LEADERSHIP AND THE PROFESSIONAL ETHIC

FUTURE TRENDS IN DENTAL EDUCATION

PERSPECTIVE ON PREVENTION

ROLE SATISFACTIONS OF DENTISTS

APRIL 1975
ACTIONS OF THE BOARD OF REGENTS

The Board of Regents of the American College of Dentists, at its recent meeting in Bethesda, Maryland, took the following actions:
—Accepted a report of the Executive Director indicating that College membership now totals 4,464, an all-time high.
—Accepted reports of the Officers and Regents on the state of the College.
—Approved the list of candidates for Fellowship to be presented at the 1975 annual convocation in Chicago.
—Accepted a report from the Committee on Section Activities on the development of a manual for Sections.
—Heard a report from the Executive Director reviewing the changes in organizational structure and operations over the past five years and offering recommendations for the future direction of the College.
—Adopted a motion to have the Coordinating Committee study the bylaws rule that requires each Fellow to be a member of a Section of the College and temporarily suspended the requirement.
—Voted to contribute $500 to the Section on Dentistry of the American Association for the Advancement of Science.
—Discussed the format of the Annual Meeting Program and Convocation.
—Approved changes in the Bylaws as recommended by the Coordinating Committee. These changes will be placed on a mail ballot for distribution to the membership.
—Approved a report on the development of a format for future College programming through a commission system, whereby issues of importance to the profession would be studied in depth and reported in the Journal, and in pamphlet form for further dissemination.
—Suggested that Section officers participate in the development of nominations of worthy individuals for College Fellowship.
—Adopted a resolution to continue the Self-Assessment and Continuing Education and the Mini-Self-Assessment programs.
—Approved a report of the Awards Advisory Committee which presented the nominations for 1975 College Awards.
—Approved plans for a conference of Dental Editors who are Fellows of the College.
COLLEGE TO MEET IN CHICAGO

The 55th Annual Meeting and Convocation of the American College of Dentists will be held at the Conrad Hilton Hotel in Chicago on Saturday, October 25, 1975.

The Annual Meeting will feature a panel discussion on "Alternatives in the Delivery of Oral Health Care II — The Role of the Specialties." This will be a continuation of the excellent program held last year in Washington.

The Board of Regents will meet on Wednesday, Thursday, and Friday, Oct 22, 23, and 24.

The Indoctrination Lecture for new Fellows will be held on Saturday morning.

SECTION NEWS

Texas Section

The Texas Section held its Twentieth Annual All-Day Session in Dallas on January 11, 1975, with President James Schmulen presiding. In the morning, Mr. Eugene C. Zorn, Senior Vice-president of the Republic National Bank of Dallas spoke on "The Outlook for 1975."

Lynden M. Kennedy, President of the American Dental Association was the after-luncheon speaker. In the afternoon, Dr. John M. Coady, A.D.A. Assistant Executive Director of Education and Hospitals spoke on "The Future of Dental Education." Mr. Eric M. Bishop, Assistant Executive Director for Dental Health talked on "The Policies of the American Dental Association on the Major issues Confronting the Profession." A panel discussion followed.

On April 26, the Section will hold a breakfast in honor of P. Earle Williams, President of the College, in Fort Worth during the Annual Session of the Texas Dental Association.

New Jersey Section

The New Jersey Section met in January at the Ramada Inn, Clark, N.J. The speaker of the evening was Mr. Salvatore Avanzato, the new Marketing Director of New Jersey Dental Service Plan, who gave an interesting talk on the changes taking place in the operation and management of the Plan.
Maryland Section

The Maryland Section of the American College of Dentists held its third annual Student Day for the graduating class of the Dental School, University of Maryland, on October 10, 1974. Many of our members were able to attend, and joined a fine representation of the students for lunch.

Two speakers then addressed the students. Dr. Lynden M. Kennedy, President-elect of the American Dental Association, spoke on "Current Trends in the Delivery of Dental Services," and Dr. Robert I. Kaplan followed with a presentation of "How to Start a Dental Practice."

Both papers were enthusiastically received by students and members alike. They were followed by a lively question and answer period.

We of the Maryland Section are very proud of this project which has become increasingly better each year, and feel that this is an excellent chance to bring the profession to the student in a way that may not be possible in classroom contacts.

As Dr. Robert Nelsen so aptly said in "Comment" on page three of the ACD "News and Views" for August, 1974: "In the profession, the sudden metamorphosis of student to practitioner has a potential for significantly great harm. The novice dentist must be influenced at this time by the profession and not the business community, so that the economic considerations necessary to establishing a practice do not supervene his mandatory professional obligations. These antagonisms are a considerable danger to his professional development at this transition period. As self-interest and financial return vie with the less apparent, but more rewarding features of a professional life-style, the guiding influence of the organized profession must become more effective."

Hawaii Section

The Hawaii Section of the American College of Dentists has donated $250 to the John H. Dawe Dental Education Fund.

Dr. Dawe was Secretary of the Hawaii Section for many years, contributing many hours of his time, as he had done for the county and state dental societies.

The Hawaii Section held a breakfast during the Pan Pacific Dental Conference in Honolulu in January 1975.
New York Section

The last meeting of the New York Section of the American College of Dentists was held Sunday, December 1st at the New York Hilton Hotel during the Greater New York Dental Meeting. There were 110 active fellows and wives in attendance.

Our guest speaker was Barry Farber, a popular radio interview personality, who spoke on the state of the economy and moral values in the United States. His views were optimistic and his discussion was most appropriate at a time when our country is receiving unfavorable publicity.

Among the notables attending this meeting were: Dr. Irving E. Gruber, candidate for 1st Vice-president of the American Dental Association (1975); Dr. John Saladino, President of the 2nd District Dental Society; Dr. Alfred J. Keck, President of the New York Academy of Dentistry; Dr. Emil Lentchner, President of the Dental Society of the State of New York; Dr. Gerard E. McGuirk, General Chairman of the Greater New York Dental Meeting; Dr. I. Lawrence Kerr, Trustee from the 2nd Trustee District to the American Dental Association; Dr. Andrew Linz, President of the 1st District Dental Society of the State of New York; Dr. Harold Gelb, Advisory Chairman of the Greater New York Dental Meeting and Dr. Lynden M. Kennedy, President of the American Dental Association.

The invocation was delivered by Dr. Gerard E. McGuirk. Dr. Robert J. Nelsen reported on the status of the Mini-Self-Assessment Program. The meeting was chaired by Dr. Michael Turoff and ably arranged by Dr. Barry Symons, our secretary-treasurer.

NEWS OF FELLOWS

Crawford A. McMurray is retiring from the position of secretary-treasurer of the Texas Section of the College, a post in which he has served for the past 22 years.

Richard C. Oliver of Redlands, California will become Dean of the University of Southern California School of Dentistry in September. Dr. Oliver is currently professor of periodontics and director of graduate periodontics at the School of Dentistry of Loma Linda University.

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The European Common Market after ten years of debate, has recently announced that the 400,000 doctors in the nine member countries are to be given the right to practice medicine in whichever country they choose. This is a most unusual decision, for it is the first time that any profession has been granted European-wide status. It could possibly lead to similar arrangements for other professions, including dentistry.

Beginning next year, professional borders will be abolished, and physicians educated in any Common Market country will be permitted to practice in any other. It will no longer be necessary to pass national examinations, as previously required, for each country will recognize the diplomas and medical licenses of the others.

A consultative group of representatives from each country will be set up to study ways to coordinate the levels of medical training. The program should go into effect in 18 months.

Proponents of the plan are hopeful that it will bring physicians into countries and areas where there are fewer per capita and the need is greater. Critics however argue that physicians will wish to practice only in areas that offer them the greatest economic advantages, which usually means the centers of population. It is interesting to note that these arguments, pro and con, have been expressed by those who favor or oppose dental reciprocity in our own country.

Preparation for the elimination of professional borders will no doubt require some careful changes in administrative rules, before the program goes into effect. The dental profession in the United States will be watching with great interest how European style reciprocity works. Its success could offer a good example to those supporting it here. Its failure could be a major stumbling block to their further efforts.

R.I.K.
Regent Charles A. Calder

At the last annual session of the College, Charles A. Calder of Dansville, New York became a member of the Board of Regents. A graduate of the University of Buffalo Dental School, he has conducted a general practice in Dansville for the past 37 years.

He is a past-president of the Livingston County Dental Society, and the Seventh District Dental Society. He also holds memberships in the Monroe County Dental Society, Dental Society of the State of New York, The Academy of General Dentistry, The American Society of Dentistry for Children, The American Dental Society of Anesthesiology, The American Association of Dental Examiners, Federation Dentaire Internationale, the Rochester Academy of Medicine, Omicron Kappa Upsilon honorary dental society, and Delta Sigma Delta fraternity.

Dr. Calder served for ten years on the New York Board of Dental Examiners; was a delegate to the American Dental Association; and is a past-president of the Board of the Dansville Memorial Hospital. He is also a former president of the Dansville Lions Club, is active in the Steuben Boy Scout Council, and was supervising dentist in the public schools of Dansville and Canaseraga.

Last year, Dr. Calder was honored by the Seventh District Dental Society, receiving the Dr. George D. Greenwood Award which is given annually to a member “who has been dedicated to his profession, faithful to his dental society and community undertakings and loyal to his colleagues throughout his career.”

He is married and has a son and daughter. His hobbies are golf, sailing, hunting, fishing and making jewelry.
Regent William C. Draffin

William C. Draffin, general practitioner of Columbia, South Carolina was named to the Board of Regents at the last annual meeting. Doctor Draffin studied at the University of South Carolina and took his dental degree at Medical College of Virginia School of Dentistry. During World War II he served in the Dental Corps of the Air Force, retiring with the rank of Major.

He is a past-president of the Columbia Dental Society, the Central District (S.C.) Dental Society and the South Carolina Dental Association; was president and later secretary of the South Carolina Dental Association; was president and later secretary of the South Carolina State Board of Dentistry; and is currently Chairman of the Board of Trustees of the Medical University of South Carolina.

Dr. Draffin is a member of the House of Delegates of the American Dental Association; a charter member of the South Carolina Academy of Practice Administration; a member of the American Association of Dental Examiners and the Southeastern Commission of Higher Education.

He has been active as a board member and fund-raising chairman for state and county cancer societies and the United Fund Organization; served on the Board of Health of Columbia, South Carolina; and is a past-president of the Columbia Executive Club. He belongs to Sigma Chi and Delta Sigma Delta dental fraternity.

Dr. Draffin was honored with the Meritorious Service Certificate of the Hinman Dental Meeting and is a member of Omicron Kappa Upsilon honorary dental society. He is married and the father of two sons and a daughter.
Leadership and the Professional Ethic

GOVERNOR WINFIELD C. DUNN

I am warmed by your welcome and deeply stirred by memories and associations which this appearance before you brings into such sharp focus. I wish it were within my power to accord fully to you the heartfelt thanks I feel for your admission of me into the ranks of your fellowship two years ago, and now the William John Gies Award.

For four years, I have been totally engaged in one of man's most interesting pursuits — the fascinating yet cumbersome process through which the will of the people of a democracy finally is expressed.

My service as governor of a sovereign state has given me an exceptional view of our country, the world in which we live, and the people. The remarkable series of events which altered the course of my personal and professional existence in such a short period of time have brought me to a point that I am now anxious for a period of reflection and assessment.

I will welcome the change in January. I find the words of Washington Irving somewhat appropriate as I near the end of a tumultuous and challenging term of office, the first by one of my party in fifty years to serve in the governorship, required to serve with a legislature controlled in both houses by those of a different partisan bent. Irving said, "There is a certain relief in change, even though it be from bad to worse; as I have found in traveling in a stagecoach, that it is often a comfort to shift one's position and be bruised in a new place!"

