FALL AND WINTER 1982

JOURNAL
AMERICAN COLLEGE of DENTISTS

A TIME TO CARE FOR DENTISTRY

DENTAL ETHICS — FACT OR FANCY

The Objectives of the American College of Dentists

The American College of Dentists in order to promote the highest ideals in health care, advance the standards and efficiency of dentistry, develop good human relations and understanding and extend the benefits of dental health to the greatest number, declares and adopts the following principles and ideals as ways and means for the attainment of these goals.

(a) To urge the extension and improvement of measures for the control and prevention of oral disorders;

(b) To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels;

(c) To encourage, stimulate and promote research;

(d) Through sound public health education, to improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient;

(e) To encourage the free exchange of ideas and experiences in the interest of better service to the patient;

(f) To cooperate with other groups for the advancement of interprofessional relationships in the interest of the public; and

(g) To make visible to the professional man the extent of his responsibilities to the community as well as to the field of health service and to urge his acceptance of them;

(h) In order to give encouragement to individuals to further these objectives, and to recognize meritorious achievements and potentials for contributions in dental science, art, education, literature, human relations and other areas that contribute to the human welfare and the promotion of these objectives — by conferring Fellowship in the College on such persons properly selected to receive such honor.

Revision adopted November 9, 1970.

(ISSN 0002-7979)

The JOURNAL of the AMERICAN COLLEGE of DENTISTS

Volume 49
Number 3 and 4
Fall and Winter 1982

A Quarterly Publication Presenting Ideas & Opinions In Dentistry

Keith P. Blair, DDS. *Editor*
Gordon H. Rovelstad, DDS, *Business Manager*
Editorial Board
Paul S. Butcher, DDS
Robert Cupples, DDS
Lynden M. Kennedy, DDS
Gerard E. McGuirk, DDS, *Chairman*

The Journal of the American College of Dentists (ISSN 0002-7979) is published quarterly by the American College of Dentists, Inc., McFarland Company, Harrisburg, Pennsylvania, with Second Class Postage paid at Harrisburg, Pennsylvania and additional points. Copyright 1982 by the American College of Dentists, Inc.

Subscription $15.00 a year. Cost of additional postage for airmail will be billed to subscriber. Single copies $6.00.

All expressions of opinion and statements of supposed fact are published on the authority of the writer over whose signature they appear and are not be to regarded as expressing the views of the American College of Dentists, unless such statements or opinions have been adopted by the American College of Dentists, Inc.

Correspondence relating to the *Journal* should be addressed to the Editor, Keith P. Blair, DDS, 4403 Marlborough Avenue, San Diego, CA 92116.

Changes of address and subscriptions requests should be addressed to the Business Manager, Journal of the American College of Dentists, 7315 Wisconsin Avenue, Bethesda, MD 20814.

Reprint requests should be directed to the author.

For bibliographic references the *Journal* is abbreviated J Am Col Dent and should be followed by the volume number, page, month and year. The reference for this issue is J Am Col Dent 49:1-65, Fall and Winter 1982.

The *Journal* is a Publication Member of the American Association of Dental Editors

CONTENTS

Nominations Due February 1, 1983

Nominations for Fellowship candidates to be inducted at the 1983 Convocation at Anaheim, California should be submitted no later than February 1, 1983. For Nomination Forms, write to the

American College of Dentists
7315 Wisconsin Avenue
Bethesda, Maryland 20814

From the Editor's Desk 3
Geriatric Dental Care

News of Fellows 4

Gies Award to Frederick T. West 6

Award of Merit to James E. Brophy 9

Henry M. Thornton Awarded Honorary Membership 10

President Elect's Address 12
Odin M. Langsjoen

Fellowships Conferred 16

Section Activities 20

Dental Ethics—Fact or Fancy 21
Kenneth V. Randolph

Scholarship Among U.S. and Canadian Faculty 28
Robert W. Mendel
James P. Scheetz

Dentists Management Style, Career Satisfaction and Practice Characteristics 32
James M. George
Charles L. Milone

A Time To Care For Dentistry 35
Wallace V. Mann, Jr.

Dental Care for the Mentally Ill 41
Marvin J. Block

The Career Satisfaction of Dentists 45
Philip Yablon
Judith Rosner

Assessment of Dental Practice 53
Alvin L. Morris

A Treasury of Dentistry 60
Gardner P. H. Foley

Deceased Fellows 62

Annual Index for 1982 64

Directory of Officers 65

VOLUME 49 NUMBER 3-4

Geriatric Dental Care

FROM THE EDITOR'S DESK

One of the fastest growing segments of our national population is the elderly. It is time that the dental profession learns more and does more about geriatric dental care.

Neglect, not age, is the main cause of tooth loss, as every dentist knows, and when people have less neglect in middle-age, they prevent unnecessary loss of teeth as they approach their later years.

Contrary to the frequent image that unfortunately type-casts most elderly people as senile and incompetent, the great majority of our present older population lead very productive lives. They have improved general health and better oral health, as compared with a generation ago. As an increasing number of middle-aged people seek regular dental care, these same people have better dental conditions in their older years.

The dental care needs of the elderly are no different than that of people in younger age groups. Seniors need a full range of dental services including oral hygiene, restorative procedures, periodontal treatment, endodontic care, fixed bridges, partial dentures and full dentures. There will be an increasing need in all phases of dental care for the elderly, except for full dentures where the need is decreasing as people preserve more of their teeth.

These senior citizens have as

Keith P. Blair

much concern for their health, comfort and appearance as do people of any other age category. Their chronological age should not interfere with having the care they need, if they are physically able to have the treatment.

We should begin geriatric dental care early by informing our patients about the need to save their teeth, not only for appearance and mastication, but also to preserve alveolar bone, which gives support to the face and preserves the dimensions of the entire lower third of the face. Dentists know that the restriction of sugars and the use of proper oral hygiene will result in healthy dentition for the lifetime of most people. *There is no cure as good as prevention* though that simple message seems to be so difficult to communicate to the public.

Recent government statistics show that 45 percent of the elderly live on pensions they have earned and another 33 percent are still earning incomes. Only a small minority of the elderly receive public assistance. Generally, they are becoming more financially comfortable. But for those seniors who cannot afford regular fees, we should arrange low-cost facilities where they can receive adequate treatment.

Certain steps need to be taken, also, if the elderly are to have better dental care and improved oral health. Community health organizations must inform the public, including senior citizens, about good nutrition and preventive dental care. Nursing homes need to train their staffs to improve oral hygiene.

Dental schools should include courses on geriatric dentistry in undergraduate studies. More continuing education classes are needed on the special problems of the elderly and recommended methods of treatment.

With our declining birth rate and the lower number of school-aged persons, our population age-groups are noticeably changing. As the great middle-aged group moves steadily into the senior classification, there will be an ever-increasing demand for dental care for the elderly.

Will we be prepared for it?

Keith P. Blair

NEWS OF FELLOWS

Myles I. Cogan

Myles I. Cogan of Martinsburg, West Virginia was one of twenty dentists designated as the first group of Fellows of the American Asociation of Hospital Dentists. The honor was received at the Second International Congress on Hospital Dentistry in Toronto, Canada. Currently, Dr. Cogan is Chief of the Dental Service at the Veterans Administration Medical Center, Martinsburg, W. Va., and is Associate Professor of Clinical Oral Surgery at West Virginia University School of Dentistry.

Dr. Hal Leyland, recently promoted to Sergeant as a Reservist in the Royal Bahamas Police Force, is shown resplendent in his red sash and medals.

Hal E. Leyland, Nassau, Bahamas writes about the colonial traditions that still persist on his "Isle of Enchantment", though his country became independent of Britain in 1973. As a Reservist in the Royal Bahamas Police Force over the past fifteen years, he was recently promoted to Sergeant and received Bahamian medals for long service and good conduct.

Richard A. Kozal, Chicago, was recently installed as president of the Chicago Dental Society. He also serves as president of the Loyola University Dental School alumni association.

George C. Paffenbarger of Gaithersburg, Md. has been named the 1982 recipient of the American Dental Association's Distinguished Service Award, the highest honor the Association can bestow on a member of the dental profession. He was selected for the award in recognition of his outstanding accomplishments in dental research, particularly in the area of physical and chemical properties of dental materials. Dr. Paffenbarger has been an ADA research associate at the National Bureau of Standards in Washington, D.C. for over 45 years. Among his numerous awards are the International Association for Dental Research Award in Prosthodontics, the Pierre Fauchard Academy's Gold Medal and the FDI's Miller Prize.

Richard A. Kozal

Gilbert N. Robin of Pittsburgh was the 1982 recipient of the Albert R. Pechan Award of Excellence from the Dental Society of Western Pennsylvania. He is a professor of restorative dentistry and director of Continuing Education at the University of Pittsburgh School of Dental Medicine. Dr. Robin has lectured extensively and his video tapes on dentistry have been widely used in the United States and in many foreign countries.

Eugene Friedman of Massapequa Park, N.Y. was installed as president of the American Association of Oral and Maxillofacial Surgeons, a 4000 member surgical specialty group. Dr. Friedman is an associate professor of oral and maxillofacial surgery at the State University of New York at Stony Brook. He also maintains a private practice at Massapequa Park.

Eugene Friedman

Gilbert N. Robin, right, receives the Award of Excellence from the Western Pennsylvania Dental Society. The plaque is presented by Marvin Sniderman, left.

Allan J. Wintner, Associate Dean at the University of Pittsburgh School of Dentistry, has resigned his administrative post because of illness. Dr. Wintner is highly regarded as a curriculum coordinator and as an editorial reviewer for prominent dental journals.

Abraham Kobren of New York, a leading educator, author and lecturer, has been appointed assistant dean for admissions at New York University College of Dentistry. In this newly created position, Dr. Kobren will be responsible for admission to the predoctoral program at NYU, as well as for such activities as student recruitment, student housing and student financial aid. In addition, Dr. Kobren is a Trustee of the American Dental Association.

GIES AWARD TO FREDERICK T. WEST

Citation Presented by Regent Dr. Robert A. Cupples

The William John Gies Award was established by the American College in 1939. This Award recognizes Fellows of the College for outstanding services in dentistry and its allied fields, especially in education, research, literature, and community service. This Award honors Dr. Gies for his outstanding contributions to all facets of the profession of dentistry, but it also serves as an index of appreciation and esteem for those Fellows of the College whose works have merited exceptional recognition.

There have been fifty-six distinguished Fellows of the College honored by this Award. These 56 Fellows represent the most noble and dedicated among us and personified professionalism in its finest form. Today we honor a very generous man. Over the 63 years of his career in dentistry, he has touched the lives of patients and their families, dental students, colleagues in academia and administration, and shaped the character of many an organization and institution with a candid and steadfast concern. His long career has been marked by an openness to people of all ages and rank in the profession; many of his former students have become fellow members of boards and societies, and come to count him as friend and associates. His loyalties—to individuals and to his profession—have been broad-based, unwavering, long-lasting.

Frederick T. West graduated from the College of Physicians and Surgeons in 1917, over 65 years ago. He immediately entered the Naval Reserve as a Lieutenant Senior Grade. When he was released from services in 1921, he took a postgraduate orthodontic course. He then entered in association with another orthodontist, one of the leading women orthodontists on the west coast, Elizabeth Richardson, who was also active in the child health and hygiene endeavors in the early decades of the century.

In addition to a busy practice, Dr. West taught at the College of Physicians and Surgeons (now the University of the Pacific) in San Francisco until 1960 when he retired as Clinical Professor Emeritus in Orthodontics. In the mid-1960's, the great anatomic and archaeologic collection of the renowned Spencer Atkinson was installed at the University of the Pacific and Dr. West was again called to serve and was given custody of the collection. He was named Curator of the school's Library of Applied Anatomy, a position which he holds to this date.

Frederick T. West

At 89, Dr. West's dedication and interests still shine clearly, as he gives a tour of the skull collection, walks through the UOP offices of administration greeting everyone kindly and by first name, or sits proudly on the platform at commencement, an event he has attended for more than 60 years.

Dr. West was President of the American Association of Orthodontists in 1955, having previously been President of the Central Section of the Pacific Coast Society of Orthodontists. He also has been Secretary of the California Dental Association and Secretary of the San Francisco Dental Society.

Dr. West's activities were not limited to professional organizations. For several years he was a member of the Health Advisory Board of the City and County of San Francisco and, during World War II, was Chairman of Chemical Warfare Defense of the city's Civilian Defense Committee. He also served as Vice President of the Public Health League of California, Director of the California Dental Service Corporation, on the Board of Trustees of the Pacific Medical Center, and a member of the Board of Regents of the Presbyterian Medical Center. In 1974, he was elected an honorary member of the Board of Regents of this same medical center.

Dr. West was cited by the Edward H. Angle Society of Orthodontists in 1965; he was awarded the Gold Key Award of the Medical Dental Study Guild of California in 1973, and he was presented the Order of the Pacific from the University of the Pacific in 1974. The latter was in recognition of over half a century of services to his Alma Mater including being one of the five alumnae who rescued the school in 1923 from financial disaster when it was about to close its doors forever. Even at this time, Dr. Frederick T. West is Administrative Assistant to the Dean for Alumni Affairs at the University of the Pacific in San Francisco.

Mr. President, I am greatly honored to present to you, Dr. Frederick T. West, for the William John Gies Award.

Dr. Fred West, curator.

Frederick T. West

Eighty-nine year old Dr. Frederick T. West, recipient of the Gies Award, is a very generous man. Over the sixty-three years of his career in dentistry, he has touched the lives of patients and their families, dental students, colleagues in academia and administration, and shaped the character of many an organization and institution with a candid and steadfast concern.

This year, Dr. West retires from his position as a member of the University of the Pacific Board of Regents, a post he has held for twenty years. He also retires after sixty-three years as a faculty member at the University of the Pacific School of Dentistry in San Francisco. His solo practice in orthodontics has been in the hands of his son since 1978, and is now joined by Dr. West's grandson, Dr. Stephen West.

Along with his deep sense of loyalty to the dental profession and the promotion of its highest ideals, Dr. West has a great sense of compassion and warmth in dealing with individuals, whether student, faculty, patient or colleague.

The Wests raised three children and Dr. West is now a grandfather thirteen times over.

Dr. West has achieved much in his lifetime, has worked with wisdom and zeal well into his ninetieth year and has received many well-deserved honors from varied and distinguished groups.

Few men today so truly deserve the name, sage.

Dr. Fred West at work as curator of the Atkinson Library of Applied Anatomy at the University of the Pacific School of Dentistry.

AWARD OF MERIT TO JAMES E. BROPHY

Citation Presented by Regent Dr. H. Curtis Hester

The Award of Merit of the American College of Dentists was established by the Board of Regents on February 8, 1959. Since that date, there have been 25 recipients. The purpose of the Award of Merit is to recognize unusual contributions made toward the advancement of the profession of Dentistry and its service to humanity by persons other than Fellows of the College. This Award is made annually at the Convocation to an individual who has made a unique contribution or has given devoted service to Dentistry. In conferring the Award of Merit, the College acknowledges its appreciation of those who work with the profession in common purpose. Mr. James E. Brophy has served the dental profession for over 30 years in an executive capacity. He began his career as the Executive Secretary of the Greater St. Louis Dental Society in 1948. He helped that Society in its Annual Mid-Continent Dental Congress to grow in size, activities and stature until 1961. It was at this time that the Board of Directors of the American Association of Orthodontists took the necessary steps to select an Executive Secretary, a professional non-orthodontist, to serve the American Association. Their selection was Mr. James E. Brophy, a well-known administrator in professional circles in St. Louis where he and the organizations he had served had achieved many of the goals that brought about an improved status of dental health in the city of St. Louis. Mr. Brophy came to the American Association of Orthodontists in 1961. He had one secretary to assist him. He now directs an organization that comprises a public relations coordinator and in-house attorney, two assistant directors and 16 other employees. The amount of growth is best exemplified by the activities of these individuals which stretches into every part of the United States.

James E. Brophy

Some of the areas of note that Mr. Brophy was active in his early years were service on the Board of the Missouri Dental Service Corporation, and support of the public health efforts of the city of St. Louis. He was instrumental in 1955 in the promotion and fulfillment of the fluoridation of the public water supplies in St. Louis and St. Louis County. In the area of communications, Mr. Brophy was the producer of a series on public television. This series ran for four years on Channel 9 in St. Louis and was entitled, "Today's Dentistry." This was a significant contribution to the health of the children in that area.

Mr. Brophy has served the profession by presenting papers and participating in conferences before a number of dental societies and orthodontic groups, both in the United States and foreign countries. He was very active in promoting dental education, for an example, by serving on the Board of the Foundation of the American Association of Orthodontists and as a Trustee of the American Fund for Dental Health.

Mr. James Brophy has served the dental profession with dignity, dedication and foresight. His accomplishments have been outstanding in service to the profession, public service, education, and literature and journalism. He has been honored by the Distinguished Service Scroll of the American Association of Orthodontists, has been recognized as an Honorary Member of the Southwestern Society of Orthodontists, and is listed in Who's Who in the Midwest as well as in the Eighth Edition of Men of Achievement—International.

Mr. President, it is a privilege and an honor for me to present Mr. James Edward Brophy to you for the **Award of Merit.**

HENRY M. THORNTON AWARDED HONORARY FELLOWSHIP IN THE AMERICAN COLLEGE OF DENTISTS

Citation Presented by Regent Dr. Norman H. Olsen

Fellows in the American College of Dentists, honored guests, ladies and gentlemen, it is a singular privilege and honor for me to present Henry Moser Thornton to you for Honorary Fellowship in the American College of Dentists.

The question might well be raised—what constitutes a great man? It is interesting that in every walk of life there are a few individuals who distinguish themselves above their peers. It is such an individual that we recognize today. Ralph Waldo Emerson has so capably stated the following which I feel captures my sentiments relative to the word "success". "To laugh often and much; to win the respect of intelligent people and the affection of children; to earn the appreciation of honest critics and endure the betrayal of false friends; to appreciate beauty; to find the best in others; to leave the world a bit better by healthy child, a garden patch, or a redeemed social condition; to know even one life has breathed easier because you have lived. This is to have succeeded."

Henry Thornton during his distinguished career has demonstrated a unique degree of leadership in his support of dental education and in enhancing harmonious relations between the dental profession and the dental industry. His presence is well known in any meeting or gathering he attends and his influence is readily perceived by all he interacts with.

Under his leadership Dentsply International pioneered for its employees and their dependents the first comprehensive dental health care program. This pioneering effort was accomplished through the cooperation of the A.D.A. and the Continental Casualty Insurance Company of Chicago in 1959. The experience of this program has been so satisfactory that many other companies throughout the United States have established similar programs for millions of Americans.

Early in his career Mr. Thornton recognized the ever-increasing needs of dental education. He was one of the founders of the American Fund for Dental Education some 25 years ago which is now known as the American Fund for Dental Health. His company supplied the funds for the survey which indicated its potential. This support has continued through the years, and with the founding of the Canadian Fund for Dental Education, Dentsply of Canada played a similar role.

I am confident that if Henry Thornton takes a special sense of pride in his many achievements, at the top of the list has to be the establishment of the Student Clinicians Program of the American Dental Association, commonly referred to as S.C.A.D.A. Since 1959 (23 years) over 1200 dental students have participated in the Students Clinician Program. Each school in the United States sends a representative to the annual A.D.A. Meeting; each participant being selected through competition with his/her peers. Today these young men and women are the leaders in the dental profession.

This program has met with such success that similar programs have been established in England and Canada. Those of you in the

Henry M. Thornton

audience who have had the pleasure of attending a S.C.A.D.A. program can attest to the future status of the leadership in the profession.

Henry Moser Thornton was born in Mechanicsburg, Pennsylvania. He was educated at St. George School in Newport, Rhode Island and at Princeton University. Mr. Thornton joined Dentsply International in 1938. By 1942 he became the Vice President of Dentsply. He was elected President in 1955 and Chairman of the Board and Chief Executive Officer in 1972.

Mr. Thornton has been widely honored by the dental profession for the leadership he has given in the support of dental education and in fostering good relations between the dental industry and the dental profession.

Henry Thornton holds honorary membership in the American Dental Association, the American Association of Dental Schools, the Chicago Dental Society, the International College of Dentists, the Alumni Association of the Student Clinicians of the A.D.A., the Fifth District Dental Society of Pennsylvania, and Delta Sigma Delta Dental Fraternity.

He has received special awards and citations from the American Dental Trade Association, the Merit Award from the American College of Dentists, the American Student Dental Association, the Odontographic Society of Chicago, the St. Louis Dental Society, and the Pennsylvania Dental Association.

He has received honorary degrees from Loyola University (Doctor of Humane Letters); Northwestern University (Doctor of Laws); Dalhousie University in Nova Scotia (Doctor of Laws); and York College of Pennsylvania (Doctor of Humane Letters).

Henry Thornton was married to Virginia Whiteley in 1935 and they have five children. Virginia has played an important supportive role in his many accomplishments.

Mr. Thornton in his capacity as the Chief Operating Officer of Dentsply International for the past 27 years has made a most significant contribution to the advancement of the dental profession and to the public we serve. The dental profession has benefited greatly from this man's efforts and influence and we are proud to now honor Henry Moser Thornton with Honorary Fellowship in the American College of Dentists.

VIEWS ON DENTISTRY

Address of the President-Elect Odin M. Langsjoen American College of Dentists Las Vegas, Nevada

Fellows of the college, candidates for Fellowship, ladies and gentlemen: it is a real pleasure to be with you this morning. Despite the early hour, the atmosphere is charged with good will and mutual respect. To be able to address this body is a privilege of the office of president-elect, a privilege which I humbly acknowledge and gratefully accept.

The annual meeting and Convocation of the College is the highlight of the American College year.

It is a time to renew friendships and welcome to Fellowship a new group of leaders in dentistry. To all of you candidates for Fellowship, I extend my personal congratulations: and to you sponsors, thank you, for your well directed efforts on behalf your candidate, and the college.

The annual meeting is also a time to hear committee reports, plan programs and tend to general housekeeping of college.

It is a time to share our successes and our concerns.

It is a time to rekindle our spirits, and reset our sights.

A time to celebrate dentistry.

My home state of Minnesota will celebrate 100 years of organized dentistry at the Dental Association's annual meeting in 1983. As a participant in the planning for that occasion, I have enjoyed delving into dental history, in search of program material. My impressions, based on a very cursory search of archival material, are that the history of dentistry in America is a story of remarkable progress, of progress driven to astonishing levels of achievement by many energetic and enterprising people, people with vision, dedicated to idealism, and a penchant for problem solving; people with manifest social consciousness.

Allow me to cite an example of individual energy and initiative so typical of American dentists.

It was in 1895 that Konrad Roentgen in Germany discovered X-Rays.

Just two weeks later Dr. Edmund Kell, a New Orleans dentist, made the first dental radiograph. Amazing?

Here is a classic example of problem solving and social consciousness, by American dentists, working together. In 1945 the Army Dental Corps reported that since Pearl Harbor it had made 71.5 million fillings, 2.6 million dentures and performed 16.5 million extractions for Army personnel.[1] This was done for Army personnel, American manhood in the prime of life! These mind-boggling statistics said a lot about the state of dental health in America. Dentistry moved into action. Dental researchers, public health dentists and organized dentistry, as a body, began an all out offensive against dental caries with the result that by 1970 the wild horses of dental decay had been reigned under control by the fluoridation of community water supplies. Indeed, American dentistry has done such a superb job of preventing dental caries that the question is sometimes asked, "How far have we come toward eliminating the need for our profession?" The question is strictly rhetorical, of course, but if we equate restorative dentistry with dentistry there may be some truth to it.

On one hand, by reducing the prevalance of dental caries, we have reduced the need for restorative dentistry. On the other hand, by saving more teeth from decay we have broadened the base of periodontal treatment needs.

American young people are enjoying the fruits of dental progress to the point where American youth are recognized in international circles, such as the Olympic games, by their dental health.

America's elderly enjoy a mixed blessing, however, as they now retain many of their own teeth well into the former denture wearing years. Personal oral hygiene procedures now become more complicated and present problems that can't be solved with a tumbler of water on the night stand.

Thus, it appears that dentistry is not putting itself out of business, but is, by upgrading the dental health of Americans, changing the emphasis of dental care. And in spite of a lack of busyness in dental offices, there is insufficient hard evidence at this time to declare a dental manpower surplus. A continued need for great numbers of highly technically trained dentists is questionable however, since many of the procedures

involved in periodontal treatment can be performed by auxiliaries with less training.

If an adjustment in the numbers of highly trained dentists is indicated, that is a problem for our dental schools to solve. It is a problem intrinsic to dentistry. In fact, with the exception of some externally motivated assaults on our profession, such as the Federal Trade Commission's intrusion into the regulation of dental practice, and other "corrective" legislation focusing only on health care costs, most of the problems we face today are intrinsic to dentistry, and their solution lies within the profession and its leaders.

H. L. Mencken once said, that for every human problem there is a solution that is neat, simple and wrong, so perhaps we shouldn't feel too frustrated when precise solutions evade us.

Malcolm Moos, a former University of Minnesota president and Eisenhower speech writer, once observed—that people frequently spend more time defending the past than managing the present and planning the future. Perhaps managing our day to day problems is the solution.

I should like to invite your attention for a few minutes this morning, to just a few of the long litany of irritating problems that we face today.

Problems that are intrinsic to dentistry and which, incidentally, are not viewed as problems by any one else. Problems, all of which are related to, and exacerbated by, a depressed economy.

Odin M. Langsjoen

Let us pursue, then, the common thread of a depressed economy, as it weaves its way through the pattern of some of our most pressing concerns: Such as:

1. The lack of busyness
2. Alternative delivery systems
3. The vanishing dental school applicant
4. The clinically underprepared graduate
5. Forays into advertising and other conduct that shocks our ethical sensibilities.

