The JOURNAL
of the
AMERICAN COLLEGE
of DENTISTS

A Self-Assessment Program
Dental Manpower Maldistribution
The Health Care Crisis
Dilemma of the Dental Hygienist
Community Oriented Activities
Developmentally Disabled Children

JULY 1972
Section news announcements and items of interest should be sent to the Editor, Dr. Robert I. Kaplan, One South Forge Lane, Cherry Hill, New Jersey 08034.

College to Sponsor Self-Assessment and Continuing Education Program

The Board of Regents of the American College of Dentists, after careful study, has approved the establishment of a Self-Assessment and Continuing Education program which will be made available to the entire dental profession. The Educational Testing Service of Princeton, New Jersey, nationally known for a large variety of testing programs, will develop and administer the project. Present plans indicate that the first test should be available by March 1973. For further information, read the article on page 146 of this issue.

Conference on Newer Communication Techniques Scheduled for October 4-6 in Atlanta

The ACD Committee on Education is planning a conference and workshop on "Newer Communication Techniques and Their Application to Dental Research, Dental Education and Dental Practice" to be held at the National Medical Audio-Visual Center in Atlanta, Georgia on October 4 to 6, 1972. The conference will emphasize the necessity for closer liaison among schools in the development and sharing of instructional materials and scientific information.

The Bureau of Health Manpower and Education will underwrite the conference. It is expected that sixty persons will be invited to participate, representing dental schools, boards and specialty groups. The Committee on Education and its consultants include Dr. William R. Patterson, chairman and Drs. William E. Brown, George Mitchell, Robert V. Walker, Harry Bruce, Robert J. Nelsen, Dale Podshadley and John Greene.
American College of Dentists Contributes $5,000 to AFDE's New Loan Program for Dental Students

The American College of Dentists has contributed $5,000 to the new guaranteed student loan program of the American Fund for Dental Education.

A check in the amount of $5,000 was presented April 25 by Dr. Charles F. McDermott, Pittsburgh, Pa., a regent of the college to AFDE Executive Vice President Joseph E. Dickinson at AFDE headquarters in Chicago.

The Fund's new guaranteed loan program for dental students has been given top priority this year by the AFDE Board of Directors, who have approved an initial goal of $500,000 in loan deposit funds. On a 10 to 1 basis this will provide $5 million in loan funds to dental students. Support of the new student loan program is now being solicited from many sources, including dental organizations, trusts, foundations, business and industry.

Dr. Charles F. McDermott, left, a regent of the American College of Dentists, shakes hands with AFDE Executive Vice President Joseph E. Dickinson, right, who has just accepted a $5,000 contribution from ACD in support of the Fund's new guaranteed loan program for dental students. Looking on, center, l. and r., are ACD Executive Director Robert J. Nelsen, D.D.S., and ACD Editor Robert I. Kaplan, D.D.S.
SECTION NEWS

Oklahoma Section

The annual meeting of the section was held at the Lincoln Plaza Hotel, Oklahoma City on April 25, in conjunction with the Oklahoma State Dental Association session. Chairman Robert G. Hirschi presided. Guest speaker was Dr. William E. Brown, President of the College and Dean of the University of Oklahoma College of Dentistry. Dr. Brown discussed current national activities and plans for the future. General discussion followed primarily regarding the contribution the section can make to the new dental school.

Officers for the year are Marion A. Flesher, Chairman; John B. Carmichael, Vice-Chairman, and Larson R. Keso, Secretary-Treasurer.

Dr. Louis A. Saporito, President-elect of the American Dental Association was a guest.

Kansas City Midwest Section

The Kansas City Midwest Section held its annual business meeting in March at which time the following new officers were elected.

Chairman, Dr. Joseph F. Burket, Kingman, Kansas; Vice-Chairman, Dr. Donald B. Amend, Salina, Kansas, and Secretary-Treasurer, Dr. Vernon S. Fricke, Kansas City, Missouri.

Mr. Glenn E. Hands, Consulting Engineer, and Diplomate of the American Academy of Environmental Engineers spoke on present and future trends in waste water treatment, water recycling and pollution control.

The section conducts an emergency student loan fund at the University of Missouri, at Kansas City School of Dentistry, which is operating successfully.

Florida Section

The Annual Meeting of the Florida Section was held at the Americana Hotel, Bal Harbour, Florida, on May 13. Captain Guthrie of Eastern Airlines was the featured speaker. Chairman Monroe Farber welcomed the new members. The Section voted to contribute $100.00 to the Academy One Hundred, and $100.00 to American Fund for Dental Education.

The following officers were elected: Chairman, Dr. Charles W. Fain, Jr.; Vice-Chairman, Dr. Harold B. Pattishall, Jr., and Secretary-Treasurer, Dr. William O. Shumpert.
Pittsburgh Section

The Pittsburgh Section held its spring meeting at the Pittsburgh Press Club on April 20. The meeting was held in honor of three of its outstanding Fellows who have achieved national prominence: Dr. George P. Boucek, trustee of the Third District, American Dental Association; Dr. W. Arthur George, president of the Pennsylvania Dental Association and candidate for second vice-president of the ADA, and Dr. Charles F. McDermott, member of the Board of Regents of the American College of Dentists. The senior student at Pitt who most exemplifies the aims of the College was also honored. The speaker was Jane Cookson, investment counsellor, who spoke on "Your Financial Six-Month Check Up."

Hawaii Section

With the assistance of Dr. Victor J. Niiranen of the U. S. Navy, a shipment of five boxes of books and magazines was sent to Djakarta, Indonesia, recently. Dr. Allen M. Ito is chairman of Project Bookshelf for the Hawaii Section.

New England Section

The New England Section met at the 57 Restaurant in Boston on May 1, and heard Dr. Robert I. Kaplan, Editor of the ACD Journal, speak on current activities of the College. His talk stressed the need for enlarging Section activities and the importance of involving new Fellows in College projects.

The officers of the Section are: Chairman, Charles Zumbrunnen, Concord, N. H.; Vice-Chairman, Walter L. Brown, Jr., Auburndale, Mass., and Secretary-Treasurer, Orrin Greenberg, Chestnut Hill, Mass.

Washington-British Columbia Section

The Washington-British Columbia Section had its Annual Meeting on May 21, 1972, at the Windjammer Restaurant, Seattle, Washington. Wives of Fellows were invited and were presented with orchids as tokens of appreciation and welcome.

Dr. Emery Fraser, out-going president, arranged the program. Mr. and Mrs. Mucklestone, Seattle attorneys, told of their fabulous trip to Europe and back by private single-engined plane.

The following were elected officers for the coming year: President,
Dr. J. Fred Grant, Spokane; First Vice-President, Dr. Olin Lommis, Seattle; Second Vice-President, Dr. Earl Maston, Seattle, and Secretary-Treasurer, Dr. Ted Harper, Spokane.

Wisconsin Fellows Present Award

The Wisconsin Fellows gave their third annual table clinic award at the recent Wisconsin State Dental Society meeting.

Dr. Truman J. Johnston, committee chairman, presented the award to Dr. K. J. Waliszewski for his outstanding clinic. Other ACD judges were Drs. Gilbert H. Larson and Nicholas E. Tapp.