In a sense, the four years, soon to be concluded, may be viewed

Presented at the Annual Convocation of the American College of Dentists, Washington, D.C., November 9, 1974. Governor Dunn was the recipient of the William J. Gies Award.
as having vanished much too swiftly, but the truth is that there have been moments of administrative perplexity and executive decision making when time seemed to stand still. On more than one occasion I have had cause to remember the response of a former governor, who, when asked how he enjoyed being the chief executive of his state, replied, "I like it very well. I sleep each night just like a baby — I sleep an hour, then I wake up and cry an hour."

Truthfully, my life has been profoundly affected by the rare privilege I, along with my family, have had as an elected official. The temptation to be unduly impressed with one's status has been continuous, but I can credit President Woodrow Wilson with words which have had a stabilizing effect on me. The President said, "Every man in public office either grows or swells. When I give a man an office, I watch him carefully to see if he is growing or swelling. The mischief of it is that when they swell, they do not swell enough to burst!"

This convocation provides the membership of the American College of Dentists with a timely reminder that the organization was founded to raise the ideals of the dental profession. Our noble calling, not unlike others within our system of professions, has as its chief concern the best interests of constituents, patient, students or clients. In view of our avowed concern for our fellow man, I intend to direct the substance of my remarks today toward what I consider an obvious need in America: A new expansion of the influence of professionalism from within our ranks, the circumstances in general which point up that need, and the effects of such a resurgence of the professional ethic on the resolution of human problems. I offer my thoughts from a perspective which not only has been shaped by an awareness of professional values but by fresh and vivid experiences as an elected public servant.

We live in a world of fantastic, accelerating change. Our nation is in the throes of the most unusual period of economic, political, social and psychological adjustments in this century. These dynamic conditions raise the logical questions for thoughtful people — will we, the people, shape those forces of change — or will we be overwhelmed by them?

The growing economic strength of our nation, measured in recent years by successive new, all-time highs of our domestic barometers, is presently undergoing traumatic adjustments, as measured by those same barometers.

Many people who have taken for granted our reward-laden, profit-minded free enterprise system, as if it were some process
predestined by divine ordinance, are beginning to notice that its benefits must be earned and are not guaranteed. The unprecedented phenomenon of a prosperous nation and its people groping with a strange condition called "stagflation," the growing rate of unemployment, the uncertainty that has and continues to accompany the stark realities of energy shortages, individually and collectively remind us that it will be necessary for us to call on our greatest strength — our built-in adaptability and its virtue in being able to manage change in such a way that the services which our society has come to expect can continue to be provided.

Politically, the swiftness with which alterations in the composition of the power structure in our nation have occurred during the past several years defies the most active imagination. The unparalleled landslide election of a president of the United States in 1972 gave evidence of the people's approval of strong, effective national leadership which would calm domestic conflicts and extract our armed forces, with honor, from a tragic commitment in Asia. Today, this now former president finds himself reduced to a pitiful spectacle, having been abandoned by former friends, having bared his personal finances to the world, having been humiliated by a self-confession of duplicity. Out of the tragedy of "Watergate" has come, according to columnist Henry J. Taylor, the lesson which teaches that any president, no matter how strong his mandate from the people or his political prowess, can make only a limited impact on the federal bureaucracy and, especially, he must keep his own house in order.

Today, we view with new enlightenment the political mandate of the people, as expressed as recently as this past Tuesday, the citizenry has reacted with dramatic results to the stimulus of change by electing a national congress weighted heavily toward one political party, by selecting for service a remarkable majority of the nation's governors who are members of that same party, by clearly indicating through their votes that they demand from a new and uniquely commissioned president of the United States effective action from an overgrown government which must now grope anew for remedies to national and worldwide ills.

There is considerable evidence from society in America today that we as a nation aspire to higher means of a collective conscious effort to a degree that endangers our worldwide reputation for aspiring to higher motives as we consider our opportunities for ourselves and our fellow man. The so-called
“New Morality” which preaches the obsolescence of fixed standards of attitudes and conduct puts our people, as a society, in danger of experiencing the loss of self-respect.

The consequences for a society of citizens whose moral development is neglected, whose training in integrity is ignored, and whose understanding of the distinct difference between success and virtue is dimmed, are, purely and simply, a loss of self-respect with all its attendant dangers.

Perhaps these weaknesses in the nation’s social fabric are the root causes of our increased national crime rate, our continued tragic experiences with alcohol and hard drugs, the historically high rate of divorce and our inability as a people to lower the barriers of prejudice which inhibit our total development.

At any rate, we Americans are challenged intellectually, philosophically, materially, spiritually, as we have never been challenged before. We are, in a sense, walking around in strange and unfamiliar places, not quite sure where reality lies. The fantastic changes going on about us have permitted us to burst through gravity and enter space; we have developed the ultimate weapon through which we can see our own annihilation; we have polluted our land with the spoilage of our activity to a dangerous degree; and we have rather suddenly found ourselves without an adequate supply of energy to meet our ever increasing appetites.

Yes, we live in a world of remarkable, accelerating change, and I get the distinct impression that we are not responding sufficiently to the changes altering our society. The institutions which we have relied on to fulfill human needs and desires, whether private or governmental, have lagged behind the realities of the times. We have got to have the courage to accept the fact that we are entering a new era in a world that is drastically changing. We should not be afraid of change that is shaped to meet the emerging needs.

Traditionally, America has faced the demands of the times, the impact of change, with varying degrees of success, but with a progression of bold and imaginative ideas to meet human needs. The results, in part, have been good, but there has also developed an imbalance in our structure of government, an imbalance which I believe to be ominous, one which has evolved because we have not, as a nation, responded sufficiently to the changes which have come.

Major turning points in our history, such as the adoption of the Sixteenth Amendment which led to the federal income tax, the
world wars with a great depression interspersed, the Korean and Vietnam tragedies, and a massive, booming economy, all have led to an enormous concentration of power and resources in Washington, D.C. The result is that our federal system of government, with a balance of governmental authority in the local, state and national levels, has been disrupted and greatly overloaded in the direction of the federal bureaucracy.

All this, my fellows and friends, clearly says to me that the time is at hand for us to realistically meet these problems which have resulted from rapid growth and change in America. We must face the facts and the implications of change, and, as a nation, develop an intelligent course of action which reflects the best interest of all our citizens. We need a clearer sense of national purpose based on the emerging realities of the world in which we live.

I think our chances to develop such a course will be enhanced if we can find amongst us from the workings of our political system a new kind of leadership. Our country, and its governments, truly needs a different breed of men and women moving into the forefront of public responsibility — a breed of men and women holding with some passion a set of values different from those exhibited by others who have led us in this somewhat mindless era of affluence.

I can think of no more appropriate a source from which America might lay claim to such leadership than from our system of professions, and more specifically, from the healing arts segment of the professional spectrum.

Professionalism in the broadest sense involves a concept of service to others, either as individuals or groups. Professionalism implies unselfishness and requires adherence to a code of ethical conduct of the highest order. A professional has a strong belief in himself, in his work, in its intrinsic worth and goodness.

Our own very distinguished executive director, Dr. Bob Nelsen, in a paper entitled "The Nature of Professionalism — Its Value to Society," accurately described the term professionalism as, "That quality of conduct which accompanies the use of superior knowledge, skill and judgment toward the benefit of another person or to society prior to any consideration of self-interest by the professional person or professional organization."

Dr. Nelsen goes on to point out that "The organization of our American society provides for systems of policy makers as bridges between the idealist and the pragmatist. This is the system of the professions which acts with a knowledge of the ideal
solutions and an awareness of the compromises necessary to affect that which is attainable."

Out of such a system, it seems apparent to me, can come the kind of public leadership which will impart to the American people a confidence and a sense of worth, as well as a new dedication to high principle and commitment to the common good.

Fortunately, we do have professionals who are willing to lead who are capable of making difficult decisions, value judgments and reasonable compromises, all of which are essential ingredients in the successful practice of artful politics and productive government.

It is within our ranks, among others, that one finds the kind of responsible conduct that has warranted official public sanctions for contest of such measures as licensure, self-government and self-discipline. Out of those same ranks can come an increasing number of patriotic professionals who are dedicated to the preservation of individual freedom, the preservation of our system of health care delivery, to a better balance in the structure of government at all levels and to a renewed faith in the destiny of our country.

It is our duty from within the ranks of our associates to contest any violation of our freedom to set standards of education and training, delivery of professional service, regulations on licensure and reciprocity, among others.

I believe it is also our duty as well as our unique opportunity to provide the kind of public leadership which will provide cohesive focus through which our national character can be built and strengthened. Herbert Hoover observed, "National character cannot be built by laws. It is the sum of the moral fiber of its individuals."

Within the short span of the most recent five years of our history, we have watched fellow professionals march to the forefront of personal commitment to political leadership. Dr. Carlos Camancho, a dentist, is the popularly elected governor of Guam. Dr. Melvin Evans, a physician, is the popularly elected governor of the Virgin Islands. Dr. Otis Bowen, governor of Indiana, is a physician. Dr. Jim Edwards, an oral surgeon and state senator, has just been elected governor of South Carolina. Dr. Jim Granberry, a dentist and former outstanding mayor of Lubbock, Texas, has just completed a strong race for the governorship of Texas, a contest which he lost, but one through which I am confident he was a substantial force for good.
In addition to these personalities, there are many others from our ranks serving in government at all levels — congressmen, mayors, county officials and members of boards and commissions.

Add to these commitments the activities of the political action committees which provide financial assistance to candidates on a nonpartisan basis and those from among the professionals who serve as managers and active supporters of candidates and it becomes obvious that the professionals are involved and concerned. I am convinced, however, that we should go further.

Within the past several years, there has been increasing evidence of a trend to reduce the imbalance in our federal system — to return more of the material resources and decision making authority to state and local governments, where the problems of our people can be effectively solved. We have seen this evidenced in general revenue sharing, special revenue sharing and the consolidation of categorical grant-in-aid programs which heretofore have been a jungle of confusion to officials at all levels.

I have seen no evidence from within the federal bureaucracy of a willingness to transfer power to local governments, but this willingness has been clear in the action of our two most recent presidents as well as important leaders in congress.

This attitude must be encouraged, and this kind of common sense approach to government must continue.

Ladies and gentlemen, government in the United States is today and will continue to be in the future simply a process through which public order can be maintained and by which people can have done for them those things which they, individually and separately, cannot do for themselves. How carefully the order is maintained, and the degree of success with which things are done for people by their governments depend upon you and me.

Government today presents a big order. In addition to coping with the dynamic forces of change to which I referred earlier, forces which require action of a national or international character, we must remember that governments at the state and local levels are challenged as never before to deal with the ignorant, the malnourished, the ill, the feeble, the retarded, the mentally ill, the alcoholic and the addict, the criminal and the victim of crime, the unemployed, the underemployed and the crippled. Our governments must regulate, inspect, monitor, contract, educate and tax, and, more importantly, work together with government at the national level to continually secure for you and me the greatest possible amount of personal freedom.
President Eisenhower, in a message to congress, said, "Freedom has been defined as the opportunity for self-discipline — should we persistantly fail to discipline ourselves, eventually there will be increasing pressure on government to redress the failure. By that process, freedom will step by step disappear."

Far too many dentists and physicians are not active in civic and service clubs in their communities. Membership rosters of Junior Chambers and Chambers of Commerce show too few professionals as active members, perhaps because these people feel they don't have time or do not want to take time. Such activities as these are eminently worthwhile and frequently serve as springboards to political activity and undreamed of opportunities for service.