A lack of busyness. It is directly related to the depressed economy in a time of abundant dental manpower.

A friend of mine tells of his first year as an orthodontist during the depression of the thirties. His practice consisted of one patient. Dentistry has historically been an accurate barometer of the economy. A reduction in spendable income translates into fewer dental visits; particularly for expensive and postponable treatment.

It seems to be an oversimplification of the busyness issue to suggest that a radical reduction in the number dental school graduates is the neat and precise solution we seek.

New dental schools, planned in the sixties to increase dental manpower, graduated their first classes in the seventies. It will likely take another ten years to effect a similar reduction in graduating class size.

Since the federal government has terminated capitation grants and mandatory enrollments for dental schools, the planned reduction in entering class enrollments, for all the schools combined, is 430 places by the year 1985.[2] That reduction won't effect graduating numbers until 1989.

We may not have a dental manpower surplus, vis-a-vis dental needs, but we clearly have more manpower than the economy cares to support at present.

The lack of busyness also bears a direct relationship to alternative delivery systems. Three of the five alternative systems currently on the scene, franchise dentistry, department store dentistry and capitation dentistry all owe a good measure of their early success to the fact that new graduates simply cannot afford to set up alone.[3]

The potential dental student, aware of the financial burdens of setting up practice and overwhelmed by the rising costs of

dental education is having second thoughts on a choice of career.

As top students compare the rate of return on their educational investment with the costs of dental education they often look elsewhere for a place to maximize their talents.

Will dental schools be tempted to relax admission standards in order to keep enrollments high; high enough to attract the funding they so desperately need; funding needed to provide quality instruction and clinical experience for students in an ever-expending dental curriculum?

Paradoxically, as extended and demanding as dental education is, many new graduates feel they lack the clinical experience necessary to cope with the technical demands of general practice.

According to Lou Terkla, Fellow and past president of the College, the Dean of the School of Dentistry at Oregon, the prevailing opinion in the profession at large is that contemporary graduates are not as well prepared clinically to enter dental practice as they should be.[4] A survey of practitioners who graduated in 1975 and 1977, supports Dr. Terkla's opinion. That survey revealed, that 68% of the random sample felt that additional clinical experience was needed, after graduation, as a transition to a permanent career.[5]

Dental educators are well aware of this criticism and are wrestling vigorously with the problem in search of solutions.

At the 1981 Conference of Deans a debate was conducted on the subject; Resolved: "That a fifth year of dental education be a requirement." Although there was no winner or loser in the debate, the subject was covered in detail from both positive and negative perspectives, indicating the degree of seriousness that Deans attach to this problem. Can you imagine how the thought of a fifth year of dental school would effect a prospective dental student, already considering other fields of endeavor because of high educational costs?

Dr. James Mulvihill, Vice President for Health Affairs at the University of Connecticut, in searching for ways to consolidate an expanding dental curriculum, and to reduce the costs of dental education, suggests that a restructuring and abbreviation of the curriculum on the front end (basic sciences and preclinical education); coupled with a required but salaried clinical residency or fellowship after graduation, would help to overcome the economic barrier that deters some potential dental school applicants, at the same time providing additional post graduate clinical seasoning that so many graduates desire.[6]

Legal limits are the lowest common denominator of professional ethics. When one behaves only within the law, idealism and ethics suffer.

Although not now required of dental graduates, general practice residencies are the fastest growing segment of advanced dental education. They are usually located in dental schools or hospitals and are funded by patient revenues. There are not enough openings, however, to accommodate the large number of graduates seeking postdoctoral training.

The 1979 A.D.A. House of Delegates, in an attempt to provide more openings, and broaden the base of advanced dental education, approved an ADVANCED GENERAL PRACTICE PROGRAM, a program offered in patient care institutions other than hospitals. The program, a minimum of one year, is not a required component of the educational sequence but is a planned, postdoctoral training program designed to enhance the skills of a general practitioner.

The financing of ADVANCED GENERAL PRACTICE PROGRAMS of this type, however, has been principally from federal funds and private foundations and their continued support is in doubt.

Despite the efforts on the part of dental educators and organized dentistry to increase opportunities in advanced dental education, it is estimated that current residency programs, graduate school positions, salaried positions in and out of government and associateships with practicing dentists, together, provide post graduate opportunities for only one half of the nations graduating seniors.[7]

The opportunities available to the remaining graduates narrow down to solo practice, group practice, or one of the alternative delivery systems.

Against a back drop of educational debt and high costs of starting a practice, it is understandable that graduates with feelings of clinical inadequacy, may, occasionally, stray from the narrow paths of professional ethics in order to put "bread on the table."

Their sometimes desperate financial situation, encourages them to take advantage of every legal means, to attract patients, to nurture their professional egos, and to live up to the expectations of dental opulence that society has led them to believe is a graduation present. They often overinvest in office equipment and in auxiliary utilization and in their spare time they flock to ego-building practice management seminars at exotic places, all on 18% money. Now we all know, legal limits are the lowest common denominator of professional ethics. When one behaves only within the law, idealism and ethics suffer.

Of course, it is much easier for us to be altruistic from a position of plenty, than it would be from a condition of want.

Carl Sandburg provides a clue to this facet of human behavior in a passage from "The People, Yes", written nearly 50 years ago:

"Once having marched over the margins of animal necessity, over the grim line of sheer subsistance, Then, man came to the deeper ritual of his bones, To the time for thinking things over, To the dance, the song, the story To hours given over to dreaming"[8] and we might add, To energies spent in altruistic pursuits.

Knowing the energy, the resourcefulness, and the dedication to the well being of others, that has historically characterized dentists, I am confident that the dental profession over the long term will manage the difficulties that command our attention today. You, Fellows of the College, will be influential in these adjustments, by assuming leadership roles according to your individual expertise.

For the short term, however, our hearts must bleed a little for the young graduate, filled with high expectations, with dreams of a long and rewarding career in dentistry, but frustrated at every turn in getting started.

I would like to suggest that until education requirements, numbers of graduates, and the availability of advanced educational opportunities all stabilize to a level that the American people, and its economy, can and will support, that Fellows of the College provide an opportunity for advanced dental education on an individual basis. I recommend advanced education for a new graduate in your private office. I am not suggesting a committment to an Associateship, expanding your office and investing in new equipment, although this could be an eventuality. I am suggesting a planned agreement, for a year, of salaried clinical experience for a stipend similar to the going rate for general practice residencies in hospitals. The agreement should include enough planning to ensure clinical experience touching all phases of general practice. There should be minimal pressure for production on the part of the graduate and ample time for exchange of ideas, and for discussion of difficult situations involving ethics and service. Dental ethics is a difficult subject to teach in the classroom as educators are the first to admit. It is a subject which is best tought by precept and example in real life situations.

Last week, I met with over a dozen pre-dental students in an advisor-advisee relationship. I continue to be impressed with the quality of the young men and women who are preparing for careers in dentistry today. I enjoy these counseling sessions.

At some point in our conversation, I usually interject that I wholeheartedly share their enthusiam for dentistry as a career, but that they should know that it is not a "piece of cake".

The education is expensive and demanding.

The costs of starting up a practice are considerable, especially with interest rates so high.

Their replies are almost uniformly objective and confident. "By the time I graduate the economy will be under control."

"By the time I set up practice, 20% of the dentists practicing now will be retired."

"I understand that, but everything else is expensive too and I want to be a dentist."

To this I reply, WONDERFUL, you've done your homework, you're thinking ahead. That's the kind of spirit that makes a good dentist. Go to it!

Somehow these students seem to sense that dentistry will manage its present problems, as it has done in the past, and they want to be a part of the future of this great profession.

But their D.D.S. is 6-7-8 years away.

How about the new graduates this year and the next and the next?

Dr. Burton Press, A.D.A. president-elect, challenged the college recently at a Northern California Section meeting when he asked:

"Does the college have a plan for the young practitioner?

Certainly the need for a broader base to the Advanced General Practice Program is real and well documented.

The second objective of the College exhorts us:

"To encourage qualified persons to consider a career in dentistry—and to urge broad preparation for such a career at all educational levels."

A year of salaried post-doctoral training for a new graduate, in office with a Fellow of the American College of Dentists, certainly could be a very rewarding educational experience for both parties.

Think about it.

Come to think about it: "A clinical fellowship in the American College Dentists" has a nice ring to it.

References

1. J.W. Knutson, Water Fluoridation After 25 Years, JADA, Vol 80 1970.
2. Letter from Harry Bruce, Executive Director of the American Association of Dental Schools, to Dental Deans, July 24, 1981.
3. The Delivery of Dental Care, An Assessment of Five Alternative Systems, JADA, Vol 105:431-442, September 1982.
4. Terkla, L.G., Dental Education in the 1980's, J. Dent. Educ., 45:789-96, December 1981.
5. Council on Dental Education, Need for a Transition, Experience Expressed by Dental Students, JADA, 102:829-32, June 1981.
6. Mulvihill, J.E., Financing Dental Education from the View Point of the Academic Health Officer, J. Dent. Educ., 46:307-313, 1982.
7. Advanced Dental Education: Recommendations for the 80's W. K. Kellogg Foundation, American Association of Dental Schools, 12-37, September 1980.
8. Carl Sandberg, The People, Yes, Harcourt Brace Jovanovich Publications, 1936.

Reprint requests to:
Odin M. Langsjoen, DDS
301 Morley Parkway
Duluth, Minnesota 55803

FELLOWSHIPS CONFERRED

Fellowships in the American College of Dentists were conferred upon the following persons at the Annual Convocation in Las Vegas on November 6, 1982.

WILLIAM B. AKERLY
Jackson, Mississippi

JOEL B. ALEXANDER
San Antonio, Texas

MICHAEL C. ALFANO
Franklin Lakes, New Jersey

ROBERT D. ALLEN
Seattle, Washington

WILLIAM H. ALLEN
Nashville, Tennessee

JOHN W. AMES, JR.
Smithfield, Virginia

MILTON ARNOLD
Brooklyn, New York

ROBERT K. AVAKIAN
South Gate, California

ROBERT W. BAKER
Ithaca, New York

JOHN A. BAMONTE
Natrona Heights, Pennsylvania

JAMES R. BATTEN
Charlottesville, Virginia

STANLEY J. BEARDMORE
Honolulu, Hawaii

RICHARD R. BEVIS
St. Paul, Minnesota

ROBERT E. BINDER
Short Hills, New Jersey

SAMIR E. BISHARA
Iowa City, Iowa

NORMAN C. BITTER
Fresno, California

WELDON G. BLODGETTE
Rocky River, Ohio

M. JOHN BORKOWSKI
Indianapolis, Indiana

HERBERT B. BRESSMAN
Dunellen, New Jersey

MYRON J. BROMBERG
Reseda, California

JIM L. BURK, JR.
San Angelo, Texas

SIDNEY O. BURNETT
Baltimore, Maryland

C. CARLOS CABRERA
Pleasant Hill, California

MICHAEL F. CAHILL
Erlanger, Kentucky

DANIEL P. CASULLO
Philadelphia, Pennsylvania

KENNETH KWOK-WING CHAUN
Vancouver, British Columbia

ROBERT H. CHRISTOFFERSEN
San Francisco, California

CHARLES H. CLAIBOURNE
Columbus, Ohio

EDWIN T. COLEMAN
Knoxville, Tennessee

TOM COLQUITT
Shreveport, Louisiana

DAVID F. COOLEY
Kalamazoo, Michigan

RONALD P. DESJARDINS
Rochester, Minnesota

JAMES A. DEWBERRY
Dallas, Texas

BREESE M. DICKINSON
Hagerstown, Maryland

MALCOLM T. DOBBINS
Irving, Texas

HERBERT B. DOLINSKY
Jersey City, New Jersey

JOHN R. DOLLARD
S. San Francisco, California

DONALD H. DOWNS
Colorado Springs, Colorado

JAMES B. EARLY, JR.
Madison, Virginia

Fellowships Conferred—1982

ERNEST M. EDINGTON, JR.
West Point, New York

FRANKLIN K. EGGLESTON
Houston, Texas

LOUIS M. ELLIS
Concord, California

ROBERT C. ENGLISH
Austin, Texas

ROGER T. ERICKSON
Seaside California

RALPH P. ERMOIAN
Fresno, California

JOSEPH R. EVANS
Holliston, Massachusetts

ROBERT C. EVERETT
Grosse Pointe, Michigan

JAMES T. FANNO
Canton, Ohio

DONALD E. FENSTER
Omaha, Nebraska

ALBERT S. FORD
Roselle, New Jersey

KENNETH W. FORD
Baytown, Texas

ROBERT C. FRATES, JR.
Belmont, California

WILLIAM A. FREDERICK
Las Cruces, New Mexico

IRWIN J. FREEDMAN
Cherry Hill, New Jersey

STEPHEN M. GAGE
Lyndhurst, Ohio

DONALD L. GAMBRALL
Middletown, Kentucky

THOMAS J. GANT
Mt. Clemens, Michigan

THADDEUS B. GASIOR
Chicago, Illinois

VICTOR GASTINEL, JR.
Baton Rouge, Louisiana

EDWARD R. GENECOV
Dallas, Texas

ANDREW J. GENUALDI
Summit, New Jersey

CHESTER J. GIBSON
McMinnville, Oregon

WILLIAM S. GILES
Hillsborough, California

GARY R. GOLDSTEIN
New York, New York

DAVID L. GOOD
Canoga Park, California

JOSEPH M. GRANA
St. Louis, Missouri

JOHN S. GREENSPAN
San Francisco, California

ALBERT H. GUAY
Wakefield, Massachusetts

EDGAR J. GUAY
Butte, Montana

FITZHUGH N. HAMRICK
Charleston, South Carolina

ALFRED G. HARRIS
Chicago, Illinois

JOEL M. HAUPTMAN
Miami Beach, Florida

J. JEROME HEBERT
Lake Charles, Louisiana

JOHN K. HEINDEL
East Orange, New Jersey

HALA Z. HENDERSON
Indianapolis, Indiana

RAYMOND F. HENNEMAN
Park Ridge, Illinois

MATTHEW J. HERTZ
Riverdale, New York

ALFRED C. HESTON
Spokane, Washington

JOHN V. HINTERMAN
Flint, Michigan

MILES B. HIRSCHEY
Edina, Minnesota

JOHN W. HOLDEN, JR.
Augusta, Georgia

GEORGE F. HOLLAND
San Diego, California

FREDERIC P. HOLLANDER
New Britain, Connecticut

JAMES W. HOLLEY, III
Portsmouth, Virginia

WILLIAM L. HOLVE
Van Nuys, California

J. BENNETT HOOKER
Terrell, Texas

RALPH S. HOPKINS
Decatur, Georgia

Fellowships Conferred—1982

ROBERT K. HORNE
Fort Worth, Texas

T. J. HOWARD
Arvada, Colorado

MELVIN C. HUMBERT
Hastings, Minnesota

YAHIA H. ISMAIL
Pittsburgh, Pennsylvania

JOHN T. JACOB
Palm Springs, California

DONALD W. JACOBS
York, Pennsylvania

PAUL M. JOHNSON
Newport Beach, California

ROBERT A. KALINA
Willoughby, Ohio

JOHN T. KELLY
Bristol, Virginia

VED MITTER KHOSLA
Hillsborough, California

ROBERT L. KINZER
Loma Linda, California

JOHN E. KNOX
Belleville, Illinois

ROBERT T. LAMBING
Oakland, California

GEROLD F. LAMERS
Spokane, Washington

CALVIN S. LAU
Los Angeles, California

BILLIE B. LEFLER
Fort Sam Houston, Texas

ROY C. LININGER
Littleton, Colorado

WILLIS C. LITTLETON
Raceland, Kentucky

ALFRED D. LOIZEAUX
Oakton, Virginia

CARMINE J. LoMONACO
West Caldwell, New Jersey

JOHN C. LOWE
Pikeville, Kentucky

N. HORACE MANN, JR.
Nashville, Tennessee

RICHARD F. MASCOLA
Jericho, New York

FRANKLIN G. MASON
Mullins, South Carolina

GEORGE J. McCLURE
Pasadena, Texas

JAMES C. McCULLOH, JR.
Birmingham, Alabama

THOMAS W. McKEAN
San Diego, California

LAWRENCE H. MESKIN
Denver, Colorado

PATRICK METRO
Cleveland, Ohio

JAMES C. METZLER
Columbus, Ohio

WILLIAM M. MIDYETTE
Plant City, Florida

JOHN F. MILLETT
Utica, New York

ANDREW MOORE
Ashland, Kentucky

FRAZIER N. MOORE
Los Angeles, California

ARNOLD P. MORAWA
Ann Arbor, Michigan

SANFORD NEUGER
South Euclid, Ohio

GEORGE W. OATIS, JR.
Moraga, California

MASAICHI OISHI
Kailua, Hawaii

WILLIAM A. OVERTON
Nashville, Tennessee

THOMAS J. PALLASCH
Burbank, California

RAYMOND W. PALMER
Glen Burnie, Maryland

JAMES L. PALMISANO
Roseland, New Jersey

LOUIS O. PASETTI
Tampa, Florida

EARLON L. PAYNE
Bryan, Texas

AUTHUR E. PHELPS
Mayfield Heights, Ohio

ARTHUR POSTER
New York, New York

ELBERT A. POWELL
Farmington, Connecticut

ROSS W. PROUT
Tarzana, California

Fellowships Conferred—1982

DONALD J. PROVENZALE
Downers Grove, Illinois

JOHN E. REGAN
Huntington, Indiana

NEAL W. ROLLER
Godfrey, Illinois

HOWARD L. ROTHSCHILD
Baltimore, Maryland

IRVING RUBEL
Los Angeles, California

FRANCIS X. SADOWSKI
Glenwood, Illinois

REED E. SANFORD
Fargo, North Dakota

STAN W. SAPKOS
Seattle, Washington

WILLIAM A. SAUNDERS
Dallas, Texas

ROBERT G. SCHALLHORN
Aurora, Colorado

ANTHONY M. SCHIANO
Union City, New Jersey

GEORGE W. SCHMITT
New York, New York

MARLENE M. SCHULTZ
Manhattan Beach, California

JOSEPH J. SCHWARZ
Chicago, Illinois

PREM S. SHARMA
Glendale, Wisconsin

HERBERT T. SHILLINGBURG, JR.
Oklahoma City, Oklahoma

ERNEST H. SIGMAN, JR.
Memphis, Tennessee

RODGER F. SISCA
San Antonio, Texas

FRED J. SMITH
Winston-Salem, North Carolina

RICHARD STARR
Fort Pierce, Florida

KENNETH R. STEFFENSEN
Billings, Montana

RALPH G. STENBERG
Lynnwood, Washington

DAVID STEVENSON
S. Pasadena, California

WARREN N. SWANSON
Los Angeles, California

DONALD M. TILGHMAN
Baltimore, Maryland

DAVID S. TITTLE
Pleasant Hill, California

CHARLES E. TOMICH
Indianapolis, Indiana

THOMAS S. TORGERSON
Birmingham, Michigan

LEIF TRONSTAD
Philadelphia, Pennsylvania

JAMES E. TROST
Rochester, Minnesota

LEWIS J. TURCHI
Rolling Hills, California

R. BRIAN ULLMANN
Ho-Ho-Kus, New Jersey

ROBERT J. URBON
Salisbury, Massachusetts

RICHARD E. VALENTINE
Fiarview Park, Ohio

CHARLES Van DYKEN, JR.
Grand Rapids, Michigan

SMITH C. VAUGHAN
New York, New York

WILLIAM N. von der LEHR
New Orleans, Louisiana

DeWITT T. WALTON, JR.
Macon, Georgia

DAVID H. WERKING
Greeley, Colorado

JOHN R. WESTINE
Delray Beach, Florida

WILLIE T. WILKINS, JR.
Greensboro, North Carolina

BERNARD T. WILLIAMS
Kansas City, Missouri

FRED J. WITKOFF
Coral Gables, Florida

KAYLAN F. WORLEY
Shreveport, Louisiana

JAMES H. WORSTER
Anderson, Indiana

MORRIS C. YATES
Madisonville, Kentucky

ROBERT J. ZOBL
Warren, Michigan

JOSEPH E. ZUCCHI
San Francisco, California

In Absentia—
ELMER HEARD, JR.
Oklahoma City, Oklahoma

SECTION ACTIVITIES

Participants at the Third J. Ben Robinson Memorial Lecture are, left to right, Bernard Gordon, Chairman of the Maryland Section; Kenneth V. Randolph, Speaker and former Dean of both Baylor and West Virginia Schools of Dentistry and Errol L. Reese, Dean of the University of Maryland School of Dentistry. The event was sponsored by the Maryland Section and held at the School of Dentistry in Baltimore.

More than 250 persons attended the Tenth Annual American College of Dentists Day at the University of Maryland School of Dentistry in Baltimore. Addressing the large group is Dr. Gordon H. Rovelstad, Executive Director of the ACD.

The Georgia Section met during the annual Georgia State Dental Meeting. Dignitaries attending the meeting are pictured above. Left to right are Pit Cleaveland, James Cassidy, Regent Charles W. Fain, Jr., Edward Austin and Stanley Hopkins, President of the Georgia Dental Association.

DENTAL ETHICS— FACT OR FANCY

A Presentation to the Maryland Section

Kenneth V. Randolph*

At the beginning of this presentation it seems appropriate to establish a meaning for the term ethics. One definition is: the science of moral values and duties; the study of ideal human character, actions and ends; a philosophy which deals with moral conduct, duty and judgment; and, the development of standards for judging the rightness and wrongness of conduct. The application of these concepts in the practice of dentistry gives credit to the term *dental ethics*. All health professionals are uniquely concerned with ethics as related to their patients, the public in general, colleagues, support staff and family. A doctor must even consider ethical obligations to his or her own personal well being. An ever-changing society continually introduces attitudes and customs which affect the philosophies of conduct. Concomitantly, it is to be expected that the ever-changing dental profession may require adjustments significant to the broad scope of dental ethics.

Since the first code of ethics was adopted by organized dentistry, almost every dental society or association has developed comparable regulations. Documental titles may vary somewhat but the content and purpose are essentially the same. The American Dental Association uses the heading, "A.D.A. Principles of Ethics and Code of Professional Conduct". Each constituent dental association may elaborate and expand on these regulations as long as there is no conflict with what the A.D.A. has approved. Likewise each component society may develop its own version, maintaining all fundamentals incorporated into the documents adopted by the respective constituent society and the A.D.A. Affiliated groups have traditionally considered standards for conduct as imperative to their members. Typical among these is the American College of Dentists, the Maryland Section of which is sponsoring this program today. Without doubt, guidelines for ethical conduct have organizational sanction and are generally regarded as essential to the profession.

The introductory statement to the American Dental Association's Principles of Ethics and Code of Professional Conduct reads as follows: "The maintenance and enrichment of professional status place on everyone who practices dentistry an obligation which should be willingly accepted and willingly fulfilled. While the basic obligation is constant, its fulfillment may vary with the changing needs of a society composed of the human beings that a profession is dedicated to serve. The spirit of the obligation, therefore, must be to guide the conduct for professionals. This obligation has been summarized for all time in the golden rule which asks only that 'whatsoever ye would that men should do to you, do ye even so to them'.

"The practice of dentistry first achieved the stature of a profession in the United States when, through the heritage bestowed by the efforts of many generations of dentists, it acquired the three unfailing characteristics of a profession: the primary duty of service to

*Kenneth V. Randolph, D.D.S., B.S., President and Dean Emeritus, Baylor College of Dentistry. Presented as J. Ben Robinson Memorial Lecture May 25, 1982. Sponsored by Maryland Section ACD.

the public, education beyond the usual level, and the responsibility for self-government."

There are five general sections identified in the body of this document. The first deals with service to the public and quality of care. Here the dentist is guided in such matters as the selection of patients, maintenance of records, involvement in community service, attention to emergency care, use of consultations and referrals, the proper use of auxiliary personnel, and the obligations for justifiable criticism and expert testimony. Rules regarding rebates and split fees are explicit.

Section two addresses education and continuing education and section three relates to the government of a profession. Section four refers to research and development; more specifically it supports investigative studies for materials and devices and offers guidance in dealing with patents and copyrights.

Finally section five covers professional announcements of practice, announcements of specialization and limitation of practice, and announcements of services by a general practitioner. All of these categories are discussed briefly leaving considerable room for further elaboration by constituent and component societies and by individual dentists.

With this brief summary of how the A.D.A. treats the subject of ethics, it might be appropriate to introduce a few terms which add significance to the dentist's role. They are frequently overlooked but are really essential at all times and under all circumstances.

A Health Professional

One who is knowledgable, skillful and inquisitive; one who is honest, humble and charitable; one who is sensitive to the needs of his fellowmen and who recognizes his own limitations; one who strives earnestly and diligently for continued personal development; and, one whose standards of ethics and conduct are beyond reproach. This definition provides a large, but not difficult, charge for meeting responsibilities.

The practice of dentistry first achieved the stature of a profession in the United States when . . . it acquired the three unfailing characteristics of a profession: the primary duty of service to the public, education beyond the usual level and the responsibility for self-government. (from the ADA Code of Ethics)

Conscience

The faculty by which distinctions are made between moral right and wrong, especially in regard to one's own conduct. It is an internal awareness regarding one's actions and motives. It is a feeling of obligation to do or abstain from doing certain acts and therefore becomes a guide to conduct. It does not exist in a new born baby but must be developed through education and training. It is a social product and represents the combined wisdom of many generations. It is fallable and must be fostered, cultivated, and protected. John Ruskin once said, "Follow your conscience but first be certain that it is not the conscience of an ass."

