased: Dr. Roosevelt T. Bills, Griffith, Indiana, 10-24-77.

#### **Class of 1924**

We have received the following changes of address:



Dr. Lewis H. Anderson  
2346 Spruce Street  
Terre Haute, Indiana 47807

Dr. Frederick J. Decker  
49 Ivy Circle  
Norristown, Pennsylvania 19401

Dr. Paul R. Detamore  
516 Sherland Building  
South Bend, Indiana 46624

Dr. Gale Driver  
1610 S. W. Kendall  
Roseburg, Oregon 97470

Dr. Forrest Paul  
9090 Pickwick Drive  
Indianapolis, Indiana 46260

Dr. Charles M. Rist  
725 Royal Palm Blvd.  
Vero Beach, Florida 32960

Dr. Russell L. Sparks  
4171 Waterway Drive  
Lake Worth, Florida 33460

#### **Class of 1926**

We received the following changes of address:

Dr. Gorman F. McKean  
4253 Bay Beach Lane S.W.  
Sea Grape Apt. G-3  
Fort Myers Beach, Florida 33931

#### **Class of 1927**

Deceased: Dr. Joe E. Beardsley,  
Cayuga, Indiana, 2-9-78

#### **Class of 1928**

Deceased: Dr. George S. Bogardus,  
Seymour, Indiana 3-29-78  
Deceased: Dr. Jack E. Cheney,  
Springfield, Illinois, 12-6-77  
Deceased: Dr. Dean Ogden Taggart,  
Sarasota, Florida, 11-15-77

WE have received the following changes of address:

Dr. Seth W. Shields  
204 Lee Blvd.  
Seymour, Indiana 47274

Dr. William H. Smith  
190 S. E. Third Street  
Linton, Indiana 47441

Dr. Harold H. Stahlhut  
16424 Island Road  
Coldwater, Michigan 49036

Dr. Roger L. Trueblood  
1307 Manor Drive  
Marion, Indiana 46952

Dr. Emmett Tully  
4050 Spanish Trail  
Fort Wayne, Indiana 46805

#### **Class of 1929**

We received a change of address for

Dr. James J. Crossen  
2060 Cold Spring Road  
Indianapolis, Indiana 46222

#### **Class of 1930**

We received a change of address for:

Dr. Floyd E. Lytle  
2399 Gulf Shore Blvd. North  
Naples, Florida 33940

We also received notice of the death of:

Dr. Sylvester Albert Schmid, Cincinnati, Ohio, 1-5-78.

#### **Class of 1931**

I received a card in August from

Dr. and Mrs. Marvin Cochrane  
310 N. 40th Ave.  
Yakima, Washington 98902



—and it is really something when someone on vacation takes time to write a card! It was so thoughtful of them to remember me from Chelan, Washington! Thanks a bunch and do write again! —C.H.

Change of address:

Dr. Willard P. Stoelting  
P.O. Box 62  
Sandborn, Indiana 47578

### **Class of 1932**

Changes of address for:

Dr. Raymond T. Allison  
430 Hedgewood Drive  
Gallipolis, Ohio 45631

Dr. Robert Ivan Durham  
17439 99th Drive  
Sun City, Arizona 85373

We have also been informed that at the last State Dental Meeting in May in Indianapolis, the following members of the class had lunch together: Harry Glass and wife, Glenn Lake and wife, Adalbert Magyar and wife, William Milligan and wife, Kenneth Smithson and wife and Meredith Tom. They sent a get well card to Seiya Nakamori in Honolulu, Hawaii, who later responded and said he would make a real effort to be present at the 47th Class Reunion in Indianapolis in May, 1979. Other news gathered was that Kingston Raycraft went through a complete physical at a hospital near Chicago with good results. Harold Asher wrote that everything is o.k. with him at Sun City, Arizona; Evan Steele, also of Sun City, had undergone surgery—is fine now. Adalbert Magyar is president of the American-Hungarian Stamp Club in Cleveland and he is very active.

### **Class of 1934**

A change of address for:

Dr. Zelix S. Messinger  
21 N. W. 203rd Terrace  
Building B #9  
Miami, Florida 33169

Deceased:

Dr. Harry C. Steinsberger, Cannelton, Indiana, 2-16-78.

### **Class of 1935**

Deceased: Dr. Elmer V. Adams, Greenfield, Indiana, 10-5-77

We received a change of address for the following:

Dr. Lawrence E. Morris  
4048 N. Pennsylvania  
Indianapolis, Indiana 46205

Dr. Leo J. Pancoska  
561 2nd Street  
Covina, California 91722

Dr. LeRoy F. Sacks  
7365 Lakeside Drive  
Indianapolis, Indiana 46278

Dr. William Ed. Smith  
1426 East Main Street  
Richmond, Indiana 47374

Deceased: Dr. Robert W. Turner, Columbus, Indiana 1-10-78.

### **Class of 1936**

We were informed by Almeda Doty, RDH (1968) that her father, Dr. William L. Allen (1936) had died May 23, 1978. She reported that he was devoted to dentistry and his hometown of Xenia, Ohio, where he had a very comfortable practice for many years, and also that Indiana University had meant a great deal to her father and he passed that feeling on to his daughter!



### **Class of 1937**

Change of address for:

Dr. Loras W. Gardner  
4812 Hidden Harbour Blvd.  
Ft. Meyers, Florida 33901

Deceased: Dr. Marvin Ellis Judd,  
Scottsburg, Indiana 2-24-78.

### **Class of 1939**

Here is another example of Dr. Carr's newsletters to his classmates:

#### **CLASS OF '39 NEWSLETTER**

WE had another reunion during the IDA May Meeting. The group was not large; however, it was a great success because at long last Phil Fichman attended. He didn't do his ice skating act because there wasn't a slick floor available. (not because he is a bit older) Eddie Young missed our meeting for the first time that anyone could remember. He was working on an addition to his house when he fell from a scaffold and broke some ribs and bruised a kidney. We heard that he was doing fine but couldn't travel to Indy. John Pell was at the meeting but didn't get up to our room. Vendes and Mary Ruthyne were busy taking care of their baby grandchild who was visiting them. They sure get started early in attending our reunions. Yoders were present as usual as were the Borens, Mintzs and Whetstones. Others in attendance were: Dyer, Tade and Carr. We had some guests including Dean Ralph McDonald, Dr. Pierson from Ohio (also a '39 graduate) and other friends.