There is no doubt that we as professional people have strength which is completely unknown. Our nation today has an immense need for a resurgence of professionalism as well as a heavy thrust of individual opportunities to meet the challenges of leadership which are waiting to be dealt with, and if we fail to do so, we will have ignored great opportunities to be vital factors in the future of our nation.

When Andrew Jackson, our beloved "Old Hickory" from Tennessee, died, someone asked, "Will he go to heaven?" And the answer was, "He will if he wants to." If I am asked will the professionals of America step forward and play an even more momentous and significant role in the destiny of these great United States of America, I will answer, "They will if they want to."
Future Trends in Dental Education

JOHN M. COADY, D.D.S.

The invitation to speak to members of the American College of Dentists provides, in my view, an opportunity for ADA staff to communicate with the leadership of the profession. Hopefully, you, as dental leaders and members of the College, will assist in carrying accurate information on ADA policy to the practicing profession. In the past, there has been much misunderstanding of the Association’s role in the governance of dental education. I hope that, at least in part, the information presented today will provide you with a better understanding of the Association’s accreditation program and will encourage the educational, licensure and practice components of our profession to close the credibility gap which now exists and to work together for the common good of the public and dentistry.

Like you, I have observed, during the past several years, a profession faced with a multitude of controversial issues on which there are many opinions and little agreement. The future need for dental manpower, the degree to which the profession can support expanded functions for dental auxiliaries, practice jurisdictional problems among specialty groups and between specialists and general practitioners, voluntary vs. mandatory continuing education, the disagreement within the profession on the issue of a single fee-for-service and the matter of who may perform the service and be reimbursed by a third-party carrier are but a few of the problems that, in my view, are tending to fragment the profession. I envision continued severe controversy and fragmentation within the profession on these and other issues during the next five to seven years. I suspect that, after these years

Presented to the Texas Section of the American College of Dentists, Dallas, Texas on January 11, 1975. Dr. Coady is Assistant Executive Director for Education and Hospitals, of the American Dental Association.
have passed, the fragmented groups, having failed to have significant impact individually, will be looking for ways to unify the profession so that it can regain its effectiveness. I only hope that when professional unification is again fact, it will not be five or seven years too late.

Today I will discuss issues related to the future of dental education from the vantage point of my twelve years of experience and association with the Council on Dental Education. The Council is only one of many influences on professional education and practice. I would like to think, however, that it has significant influence and that it has been instrumental in producing professional manpower competent to provide the public with quality dental care.

THE COUNCIL ON DENTAL EDUCATION

Perhaps, it would be appropriate at this time to devote a few minutes to reviewing the structure and function of the Council on Dental Education and how the Council has influenced the present philosophy and format of dental education.

The Council was authorized by the American Dental Association in 1938 and charged with the responsibility of undertaking a program of accreditation of dental schools. To initiate this program, the ADA House of Delegates approved standards known as Requirements for the Approval of a Dental School. These Requirements were not implemented until the 1941-1942 school year, at which time the Council conducted its first dental school site visit evaluation. Although the Requirements have undergone several revisions since first adopted, I think it is significant to note that many of the basic concepts and principles contained in the original standards are still valid today. I think it is also significant that the balanced tripartite organization of the Council, which represents dental practice, dental examining boards and dental education, has withstood over three decades of experience. The Council, originally a nine-member body, had three representatives nominated by the trustees of the ADA, three nominated by the AADS and three nominated by the AADE. The present Council consists of the same tripartite structure but is now a twelve-member body with four members representing each group. All appointments to the Council on Dental Education are confirmed by the ADA House of Delegates.
On January 1 of this year, the ADA Commission on Accreditation of Dental and Dental Auxiliary Educational Programs was born. This new twenty-member body, which represents all segments of the profession affected by the Association's accreditation program, is responsible for the accreditation activities of the Association. The Council on Dental Education, whose membership makes up the core of the Commission, continues to exist as a separate entity and to make recommendations on educational matters to the House of Delegates. For example, the Council continues to have the responsibility for recommending recognition of new specialties and for assuring the profession that the various specialty and auxiliary certifying boards continue to comply with Association policy and standards. The Commission, on the other hand, has final authority for approval and implementation of all educational standards and for the accreditation program for dentistry, its specialties and its auxiliaries. Its core membership — that is, the members of the Council on Dental Education — should have significant impact in providing guidance to this important body on matters related to education.

The new Commission on Accreditation is recognized by the Council on Postsecondary Accreditation, the successor to the National Commission on Accrediting (an agency which represented the colleges and universities of the country) and the U.S. Office of Education, Department of Health, Education, and Welfare, as the accrediting agency for dental and related education programs. All criteria and procedures used by the ADA Commission meet the standards established by these national agencies.

As stated previously, the accrediting activities were initially confined to dental schools; but today, in a course parallel to the development and growth of the profession, the new Commission's accreditation activities also include advanced education programs for special areas of dental practice, general practice residency programs and education programs for dental hygienists, dental assistants and dental laboratory technicians. It may be of interest to note that the Commission has been initiated with a total of approximately 1,300 separate education programs within its purview.

May I take this opportunity to clear up some confusion related to the authority of the Commission as an accrediting agency.
Commission decisions related to accreditation must be based solely on the educational standards approved for the discipline and the accreditation status granted a program must be based on objective evidence related to programmatic review. It is important to emphasize that the Council has been informed by both the National Commission on Accrediting and the U.S. Office of Education that the Commission's recognition as a specialized accrediting agency would be jeopardized if it used the sanction of accreditation to enforce Association policy or state laws.

Another point of confusion in the Association's accreditation program relates to the degree of responsibility the Commission has in assessing an individual student's clinical competency. The Council ordinarily visits educational programs for accreditation purposes once every seven years. Its responsibility is to assess the "process" — that is, the quality and the content of the education program — to assure that the basic components necessary for the development of competent practitioners are included in the program. The responsibility for assessing the "product" — that is, the quality of the student graduates from the program — is that of the individual state board. Therefore, in order to keep accreditation and licensure separate, the Commission will continue to assess only the quality of the educational experience which a student receives during his years in the educational program. However, dental school site visit teams will begin to experiment this year with a dental student peer review mechanism which will attempt to evaluate, in greater depth, the students' clinical competency as part of the accreditation process. Final review of the individual graduate's ability to practice dentistry is a licensure board function and responsibility and must remain with the state's legal authority.

I have attempted to provide you with a general background of the Commission's obligation and accreditation commitment to dental, advanced specialty and auxiliary education programs. Perhaps it would now be appropriate to describe briefly several other factors which have influenced dental education in the past and will continue to do so in the future.

**FACTORS INFLUENCING DENTAL EDUCATION**

The Council on Dental Education and the Council of National Board of Dental Examiners have been identified by some as having a significant and, perhaps, an overly-important influence. The state dental examining boards have been cited by many as
exerting a controlling and sometimes undesirable influence. The federal government, through its various funding programs, must be considered an influencing factor. Student quality certainly influences the level of instruction in a dental school. Finally, many members of the dental profession are convinced that the deans of dental schools, occasionally with faculty assistance, determine from their "ivory towers" the precise ingredients in a dental curriculum which will develop dental students into competent practitioners.

In a very real sense, I suspect that all of these influences do exist and that all, to some degree, hinder and help the progress of dental education. There is not the slightest doubt in my mind that dental faculties have the major responsibility for determining the dental curriculum and this, I believe, is as it should be. It is to be hoped, however, that the faculties will make a continuing effort to maintain a close touch with the realities of dental practice and with the social and economic atmosphere in which their graduates will live when they leave the dental school.

THE STATE BOARDS

There is not the slightest doubt in my mind that state boards of dental examiners have an influence on the dental curriculum and, for the most part, I do not feel that this is undesirable. In fact, state boards serve as a counterpart to education in providing a desirable "check-and-balance" system from which the public and profession benefit. Again, however, I think it is essential that state boards review their examinations and procedures continuously to be sure that they are measuring those skills and abilities which are important to modern dental practice and which are responsive to the learning experiences which the students had while they were in dental school. If the profession loses the authority for licensure at the state level, in my view, the "check-and-balance" system disintegrates and both the public and the profession are the losers.

On the other hand, there are forces at work today which seek to destroy licensure as we now know it. It is true that the national licensure standards proposal, which was a part of the Kennedy health manpower bill, was deleted from that piece of legislation. It does not mean, however, that the issue is dead. If licensure at the state level is to survive, then boards must be sensitive to the cry from within the profession for a modernized approach to licensure. I support and will continue to support the right of a state to
FUTURE TRENDS IN DENTAL EDUCATION

determine on the basis of a clinical examination the competency of each graduate. I cannot support the need for continued clinical re-examination of this individual as he seeks licensure in additional states. Certainly, a realistic, specific professional criteria approval system is a part of the answer and would, in my view, result in increased support for licensure at the state level.

FEDERAL GRANT PROGRAMS

The Comprehensive Health Manpower Training Act of 1971, under which the Health Profession’s Educational Improvement Program exists, determines which dental schools will receive support based on increased enrollment of full-time students. Special funds have been available to projects which result in curriculum development or improved methods of training, or will help to reduce the period of required training without adversely affecting the quality thereof. In other words, priority in approval and funding of applications for special project grants has been given to the support of activities which will make the greatest contribution towards maintaining or increasing the output of health professional personnel to provide health services to the nation without loss of quality.

A major problem related to the Council’s, and now the Commission’s, accreditation program stems from the Department of Health, Education, and Welfare’s refusal to implement, in a reasonable manner, a provision of the Comprehensive Health Manpower Training Act of 1971 that permits the Department to grant a waiver of an enrollment increase where the dental school might imperil the quality of its educational program by enrolling additional students. For capitation grant eligibility, the law requires a dental school to expand its first year enrollment and to continue the expansion for each year of the grant. In the opinion of the Council, several dental schools have not been and are not currently in a position to accept additional students without compromising program quality.

The issue related to the waiver provision, the quality of dental education and the accreditation processes of the Council on Dental Education are all interrelated. The Council supported the waiver applications of several dental schools and indicated to the institutions that the acceptance of additional students, without adequate facilities and other related support, would jeopardize the program’s accreditation status. As suspected by the Council, the waiver provision was not exercised to any reasonable extent
during 1972, 1973, or 1974. Several dental education programs were placed in an extremely awkward position — between the Department of Health, Education, and Welfare’s insistence on mandatory enrollment increases and the Council on Dental Education’s accreditation policy. As a result, some of these schools have been moved to less than full approval because the increase in enrollment affected the quality of the education program. Let me assure you that the Council, the Commission, and the Association’s Washington Office are seeking a meaningful waiver provision in the next health manpower bill.

During the last decade, the Dental Auxiliary Utilization Program, sponsored by the U.S. Public Health Service, has had great acceptance with dental schools in providing the resources for teaching dental students how to utilize effectively the chairside assistant in the four-handed, sit-down concept of dental practice. Federal funding for the creation of departments of community dentistry in some 20 dental schools also clearly indicates the influence which the federal government has on the structure and emphasis of a dental school curriculum.

Again, let me clarify a matter relative to the Commission’s position on the utilization and education of auxiliaries. The Commission, in its evaluation program, neither encourages nor discourages the teaching of expanded functions to dental auxiliaries. It believes it is the responsibility of the constituent dental society, the state board of dental examiners and the education programs within the state to determine cooperatively what expanded functions, if any, should be legalized and promoted. The Commission’s role is that of assessing the quality of the expanded function teaching program. Therefore, if expanded functions are taught within an accredited educational program, the Commission will assess the performance goals utilized for teaching those procedures. Failure of an institution to teach expanded functions to students at a quality level could result in the lowering of the accreditation of that program.