Integrity—Honesty

A characteristic not given to lying, cheating, stealing; acting honorably and justly; uprightness of character; freedom from deceit and fraud. To me there isn't any substitute for this quality. Honesty to oneself, one's family, one's patients and to society in general sets the stage for unquestionable ethical conduct. Coupled with fairness which adds frankness, impartiality and candor, honesty stands for the highest quality of life.

Altruism

A selfless devotion to the welfare of others. It endorses the doctrine that the general welfare of society is the proper goal of an individual's actions. It is the principle or practice of unselfish concern for, or devotion to, the welfare of others. The health of others is what dentistry is all about. An altruistic attitude must be sustained throughout one's professional career.

Obligation

That which one is morally or legally bound to do. It is the action or conduct required by one's profession or position. It assumes that the best wisdom or judgment will be applied to all circumstances. In our professional responsibilities we have an obligation to apply our knowledge and skills using the best judgment possible.

An awareness of the forgoing definitions and descriptions helps develop a base for dental ethics. But, there are additional points characteristic of this concept of conduct. One must always remember that ethics is a personal matter and the level practiced represents the individual application of basic fundamentals. In contrast to the various laws affecting dentistry, it cannot be legislated. Of course dental societies can and do discipline those who violate codes established for their organizations. Membership may be denied or probational membership may be

One must remember that ethics is a personal matter and the level practiced represents the individual application of basic fundamentals. In contrast to the various laws affecting dentistry, ethics cannot be legislated.

granted depending upon the severity of the infraction. Laws are made by legislatures and laws regulating dentistry are incorporated into the dental practice acts. Breaking a law is unethical and may be subject to legal actions. Legislation for a violation of ethics occurs only because there are legal connotations. The spectrum of one's conduct goes far beyond the law and is measured by one's attention to concepts previously described.

Ethics is a philosophy of conduct that evolves "from the heart". It is an application of the principles of rightness and wrongness in daily living or in the daily practice of dentistry. It reflects a quality of life, a concern for others. The established institutions common to our era, including the home, family, school and religious organizations, all have an effect upon us as individuals. Likewise, how we conduct our lives reflects upon those who have guided us in formative years, namely parents, teachers, counselors, men of the cloth, etc. The quality of dental practice and the quality of professional conduct affect the institution from which one is graduated as well as the profession itself. Teachers, parents and associates who have exerted strong influence during formative years can go just so far. Each individual must ultimately become accountable for his or her conduct. Your ethics is personal and it comes from the heart.

The conduct and attitude of man are affected by his societal environment characterized by social, economic, political, physical, emotional and spiritual values. The ultimate effect may come rapidly or be delayed. The general trends of life for any particular generation, culture, nationality or race will be reflected in the standards of conduct. A typical example might be found in Greece some two thousand years ago. In those little Grecian villages high up in the bleak and barron peaks of the Tegetus mountains, the mothers of Ancient Greece would meet in the village squares with their little boy babies in their arms. These babies were given a physical examination.

Those that passed were returned to their mothers care. Those that did not pass were literally torn from their mothers breasts, carried higher up into the mountains and left there exposed to the elements and starvation. Here the jackels and wolves of the earth and the buzzards and vultures of the air quarreled and picked over the bones of the dying and the dead. Greek infanticide and its "valley of bones" was one way of preparing the ancient Greek for war. Only the fittest were permitted to live and grow. This was a type of mores for a warring nation. We are proud that we have passed that stage or our existence. Modes of conduct have often been based upon some selfish motive and show little regard to the welfare of others. Perhaps this concept of "survival of the fittest" may not be too foreign to what the present generation is experiencing.

Greed is one of the greatest deterents to ethical behavior.

Attitudes usually develop slowly and their long range effect may surface without being noticed. Suddenly there may be a change and we wonder what has happened, why the change. This may occur in a profession. What about those societal features that may be affecting the current way of life? Going back about four decades there was a war that would supposedly end all wars—World War II. Man, woman and child made sacrifices of many kinds and in many ways for a patriotic cause. They were anxious to stand up and be counted as ones who were doing their part to help. Dentists serving in that conflict were pushed to produce numbers of services with the primary objective of getting the recruit ready for the front lines. The quality of professional care, as taught in dental schools, was compromised with the hope or promise that better treatment would be provided later. One returning Navy Lieutenant made this statement to me, "this year I inserted over 7,000 restorations. Just think, at $2.00 a clip that would be over $14,000." Well, $14,000 was a lot of money at that time but more importantly it represented an attitude affected by a world at war. I doubt if this were an isolated case; more than likely there were many who reacted similarly. The quality of dental treatment and the stature of a profession were thrown to the mercy of an attitude dictated by international upheaval.

What about the Viet Nam war? This was a conflict which produced many questions. Why was our country involved? Why were the lives of our youth subjected to a conflict in which there seemed to be no well-founded purpose and no determination to emerge victoriously? If the reasons for being there were just, they were not generally understood by the public. Consequently, an attitude was developed and has since prevailed that threatens the future defenses of our nation. These attitudes help establish a different type of mores

for our society, one that affects many facets of life and even filters down into professional conduct. Today we shudder to think of nuclear energy in warfare, yet we know that defense must be strong. A hydrogen bomb packed with one megaton of energy strength is equivalent to a train load of TNT 300 miles long. Dropped over a city the size of Detroit it would kill 470,000 people and injure 630,000 others. There would be virtually no medical help for the injured.

One should also be alert to the possible effects of a rebellious spirit which has become quite prevalent especially in the last two and one-half decades. There seems to have been a generalized resentment of authority. Our news media have been filled with information about strikes, marches, sit-ins, the so-called "hippie movement" and other types of demonstrations that challenge the traditional order of things. Some of these have been good and some may have resulted in irreparable damage. My purpose is not to question the validity but rather point out changes which may ultimately affect the profession we hold dear. William Graham Sumner's famous dictum was, "The mores can make anything right". In *Folkways* he wrote that "for the people of a time and place their own mores are always good . . . for them there can be no question of the goodness of their mores. The reason is because the standards of good and right are in the mores." Who knows what the long range result of protests in personal grooming will be? Will the dirt and carelessness of some segments of society make such an impact that promising youth who grew up in that era will permit these trends to influence their own professional care to society?

This nation's very beginning resulted from a resentment to taxation. Today every household and every business feels the impact of increasing taxes. Naturally some people are affected more than others; likewise, some periods of time and some segments of society suffer more severely than others. The old adage that "one cannot escape death or taxes" seems more meaningful than ever before. There is an impact upon the way of life and the integrity of man, and therefore, the ethics of a profession. A resentment of taxes is uniform and undoubtedly there are those who take pride in cheating the government out of as many dollars as possible. If this concept of cheating prevails in conduct resulting from taxes, how much will it grow and be reflected in the ethics of a profession?

One of the fundamentals on which a health profession develops and grows is the right of self-government.

Today in discussing circumstances that radiate a way of life and penetrate into the depths of well established customs one must think of the ramifications of a drug culture. The speed of living is almost more than our bodies and minds can endure. Consequently man has begun to rely more heavily upon chemicals to offset what the body cannot produce through natural processes. Our society has grown accustomed to the use of stimulants, depressants, sedatives and other medications merely to cope with life and the environment in which we live. Our gullibility or addictiveness, if you please, has provided a fertile field for entrepreneurs of other countries to build wealth and perhaps even laugh at us. The devastating effects of the "drug culture" are seen all about us and yet many fail to find strength for resistance. Attitudes change and these changes influence all walks of life—even the practice of a health profession.

One could go on and on with typical examples that have an influence on ethics. We must not be naive and we must never rationalize concepts that may destroy the principle of rightness. Being alert to the ultimate influence may prevent a deterioration of our standards and values.

Up to this point I have been building a case for the concepts of ethics as I see them. Now the big question to me is encompassed within the title of my presentation; *Dental Ethics—Fact or Fancy.* The curriculum of most dental schools includes brief aspects of the subject of dental ethics, although quite frequently it is couched under a heading which obscures its identity and importance. Most all dental organizations consider some code of behavior as essential to maintaining membership in good standing. It is a fact that documents are written and adopted but the practice of the principles involved is frequently a farce. Our ideology prompts us to take pride in these codes but many times they have mere paper value. Dedication to, and the practice of, the principles involved are of utmost importance to eliminate any possibility of dental ethics being a fancy.

Any health profession which becomes static is essentially a dead profession. We can be proud that dentistry certainly is not dead. Continuing research on materials, devices, procedures and methods will produce changes in practice which may call for adjustments in aspects of dental ethics. Compensatory modifications may be necessary and one must be continually alert to these changes and the rightness or wrongness of adopting them.

Many of my generation never cease to be amazed at the advancement in methods of tooth reduction.

The development of high speeds has made it possible to prepare a tooth rapidly and conveniently for intra or extra coronal restoration. This is especially significant to those of us who experienced tooth reduction using rotary instruments with maximum speeds of about 8000 rpm. When this was the best way to accomplish the task many felt fortunate for there were those of the previous generation to remind us of the limitations of the foot drill and the drudgery of cutting cavities with hand instruments alone. Advancements in impression techniques, filling materials, casting accuracies, preventive measures, corrective appliances, surgical procedures, etc. have paralleled those of tooth reduction. All of these innovations of progress require the dentist to make adjustments but still hold high those standards of ethics and conduct which have made his profession great.

About six years ago, the Federal Trade Commission . . . placed increased emphasis on the rights of individuals in contrast to the rights of society or of a profession. Through the dictates of the FTC, dental practice acts were necessarily changed. Advertising . . . became more common.

Likewise, there have been many developments in practice methodology. Some have been initiated by the profession through research and others seem to have been adopted in self defense. Time and motion studies have improved equipment and delivery systems and have helped dentists be far more productive without adversly affecting the quality of service. The increase in productivity has physical, mental and economic overtones. Strains resulting from a continuous drive increases the doctor's fatigue and thereby necessitates a conscientious program of rest and relaxation.

Not too many years ago a class II amalgam with a base was considered pretty good for an appointment period of one hour. Today one would think of treating at least a quadrant in a similar amount of time. The productivity has changed. Who should benefit economically—the dentist, the patient or both? We shall assume the competency of knowledge and skill and that good professional judgment will be exercised. However, some might be tempted to stress numbers of restorations in an appointment period merely to increase the gross receipts. Recall my earlier reference to the chap who began to think in terms of what he would earn "at two dollars a clip". Sometime ago a professional colleague commented that he would be glad to retire because he hated to charge $120 for one-half hour of amalgams. Since he was an associate in a group practice the anxiety he felt was not in his control. Under different circumstances he might have considered a lesser fee with the patient sharing the benefit of the more rapid treatment techniques. The male member of a husband and wife team of physicians once commented that their office was open only three and one-half days each week. He reasoned that any additional time would change their income tax bracket and they just couldn't afford to spend more time. Yet, many patients needed the care they could offer. It would seem that income and income tax replaced altruism, obligation and ethics.

The use of auxiliary personnel in the dental office has expanded considerably over the last several years. Dental practice acts have incorporated guidelines for dental hygiene, dental assisting and dental laboratory technology. We, the dentists, have promoted the

A profession which has been exemplary in its role of self-government and one which has stood the test of time can only be adversely affected by this change (brought on by FTC actions).

development and growth of expanded services. Less disirable office procedures have been delegated to those with less skill and less responsibility. One early premise for expanded services was the reduction of the cost of health care to the patient. But has this happened? A prophylaxis is a prophylaxis whether performed by a hygienist or a dentist and the charge has not been determined by the years of preparation of the provider.

Before practice acts placed more controls over work authorizations for technicians, many dentists were willing to relinquish the responsibility for appliance designs. Others were asked by us to do the thing we were educated to do. As a result, denturism has become a threat to the profession in many areas. With continuing litigation over the right for technicians to make dentures independently, it isn't surprising that hygienists have raised similar issues and are striving for the independent practice of their skills. With such matters under debate there is little question but that the profession of dentistry, as it has been known, is at a crossroads and the stature is at stake.

Third party payment for services rendered has been endorsed in recent years and now accounts for a major part of a modern practice. With current trends one might

suggest that schools would be remiss unless formal courses are designed to prepare students in the management of these matters. Undoubtedly the scope will expand—there just seems to be no way to divert the sole responsibility of health care back to the individual. This may be good—at least it aids in the "marketing" so to speak, of dental service. Private insurance coverage, group programs, medicaid, etc. provide what the public seems to want—third parties sharing in the responsibility and the cost.

Only recently has the use of the term "marketing in dentistry" become common to our vocabularies. As opposed to public education it carries the connotation of "sell". I doubt if we are ready or willing to commercialize our services in this way. It has always been encumbent upon us to strive for the best possible oral health of the public. Much progress has been made, yet only 53% of the people seek regular dental care. There is an awareness of the merits of good oral health but unfortunately many still give it low priority. Department store dentistry is another issue that implies commercializing and one that carries questionable merits.

Innovations in procedures, materials, practice methodology, etc. have and will continue to exert influence on ethics. Adjustments must be made to keep personal and professional conduct timely but ethically sound. In making these adjustments we need not compromise those principles on which dentistry became a profession.

Greed is one of the greatest deterents to ethical behavior. It has many ramifications. This characteristic, of being eagerly desirous especially of wealth, is universally present. Although we hate to admit its presence in dentistry, it does exist. Debt and security are frequent companions of greed. Many times the urge for wealth is hidden behind the need to meet financial obligations and the desire to plan for a comfortable future. Most often this desire is at the expense of others and it influences the way we treat them. When it exists in dentistry, it could even compromise the quality of treatment as well as degrade standards of conduct. All too frequently a young dentist is mislead in the extent of indebtedness for opening an office. Furthermore, he or she may become the victims of slick-talking salesmen for insurance policies, a big car, a new home and an investment program. All of which are to provide that prosperous image. He becomes so deeply in debt that he may yield to short cuts which are contrary to good professional judgment. There seems to be no escape from the financial dilemma which faces him. The quality of his dental care suffers, his ethics may quickly become fancy.

Unfortunately greed, debt, social climbing and the attitude of "I'll get mine and to heck with others" has caused many to do unusual things. A young graduate was convicted of falsifying records in order to obtain payment from a third party carrier. He had reported dozens of treatment procedures which had not been provided. His justification was that he expected to provide the treatment as reported; he just wanted to get the paper work out of the way. This decision was in conflict with the dental law, it was in conflict with regulations of the carrier and it was in conflict with ethical conduct. As one would expect, legal actions were taken and the young man's license was lifted. Had his standards of ethics been sufficiently high, there would have been no conflict to draw legal action. One would cite many similar situations where colleagues have broken codes and have become subscribers to unprofessional conduct. Their credibility and the credibility of dentistry suffers immeasurable damage. Falsifying records, overcharging, compromising the service, and general misrepresentations are all side effects of a desire to obtain "too much too soon".

We as members can hold to what has been true and good without violating any dental law. We don't have to advertise . . . Our ethics can remain fact and not become mere fancy.

Increased governmental involvement tugs at the very core of personal and professional ethics. The general resentment of federal regulations fosters an attitude of opposition. It creates scheming, manipulating and cheating almost as a way of life. Heavy taxation and the ways tax dollars are used compound the problem.

One of the fundamentals on which a health profession develops and grows is the right of self-government. This right must always be treated with care. As conducted in the past that right has given dentistry stature unparalleled in professional circles. About six years ago, the Federal Trade Commission, an agency of the U.S. Government, placed increased emphasis on the rights of individuals in contrast to the rights of society or of a profession. Through the dictates of the F.T.C. dental practice acts were necessarily changed. Advertising, which had been frowned upon for almost a century, became more common. Today in the telephone directories of most any large city special announcements are made. Some even include reference to payment procedures such as "master card acceptable". Many of these ads are misrepresentations

to the public and have damaging effects on colleagues. A profession which has been exemplary in its role of self-government and one which has stood the test of time can only be adversely affected by this change. Preservation of the profession lies in the strength of individuals and we must stand firmly on our ethical conduct resisting the extended privileges thrust upon us by these agencies. Harry K. Cirvetz, in his book *Beyond Right and Wrong*, says: "Through moral deliberation and choice we determine if there is need to reconstruct our values instead of having them determined and changed for us". We as members can hold to what has been true and good without violating any dental law. We don't have to advertise in the local newspapers or yellow pages. We can still rely upon the quality of our service and the way we treat people to carry the good news of our offices. Our ethics can remain fact and not become mere fancy.

If one examines his environment and the social order in general, he will find multiple factors which affect his conduct and his ethics. As already stated, changes in a society and changes in a profession are inevitable; compensating adjustments are necessary. Laws and regulations to which we are obligated help establish standards of living. Most important, however, is the individual and the standards he sets for himself. How well do we hold to those fundamentals of conduct and to those basics essential to professionalism? Is our integrity strong enough to resist the temptations that surround us? Will we maintain a sincere concern about the welfare of others or will the power of personal gain override this concern? Where will altruism, conscience, judgment and obligation fit into our styles of life and practice? Can we sustain our pledge to be knowledgable, skillful and inquisitive; to be honest, humble and charitable; and to be sensitive to the needs of others? If we as individual dentists fail to honor these characteristics affirmatively the profession is destined to degradation and we will no longer deserve the status for which we have taken great pride. Ethical conduct is the answer. Will ours be fact or fancy?

A recent Gallup pole placed dentists third among twenty four professions in a survey for honesty, integrity and ethical standards.

The most recent issue of the Journal of the American Dental Association carried an article—"Quality Assurance: Five Experts Examine the Issue". Earlier the A.D.A. had completed a study on quality assurance which had been funded, no less, by the Federal Government. The House of Delegates last October approved funding for an Office of Quality Assurance. Professional Standards Review Organizations have been implemented as a mechanism of monitoring our professional care. Is it any wonder that insurance carriers want to examine our x-rays to determine the validity of our diagnoses? All of this comes about because there are dentists who adjust and manipulate ethics to their styles of practice rather than maintaining styles of practice that will conform to well established and well tested codes of professional conduct. Dentistry is not alone in these infractions. Similar situations exist even in religions where people rationalize and manipulate principles to their own satisfaction. If those basic fundamentals are followed there should be no need for rules and regulations—the rightness of our conduct would come naturally. Our ethics would be fact not fancy. Dental schools have been attacked for producing an oversupply of dentists. What is really needed is a way of weeding out those who jeopordize the image we have worked so hard to achieve. Are we really willing to face such issues that may infringe on the individual rights rather than the rights of society or a profession?

The trend of my comments may be regarded by some as preacher talk. If so, I make no apologies, because in the face of the many changes about us, it is good to be reminded of our obligations to society and to our profession. Striving to make the world or dentistry better because we were in it is a noteworthy cause. My comments may also be regarded as spreading gloom or pessimism. Quite the contrary, we have a great record but we cannot sit idly by and expect it to remain such without our input. Our ethics and personal conduct will make the difference. There are a lot of pluses even though it may be increasingly difficult to hold our own. Eighty-five percent of the public looks upon us as qualified professionals, 75% believes we treat people as people rather than ailments, 61% believes that dentists are worth what they charge, and 95% is satisfied with our chairside manner. A recent Gallup pole placed dentists third among twenty-four professions in a survey for honesty, integrity and ethical standards. We were surpassed only by ministers and pharmacists. Although confidence in such polls is questionable, certainly the results must attract our attention. Obviously we do make our ethics fact but we must continue that image and avoid any replacement by fancy.

Reprint requests to:
Kenneth V. Randolph, DDS
Route 10, Box 424-C
Morganton, N.C. 28655

SCHOLARSHIP AMONG U.S. AND CANADIAN DENTAL FACULTY

Robert W. Mendel*
James P. Scheetz**

Schools with many advanced education programs tend to be more productive scholastically.

Emphasis on research and publications as a measure of faculty excellence appears to be increasing in the United States. Universities receiving large sums in U.S. government grants tend to favor quality of publications over quality of teaching as tenure criteria.[1] Currently, dental school deans consider research and publications on a level with teaching as criteria in making tenure decisions,[2] but those priorities may change if the financial crunch continues. Publication activity of faculty has been investigated in several recent studies. Ladd and Lipset[3] surveyed a cross section of higher education faculty by investigating 158 institutions ranging from two year colleges through research universities. Centra[4] examined the publications in a group of universities and four year colleges. A study of faculty who received tenure from a large urban research university was conducted by Lewis.[5] None of these studies included medicine, dentistry or law faculty. Publication figures of dental school faculty are rare. Martinoff, et. al.,[6] identified the dental schools with the greatest numbers of articles published in 12 well known dental journals which covered the recognized dental specialties as well as dentistry in general. Publication output of recent tenure recipients in dental schools and faculty publications activity by academic rank was not addressed.

The number of articles a dental educator has published in refereed journals often is considered in determining his/her value to the school. Knowledge of the publication activity of dental educators in U.S. and Canadian dental schools should be useful to administrators, faculty, and personnel committees as a benchmark with which to compare publication effort in their own institution.

The purpose of this study was:

1. to determine the number of publications in refereed journals authored by full-time faculty in U.S. and Canadian dental schools, who received tenure in 1979.
2. to determine the number of publications in refereed journals authored by full-time faculty in U.S. and Canadian dental schools in each of the following ranks: instructor, as-

*Robert W. Mendel, D.D.S., M.A., Associate Professor and Chairman, Department of Endodontics.

**James P. Scheetz, Ph.D., Associate Professor, Department of Community Dentistry, University of Louisville, School of Dentistry.

sistant professor, associate professor and full professor.
3. to compare the publication activity of faculty in dental schools which have many advanced dental education programs with dental schools which have fewer of these programs.

Method

With the aid of the American Association of Dental Schools, a questionnaire was developed which, in addition to other questions, contained requests for the following information about each dental school.

1. The number of publications in refereed journals authored by full-time faculty who received tenure in 1979.
2. The number of publications in refereed journals authored by full-time faculty in each of the academic ranks previously mentioned.

The information was requested in ranges of numbers of publications as shown in Tables 1 and 2. The specific information sought was the number of articles published in refereed journals. No attempt was made to measure the quality of publications or to identify books, monographs or other forms of scholarly activity. The questionnaire was sent to the deans of U.S. and Canadian dental schools. The total number and percentage of deans reporting each range was tabulated.

The number of dental school specialty and general practice residency programs of each school who returned publication figures was determined by consulting the 1980/81 Annual Report of Advanced Dental Education of the American Dental Association.[7] The median number of advanced programs per school was determined to be between five and six. The schools were divided into one group which had six or more specialty and general practice residency programs and a second group which had five or less of these programs.

The publications of 1979 tenure recipients as well as those in each academic rank in each group were tabulated.

Results

Sixty-eight of the 70 questionnaires were returned, however, there were 53 responses to the first question which dealt with publications of 1979 tenure recipients. Responses to the second question, which sought information about publications of faculty by academic rank, varied from 36 to 43.

More schools reported that 1979 tenure awardees authored three to five publications than any other number (Table 1). There was a wide variation among the schools with respect to the number of

Table 1. Publications by 1979 Tenure Recipients in Dental Schools*

Number of Publications	Number of Schools	Percent of Schools
0–2	11	20.8
3–5	15	28.3
6–8	12	22.6
9–11	4	7.5
12 or more	11	20.8
TOTAL	53	100.0

N = 53

*Two deans reported that no faculty members received tenure in 1979.

Table 2. Publications of Full-time Faculty in Dental Schools

NUMBER OF PUBLICATIONS	NUMBER OF SCHOOLS			
	Instructor	Assistant Professor	Associate Professor	Full Professor
0–5	36 (100%)	21 (74%)	13 (30%)	10 (24%)
6–10	0	11 (26%)	19 (44%)	8 (19%)
11–15	0	0	10 (23%)	8 (19%)
16–20	0	0	0	12 (29%)
21 or more	0	0	1 (2%)	4 (9%)
TOTAL	36 (100%)	42 (100%)	43 (100%)	42 (100%)

Table 3. Influence of Number of Advanced Education Programs On Publication Activity of 1979 Tenure Recipients in Dental Schools

NUMBER OF PUBLICATIONS	NUMBER OF SCHOOLS	
	6 or More Programs	5 or Less Programs
0–2	3 (10.3%)	8 (33.3%)
3–5	8 (27.6%)	7 (29.2%)
6–8	7 (24.2%)	5 (20.8%)
9–11	3 (10.3%)	1 (4.2%)
12 or more	8 (27.6%)	3 (12.5%)
TOTAL	29 (100.0%)	24 (100.0%)

Table 4. Influence of Number of Advanced Education Programs on Publications of Full-time Faculty in Dental Schools

SIX OR MORE PROGRAMS

NUMBER OF PUBLICATIONS	NUMBER OF SCHOOLS			
	Instructor	Assistant Professor	Associate Professor	Full Professor
0–5	17 (100.0%)	14 (66.7%)	2 (9.5%)	1 (4.7%)
6–10	0	7 (33.3%)	12 (57.2%)	4 (19.1%)
11–15	0	0	7 (33.3%)	4 (19.1%)
16–20	0	0	0	8 (38.0%)
21 or more	0	0	0	4 (19.1%)
TOTAL	17 (100.9%)	21 (100.0%)	21 (100.0%)	21 (100.0%)

FIVE OR LESS PROGRAMS

NUMBER OF PUBLICATIONS	NUMBER OF SCHOOLS			
	Instructor	Assistant Professor	Associate Professor	Full Professor
0–5	19 (100.0%)	17 (81.0%)	11 (50.0%)	9 (43.3%)
6–10	0	4 (19.0%)	7 (31.8%)	4 (19.0%)
11–15	0	0	3 (13.6%)	4 (19.0%)
16–20	0	0	0	4 (19.0%)
21 or more	0	0	1 (4.6%)	0
TOTAL	19 (100.0%)	21 (100.0%)	22 (100.0%)	21 (100.0%)

articles published by those receiving tenure that year with one-fifth of the schools reporting 12 or more articles while one-fifth listed two or less publications.