The award is based upon originality, application to clinical dentistry, presentation and audience interest. The Wisconsin Fellows are interested in encouraging outstanding clinical and scientific presentations. They realize the importance of recognizing individuals who contribute to the betterment of our dental profession. The awards will be given on an annual basis for table clinics presented during the Wisconsin State Dental Society meeting.

Dr. Truman J. Johnston presenting plaque to Dr. K. J. Waliszewski.
NEWS OF FELLOWS

Dr. Harold Gelb, associate professor of prosthodontics at the New Jersey College of Medicine and Dentistry, is the newly elected chairman of the Greater New York Dental Meeting.

Dr. Robert E. Gaylord of Dallas, Texas, was installed as president of the American Association of Orthodontists at its 72nd Annual Session recently in Denver, Colorado. Dr. Hubert J. Bell of Boulder, Colorado, became president-elect. Dr. B. F. Dewel, Evanston, Illinois, was the recipient of the Albert H. Ketcham Award at this meeting. This award was established to commemorate the late Albert H. Ketcham, and is given to both orthodontists and scientists in other fields who, in the judgment of the Award Committee, have made an outstanding contribution to the advancement of the science and art of orthodontics. At the same meeting, Drs. Ernest T. Klein, Denver, Colorado, and Richard A. Lowy, Chatham, New Jersey, were awarded Distinguished Service Scrolls for “substantial scientific, technical, and non-scientific contributions to orthodontics, in addition to other valuable and devoted service to the association and its membership.”

Dr. Gunnar Ryge of San Francisco was recently installed as president of the International Association for Dental Research. He succeeds Dr. Frank J. Orland of Chicago.

Dr. James K. Avery of Ann Arbor, Michigan, was elected as vice-president and Dr. Arthur R. Frechette of Chicago was reappointed as secretary-treasurer.

Reginald H. Sullens of Oklahoma City, Okla., associate dean for administrative affairs of the University of Oklahoma dental school, was installed as president of the American Association of Dental Schools at its recent annual session held in Las Vegas, Nev. He succeeds Dr. John J. Salley of Baltimore, dean of the University of Maryland dental school.

Dr. Charles L. Howell of Philadelphia, dean of Temple University dental school, was chosen president-elect.

Other AADS officers include: Dr. Harry W. Bruce, Jr., of Washington, D. C., director of the Division of Physician and Health Professions Education, Bureau of Health Manpower Education, National Institutes of Health, vice-president for federal dental services; Dr. James B. Bush of Ann Arbor, Mich., University of Michigan dental school, vice-president for sections; Dr. Erling Johansen of
Dr. Charles A. McCallum, Jr., dean of the University of Alabama in Birmingham School of Dentistry, has been named 1972 distinguished faculty lecturer by his colleagues at the UAB Medical Center. He was chosen by a committee representative of all divisions of the Medical Center. Dr. McCallum is the ninth to be honored since the award was established to recognize faculty members who have advanced frontiers of the health sciences and contributed to the growth of UAB.

Dr. Herbert Yee of Sacramento, California, has been named to the University of the Pacific Board of Regents.

Dr. Frank G. Everett, professor emeritus of periodontology at the University of Oregon Dental School, was honored at a dinner recently by the Multnomah County Dental Society and presented a plaque as an award of merit “in recognition of his untiring efforts, outstanding service, dedicated leadership and his many contributions to the field of education in the dental profession.”

Dr. Louis A. Simon, professor and chairman of preventive dentistry and community health of New York University Dental Center, has retired and moved to Hallandale, Florida.

Dr. Lester W. Burket, retiring dean of the University of Pennsylvania School of Dental Medicine, addressed the graduates and received an honorary degree of Doctor of Science from Georgetown University School of Dentistry. Dean Burket was cited for “his great talents as an educator and administrator” in nearly forty years of service to dental education.

Dr. Clifton King Saunders, clinical professor of crown and bridge at Georgetown, also received an honorary degree of Doctor of Science, being cited as a dedicated clinical professor of remarkable talents who “has instilled the love of the dental profession in a special way” to 46 classes of dental students.

Dr. Russell Todd of Richmond, Kentucky, was awarded the honorary degree of Doctor of Science recently from Berea College. In his address to the members of the graduating class, Dr. Todd urged them to seek “a generation tie, not a generation gap.”
Dr. Gerald Kramer, chairman of periodontics at Boston University School of Graduate Dentistry, heads the public subscription drive for a new predoctoral department of dentistry which to date has raised nearly a million and a half dollars. A clinic in the new department is being named in his honor.

Dr. John J. Salley, dean of the University of Maryland School of Dentistry, has been elected vice-president and a member of the board of directors of the American Fund for Dental Education. Three dental school deans have been elected to the AFDE board of trustees. They are Dr. Richard E. Bradley of the University of Nebraska, Dr. Edward E. Jeansonne of Louisiana State University, and Dr. Jack Wells of the University of Tennessee.

Dr. Clifton O. Dummett, professor and chairman of the Department of Community Dentistry at the University of Southern California, has been informed that his film "What About Tomorrow?" which was produced to encourage minority students to consider dentistry as a career, has won two international awards; the CINE (Council on International Nontheatrical Events) Golden Eagle, and the Gold Camera Award of the U. S. Industrial Film Festival. Dr. Dummett has also been elected to membership recently in the Institute of Medicine of the National Academy of Sciences.

Dr. Alvin L. Morris, administrative vice-president of the University of Kentucky at Lexington and former dean of the UK College of Dentistry, addressed graduates at the University of Alabama in Birmingham School of Dentistry on June 3, at the annual dental honors convocation preceding graduation exercises.

Dr. John I. Ingle, dean of the University of Southern California School of Dentistry, has been elected as a Foreign Member of the Brazilian Academy of Dentists, at a recent ceremony in Sao Paulo.

An ACD Family

In addition to the two husband and wife teams in the College mentioned in previous issues of the Journal, Fern Crawford, secretary for many years to Dr. Otto W. Brandhorst, sends information about an ACD family. Dr. Sidney Riesner of Indio, California, who became a Fellow in 1939, and his wife, Dr. Josephine Abelson, who was inducted in 1951, have a son, Dr. Neal R. Riesner of Scarsdale, New York, who received Fellowship in 1967.
the JOURNAL of the AMERICAN COLLEGE of DENTISTS

A QUARTERLY PRESENTING IDEAS IN DENTISTRY

ROBERT I. KAPLAN, Editor
One South Forge Lane
Cherry Hill, New Jersey 08034

ROBERT J. NELSEN, Business Manager
Journal of the American College of Dentists
7316 Wisconsin Ave.
Bethesda, Maryland 20014

July 1972

Editorial Board—HOMER N. HAKE, Chairman
ROBERT L. HEINZE    LOUIS G. TERKLA

THE JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS is published quarterly—in January, April, July, and October—by the American College of Dentists, Inc., at Huntzinger Printing Corporation, 215 S. Tenth Street, Camden, New Jersey 08103 • Subscription $10.00 a year; single copies $3.00 • Second class postage paid at Washington, D. C. and additional points • Copyright 1972 by the American College of Dentists, Inc.