EDUCATIONAL STANDARDS

With your permission, I would like to describe in some detail the ways in which the Council and the Commission influence curriculum change. The Council has developed educational requirements for dental schools and dental hygiene, dental assisting and dental laboratory technology programs. In addition, the Council has educational standards for advanced education
programs designed for the preparation of specialists and general practice residents. Educational guidelines have been developed for each discipline for use by institutions developing teaching programs and for use by the Commission in the evaluation of educational programs. All educational requirements used by the Council in the past have been reviewed by the Board of Trustees and the House of Delegates and have been in accordance with the former Bylaws, approved by the House of Delegates. The Association has now given the Commission on Accreditation authority to develop and approve such educational standards. As a matter of principle, the Council and the Commission believe that educational requirements should be cast in general terms so as to provide a maximum of flexibility to the individual educational institution. To be sure, there are certain standards which must be specific, such as the minimum duration of the preprofessional and the professional education program.

An effort is made to review all approved educational requirements at least every six years and, of course, revisions related to a particular standard can now be submitted to the Commission at any time. In developing and preparing revisions of educational requirements, the Commission calls upon many of its consultants and, generally, convenes a national conference or a workshop in order to obtain the best possible advice and guidance from all individuals and agencies interested in dental and dental auxiliary education. Proposed revision in educational standards are widely distributed within the profession for comment and recommendation.

**CURRICULUM EXPERIMENTATION**

Since the formation of the Council on Dental Education in 1938, it has proclaimed its support of curriculum experimentation. I think the record will show that the Council has, in fact, given more than lip-service to the support of curriculum experimentation. For example, in spite of continued misunderstanding on this point, the Council eliminated the minimum clock hour requirement several years ago and no longer specifies the courses which must be included in the dental curriculum. The current Requirements state, in general terms, the areas of instruction which should be offered, but leave to the individual institutions the determination of how this instruction will be given. Some years ago when it became apparent that dentists of the future would need to depend more and more on the use of auxiliary personnel, the Requirements
were revised to include the stipulation that dental students must be taught the utilization of auxiliaries but, in keeping with the concept of flexibility, no effort was made to determine the way in which this instruction should be given.

On the other side of the coin, it must be pointed out that the Requirements still specify the minimum length of the dental curriculum. Also, the site visit evaluations still result in rather specific recommendations related to the amount of instruction given in certain areas of the curriculum and the accreditation reports still criticize administrative and instructional procedures which do not appear to produce a desirable quality of education. Serious weaknesses within an education program result, of course, in the lowering of accreditation status.

The purpose of the last several comments is to identify the dilemma which faces the Commission on Accreditation and other accrediting agencies and to focus on a few questions which, I hope, we will have an opportunity to consider. The dilemma is this. While believing firmly in the need for continuing experimentation, the Commission and the Council must do their very best to assure that all accredited dental schools are producing graduates who are competent to practice general dentistry. On the face of it, this may not appear to be a particularly difficult assignment and, in fact, there have been relatively few times when the Commission or the Council have found it necessary to discourage experimentation because of a concern that a particular curriculum change might not produce a qualified dental practitioner. It is my opinion, however, that the nature of curriculum revision now in progress or under consideration is going to sharpen the potential conflict between support of experimentation and the production of competent practitioners, thus bringing to bear on the Council and the Commission greater pressures and problems than have existed in the past years.

Curriculum revision at fifteen schools has resulted in the compression of four academic years of study at these institutions into three calendar years. It is not possible, of course, on the basis of the kind of information now available to judge whether the proposed curriculum will be more effective in producing a competent practitioner, but it does appear certain that curriculum trends of this kind will have a significant impact on dental education and practice at both the undergraduate and the advanced levels. The purpose of citing this example is not to evaluate the advantages and disadvantages of the compressed
curriculum at this time since the Commission keeps and will continue to keep these programs under constant scrutiny, but rather to point out the difficult problems which confront the Council and the Commission in considering curriculum changes of this magnitude in terms of the existing educational standards.

DENTAL SPECIALTY PROGRAMS

Let me complicate the matter to a further degree. The primary concern of all of us is that dental care for the public be of the highest possible quality. Specialization is now a recognized part of the total picture of modern dental care. Will specialties retain their recognition in the future? In 1966, a prominent educator predicted that by 1975 more than one-third of the dental graduates would continue their education in one of the specialties of dentistry. At that time, according to a report published in the Journal of the American College of Dentists, fewer than ten percent of the graduates went on to obtain a degree or a certificate in one of the specialties.

Since 1966, there has been continued growth in both numbers of advanced dental specialty programs offered and numbers of students enrolling in these programs. Council records as of May 1974 show 1,444 first-year places in specialty programs. The dental school graduating class for the same period was 4,230. It becomes obvious, then, that there are places in specialty programs for about 34.1 percent of our recent graduates. Add to this the fact that the number of advanced programs continues to grow at the rate of about 10 percent per year and the number of first-year places in existing programs expands at a lesser rate. If this trend continues, it is certain that dentistry will follow the route of medicine in becoming overspecialized.

The profession stands on the threshold of a time when, because of a national health insurance program, it must be more responsive to the public in providing comprehensive dental service to a larger segment of the population. This comes at a time when many believe that the number of general practitioners will decrease as the number of specialists increases. A year ago, I would have supported this premise. Now I am not so sure that the trend line will continue — that an increasing percentage of the profession will be specialists. Until the last several years, the income of the specialist was increasing at a rate faster than the income of the general practitioner. Now that has changed. Percentagewise, the general practitioner's income has been
increasing at three times the rate of the specialist. This is not to suggest that dentists seek specialization for money alone, but income might reflect demand for services and an impending change in the trend toward specialization.

Some indicate that the best way to solve the potential overspecialization problem is for the Association to declare a moratorium on the development of additional specialty programs. In my view, this solution is invalid since any attempt by the Association to restrict educational opportunity would result in antitrust suits, would necessitate the Commission's ignoring and opposing Association policy if it were to remain a recognized accrediting agency, and, for these reasons, would ultimately fail. Another more desirable solution is to revamp the dental curriculum to provide students with greater expertise in the clinical areas now identified to the dental specialties. Greater clinical expertise for recent graduates in the specialty areas, plus the ever-growing opportunity to enroll in general practice residency programs, plus a reasonable policy by third-party carriers on who can be reimbursed for dental services would significantly increase the opportunities for students in general practice. As I mentioned earlier, some fifteen dental schools have gone to a compressed curriculum. Already one is returning to the four academic year program and two others are considering such a move.

The real reason, I believe, the dental profession will not overspecialize is that the Council on Dental Education will make every effort to encourage graduates to pursue the general practice of dentistry. It will do its utmost to influence dental curriculums to produce general practitioners with a broader scope of clinical skills. In this regard, it should be noted that several dental schools are making concerted efforts to encourage the general practice of dentistry. For example, the University of Oregon Dental School has received federal funds to develop a curriculum for expanded roles in oral health care delivery, particularly by emphasizing the dentist's role in oral medicine, internal medicine and physical diagnosis. It is anticipated that evaluation of this curriculum will assist in determining the future role of the dentist and the dental team in the overall health care system. Similarly, the School of Dentistry, State University of New York at Buffalo, has developed a new program which provides the dental graduate with the option of electing a minor in dental education. Such a minor in education is important in that, long-range, it will allow a general practitioner
having an educational background to serve with greater expertise as a dental faculty member on a full- or a part-time basis. In essence, it encourages full- or part-time faculty to remain in general dentistry.

In my view, the general practitioner will, by virtue of an ever-changing dental curriculum, assume more and more of the responsibility that has been, in the past, within the scope of specialty practice. I believe that the general practitioner will eventually be more willing to turn over certain functions to the auxiliary, as he develops greater clinical expertise in the specialty areas.

There is little question that the need for dental specialists in the foreseeable future will continue because of the human element. All dentists do not and will not share the same enthusiasm. Indeed, some have a lack of interest in or a dislike for particular procedures being carried out by the specialists. Dentistry is changing and will continue to change. I believe that, long-range, the profession will not become overspecialized and, therefore, that specialty practice will be influenced by some changes I predicted two years ago.

Let us consider each of the recognized dental specialties separately and indicate what I believe will be their future.

Future dental students will be given greater experience in the area of periodontics. The dental hygienist will perform additional functions related to periodontics. This combination could result in this aspect of dentistry being practiced more and more by the general dentist and less and less by the specialist.

Problems related to dental caries will be greatly reduced. As the incidence of caries is controlled, the character of pedodontic practices will change markedly. The restorative aspect will lessen significantly; however, problems related to growth and development of the jaws and dentition will persist. As a result, one could logically expect that the pedodontist and the orthodontist might, in the future, be treating identical problems and, perhaps, merge.

Endodontic problems related to dental caries will lessen, but problems related to injuries of the teeth resulting in the need for endodontic treatment will insure a continued need for the endodontist. However, it is very likely that an increasing number of such problems will be treated by the newly graduating dentist, rather than by the specialist.

Oral pathology has always been considered a specialty service,
rather than a clinical discipline. The need for expertise in oral pathology will continue; however, it is possible that, in the future, this special area might merge with other disciplines, such as oral medicine, oral diagnosis and dental radiology.

Dental public health, whether it is retained as a dental specialty or not, will undoubtedly change with the advent of national health insurance. Perhaps, administrators will be non-dentists.

With increased longevity, higher living standards and greater dental awareness, prosthodontists will continue, especially in the maxillofacial area. Increased emphasis on prevention should slow the growth rate in the other areas of prosthodontics. Most general dentists provide full denture, partial denture and crown and bridge services for patients today. There seems no reason for this pattern to change.

Oral surgery will continue, but exodontia will be handled almost exclusively by the general dentist. I have a grave concern that the oral surgeon will be less and less identified with dentistry and more and more identified with other hospital-oriented specialized surgeons.

The 1974 ADA House of Delegates revised its Principles of Ethics so that the dentist may announce himself to the public as limiting his practice in more than one special area, if he is educationally qualified by Association standards to do so. What does this mean? It means that the statements I have just made about the potential amalgamation of some specialties and the potential increase or decrease in number of specialties are even more imminent. Dual announcement and the decision of the Council on Dental Education to approve combined specialty programs will hasten the trend of amalgamating specialties and reduce the number of specialties.

THE FUTURE OF DENTISTRY

What does the future hold for dentistry? In general practice? In specialty practice? And for its auxiliaries? No one really knows. I suspect that sophisticated teaching methods in dental schools will reduce, for some disciplines, the clock hour time needed to convey appropriate knowledge, thus freeing time in the curriculum to cover a broader scope and depth of subject matter. Dental students will receive instruction in subject matter that was at one time confined only to advanced specialty students. There is little question that this trend will not only be continued but, in my view, expanded. Increasingly, dental students will be taught the concept
of providing total and comprehensive dental care. Greater emphasis will be placed on preventive dentistry.

These changes in the doctoral curriculum combined with greater emphasis on the use of auxiliaries, expanded functions assigned to auxiliaries, research, and social and economic advances will greatly influence the pattern of dental practice, not only for the general practitioner, but also for the specialist. To some extent, these things are already happening. I believe in the next few years you will see general practice emerge as one of the most challenging and desirable parts of dental practice. As the general practitioner assumes more responsibility in a greater variety of clinical procedures, the issue of expanded functions for auxiliaries will fall into its logical place. Likewise, the need for specialists will begin to assume its appropriate proportion in dental practice.

Continuing education will provide an appropriate mechanism for the general practitioner who has been in practice for some time to increase his knowledge and skills to perform more sophisticated procedures. The Principles of Ethics of the American Dental Association state clearly the responsibility of the dentist to keep himself abreast of scientific discoveries and developments through the mechanism of short refresher-type continuing education courses. In support of this position, the House of Delegates, during the past several years, seems to have established the following principles.