We discussed plans for our 40th reunion and most were in favor of having the big hash at Bloomington a year from this fall.

For those who can't plan the fall meeting we still can have a dinner reunion in Indianapolis in May 1979.

Of course the faithful will have a meeting this fall in Bloomington at the Alumni Conference.

Since we have finally gotten Fichman to respond we can now start to work on those that we haven't heard from since 1939. Groher, Segal, Jordan, Bedk, Greg and a few others. Let's hear from you guys.

Sarah called "Manny" Green the last time she was in Dearborn. He is fine and Dorothy is improving. Manny wrote a long letter after Sarah returned in which he reported that he is retiring as of July 31st. His vote on the reunion is for Indianapolis since he was in Bloomington only at graduation time.

Rutledge and his son are in practice together in a new office building. He suggested that a class of '39 trip be arranged. Much like the one to Europe four years ago.

A number of the class have contributed to the fund for our meetings, letters, pictures, etc. Donors so far are Prentice, Whetstone, Boren, Vendes, Yoder and Mintz.

I'm sorry to report that Buz and Rosemary Prentice have been divorced. The last report on Jerry Timmons is that he is still alert and enjoys hearing from all of our class.

Harry Healey has moved to Florida and Drex Boyd is still active in the School.

Hope to see lots of you at the Fall Conference and bring some suggestions for our 40th.

Jack



We also have the following information from the Class of '39:

Change of address for:

Dr. Philip J. Fichman  
6404 Hoover Road, #C  
Indianapolis, Indiana 46260

Also for:

Dr. Guy B. Rutledge  
2499 Margaret Avenue  
Terre Haute, Indiana 47803

Deceased: Dr. Gerald Nicholas  
Wagner, LaPorte, Indiana, March  
1978.

#### **Class of 1942**

We received a change of address for

Dr. Wesley C. Good  
5317 South Monticello Court  
South Bend, Indiana 46614

#### **Class of 1944**

We received a change of address for:

Dr. Ernest George Regis  
P. O. Box 1988  
Delray Beach, Florida 33444

#### **Class of 1945**

A change of address for:

Dr. Stanley Schwartz  
163 Old Farm Road  
Pleasantville, New York 10570

#### **Class of 1947**

A change for:

Dr. John S. Routes  
915 Olean Blvd.  
Pt. Charlotte, Florida 33952

#### **Class of 1948**

Dr. Robert H. Marlette  
Kirk US Army Health Clinic  
US Army Medical Department Activity  
Fort George Meade, Maryland 20755

writes as follows:

*A letter from the Class of 1948 seldom appears in the Alumni Bulletin; however, we were a small class, twenty-two to be exact, and the last of the "wartime" groups which finished in three and a half years. In addition, I suspect many of my classmates are busy sending income tax statements to the government and trying to enjoy the good life with what is left over!*

*Our next reunion in September will be our 30th anniversary and I am sure all of us are looking forward to renewing old friendships. This also is a landmark for Margaret and me as we will finish 30 years of active duty in the Army Dental Corps. We retire in September and our home will be in Colorado Springs, Colorado. One reason for this letter is to reinforce to any classmates or alumni that our open door policy will always be in effect. Our military career has been most satisfying and we regret the passing of time has curtailed this way of life. We were able to educate our children, enjoy world-wide travel and perhaps contributed a small part to the military community and the Corps which provided the opportunity for me to practice my specialty of Oral Surgery. Change is inevitable and the Dental Corps today is entirely different than that which I entered in 1948. I have reservations concerning the direction the Corps is now taking, but perhaps this is the reason it is time to move over and make room for a new generation. It is public knowledge that military benefits, tangible and intangible, have been eroded over the years and I no longer advocate a military career unless the young dentist and his wife are fully aware of the current and potential changes which may occur.*

*The Army sent me to graduate school and allowed me to practice my specialty with minimal pressure or restrictions. Training in the*



*Army in one of the best in the country, but will become more competitive in the future and more restrictive in size.*

*On our way through Indiana from our current station at Aberdeen, Md., I will perhaps have the opportunity to pay my respects to Dean McDonald and visit old friends in the Indianapolis area. We are looking forward to an active retirement and hope classmates and friends can visit the ski capital, USA, and drop in on the Marlettes in Colorado Springs.*

Dr. Marlette: I think I worked on you mentally—ESP or something. When Dr. Heath did my dental work in March and early part of April, we were discussing dentistry and careers in the Service and I told him I used to hear from you but hadn't in a long time and wondered what had become of you. Dr. Heath graduated in '53 so you just missed knowing each other. He seemed to remember your name and it is possible you came back and took your graduate work at IU while he was there. Anyway, it is really good to hear from you and I'm sure your classmates will be glad someone in the Class of '48 is still able to write! And you do write well, as you always have. Please write again so next time we can give your address in Colorado Springs. You have chosen a beautiful place to live. I visited there in 1935—I imagine it has changed a bit—bigger and more beautiful! But as for me—I like California! To each his own, I guess. Thanks again for your interesting and informative letter. . . .C.H.

#### **Class of 1949**

Deceased: Dr. Walter J. Dean, Indianapolis, Indiana 10-28-77.