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

Correspondence relating to the JOURNAL should be addressed to the Editor, One South Forge Lane, Cherry Hill, New Jersey 08034. Changes of address and subscription requests should be addressed to the Business Manager, JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS, 7316 Wisconsin Avenue, Bethesda, Maryland 20014. Reprint requests should be directed to the author.

## Contents for July 1972

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>News and Comment</strong></td>
<td>129</td>
</tr>
<tr>
<td><strong>The Vice-President of the College</strong></td>
<td>139</td>
</tr>
<tr>
<td><strong>Editorial</strong></td>
<td></td>
</tr>
<tr>
<td>Professional Privilege vs. the Public Good</td>
<td>142</td>
</tr>
<tr>
<td>Robert J. Nelsen, D.D.S.</td>
<td></td>
</tr>
<tr>
<td><strong>The Dentist's Creed</strong></td>
<td>144</td>
</tr>
<tr>
<td><strong>Annual Meeting and Convocation Program</strong></td>
<td>145</td>
</tr>
<tr>
<td><strong>A Self-Assessment and Continuing Education Program for the Practicing Dentist</strong></td>
<td>146</td>
</tr>
<tr>
<td><strong>Maldistribution of Dental Manpower: A Cause for National Concern</strong></td>
<td>151</td>
</tr>
<tr>
<td>Henry Wechsler, Ph.D., Allan F. Williams, Ph.D., and Denise Thum, Ph.D.</td>
<td></td>
</tr>
<tr>
<td><strong>Dentistry and the Health Care Crisis</strong></td>
<td>161</td>
</tr>
<tr>
<td>Philip R. Lee, M.D.</td>
<td></td>
</tr>
<tr>
<td><strong>The Ethical Dilemma of the Dental Hygienist</strong></td>
<td>169</td>
</tr>
<tr>
<td>Nathaniel H. Barish, Ph.D., and Anna M. Barish, R.D.H.</td>
<td></td>
</tr>
<tr>
<td><strong>The Performance of Community Oriented Activities by Dental Practitioners: Its Relation to Practice Intensity</strong></td>
<td>175</td>
</tr>
<tr>
<td>H. Barry Waldman, D.D.S., M.P.H., Ph.D.</td>
<td></td>
</tr>
<tr>
<td><strong>Community Dental Care for Developmentally Disabled Children: An Overview of the Problem</strong></td>
<td>184</td>
</tr>
<tr>
<td><strong>Letter to the Editor</strong></td>
<td>188</td>
</tr>
</tbody>
</table>

138
ROBERT L. HEINZE
Vice-President
The Vice-President of the College

Robert L. Heinze, a former regent of the College and a general practitioner for nearly fifty years, serves this year as vice-president. Born and raised in New York City, he studied dentistry at the University of Pennsylvania, where he played lacrosse and was an associate editor of the Penn Dental Journal. Here he began an interesting avocation as a newspaper reporter and also as a teacher in the New York City schools. Graduating in 1923, he entered practice in Brooklyn, and has remained there ever since.

Joining the Second District Dental Society, he served on various committees and its Board of Trustees for more than fifteen years, and became president in 1943. He is a former member of the Board of Governors of the Dental Society of the State of New York, a past president of the New York State Board of Dental Examiners, and for the past fifteen years a member of the editorial board of the New York State Dental Journal. He is an honorary member of the Metropolitan Conference of Hospital Dental Chiefs.

On the national level he has served the American Dental Association in many capacities—as a member of the Judicial Council for six years, as a section officer, on various reference committees and as a member of the House of Delegates for fifteen years.

He is a dental consultant to the Kingsbrook Medical Center and the Kings County Hospital, Brooklyn, and a past president of the New York State Society of Dentistry for Children. He is a fellow of the Academy of General Dentistry and a fifty year member of Psi Omega Dental Fraternity.

Dr. Heinze has written numerous articles and his given many talks on operative dentistry, children's dentistry, pin inlays and endocrine problems at various local and state meetings. He has been a leader in fraternal, civic and boating activities, and has received a number of awards. In 1950 he was honored with the Interfraternity Congress "Man of the Year Award." As a founder of the New York Academy of General Dentistry, he was presented with a Meritorious Award "In recognition of his exemplary service to the profession of dentistry. His assiduous dedication as a public servant, teacher and outstanding general practitioner has served as a beacon of inspiration to his grateful colleagues."
A recent hospital citation reads, "Presented in recognition of his devoted service and leadership of the Department of Dentistry of the Kingsbrook Jewish Medical Center and for his statesmanship in the dental profession of this nation. Few areas of dentistry remain unaffected by his activity, his intelligence and his devotion. Indeed, it would be difficult to conceive of the profession of dentistry without including in its outstanding history the accomplishments of Dr. Robert L. Heinze."

He and his wife Edria, live in the suburban Long Island town of Rockville Centre, N. Y. They have two sons.

The American College of Dentists is proud of the achievements of Bob Heinze, and is grateful for his years of faithful service, which are culminated now by his elevation to the vice-presidency. We wish him well.
Professional Privilege vs. the Public Good

The recent controversy over the use of character reference procedures by state boards of dental examiners evidences a seeming lack of understanding by persons who should be more aware of the important exchanges between society and professions. Some comments on the subject are in order for there may be a message in the noise.

In our free society, various special positions and privileges are given by society to persons within professions as an exchange for performance of assigned responsibilities. In this system of reciprocal benefit, a person possessing a certificate (diploma) may apply for a license to offer services to the public in an arrangement called “professional privilege”. It is a unique privilege which has the protection of law.

In its obscure wisdom, society requires that all who aspire to such privilege of licensure give evidence of a minimum of knowledge, skill and judgment. This requires an examination which is an incontestable prerogative of society. How it secures evidence of competence and how successfully it does so depends much upon how well both society and the profession understand and respect the system. In our pluralistic society, this arrangement has unique value to both the public and the profession.

While the profession maintains that the very nature of health care demands great latitude of professional freedom, the public is well aware that that same freedom has great potential for malignant pilferage. Because of this, and before any contract for the exchange can be drawn, the essentials in the exchange must be made known and be validated. The applicant offers his credentials in the presentation of a certificate or diploma and a not too audible pledge of professional ethics regarding future conduct toward his public trust. This he
offers in exchange for special privileges and the state correctly asks to examine what is offered. Remember that the state has the prerogatives and that its main purpose is to protect the public. In this direction, it may have developed, recently, a concern about the effectiveness of professional ethics as a form of quality control.

A diploma indicates only that its possessor carries just such special credentials as the reputation of the issuing institution may certify or imply. Because of this, society elects to make its own measure of the applicant against what it believes are minimum performance standards. Not a bad idea! However, some dimensions of these performance standards are not always to the liking of those who must meet them, especially when they challenge a weakness, e.g. an inability to operate, a lack of knowledge or even a lack of prudence in the management of another's trust. Whatever the need, all measurements made of an applicant, to be just, must be devised singularly to protect the public and NOT to restrict the applicant. If tests should be designed primarily to the restriction of applicants or, if applicants failing or contemplating failure demand special dispensation, this system will fail. Occasionally, but of the necessity to protect the public, there will occur the untoward secondary effect of withholding the privilege of licensure.