1. The dental profession is opposed to the determination of the standards for participating in publicly funded health programs by agencies outside the dental profession.

2. The Association recognizes the need for agencies of the profession, particularly constituent dental societies and state dental examining boards, to develop programs which will help to encourage the continuing education of all dental practitioners.

3. The Association has not taken a position on the approach which might be most effective in promoting continuing education for all practitioners, but has made it entirely permissible for individual constituent societies to require reasonable standards of continuing education for the maintenance of membership, if they choose to do so.

4. The Association, in its position statement on dental licensure, adopted by the 1973 House of Delegates, recommends that each state board consider requiring dentists to show evidence
of continuing education as a condition of re-registration of their licenses.

All of this indicates that, in recent years, the dental profession's interest in continuing education has accelerated. Technologic advances through research, changing patterns of health care delivery, updating of clinical procedures and increasing social awareness have accentuated the need for dentists to remain professionally current. On several occasions, the Council received suggestions that the Association conduct an accreditation program in continuing education. In considering this matter, the Council did not believe that it would be feasible to develop a quality continuing education accreditation program at this time. However, it did believe that it should, in some way, provide guidance to constituent societies and other sponsors of continuing education programs. For these reasons, the Council convened a committee, composed primarily of general practitioners, to develop such guidelines. Subsequent to the development of the document, it was circulated widely within the profession and finally approved by the 1974 House of Delegates. It is hopeful that these Guidelines for Continuing Dental Education will be of assistance in helping constituent and component societies assess the quality of such offerings.

In addition, the Council on Dental Education sponsored a pilot project for the development of an ADA Continuing Education Registry program. The program is now available for nationwide use. It is simply a mechanism to record the continuing education credits received by individual dentists. It makes no assessment of the quality of such continuing education offerings, but serves as a central resource for recording these credits.

Where is continuing education going in the future? I think I would agree with one of our examiner members of the Council on Dental Education, Dr. Gerald R. Wolfshehr. In a recent paper, he indicates that he favors instituting a record system of each practitioner's continuing education experience. This would be part of each dentist's file and could be used as evidence, if justifiable complaints are made by the public or other practitioners. Without a specific requirement, the feeling of self-motivation as a professional could, at least partially, be preserved.

Those dentists registering no continuing education after a period of time would be sent a letter from the board reminding them that the board's records evidenced this, and that it could have an adverse effect in a hearing if a complaint were filed with
the board by a patient, another practitioner, or a third-party responsible for payment of his fees. I would think that the number who would choose not to comply would be small, and that the total number of hours spent in continuing education might far exceed those that would be taken if minimum requirements were set.

In conclusion, I would like to emphasize that the policies and the procedures used by the Council and the Commission in charting the future of dental education are under constant study and evaluation by the Council, the Commission and staff. I urge all of you to let us have your suggestions so that we may continue our efforts to contribute to the improvement of the quality of dental education.

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There is no squabbling so violent as that between people who accepted an idea yesterday and those who will accept it tomorrow.
Christopher Morley
Perspective on Prevention

NORA FRENCH

Dentistry today has the knowledge to control most of the dental disease of the American population.1 The dental profession has the knowledge; but as of now, the American public does not. This enigma is exceedingly difficult for students in the profession to understand and they ask "why?"

Our armamentarium of prevention already includes the basic components of fluoridated public water supplies, topically applied fluorides, fluoride-containing dentifrices, plaque control programs, pit and fissure sealants and dietary counselling and therapy. Research is continuing on a host of products and techniques to determine their efficacy and applicability to dental public health programs.

If these measures have the potential of controlling 90 percent of the dental disease to which the American population is susceptible, why haven't we begun to publicize this to the people we serve? How should we initiate this preventive program? How can practitioners implement them in their practice? What is the position of dental public health practitioners on these preventive programs? Asking the right questions has always been easier than providing the answers to the questions. A purview into what has been accomplished and needs to be accomplished in dental health is hereby examined.

FLUORIDATED PUBLIC WATER SUPPLIES

During the past 35 to 40 years, the federal government allocated resources for dental health which has been directed toward research to investigate the cause of dental disease and methods of preventing such diseases. This research effort has allowed the dental profession to reach a point where the use of fluorides to

Ms. French is a student at the University of Louisville College of Dentistry, Louisville, Kentucky. Her essay won an award in the student writing contest sponsored by the Kentucky section of the American College of Dentists.
control dental disease can be made available to the public at large. Although fluorides were available economically, many communities resisted for various reasons the fluoridation of their public water supplies. More recently, many state legislatures have passed statutes which permit state health agencies to force communities to incorporate fluorides in their water supplies. Faced with harsh money penalties, communities finally consented to their water fluoridation. This task is not completed — there must be directions for such legislation in every state to assure that everyone in this country who utilizes public water supplies receives the benefits we know accrue from this program.

By 1969 almost 90 million people or 60 percent of the American population were served by fluoridated public water supplies or naturally fluoridated water. This figure could rise to approximately 150 million people if all public water supplies were fluoridated. It has been estimated that this change from 90 million to 150 million people drinking fluoridated water would be equal to the training of 17,600 additional dentists. Studies have indicated that this one preventive measure will reduce by 55 to 60 percent the number of decayed, missing or filled permanent teeth in children continuously exposed to fluoridated water from birth. The per capita cost for this measure of prevention is approximately ten cents per year.

What remains to be done when all public water supplies are fluoridated? There are approximately 50 million people in America who are not served by public water supplies. In recognition of this fact, some states have instituted fluoridation of school water supplies in order to reach the most caries susceptible portions of that population. By raising the fluoride content of school water supplies to 5 p.p.m., such children receive virtually the same benefit as those with 24-hour water supplies containing fluoride at a level of 1 p.p.m. Although the cost of such programs is somewhat higher than fluoridation of public water supplies, it has still been found to be a most economical method of prevention.

This component of prevention has made great progress in dental health over the last decade. The mechanisms and organizations are available to extend this component of prevention to every American served by public water supplies and to every school child in this country. While efforts must continue until these objectives are accomplished, the dental profession's achievements can be called a milestone in the prevention of dental disease.
TOPICALLY APPLIED FLUORIDES

The aim of using topical treatments of fluoride is to deposit fluoride into the surface layers of enamel in the form of fluorapatite. We know the chemistry involved in the process of reducing the solubility of enamel through the use of topically applied fluorides. Recent studies on topical fluorides have shown that an additional reduction of 30 to 35 percent in DMF index; this, indicating an extension of benefit of fluoride therapy in children already benefitting from community water fluoridation.4

The problem at hand is not a lack of scientific research and information but one of deciding how best to educate and motivate the general public to secure such treatment or devising a method of application which can be provided through public health outlets and in schools quickly and economically.

According to data accumulated by the National Opinion Research Center, 33 percent of all dental visits today are preventively motivated.5 This implies that preventively motivated parents are seeking this additional protection for themselves and their children. Why then are not all parents seeking such protection for their children? Is it a lack of education regarding oral health — lack of income to secure such service — or is it a lack of motivation — or unknown factors?

The American Dental Association has reported data from a national survey which shows the individuals in low socioeconomic status show the least concern for their teeth, consider them to be less important, and often feel that the loss of teeth is inevitable.6 This suggests that people who experience the greatest need for preventive services are the ones whose orientation to health makes them the least likely to participate in a preventive program.

Similarly, data regarding utilization of dental benefits through the state Medicaid program in Kentucky indicates that only 14.4 percent of those eligible for dental services utilized such services during the years 1971 and 1972.7

Studies of prepaid dental care show that utilization largely is independent of ability to pay and more closely associated with a habit of previous utilization. Economic research on consumer behavior has found that the best predictor of who will buy durable goods is the one who has already made such purchases.8

Presumably then, according to this traditional theory, exposure to topical application of fluorides during childhood will imbue the child of today with the proper dental health care habits; and, in
PERSPECTIVE ON PREVENTION

...will serve as the catalyst for seeking such services on a continuing basis when he reaches adulthood. Certainly, one cannot short-sightedly ignore such theories in deciding what preventive services must be given priority in today's program of prevention.

Toward the objective of providing topical applications of fluorides to all the children in America on a routine and economical basis, researchers are presently conducting investigations on 0.1 percent stannous fluoride mouthwashes which may soon make routine topical applications of fluorides available, and can be administered either by the patient himself or with a minimum of supervision. Although the protection provided by an application of this mouthwash for two minutes is about one half of that provided by presently utilized 10 percent solutions of stannous fluoride, the capability of being applied at frequent intervals in a program of care at home or in groups at school offsets this apparent deficit. The use of this solution in public schools has been found feasible as well as a simple procedure.  

**FLUORIDE-CONTAINING DENTIFRICES**

Ask almost any person what kind of dentifrice they use and the odds are tremendous that they will name a popular fluoride-containing dentifrice. The dental profession must relinquish credit for the success of this preventive component to private enterprise. Dental researches contributed greatly to the development of such dentifrices but the motive for profit appears to be the greatest single ingredient in its almost universal acceptance by the American public. It seems certain that competition among the major dentifrice manufacturers will continue to stimulate produce improvement and to enhance public education on certain aspects of oral health in order to improve markets for their products. Dentistry must continue to work with these manufacturers to assure that any fruits of dental research can be effectively incorporated into future products of this segment of industry.  

**PLAQUE CONTROL PROGRAMS**

If there is a direct relationship between dental caries activity and dental plaque and if plaque can be removed from the teeth, then an effective program for the control of plaque should lead to a decrease in the incidence of carious lesions. Clark, Fintz and Elwell tested this hypothesis as it related to Patient Hygiene.
Performance (PHP) scores of sixth grade children in selected Cleveland, Ohio schools over a period of 14 months. They observed that these children maintained acceptable oral habits following a program of instruction plus sustained motivational exercises for the first six months. Their control group of sixth graders did not show a comparable reduction in PHP scores following similar instruction alone. Yet to be reported is the incidence of carious lesions of these two groups over a longer period of time.

There are few in dentistry today who will debate the concept that plaque control provides us a potential tool in providing our patients with better oral health. The question here which requires answering is how the dentist can best instruct and motivate the patient. With the daily requirement of thorough plaque removal, the patient can no longer be a passive recipient of care but must assume a great deal of the responsibility for the continuing success of his dental regimen.

The issues associated with plaque control are a complex mixture of knowledge, values, psychomotor skills, and habit. Chambers presents considerable evidence supporting the hypothesis that the number of Americans able to benefit by plaque control programs in their homes is limited because this habit is inconsistent with their style of living. While we may not agree with many of his suppositions, few of us who have attempted to implement plaque control programs will argue with his insistence that there is a need for research to identify the characteristic social and psychological profiles of persons who are most likely to benefit from our current method of plaque control instruction and motivation.

Optimal teaching is possible only when each person is exposed to the type of instruction for which he is most susceptible. We must attempt to identify the combination of factors which works best for each patient. A more realistic method for implementing plaque control is to identify, educate, and motivate those individuals who can benefit by our present methods of plaque control instruction. We know that these individuals are probably already preventively motivated and it is the responsibility of every dental practitioner to provide them with all knowledge at his disposal which will enhance their oral health.

The second step in this approach would be to identify the categories among the public that best respond to differing approaches of prevention. This will then permit us to select
preventive treatments and programs which are more likely to succeed because they closely match the patient's total needs.

The third plateau in this program would be to find a way to remove plaque without involving individual motivation and habit formation or, through behavioral research, be given methods which instill the skill-habit necessary for daily plaque removal.