The number of publications of full-time faculty members increased as the academic rank became higher (Table 2), but the rate of increase became greater as the associate professor rank was reached. More deans declared that their full professors had authored 16-20 publications than any other range (Table 2), but full professors in almost as many schools produced five or less publications.

Publication activity appears to be greater in schools with larger numbers of advanced education programs. This is reflected by comparing the productivity of recent tenure recipients in the two groups of schools (Table 3) as well as the productivity of faculty by rank, particularly in the associate and full professor ranks (Table 4).

Discussion

The wide variation among the schools in the number of articles published by recent tenure recipients as well as by senior faculty members may be partially due to the following variables: research and publication philosophy of the school; availability of funding for research including faculty salaries; quality of research facilities; availability of researchers who will work with other faculty; and time available for faculty research.

The marked increase in numbers of publications as the rank of associate professor is reached may reflect, to some extent, successful faculty efforts in meeting tenure requirements, since in many schools eligibility for promotion to this rank occurs at about the same time as consideration for tenure. Increased scholarly requirements for promotion in some schools as well as interest in research activity may be factors in the continued increase of publication activity as the full

professor rank is reached. Previous rather than current philosophy toward research in some schools may explain to some extent why nearly one-fourth of the deans report that full professors have authored five or less publications. However, since one-fifth of the schools granted tenure in 1979 to faculty with two or less published articles, there is some indication that scholarly activity may not be a serious requirement for tenure in some schools.

The publishing activity of recent tenure recipients appears to be well below that of associate professors and full professors (Tables 1 and 2) which suggests that many faculty continue their scholarly activity after they receive tenure.

The finding from the present study that schools with many advanced education programs tend to be more productive scholastically is reflected by Martinoff, et. al.[6] Almost all schools identified as leading in publication productivity in that study have six or more advanced education programs. Better research facilities, more research funds, and the presence of greater numbers of advanced students and research faculty may contribute to this greater output.

If it is assumed that the percentage of schools shown in Tables 1, 2, 3, and 4 represent a general profile of the publication activity of U.S. and Canadian dental faculty, then some general comparisons with other studies may be made. The publication activity of recent tenure recipients in dental education appears to be greater than that of recent tenure recipients in some studies of higher education in general. Thirty-eight percent of the 1979 tenure recipients in the Ladd-Lipset study[8] had published no articles compared with 21 percent of 1979 tenure recipients in dental schools who had published two or less articles. During the first six years of employment, a time frequently used for tenure evaluation, the median number of articles published by natural science faculty in the Centra[4] study was 2.3 while social science and humanities faculties had a median of 1.5 articles each. More than 79 percent of dental school 1979 tenure recipients had published three or more articles. However, 1976-77 tenure recipients, in a large urban research university investigated by Lewis,[5] had greater publication activity than the dental school tenure awardees. Sixty-six percent had published six or more articles compared with 51 percent of the tenure recipients from dental schools with that number. Instructors and assistant professors in dental education show about the same level of scholarly activity as faculty in these ranks from the variety of institutions in the Ladd-Lipset study.[8] Data about the publication productivity of associate professors and full professors in the two studies is more difficulty to evaluate. A much greater percentage of faculty in these ranks in the Ladd-Lipset survey have published extensively than have their counterparts in dental education. However, the Ladd-Lipset[8] data indicates that the vast majority of faculty with extensive publication activity come from universities with extensive research programs and these faculty do not constitute a cross section of higher education faculty.

Conclusions

1. More U.S. and Canadian dental schools reported that their faculty, who received tenure in 1979, authored three to five publications than any other range.
2. In most schools, there appears to be an increase in the number of publications as faculty members reach the rank of associate professor.
3. There is a wide variation in the publication activity of faculty among the dental schools, particularly in the senior faculty ranks, with faculty in some schools producing relatively few articles while faculty in other schools appear to be exceptionally productive.
4. In some schools scholarly activity may not be a serious requirement for the award of tenure.
5. The evidence suggests that many dental school faculty continue their publication efforts after receiving tenure.
6. Faculty from dental schools offering six or more advanced education programs tend to publish more articles than do faculty from schools which offer five or less advanced education programs.
7. The number of articles published by recent tenure recipients in dental schools appears to exceed the number of articles published by tenure recipients in some recent studies of higher education in general.

References

1. Centra, J.A. "Determining Faculty Effectiveness" San Francisco: Jossey-Bass, 1980, p. 14.
2. Scheetz, J.P., and R.W. Mendel. Tenure in Dental Schools in the U.S. and Canada. Unpublished research paper, accepted by J. Dent. Educ.
3. Ladd, E.C., Jr., and S.M. Lipset. Errata Sheet to the 1977 *Survey of the American Professoriate, Technical Report.* Storrs, Connecticut: University of Connecticut Social Science Data Center, 1978. (Mimeographed)
4. Centra, J.A. "Determining Faculty Effectiveness" San Francisco: Jossey-Bass, 1980, p. 123.
5. Lewis, L.S. Getting Tenure: Change and Continuity. *Academe,* 373-381, Nov. 1980.
6. Martinoff, J.T.; E.S. Lawson, and D. Sungkhoboe. Clinical Research in Dental Institutions as Reported in Selected Dental Journals. *JADA* 101:919-922 December 1980.
7. Division of Educational Measurements, Council on Dental Education. *Annual Report on Advanced Dental Education 1980-81.* American Dental Association, Chicago, Ill. March 1981, pp. 11-17.
8. Ladd, E.C., Jr. personal communication. April, 1981.

Reprint requests to
Robert W. Mendel, DDS
School of Dentistry
University of Louisville
Louisville, Kentucky 40292

DENTISTS' MANAGEMENT STYLE, CAREER SATISFACTION, AND PRACTICE CHARACTERISTICS

James M. George and Charles L. Milone*

This study focuses on the relationship of dentists' leadership style, career satisfaction and managerial effectiveness in dental practice. A dental practice is an interesting setting for the study of management style, because the dentist is really "in charge" of the business. He or she reports to no one else and has sole responsibility for managing the financial and personnel aspects of the practice (except for group practices, which are still a minority). Thus a dental practice is a small business setting in which success or failure is very directly determined by the dentists' managerial competence. In contrast, much of the previous research on management style has been conducted in an industrial or organizational setting, where the impact of the manager's behavior is obscured by the pervasive influence of organizational variables.[1]

Another interesting aspect of dental practice management is the anecdotal reports that dental offices experience a high rate of employee turnover.[2,3] The average tenure of a dental auxiliary has been estimated to be between 18 and 22 months.[4] This estimate is inconsistent with the 1975 Survey of Dentists,[5] in which the average (median) tenure for the primary chairside assistant is just under 3.5 years. Our study was designed to provide information on auxiliary turnover and to find out if this measure correlates with management style. Several other practice characteristics were measured to find whether they were related to leadership style and turnover. We also measured dentists' satisfaction with their careers to find out what factors were predictive of this important outcome.

A dental practice is a small business setting in which success or failure is very directly determined by the dentists' managerial competence.

Many theories have been advanced about the important dimensions and the measurement of management style.[6,7] Similarly, several theories have been proposed relating leadership style to management effectiveness. Some writers claim that one style is best[8,9] while others argue that circumstances such as position power, employee maturity, or the nature of the task determine the best style.[10,11,12] We chose to focus on management style as defined by the two dimensions of Consideration (or Concern for People) and Structure (or Concern for Production) because of their continued popularity in the applied management literature[9] and their ease of measurement using our mail survey approach. Since most dental practices present a similar set of management circumstances, we also chose to try to determine if one particular combination of Consideration and Structure was consistently related to management effectiveness.

Method

A random sample of 476 dentists in private practice in North Carolina was chosen (out of a total pool of 1339). The population was restricted to those dentists who had graduated at least 10 years

*James M. George, Ph.D., Charles L. Milone, D.D.S., M.P.H., Department of Dental Ecology, University of North Carolina at Chapel Hill.

previously to provide a sufficient baseline for auxiliary turnover.

Questionnaires were mailed to the selected dentists along with a cover letter. They were assured that their responses would be anonymous. A follow-up letter was sent a few weeks later stressing the importance of returning the questionnaire. A total of 234 were returned giving a return rate of 49%. Ten of the questionnaires were rejected because of incomplete responses or insufficient time spent in private practice giving a final sample of 224.

The first part of the questionnaire consisted of the Leadership Opinion Questionnaire[13] with the wording of the items slightly modified to fit dental practices. The second part of the questionnaire asked for information about the practice. The variables measured in this section are listed in Table 1.

Turnover was the most difficult variable to measure. We devised a matrix in which the dentist indicated by initials the person occupying a position for each of the previous five years. Turnover was calculated as the average number of auxiliaries leaving a job over a five year period.

Dentists in the most financially successful practices tended to be younger, employ more auxiliaries, see more patients per day, have more patients on their recall lists, take more continuing education and be more satisfied with their careers.

Results

The means of the variables measured and their correlations with each other are reported in Table 1. Management style measures showed little correlation with any of the variables except that Structure is higher in practices employing more auxiliaries. Practices of long standing and those with higher percentages of net as part of gross income tended to have less turnover.

Strong relationships that one would expect intuitively were also found among other variables. Dentists in the most financially successful practices tended to be younger, employ more auxiliaries, see more patients per day, have more patients on their recall lists, take more continuing education, and be more satisfied with their careers. Other than income, other predictors of higher satisfaction included more years in practice, higher numbers of auxiliaries employed and more patients seen per day.

Only 13.8% of the dentists were in a group practice. Those in group practice had higher scores on the Structure dimension, $t(222) = 3.78$, $p < 001$, but did not differ from those in solo practice on the Consideration dimension.

The Structure and Consideration scores were split at their median values to form a 2 × 2 matrix of High and Low Structure by High and Low Consideration. Analysis of variance was used to explore the association between these four combinations of Structure and Consideration and the practice variables. The only significant result

Table 1. Means and Correlations of Leadership Style and Practice Characteristics

		Correlation Matrix										
Variables	Mean	Consid.	Years	Gross	Net	Net Gross	# Auxiliaries	Turn-Over	Patients Per Day	Recall Patients	Cont. Ed. Hours	Satisf.
Structure	53.1	−.08	−.08	.12	.04	−.01	.18*	.05	−.07	.01	.10	.04
Consideration	41.1		.07	.02	.02	.06	.06	−.01	−.04	−.01	.08	.11
Years in Practice	19.5			−.30***	−.17*	.23**	−.27***	−.16*	−.14	−.02	−.20**	.14*
Gross Income	113				.82***	−.22**	.63***	−.05	.21*	.42***	.37***	.23**
Net Income	52					.32***	.44***	−.13	.28**	.34***	.24**	.25**
Net/Gross	.47						−.19*	−.20*	.14	−.04	−.12	.10
# of Auxiliaries Emp.	3.4							.01	.14	.31***	.40***	.15*
Turnover	.78								.01	−.11	−.01	−.05
# Patients Per Day	15.7									−.02	−.05	.18*
# on Recall List	1,391										−.01	.14
Cont. Ed. Hours	47.2											.07
Satisfaction	8.74											

*p < .05, **p < .01, ***p < .001

Table 2. Number of Auxiliaries Employed as a Function of Structure and Consideration

	Structure	
Consideration	Low	High
Low	3.2	3.4
High	2.9	4.1

was a Structure by Consideration interaction for the variable of Number of Auxiliaries Employed, $F(1,192) = 4.56$, $p < .05$. This interaction is reported in Table 2.

Discussion

We did not find the management style dimensions of Structure and Consideration to be predictive of management effectiveness in dental practice. Since the size of our sample was more than adequate to discover meaningful correlations, we must conclude that these dimensions (at least as measured by our questionnaire) are not important factors in determining any of the practice characteristics we examined. Perhaps other management dimensions or other means of measuring management style (such as reports by auxiliaries) should be explored, or perhaps different management circumstances must be taken into account.

We found that the turnover of auxiliaries in dental offices was at a rate less than one auxiliary leaving a given position over a five year period. This finding does not support the anecdotal reports of high auxiliary turnover but is in accord with the ADA 1975 Survey of Dentists.[5] Turnover was related only to years in practice and net as a percentage of gross income. Perhaps such factors as the auxiliaries' career and family plans, the "fit" of the auxiliary with the rest of the team, the availability of other jobs, or the salary program are stronger determinants of turnover than the dentists' leadership style or other practice dimensions.

As expected, we did find that practices employing more auxiliaries tended to have higher gross and net income. Perhaps the number of auxiliaries employed is determined by demand for services. The increased productivity resulting from employing more auxiliaries apparently more than offsets the cost of employing them, since both net and gross income increase. Dentists who employed the most auxiliaries tended to be higher in both Structure and Consideration (Table 2). Although the reasons for this relationship are not clear, one possibility is that structure enables the dentist to manage more auxiliaries and consideration makes work more pleasant for auxiliaries. This combination results in a productive practice that is rewarding for all team members.

Perhaps, as dentists mature in practice, they hold more realistic expectations and become more satisfied.

Dentists' satisfaction with their careers was quite high on the average. This result ran somewhat contrary to our expectations, since another report indicated a high degree of dissatisfaction among practicing dentists.[14] As shown in Table 1, satisfaction depends strongly on income and somewhat less on years in practice, number of auxiliaries employed and number of patients seen per day. Perhaps, as dentists mature in practice, they hold more realistic expectations and become more satisfied. The ability to make a difference in other people's lives surely is a satisfier. For the dentist, this is reflected by the number of people he treats and the number of people he works with.

The final finding of interest was that dentists in group practice were higher in Structure than those in solo practice. It has been our observation that the organizational complexities of a group practice demand a more structured management approach. Thus these dentists may be responding to the demands of the situation, or they may be self-selected into this setting because of their greater capabilities in structuring jobs and roles.

References

1. Melcher, A.J. Leadership models and research approaches. In J.G. Hunt and L.L. Larson (Eds.) *Leadership: The Cutting Edge.* Carbondale: Southern Illinois University Press, 1977, 94–108.
2. Kuhn, B.L. How to hold a dental assistant. *Dental Management,* 15:41-44, 1975.
3. Sapp, J. The constant turnover. *Dental Assistant,* 47;35-36, 1978.
4. Fowler, S. How to avoid staff burnout. *Dental Practice,* 2:26-36, 1981.
5. ADA Bureau of Research and Statistics. Utilization of auxiliaries and attitudes of dentists toward the delegation of duties. *JADA,* 93, 1976.
6. Schriescheim, C.A. and Kerr, S. Theories and measures of leadership: A critical appraisal of current and future directions. In J.G. Hunt and L.L. Larson (Eds.) *Leadership: The Cutting Edge.* Carbondale: Southern Illinois University Press, 1977, pp. 9-45.
7. Mitchell, T.R. Organizational behavior. *Annual Review of Psychology,* 30:243-281, 1979.
8. Hall, J. and Darnell, S.M. Managerial achievement: The personal side of behavioral theory. *Human Relations,* 32: 77-101, 1979.
9. Burke, W.W. Leadership: Is there one best approach? *Management Review,* 69(11):54-56, 1980.
10. Fiedler, F.E. *A Theory of Leadership Effectiveness.* New York: McGraw-Hill, 1967.
11. House, R.J. A path-goal theory of leader effectiveness. In E.A. Fleishman and J.G. Hunt (Eds.), *Current Developments in the Study of Leadership.* Carbondale: Southern Illinois University Press, 1973, pp. 141-177.
12. Hersey, P. and Blanchard, K.H. *Management of Organizational Behavior: Utilizing Human Resources.* 3rd Edition. Englewood Cliffs, N.J.: Prentice-Hall, 1977.
13. Fleishman, E.A. *Manual for Leadership Opinion Questionnaire.* Chicago: Science Research Associates, 1969.
14. King, A. Dentists who wish they weren't. *Nexus,* 4(17), 1978.

Reprint Requests to
James M. George, Ph.D.
School of Dentistry
University of North Carolina
Chapel Hill, NC 27514

A TIME TO CARE FOR DENTISTRY

A Presentation to the Tri-State Section

Wallace V. Mann, Jr.*

Several months ago, when Kirby Walker asked me to speak to the Tri-State Section of the American College of Dentists, we half-heartedly agreed on a subject that is on everyone's mind, a topic variously described as "busyness", "manpower problems" or "the dentist glut", but I think the profession already recognizes these problems and—perhaps—we have heard enough about them in their traditional context.

As members of the American College, I believe we have reached the stage where we are in a position to truly help the profession by putting aside self interest and demonstrating what it means to be a professional person—by caring for our profession and not simply caring for ourselves.

Thus, I want to go beyond the simple identification or definition of these problems and ask that you think with me as we consider methods of resolution. I do not expect you to agree with me entirely, but I hope you will at least consider what I have to say about possible solutions to the problems of busyness, manpower and attitudes of the dentist towards dental education and the profession.

The ability to grasp different points of view is the mark of the intelligent person. As F. Scott Fitzgerald wrote in his short story "The Crack Up", "The test of a first rate intelligence is the ability to hold two opposed ideas in the mind at the same time and still retain the ability to function".[1]

Government subsidies, whether supporting dental students or the dairy industry, result in surpluses.

Similarly, the ability to objectively consider various points of view is something all of us—even presidents—should develop. Nicholas von Hoffman noted in a recent article in Harper's, "A president, perhaps more than any other individual, must "cultivate the open mindedness that is disciplined by fact and renewed by novel hypothesis.[2]

I would suggest that the leadership within the American College, the American Dental Association and dental education must carefully nurture and develop those same characteristics—open mindedness, a mind disciplined by fact, a mind that is renewed by thinking and new ideas—if we are to meet successfully the challenges our profession faces in these times.

For the past few years, we have heard of many economic problems in dentistry. I would call your attention to two articles which appeared in the January and February issues of the Journal of the American Dental Association.[3,4] In these two reports, four noted economists give an excellent summary of the key economic issues confronting our profession today. Although one of the economists interviewed admitted the problems associated with economic forecasting, it was general consensus that current policy designed to stimulate growth in the private rather than in the government sector should benefit dentistry more in the long run.

Two of the issues the economists discussed merit comment here since they have a direct relationship to dental education. They are capitation aid to dental schools and the nation's dentist supply, two problems on the desk of every dental dean at the present time.

Capitation aid—for all practical purposes—is a dead issue. But some in our profession either won't let it die or they continue to raise the spectre of federal support to

*Wallace V. Mann, Jr., D.M.D., Dean, School of Dentistry, University of Mississippi.

the extent that all such aid should be denied. There isn't much to be gained by going back over the long history of capitation in the 60s and 70s. Dental schools are no different than other organizations which operate on the principle that when the federal cow wanders into the barn, somebody's going to milk it. One does not have to look too far to see pertinent examples: shipyard contracts, waterways development, medicare and medicaid, military bases, farm price supports, sugar, tobacco subisidies. When you look at the dollars involved in some of these programs, the support for dental education during the 16 years in which capitation payments were made pales by comparison. Furthermore, I am concerned over the possibility of a drastic pendulum swing where all support will be curtailed. Such a move would have serious consequences on a school's ability to attract students from low and middle income families, on our research programs, equipment maintenance and replacement—and the overall quality of our educational programs. But let's examine what the economists said on this issue when they were asked two questions. The first was:

"Is it an appropriate role of government to influence the number of people applying to dental schools through implementation of economic policies, such as capitation aid to dental schools?"[3]

Each of the economists agreed that government subsidies do not improve the economic climate of the open or free market. Government subsidies, whether supporting dental students or the dairy industry, result in surpluses. There also was concurrence that the marketplace for dental education is "self-correcting" because students are perceptive and the attention to various careers will increase or decrease in a cyclical pattern that is fairly easy to predict.

In spite of skepticism about government controls, one of the economists, Douglas Conrad, warned about overreacting and reducing enrollments in health professional schools. Although he did not support continuing capitation support, Conrad said that schools should carefully consider what the demand for entry is before cutting back. He points out that it is very expensive to create or expand schools, and schools should protect the flexibility of the system. The pendulum may well swing back in the direction of more interest in dentistry, and certain areas of the country, in fact, may need to increase enrollments as population shifts.

The national applicant pool has decreased from 14,970 in 1974 to 9648 in 1980, a 35.5% decrease.

Interest in the profession and the decline in our applicant pool leads us to the second issue from these two articles which I would like to discuss: the oversupply of dentists. This time the question posed to the economists was "In the mid 1960s, many people believed there was a shortage of dentists, and therefore, too little dental care being provided. Now, many seem to believe there is an oversupply of dentists. What's wrong with having an oversupply?"

I thought this was an interesting way for the Journal to pose part of the question, because one could just as well have asked, "What's right with having an oversupply?" One of the economists detected the loaded question and pointed out "Whether an oversupply or a shortage of dentists is good or bad depends upon who is adversely affected and who benefits".

As far as the public is concerned, an oversupply should create greater access to dental care, greater competition and lower fees, and a more favorable distribution of dentists throughout the country. However, dentists view oversupply as leading to less income, a decreased delegation of tasks to auxiliaries, greater competition and a loss in the quality of care delivered.

Obviously, the economic aspects of the supply of dentists is complicated. However, the reaction of the economists was not the gloom and doom that I have heard at many meetings in recent years. There should be some comfort to all of us when we read that we should neither panic nor overreact and that these problems are to be expected in a free market system. What is required is understanding, patience and a recognition that the profession must maintain its flexibility to adjust to future changes. Dr. Conrad summarized this position nicely in saying "Oversupply is a highly subjective concept as it is currently used in public policy discussions. Adjusted for general inflation, dental fees appear to have declined moderately or stayed roughly constant in recent years . . . this fee pattern undoubtedly reflects the market forces of rising numbers of dentists and an increasingly competitive practice environment."

However, labeling this state of affairs as an oversupply biases one's choice of policy options. Increases in the supply of new practitioners, which were unanticipated by current practitioners, will result in a lower rate of return on their capital investment than established practitioners originally predicted. These transitional losses are a normal feature of competitive market forces.

The challenge for policy choice is to balance a set of competing considerations: 1) not to exacerbate these transitional losses artificially by overly generous education subsidies and not to increase provider uncertainty by pursuing a stop/go approach to such subsidies; 2) to improve the delivery system's elasticity of supply by ensuring that dental education has the capacity and flexibility to respond to future changes in the market demand; and 3) to provide a sufficient inflow of new practitioners to maintain competitive fees in local dental care markets."

Finally, we ought to recognize that dentistry is not alone when faced with supply and demand problems for applicants and graduates. From time to time, there have been surpluses of engineers and lawyers. Demand dictates the "in" career fields, and in the past decade there has been a rush of students to graduate business schools. However, a recent article in a Jackson newspaper headlined "MBA losing its luster" reported that such major corporations as Exxon, Ford, General Motors, and Honeywell plan to hire from 25 to 50 percent fewer MBA graduates this year.[5] I was amazed to find out that the number of MBA degrees had increased by 10 times over the past 20 years. If that rate of increase were applied to dentistry, we would have about 35,000 students graduating this year using our first-year enrollment in 1960 (3,616) as basis. Our first-year enrollment in 1981 was 5,755, a one and one half fold increase in the past two decades, considerably less than the ten-fold increase in MBAs, and it appears the free market effects are taking hold with those students who were led to believe that an MBA was a ticket to paradise.

In the same article the president of Borg-Warner was quoted as saying, "We are slowing the pace in recruiting MBAs. They can be too bottom-line oriented, looking inward rather than outward. MBAs are often quite impatient, and they can be a bit condescending toward others. They forget it takes time and patience to learn customers and their needs." Executives also say that MBAs tend to lack sufficient training in communications and in entrepreneurship, especially at the small-business level.

We sometimes find similar characteristics in our students, recent graduates and junior faculty—a lack of caring, a self-centeredness, the "looking inward" to which Borg-Warner's president referred. I would like to comment on these characteristics because I believe they represent problems for dental education and the profession.

It has been fashionable for writers and novelists to apply names or phrases to various periods of time. Some of you may recall the "lost generation". When I was in college, I didn't realize it, but I was a member of the "silent generation" since I finished college and dental school in the fifties. We grew up during the World War II full of guilt because we were too young to fight the big war. We went to college and professional school in the shadow of the veterans who were a lot older and tougher than we. We kept quiet, recognized our place, thought ourselves very lucky to be in college or dental school and thus went about our lives without making waves.

Dental schools have never had an abundance of applicants. It is a common misconception among dentists as well as the public that it is very difficult to get into dental school.

Then the 60s hit us right between the eyes with the "beat generation". Remember the flower children, the musical "Hair", Viet Nam, protest revolution? We surely lost our complacency in a very big hurry. The 70s were a different story. Tom Wolfe wrote an essay in 1976 called "The Me Decade and the Third Great Awakening", and pretty soon writers everywhere were characterizing this period as "The Me Decade".[6]

The characteristics of this generation are outlined in an interesting and challenging book titled "A Time for Caring" by George Bach and Laura Torbet.[7] The authors list several manifestations of modern life which have resulted from the "Me Decade", from a fervent attempt to establish a new order:

—Politics and Government: Crushing taxation, inept and strangling bureaucracy, unpopular wars, . . . and the fall from grace of a dishonest administration have called into question all the values of the system. Voters . . . feel powerless to change the . . . order of things.

—Religion: Organized religions stand accused of everything from repression and hypocrisy to irreverence. Yet the need for faith or transcendence is powerful. Modern society . . . hosts the kind of misguided, fanatical faithful who go to their deaths in a mass suicide in Guyana.

—The Sexual Revolution: In no sector has rejection of the past been more complete or more radical than in the area of sexual mores and practice. The one-night stand is the sexual liaison of preference. Sexual pleasure is measured in terms of performance . . . Getting laid has replaced getting loved.

Too frequently, I see a perversion of the golden rule, and it seems that the credo now is "Do unto others, before they do unto you."