This reciprocity between society and professions is always in delicate balance. If the measurement procedure is brutal, society will strangulate the system and lose it. If the profession refuses to be measured, or much worse, if it reneges on its ethical commitments, then it will lose its important freedoms and ultimately suffocate in the necessary directives and controls of social management. All the important prerogatives belong to society. It may well be that the responsibilities and obligations attendant to its side of the bargain need the attention of the profession. By looking so hard at those who now apply for the privileges of licensure, could society be saying something to the profession?

It may be time for us to examine our performance against our own professional ethic or standard. Could our standard be leaning so much that our banner is in the mud? If we would but listen, would we hear the admonition "Straighten up and fly right"?

ROBERT J. NELSEN
The Dentist's Creed

To respect my profession, my reputation and myself. To be honest and fair with my patients as I expect my patients to be honest and fair with me; to think of Dentistry with loyalty, speak of it with praise, and act always as a custodian of its good name. To be a man whose word carries weight with my fellow-citizens; to be a booster, not a knocker; a pusher, not a kicker; a motor, not a clog.

To base my expectation of reward on a solid foundation of service rendered; to be willing to pay the price in honest effort. To look upon my work as opportunity to be seized with joy and made the most of and not as painful drudgery to be reluctantly endured.

To remember that success lies within myself, in my own brain, my own ambition, my own courage and determination. To expect difficulties and force my way through them; to convert hard experience into capital for future struggles.

To believe in my proposition heart and soul; to carry an air of optimism into the presence of everyone I meet; to dispel ill-temper with cheerfulness, kill doubts with strong convictions, and reduce active friction with an agreeable personality.

To make a study of the professional and business sides of Dentistry; to know both sides in every detail from the ground up; to mix brains with my efforts, and use system and method in my work; to find time to do everything needful by never letting time find me doing nothing. To make every hour bring me dividends in service, increased knowledge or healthful recreation.

Finally to take a good grip on the joy of life; to play the game like a gentleman; to fight against nothing so hard as my own weakness; and to endeavor to grow as a dentist, and as a man with the passage of every day of time.

THIS IS MY CREED.

—Author Unknown
Annual Meeting and Convocation
Fairmont Hotel - San Francisco, California
Saturday, October 28, 1972

PRELIMINARY PROGRAM

9:30 a.m. Welcome .................. William E. Brown, President

9:40 a.m. Address ..... Ormonde J. McCormack, President-Elect

10:00 a.m. Panel on Prevention ...... Robert I. Kaplan, Moderator
PREVENTION—A BROAD BASE
William E. Brown
Dean of the University of Oklahoma School of Dentistry
PREVENTION—THE PATIENT'S
RESPONSIBILITIES
Richard C. Oliver
Professor of Periodontics, Loma Linda University
School of Dentistry
PREVENTION—THE FUTURE OF FISSURE
SEALANTS
Gunnar Ryge
President of the International Association for Dental Research

11:30 a.m. Activation of the American College of Dentists
Foundation

12:15 p.m. Luncheon

3:00 p.m. Convocation Ceremony
The Convocation speaker will be Dr. William S. Banowsky, President of Pepperdine College, Los Angeles, California

7:00 p.m. Reception

8:00 p.m. Dinner and Entertainment
A Self-Assessment and Continuing Education Program for the Practicing Dentist

For many years, intelligent and perceptive professional persons have recognized the need for maintaining their knowledge, skills and competence through continued study. Many dentists, accepting the dictum of G. V. Black, that "The professional man has no right to be other than a continuous student," have made it their business to keep their ability up to date by attendance at postgraduate courses, clinics and meetings. Some have made continuous education a way of life and have pursued learning on a regular and methodical basis.

Until recently, however, there has been no practical way for a dentist to evaluate the effect of such educational experiences; no way for him to measure his knowledge and performance against that of his peers. There is, however, a method presently in use in the medical field and in one dental specialty (oral surgery) which, when applied to general dentistry, could provide this information; a method known as a self-evaluation or self-assessment program.

Briefly, such a program involves having the dentist take a periodic self-administered written test. This is marked by an outside agency and returned to him with his score, his relative standing in comparison to all other dentists taking the same test, the correct answers to the questions, and a bibliography for further reference and study.

Similar programs are enjoying considerable success in the medical specialties, and it was this fact which attracted the attention of Executive Director Robert J. Nelsen, who attended a self-assessment workshop in Chicago in 1971, sponsored by the Interspecialty Committee and Council on Medical Education of the American Medical Association. Dr. Nelsen came away convinced that the dental profession needed such a program and determined to promote it as a project of the College.
Early in 1972 in response to a proposal by the Executive Director, the Board of Regents of the American College of Dentists, agreed to sponsor a self-assessment program which would be made available to dentists everywhere who are interested in evaluating their current professional knowledge, and in the learning experience such evaluation can provide.

Proposals were solicited from a number of agencies which were presently conducting such programs for other groups. After careful study, the plan presented by the Educational Testing Service of Princeton, New Jersey, was chosen as it appeared to offer the best potential for development, administration and evaluation of such a program in dentistry. A Self-Assessment and Continuing Education Committee and an Advisory Committee were chosen. These groups met in Bethesda recently with representatives of the Educational Testing Service, to determine how best to proceed to develop the program and make it available to the 88,000 or more practicing dentists in the United States.

THE EDUCATIONAL TESTING SERVICE

The Educational Testing Service currently conducts more than 800 different testing programs and projects for a large variety of sponsors, including the tests of the College Entrance Examination Board, the Graduate Records Examination Board and others. It conducts educational and psychological research and provides consulting services to educational groups. It operates with the assistance and cooperation of many committees of specialists from various educational and psychological fields. ETS has an expanding program of proficiency tests for a number of medical specialties, including the American Board of Obstetrics and Gynecology and the American Board of Ophthalmology. It projects the following plan for the dental profession:

PROPOSED PLAN

The ETS proposal is designed to develop a continuing examination plan and procedures to afford the practicing dentists an opportunity to assess his competence and his knowledge of the present state of his art on a schedule convenient to him, and with his results reported to him only.

A major feature of the Program is to provide a professionally sound method of self-assessment that can be periodically updated to reflect advances in Dentistry.
This proposal is based upon the assumption that all dentists will be notified and approximately 10,000 will participate in the program. The test will be designed for the general practitioner, though it is assumed that some specialists may wish to participate in it. It is proposed that four tests each consisting of approximately 150 questions will be mailed to each participant at spaced intervals during 1973-74. Each of the tests will cover the various areas of dental practice and each participant in the program will receive an analysis of his performance on each segment and each question, with sources cited for the correct answers. This diagnostic and instructional aspect would provide a unique service to the dentist, and would serve as a useful measure of continuing education progress.

TEST DEVELOPMENT

The tests will be prepared by Examining Committees working in conjunction with an Advisory Committee of approximately ten members and with ETS test development specialists. The membership of the Advisory Committee, named by the Board of Regents of the American College of Dentists includes representatives of the American College of Dentists, the American Dental Association, the International Association of Dental Research, and the American Association of Dental Schools.