Perhaps of all the components of our preventive armamentarium today, plaque control programs probably have the least applicability to public health programs. This is not to say that it is not an effective component of prevention but that the proportion of the population which will respond to this treatment is rather small and is drawn principally from the segment of population which needs this care the least. Acceptance of this limitation of plaque control as we know it today should ultimately lead to better health education by developing preventive dentistry for individuals in the same way that excellent restorative treatment has been adapted to the needs of each patient.

PIT AND FISSURE SEALANTS

Pit and fissure caries is the most common type of caries found in individuals. Deep narrow pits and fissures favor the retention of food debris and microorganisms and caries often result from fermentation of this food and the formation of acids. Coupled with the fact that these areas are only 70 percent mineralized at the time of eruption, it is little wonder that such teeth prove carious even before they are fully erupted.

Several types of sealants for pits and fissures have become available in recent years and unfortunately, many of them were found faulty. More recent products on the market are still undergoing testing to determine the length of time these sealants effectively protect the occlusal surfaces and the cost of providing such protection.

Some techniques for the application of these sealants require a large investment in equipment necessary to provide this protection for the patients of a general practitioner and this has delayed the availability of such service to preventively-motivated patients who would avail themselves of the added protection.

Many state dental Medicaid programs have likewise developed a "wait and see" attitude regarding payment for sealants applied to the teeth of eligible participants. Such agencies must, of necessity, evaluate innovations based on effectiveness and cost of utilization and it is clear that the general practitioner who
provides sealants for such patients must be reimbursed at least at a level comparable to his charges for placement of an occlusal alloy. If in making a cost comparison, no value is attributed to the amount of the tooth's occlusal surface which must be removed to prepare it to receive an alloy, the effect on the pulp of such a preparation, or the esthetics of the natural dentition; then pit and fissure sealants appear to be prohibitively expensive to be purchased with public funds.

Where then does the dental profession stand and what can be done regarding the use of pit and fissure sealants as a preventive measure?

1. Continued research input is needed to test the efficacy of products currently available.
2. Efforts must be made to simplify treatment techniques and equipment required for application.
3. Once efficacy can be established, dental public health officials must be encouraged to include this component of prevention within their schedules of reimbursable services.

Diet Counseling and Therapy

Most of our measures in preventive dentistry are concerned with changing the oral environment, yet historically, the most effective method of combating disease in general has been to change the patient who lives in the environment. While removing plaque is desirable, all detrimental bacteria cannot be removed from the mouth. Methods must be developed to help the patient live with the bacteria and protect the individual so the bacteria can live synergistically.

The major objective of diet counseling for the prevention and control of dental caries is to provide the patient with a personalized, realistic, acceptable diet prescription which will contain those foods and food practices that can prevent or inhibit the spread of dental decay and maintain optimal general health.13

This is very laudable, but just where does the private practitioner of dentistry implement diet counseling into his practice? For most dentists, starting with refined carbohydrates is comfortable. He is aware of the over-consumption of refined carbohydrates and knows that they are detrimental to the teeth. However, because he is also realistic about attempting to motivate patients to improve their oral health, diet counseling is usually reserved for very caries-active patients. Few feel equipped to give comprehensive counseling regarding nutrition and its importance in total health.
As professionals, we know that statements we make about dental disease and advice we provide patients should always be based on facts derived from scientific research. Since only the most cooperative patient will adhere rigidly to the type of diet designed to reduce sugar consumption drastically, clinical studies on large groups of patients for the purpose of ascertaining the extent of caries reduction that could occur with restriction of sugar consumption are difficult to carry out.

What can we do to improve this aspect of prevention? We must first take advantage of the current concern among the public with weight, health foods and nutrition and to educate the public regarding those aspects of nutrition which contribute positively to better oral health. Second and perhaps more importantly, information must be disseminated on this aspect of prevention to practitioners within the profession. Until such information is made available to those who must provide the counseling, there will be little accomplished in improving the oral health of the patient.

SUMMARY

After briefly examining the components of preventive dentistry available to the profession in treating the American public and finding that only 33 percent of dental visits are preventively motivated, we in dentistry have not and truly cannot positively answer the question of why we are not preventing 90 percent of the dental disease today. But we do have a partial answer.

The use of fluorides has offered the most economical, most anticariogenic, and most effectively utilized preventive measure available to dentistry. Great strides have been made to its universal application through fluoridated water supplies, topical application of fluorides and use of fluoride dentifrices. Topical application of fluorides have been available for many years and such programs are publicly supported. However, the dental profession must strive to increase utilization of fluorides. The profession must search diligently for new methods of application which can be made available more readily to the population as a whole, either for home use or minimally supervised group application in the public schools.

Full implementation of fluoride usage nationally should hypothetically provide a reduction of 80 to 85 percent in the incidence of caries. These programs appear to be supported enthusiastically by the private practitioner, dental professional
organizations, and dental public health agencies.

Other components of preventive dentistry remain important and must not be neglected. It is dentistry's responsibility to assure public awareness of the desirability and practicality of prevention of oral disease. But, at the same time, the priorities established must be based on proven successes and all efforts and resources must be concentrated toward full implementation of these programs. The remainder of prevention for the prevention is up to the dentist as an individual health practitioner.

REFERENCES

1. Verbal estimates of prevention generally are claimed at the 90 percent level; however, the author was unable to document this by reference specifically. Statistics regarding each preventive measure closely approximate this level cumulatively.
3. Ibid.

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School of Dentistry
Health Sciences Center
Louisville, Kentucky 40201
A Study of the Professional Role Satisfaction of Dentists

BRUCE P. MURRAY, M.S.*
JOHN F. SEGGAR, Ph.D.**

Very little information is available describing the practitioner of dentistry. Almost nothing is known about such factors as dentists' attitudes toward practice of the profession, or about the extent to which they participate in voluntary associations in the cities and communities in which they practice.

In a recently published and very comprehensive critical bibliography of socio-dental research, Willcocks and Richards¹ suggested: "...it ought surely to be important to have some picture of the impressions of dental practice which those currently in practice pass on to potential recruits." Furthermore, with regard to social participation, Boissonneault² stated in a provocative news editorial: "Deserved or not, dentists have become known as a group who do nothing but practice dentistry. In the public eye they don't provide community leadership, they don't support community activities with either time or money."

The development of more information through research relevant to these problems would be helpful to dentists, dental educators, social scientists, and other professionals alike. Gray³ contends, for example, that the image of dentistry held by high school students needs to be changed if the profession is to attract quality students. Moreover, Andersen and Anderson⁴ have indicated that utilization of dental services is low. They report that "...actual utilization may be further from the accepted norm than for any of the other major types of health services." The magnitude of this problem is reflected in the following statistics reported by Keith:⁵

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¹ NIMH Trainee in Medical Sociology, Department of Behavioral Science, University of Kentucky.

² Associate Professor, Department of Sociology, Brigham Young University.
Tooth decay alone is estimated to have caused an already existing backlog of over 800 million unfilled cavities in this country. According to the Health Interview Survey 59 percent of the population visited the dentist at least once during 1971. However, 10 percent of the population utilized over 60 percent of all dental appointments.

Understandably, availability of dentists to provide services to meet the needs of the public and popularity of dentists and paradental or auxiliary personnel (in terms of recognized social contributions) will affect utilization of services. Based upon the highest estimate of dentist productivity increase between 1950 and 1965 (42%), it is projected that a serious future manpower shortage will ensue.

Thus, with reference to the recruitment of prospective dentists so as to increase dental manpower, and in terms of helping to establish a baseline from which to evaluate the social contributions of dentists, the development of further information vis-a-vis dentists' attitudes toward their professions and their involvement in community and city affairs is deemed crucial to the future progress of dentistry.

It is apparent that data on the subject of job-satisfaction, per se, are not plentiful. O'Shea reports that a 1957 national survey asked practicing dentists how satisfied they were with their careers, of which 44 percent answered: "Its the only career that could really satisfy me." The remainder — 56 percent — were asked what the alternative careers were; 51 percent of these mentioned medicine.

In South Wales, Eccles and Powell found that 60 percent of 231 dentists surveyed expressed a liking for their vocation and only 19 percent disliked it.

A survey by Page and Slack in which they sent out 600 questionnaires to dental graduates of the London Hospital Medical College, and obtained 358 replies, demonstrated in general terms, that those surveyed "...made a free choice of their profession, would choose dentistry again if they had the choice, liked their job, but worried about it moderately." The most congenial aspects found were a sense of achievement, the freedom to make decisions, the numerous opportunities for working with and helping people, and the chance to work with their hands and use technical skills. They did not like the severe pace of their work, and all the paperwork and administrative duties were burdensome. Furthermore, they found their job trying,
somewhat monotonous and frustrating at times, but nevertheless rewarding and enjoyable.

Another recent summary provided by Katz and Kahn (1960) and based upon information obtained from a Table compiled by Gurin et al. in 1960, illustrates that it is professionals who have the largest percentage in the "very satisfied" category in terms of job-satisfaction. They also discussed a number of other surveys of a comparative nature which presented similar conclusions. The samples upon which these conclusions were based were relatively small, however.

The purpose of this research is to provide further information on the role satisfaction and social participation of dentists. The specific research objectives are: (1) to determine how satisfied dentists are with their professional roles; (2) to determine how active dentists are socially in community and city organizations; and (3) to see how role satisfaction varies with age, years practicing, geographic location of practice (urban-rural), and amount of social participation. The dependent variable is professional role satisfaction. The independent variables are various items posited as having an influence on role satisfaction of dentists. The following hypothesized relationships will be analyzed:

1. Dentists' professional role satisfaction will vary directly with their ages.
2. Dentists' professional role satisfaction will vary directly with their number of years practicing.
3. Dentists' professional role satisfaction will vary with their practice locations (urban-rural).
4. Dentists' professional role satisfaction will vary directly with their amount of participation in community or city social organizations.

METHODOLOGY

In order to complete the research objectives, data were gathered from a limited universe sample consisting of all dentists who were listed as members of the Utah State Dental Association (1972) and who resided in major cities located along the Wasatch Mountain Range in Utah. For comparison purposes, a small rural limited universe sample was also drawn from communities of rural Utah County. These samples necessarily excluded those dentists who were not listed as members of the Utah State Dental
Association (approximately eight percent) and those dentists who were members but unavailable at the time the research was conducted (i.e., on vacation, out of town on business trips, etc.)

Data were collected by questionnaires which were delivered and subsequently collected by the senior author over a two-week period in June 1972. The final sample consisted of 253 dentists out of a possible 350 (72 percent return). It is assumed that the small percentage of dentists who were excluded (either absent members or nonmembers of the Association) would not appreciably effect the variability of the sample results.

The dependent variable, professional role satisfaction, was defined as the subjective feelings of happiness, satisfaction, and pleasure experienced by the practitioner when considering all current aspects of his occupational duties. To measure this variable, a 24-item Guttman scale was devised. Eighteen items were adapted from Brayfield and Rothe's 11 Index of Job Satisfaction (six other items developed by the authors and referring to autonomy, pain infliction, and manual dexterity were also included). Though some of the items were redundant, all 24 items were included in the research instrument. For example, one of the items addressed to the respondents was: "I feel that my profession is no more interesting than others I could get." Responses were recorded on scales on which five alternatives ranging from "strongly agree" to "strongly disagree" were provided. Correlation analysis was used to examine the scale items in order to determine if they were related in a way which would allow them to be combined into a composite scale or index. Pearson product-moment correlation coefficients for the inter-item correlation matrix were sufficiently strong enough to justify inclusion of only ten of the items in the final scale from which the professional role satisfaction scores were derived.