—Education: Schools have become child repositories in which education is subordinated to discipline. Students who can't read or write drop out of classes run by once-dedicated teachers who become case-hardened and unconcerned. The egalitarian dream of a college education for all comers has become a nightmare of educational mediocrity, lowered standards, and bankrupt schools turning out undereducated graduated. . . ."

And perhaps the most meaningful manifestation for us is the author's description of professional care: "The lack of caring in society at large has spawned a huge professional-care industry. People pay dearly to get the care they cannot find at home or within themselves. Yet caring professionals are subject to the same syndrome of exhaustion, cynicism, carelessness and petty corruption that charac-

terizes other sectors in American Life."

Thus far, I have identified major problems within our profession. These include the complex problems of capitation, the supply of dentists and current attitudes of a vast segment of our associates who just don't seem to care. If they care, at all, they care about themselves and ask only, "What's in it for me"? Perhaps the most troublesome aspect of this pervasive attitude is that it is reaching down into the high schools. In a recent editorial in the Chronicle of Higher Education, Rhoda Gilinsky talked about her impressions of current college applicants. For the past decade, she has served as an interviewer for an Ivy League College, and her impressions of the students she talked to bore out the general attitude of self-caring. In her words " .... the applicants of recent years seem to care less, to do less about the world beyond their immediate boundaries", there is " .... a general lack of idealism". and " .... emphasis on the me-first me-only values."[14]

One can only wonder what effect this attitude will have on the professions these students will enter. I know it is unfair to generalize—and certainly many people remain socially sensitive—but I am most concerned when I think of the possible effect the dentists raised in the "Me Decade" will have on the profession and professional practice. Too frequently, I see a perversion of the golden rule, and it seems the credo now is "Do unto others, before they do unto you."

"The applicants of recent years seem to care less, to do less about the world beyond their immediate boundaries. There is . . . a general lack of idealism, and . . . emphasis on the me-first, me-only values."

Perhaps I'm being overly sensitive, but I have attempted to identify these problems and will not leave you without some suggestions for their resolution—some suggestions about what the profession and individuals can do to lead us from the "Me decade" into what has already been called the "We Decade"—The Caring Genaration.

I include within the profession, organizations at the state and national level, groups like ours—the American College as well as dental education. First, as professionals, we should get the facts straight and then speak from knowledge, not ignorance. Let's consider the current admissions and enrollment pictures in schools of dentistry. When I travel, I hear all sorts of rumors about the decline in applicants, the fact that schools are accepting unqualified applicants and that schools are closing.

If you care about your profession, you will play a more active role in your state and local government.

What are the current enrollment levels in the United States and what are the projections? The national totals of first-year position are as follows:

1978/9	6301
1982/3	5517
	12.4% decrease

Schools are projecting even further enrollment decreases, and Dr. Harry Bruce, Executive Director of the American Association of Dental Schools, believes there will be about a 20 percent reduction in first-year positions over the next 10 years. In real numbers, this will affect dental schools, decreasing the first-year enrollment of 1981/82 from 5748 in all schools to about 4598—a drop of 1150 positions.

All of this is conjecture. If one considers the rapid enrollment escalation from 1967-1982 and applies the same rate towards reduction, taking into consideration the already announced cuts and those projected for other reasons, it is not unrealistic to think of a reduction of 1,000 first-year positions, plus or minus 200.

Predicting the future has always been a popular game. Even Thomas Watson, former president of IBM, missed the mark after the invention and successful operation of the first computer. "I think", he said, "there is a world market for about five computers".[8]

In spite of the difficulty in predicting what dental schools will do, I hope I have convinced you that we are not insensitive to the marketplace. On the other hand, you must realize the issue we face is that of maintaining support in the light of diminishing resources and, at the same time, maintaining quality programs—the stance you ought to expect of dental education. If professional organizations care about the profession, they will make every effort to help dental educational institutions adapt to fewer students, while maintaining funding levels to assure a first-rate education.

I believe a review of our applicant pool points out to another area in which organizations can assist, and I have pleaded this case as a member of the Commission on Accreditation. I hope we can develop a level of understanding, again based on hard data, which will convince members of this organization that we cannot persist in this negative attitude toward ourselves and the opportunities within the profession.

Dental schools have never had an abundance of applicants. It is a common misconception among dentists as well as the public that it is very difficult to get into dental school. What are the facts? If one goes back to 1955, the ratio of applicant/acceptance was 1.3/1, and tracking it through the years at intervals of five years, one finds the highest ratio was 2.6/1 with a range of the low of 1.2 (1960) to the high of 2.6 in 1975. The 1981 ratio of applicant to acceptance was 1.4/1. So, we have never been that attractive, and yet the major concern is the rapid drop over the past eight years. The national applicant pool has decreased from 14,970 in 1974 to 9648 in 1980, a 35.5% decrease.

Obviously, there are many factors associated with this extremely sharp drop. The economy, cost of education, attractiveness of other careers, intensity and duration of educational programs, the sometimes insensitive teaching and learning environments in dental schools, and last, but by no means least, the role of dentists in stimulating students to select dentistry. Nearly all of these factors are beyond the direct control of our professional organizations, but I firmly believe it is time for our organizations to encourage and not discourage prospective students. We should be honest with them and point out that dentistry is not a sure way to make a million but we do have a lot to offer prospective dentists. In a recent Gallup Poll which reflected the opinion of some 1500 Americans, the profession did very well. When those interviewed were asked the question "How do you rate the honesty and ethical standards of people in these different fields?" Dentists were third highest, just below pharmacists and clergymen and just above physicians, engineers and college teachers.[9] The occupations and professions held in the lowest respect were realtors, state office holders, insurance salesman and car salesmen.

We need to capitalize on our position and be proud of our profession and of what it has to offer. Our organizations should play a critical role in getting this message across to our future dentists. I really don't think the American College wants dental schools to accept those students who are left over from the other professions. We want the best—the bright, highly motivated student.

Also, as members of the American College, I would remind you of the second purpose and objective of the college, "To encourage qualified persons to consider a career in dentistry so that dental health services will be available to all and to urge broad preparation for such a career at all educational levels."[10]

The second thing which organizations can do is to play a more active role at the state and regional level as government moves away from Washington. I believe more control will be at the state level, and we must take an active role in this area so we may have much more to say about our profession in terms of maintaining our quality, shaping the laws and influencing the flow of funds to support our dental educational programs. If we don't, we will find others elected to office, appointed to Committees, introducing legislation and changing our profession. If you care about your profession, you will play a more active role in your state and local government.

I have mentioned one way in which I think organizations can show how they care for their professions, and I cannot neglect the role that dental schools should play.

Dentistry is a business, and the dentist must have management skills as an effective administrator. For this reason, we must ask if our dental schools are doing a good job in educating their students in these skills? In the book "Developing Executive Leaders", Robert Katz says an administrator must have three skills: technical, human, and conceptual.[12] Measured by almost all parameters, dental schools in this country do an excellent job of teaching technical skills; through our curricula we impart specialized knowledge and an ability to analyze problems which are resolved with specific techniques.

Dentistry is a business, and the dentist must have management skills as an effective administrator . . . I would propose that a mandatory general practice residency be required of every dental student . . .

Human skills are much more difficult to develop. Katz defines human skill as an ability "to work effectively as a group member and to build cooperative effort within the team he (or she) leads". Schools are moving in this direction by establishing teaching teams. Students gain experience early in the curriculum in serving as a team member and then eventually moving up to manage the team. However, relatively little time is spent in developing those human skills which are so important in dentistry. There are consistently two areas of teaching which are regarded as lacking in dental schools; Orthodontics and Practice Management. Surveys of recent graduates in almost every dental school I have site-visited point out these areas of teaching deficiency. Consequently, dentists must depend upon continuing or self education to develop their skills for effective communication and understanding of those with whom they live and work.

Conceptual skill is even more difficult to analyze, but it is a manager's ability to coach those around him to help them gain insight into problem solving. We do very little of that type of teaching in dental schools, and I suppose this is the reason our students, when suddenly alone in an office, are at a loss in dealing with their employees.

Dental schools should show their caring by modifying educational programs to better prepare students in these three skill areas so the student can become an effective administrator. To do this, I would propose that a mandatory general practice residency be required of every dental student before the student is allowed to take a state board examination. A discussion of that proposal is not my purpose here, so suffice it to say that four years is adequate to teach the technical skills. However, a residency year in which the new graduate practices as general practice resident is needed to help the new dentist learn and develop human and conceptual skills.

Having discussed what organizations should do to help care for our profession, let me briefly touch on

what each of us should do in caring for dentistry.

Just a few days ago, a brochure arrived on my desk advertising a course in Pensacola, Florida. The title is "Caring for Your Patient", and it will be presented by Dr. F. Harold Wirth, Past President of the L.D. Pankey Foundation. The course description says that trust, good judgement, appreciation, able management, emotional maturity, stress reduction are part of caring for patients. Evidently, others are concerned over our need to care.

On a more personal basis, let me share an incident in my life which dramatically illustrates the need for caring. In 1970, I decided to accept a post at Connecticut and leave Alabama. I used what some have described as narrow bore, small gauge mentality in reaching that decision. For me (perhaps that should be a capitalized ME), all that I could see was going home to New England in spite of the fact that my family was very content in Alabama. We had a beautiful home, and I had a daughter who had spent almost 10 or her 16 years growing up as a southern belle. She was about to begin her senior year in high school. But we moved and it was a difficult year.

Many of you have had to contend with teenagers who are "moving out into their environment" as the psychologists euphemistically say. My problems with Lisa thus were compounded, and one day everything came to a head over a new boy friend. It was an unpleasant scene that evening, and yet the next day when I came home from work, Lisa and I went out onto the porch and had a long talk. She still didn't see things my way and so, in desperation, I threw up my hands and said, "Lisa, I've given you my advice, I've told you what to do, and right now I really don't care what you do". With that, I turned away and Lisa broke down sobbing and said "Don't say that, just don't say that". I said "Say what?"—she replied "Don't say you don't care. You're supposed to care, you're my father".

I can think of no better explanation of the need for caring in human relations.

Lisa taught me how to care, and like many of you I've had a lot of on-the-job-training. Caring is an important quality in our lives, and I recommend the book I referred to earlier, "A Time for Caring", by Bach and Torbet which contains many references to the biological and psychological aspects of caring. The authors indicate the importance of taking care of yourself, but a more powerful and natural force is to care for each other.

A first rate intelligence, the mark of a true professional, is someone with an open mind, disciplined by fact and renewed by new thinking. Let's demonstrate that—by caring.

I cannot improve on their writing and would like to conclude with a passage of theirs:[13]

"Agression and evil, benevolence caring, are merely human attributes to be put to use where needed and useful, and are tempered one by the other. Caring surroundings lessen the need for hostility as a means of getting what one needs, while a hostile environment inhibits the expression of caring feelings. Caring is coded into the genetic makeup of the species, reinforced by the very conditions of human life, and is as necessary to survival as aggression and the ability to fight."

I have attempted to share with you some of my concerns as a dental educator and look at a few of the problems which are of particular importance to our profession. I have identified some of these problems and have tried to give you some insight into the problems of federal support for dental education, dentist supply, applicant pool, enrollment, and the attitudes of dentists toward their profession. I also have tried to pose some solutions to these problems by providing accurate and up-to-date information about these issues. Sometimes problems go away when we recognize the facts. Remember what I said earlier—a first rate intelligence, the mark of a true professional is someone with an open mind, disciplined by fact and renewed by new thinking. Let's demonstrate that—by caring. Care a bit more about the American College, about dental education, and most importantly about our profession.

REFERENCES

1. Fitzgerald, F.S., *The Crack Up.*
2. von Hoffman, N., "Contra Reaganum", *Harper's*, May, 1982, pp. 29-36.
3. "Dentistry in the Marketplace: An Economic Forecast" Part 2, *J.A.D.A.*, 104:18–24, January 1982.
4. Dentistry in the Marketplace: An Economic Forecast" Part 2, *J.A.D.A.*, 104: 148–154, February 1982.
5. "M.B.A. Losing Its Luster", The Clarion Ledger, Jackson, MS, May 15, 1982.
6. Wolfe, T., *In Our Time*, Farrar Straus Giroux, New York, N.Y., 1980, p. 9.
7. Bach, G.R. and Torbet, L., *A Time for Caring*, Delacorte Press, New York, N.Y., 1982, pp. 12–13.
8. "Looking for Tomorrow (and Tomorrow"), *Time*, April 26, 1p. 90.
9. Ann Landers, The Clarion-Ledger, Jackson, Mississippi, May 1, 1982.
10. "The Fellowship Handbook and Roster of the American College of Dentists", 1982, Executive Office, The American College of Dentists, Bethesda, Maryland, 1982, p. 6.
11. "1981 Business Climate Study" Mississippi Economic Council, Jackson, MS. 1982.
12. Katz, R.L., *Skills of an Effective Administrator*, Developing Executive Leaders, Eds., Bursk, E.L. and Blodgett, T.B., Harvard University Press, Cambridge, Mass., 1971.
13. Bach, G.R. and Torbet, L., *A Time for Caring*, Delacorte Press, New York, N.Y., 1982, p. 11.
14. Gilinsky, R.M., "How Will We Find the Philosophers in a World of Lawyers and Doctors", The Chronicle of Higher Education, February 24, 1982, p. 25.

Reprint requests to
Wallace V. Mann, Jr., DMD, Dean
University of Mississippi
School of Dentistry
2500 North State Street
Jackson, Mississippi 39216

DENTAL CARE FOR THE MENTALLY ILL

The Need For Establishing Extramural Programs

Marvin J. Block*

Previously, treatment for several kinds of mental disorders was concentrated at the various psychiatric hospitals. Current concepts in psychiatry advocate that many selected individuals with mental illness can function well in their own communities with supportive psychiatric services in local mental health facilities. With fundamental changes in the methods and the utilization of innovative approaches in the treatment of mental disorders, long term institutional confinement for many people has been appreciably reduced.[1-4] Consequently, the new pattern for most patients admitted to mental hospitals is short term hospitalization before returning to their own communities.

Smith et al[5] found that patients from areas with community mental health programs spend less time in mental hospitals and were able to spend a greater amount of time in their local communities. These studies indicate that supportive care services, particularly, the use of psychiatric medications can enhance social functioning and reduce repetition of antisocial behavioral patterns. When institutionalized mentally ill individuals return to their communities, they require well organized support services. This includes dental treatment as a part of the holistic view of health care. In terms of total patient care, dentistry has an important role in the rehabilitation of the mentally ill patient. As these support systems replace institutionalization, the major responsibility for dental care will increasingly fall to the private practitioner. Dentists in the community will be seeing more and more individuals who are or who have been under psychiatric care.[6,7] An increasing number of emotionally disturbed patients who live at home or some other community environment often seek dental treatment from the private practitioner.

Dentists must have the insight as well as the willingness to carry out the responsibilities of the dental profession in meeting the dental health needs of the mentally ill in the community. Markette et al[5] stated that "the restoration and maintenance of oral health for this segment of the population has significant relevance to the overall well being of the individual. The problem of poor appearance, limited speech and oral function tend to reinforce feelings of inadequacy, isolation and rejection. Good dental health as a component of the overall support system is an important factor for increasing responsiveness to mental health therapies."

Dentists in the community will be seeing more and more individuals who are or who have been under psychiatric care

Dentists generally are reluctant to provide care for the mentally ill patient due to: (1) lack of understanding of patients with mental disorders (2) stigma of mental illness in our society (3) lack of education, training and experience to treat these patients (4) not knowing what to expect during dental treatment (5) inadequate knowledge of the pharmocological aspects in the treatment of mental disorders. It is necessary for dentists to become more aware of the relationship between psychiatry and dentistry. There can be little or no improvement in facilitating the delivery of care to individuals with mental problems as long as the dentist lacks understanding and certain basic attitudes to treat patients with emotional disorders.

Dental students should have the opportunity to acquire clinical experiences and to develop specialized knowledge in the care of the mentally ill before entering private practice. Students who have had clinical experience with the special patient seem to have a better attitude and more competence in dealing with these patients than those who have not.[8,9] Therefore, it is the responsibility of the dental

*Marvin J. Block, D.D.S, M.P.H., Associate Professor, Department of Dental Ecology, University of North Carolina, School of Dentistry.

schools to provide professional training and experience for students so that the dental profession can meet the increasing challenges of delivering dental health care to the mentally ill. Presently, dental schools offer little or no training in treating patients with a history of mental illness. Salley[9] points out that there is a serious backlog of dental neglect in a significant number of all kinds of handicapped individuals which is due to a void in the educational experiences offered to undergraduate dental students.

Recognizing the need for training in the dental treatment of the mentally ill and other handicapped patients, the Department of Dental Ecology at the University of North Carolina School of Dentistry established a required course as one of the components of an overall extramural program. This special patient care program for senior dental students has two major goals: (1) to expose students to a wide variety of patients with special needs, problems and conditions (2) to give students an opportunity to observe different functioning health delivery systems in operation. Over a three year period 74 students were randomly assigned to a psychiatric institution to learn the basic fundamentals of mental disorders, to provide dental care for this segment of the population with mental illness.

Program Design and Content

Students attend an orientation session before leaving for the extramural sites. Discussions are held concerning expectations of field preceptors, dental school faculty and dental students. All students receive manuals which include information concerning logistics, purpose and objectives of the program and required reading materials relating to health care of mentally ill patients. At the end of the two week rotation, students return to the dental school for a seminar which includes discussions about their extramural experiences. A final examination based on the objectives of the program is given at the end of the semester.

At these mental institutions, students receive direct patient care exposure in modern and productive settings with assistants trained in four-handed dentistry. They treat a diversity of patients under supervision of the dental director and staff dentists who have adjunct faculty appointments in the dental school. Students participate in a variety of dental procedures which include screening examinations, oral prophylaxes, restorative and periodontal treatment, prosthodontics, endodontics and minor oral surgery. This is accomplished in a simulated private practice environment.

There is a serious backlog of dental neglect in a significant number of all kinds of handicapped individuals

Most patients receive at least one medication. By consulting with the dentists an physicians, students have the opportunity to learn about the correlation of various aspects of clinical pharmacology as it pertains to dental care and the medical and physical evaluation of patients.

During the seminars at the extramural sites there are discussions concerning different aspects of performing dental treatment under general anesthesia and instruction on the scrub procedure, gowning and gloving in the operating room. Students interact and discuss complex an unusual cases and learn about drug usage, appropriate doses of medications and handling of emergencies. At the clinical conferences of the medical staff, students are informed about various medical problems of patients, psychiatric pathology, psychiatric treatment philosophies and different modalities in the care of the mentally ill.

Program Objectives

Knowledge Objectives. Specific knowledge objectives were developed for this program in the dental care of the mental ill patient; these comprise the questions included in the written final examination at the end of the semester. Based on the assigned readings and participation in the extramural experience, the student, after completion of the program must be able to:

1. Identify three behavioral problems in patient management of the mentally ill during dental treatment and describe methods to solve them
2. a. define psychosomatic reaction
   b. list three lesions of the oral cavity which may be caused by psychosomatic etiological factors
3. a. discuss the reasons for the changing emphasis in the care of the mentally ill represented by the greater utilization of area mental health centers, rather than large mental institutions.
   b. discuss how the above changes will affect the following:
   (1) the private dental practitioner
   (2) the role of the dentist in the mental institution
4. a. discuss how dental treatment can contribute to the overall improvement of a mentally ill patient
   b. outline an approach to improving the oral hygiene of mental patients in a chronic ward in a psychiatric hospital
5. Discuss the following:
   a. why many elderly mental patients, past the age of maximum caries susceptibility, who are on large doses of pherothiazine, might suddenly develop rampant caries

b. describe the side effects of long term phenothiazine medication on patients with mental illness

6. Discuss how you would manage a mentally disturbed patient who refuses to cooperate during dental treatment
7. a. discuss the differences between mental retardation and emotional disturbance

   b. how much are they correlated?
8. a. define Parkinson's Disease

   b. list three causes of Parkinson's Disease and discuss two specific problems which may occur when working with such patients
9. a. define schizophrenia

   b. list the four types of schizophrenia and describe the behavior exhibited by each type
10. a. list six cardinal symptoms of depression

    b. list the five cardinal features of organic brain syndrome

    c. list the four A's of schizophrenia
11. a. define hypochondriasis

    b. discuss three examples of how this may be exhibited in dental patients
12. Define what is meant by "normal" or "healthy". What generally distinguishes a normal person from one with emotional disturbance in terms of anxiety and ability to function?

Skill Objectives. These include those abilities that the student is expected to develop by the end of the extramural experience. Included are the ability to:

1. Review the past, present, social and medical case histories of patients admitted to the clinic
2. Observe dental treatment of patients with variations in mental illness, considering special problems involved in the treatment of these patients—the techniques applied in various operative procedures and patient management
3. Discuss with the staff psychologist or psychiatrist various psychiatric problems relating to the delivery of dental care to the mentally ill
4. Discuss with the dental director and staff specific manifestations of mental and physical disabilities of patients who receive dental care
5. Treat patients in the dental clinic under supervision of the dental director and dental staff
6. Participate in oral hygiene program of prevention for patients able to carry out these procedures
7. Participate in inservice training in oral hygiene procedures for hospital personnel who are responsible for patient care

Attitude Objectives. These include those attitudes that the student is expected to develop by the end of the field experience. The student should be able to:

1. Develop confidence in his/her abilities to treat mentally ill patients and continue to accept this segment of population for dental care in private practice.
2. Interact with individuals of other health disciplines who are responsible for the delivery of health care to the mentally ill—(psychiatrists, psychologists, social workers, etc.) to better understand the problems of mental illness.
3. Understand the role of the dentist as part of the health team in providing dental care to the mentally ill.
4. Become comfortable and receptive to working with trained auxiliary personnel in providing dental care.
5. Learn about current basic psychiatric concepts in order to have a better understanding of the different kinds and varying degrees of mental illness.

Evaluation of the Program

To evaluate the effect of the extramural program on students' attitudes toward dental care for the mentally ill, a questionnaire was devised. This pertained to the educational, private practice application and personal aspects of the experience. Prior to the experience, most students had reservations about providing dental care and handling mentally ill patients; they didn't know what to expect; some were fearful, some were reluctant. However, after the experience according to the evaluations, students pointed out they were more self confident and felt better informed to treat this segment of the population. Students realized that many of these patients would be going back to their communities, and that the private practitioner of dentistry would be seeing more individuals with mental disorders. From these experiences the students felt that it was worthwhile and rewarding to provide dental care to the mentally ill. Some of the items of the evaluation and the typical responses of the large majority of students are listed as follows:

1. Did you have reservations about treating mentally ill patients before your extramural experience?
   - Yes, I didn't know what to expect from mentally ill individuals.
   - Unsure how they would respond.
   - To my knowledge, I had not met a mentally ill patient before this.
   - Basically, I was not familiar with treatment therapy now utilized to help mentally ill patients.
   - Prior to this experience, I was somewhat afraid and uncomfortable, even thinking about being around this population.

2. Due to your experiences at the mental hospital, do you feel more adequate in treating mentally ill patients?
   - I became more at ease with these patients as I provided dental care.
   - I now feel that I have the capability to adequately manage and treat these patients.
   - I got plenty of experience performing restorative and surgical procedures.

3. Do you feel that the extramural program in treating the mentally ill patient will be beneficial to your future practice of dentistry?
   - Yes, because more mentally ill patients are returning to their communities and will be seeking dental care.
   - My practice will be open to these patients; I know what to expect.
   - I definitely will see patients with depression and other psychiatric patients in my office.
   - I feel that these patients need dental care and its the responsibility of the dentist in the community to treat these people.

4. From your experiences at the mental hospital do you have a better understanding of the behavioral management of mentally ill patients?
   - Yes, I feel that I now understand what to realistically expect in the way of patient cooperation and how to relate with their degree of mental depression.
   - The experience has demonstrated that most of these patients respond well in the dental chair.
   - Yes, because of first hand information and experience as well as the talks we had with dentists, psychiatrists and psychologists.
   - I have a much better understanding from reading about the patients' psychological diagnosis in the charts, observing specific illnesses and the different methods of patient management.
   - Patients with mental disorders are not as unpredictable as I thought; I learned that many of these individuals respond to genuine concern.

5. From your experiences at the psychiatric institutions do you feel that you have a better understanding of mental illness?
   - More aware of mental illness and its effects on people.
   - Now have some understanding of mental illness and the problems of the mentally ill.
   - Old concepts of the mental ill were broken down.
   - Yes, excellent opportunity to learn about the mentally ill.
   - I now feel that more of society is inflicted with mental illness than I thought.

A small number of students felt they would rather not treat this population. Most of these students did not give any particular reason. Others stated that it took more time or they would not like to deal with too many psychological problems.

Summary

With continued emphasis in the deinstitutionalization of individuals with a history of mental disorders who will be living in their local communities, more responsibility for dental care for these individuals will be borne by the private practitioner. Unfortunately, many dentists do not provide care for this population due to lack of information and lack of previous exposure to this type of patient. In order to better educate the practicing dentist to meet these dental health needs, it is necessary to prepare the undergraduate students with the necessary knowledge and skills to treat this segment of the population.

This must be done in a meaningful manner by coordinating didactic material and clinical experiences in working with the mentally ill. By giving dental students the opportunity to treat this segment of the population, it is hoped that students will attain positive attitudes and the willingness to provide dental care for these individuals in their private practices. The University of North Carolina, School of Dentistry at Chapel Hill has planned, developed and implemented such a program with the purpose of providing worthwhile learning experiences for dental students in the care of people with mental disorders.