The Advisory Committee will provide direction in the development of the tests, and will determine the content categories to be covered in the examinations. Major categories mentioned in preliminary discussions include the following:

1. Prevention
2. Diagnosis and Treatment Planning
3. Treatment
4. Professional Responsibility

These four broad areas will be represented by approximately the same number of questions in each test. The American College of Dentists in collaboration with the Advisory Committee will name the members of the four Test Committees to be appointed. Each Test Committee will be responsible for one of the broad content areas delineated by the Advisory Committee.

Each examination will be assembled by test development personnel at ETS from questions approved by the Test Committees and according to the specifications developed by the Advisory Committee and the Test Committees. Each will be reviewed prior to printing.
by selected members representing each of the Test Committees to
insure the internal consistency of the tests.
ETS personnel trained in test development will work closely with
each of the committees during all the phases of the development of
the tests.

THE BULLETIN OF INFORMATION

ETS will write and produce a Bulletin of Information to be mailed
to approximately 110,000 members of the American Dental Associa-
tion together with an announcement of the Self-Assessment Program.
The ADA will supply ETS with address labels (or addressed en-
velopes) for the 110,000 members.
The Bulletin of Information will include a Registration Form with
prepaid return envelope, an outline of the subject matter to be tested,
sample questions, a sample of the nature of the report showing refer-
ces, information and discussion of each question and an individual
analysis of performance. In addition the Bulletin will stress that
the individuals' test results are strictly confidential and only the
subscriber will receive the scores.

ADVANCE INFORMATION

ETS will cooperate with the American College of Dentists in de-
veloping appropriate publicity and advance information about the
program in order to achieve the widest dissemination to all the mem-
ers of the American Dental Association. ETS will attempt to utilize
opportunities such as the annual meetings of Dental Associations and
Dental Publications as a viable means of informing dentists about
the program.

THE TEST

Subscribers will be sent a kit of testing materials at approximately
three month intervals. The kit will include the test book, instructions
for taking the test, an answer sheet and a return envelope. In addi-
tion, at the initial mailing the participants will receive a loose-leaf
binder in which to keep test materials, reports and references.
Biographical questions which will serve as a basis for developing
norms and interpretive material will be printed in the first section of
the test book and the answers will be coded on the answer sheet by
participants.
After ETS receives and scores the answer sheets an item and test
analysis will be done. The test results will be reported to participants
in the following way.
Test Results

An answer key and a reference to the sources of the correct answer will be provided each participant as a means of checking his response to each question. This pamphlet will also contain statistical information for comparison of his own performance with that of other dentists having a similar practice profile. Only the participant will receive his score report containing his total score, section scores and a listing of his responses to each question.

The test results will be totally confidential, will be entirely machine scored, and will be mailed directly from ETS to participants along with the next text book. Participants will be asked to return answer sheets within two weeks for each testing.

According to present plans, the first test will be available by March 1, 1973. The fee for the complete series of four tests is $40 and will be payable in advance to the Educational Testing Service at the time of registration. More information will be made available as the program develops.

Great souls have wills; feeble ones have only wishes. He who has a firm will molds the world to himself.

—Goethe
Maldistribution of Dental Manpower:
A Cause for National Concern

HENRY WECHSLER, Ph.D.**
ALLAN F. WILLIAMS, Ph.D.†
DENISE THUM, Ph.D.‡

There are two views concerning the adequacy of the supply of dentists and physicians in the United States. According to one, there are not enough dentists and physicians available to handle existing health care demands.\(^1,2,3\) The shortage of dentists is seen as becoming increasingly acute, and it is estimated that by 1975 there will be 28,000 fewer dentists than needed.\(^4\) According to the second view, there are sufficient numbers of these health care professionals, but they are maldistributed.\(^5\) Although there are not enough dentists and physicians in some areas, other areas are oversupplied in terms of the health care demands generated by the population. Elliot Richardson, Secretary of Health, Education, and Welfare, has referred to this situation as a "paradox of scarcity amid plenitude."\(^6\)

Two recent studies of dental manpower, one conducted in New York State and one in Metropolitan Boston, illustrate the "scarcity amid plenitude" view. Both of these areas are very well supplied with dentists relative to other areas of the country and are generally thought to have enough dentists to handle existing dental demand. Yet, a close examination of the dental manpower situation in these areas revealed in each case a serious maldistribution problem and subareas where more dentists are needed.

* The New York dental manpower study was conducted under contract with the New York State Education Department; the Boston study was supported by Contract PH 108-67-178, U. S. Public Health Service.
** Director of Research, †Project Director and ‡Research Associate at The Medical Foundation, Inc., 29 Commonwealth Avenue, Boston, Mass. 02116.
New York State

New York State has the most favorable dentist-to-population ratio of all 50 states. In 1968, dentist-to-population ratios ranged from one dentist for every 3,726 persons in South Carolina to 1:1,230 in New York State. The national average was 1:1,824.\(^7\)

Despite New York’s national preeminence in its supply of dental manpower, wide variations exist within the state. New York is divided into 12 Office of Planning Coordination (OPC) regions. According to recent figures on dentists licensed in New York,\(^8\) 13,690 dentists were registered as of August, 1970, and 77% of these were located in the New York City, Nassau-Suffolk, and Mid-Hudson regions. Table 1 presents the distribution of dentists and dentist-to-population ratios for each of the 12 OPC regions. Ratios ranged from one dentist for every 1,125 persons in New York City to 1:2,882 in the St. Lawrence region. In 1970, six of the 12 regions had ratios below the 1968 national average of 1:1,824.

**TABLE 1**


<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
<th>%</th>
<th>D:P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nassau-Suffolk</td>
<td>2,070</td>
<td>15.2%</td>
<td>1:1,277</td>
</tr>
<tr>
<td>New York City</td>
<td>6,993</td>
<td>51.1</td>
<td>1,125</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>1,420</td>
<td>10.4</td>
<td>1,278</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>455</td>
<td>3.3</td>
<td>1,325</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>234</td>
<td>1.7</td>
<td>1,919</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>99</td>
<td>0.7</td>
<td>2,166</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>93</td>
<td>0.7</td>
<td>2,882</td>
</tr>
<tr>
<td>Central</td>
<td>373</td>
<td>2.7</td>
<td>2,036</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>236</td>
<td>1.7</td>
<td>2,087</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>223</td>
<td>1.6</td>
<td>2,212</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>642</td>
<td>4.7</td>
<td>1,675</td>
</tr>
<tr>
<td>Western</td>
<td>852</td>
<td>6.2</td>
<td>1,628</td>
</tr>
<tr>
<td><strong>TOTAL N. Y.</strong></td>
<td>13,690</td>
<td>100.0</td>
<td>1,321</td>
</tr>
</tbody>
</table>

Sources:

1 Compiled from material provided by Dr. Donald F. Wallace, New York Board of Dental Examiners.

2 Based on information from the 1970 U. S. Census.
Variations in dentist-to-population ratios do not necessarily indicate a maldistribution of dentists, since there are regional variations in demand. Such factors as the socioeconomic level of the population, the proportion having dental insurance, and the fluoridation of water supplies have considerable impact on demand. The key factor concerns the ability of dental practitioners to meet current and near-term demands for services in their area. To obtain information on this topic, a mail questionnaire survey was conducted among dentists in New York State. Random samples were selected from the licensed dentists in each of the 12 OPC regions. In all, 1,040 dentists were mailed questionnaires. Excluding 116 ineligible dentists (retired, moved out of state, not in private practice), 878 (95%) responded.