#### **Class of 1950**

We received a change of address for:

Dr. Ralph E. Laybold  
Route #1, Box 430  
Riverview, Florida 33569

#### **Class of 1951**

A change of address for:

Dr. Bruce C. Cook  
31 Indi-Illi Park  
Hammond, Indiana 46324

#### **Class of 1952**

Changes of address for:

Dr. William C. Baker  
3266 N. Meridian Street #409  
Indianapolis, Indiana 46208

and

Dr. Odus L. Baldrige  
470 Ashley  
Grand Blanc, Michigan 48439

#### **Class of 1953**

We received a change of address for:

Dr. William P. Kelly  
50 Rodgers Road  
Anapolis, Maryland 21402

Deceased: Dr. Benito M. Ruiz-Amengual, Vega Baja, Puerto Rico, 11-1-77.

#### **Class of 1954**

Change of address:

Dr. Glenn S. Gardiner  
Route #6, 11515 Wexsford Drive  
Fort Wayne, Indiana 46804

Dr. Irma Rumbaugh  
611 Carroll Road  
Fort Wayne, Indiana 46808

#### **Class of 1957**

Change of address:

Dr. Lloyd A. Delman  
7020 North Delaware Street  
Indianapolis, Indiana 46220



### **Class of 1958**

Changes of address:

Dr. Walter C. DeWitt  
913 Arden Way  
Signal Mountain, Tennessee 37377

Dr. Robert L. Frazier  
1751 Hospital Road  
Franklin, Indiana 46131

Dr. Jaime Perez Rosario  
P. O. Box 4238  
Vega Baja, Puerto Rico 00763

### **Class of 1959**

I received a phone call from Dr. Joe Hilton from Fort Lauderdale, Florida. He had been wanting to write me for a long time, and tell me he had become a Christian 10 years ago and how his life had been changed dramatically. He is so happy with this new relationship with God and Christ. Isn't that just too wonderful for words? From Fort Lauderdale, Florida to Escondido, California is a good many miles but it was as if he were right here and I thanked God that there are so many young people who are finding themselves an in so doing find Christ and immediately want to tell others. It has been thus since the beginning. I think we are living in wonderful times. I have never seen such interest in religion, not just "go to church on Sunday religion" but religion that activates, motivates, and finds a way to tell others—a sharing like that had by the early Christians. I rejoiced with Joe and am so grateful he wanted to share this with me. As I look back, it seems so many things happened about the time of his call that strengthened my faith—perhaps to help me accept God's will in the months to come. Dr. Hilton, please call again some time! "Ma" Bell sure helps us, in so many ways!—C.H.

WE received a change of address for:

Col. Donald R. Nelson, D.C., D.D.S.  
13511 Norland  
San Antonio, Texas 78232

### **Class of 1961**

Change of address for:

Dr. Burthal Cleveland, Jr.  
P. O. Box 129  
Cicero, Indiana 46034

and for

Dr. Kesler E. Truelove, Jr.  
50 West 181st Street  
Lowell, Indiana 46356

### **Class of 1962**

We received the following changes of address:

Dr. Michael J. Gross  
25 Evergreen Row  
Armonk, New York 10504

Dr. Michael D. Hopping  
3863 Peachtree Road, N. E.  
Atlanta, Georgia 30319

Dr. Thomas W. Ullrich  
1845 Schwier Court South  
Indianapolis, Indiana 46229

### **Class of 1963**

Change of address for:

Dr. Robin A. Roberts  
4725 East Cranbrook Road  
Bloomington, Indiana 47401

### **Class of 1964**

Change of address for:

Dr. Ronald M. Patterson  
2314 East Bishop Drive  
Tempe, Arizona 85282



### **Class of 1965**

Changes of address for the following:

Dr. Roger A. Carroll  
3406 Ormond Ave. (Office)  
Cincinnati, Ohio 45220

Dr. Arthur Howell  
8130 North Beach Drive  
Milwaukee, Wisconsin 53217

Dr. Joel Knapp  
623 East Main  
Hendersonville, Tennessee 37073

Dr. Herman A. Blair (M.S.D.)  
2041 Lakeside Drive  
Lexington, Kentucky 40502

Dr. Cletis R. Foster  
2118 Pinehurst Drive  
Carmel, Indiana 46032

Dr. William O. Schelm  
8725 Maraville Drive  
Fort Wayne, Indiana 46815

Dr. Nicholas H. Watson  
5321 N. Pennsylvania Street  
Indianapolis, Indiana 46220

### **Class of 1966**

Changes of address for:

Dr. John T. Boyle  
P.O. Box 815  
Anderson, Indiana 46015

Dr. Sarad R. Desai (M.S.D.)  
14 Kessler Blvd., West Drive  
Indianapolis, Indiana 46208

### **Class of 1967**

We received changes of address for:

Dr. Ronald H. Jarvis (M.S.D.)  
85 Greenaway Road  
Buffalo, New York 14226

Dr. Ronald W. Krantz  
2886 Victoria  
Cincinnati, Ohio 45208

Dr. Donald L. Lintzenich  
558 Devil's Lane  
Naples, Florida 33940

Dr. Lowell D. McClanahan  
1324 Gump Road  
Fort Wayne, Indiana 46825

### **Class of 1968**

And changes of address for:

### **Class of 1969**

We received the following changes of address:

Dr. M. Thomas Barco (M.S.D. 1978)  
5401 Masada Drive  
Virginia Beach, Virginia 23462

Dr. Gary L. Dickinson  
2107 "F" Street  
Iowa City, Iowa 52240

Dr. Roy V. Green  
1956 Hill Ave.  
Fort Myers, Florida 33901

Dr. Carl F. Peek  
839 Cedarwood  
Indianapolis, Indiana 46224

Dr. Marc S. Smith  
7193 West Gifford Road  
Bloomington, Indiana 47401

### **Class of 1970**

Received a change of address for:

Dr. Ronald L. Armstrong (M.S.D. 1976)  
5401 Millcreek Road  
Kettering, Ohio 45440

On April 18, 1978, I received a huge bouquet of beautiful red roses from Dr. Gerald Funderburk of Rising Sun, Indiana. I called him and thanked him and it



was all I could do to keep from crying for joy. His card read "I love you—I will never forget you." He had just read Alumni Notes and wanted to say "hello" and said he didn't like to write letters!