References

1. Kaplan, H. M., Bohr, R. H. Change in the Mental Health Field. Comm. Ment. Health J. 12:244-251, 1976.
2. Kirk, S. A. Effectiveness of Community Services for Disturbed Mental Hospital Patients. Am. J. Orthopsych. 46:646-659, 1976.
3. Talbott, J. A. Deinstitutionalization: Avoiding Disasters of the Past. Hosp. Comm. Psych. 30:621-624, 1979.
4. Cotton, P. G., Bene-Kociemba, A. and Starker, L. A Mental Health Center's Aftercare Specialty Service for Discharged State Hospital Patients. Hosp. Comm. Psych. 31:397-400, 1980.
5. Smith, W., Kaplan, J. and Siker, D. Community Health and the Seriously Disturbed Patient. Arch. Gen. Psychiatry. 30:693-696, 1974.
6. Markette, R., Dicks, L., Joseph, L. and Watson, R. C. Dentistry and the Mentally Ill. J. Acad. Gen. Dent. 23:28-30, 1975.
7. Cummins, F. N. Mental Illness and Dentistry. Va. Dent. J. 41:22-25, 1964.
8. Schmidt, G. Neuropsychiatrist and Dentist: A Need for Cooperation. J. Dent. Med. 15:13-21, 1960.
9. Miller, S. L., Heil, J. Effect of an Extramural Program of Dental Care for the Special Patient on Student Attitudes. J. Dent. Educ. 40:474-744, 1976.
10. Salley, J. Providing Dental Care to the Handicapped. J. Dent. Educ. 44:136-140, 1980.

Reprint request to:
Marvin I. Block, DDS
School of Dentistry
University of North Carolina
Chapel Hill, N.C. 27514

THE CAREER SATISFACTION OF DENTISTS

In Relation to Their Age and Income

Philip Yablon*
Judith F. Rosner**

The importance of the work role and the desirability of a positive work experience in the total life experience of the individual are generally recognized. The degree of satisfaction with one's work has been linked to the quality of one's life outside the work role, especially with regard to one's physical and mental health.[1] In a fifteen year study of aging,[2] the strongest predictor of longevity was work satisfaction. The second best predictor was overall happiness.

In the *Seasons of a Man's Life*, Levinson states: "In all societies, work is a major part of individual life and of the social structure. . . . A man's occupation is one of the primary factors determining his income, his prestige and his place in society. It exerts a powerful influence upon the options available to him, the choices he makes among them, and his possibilities for advancement and satisfaction. His work world would also influence the choices he makes in other spheres of life.

At best, his occupation permits the fulfillment of basic values and life goals. At worst, a man's work life over the years is oppressive and corrupting, and contributes to a growing alienation from self, work and society."[3]

The practice of dentistry contains many of the factors associated with positive career satisfaction. It offers prestige, relative autonomy, income well above the average, the opportunity to help others and creative and artistic challenges. In spite of the plethora of reports describing dentists' high stress and burnout symptoms and their high suicide and divorce rates,[4,5] dentistry has been a relatively stable and prosperous profession during the last 25-30 years.

Change in one's personal and/or occupational situation has been associated with an accumulation of stress.[6] Today the occupation of dentistry and the role of the dentist are undergoing considerable changes.

In April 1981, a symposium was held in New York at Columbia University's School of Public Health "to examine the dental care system as it is affected by competition, the market for dental care and the forces creating change in the delivery of care."[7] Papers were presented relating to traditional and emerging forms of dental practice,[8,9] and the economics of the dental care market.[10,11] It was suggested that the role of the dentist, as well as the traditional dentist-patient relationship, is being modified by these alternative delivery modalities. Another conference (September 1981), on "Alternative Career Options for Dentists" was held at New York University's School of Dentistry.[12] These kinds of discussions were unheard of several years ago. They underscore the

*Philip Yablon, D.D.S., M.P.H., Ph.D. is Director of the Division of Behavioral Science, Oral Health Research Center and Associate Professor of Preventive Dentistry at the Fairleigh Dickinson University School of Dentistry. He has been practicing general dentistry in New Rochelle, New York, since 1961.

**Judith F. Rosner, Ph.D. is Associate Professor of Sociology at Mount Saint Mary College, Newburgh, New York and Behavioral Science Investigator, Oral Health Research Center, Fairleigh Dickinson University School of Dentistry.

turbulence taking place within the structure of the dental profession. However, the self-image, values and attitudes of American dentists are the product of their historical development. The dentist's world of work started with their specialized education, training and socialization received in dental school. An understanding of the traditional values and goals of most dentists is necessary to appreciate their responses to whatever changes are taking place in their professional lives.

It is within this framework that this study of almost 1200 dentists should be viewed. It deals with how the career satisfaction of dentists is related to various factors in their professional and personal lives. The research attempts to obtain information and uncover relationships that exist between satisfaction and the practice of dentistry.

This paper which is part of the larger study concentrates on the following two areas:

1. The development of three career satisfaction scales:
   a. overall career satisfaction
   b. intrinsic satisfaction
   c. extrinsic satisfaction
2. The relationship of the study group's age and income with these satisfaction scales.

Other studies of dentist career satisfaction have come from various sources and have employed differing hypotheses and methodologies. Most of them ask whether the dentists are satisfied with their work, to what extent their expectations and goals been realized and would they choose dentistry if they had it to do over again. In our literature review, we will concentrate on studies that have data relating dentists' age and income to their career satisfaction.

Literature Review

Eccles and Powell (1967) conducted a mail survey of dentists practicing in South Wales.[13] (They had a response rate of 88.5 percent N = 231.) They were interested in such factors as the dentist's mental and physical health, career values, attitudes toward the practice of dentistry, and how these interact with various practice conditions. Some relevant findings were that dentists between the ages of 23-34 and those over 65 were the most satisfied, while those in the 45-54 age groups were the least satisfied. The greatest source of satisfaction were related to achievement and satisfaction in the work itself, as well as good relationships with patients. The greatest sources of dissatisfaction and difficulty lay in the external limitations imposed on the dentist and the pace of his work. Income and status had little effect on job satisfaction. Sixty percent of the dentists said they liked their work while 19 percent stated that they did not like it.

Page and Slack (1969) did a survey of all dental graduates of the London Hospital Medical College from 1920 onward (N = 358, 60 percent response rate).[14] They asked the dentists about various aspects of their work such as the degree of anxiety it generated, the level of fatigue associated with it, and its most liked and disliked features. They related their findings of satisfaction and dissatisfaction with Herzberg's theory of job satisfaction. They found "that the fit between his theory and data from this survey is sufficiently good to inspire confidence that these considerations clarify important dimensions of a man's working life." Forty-six percent of the sample said they would choose dentistry again while 19 percent said they would not, if they had their "time" to choose again. When asked what are the things they liked most about their work, only six percent chose financial reward and six percent chose status and prestige.

Murray and Seggar (1975) found a high level of role satisfaction among dentists practicing in the State of Utah (N = 253, 72 percent response rate).[15] Levels of satisfaction were negligibly affected by age, number of years in practice, social participation or practice

location. The predominantly Mormon religious orientation of the sample may have severely affected the results.

Bailit et al, in 1975 in a presentation to the American Association for Dental Research, reported that in their study of 138 Connecticut dentists the most highly satisfied were "involved more extensively in non-practice professional activities, utilized more auxiliaries, had more patient visits, spent more time on prosthetics than operative dentistry, and had above-average incomes."[16]

Howard et al, (1976) cited stress as a factor in the job satisfaction of dentists.[17] A Canadian study (N = 33) was designed to examine job stress and other issues related to careers in dentistry. In this study, the best predictors of job satisfaction were (1) the job's interference with one's personal life, (2) the length of time in one's present location, and (3) the number of years of experience of the dentist. The younger dentists were found to be the most dissatisfied in the group.

Dental Economics, in 1977, published results of its surveys which contained data related to our subject matter.[18] Questionnaires were distributed by insertion into previous issues of the journal. The self-selected respondents mailed the completed questionnaires to the publication. A profile of the troubled dentist was developed (N = 1800). "The depressed dentists noted more divorces, more illnesses, fewer hobbies, and less friends to confide in. They tend to be overweight and have usually been in practice from five to fifteen years and are from 35–45 years of age."

Burge et al (1978), in a paper presented to the AADR, discussed job satisfaction among dentists.[19] Their data were obtained from dentists attending the American Dental Association's annual meeting in Chicago in 1975 (N = 413). The dentists who volunteered for this study were from a group who were participating in a health screening program offered at the meeting. Satisfaction was measured using the Porter Job Satisfaction Scale. This measures the perceived present fulfillment of needs, relative to the fulfillment believed should be available in one's job. When using this scale the group was most satisfied with job security and least satisfied with feelings of accomplishment and self-fulfillment. Dissatisfaction with feelings of accomplishment went down with an increase in age. The same was true with an increase in income, although when the joint effects of income and age were studied the results were more complex. Older dentists were more dissatisfied with low income than the younger ones, and less dissatisfied than young dentists across the middle range of the income level.

Murray (1980), compared the results of the role satisfaction of dentists from two different cultural areas.[20] The previously cited Utah study was essentially replicated and compared with a study of dentists practicing in Kentucky (72 percent response rate, N = 94). While the relationship between role satisfaction and age and role satisfaction and years practicing was not statistically significant, there was an increase in satisfaction with an increase in the number of years practicing for the Kentucky group. Conversely, the younger dentists in the Utah sample tended to be more satisfied than their Kentucky counterparts.

Schwartz and Murray (1981) in a secondary analysis of the previously cited Utah study investigated various aspects of the original data to try to understand the reasons for the unusually high career satisfaction level of their respondents (90 percent).[21] One of the findings was that dentists who reported their fees-for-services were "too low" tended to be significantly less work satisfied than those dentists who reported their fees-for-services were "about right." They concluded that "these findings clearly suggest that a higher fee structure for dental services may be associated with increased work satisfaction, and

Table I
Overall (O) Career Satisfaction Measures Expressed in Percentage

	Percentage
Goals and aspirations	
Highly or moderately realized	88
Neutral or highly or moderately unrealized	12
Amount of time satisfied	
Most or a good deal of the time	85
1/2 of less of the time	15
Select dentistry again	
Yes	61
Yes but another area	21
No	18
Happy to have own child become dentist	
Very or moderately	66
Neutral or moderately or very unhappy	34
Dentistry as career	
Only career satisfactory to you	13
One of several equally satisfying	67
Other careers more satisfying	20

Table II
Items Comprising the Intrinsic (I) Satisfaction Index

Intrinsic factors	S[a]	N[b]	D[c]
Helping people	95%	3%	2%
Working closely with people	86	10	4
Work done in mouth	84	12	4
Creativity	82	11	7
Being a perfectionist	74	19	7
Educating and instructing in dental health	68	24	8

Table III
Items Comprising the Extrinsic (E) Satisfaction Index

Extrinsic factors	S	N	D
"Own boss" independence	93%	5%	2%
Status and prestige	84	13	3
Income	76	12	12
Pace of work	71	12	17
Management-business part of dentistry	36	26	38
Feeling confined as a dentist	26	38	36

[a]S = As a source of great or moderate satisfaction.
[b]N = As a source of neither satisfaction or dissatisfaction.
[c]D = As a source of great or moderate dissatisfaction.

that a low fee structure is associated with lower dentist work satisfaction.

Lange et al, (1982) reported the results of a longitudinal study of University of Minnesota School of Dentistry graduates entering their sixth year of practice (N = 87).[22] Three satisfaction scales were developed corresponding to tasks performed, professional progress, and realization of expectations. Income was included in the professional progress matrix and income and prestige were both included in the realization of expectations format. Using these scales, a group of 14 dentists was identified as "satisfied" and a group of 14 as "dissatisfied." While age was not a factor in this group of young dentists, the overall results identified maturity as an important characteristic of the more satisfied group.

Methodology

The data were collected by means of a precoded, self-administered, three-part, 59-item questionnaire which was mailed in February, 1977 to all the graduates of the School of Dental and Oral Surgery, Columbia University, 1920-1976. A second mailing was sent two months later to all those dentists who did not initially respond.

Completed questionnaires were received from 1172 dentists for a 53 percent response rate. When the characteristics of the non-respondents were analyzed according to graduation year, it was found that hypothetically eliminating those dentists graduating between 1920-1930 the response ratio increased to 60 percent. When considering only the universe of dentists graduating from 1941-1970 (the bulk of active practicing dentists in the study), the response rate rose to 67 percent.

Dependent Variables

Career satisfaction was conceptualized in three categories:

1. Overall Career Satisfaction (O)
2. Intrinsic Satisfaction (I)
3. Extrinsic Satisfaction (E)

Each scale was developed from answers to questions which were scored from one to five in the following way; 1 = highest satisfaction; 5 = lowest satisfaction or highest dissatisfaction.

The Overall Satisfaction index was based on responses to five questions related to goal achievement, a temporal measure of satisfaction, a willingness to have your own child become a dentist and two questions relating to the appropriateness of the career choice of dentistry. (Table I)

The Intrinsic Satisfaction index was based on responses to six questions related to the perceived degress of satisfaction or dissatisfaction in such areas as creativity, perfection, work done in the mouth and helping, educating and working closely with people. (Table II)

The Extrinsic Satisfaction index was based on responses to six questions related to the perceived degree of satisfaction or dissatisfaction with such variables as independence, status and prestige, income, business management, the pace of work and feeling confined in one's work. (Table III)

The means for satisfaction scales are listed in Table IV. The indices were then tested for internal consistency using Cronbach's Alpha (Table IV). Pearson correlation coefficients were obtained to evaluate the strength of relationship between the individual satisfaction scales (Table V). The items comprising the intrinsic and extrinsic satisfaction measures were also factor analyzed to corroborate the validity of its dual nature.

Table IV
Measures of the Satisfaction Indices

Satisfaction	$\overline{x}$	Standard deviation	Cronbach's alpha
Overall	2.15	0.81	.80
Intrinsic	1.81	0.61	.79
Extrinsic	2.23	0.63	.66

Table V
Pearson Correlation Coefficients

Satisfaction	Intrinsic	Extrinsic	Overall
Intrinsic	—	.5178	.5208
Extrinsic	.5178	—	.5204
Overall	.5208	.5204	—
General life happiness	.3561	.4087	.4795

Independent Variables

While both work-related and non-work-related independent variables were examined in the larger study, this paper will discuss the analysis of only two non-work variables: age and income.

Age categories were established for each five year interval from 30-69 with additional categories for "below 30" and "70 years of age and older."

Income data were analyzed in the following manner:

A. net income from dentistry for the past year.
B. percent of total income derived from dentistry.
C. comparison of own income with that of other dentists.

The data generated in this manner were then subjected to a one-way analysis of variance with each satisfaction index serving as the criterion variable. Cross tabulations and two-way analysis of variance were performed for selective evaluations. The results were then subjected to significance testing. The Statistical Package for the Social Sciences computer method was used for the study.

We hypothesized the following:

1. Younger and older dentists will tend to be more satisfied with their careers than middle-aged dentists.
2. Income will be directly related to satisfaction on all three satisfaction scales.
3. Those dentists who perceive their income as higher than the average dentist's will tend to be more satisfied with their career than those who perceive their income as lower or the same as the average dentist's.

Results and Discussion

Before presenting the age and income data, a general demographic profile of the study group is outlined:

1. Age - Mean age, 52 years.
2. Sex - Male, 98.4 percent.
3. Race - White, 98.1 percent.
4. Religion - Catholic, 22 percent; Jewish, 56 percent; Protestant, 13 percent; None or other, 8 percent.
5. Marital status - Married, 86 percent; Never married-single, 3 percent; divorced-remarried, 5 percent; widowed, 3 percent; separated, 1 percent.
6. 1976 net income from dentistry - Mean adjusted income, $43,700. (Those dentists earning less than $10,000 were not included.)
7. Primary work setting - Solo (private) practice, 70 percent; partnership or group (private) practice, 17 percent; full-time faculty, 5 percent; institutional, 6 percent, other, 2 percent.
8. Practice classification - General practice, 65 percent; General practice and specialty, 14 percent (whether or not board certified); specialty only (board certified), 9 percent; specialty only (board eligible), 12 percent.
9. Practice location - New York City, 40 percent; Rockland or Westchester County, 10 percent; Nassau or Suffolk County, 14 percent; another area in the United States, 35 percent; outside the United States, 1 percent.

Age

The average age of dentists in the Columbia study group was approximately fifty-two years which is consistent with data on dentists' ages in New York State (1975).[23] However, it is slightly older than the mean age for dentists in the entire country in 1975 (48 years).[23]

We hypothesized that the younger and older dentists would tend to be more satisfied with their careers than those who were middle-aged. This hypothesis was based on the results of Eccles and Powell's study of 231 dentists practicing in South Wales. They found that dentists between the ages of 23-34 and those over 65 were the most satisfied while those in the 45-54 year age group were least satisfied.[13]

In addition, a study appearing in *Dental Economics* (1977) found more dentists in the 35-45 year age category subject to periods of depression.[18] This is consistent with Levinson's contention that career

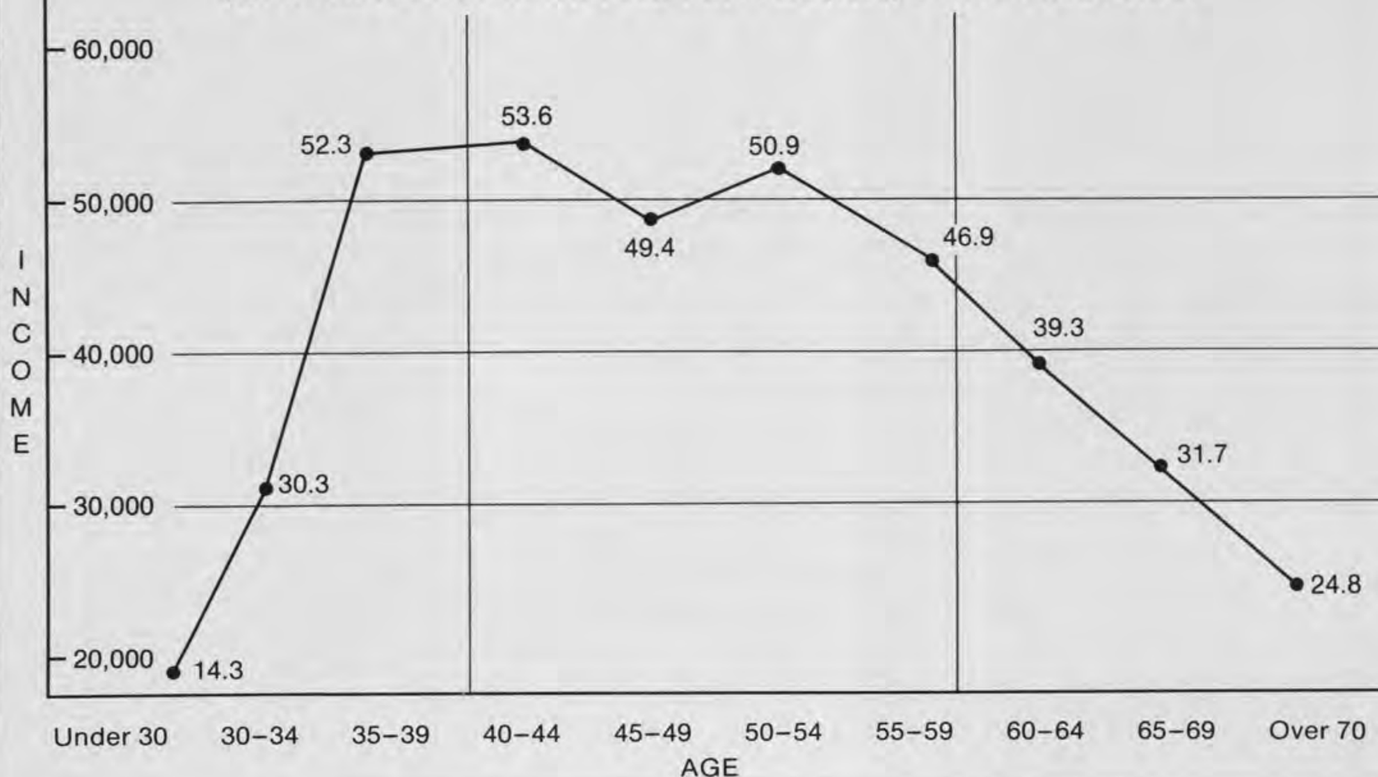

FIGURE I
COLUMBIA ALUMNI DENTISTS NET INCOME (1976) BY AGE CATEGORIES

problems are often manifested during the "mid-adult transition" when a man "is likely to review his progress and ask, What have I done? He must deal with the disparity of what he is and what he has dreamed of becoming."[3]

Contrary to our expectations, no statistically significant differences were found between age groups in the intrinsic or overall satisfaction scales. However, the differences between the age groups on the extrinsic satisfaction scale was highly significant ($P < .01$). We also found a general trend toward increased overall satisfaction with increasing age.

Because the extrinsic satisfaction scale contains satisfaction or dissatisfaction with income as one of its items, we controlled for this item to rule out the possibility of a spurious finding. With the income variable removed from the extrinsic scale, another analysis of variance test was performed yielding almost identical results. Further evidence in this study that higher perceived levels of extrinsic satisfaction are *not* primarily due to increased income is that income from dentistry for this study group stops increasing after age 45 and decreases fairly sharply after age 55 (see graph Figure I).

Our findings for age and career satisfaction are corroborated by those Burge et al in their study (1975) of 410 dentists who attended the ADA National Convention in 1975.[19] They found that dissatisfaction with feelings of accomplishment decreased with an increase in age. Moreover, in "Measurement of Work Satisfaction Among Health Professionals," Stamps et al notes, after reviewing the literature, that "job satisfaction seems to increase with age, which may suggest a more realistic adjustment to the work situation."[24] These explanations seem more reasonable in light of the data we collected than the "mid-life crisis" explanation. It may also be that the findings of Eccles and Powell's are culture-specific. That is, they may apply to English dentists working under the National Health Service, but not to American dentists.

Income

The Columbia Alumni dentists were asked to approximate their net incomes from dentistry for 1976. The mean income was found to be about $42,000 after the six percent of the sample who had no income from dentistry was eliminated. Probably a more accurate figure is $43,780, the adjusted mean we computed after eliminating those dentists who earned less than $10,000. This mean is comparable to the mean for all independent dentists arrived at by the American Dental Association in its Survey of Dentistry of the same year.[25]

Income in our society is a measure of status and success. Money, and what it buys, are outward symbols of our worth. Therefore, income is closely tied to self-esteem and work satisfaction. Thus, high income was hypothesized to result in high levels of satisfaction in all three areas.

We found that while the relationship between income levels and scores on the extrinsic and overall satisfaction scales were strong ($P < .001$), no significant differences were found between income levels and intrinsic satisfaction. The most striking finding was that dentists with incomes below $40,000 were very low in extrinsic and overall satisfaction compared to those dentists who reported an income over $50,000 ($P < .001$ for both E and O scales). As with the age data analysis, when the income item on the extrinsic index was controlled, the results remained the same.

Interestingly, it was also found that those dentists earning $60,000 or more (up to $150,000), were no more satisfied with their careers than were those in the $50-60,000 income bracket. No significant differences in the extrinsic or overall satisfaction scales were found between dentists in this income bracket and those earning over $60,000. The inference drawn from these results is that the lack of income is more of a dissatisfier than the existence of high income is a source of positive satisfaction, once a perceived sufficient income level has been attained. These data are basically consistent with Herzberg's theory of job satisfaction.[26]

When questioned about the percentage of their total income derived from dentistry for 1976, it was found that 25 percent of the dentists derived 50-90 percent of their incomes from dentistry. These dentists scored significantly higher on the extrinsic satisfaction scale than did their colleagues whose income was 91-100 percent derived from the practice of dentistry ($P < .01$). A possible explanation for these results may be that the non-dental, independently derived source of income enjoyed by some of the respondents, may make their practice of dentistry less pressured, particularly in the areas of "pace of work" and "business management."

The respondents were also queried on the perception of their incomes relative to the average dentist's income in a similar geographic area. It was hypothesized that those who perceived their incomes to be above the average dentist's would be more satisfied than those who placed their income as average or below it. This, in fact, turned out to be the case. Those dentists who perceived their income as above the average, scored consistently higher on all three scales ($P < .01$). Lange, Loupe and Meskin stated; "Because many dentists work independently, receiving recognition might best be considered as the level of prestige perceived; similarly, achievement may best be reflected by satisfaction with the level of income obtained."[22] The perception of more financial success than one's comparable colleague, seems to

say much about one's self-esteem as well as the degree of satisfaction derived from one's professional career.

Summary and Conclusions

While age was not significantly related to either intrinsic or overall satisfaction, it was related to extrinsic satisfaction: younger dentists scored significantly lower than their older colleagues. This is probably explained by the difficulties in setting up a practice and building up a clientele. Because recent dental school graduates are experiencing more difficulty entering their own practices and have even greater indebtedness problems than the young dentist in 1977, we would expect that they would score even lower on satisfaction if this study were repeated today.

Moreover, employment opportunities available to young dentists today in "retail type" dental offices do not provide conditions conducive to achieving high levels of work satisfaction based on our findings, e.g., the generally low level of income earned by these dentist-employees, and the structure of work. Thus, they may also score lower on intrinsic satisfaction.

Income is a powerful force in our society. It may not provide or buy happiness, but it is hard to refute the contention that poor people are generally less happy than rich people.[27] Thus, we found, as did Burge,[19] that dentists' satisfaction increased with increasing income—but only up to a point. The fact that very high incomes do not produce a concomitant or equivalent rise in satisfaction is given this interpretation: Dentists who are entrepreneurially-oriented may be miscast in the traditional dentist's role.[28] Thus, they exhibit a form of "differential role disharmony."[29] Perhaps a new role for this type of dentist will emerge from the commercial dental industry that is growing across the country.

While the structure of dental practice is changing, the traditional role of the dentist is so firmly established we would predict the changes that will take place will do so at a "deliberate" pace. There is also a somewhat optimistic prospect emanating from the data of this study. If the dissatisfied dentists can only survive into older age categories, they may learn to better appreciate their chosen profession.