Practitioners' Judgments of Dental Manpower Supplies. In the mail survey, dentists were asked to estimate the adequacy of the supply of dentists in their area. As may be seen in Table 2, the survey findings indicated that 61% of all New York general practitioners thought that their area had enough dentists, while 32% felt that there were more than enough to handle the current demand.

The highest proportion reporting a need for more dentists (35%) was found among general practitioners in the St. Lawrence area, the region with the least favorable dentist-to-population ratio; this was

<table>
<thead>
<tr>
<th>TABLE 2</th>
<th>Estimates by New York General Practitioners of the Supply of Dentists in OPC Regions.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Need More</td>
</tr>
<tr>
<td>Nassau-Suffolk</td>
<td>8.5%</td>
</tr>
<tr>
<td>New York City</td>
<td>3.0</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>4.1</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>15.6</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>12.3</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>19.4</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>35.0</td>
</tr>
<tr>
<td>Central</td>
<td>8.4</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>23.4</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>28.3</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>18.4</td>
</tr>
<tr>
<td>Western</td>
<td>16.4</td>
</tr>
<tr>
<td>TOTAL N. Y.</td>
<td>7.3</td>
</tr>
</tbody>
</table>
the only region in which no dentists reported that there were more than enough dentists. A need for more dentists was also reported by approximately one out of four dentists in the Southern Tier-East and Southern Tier-West regions, both of which have unfavorable dentist-to-population ratios. Conversely, many dentists in areas with high dentist-to-population ratios indicated that their area had more than enough dentists to handle the demand. An excess of dentists was reported by more than one-third of the dentists in the New York City, Nassau-Suffolk, and Mid-Hudson regions, and by 30% of the Western region dentists.

Practitioners' Ability to Handle Care Demands. As Table 3 shows, the mail survey of New York dentists found that 64% of New York State's general practitioners reported that they were usually able to see patients within a week after the patient called for an appointment, and 96% accepted new patients.

However, dentists in the various OPC regions differed strikingly in their capacity to accept new patients and in reported waiting times. Thus, although a large majority of dentists in all areas accepted new patients, 18% of St. Lawrence dentists and 16% of Lake Ontario dentists indicated that they did not accept new patients at the time of the survey. Relatively high proportions of dentists in the Upper Hudson, Southern Tier-West, and Western regions also indicated that they did not accept new patients. Waiting times of four weeks or more were reported by 34% of Southern Tier-East dentists, and by approximately 25% of the dentists in the Mohawk Valley, Lake Champlain-Lake George, St. Lawrence, and Southern Tier-West regions. In contrast, virtually all New York City, Nassau-Suffolk, and Mid-Hudson dentists accepted new patients, and waiting times were usually minimal.

These findings indicate that dentists in some areas of New York State find it difficult to meet current demands for services. In most areas, however, dentists are able to handle current demands. Thus, in each of the 12 regions studied, the majority of general practitioners reported that their area had enough or too many dentists, at least one-third reported waiting times of a week or less, and very few were unwilling to accept new patients.

Additional information was obtained on two other indicators of dentists' ability to expand their practices: preferred size of patient load, and age.

Preferred Size of Patient Load. Dentists were asked whether they would like to have more patients, fewer patients, or the same number (see Table 4). It is of considerable interest that 37% of New
**Table 3**

**Usual Waiting Time for Appointments and Acceptance of New Patients by New York General Practitioners.**

<table>
<thead>
<tr>
<th>Location</th>
<th>Waiting Time</th>
<th>% Accepting New Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 Week or Less</td>
<td>2-3 Weeks</td>
</tr>
<tr>
<td>Nassau-Suffolk</td>
<td>64.8%</td>
<td>29.6%</td>
</tr>
<tr>
<td>New York City</td>
<td>75.8</td>
<td>22.7</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>56.0</td>
<td>37.3</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>44.2</td>
<td>40.3</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>38.3</td>
<td>38.4</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>38.9</td>
<td>36.1</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>35.0</td>
<td>42.5</td>
</tr>
<tr>
<td>Central</td>
<td>50.8</td>
<td>39.4</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>43.7</td>
<td>21.9</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>41.4</td>
<td>34.5</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>37.3</td>
<td>49.3</td>
</tr>
<tr>
<td>Western</td>
<td>43.5</td>
<td>43.6</td>
</tr>
<tr>
<td><strong>TOTAL N. Y.</strong></td>
<td><strong>64.3</strong></td>
<td><strong>29.5</strong></td>
</tr>
</tbody>
</table>

**Table 4**

**Size of Patient Load Preferred by New York General Practitioners.**

<table>
<thead>
<tr>
<th>Location</th>
<th>Want Fewer Patients</th>
<th>Want Same Number</th>
<th>Want More Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nassau-Suffolk</td>
<td>8.5%</td>
<td>50.7%</td>
<td>40.8%</td>
</tr>
<tr>
<td>New York City</td>
<td>6.1</td>
<td>53.0</td>
<td>40.9</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>12.0</td>
<td>50.7</td>
<td>37.3</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>17.1</td>
<td>63.2</td>
<td>19.7</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>9.5</td>
<td>65.8</td>
<td>24.7</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>11.1</td>
<td>63.9</td>
<td>25.0</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>22.5</td>
<td>67.5</td>
<td>10.0</td>
</tr>
<tr>
<td>Central</td>
<td>7.0</td>
<td>59.2</td>
<td>33.8</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>13.6</td>
<td>63.7</td>
<td>22.7</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>18.6</td>
<td>52.6</td>
<td>30.8</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>14.3</td>
<td>54.5</td>
<td>31.2</td>
</tr>
<tr>
<td>Western</td>
<td>16.1</td>
<td>59.7</td>
<td>24.2</td>
</tr>
<tr>
<td><strong>TOTAL N. Y.</strong></td>
<td><strong>9.0</strong></td>
<td><strong>54.0</strong></td>
<td><strong>37.0</strong></td>
</tr>
</tbody>
</table>
York general practitioners wanted more patients and that the proportion wanting more was greater than the proportion wanting fewer in all areas except the St. Lawrence region. Thus, given the present distribution of dentists, practitioners in New York State have some reserve capacity to accommodate to moderate near-term increases in demand.

**Age.** Age is an important factor in evaluating dental manpower supplies, since areas with high proportions of older dentists may suffer from replacement problems. In addition, older dentists work fewer hours than younger dentists, and are less likely than younger dentists to employ auxiliaries, to accept new patients, or to want to expand their practice.9-12

The mail survey found that 33% of New York general practitioners were under 45 years of age, 30% were between 45 and 54, and 37% were 55 or older, with a median age of 50 (see Table 5). Table 5 shows that New York City and the Lake Champlain-Lake George and St. Lawrence regions had the highest proportions of older dentists.