Thank you again, Gerald. Those flowers talked to me for days. A friend brought her camera over and took a picture of them and it turned out quite well, so your letter by flowers will long be remembered!—C.H.

WE received the following changes of address:

Dr. Ronald J. Henderson  
9 Beech Road  
Dover, New Hampshire 03820

Dr. Gary Pippenger  
63691 Miami Road  
South Bend, Indiana 46614

Dr. James D. Reed, Jr.  
4709 Stone Hill Drive  
Raleigh, North Carolina 27609

#### **Class of 1971**

We received changes of address for:

Dr. David B. Kennedy (M.S.D.)  
708-2525 Willow Street Vancouver,  
British Columbia V5Z 3N8 CANADA

Dr. David E. Lawler  
5111 East Heritage Woods Road  
Bloomington, Indiana 47401

Dr. Thomas A. Layman  
1166 Garden Drive West  
Terre Haute, Indiana 47802

I received a letter from:

Dr. Dominic Lu  
Northwestern Medical Center  
New Tripoli, Pennsylvania 18066

in May, reporting that he is setting up an oral surgery residency program to be fully accredited by the American Board of Oral Surgery; the initial cooperative program will be between the Medical

College in his hometown where he is on its faculty and Fairleigh Dickinson University Dental School in New Jersey, and he is planning to expand the program to other phases of dentistry in Taiwan. He hopes to get as much advice and assistance from experienced persons as possible. I told Dominic to write Dean McDonald, Dr. Hine and Dr. Wells and I was sure they would all help him and perhaps suggest other persons he should contact.

Dominic, I'm sorry I haven't written you but perhaps the phone call took care of it. I'll find it very hard to write letters. However, by the time this comes out I surely will have gotten a letter to you. I hope things are working out for you and I'm sure they will. Maybe I'll see you in October- I hope so!—C.H.

We recently received a change of address for:

Dr. Thomas Charles Miller  
Route #10, Box 47  
Cumming, Georgia 30130

Dr. Thomas R. Northcott  
504 North Jackson Street, Suite 103  
Tullahoma, Tennessee 37388

recently reported on his activities since graduation in 1971. From 1971 to 1973 he was with the U.S. Army Dental Corps in Fort McClellan, Ala.; 1973 to 1976 he was with Wishard Memorial Hospital in Indianapolis in an Oral Surgery Internship/Residency; in 1976-1978 private partnership practice of Oral Surgery in Salem, Indiana and in July of 1978 Dr. Northcott began his solo practice of Oral Surgery in Tullahoma, Tennessee. He writes,

*We have enjoyed restoring a 105-year-old house in Salem, but are now looking forward to starting a new practice in Tennessee. My wife Nancy is a fulltime housewife and mother handling our two boys and two girls ages 6, 5, 3% and 1%.*

*Received address changes for:*



*Dr. Philip C. Rake*  
4526 West 71st Street  
Indianapolis, Indiana 46268

*Dr. Michael J. Scheidt*  
121 Grove Park  
Fort Dix, New Jersey 08640

*Dr. John R. Sisk*  
1542 Sunset Drive  
New Albany, Indiana 47150

*Dr. Jon S. Wilkins (M.S.D. 1975)*  
2204 Merritt Park Drive  
Orlando, Florida 32803

### **Class of 1972**

Received address changes for:

Dr. Ronald K. Corley  
351 West Meadows Lake Lane  
LaPorte, Indiana 46350

Dr. Robert J. Jasinski  
143 North Court  
Crown Point, Indiana 46307

Dr. Thomas H. Walker  
122 Restin Road  
Greenwood, Indiana 46142

Dr. Laura Johnson Kilgore  
6038 Rosslyn Street  
Indianapolis, Indiana 46220

Dr. David LeRoy Pitts  
10041 46th Ave. N. E.  
Seattle, Washington 98125

Dr. Dennis R. Skirvin  
1932 Daisy Court  
Manhattan, Kansas 66502

### **Class of 1973**

We received address changes for:

Dr. Nolan W. Allen  
2226 East Druid Road  
Clearwater, Florida 33516

Dr. Charles S. Billings  
4295 North Forbes Drive  
Bloomington, Indiana 47401

Dr. Walter C. Brown II  
2803 Locust Court East  
Kokomo, Indiana 46901

Dr. Clarence R. McCurdy, Jr. (M.S.D.  
1973)  
248-B Minnehaha Avenue  
St. Paul, Minnesota 55111

Dr. David A. Ellmore  
1122 15th Street  
Bedford, Indiana 47421

Dr. Patrick J. Stetzel  
13 Bonny Shores Drive  
Lakeland, Florida 33801

### **Class of 1974**

Received address changes for:

Dr. Gary L. Ault  
2150 North Argyle Avenue  
Los Angeles, California 90068

Dr. Steven L. Bricker (M.S.D. 1976)  
15402 Bluffview  
San Antonio, Texas 78232

Dr. Steven L. Hatfield  
10080 Menaul Blvd., NE  
Albuquerque, New Mexico 87112

Dr. Kenneth U. Lau  
122 West State  
Pendleton, Indiana 46064

Dr. John B. Lehman, Jr. (M.S.D.  
1976)  
16999 Woodshire Court  
Granger, Indiana 46530

Dr. David K. Uelbelhack  
819 East Fourth St., Box 673  
Mt. Vernon, Indiana 47620

Dr. Stephen M. Zeck  
1338 Willow Court #5  
Schererville, Indiana 46385

### **Class of 1975**

We received changes of address for:



Dr. Daniel W. Fridh  
0101 West Curtis Drive  
LaPorte, Indiana 46350

Dr. Ted L. Huppert  
340 East Broadway  
Danville, Indiana 46122

Dr. Kenneth R. Hyde  
1903 Beech Street #313  
Valparaiso, Indiana 46383

Dr. Mark L. Johnson  
4801 North Brooke Drive  
Marion, Indiana 46952

Dr. Richard E. Jones (M.S.D. 1978)  
1308 Camellia  
Munster, Indiana 46321

Dr. Gerald E. Kerr  
1619 Osage Drive  
Kokomo, Indiana 46901

Dr. George E. Lanning  
505 Thornberry Drive  
Carmel, Indiana 46032

Dr. Michael P. Muller  
1026 Castlewood Drive  
New Albany, Indiana 47150

Dr. Carl W. Newton (M.S.D. 1977)  
3216 Acacia Drive  
Indianapolis, Indiana 46224

Dr. Marc M. Nussman  
181 Long Hill Road, Apt. 9-8  
Little Falls, New Jersey 07424

Dr. K. Douglas Schmidt  
5658-A N. Illinois  
Indianapolis, Indiana 46208

Capt. James L. Snyder, Jr.  
9400 Fredericksburg Road, #2801  
San Antonio, Texas 78240

Dr. Delynn W. Stults  
Route #1, Box 76 A, Roll Road  
Fountain City, Indiana 47341

Dr. Kenneth W. Volstad  
The Surf #703  
900 Ocean Drive  
Juno Beach, Florida 33408

Dr. Timothy J. Worley  
310 46 7910, USAR, DC  
6-8-C22, 2, Acy. of Health Science, U.  
S. Army  
Fort Sam Houston, Texas 78234

### Class of 1976

We received the following address changes:

Dr. Gary L. Beslauer  
8854 Lake Nora West Drive #C  
Indianapolis, Indiana 46240

Dr. James B. Carr  
5431 West Wind Lane #3A (home)  
Indianapolis, Indiana 46250

Dr. John T. Doyle  
3625 Palmer Court  
Clovis, New Mexico 88101

Dr. Gregory H. Johnson  
2907 Sharon Drive  
Kokomo, Indiana 46901

Dr. Terry A. McCooe  
3009-B John Adams Court  
Jacksonville, Florida 32221

Dr. Charles H. Miller, Jr.  
120 West Votaw  
Portland, Indiana 47371

Dr. Charles L. Nelson  
3255 Winfield  
Indianapolis, Indiana 46222

Dr. Philip L. Nicholson  
4420 Indianola #4  
Indianapolis, Indiana 46205

Dr. Michael A. Olivotto  
4225-B Airport Road  
Colorado Springs, Colorado 80910

In a note to Mrs. Sarah Manion at the Dental School, Dr. Olivotto wrote he had just returned from a tour in Korea and is currently stationed at Fort Carson, Colorado in Colorado Springs. He said it certainly was beautiful there.



Dr. William M. Record  
1111 Ferndale Street  
Plymouth, Indiana 46563

Dr. Neville W. Richter  
3728 77th Ave. S. E.  
Mercer Island, Washington 98040

Dr. Dirk A. Sterley  
15123 Goodtime Court  
Carmel, Indiana 46032

### Class of 1977

We have the following address changes:

Dr. Steven A. Budzik  
2001 N. Arbogast #1B  
Griffith, Indiana 46319

Mrs. Sarah Manion received a note from Mrs. Wesley Carroll with their new address:

Dr. Wesley Carroll  
4975 West 82nd Court  
Crown Point, Indiana 46307

and she reports, *Inquiries have been made as to our whereabouts. Well, here we are—back in Indiana. Hawaii was breathtaking but it's great to be home!*

Dr. Paul J. Conquest  
1701 Pine Knoll Drive  
Austin, Texas 78758

Dr. John F. Crisler  
P. O. Box 1285  
Navajo, New Mexico 87328

Dr. Donald G. Eklund  
303 Portland Ridge  
Norcross, Georgia 30071

Dr. Barry R. Fritsch  
4215 East 82nd Street, Suite A  
Racquet Square  
Indianapolis, Indiana

announced in May 1978 the opening of his office for the practice of general den-

tistry. He is currently also teaching Operative Dentistry at the School of Dentistry.

Dr. Michael D. Goodwin  
9616 Hampton Dr., #9  
Highland, Indiana 46322

Dr. James H. Hastings  
7229 West 79th Street  
Indianapolis, Indiana 46278

Dr. Robert E. Hindman  
2627 Cold Springs Manor Drive  
Indianapolis, Indiana 46222

Dr. Thomas J. Hoffman  
2315 Cambridge Blvd.  
Fort Wayne, Indiana 46808

Dr. Jane Ellen Kilgore  
320 N. Meridian Street, Suite 808  
Indianapolis, Indiana 46204

Dr. Charles Michael Knepper  
5206A Winterberry Circle  
Indianapolis, Indiana 46254

Dr. James J. Kloer  
P. O. Box 724  
Dana, Indiana 47847

An interesting article in the Indianapolis News during race time last May concerned grinding of teeth—more ways than one! Race driver Mike Hiss had an infected tooth and spent Wednesday night in the dentist's chair. Interesting, but the real irony was that the man who did the work was Dr. Tom Lucas (3002 North Tibbs Ave., Indianapolis, Indiana). Five years ago when Hiss came to the Speedway and earned rookie of the year honors, Lucas was the "gopher" for the team.

More address changes:

Dr. Mark S. Lund  
8748 N. Central Ave.  
Indianapolis, Indiana 46240

Dr. Scott W. Martinsen  
323 East Lincolnway  
LaPorte, Indiana 46350



Dr. Douglas E. McDaniel  
742 Cambridge  
Battle Creek, Michigan 49015

Dr. Gregory C. Moo  
16925 Londonberry Lane  
South Bend, Indiana 46635

Dr. Thomas H. Morse  
2908 Embassy Court  
Speedway, Indiana 46224

Dr. Ray Edwin Pierce  
2116 Brookside Parkway North Drive  
Indianapolis, Indiana 46201