Responses to the ten items of the satisfaction scale were analyzed using all the major criteria of unidimensionality that are related to the Guttman scaling technique as discussed by Kerlinger.12 The coefficient of reproducibility obtained was .87. Satisfaction scores were assigned by dichotomizing each scale item so that responses which had equal to or greater values than selected cutting points were assigned 1 point for each item "passed" and responses which had values less than the cutting points were assigned a score of 0 for each item “failed.” Possible scores ranged from 0-10 points.
Social participation refers to the number of paid or voluntary membership organizations in the community or city with which the dentist affiliates (e.g., Rotary Club, Kiwanis, Lions, BSA, etc.). To measure this variable, Chapin’s Social Participation Scale was utilized. Modifications of this scale were not deemed necessary. The degree of a dentist’s participation in community or city organizations was determined by getting a composite score reflecting membership, contributions, and attendance of individuals so affiliated, computed according to the lengthy instructions presented with the scale in Miller’s Handbook of Research Design and Social Measurement (1964). The lowest score recorded was 0, the highest 58, and the mean score was 11.

Gamma and t-tests were used to analyze the hypothesized relationships.

FINDINGS

As presented in Table I, 90.0 percent of the respondents reported a high degree of satisfaction with their professional role, while only 10.0 percent were undecided or dissatisfied. Sixty-two percent reported being extremely satisfied while only 28.0 percent reported they were generally satisfied.

The first hypothesized relationship was tested by analyzing the relationship between age and role satisfaction. A Gamma coefficient of -0.07 (negligible negative association) indicated that as dentists grow older they become slightly less satisfied with the professional role, but to a negligible degree. Since this relationship was negligible, the data are not presented.

The second hypothesized relationship between role satisfaction and years of practice also received negligible support, i.e., as dentists increase years of practice, they become progressively but negligibly less satisfied with the professional role (Gamma = -0.10; a low negative association).

These results suggested the remote possibility of a “conjoint influence” a’la Rosenberg since both factors may jointly account for the relationship better than either alone. Correlation analysis produced a coefficient of .93 suggesting a highly positive association between the two independent variables. When the relationship between age and satisfaction was analyzed controlling for years practicing, the relationship became increasingly positive as years practicing increased. This possibly means that as dentists grow older and increase years practicing,
they become more proficient, their domestic liabilities decrease, they incur less debts, and gain more income, etc.

To determine the influence of practice location upon role satisfaction, a comparison of the mean satisfaction scores as reported for dentists from urban and rural locations was completed. As disclosed in Table II, the mean professional role satisfaction score for dentists from urban locations was 4.6 and for dentists from rural locations was 4.8 indicating no significant differences in the mean professional role satisfaction scores of the two groups. This hypothesis receives negligible support.

For this sample, there is a low positive association between social participation and role satisfaction (Gamma = .12). These data are presented in Table III. An analysis of the relationship between age and years practicing against social participation yielded no significant results.

Hyman and Wright reporting on trends in voluntary association memberships of American adults (based on national sample surveys) gave the following proportions of participation in voluntary organizations: "For professional and business people making over $7,000.00 per year, 47 percent belonged to 0 organizations, 17 percent belonged to 1 organization, and 36 percent belonged to 2 or more organizations." In addition, Scott reported the mean number of memberships in voluntary associations for individuals in nonmanual (professionals, etc.) occupations as 3.3 (based upon field research in Vermont and comparative research done in other cities throughout the United States). He also suggested that nonmanual workers have much greater membership participation in voluntary associations than

<table>
<thead>
<tr>
<th>Degree of Satisfaction</th>
<th>Score</th>
<th>f</th>
<th>Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely satisfied</td>
<td>9-10</td>
<td>157</td>
<td>62.0</td>
<td>62.0</td>
</tr>
<tr>
<td>Satisfied</td>
<td>7-8</td>
<td>70</td>
<td>28.0</td>
<td>90.0</td>
</tr>
<tr>
<td>Undecided</td>
<td>5-6</td>
<td>10</td>
<td>4.0</td>
<td>94.0</td>
</tr>
<tr>
<td>Dissatisfied</td>
<td>3-4</td>
<td>2</td>
<td>1.0</td>
<td>95.0</td>
</tr>
<tr>
<td>Extremely Dissatisfied</td>
<td>0-2</td>
<td>14</td>
<td>5.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note: N=253
TABLE II
A COMPARISON OF THE MEAN PROFESSIONAL ROLE SATISFACTION SCORES FOR DENTISTS FROM URBAN AND RURAL PRACTICE LOCATIONS

<table>
<thead>
<tr>
<th>Professional Role Satisfaction Score</th>
<th>Urban (N)</th>
<th>Percent</th>
<th>Rural (N)</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>20</td>
<td>8.0</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>2.0</td>
<td>1</td>
<td>6.0</td>
</tr>
<tr>
<td>7</td>
<td>17</td>
<td>7.0</td>
<td>1</td>
<td>6.0</td>
</tr>
<tr>
<td>8</td>
<td>46</td>
<td>20.0</td>
<td>4</td>
<td>24.0</td>
</tr>
<tr>
<td>9</td>
<td>77</td>
<td>33.0</td>
<td>6</td>
<td>35.0</td>
</tr>
<tr>
<td>10</td>
<td>71</td>
<td>30.0</td>
<td>5</td>
<td>29.0</td>
</tr>
<tr>
<td></td>
<td>236</td>
<td>100.0</td>
<td>17</td>
<td>100.0</td>
</tr>
</tbody>
</table>

\[
\bar{X}=4.559 \\
\bar{s}=1.465 \\
\bar{X}=4.765 \\
\bar{s}=1.147 \\
\]

Note: Difference of means test: \( t=0.01, p=.99 \)

TABLE III
THE RELATIONSHIP BETWEEN PROFESSIONAL ROLE SATISFACTION AND SOCIAL PARTICIPATION

<table>
<thead>
<tr>
<th>Professional Role Satisfaction Score</th>
<th>Social Participation Score</th>
<th>Total Percent</th>
<th>Total N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0-10</td>
<td>11-20</td>
<td>21-30</td>
</tr>
<tr>
<td>0-5</td>
<td>16</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6.3</td>
<td>0.8</td>
<td>0.4</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2.0</td>
<td>0.4</td>
<td>0.0</td>
</tr>
<tr>
<td>7</td>
<td>13</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5.2</td>
<td>1.2</td>
<td>0.4</td>
</tr>
<tr>
<td>8</td>
<td>32</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>12.7</td>
<td>5.2</td>
<td>0.0</td>
</tr>
<tr>
<td>9</td>
<td>58</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>23.0</td>
<td>6.3</td>
<td>2.4</td>
</tr>
<tr>
<td>10</td>
<td>47</td>
<td>16</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>18.7</td>
<td>6.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Total N</td>
<td>171</td>
<td>51</td>
<td>15</td>
</tr>
</tbody>
</table>

Note: Gamma= .12; d.f. = 25
TABLE IV

COMPARISON OF PARTICIPATION IN VOLUNTARY ORGANIZATIONS

<table>
<thead>
<tr>
<th>Number of Organizations Affiliated With</th>
<th>Murray-Seggar Data (1972)</th>
<th>Hyman-Wright Data (1971)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>29.2 (Percent)</td>
<td>43.0 (Percent)</td>
</tr>
<tr>
<td>1</td>
<td>24.9 (Percent)</td>
<td>17.0 (Percent)</td>
</tr>
<tr>
<td>2</td>
<td>10.7 (Percent)</td>
<td>36.0 (Percent)</td>
</tr>
<tr>
<td>3 (or more)</td>
<td>7.5 (Percent)</td>
<td></td>
</tr>
<tr>
<td>No Response</td>
<td>27.7 (Percent)</td>
<td></td>
</tr>
</tbody>
</table>

Note: (for Murray-Seggar Data) N=253; Mean=3.0; s.d.=2.0

manual workers and concluded that "approximately two-thirds, or 64.2 percent of the overall population are members of one or more voluntary associations other than a church."

For comparison purposes, Table IV is presented. Based upon the figures therein, it can be concluded that only 29.2 percent of the dentists surveyed in this investigation belonged to no organizations as compared with 43.0 percent of a national survey sample; 24.9 percent as opposed to 17.0 percent nationally belonged to one organization; and, 18.2 percent as compared with 36.0 percent nationally belonged to two or more organizations.

When comparing the Scott and Murray-Seggar data (though not presented in Table IV), it appears that the mean number of organizations affiliated with is similar (3.0 vs. 3.3; no significant difference with t-test). Also, 43.1 percent of the overall population of dentists in this sample compared with 64.2 percent of the overall population nationally are social participants in voluntary associations. Responses used in making these comparisons were reported in terms of the number of organizations affiliated with, while the social participation scores calculated as described above were used in testing the hypothesized relationship also presented above.

DISCUSSION

When the dental graduate embarks upon his professional career, he may find that he is beset with a number of conflicting demands. From the beginning of his training, his goals may have included desires for prestige and financial security. Concurrently, however, the individual cultivates a code of professional ethics wherein
he is expected to learn altruism, service, and sacrifice. If such conflicting demands are present it could be proposed that they would be reflected in his reported level of satisfaction with professional practice.

As disclosed in this investigation, it may be true that in spite of structural maladjustments (if they exist) which would give rise to professional role dissatisfaction, the modal respondent expressed above average role satisfaction because of the compensating rewards that are existent in the practice of dentistry. Kapoor has stated that "an employee's satisfaction or dissatisfaction with a particular situation or job factor is a function of the discrepancy between his expectations/aspirations and actual achievement." That is, "the greater the discrepancy, the stronger the dissatisfaction, and vice versa." In a similar vein, Katz and Kahn made the following point: "By and large, people seek more responsibility, more skill-demanding jobs...and as they are able to attain these...they become happier, better adjusted and suffer fewer health complaints." It seems that dentistry would be one of these more "skill-demanding jobs" the attainment of which would make for more satisfied practitioners. Despite the fact that none of the hypothesized relationships were supported, the findings of this research do seem to lend support to the above notions.

Also, when considering the recruitment of prospective dentists and their impact on increasing dental manpower, these findings have great applicability. High school students who are considering dentistry as a profession should be impressed with such findings, and therefore motivated to give dentistry additional consideration.

With regard to social participation, contemporary leaders of the dental profession have manifested considerable discontent with the products of dental education in the past several decades. It has been felt that the technical excellence achieved by dentists in America has not been accompanied by a concomitant development of social awareness in the individuals who function in the professional roles, in terms of relations with their patients or relations with the communities and cities in which they practice. The findings of this research demonstrate for the most part that dentists are more socially active in community and city organizations than many other professionals (based upon the available data) even though they may be less socially active than adult Americans of less demanding occupations.
Finally, a possible limitation of this study was a failure to sample individuals living outside the State of Utah who were not subject to the predominant influence of The Church of Jesus Christ of Latter-Day Saints (members are commonly called "Mormons"). Out of 253 total respondents, 220 listed their religious preference as "Mormon." Widdison and Skipper have demonstrated that Mormon dental students are distinctive from other non-Mormon dental students (e.g., that Mormons are more likely to list the desire to serve and help others as one of the important features which attracted them to the profession — corresponds with the service orientation of missionary work). It is thought that a carry-over of these distinctions into private practice may produce differences in reported role satisfaction. Therefore, it appears that further investigation of these research problems with other samples is warranted.

SUMMARY

The purpose of this research was to make an analysis of the role satisfaction of dentists. The research objectives were: (1) to determine how satisfied dentists are with their professional roles; (2) to determine how active dentists are socially in community or city organizations; and (3) to see how role satisfaction varies with age, years practicing, geographic location of practice (urban-rural), and amount of social participation.

Based upon the responses of a sample of 253 dentists who were members of the Utah State Dental Association and from urban and rural practice locations in Utah, it was found that the majority were satisfied with their professional roles and that their satisfaction levels are negligibly effected by age, years practicing, and practice location. Furthermore, a smaller percentage of dentists in this sample report no social participation than do professionals on a national scale, and social participation does not appear to effect role satisfaction appreciably.