Table 6 summarizes the key findings presented. The 12 OPC regions were ranked with respect to favorability on each of six variables related to dentists' ability to meet care demands: (1) dentist-to-population ration (1= highest ratio); (2) estimated supply of dentists (1= highest proportion of general practitioners estimating enough or too many dentists); (3) waiting time (1= highest proportion with an average waiting time of one week or less); (4) acceptance of new patients (1= highest proportion accepting new patients); (5) preferred patient load (1= highest proportion wanting more patients); and (6) age (1= highest proportion under 45).

The findings summarized in Table 6 show that, in general, dentists in regions with unfavorable dentist-to-population ratios have the most difficulty handling current demand. Conversely, in areas with highly favorable dentist-to-population ratios, there are indications of a possible surplus of dentists. There is no absolute shortage of dentists in New York State. Rather, New York's problem is a maldistribution of dentists. Some areas, particularly the St. Lawrence region, are undersupplied with dentists, while others are oversupplied and show evidence of much unused capacity. For example, it was pointed out that 77% of the State's licensed dentists are located in New York City, Nassau-Suffolk, and Mid-Hudson. Since approximately 40% of the general practitioners in these three regions want more patients than they have now, it can be estimated that there are
roughly 4,200 dentists in these three areas who would like to have more patients, representing nearly one-third of all licensed dentists in New York State.

The conclusion that a region such as St. Lawrence is undersupplied with dentists must be qualified in that some areas within this region undoubtedly have enough dentists or more than enough. Similarly, some regions within New York City, such as the poorer areas, are likely to be undersupplied. An examination of areas within the oversupplied regions—New York City, Nassau-Suffolk, and Mid-Hudson—was not undertaken in this study. However, evidence that poorer sections of large urban areas are undersupplied with dentists was found in a dental manpower study in Metropolitan Boston which, like New York City, has an extremely favorable dentist-to-population ratio.

**Metropolitan Boston**

A dental manpower study carried out in the Boston Metropolitan Statistical Area (SMSA) in 1967 has been described in detail elsewhere. The Boston SMSA includes 77 communities in the Boston metropolitan area, plus Boston which was subdivided into 15 areas. The overall dentist-to-population ratio was 1:1,481, but there was an extremely wide range within the 92 areas: from 1:344 to 1:5,460. Some areas were found to be oversupplied with dentists in terms of the demand for dental care, and some were found to be undersupplied. Furthermore, it was the poorer areas which tended to need more dentists; presently they have fewer and less productive dentists than other regions in Metropolitan Boston. Specifically, each of the 92 areas was ranked on a poverty index, constructed from seven variables: unemployment, percentage of those earning less than $3,000 per year, median income, percentage of people over 25 with less than 5 years of education, median education, percentage of housing units considered deteriorating or dilapidated, and median value of one-unit housing. It was found that the high poverty areas, compared to areas of higher socioeconomic standing, had: (a) fewer dentists relative to their population; (b) older dentists, who are less productive in terms of equipment, employment of auxiliary personnel, and hours worked, and who will require replacement soon; (c) dentists who less frequently employ auxiliary personnel; and (d) recent histories of losing rather than gaining dentists. Thus within a large urban area well supplied with dentists overall, there were found to exist sections in which more dentists are needed to meet the demand.
### TABLE 5
Age Distribution of New York Dentists.

<table>
<thead>
<tr>
<th>Region</th>
<th>Under 45 Years</th>
<th>45-54 Years</th>
<th>55 Years &amp; Over</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nassau-Suffolk</td>
<td>39.5%</td>
<td>33.8%</td>
<td>26.7%</td>
</tr>
<tr>
<td>New York City</td>
<td>25.7</td>
<td>30.3</td>
<td>44.0</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>49.3</td>
<td>20.0</td>
<td>30.7</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>28.5</td>
<td>33.8</td>
<td>37.7</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>30.2</td>
<td>47.9</td>
<td>21.9</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>33.3</td>
<td>25.0</td>
<td>41.7</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>20.0</td>
<td>32.5</td>
<td>47.5</td>
</tr>
<tr>
<td>Central</td>
<td>40.9</td>
<td>31.0</td>
<td>28.1</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>40.8</td>
<td>25.8</td>
<td>33.4</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>36.6</td>
<td>25.0</td>
<td>38.4</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>44.1</td>
<td>29.9</td>
<td>26.0</td>
</tr>
<tr>
<td>Western</td>
<td>37.1</td>
<td>35.5</td>
<td>27.4</td>
</tr>
<tr>
<td><strong>TOTAL N.Y.</strong></td>
<td><strong>32.8</strong></td>
<td><strong>30.3</strong></td>
<td><strong>36.9</strong></td>
</tr>
</tbody>
</table>

### TABLE 6
OPC Regions Ranked by Favorability of Dentist-Patient Supply Conditions.

<table>
<thead>
<tr>
<th>Region</th>
<th>D:P</th>
<th>Estimated Supply</th>
<th>Waiting Time</th>
<th>New Patients</th>
<th>Patient Load</th>
<th>Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nassau-Suffolk</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>New York City</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Mid-Hudson</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Upper Hudson</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>10</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Mohawk Valley</td>
<td>7</td>
<td>5</td>
<td>10</td>
<td>5</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Lake Champlain-Lake George</td>
<td>10</td>
<td>9</td>
<td>9</td>
<td>4</td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td>St. Lawrence</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Central</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>Southern Tier-East</td>
<td>9</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Southern Tier-West</td>
<td>11</td>
<td>11</td>
<td>8</td>
<td>9</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Lake Ontario</td>
<td>5</td>
<td>8</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Western</td>
<td>4</td>
<td>7</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>6</td>
</tr>
</tbody>
</table>

Note:

1 = most favorable supply conditions among the 12 OPC regions,
12 = least favorable supply conditions.
MALDISTRIBUTION OF DENTAL MANPOWER

Discussion

The results indicated that although New York State has the most favorable dentist-to-population ratio in the nation, it contains areas which are undersupplied with dentists. Even within oversupplied areas such as New York City, where a significant proportion of dentists would like to be busier than they are, it is likely that some of the poorer areas are undersupplied, as was found to be the case in Metropolitan Boston.

All the states have considerable variation in dentist-to-population ratios, by county or other geographic subunit, and it is probable that many have a maldistribution problem, especially large urban states with favorable overall dentist-to-population ratios. The shortage of dentists in the poorer sections of large urban areas may be a general phenomenon, and poorer rural areas may have a similar problem.

The need to solve this maldistribution problem is underlined by the fact that the number of dentists is expected to decrease in relation to the population over the next decade, whereas the physician-to-population ratio will become more favorable. Concurrently, per capita dental demand is expected to increase markedly, primarily due to increasing coverage by both public and private insurance plans.