Dr. Jay Rifkind  
5902 Apache Wells, #469  
Indianapolis, Indiana 46224

Dr. Nathan G. Roth  
642 Castro Street  
San Francisco, California 94114

Dr. Michael C. Tavenner  
1823 W. 58th Avenue  
Merrillville, Indiana 46140

Dr. Lynn R. Thomas  
P.O. Box 1931  
Elkhart, Indiana 46515

Dr. Kevin P. Tolliver  
4406 London Court  
Indianapolis, Indiana 46254

### **Class of 1978**

Deceased: Dr. Edgar Price  
Indianapolis, Indiana  
11/2/78

We have received changes of address  
for the following:

Dr. Robert S. Angelo  
2025 Oriole Trail, L.B.  
Michigan City, Indiana 46360

Dr. Dennis A. Block  
1531 St. John Court South  
Beech Grove, Indiana 46107

Dr. Dayn C. Boitet  
9645 Bay Meadows Road #759  
Jacksonville, Florida 32216

Dr. John A. Bozic  
% Jack C. Hayes  
2711 Hickorywood Court  
Indianapolis, Indiana 46224

Dr. Timothy J. Carlson  
350 North Greenlawn  
South Bend, Indiana 46617

Dr. C. Ronald Chamberlain  
12410 Dunedin  
St. Louis, Missouri 63141

Dr. Phillip W. Conn  
16 Dodge Street  
Danville, Illinois 61832

Dr. Jerry R. Davis  
2262 Patterson Blvd. South  
Dayton, Ohio 45409

Dr. Jeffrey A. Dolle  
4141 Bayshore Blvd.  
The Pinnacle, Unit 505  
Tampa, Florida 33611  
Office: 3409 South Manhattan Ave.  
Tampa, Florida 33609

Dr. Lloyd L. Drager (M.S.D.)  
4655-E Merrimar Circle  
Columbus, Ohio 43220

Dr. Bruce W. Dragoo  
601 South Main Street  
Ligonier, Indiana 46767

Dr. James W. Fisher  
125 Pleasant Street, #504  
Brookline, Massachusetts 02146

Dr. Karl F. Frey  
7605 Phoenix Drive #960  
Houston, Texas 77030

Dr. Phillip W. Gardner  
2717 East Drive  
Fort Wayne, Indiana 46805

Dr. William Alexander Gitlin  
446 Richmond Park East #325A  
Richmond Heights, Ohio 44143

Dr. Robert M. Grace  
12807 Delaware Street  
Crown Point, Indiana 46307



Dr. Charles R. Hutton  
305 South Market  
Winamac, Indiana 46996

Dr. Bruce Mathew Jordan  
P. O. Box 1385  
Oceanside, California 92054

Dr. Scott M. Jordan  
NRDC-MCRD  
P. O. Box 147  
San Diego, California 92136

Dr. Thomas G. Kaeuper  
1037 South 23rd Street #70  
Richmond, Indiana 47374

Dr. George E. Kirtley  
1011 Barberry Lane  
Evansville, Indiana 47710

Dr. Allan C. Knapp  
4120 Brooklyn, N. E. #202  
Seattle, Washington 98105

Dr. David A. Llewellyn  
%Route #31, Box 18  
Terre Haute, Indiana 47803

Dr. Joshua Paul Majors  
233 Green Meadows Drive  
Greenfield, Indiana 46140

Dr. Carey B. McLaughlin  
16 North Freemont  
Peru, Indiana 46970

Dr. Assad Mora (M.S.D.)  
3537 Scarlet Oak Court  
Indianapolis, Indiana 46222

Dr. Diana L. Moorman  
4148 Independence Drive  
Indianapolis, Indiana 46227

Dr. Anita C. Murray  
3470 Sherburne Lane, Indianapolis,  
Indiana 46222

Dr. E. Michael Ozment  
521 South East Street  
Plainfield, Indiana 46168

Dr. Christopher R. Peeler  
5811 Riverwood Drive  
Indianapolis, Indiana 46250

Dr. Gregory P. Pfau  
401 South Indiana Street, Suite B  
Mooresville, Indiana 46158

Dr. Forest R. Robertson, II  
515 South Illinois Street  
Monticello, Indiana 47960

Dr. William E. Sauter  
Box 894  
LaFarge, Wisconsin 54639

Dr. GERALYN LaMere Schroeder  
4109 Alexandria Drive  
Greenfield, Indiana 46140

Dr. Jeffrey D. Starr  
3136 Watergate Way  
Indianapolis, Indiana 46224

Dr. Charles L. Steffel  
84 Culliver Street  
Milton, Massachusetts 02186

Dr. Ronald W. Stewart  
1122 N. W. Garden Valley Blvd., Suite  
103  
Roesburg, Oregon 97470

Dr. Mark I. Thompson  
3117 Nobscot Drive #C  
Indianapolis, Indiana 46222

Dr. Michael K. Van Emon  
612 West Main Street  
Paoli, Indiana 47454

Dr. Robert L. Van House (M.S.D.)  
Route #2, Stage Coach Drive  
Anderson, South Carolina 29621

Dr. George Joe Zorawski  
Mill Rare Village Apts. #7D  
Elizabethton, Tennessee 37643



## Dr. Gerald D. Timmons Is Dead at 80

Dr. Gerald D. Timmons, a 1925 graduate of the Indiana University School of Dentistry who taught at the School for 15 years after graduation and served as Acting Dean in 1938-39, died of cancer on July 22 in Scottsdale, Arizona. He was 80 years old.

Dr. Timmons established a distinguished record in dental education and in organized dentistry. He served as Dean of the Temple University School of Dentistry from 1942 to his retirement in 1964. He was President of the American Association of Dental Schools in 1949-50 and served as President of the American Dental Association in 1962-63. From 1940 to 1942 he was Executive Secretary of the ADA.

A native of Valparaiso, Indiana, Dr. Timmons attended public schools there and received a degree in pharmacy from Valparaiso University in 1917. He served in the Army in 1917-18.

Dr. Timmons was President of the Indianapolis District Dental Society in 1931 and served for several years on the Legislative Committee of the Indiana State Dental Association.

His other activities included service as President and member of the Board of Censors and Board of Regents of the American College of Dentists and Supreme Grand Master of Delta Sigma Delta fraternity.