References

1. Kalleberg, A.L. Work values and job rewards: a theory of job satisfaction. Amer. Soc. Rev. 42:124-143, 1977.
2. Palmore, E. Predicting longevity: a follow-up controlling for age. Gerontology, Winter issue, 1969.
3. Levinson, D. The seasons of a man's life. New York A.A. Knopf, 1978, p. 45.
4. Dunlop, J.E. Stress, change and related pains for dentists and those nearby. Tulsa, Oklahoma, Penwell Books, 1981.
5. Sword, R.O. Stress and suicide among dentists: competitiveness and 'being all things'. Dent. Surv., April 1977:10.
6. Holmes, T.H., and R.H. Rahe. The social readjustment rating scale. J. of Psychosom. Res., vol. II, pp. 213-18, 1967.
7. The Dunning Memorial Symposium—School of Dental and Oral Surgery and School of Public Health, Columbia University, 4/29/81.
8. Rovin, S. and Nash, J. Traditional and emerging forms of dental practice: cost, accessibility, and quality factors. Presented at the Dunning Memorial Symposium.
9. Bailit, H.L. Traditional and emerging forms of dental practice, another view. Presented at the Dunning Memorial Symposium.
10. Lipscomb, J. and Douglass, C.W. A political economic theory of the dental care market. Presented at the Dunning Memorial Symposium.
11. Wotman, S. and Goldman, H. Pressures on the dental care system in the United States. Presented at the Dunning Memorial Symposium.
12. The First Regional Conference—career options for the dental graduate. Sponsored by: The American Association of Dental Schools, 9/21/81, New York University College of Dentistry.
13. Eccles, J.D., and Powell, M. The health of dentists: a survey in South Wales 1965-66. British Dent. J. (Oct.):379-387, 1967.
14. Page, C.N., and Slack, G.L. A contented profession? A survey of Old Londoner dentists. British Dent. J. (Sept.):220-225, 1969.
15. Murray, B.P., and Seggar, J.F. A study of the professional role satisfaction of dentists. J. of the Amer. Coll. Dent. 42(2):107-117, 120, 1975.
16. Bailit, H.L., Koslowsky, J., and Valluzzo, P. Job satisfaction of dental practitioners. Paper presented at the American Association of Dental Research Annual Meetings, April 5-8, 1975, in New York City.
17. Howard, J.H., Cunninghan, D.A., Rechnitzer, P.A., and Goode, R.C. Stress in the job and career of a dentist. JADA (Sept.):630-636, 1976.
18. Dental Economics, Survey #2, February; Survey #3 (Pat Redmond), March, Tulsa, Oklahoma, 1977.
19. Burge, J.R., Ayer, W.A., and Borkman, T. Job satisfaction among dentists. Paper presented at the American Association Of Dental Research Annual Meetings, March 16-19, 1978 in Washington, D.C.
20. Murray, B.P. Professional role satisfactions of dentists: some cross-cultural comparisons. J. of the Amer. Col. of Dentists (Oct.):214-228, Vol. 47, No. 4, 1980.
21. Schwartz, R.H. and Murray, B.P. Factors affecting work satisfaction among dentists in Utah: a secondary analysis. J. of the Amer. Col. of Dentists (Spring) Vol. 48, No. 1, pp. 47-58, 1981.
22. Lange, A.L., Loupe, M.J. and Meskin, L.H. Professional satisfaction in dentistry. JADA, Vol. 104, pp. 619-624, May, 1982.
23. Waldman, B.H. and Sreebny, L.M. Dental manpower in New York State: a changing picture in the future. New York State Dental Journal (May):182-185, 1978.
24. Stamps, P.L., Piedmont, E.B., Slavitt, D.B., and Haase, A.M. Measurement of work satisfaction among health professionals. Med Care IVI(4), 1978.
25. The 1977 survey of dental practice. Bureau of Economic Research and Statistics, Chicago, Illinois, 1978.
26. Herzberg, F. Work and the nature of man. New York, Thomas Y. Cromwell Company, 1966.
27. Freedman, J. Happy people. New York and London, Harcourt Brace Jovanovich, 1978.
28. Smith, T.A. Dental practice and the psychology of vocational choice. JADA (April), 1979.

Reprint requests to:
Philip Yablon, DDS
Fairleigh Dickinson University
110 Fuller Place
Hackensack, N.J. 07601

ASSESSMENT OF DENTAL PRACTICE

Alvin L. Morris*
Beth E. Kephart*
Howard L. Bailit**
and Anthony A. Vito*

In February, 1982, the W. K. Kellogg Foundation funded a four and a half year project sponsored by the University of Pennsylvania and the School of Public Health of Columbia University. The title of the study is Development of Evaluation Methods and Computer Applications in Dentistry (DEMCAD). The overall goal of the project is to develop new technologies that can be used by individual dentists and the dental profession to improve the effectiveness and efficiency of dental practice. The development of an objective, practical, and professionally acceptable method for evaluating dental practices through in-office visits will be undertaken at the University of Pennsylvania. An in-office computer and information system for solo and small group practices that will improve fiscal and patient management will be developed at Columbia University.

*University of Pennsylvania, School of Dental Medicine, 4001 Spruce Street, Philadelphia, PA 19104

**Columbia University School of Public Health, 600 W. 168th Street, New York, New York 10032

Project Director is Alvin L. Morris, DDS., Ph.D.

The project addresses the challenging goal of developing a comprehensive assessment methodology for dental practices. The end product of this effort will be an evaluation methodology that can be used by individual dentists and the profession in programs of self-regulation.

The dental profession's efforts to improve the quality of dental care are longstanding. Examples include the early establishment of requirements for state licensure and for the accreditation of educational programs. The dental profession has also developed an elaborate peer review mechanism to deal with patient, fiscal intermediary and dentist disputes. More recently, stimulated in part by the large increase in prepaid dental care and by more competition in the dental market, there is renewed interest in quality review systems.

The purpose of this paper is to review the literature related to the assessment of dental practice. The paper focuses on quality assessment—the collection of data that permits subsequent judgments relative to the quality of care—and not on quality assurance—mechanisms and programs aimed at improving or maintaining the quality of care received by patients. A thorough review of existing quality assurance programs was undertaken in 1978 in conjunction with the Department of Health, Education, and Welfare, and a summary of those findings, complete with an extensive bibliography, is available.[1-3]

Assessment Approaches

The development of assessment methods in dentistry has been influenced by earlier work in medicine.[4-9] The differences between medical and dental practice, however, restrict the extent to which medical assessment technology can be directly applied to dentistry. The major differences relate to the fact that most dental care is provided in non-institutional ambulatory settings. Thus, 98 percent of dental services are delivered in private offices and 78 percent of these offices are owned and operated by one dentist.[10] It is also significant, in comparing medicine and dentistry, that only 13.6 percent of all dentists are engaged in specialty practice.[11]

A second important distinction is that dentistry is primarily concerned with two chronic condi-

tions, caries and periodontal disease. The treatment of these two conditions and their sequellae, loss of teeth, constitute the major activity of dentists in general practice.

A final distinction is that dental treatment involves the application of sophisticated surgical and restorative skills. The diagnosis of disease is perhaps less complicated than in medicine, whereas treatment requires considerable technical skill.

These important differences between medicine and dentistry account, in part, for the emphasis that dental review systems have placed on ambulatory services and specifically on restorative care. Relatively little work has been done on the broader problems of total patient care or program evaluation. Some notable exceptions to this generalization include Friedman's *Basic Guide* for assessing dental programs (e.g., union operated dental clinics).[12] As part of this effort, Friedman established explicit criteria for assessing both the treatment planning and treatment dimensions of quality.[13] Also, self-assessment testing instruments have been developed by both the American College of Dentists and the American Society of Oral Surgeons.[14-15] The provider-patient relationship has been scrutinized and assessed,[16-17] and two major contributions in the development of patient questionnaires have been made.[18-19] Finally, DeJong and Dunning,[20] Schonfeld,[21] Hillsman,[22] Kress,[23] and Bailit[24] have each reviewed the status of dental care evaluation systems, thereby providing frameworks for their consideration.

Many of these evaluation systems employ assessment methods which are considered in this paper. These methods are grouped into three primary categories: 1) assessment of specific treatment components, 2) indirect office assessment, and 3) direct office assessment. Within each category, instruments with similar characteristics are discussed. Multi-purpose instruments that pertain to more than one category are cross-referenced.

Assessment of Specific Treatment Components

The literature contains a series of publications that establish assessment criteria for particular components of care. Often termed 'checklists' or 'guidelines,' these instruments are usually field-tested and incorporated into more comprehensive assessment strategies. As will be discussed, most represent criteria for measuring the technical quality of care.

The quality of radiographic films has been studied and specific assessment criteria developed. In 1974, Beideman defined deficiencies in radiographic films that rendered them unsatisfactory.[25] In the same year, Wuerhmann proposed a method for evaluating radiographs based on specific technical requirements.[26] Several other contributions in this area have been made.[27-33]

Major contributions to the measurement of restoration quality have also been made. Concerned specifically with the "clinical assessment of the quality of an amalgam or resin restoration shortly after it has been placed," Ryge and Snyder considered three separate characteristics of the restoration—surface and color, anatomic form, marginal integrity— and wrote specific criteria by which they could be analyzed. They additionally proposed a four point scoring system based upon the degree to which the restorations met the criteria.[34] In another project, Anaise prepared guidelines for scoring fillings, crowns, and bridges.[35]

Dental education programs need to assess the quality of student performance, and a large literature describes academic evaluation guidelines and methods. The University of Michigan has created a quality assessment program for complete denture work.[36] Novetsky[37] and Razoog[38] discuss the use of prosthetics checklists. Abou-rass has tested two rating scales for a dental school endodontics program[39], and similar clinical performance guidelines have been created in the areas of diagnosis, treatment and patient interaction[40] as well as fixed prosthodontics.[41]

Indirect Office Assessment

Indirect office assessment refers to assessment techniques such as record audits, review of radiographs, and study models that can be used external to the dental office. While these methods may be used within the office setting, this location is not a requirement for their application. Pioneering research into the indirect assessment of dental offices was conducted in the early 1970's by Friedman who suggested that the "overall evaluation of dental care can be accomplished more economically without examination of patients." He suggested the correlation of x-ray diagnosis to treatment records, a review of post-operative x-ray, and an analysis of significant statistics such as the ratio of filled teeth to extractions and fixed bridges to partial dentures. Friedman's *Guide* examines 11 phases of care, outlines specific criteria, illustrates the forms to be used during evaluation, and describes the role of the assessors.[42] In a different study, Friedman and Schoen performed an audit of dental care by relying solely on patient treatment records and radiographs.[43]

The review of diagnostic materials submitted to insurance carriers for preauthorization provided the impetus for quality assessment studies in Pennsylvania. Quality was screened through x-rays, study models, and photographs of the oral cavity for operative dentistry, endodontic treatment, prosthetics, periodontics, and orthodontics for services exceeding a specified dollar amount.[44] In another project designed to "determine the quality of radiographs submitted to insurance carriers" for prior-authorization of treatment plans, Bailit et. al. used professionally

accepted criteria to establish the relative importance of radiographic quality to the clinical decisions of dental consultants.[45]

At the University of Connecticut's School of Dental Medicine, a record audit system for hospital based programs in general dentistry was developed. This system focused on the tasks involving dental staff judgment and expertise. The assessment is based on the criteria mapping audit method and uses explicit criteria.[46]

An indirect review system designed at the University of California in Los Angeles' School of Dentistry examines dental records to determine the appropriateness of dental services. Information on patient's stage of care (i.e., non-use of system, episodic use, initial care, and maintenance care) based on the services rendered to patients is abstracted from the records and a quantitative data summary is compiled. This record review system allows dentists to "improve the quality of their practices via management of information, rather than via the imposition of restrictive norms and standards."[47]

At the University of North Carolina, an office evaluation program assesses the quality of patient records and radiographs.[48] Likewise, Demby has developed procedures for evaluating dental care provided to a patient group from Sunset Park, Brooklyn. An integral component of the Sunset Park Quality Assurance Study is the indirect assessment of dental records and radiographs. For each patient, radiographs taken within the last five years are removed from the files and reviewed by independent assessors who check the number, frequency, and quality of the radiographs. In a separate assessment, patient charts are checked for medical history, extra-oral examination, dental caries and periodontal charting, treatment plan, and progress notes.[49]

Direct Office Assessment

Direct office assessment refers to the observation of the office setting and the practitioner's clinical performance. The structure, process, or outcome of the dentist's practice may be reviewed singularly, or together, either by the practitioner or by peers. A large literature has been devoted to the assessment of office personnel who fulfill expanded roles. In 1971, Lotzkar studied dental assistants who were trained to perform expanded duties using explicit criteria.[50] Similar studies have explored the potential for increasing the functions of dental assistants.[51-53] In an experimental program at the University of Alabama, general practitioners assessed the quality of amalgam restorations, temporary restorations, and matrix band placements delivered by dentists and dental therapists against explicit criteria.[54]

The Indian Health Service, which provides dental service to American Indians, Eskimos, and Aleuts has expanded its use of dental auxiliaries and has established specific criteria for minimal levels of acceptable care. Both the individual-service phase, the total-patient phase, and the community-phase are assessed.[55]

In Saskatchewan, dental nurses trained in taking and interpreting x-rays, administering local anesthesia, and placing crowns and space maintainers were assessed by three clinical examiners. The quality of diagnostic radiographs, the quality of amalgam restorations in primary and secondary teeth, and the quality of stainless steel crowns in primary teeth were rated on a three dimensional scale.[56]

The evaluation of dental care quality via self-assessment has been studied extensively. Milgrom described an experiment in which individual dentists were taught to critique the quality of their restorative care against a series of from 20 to 42 explicit criteria. Subsequently, the same restorative treatments were assessed by peer reviewers to determine the dentist's objectivity.[57]

A similar study undertaken at the University of Montana required the recall of fifteen patients for whom restorations had been completed over the last three years. Dentist, assistant, and receptionist participated in an assessment of oral health and restorative quality. Upon the completion of this self-assessment, dentists compared their findings to 'acceptable' standards.[58]

The quality of dental care delivered in New York City Medicaid offices has been periodically reviewed and assessed. Cons,[59] Bellin,[60] and Fisher[61] have each developed evaluation checklists and assessment strategies.

The American Board of Pedodontics has devised an instrument for assessing the office, staff, treatment plan, record keeping and technical proficiency of their candidates for certification.[62] Similarly, the American Academy of Dental Group Practice has created an instrument that examines the structure, organization, patient management, internal auditing systems and record-keeping capabilities of group dental practices.[63]

To ensure the establishment and maintenance of properly equipped offices, the American Association of Oral and Maxillofacial Surgeons has devised an Office Evaluation Manual to guide assessors as they observe surgery within the office. This guide looks at the surgeon's performance of simulated emergency care as well as the office facilities.[64]

In addition to the indirect office assessment procedures developed by Demby for the Sunset Park Study, a guide for direct clinical assessment has been created in which the technical aspects of restorative, prosthodontic, and endodontic care are evaluated against explicit criteria.[49] Similarly, the North Carolina Evaluation Study provides for direct office evaluation of the structure and process of care.[48]

At the Philadelphia Department of Health, an evaluation program evolved under the direction of Soricelli. An explicit manual of

procedures directs trained assessors for on-site visitations.[65]

Both the California and Pennsylvania State Dental Associations have been active in creating assessment instruments. In 1973, the California Task Force on Quality Evaluation developed an evaluation method for "those procedures most commonly performed in dentistry" regardless of whether the dentist is a general practitioner or specialist.[66] The Pennsylvania Quality Assessment Guidelines, designed in 1975, review fifteen categories of dental care and describe both clinical and non-clinical rating techniques.[67]

Discussion

The foregoing literature review reveals the development of a broad spectrum of philosophical and practical approaches to the assessment of dental care. The growing concern for the quality of dental care, and the progress made toward evaluating single components and entire dimensions is abundantly evident. At this juncture, it is instructive to consider the several instruments as a composite. By organizing the literature into the more general categories of structure, process, and outcome, as defined in the subsequent discussion, it becomes possible to make determinations about the relative weaknesses and strengths of available assessment methods.

The structural dimension of dental care has received attention in the context of direct office assessment; however, relatively few evaluation strategies have been developed to assess the quality of office facilities, equipment, administration or personnel. While this can be explained, in part, by the difficulties in creating meaningful criteria for evaluated elements such as the appearance, size, utility of office space and practice administration, the impact of such factors upon patient satisfaction and staff efficiency and attitude cannot be ignored. It is essential that objective and practical measuring devices for these currently overlooked components be created.

The process dimension of dental care has received extensive study: all three Assessment categories include several process-oriented instruments. Advances in assessing the quality of radiographs, patient records, and at least fifteen categories of dental care including periodontics, operative dentistry, and endodontics have been made. Restorative services have been reviewed in both the self-assessment and peer review context. In direct contrast to the relative sophistication achieved in measuring the technical aspects of care, measures of the quality of patient management, diagnosis, and treatment planning are relatively underdeveloped. This void is largely attributable to the lack of objective data upon which many such measurements may be made. The quality of treatment planning, as Bailit has shown, is most difficult to assess.[68]

Although the outcome of dental care has great importance in general dental health, instruments designed to assess this dimension are less advanced than those for the structure or process dimensions. Because the patient's oral health is determined by genetics, environment, personal habit, and education, the effect of the quality of care received is difficult to assess. An additional limitation in the assessment of outcome results from the current lack of data. Hence, most progress in developing outcome assessment instruments have been made in the areas of oral hygiene and patient satisfaction. Again, much remains to be done.

The structure, process, and outcome of dental care delivery must be viewed as a continuum. Criteria must be developed that are measurable, objective, reliable, and verifiable. Instruments must be practical and implemented in such a way that least disturbs the routine and the behavior of the practitioner and in such a way that is applicable to all practitioners, regardless of delivery mode or geographic location.

The volume of effort already directed at assessment in dentistry attests to the importance that the profession places on the quality of dentistry provided to the public. It should be noted, however, that primary attention has been directed to assessing the quality of dental services. The issue of what constitutes quality dental practice has not been investigated in depth. Progress in this area has undoubtedly been compromised by the absence of an accepted definition of quality dental practice.

Somers has stated that the word quality is a "verbal Rorshach blot" into which people project a variety of interpretations and fantasies.[68] Donabedian has written, "What is by no means clear is whether quality is a single attribute, a class of functionally related attributes, or a heterogeneous assortment gathered into a bundle by established usage, administrative fiat, or personal preference."[5] The above misgivings notwithstanding, it is a desirable goal to attempt to establish a definition of quality dental practice that can achieve sufficient acceptance to serve as a frame of reference for future assessment efforts. Toward that end, the following definition is suggested:

Quality dental practice is the kind of dentistry practiced by recognized leaders of the dental profession at a given time or period of social, cultural, and professional development.

It should be noted that this definition, paraphrased from a definition of good medical care developed by Lee and Jones in 1933,[4] places emphasis on how dentistry is practiced, not on how it should be practiced; empirical rather than normative practice. It also acknowledges that quality is a dynamic attribute that changes as

the profession and the public being served undergo change. Implicit in the definition is the understanding that it is the practicing profession, rather than scientists or educators, that determine quality.

Progress in dental practice assessment would also be served if the nomenclature related to assessment could be rendered less confusing.[6] There are many legitimate approaches that can be taken in identifying the quality of dental practice. What terminology is most appropriate in seeking to identify quality dental practice as defined? Donabedian, in 1966, suggested that efforts to assess medical care be divided into structure, process, and outcome, and Bailit later recommended that this approach be applied in dentistry.[7,24,68] **Structure** relates to a review of dental facilities, equipment, organization, administration, and personnel. **Process** refers to what the dentist actually does in rendering care and includes the completeness of history taking and the technical skill with which treatment is carried out. **Outcome** is concerned with the health status of patients who have been recipients of the dentists' care and considers dental *morbidity* (decayed and missing teeth, and periodontal status), **disability** (reduction in a patient's activity due to acute or chronic dental conditions), **social functioning** (limits on a patient's self-image due to oral conditions), and **satisfaction** (the reaction of the patient to overall dental care experiences).

It is recommended that these three aspects of practice—structure, process, and outcome—be referred to as DIMENSIONS of practice. Further, it is suggested that the word COMPONENTS be used to designate those features of practice that should be evaluated under each dimension. Within each component, there will be multiple areas of professional activity that require evaluation. It is recommended that these be referred to as ELEMENTS of practice. Evaluation of practice performance related to individual elements must be accomplished through disciplined observations. It is recommended that these observations be termed CRITERIA.. It is important that these criteria minimize subjectivity by being explicit, reproducible in their application, and capable of rendering an evaluation score. In an exercise of dental practice assessment, the above suggested nomenclature would be applied as follows:

- Process (DIMENSION)
  - Radiographs (COMPONENT)
    - Diagnostic Value (ELEMENT)
      - No more than three contact areas that cannot be viewed in at least one film (CRITERION)

The feature of the suggested nomenclature that may tend to create rather than abate confusion is the recommended use of the term CRITERIA. In the medical assessment literature, the word criteria is used widely but imprecisely. The PSRO Manual defines criteria as ". . . predetermined elements against which aspects of the quality of medical service may be compared."[70] Slee appeared to prefer the term "parameter" for such use.[71] Earlier literature appeared to apply the word "standard" in a similar way.[72] Donabedian is a strong proponent for use of criteria as an assessment term.[73] He applies the term in a manner generally as used by the PSRO manual but acknowledges it as a ". . . usefully flexible, though imprecise term. . . ." Donabedian states "I hope . . . I shall be able to contribute to an understanding of the basic properties of the criteria, and to help identify some of the *criteria by which the criteria themselves may be assessed.*"[74] (emphasis added) The recommendation presented here for the use of the term criteria in dental assessment limits its application to the first of the above compound references to the word.

There are two distinct and separable requirements for assessing quality of dental practice. First, there is the requirement for data derived through objective, quantifiable observations. The requirement follows that judgments be made regarding what values to place on the data. Individual or collective observations can yield data on elements of practice that can be expressed numerically. Numbers have no meaning, however, in terms of identifying quality, until judgments are made regarding their value. The mechanism for deriving the numbers must be explicit, standard, and reproducible. Also required are observations on how these numbers, for their respective practice elements, are distributed over a representative sample of dental practices . . . a profile of practice behavior of American dentists. Given such data, there is wide latitude in the choices that may be made regarding what level of quality is ascribed to the numbers identified within a given practice.

In pursuit of the goal of an acceptable dental assessment nomenclature, it is recommended that accumulated data on elements of practice derived from a sample be referred to as NORMS. Specifically, dental assessment norms are defined as numerical or statistical measures of usual observed performance. It is emphasized that this definition, taken from the PSRO manual, is intended to have no evaluative connotation. A norm is merely descriptive. An evaluative connotation is derived when a professional group renders judgments regarding desired rather than observed performance, thus establishing STANDARDS. A standard is defined as professionally developed expressions of acceptable variations from a norm.

To recapitulate, it is recommended that the nomenclature used in dental practice assessment apply the following terms as defined:

DIMENSIONS:
Three unique but interrelated divisions into which dental practice can be separated for the purpose of evaluation.

COMPONENTS:
Major aspects or characteristics of a dimension of dental practice, the quality of which is related directly to the quality of care rendered by the practice.

ELEMENTS:
Specific features of a component of care that can be subjected to measurement.

CRITERIA:
Descriptive observations utilized in measuring elements of dental practice.

NORMS:
Numerical or statistical measures of usual observed performance of elements and components of dental practice.

STANDARDS:
Professionally developed expressions of acceptable variations from norms.

Conclusion

This paper has reviewed dental practice assessment methods. Three distinct assessment strategies—Assessment of Specific Treatment Components, Indirect Office Assessment, and Direct Office Assessment—have been identified and described. In addition, an effort to clarify the assessment nomenclature has been made. Such reflection on the past and present status of dental practice assessment may serve to enhance the quality and comparability of future studies and approaches.