ACKNOWLEDGMENTS

The authors wish to thank Spencer J. Condie, Ph.D. and Barry L. Johnson, M.A., of the Department of Sociology at Brigham Young University; Charles E. Foster, DMD (former President of the Utah State Dental Association); and, Richard G. Ellis, DMD (private practice) for their assistance in the development and completion of this research project.
REFERENCES


(Continued on page 120)
Dear Doctor Kaplan:

We note with interest the analysis of the ADA Survey of Dental Practice by Dr. Waldman and Dr. Shakun, in the October 1974 JACD. Having been associated with the last two surveys, we would like to make a brief constructive response. Our reaction to much of the article is favorable and receptive to the authors' observations. The article contains meritorious suggestions, in particular, that of weighting returns by state, so that data are not discarded. This suggestion and others will be given serious consideration in future surveys.

To the authors' concept of sample composition in past surveys, as presented in their Table II, we should add: In defining the population to be sampled, there is a screening process whereby nearly 20,000 members not in active practice are removed from the prospective mailing. The groups eliminated consist of about 15,000 student members, plus retired dentists, members of the armed forces, dentists practicing outside the 50 states, those in nondental occupations, and honorary, associate and affiliate members. This brings the population within the survey's purview down to about 102,000 for 1971 and the mailing to about 40 percent of this population. In our opinion it is more meaningful to view the sample size this way rather than as 30 percent of the entire membership.

The authors' observations on random withdrawal of questionnaires from "overrepresented" states to form a geographically balanced sample are acknowledged. The withdrawals are made from states yielding large returns and never from low-return states.

Turning to the alternative survey method proposed in the article: In order to provide follow-up of nonrespondents, the survey could not be conducted on an anonymous basis. The question this raises is whether dentists would be willing to reveal income data if a form of identification appears on the questionnaire.
Would they be willing to do so in the case of telephone or personal follow-up? Conceivably, with improved survey procedures they would. The authors suggest making the questions more general in order to increase dentists' willingness to participate in the survey. Something is given up in the process. The compromise would have advantages, but also disadvantages.

The alternative survey method proposed by Drs. Waldman and Shakun involves selection of a representative sample of the dentist population stratified geographically by age, specialty, etc. For this a preliminary computer run would be required, preceded by careful determination of factors to be selected. Even with extreme care in the selection process, questions might be raised on the representativeness of the sample chosen. Perhaps, even the same question the authors ask — How valid are the findings of the survey? Problems might arise also with respect to uniform administration of procedures by 485 local societies, ranging in size from 7 to over 3,500 members, or by state societies ranging in size from 200 to over 11,500 members. Time and dollar costs would multiply if extensive follow-up is needed, especially in larger states.

On the matter of sample size: The alternative proposal, while improving the representativeness of the sample, does not actually propose an increase in the sample size. It would obtain data from about 10,000 dentists, which is about a thousand more returns than the 1971 survey produced. The authors do not propose a stratified sample of say, 20,000 to 50,000 dentists with follow-up to improve the response rate. It would very likely not be necessary with a carefully drawn sample and the cost would be high. But, how much is to be gained in validity with only a small increase in the sample size?

The question should also be raised as to whether a smaller stratified sample of the type the authors suggest would make the results more valid. Using a smaller sample would more than likely increase the size of the standard deviations and confidence intervals.

We admit that some of the questions are time consuming to answer. These questions are included because there is a demand for this information. The suggested questionnaire revisions, such as how many patients do you see in a “busy week” and a “slow week” might be vague to many. Each individual has a different concept of slow weeks and busy weeks.
We conclude by agreeing that some of the authors' recommendations should be tried and experience gained on what, if any, problems would arise. Clearly, the suggestion of two reports is excellent since it would provide the practicing dentist and the health planner/researcher with what they are most interested in. Implementation of these recommendations would require a larger staff and more computer time devoted to the survey, but it may well be worth the investment. The Bureau is currently investigating the cost and staff time involved in implementing some of Dr. Waldman's and Dr. Shakun's recommendations.

Sincerely,

Sheldon B. Loewy, Research Associate
William E. Poetsch, Statistician
Bureau of Economic Research and Statistics

Professional Role Satisfaction
(Continued from page 117)


*For a further discussion of limited and hypothetical universes, see M. J. Hagood and D. O. Price, Statistics for Sociologists, New York: Henry Holt and Co., 193-195, 1952. It should be noted that the use of the limited universe sample precludes the application of tests of significance to this problem. In relation to sampling from a hypothetical universe, Hagood and Price have indicated that as we increase the sample size, the standard error of the mean (the standard deviation of the sample mean from the population mean) approaches zero. This means that the value of the sample mean is no longer an estimate, but the actual measured universe parameter. Thus, Gamma as used in this paper is a descriptive statistic, a literal measure of the degree of association of the hypothesized relationships of the actual measured universe. Tests of significance have no meaning or application to this problem.
Robert J. Nelsen Receives Hollenback Award

Executive Director Robert J. Nelsen is the first recipient of the Hollenback Memorial Award for Research in Operative Dentistry. This award was presented by the Academy of Operative Dentistry at its recent meeting in Chicago, in recognition for his invention of the turbine dental handpiece.

The following citation was read by Dr. Lloyd Baum of Stony Brook, New York.

This award is being presented with mixed feelings. Naturally I am proud to present it in the name of our organization and in honor of one of our great men in dentistry, George M. Hollenback. Yet I look upon this award and like awards which will be given in years to follow, as a protest award; a protest against discrimination in favor of the biologic science component of our profession.

Dentistry is a curious blend of art and science — a blend which, when viewed in proper perspective, has made American dentistry great. Many would attempt to make it all science because "science" is an unusual word which inspires awe and has magic powers to generate research funds for its promotion.

I consider it a protest award because it is high time some status and honor was directed toward the creative artistic components; technology, if you please, which has influenced metamorphosis of practice far more than biologic scientific studies. The mandate of the dentist is to prevent or treat dental disease; I say "treat" because the biologic therapist and the artisan views treatment in absolutely different ways. The artisan views dental therapy as an act, an act which re-establishes health by directly restoring the tooth and conjoint structures with metal, plastic or porcelain. (This concept of therapy was promoted and argued by Dr. Hollenback many decades ago.)

On the other hand the biologic therapist views therapy in a different vein. In his treatment of dental disease, he also performs an act, but his act is to apply a potion, to inject a chemical or drug, or even to perform a surgical procedure which will stimulate or utilize body responses (growth and development, etc.) so the body
can actually heal itself. As we look at the track record over the last 25 years we discover that, aside from the fluorides, little can be said in its behalf. Can we take a sample of blood to the laboratory technician and determine caries susceptibility? Can we test a urine sample for prognosis of periodontal disease? By and large the last few decades do not reveal biologic breakthroughs which enable hard tissue to heal and restore itself.

So we are here today to honor a man who, by his creative and technologic endeavors, has vastly changed the practice of dentistry in the U.S. — indeed, throughout the world. Via the introduction of an operational turbine in the head of the contra-angle handpiece, high speed cutting has resulted in many secondary spin-off benefits.

1. Cavity design has been changed from the mortise inlays to the veneers.

2. Indirect techniques with improved impression materials have placed the technician in an entirely new and different position. His role instead of removable prosthodontics, is now concerned with bridges and ceramics appliances.

3. Quadrant dentistry is now a reality.

4. Being able to reduce hard tooth substance readily, new coronal topography is readily accomplished with new concepts in occlusal anatomy — in other words it has made it possible for the discipline of gnathology to develop.

Bob Nelsen's history has been one of intellectual curiosity on how to do things easier and better. Did you know where the front surface dental mirror came from? How about the transparent tube attached to the X-ray head for the long cone technique? The first prototype of such, being a plastic tubular box which he robbed from his wife who had to find another place to keep her knitting needles. Who first called marginal percolation to the attention of the profession? Who concocted the idea of the Panoramic X-ray and developed it into a reality?

Having come from the iron mining community of Chisholm, Minnesota, and as a teacher of dental materials at the University of Washington, Bob attracted a man by the name of John Kumpula as his machinist assistant, who moved with him to the Bureau of Standards where, in the early 1950's, they worked together to perfect many of his ideas. With respect to the handpiece, Mr. Carl Pelander of the NBS also assisted in perfecting prototypes of handpieces.
A paper describing the invention of the turbine handpiece was published in the *Journal of the American Dental Association*, Volume 47, September 1953, pp. 324-329. In effect, the invention has been dedicated to the public by such publication, thus removing all restriction to its use in this country. There are no U.S. patents which cover the basic concept of the contra-angle turbine dental handpiece as presented in the JADA paper. The experimental turbines and the first successful contra-angle and cabinet were presented to the Smithsonian Institution on October 1, 1963, in a ceremony reported in the JADA, January 1964.

Because of a lack of NBS funds to pursue the further development of the new drill, Dr. Nelsen independently arranged for a machinist from Arlington, Virginia to build a more refined version based upon the experience with the equipment built by Mr. Kumpula and Mr. Pelander of the NBS. This version of the instrument proved very successful and the Dental Section of the NBS purchased the first unit.

To finance this endeavor, the following dental practitioners provided the necessary funds to build a more usable clinical handpiece: Doctors Charles B. Hall, N.W. Ditzler, C.E. Dawson, and John V. Borden. Each of them subsequently purchased a unit for their own use and thus were the first to use the turbine dental drill in private practice.

Dr. John V. Borden subsequently and independently embarked on the commercialization of the turbine handpiece applying his name to a modification of the original design.

Presently the turbine dental drills are being used throughout the world, and they have been acclaimed as a most significant advance in the practice of restorative dentistry.

Bob is also known for his motion picture productions, having won prizes at international film festivals. Administration has also been his bag — for three (3) years as research director at N.I.D.R., and now currently serving as the Executive Director of the American College of Dentistry. He and his wife Alice have six children, and live in Potomac, Maryland.

But deep down in his heart, I am sure Bob, as did George Hollenback, considers himself a clinician, one who could treat people with sick mouths, and treat them as an artisan with skill and expertise. So we wish to honor a great man in our profession today with the first George Hollenback Award. Our sincere gratitude and appreciation. Congratulations!
News of Fellows
(Continued from page 68)

John L. Bomba of Philadelphia is presently serving as president of the Academy of General Dentistry.

Clifton O. Dummett of Los Angeles is president of the American Association of Dental Editors for 1974-1975.

John B. Ronnau of Los Angeles has been appointed professor of oral surgery at the Drew Postgraduate Medical School. He will hold a concurrent appointment in the department of surgery at UCLA.

Samuel D. Harris, Detroit pedodontist, has contributed $100,000 to the American Fund for Dental Health to create an endowment for the support of projects to advance children's dental health. This is the largest gift made to AFDH by an individual dentist.

Clifford Sturdevant of Chapel Hill, North Carolina became the president of the Academy of Operative Dentistry at its annual meeting in Chicago recently.

Former Governor Winfield Dunn is being honored by the University of Tennessee by having the new dental clinic building, now under construction, named for him.

Richard Topazian has been appointed professor and chairman of the department of oral surgery at the University of Connecticut.

Andrew Linz has been named head of the newly created department of dentistry at Roosevelt Hospital, New York City.

The University of North Carolina School of Dentistry has announced the appointment of Robert J. Shankle as director of public relations and development. He retains his academic appointment in the department of endodontics.

James R. Jensen has been named associate dean for academic affairs at the University of Minnesota School of Dentistry.
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 graduate studies and continuing educational efforts by dentists and auxiliaries;

(d) To encourage, stimulate and promote research;

(e) 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;

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

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

(h) 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;

(i) 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.

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