The recipient of honorary degrees from Muhlenberg College, the University of Manitoba, and Fairleigh Dickinson University, Dr. Timmons held many other honors as well, including the following: The William J. Gies Award of the American College of Dentists; the Connecticut State Dental Association's Alfred C. Fones Medal; the Conwell Award from Temple University; the

Sigma Epsilon Delta Annual Award; the Rhode Island State Dental Association Award; the Clarence J. Shaffrey Medal from St. Joseph's College and the Delta Sigma Delta Meritorious Award.

He was a Fellow of the Faculty of Dentistry of the Royal College of Surgeons of England. He also was the first dentist to receive the annual "Health-USA" award, presented jointly by the Medical Society of the District of Columbia and the Metropolitan Washington Board of Trade.

Dr. Timmons maintained close contacts with his many Indiana friends and was especially beloved by his colleagues in the Class of 1925. When the group held a special reunion in 1975 marking the 50th Anniversary of the changeover from the old Indiana Dental College to the Indiana University School of Dentistry, Dr. Timmons was unable to attend because of illness. However, on a visit to Scottsdale not long before the reunion, Dr. Maynard K. Hine had talked with Dr. Timmons, and he brought back a tape-recorded greeting from "Jerry" to his classmates. The message was nostalgic, it was characteristically good-humored, and it was a highlight of the reunion.

Dr. Timmons' wife, Tama, died last year.

### GIRLS SCHOOL

*(continued from page 18)*

dodontics, amalgams, resins, etc. are performed. However, only minor orthodontics is performed. A local dental laboratory fabricates any needed prostheses. An effort is made to make good dental health practices attractive and interesting. Books on teeth and their care have been placed in the school library; large posters are displayed during Children's National Dental Health Week; kits of toothbrushes and toothpaste are provided to the new girls. Oral hygiene techniques are taught through chairside instruction, demonstrations, and pamphlets.



## BOARD OF HEALTH

(Continued from page 36)

All this is part of the lives of the people we serve, our patients.

Certainly, the people in our office are vital to our successes. Dr. Gish is a man who is both a "thinker" and a "doer." Vic lends his sensitivity and tact to any person or group he assists. Jack brings relaxation to our office with his cheerful and candid manner. Chuck Smith is a reflective person, capable of uniting thoughts and words in a way no one else can—like the time he stopped me to say, "I heard an ugly rumor—you're going to work here!" And I'll never forget the unbelievable compliment he gave Barbara Smith and myself when he dubbed us the "Laverne and Shirley of dental hygiene."

Of course, other staff members add their talents to the list—Marsha McCullough, who teaches the Montgomery County Field Training Program for second-year dental hygienists with decisiveness and practicality; Dan, Robin, Bunny and Susan, who bring enthusiasm and new ideas to our office. Allen Craven, adding knowledge and intuition gained from years of experience in business, industry, and health programs. And finally, Marge Welker, who, despite pressures and the unexpected, is pleasant, efficient and cooperative every single day.

Well, that's it. That's what we do at the Board of Health—in the Dental Division. It's unique and it's varied. And it's important!

## DEAN'S COLUMN

(Continued from page 51)

Mrs. Carla Totten was elected President of Sigma Phi Alpha, the National Dental Hygiene Honor Society.

Dr. Paul Starkey, having recently returned from sabbatical leave in Brazil, has been named to a 10 member-committee to Review the Performance of the President of Indiana University.

Ms. Evelyn Oldsen has been appointed a consultant to the ADA Commission on Accreditation.

Your Dean is serving as Chairman of the Administrative Board of the Council of Deans of the American Association of Dental Schools and with Associate Editor David Avery published the third edition of *Dentistry for the Child and Adolescent*.

## AUXILIARY EDUCATION

(Continued from page 61)

panded the program's capabilities and function.

With great eagerness and enthusiasm the faculty of the Dental Laboratory Technology Department are looking forward to a very good and productive year, one that will not only be more meaningful for the students, but also make them a more valuable member of the dental health team.

## Centennial Events Planned by School

A century of dental education in Indiana will be celebrated with a series of special observances during 1979, Dean Ralph E. McDonald of the Indiana University School of Dentistry has announced.

Programs planned by the School will mark the progress of dental education in the state since the establishment in 1879 of the Indiana Dental College, which became a part of Indiana University in 1925.

Dr. Maynard K. Hine, former dean of the Dental School and Chancellor Emeritus of Indiana University-Purdue University at Indianapolis, is Chairman of the Centennial Committee, which consists of faculty members and representatives of the Indiana Dental Association.

According to Dr. Hine, scheduled events will include a dedication ceremony on May 2 of the mural in the Dental School lobby depicting dental history; a keynote address at the Indiana Dental



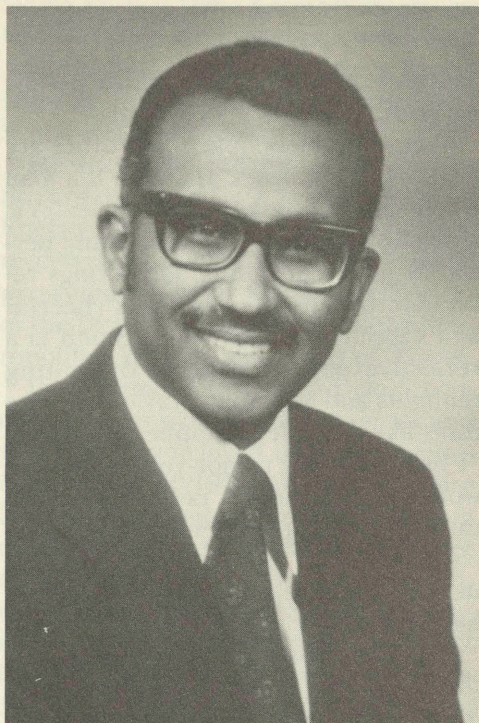
Association Annual Meeting on May 4; historical exhibits during the IDA meeting; and special programs next September during the Annual Fall Conference of the Dental Alumni Association and the Annual Teaching Conference of the School's faculty.