References

1. Stern, S.K. et. al. Quality Assurance in Dental Health Care Study. DHEW-HRA 240-76-0066, 1978.
2. Quality Assurance in Dentistry. Journal of the American Dental Association, 98:261-267, February 1979.
3. Stern, S.K. Quality Assurance in Dentistry. Quality Review Bulletin. September 1979: 25-31.
4. Lee, R.I. and Jones, L.W. The Fundamentals of Good Medical Care, Publications of the Committee on the Costs of Medical Care, No. 22. Chicago: Chicago University Press, 1933.
5. Donabedian, A. Explorations in Quality Assessment and Monitoring, Volume I. The Definition of Quality and Approaches to its Assessment. Ann Arbor, MI: Health Administration Press, 1980.
6. Donabedian, A. Criteria, Norms, and Standards of Quality: What Do They Mean? American Journal of Public Health, 71:409-412, April 1981.
7. Donabedian, A. Evaluating the Quality of Medical Care. Milbank Memorial Fund Quarterly Part 2, 44:166-206, July 1966.
8. Brook, R.H. Quality of Care Assessment: A Comparison of Five Methods of Peer Review. Washington, D.C.: National Center for Health Service Research, Department of Health Education and Welfare, 1973.
9. Sanazaro, P.J. and Worth, R.M. Concurrent Quality Assurance. In: Sanazaro, P.J. (ed.), Private Iniative in PSRO. Ann Arbor, MI: Health Administration Press, 1976.
10. Third Report to the President and Congress on the Status of Health Professions Personnel in the United States. DHHS Publication No. (HRA) 82-2: VI-1, 1982.
11. Ibid., p. VI-2.
12. Friedman, J.W. Basic Guide to Qualitative Standards for the Evaluation of Dental Care Programs. Los Angeles: UCLA School of Public Health, 1963.
13. Friedman, J.W. Nonclinical Assessment of Clinical Care: Dental Care Index. IN: Report of the 23rd National Dental Health Conference. Chicago: Chicago ADA, 1972, pg. 420.
14. Journal of the American College of Dentists. 39:189-90, 1972.
15. Self-Assessment Program for Oral Surgeons and Dentists. Journal of Dental Education. 36:9, August 1972.
16. Weinstein, P. et. al. Dentists' Perceptions of their Patients: Relation to the Quality of Care. Journal of Public Health Dentistry. 38(1):10-21, Winter 1978.
17. Jenny, J. et. al. Parent's Satisfaction and Dissatisfaction with their Children's Dentist. ibid., 33(4):211-221, Fall 1973.
18. Kress, Gerald. Patient Feedback Project. Harvard School of Dental Medicine, 1982.
19. Davies, A.R. and Ware, J.E. Measuring Patient Satisfaction with Dental Care. Social Science And Medicine 15 A: 751-760, 1981.
20. Dejong, N. and Dunning, J.M. Methods of Evaluating the Quality of Programs of Dental Care. Journal of Public Health Dentistry. 30:223-231, Fall 1970.
21. Schonfeld, H.K. Dental Care Evaluation Systems. Public Health Reviews III (4): 403-22, 1974.
22. Hillsman, J.T. Quality Assurance in General Dentistry. Journal of the American Dental Association. 97:787-797, November 1978.
23. Kress, G.L. Towards a Definition of the Appropriateness of Dental Treatment. Public Health Reports III (5):56-72, Nov/Dec 1981.
24. Bailit, H.L. Quality Assurance in General Dentistry. The Compendium of Continuing Education. I:49-55, 1979.
25. Beideman, R.W. et. al. A Study to Develop a Rating System and Evaluate Dental Radiographs Submitted to a Third Party Carrier. American Dental Association Journal. 93:1010-13, November 1976.
26. Wuerhmann, A.H. Evaluation Criteria for Intraoral Radiographic Film Quality. American Dental Association Journal. 89:345-352, August 1974.
27. Barr, J.H. The Information Yield from Radiographs. Oral Surgery, Oral Medicine, Oral Pathology. 22:174-182, August 1966.
28. Farman, A.G. and Shawkat, A.H. Survey of Radiographic Requirements and Techniques. Journal of Dental Education. 45(9):581-584, 1981.
29. Wege, W.R. Radiographic Quality and Protection. Georgia Dental Association Journal. 47:21-22, Winter 1974.
30. Mayes, D.S. Discussion: Quality Standards. Proceedings of the Conference on PSRO and Peer Review, February 26-27, 1974, Sponsored by the ADA Council on Dental Care Programs, Chicago. ADA, 1974, p. 290.
31. Crabtree, C.L. Factors that Influence Quality of the Dental Radiograph. Journal of Preventive Dentistry. 4: 8-17, Nov/Dec, 1977.
32. Crandell, C.E. The American Academy of Dental Radiology Training Requirements in Radiology for the Dental Assistant. Dental Assistant. 39:21-22, Aug. 1970.
33. Jerge, C.R. et. al. Using Protocols to Organize and Assess the Delivery of Dental Care. Compendium of Continuing Education, Article #3, I(6):392-396, Nov/Dec 1980.
34. Ryge, G. and Snyder, M. Evaluating the Clinical Quality of Restorations. Journal of the American Dental Association. 87: 369-377, August 1973.
35. Anaise, J.Z. and Ehrlich, J. A Method for Recording and Numerically Scoring Quality of Dental Restorations. Journal of Public Health Dentistry. 37(1):57-61, Winter 1977.
36. Peer Review and Quality Assessment Program in Complete Denture Education. University Of Michigan: School of Dentistry, Complete Denture Department.

37. Novetsky, M. and Razoog, M.B. Peer Review and Quality Assessment in Complete Denture Education. Journal of Dental Education. 45(11):763-764, 1981.
38. Razoog, M.B. and Lang. A Complete Denture Program and Criteria for the Assessment of Quality. Journal of the American Dental Association. 97:953-968, December 1978.
39. Abou-rass. Clinical Evaluation Instrument in Endodontics. Journal of Dental Education. September 1973:22-36.
40. Greene, D.S. Comprehensive Approach to the Evaluation of Clinical Performance. ibid., 23-26, August 1972.
41. Gaines, W.G. et. al. Reliability of Ratings in Preclinical Fixed Prosthodontics: Effect of Objective Scaling. ibid., 38(12): 672-675, 1974.
42. Friedman, J.W. A Guide for the Evaluation of Dental Care. Los Angeles: UCLA School of Public Health, 1972.
43. Friedman, J.W. and Schoen, M.H. Audit of Quality of Dental Care: A Pilot Study. Journal of Public Health Dentistry, 32: 214-224, Fall 1972.
44. Tannenbaum, K.A. Towards Quality in Programs of Dental Insurance: Proceedings of a Conference. ibid., 34(4):210-231, Fall 1974.
45. Bailit, H.L. et. al. Quality of Radiographs Used in Pretreatment Review of Dental Claims. ibid., 39(2):125-136, 1979.
46. Bailit, H.L. Quality Assurance Dental Audit System. University of Connecticutt, School of Dental Medicine, February 1980.
47. Marcus, M. et. al. A Record Review Model for Assessing Dental Practices. California Dental Association Journal. October 19-7:51-54.
48. Lindell. University of North Carolina Office Evaluation Program, University of North Carolina.
49. Demby, N. et. al. Dental Quality Assurance Study, Sunset Park Family Health Center of Lutheran Medical Center, Brooklyn, NY, 1978.
50. Lotzkar, S. et. al. Experimental Program in Expanded Functions for Dental Assistants. Journal of the American Dental Association. 82:101-120, January 1971.
51. Ludwick, W.E. et. al. Greater Utilization of Dental Technicians II. Great Lakes, IL: U.S. Naval Training Center, May 1964.
52. Abramowitz, S. Expanded Functions for Dental Assistants: A Preliminary Study. Journal of the American Dental Association. 72:386, February 1966.
53. Sisty, N.L. et. al. Evaluation of Student Performance in Four Year Study of Expanded Functions for Dental Hygienists at the University of Iowa. ibid., 97: 613, October 1978.
54. Hammons, P.E. Quality of Service Provided by Dental Therapists in an Experimental Program at the University of Alabama ibid., 82:1060-1066, May 1971.
55. Abramowitz, J. and Mecklenberg, R.E. The Quality of Care in Dental Practice The Approach of the Indian Health Service. Journal of Public Health Dentistry. 32:90-99, Spring 1973.
56. Stamm, J.W. et. al. A Quality Evaluation of Specific Restorative Services Provided by Dental Nurses in Saskatchewan. McGill University, 1974.
57. Milgrom, P. Assessment of Care and Continuing Education. University of Washington, Grant # HS 01645, February 1980.
58. Milgrom, P. et. al. Montana Dental Association Self-Assessment Project. University of Washington, Department of Community Dentistry, 1979.
59. Cons, N.C. Method for Posttreatment Evaluation of the Quality of Dental Care. Journal of Public Health Dentistry. 31:104, Spring 1971.
60. Bellin, L.W. and Kavaler, F. Policing Publicly Funded Health Care for Poor Quality, Overutilization, and Fraud—the New York City Medicaid Experience. American Journal of Public Health. 60:811, May 1980.
61. Fisher, M.A. Administrative Controls Over Quality in Prepayment Programs. Presented at: Training Workshop of Quality Evaluation of Dental Care Programs. American Public Health Association, March 11-14, 1971.
62. Assessment Instrument, American Board of Pedodontics, University of Nebraska, January 1981.
63. Accreditation Program for Dental Group Practice: Program Description and Requirements for Accreditation. Dental Care Systems, University of Pennsylvania.
64. Office Anesthesia Evaluation Manual. American Association of Oral and Maxillofacial Surgeons, 1978.
65. Soricelli, D.A. Methods of Administrative Control for the Promotion of Quality in Dental Programs. American Journal of Public Health. 58:1723-1737, September 1968.
66. California Dental Association. Quality Evaluation for Dental Care Guidelines for the Assessment of Clinical Quality and Professional Performance and the Standards for Program Design to Assure the Quality of Care for the California Dental Association. Los Angeles: California Dental Association, 1976.
67. Pennsylvania Dental Association. Quality Assessment Guidelines. Pennsylvania Dental Association Task Force on Quality Assessment, 1975.
68. Bailit, H.L. Quality of Dental Care: Development of Standards. Journal of the American Dental Association. 89: 842-853, October 1974.
69. Somers, Anne R. Personal Communication.
70. PSRO Program Manual, Chapter VII. Department of Health, Education and Welfare Office of PSRO, March 15, 1974.
71. Slee, V. PSRO and the Hospital's Quality Control. Annals of Internal Medicine. 81:97-106, 1974.
72. American Public Health Association. A Guide to Medical Care Administration, Volume II. Medical Care Appraisal—Quality and Utilization, 1969.
73. Donabedian, A. Advantages and Limitations of Explicit Criteria for Assessing the Quality of Health Care. Milbank Memorial Fund Quarterly. 59:99-106, Winter 1981.
74. Donabedian, A. Explorations in Quality Assessment and Monitoring, Volume II. Ann Arbor, MI: Health Administration Press, 1982.

Reprint requests to:
Alvin L. Morris, DDS
School of Dental Medicine
University of Pennsylvania
4001 Spruce Street
Philadelphia, PA 19104

A Treasury of Dentistry

By Gardner P.H. Foley

Charles Nelson Johnson

Editor and ADA President

A roster of great American dentists would certainly include the name of Charles Nelson Johnson (1860-1938). Born in Brock, Ontario, Canada, Dr. Johnson received the LDS degree from the Royal College of Dental Surgery in 1881. In 1883 he began his long affiliation with Chicago as a practitioner and as a teacher. After his graduation from the Chicago College of Dental Surgery in 1885, he joined the faculty of his American alma mater; from 1891 to the end of his life, he occupied the chair of professor of operative dentistry.

These biographical notes will reveal the almost unique versatility of Dr. Johnson's contributions to American dentistry. His reputation as an educator was enhanced by the publication and wide acceptance of his *Textbook of Operative Dentistry*. As editor of the *Dental Review* (1899-1914), and of the Journal of the American Dental Association (1926-1938), Dr. Johnson became a renowned figure in dental journalism. Both as an editor and as a speaker, he exercised an exceptional influence on organized dentistry. In recognition of his rare qualities of leadership, he was called to the presidencies of the American Dental Association, the American College of Dentists, and the American Association of Dental Editors.

In addition to his prolific writings for the profession, he contributed numerous short stories and demonstrated his skill as a poet by *Poems of the Farm, and Other Poems* (1901), based on his boyhood experiences on a Canadian farm.

The particular purpose of this note is to present to the reader a very interesting and inspirational anecdote of personal dental experience related by Dr. Johnson. The practitioners who are keenly receptive to solid testimony of the value of their contributions to the comfort and health of their patients should enjoy reading it.

> One night after twelve o'clock I was called by the 'phone, told one of my patients was suffering terribly, and asked if I would come and see if I could do anything for her. It was a long way, but they sent a cab for me and I went. I found an ex-Mayor of Chicago pacing the floor himself, on account of the suffering of his wife. She was sitting up in bed, and the pain was so severe that she told me she was afraid she was losing her mind. I went to work as best I could. Within fifteen minutes the patient began to relax, and in another ten had dropped off to sleep. The change in her face from the drawn look of agony to that of repose repaid me for hours and weeks and years of study, and condoned in a measure all the mistakes I had ever made. I went home, and the report came the next morning that she had slept the night through. I couldn't tell you the amount of money I made that day, or the days before or the days following, but as long as I live, that woman's face will remain with me as one of the best rewards I could ever get from professional effort. It is a great comfort to quiet pain, and it should be our pride that we are permitted at times to relieve the suffering of our fellow-man.

Josiah Atkins

Revolutionary War Dentist

One of the most challenging areas of research by dental historians is the dental services made available to the American soldiers of the Revolutionary War. As the sources for information are scarce and usually provide only brief references to the subject, I became keenly interested in procuring *The Journal of Josiah Atkins of Waterbury* (1781), printed for the Mattatuck Historical Society of Waterbury, Conn. in 1954 (first publication). For several years I had known about Atkins' journal, but only after pursuing many leads did I finally get to possess it.

Atkins was born in 1749. He taught school for several years in Farmington. Later he operated a blacksmith shop in Wolcott. Probably the latter occupation provided him with the experience in dental services that was to prove so valuable during his short army career. Atkins enlisted in January of 1781, engaging for three years. He was sent to West Point for training, and on May 15 he was among the 1200 troops that Washington detached under Lafayette to march to Virginia. On June 15 the Lafayette legion encamped within four miles of the British forces at Yorktown and on July 6 was engaged against Cornwallis' army.

Gardner P. H. Foley

July 13. I am at present among ye invalids, and unfit for duty, but however, providence has so ordered it as to make me instrumental of some good to my country, at least to my fellow soldiers; which is by letting blood and drawing teeth. This last I practice very much, *there not being another tooth-drawer in ye whole army* (my italics). August 23. The doctor sent for me to come and live with him in order to assist him in his hurry of business dealing out medicines, dressing wounds etc. (Given Atkins' reputation as an extractor of teeth, one may logically conclude that "etc." embraced dental operations.) August 25. I have such thirst for medical knowledge that were I capable of ye business in which I am now engag'd I shou'd be content, even tho' I have no prospect for wages. September 4. My business is much fatiguing, but ye affection or sympathy, I have for ye sick and my desire after medical knowledge, make it far easier for me than ye disaffected camp and ye loathsome instruments of war. September 7. Our sick continue to increase in numbers and some of them, I think, cannot recover. The ague-fever, slow fever, and intermitting fever, dysentery, rheumatism, and ye venereal disease, are what trouble us chiefly.

On October 4 Atkins was given a pass "to return to ye Northward for the recovery of his health". He died in the military hospital at Hanover, Virginia, on October 26 or 27, 1781. Cornwallis had surrendered on October 19.

DECEASED FELLOWS

OCTOBER 1981—NOVEMBER 1982

*AUBERTINE, DON JOSE
Walnut Creek, CA

BEAR, S. ELMER
Richmond, VA

BERRY, HENRY W. JR.
Lincolnwood, IL

*BIEDERMAN, WILLIAM
Ft. Lauderdale, FL

*BISHOP, LYALL O.
Walnut Creek, CA

*BOLAND, PAUL J.
San Antonio, TX

BOUSIER, JEAN G.
Paris, France

*BRAND, CHARLES F.
Chesterfield, MO

*BROOKS, GLENN R.
Rochester, MI

CARTWRIGHT, H. VANCE
Memphis, TN

*CHAMBLEE, H. ROYSTER
Raleigh, NC

*CHAPMAN, WALTER
Lyons, CO

*COGLEY, ELMER A.
Great Falls, MT

*CULLER, OSCAR E.
Burlington, NC

DAVIS, BENJAMIN
St. Louis, MO

*DELANEY, HENRY R.
Winchester, MA

*LIFE FELLOW

*DeRISI, MARY C.
Washington, D.C.

DICKSON, RALPH A.
Alton, IL

DOTSON, ORAS L.
Newport, AR

*DOUGLAS, ELIJAH
Parkersburg, WV

*DUNLAP, WALTER M.
Brownsburg, VA

*DUNN, P. M.
Edina, MN

EDWARDS, EDGAR E.
Sheridan, WY

EMORY, LOUIS
Upper Arlington, OH

*FISK, G. VERNON
Don Mills, Ontario

FORTENBERRY, MARSHALL
Jackson, MS

*FOX, THOMAS P.
Bryn Mawr, PA

*FRAME, J. WALLACE
Napa, CA

*FROST, MICHAEL
Passaic, NJ

*GAY, SYLVESTER P.
Salt Lake City, UT

*GRANT, FREDERICK E.
Dedham, MA

*GRAY, CHARLES F.
Santa Cruz, CA

*GEOFFRION, PAUL
Montreal, Quebec

GILLIS, ROBERT E.
Short Hills, NJ

*GIORDANO, JAMES V.
Paterson, NJ

*GREEN, HENRY
Grosse Pointe, MI

*GREEN, ROY A.
Sacramento, CA

*GROSS, LOUIS
Stamford, CT

*GYLLENBERG, WILLIAM H.
Longview, WA

HANSEN, NILES M. JR.
Indianapolis, IN

HAPPLE, JAMES D.
Acme, MI

*HEIBERT, ARTHUR C.
Akron, OH

*JACKSON, HUBERT S.
Sequin, TX

*JAMIESON, OLIVER M.
Memphis, TN

JOHNSON, VINCENT
Lyons, GA

JOLLY, JAMES M.
St. Charles, MO

KAYNE, SAMUEL P.
Richmond, VA

*KIMMEY, VIRGIL A.
Chesterfield, MO

KOLODZIEJCZK, JOSEPH
Wilmette, IL

*LIFTON, JACOB C.
New York, NY

*LINDEN, CYRUS M.
Great Falls, MT

LISTER, RODERICK L.
East Sound, WA

*LOWY, RICHARD A.
West Orange, NJ

McDANIEL, WILLIAM
Chicago, IL

McINNIS, HARRY B.
Sante Fe, NM

MANN, WILLIAM R.
Ann Arbor, MI

*MILLER, REUBEN E.V.
Doylestown, PA

*MORAN, JOHN F.
Hampden, MA

*MULLEN, GEORGE E.
New Milford, CT

*MUSGRAVE, WILLIAM A.
Borrego Srings, CA

*NAVARRA, MARIA
Uruguay

NELSON, FRANK W.
Graymont, IL

*NEWMAN, LEON E.
Beachwood, OH

NORRIS, J. PHILIP
Catonsville, MD

OSBORNE, LAWRENCE
Santa Barbara, CA

*LIFE FELLOW

*PAMMENTER, ELMER J.
Rochester, NJ

PEELER, LACKEY B.
Charlotte, NC

PETERSON, ROBERT H.
Pittsburgh, PA

*PRICE, THOMAS A.
N. Miami, FL

*PRINDLE, V. ARTHUR
Oakland, CA

*POUND, EDWIN C.
Atlanta, GA

*RAMSEY, HARRY E.
Saxton, PA

REGLI, CARL P.
San Francisco, CA

*REID, HARVEY W.
Toronto, Ontario

*REIERSON, CLARENCE N.
Minneapolis, MN

*RIESNER, SIDNEY
LaQuinta, CA

*ROBERTS, ARTHUR L.
Aurora, IL

*ROSE, ARMAND
Upper Montclair, NJ

SCIAKY, INO
Jerusalem, Israel

*SHAEFFER, JAMES H.
Parker, SD

SIMS, RONALD H.
Downey, CA

SMITH, ROBERT A.
Johnstown, NY

*SORRELS, HARRY H.
Oklahoma City, OK

*SWANSON, CLAYTON A.
Minneapolis, MN

*SWEET, CHARLES A. SR.
Pebble Beach, CA

*TAYLOR, CECIL M.
Houston, TX

TAYLOR, PERRY L.
Kankee, IL

*THOMAS, THOMAS W.
Leesburg, FL

TIMKO, MICHAEL
Pittsburgh, PA

TRAVAGLINI, EDMUND A.
Silver Spring, MD

*VIEILLE, ALBERT C.
Laguna Hills, CA

WACHTEL, NATHAN
New York, NY

WAKAI, WARREN T.
Honolulu, HI

WINKLER, HARRY JR.
Portland, OR

WILLIAMS, ALFRED K.
Atlanta, GA

*WOOD, HOWARD B.
Cumberland, MD

WRIGHT, WELLESLEY H.
Bend, OR

*ZIMMERMAN, MILES D.
Pottsville, PA

ANNUAL INDEX FOR 1982

American College of Dentists Foundation ..... Summer 7
A Positive View—*Richard J. Reynolds* .... Summer 11
Assessment of Dental Practice—
Alvin M. Morris .... Fall-Winter 53
A Time To Care for Dentistry—
Wallace V. Mann, Jr. .... Fall-Winter 35
A Treasury of Dentistry—*Gardner P. H. Foley* .. Spring 26
Summer 28
Fall-Winter 60
Augmenting Licensing Examinations .... Summer 21
H. Barry Waldman
Award of Merit to James E. Brophy .... Fall-Winter 9
Career Satisfaction of Dentists .... Fall-Winter 45
Philip Yablon and *Judith Rosner*
Deceased Fellows—1982 .... Fall-Winter 62
Dental Care for the Mentally Ill .... Fall-Winter 41
Marvin J. Block
Dental Ethics—Fact or Fancy .... Fall-Winter 21
Kenneth V. Randolph
Dental Radiology—Trends, Issues and
Problems .... Summer 14
Lauriston S. Taylor
Dentistry and the Public's Health .... Spring 11
Gordon K. Ting
Dentistry Is At A Crossroads .... Spring 14
I. Lawrence Kerr
Dentists Management Style, Career Satisfaction and Practice
Characteristics .... Fall-Winter 32
James M. George and *Charles L. Milone*
Editorials: F.A.C.D. .... Spring 3
Geriatric Dental Care .... Fall-Winter 3
Social Trends Affect Dentistry .... Summer 3
Fellowships Conferred—1982 .... Fall-Winter 16
Gies Award To Frederick T. West .... Fall-Winter 6
Honorary Membership to
Henry M. Thornton .... Fall-Winter 10
Is Dentistry a Viable Organism? .... Summer 30
Odin M. Langsjoen
Is There a Future for Tenure in Dental
Education? .... Spring 28
Robert W. Mendel and James P. Scheetz
President-Elect's Address .... Fall-Winter 12
Odin M. Langsjoen
Scholarship Among U.S. and Canadian
Faculty .... Fall-Winter 28
Robert W. Mendel and James P. Scheetz

Index of Authors

Blair, Keith P. (Editorials)
F.A.C.D. .... Spring 3
Geriatric Dental Care .... Fall-Winter 3
Social Trends Affect Dentistry .... Summer 3
Block, Marvin J. .... Fall-Winter 41
Dental Care for the Mentally Ill
Elsasser, William E.—The College and the
Future .... Summer 32
Foley, Gardner P. H. Foley .... Spring 26
A Treasury of Dentistry .... Summer 28
Fall-Winter 60
George, James M. .... Fall-Winter 32
Dentists Management Style, Career Satisfaction and Practice Characteristics
Kerr, I. Lawrence—Dentistry Is At A Crossroads Spring 14
Langsjoen, Odin M.—Is Dentistry A
Viable Organism .... Summer 30
President Elect's Address .... Fall-Winter 12
Mann, Wallace V., Jr. .... Fall-Winter 35
A Time To Care for Dentistry
Mendel, Robert W.—Is There A Future
for Tenure .... Spring 28
Scholarship Among U.S. and Canadian
Faculty .... Fall-Winter 28
Milone, Charles L. .... Fall-Winter 32
Dentists Management Style, Career Satisfaction
and Practice Characteristics
Morris, Alvin L.—Assessment of Dental
Practice .... Fall-Winter 53
Randolph, Kenneth V. .... Fall-Winter 21
Dental Ethics—Fact or Fancy
Reynolds, Richard J.—A Positive View .... Summer 11
Rosner, Judith F. .... Fall-Winter 45
The Career Satisfaction of Dentists
Scheetz, James P.—Is There A Future For Tenure Spring 28
Scholarship Among U.S. and Canadian
Faculty .... Fall-Winter 28
Taylor, Lauriston S. .... Summer 14
Dental Radiology—Trends, Issues and Problems
Ting, Gordon K. .... Spring 11
Dentistry and the Public's Health
Waldman, H. Barry—Augmenting Licensing
Examinations .... Summer 21
Yablon, Philip .... Fall-Winter 45
The Career Satisfaction of Dentists

OFFICERS

President
ODIN M. LANGSJOEN
301 Morley Parkway
Duluth, Minnesota 55803

President-Elect
LYNDEN M. KENNEDY
1918-A Skillman Avenue
Dallas, Texas 75206

Vice President
CHARLES W. FAIN, JR.
320 Harvey Street
Daytona Beach, Florida 32018

Treasurer
ROBERT W. ELLIOTT
8732 Falls Chapel Way
Potomac, Maryland 20854

Editor
KEITH P. BLAIR
4403 Marlborough Avenue
San Diego, California 92116

Executive Director
GORDON H. ROVELSTAD
7315 Wisconsin Avenue
Bethesda, Maryland 20814

REGENTS

Regency 1 **SUMNER H. WILLENS**

Connecticut, Maine, Massachusetts, New Hampshire, New York, Quebec, Rhode Island, Vermont

Regency 2 **H. CURTIS HESTER**

Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania

Regency 3 **JAMES A. HARRELL, SR.**

Alabama, Florida, Georgia, North Carolina, South Carolina, Puerto Rico, Virginia

Regency 4 **NORMAN H. OLSEN**

Illinois, Indiana, Kentucky, Ohio, West Virginia

Regency 5 **PAUL S. BUTCHER**

Iowa, Kansas, Manitoba, Michigan, Minnesota, New England, North Dakota, South Dakota, Oklahoma, Ontario, Wisconsin.

Regency 6 **ROBERT C. COKER**

Arkansas, Louisiana, Mississippi, Missouri, Tennessee, Texas

Regency 7 **LEO E. YOUNG**

Arizona, Southern California, Colorado, Nevada, New Mexico, Utah, Wyoming

Regency 8 **ROBERT A. CUPPLES**

Alaska, Alberta, British Columbia, Northern California, Hawaii, Idaho, Montana, Oregon, Washington, Saskatchewan

American College of Dentists
7315 Wisconsin Avenue
Bethesda, Maryland 20814

Return Postage Guaranteed

Second Class Postage
PAID
Washington, D.C.
and Additional Mailing Points