In addition, an expanded commemorative issue of the School of Dentistry Alumni Bulletin next spring will feature articles and pictures tracing the development of dental education in the Hoosier State.

Dr. James R. Roche, Assistant Dean for Faculty Development and a member of the Centennial Committee, is making tentative plans for a satellite-assisted television program which would enable alumni from the Indiana University Dental School to meet in various parts of the country and participate through TV in a sharing of information and ideas on current dental research.

Among the dates noted by the Committee as having special historic interest are these: March 29, 1879—first Indiana Dental Law passed; May 20, 1879—letter sent to dental practitioners calling for a meeting to form a school; June 23, 1879—meeting held to form Indiana Dental College; October 1, 1879—Indiana Dental College opens with six students in attendance.

The Committee requests that anyone having information or materials (such as old correspondence, certificates, pictures, or instruments) that he would like to make available to the Committee get in touch with Dean McDonald or Dr. Hine at the Dental School, 1121 W. Michigan St., Indianapolis, Indiana 46202.



Dr. Aly Eloui Bastawi has been named Chairman of the Department of Pedodontics at the University of Louisville School of Dentistry. He had served as Acting Chairman of the Department for over a year. Dr. Bastawi is a 1957 graduate of Cairo University who also earned a DMD degree from the University of Louisville. After receiving an MSD degree in Pedodontics from Indiana University in 1963, he taught Pedodontics at dental schools in Sweden, Egypt, and the U.S.A.





Shown with Dr. Robert L. Bogan, Associate Dean for Students, is Ms. Lorraine M. Henderson, class of 1979, this year's recipient of the Pierre Fauchard Student Award. Ms. Henderson was selected by the faculty as the member of her class who demonstrated the highest level of clinical maturity at the end of the third year in dental school. Last year's winner was Dr. Timothy J. Carlson, class of 1978.

## Orchids Distributed At Class Reunion

Among those who attended the class of 1928 reunion last spring was Dr. William Y. O'Hara, of Waipahu, Hawaii, where he still maintains his dental office. An orchid grower, he has won many awards, among them the prized Eisenhower award. At the reunion luncheon on Sunday, May 7, each of the wives was presented with a beautiful orchid corsage, brilliant native flowers, and all of the guests were treated to Macadamia nuts and candy.



This photograph of the Indiana University Medical Center campus as it appeared in the late 1930's came to the Alumni Bulletin from Dr. Paul E. Starkey, who obtained it from Dr. Antonio Rosat, class of 1938, during Dr. Starkey's sabbatical leave in Brazil last spring. While on leave Dr. Starkey served as Visiting Professor at the School of Dentistry of the Federal University of Rio Grande do Sul.



## THE BOOKSHELF

(Continued from page 88)

gated. A two-page questionnaire constructed by the investigator was used.

A sample of 506 dentists were selected: 402 general practitioners chosen on the basis of year of graduation, location and community size; and 104 specialists chosen on the basis of geographic location and type of practice. All of the practicing specialties were represented.

Eighty percent of the questionnaires were returned, including 75 percent of general practitioners and 97 percent of specialists.

The first hypothesis, that general practitioners are reluctant to treat cerebral palsied patients, was disproved. Forty-eight percent of the general practitioners had treated one or more such patients in the past year and 84 percent indicated willingness to treat these patients. The general practitioners cited a lack of proper equipment and a feeling of apprehension as problems. The second hypothesis, that the general practitioner in a community of less than 2,500 is more reluctant to treat cerebral palsied patients than those in a larger city, was also disproved. No statistically significant difference was found based on community size. The third hypothesis, that the general practitioner who has graduated from dental school within the last 10 years is less reluctant to treat these patients than earlier graduates, was also disproved. No statistically significant difference was found between these groups. The fourth hypothesis, that the general practitioner feels that he did not receive adequate education concerning treatment of these patients and is willing to acquire more knowledge, was verified. The fifth hypothesis, that the specialist is less reluctant to treat patients with cerebral palsy than is the general practitioner was verified. Nearly 90 percent of the specialists indicated a willingness to treat patients with cerebral palsy.

## THE A AND B BLOOD GROUP ANTIGENS IN ODONTOGENIC EPITHELIUM

John M. Wright, Jr.

Whether or not odontogenic epithelium expresses the A and B blood group antigens has never been ascertained. The purpose of this thesis was to determine by means of enzyme histochemistry if odontogenic epithelium does indeed produce these substances. Peroxidase-conjugated anti-human IgM with its appropriate substrate, diaminobenzidine, was used.

Twenty-three cases from patients of either A or B blood group were studied. In approximately one-half of these cases, the blood group substances were produced. All epithelium that showed localization of the blood group antigens had morphologically differentiated to squamous epithelium. Not all squamous epithelium, however, produced the blood group substances.



Dr. Antonio Rosat, a 1938 graduate of Indiana University School of Dentistry, recently was presented with the "Comendador Do Distrito Federal" award by the Brazilian government during a ceremony at the capital in Brasilia. Dr. Rosat is Chairman of the Department of Integrated Dentistry at the Federal University of Rio Grande do Sul School of Dentistry. In the above photo he is holding the citation for the award, which is the second highest commendation of the Brazilian government. It is given in recognition of an individual's outstanding contributions to his country.



Mrs. Helen W. Campbell, School of Dentistry Librarian, chats with Dr. Rolando A. DeCastro, Director of Art at Indiana University School of Dentistry, as they hold the plaque (a "DeCastro original") which was presented to Mrs. Campbell during the 14th Annual Teaching Conference of the School of Dentistry at McCormick's Creek State Park in September. The plaque was in appreciation of her long and distinguished service to the Annual Teaching Conferences.



Indiana University School of Dentistry  
(ALUMNI BULLETIN)  
1121 West Michigan Street  
Indianapolis, Indiana 46202

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