What solutions exist for achieving a more equitable distribution of dentists in relation to demand? The Carnegie Commission has called for the development of a broadly distributed system of health education centers in an effort to attract health personnel to remote, rural areas. Other steps are needed as well if adequate dental care is to be made available in all areas of the country. In a study of factors related to choice of practice location, it was found that dental school graduates usually establish practice in the same geographical area as their residence prior to enrollment, irrespective of the location of the school attended. The implications of this finding are that dental students must be actively recruited from areas with shortages of dentists. Since regions with low dentist-to-population ratios are often low-income areas, potential dental students from these areas will have to be offered financial assistance and other incentives to enable them to attend dental school. Furthermore, it may be necessary to offer inducements to encourage graduate dentists to practice in areas where dentists are in short supply. Solutions of this type need to be considered, for if new dentists entering practice cluster in areas already oversupplied, this trend will only aggravate exist-
ing problems. As the overall supply of dentists decreases in relation to the population, it will be imperative to make the most efficient use of existing personnel.

REFERENCES

8. Material provided by Dr. Donald F. Wallace, New York Board of Dental Examiners, 1970.
Dentistry and the Health Care Crisis *

PHILIP R. LEE, M.D.**

The dental profession shares with the other health professions the growing challenge of the health care crisis. This crisis emerged in the 1960's and it must be dealt with effectively in this decade or we will witness major changes in the role of government and the private sector in health care.

Perhaps a good introduction to our subject is the recent statement attributed by local newspapers to California's Lt. Governor Edward Reinecke, that the government will step in if the dental profession does not provide quality dental services for the poor. This statement comes as no surprise. Leaders of the dental profession have long urged more effective action by the dental profession. Dr. Willard Fleming for many years cajoled, stimulated and advised the dental profession to look ahead, to anticipate social change and to lead rather than react to the pressures of the day.

This call for leadership and direction was recently reiterated by Dr. Erik Olsen in an address before the Detroit District Dental Society:

"Organized dentistry's biggest task in the 70's will be to help shape our role in the emerging national health scene. Dentistry is today at a crossroad of decision in this matter; but the question is not: Is health care, including dental care, a privilege or a right? That question has really already been answered, perhaps not by dentistry, but by the public. This fact is certainly reflected in the high interest in health legislation in the Congress. The American public has answered that health care, including dental care, is a right, which it wants as quickly as money is available and the delivery system can deliver it, maybe even sooner. Therefore the real question facing dentistry is how do we react to this challenge? Do we fight it? Pretend it doesn't exist? Or do we work to guide it, to provide the best possible dental care and at the same time preserve the dignity and stature of the profession?"1

---

* Presented to American College of Dentists, Annual Fellowship Dinner, December 6, 1971, University of California, San Francisco, Calif.
** Chancellor, University of California, San Francisco, Calif.
Dr. Olsen clearly states that dentistry cannot separate itself from the current health care crisis, even though a number of the problems are not related primarily to dental care. The symptoms of the crisis include:

1. Millions of Americans, particularly the poor, without adequate health care;
2. Rapidly rising costs;
3. Increasing demand for services;
4. Growing pressure for government involvement, particularly in financing; and
5. The absence of preventive services in most health insurance programs.

These problems go well beyond the present crisis. Some of them have been around for a long time, but they now cry out for more effective action. For example, we must develop a greater awareness of preventive measures—good oral hygiene, proper diet and regular preventive dental care. Communities must be convinced to fluoridate their water supplies. Consumers and providers must work together to assure everyone access to quality health care, including dental care. The experiences of Medicare and Medicaid make it abundantly clear that removing financial barriers alone is not enough. We must be concerned about the organization of services, their distribution and availability, access, cost and quality control.

These are complex problems. In examining them we need first to ask ourselves, what are the goals of the system? Should the goal of the health care industry, as it is called, be to deliver comprehensive health care to people or merely to provide episodic treatment for patients?

Prevention

A shift in emphasis from the treatment of acutely ill patients—those in pain and distress—to prevention and health maintenance will not be easy because of patients' perceptions and expectations of medical and dental care. Most patients do not think in terms of preventive care.

Dentistry has devoted itself to defining a conception of dental health and stressing its importance and its relationship to systemic health and well being. Most people, on the other hand, conceive of dental care in terms of pain relief or the restoration of function. Indeed, most dentists spend most of their time meeting the needs of their patients for episodic care.²
A recent study in Israel revealed that dentists tend to overestimate patients' preventive dental behavior and that they are satisfied with their own efforts with respect to their patients. It appeared unlikely to the investigators, based on these observations, that the dentists would change their attitudes and behavior in such a fashion as to influence their patients and the public to practice more preventive dental care. One wonders whether a health oriented, preventive dental care approach can develop under these circumstances. Do we have the same problem in the United States? Certainly many of our students feel that we do not stress preventive dentistry enough in the curriculum and in our patient care programs. We will not develop sound preventive services without effective and vigorous leadership by the dental profession.

The impact of such a shift in emphasis, if effective, would be significant in terms of the health of the individuals involved, the availability of dental services, manpower requirements and costs.

**Fluoridation**

Fluoridation of public water supplies illustrates both the potential and the problems involved. About 90 million people or 56 percent of those drinking water largely from public water supplies have fluoridated water available. This figure could rise to about 150 million people if all public water supplies were fluoridated. This would produce a significant reduction in dental caries and the demand for dental care.

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. To achieve this level of public acceptance will not be easy. We all recognize the intense social and political forces at work. Small numbers of dedicated opponents to fluoridation have often been effective in holding back this important public health measure.

**Other Research Efforts**

The development of improved dental sealant compounds should have an additional impact on the prevention of dental caries, the demand for services and the need for dental health manpower. The studies to date on children look promising. The technique appears to be one that might be safely and effectively applied by dental hygienists. This could have a two-fold effect—reducing the need for dentists to treat caries and increasing the need for dental hygienists,
Should present research efforts produce a major breakthrough in determining the cause of dental caries and effective means of prevention, we would witness an even greater effect on manpower requirements and the delivery of services. While fluoridation affects mostly children in the short run, another preventive measure might be applicable to people of all ages. A breakthrough of this significance could possibly eliminate as much as 50 percent of the work now performed by dentists. Should such a change occur, it might be possible to meet the needs of the entire population for dental health care, without a dramatic increase in dental manpower. Many millions of people who have never seen a dentist would have access to comprehensive dental health care, provided the means were available to pay for it and provided the services were organized in such a way as to really be available to all who needed them.

**Effective Use of Auxiliaries**

In the face of rising costs and rising demand for services, we hear more and more about cost/benefit analysis, productivity, and efficiency. These are strange terms to a health professional who has been concerned about quality, competence, and compassion. Translated into terms we are familiar with, these economists' and systems analysts' terms refer to greater use of chair-side assistants by the dental practitioner. Between 1955 and 1968 the supply of active dentists increased by less than 20 percent (from 83,509 to 100,000), while the services provided by dentists increased by more than 50 percent. The key was more effective use of dental hygienists and dental assistants.\(^5,6\)

According to data from the National Institutes of Health, the efficient use of one chair-side dental assistant can increase a dentist's productivity by 50 percent, use of two can increase productivity by 75 percent, and full utilization of the skills of other members of the dental health team can further increase the dentist's productivity.\(^4\)

What can we conclude from these data? First, a team approach will be increasingly important in the future. Second, greater emphasis will be placed on the training of dental hygienists and dental assistants because effective utilization of the dental health team will add enormously to the productivity, efficiency, and availability of dental health care. Third, financing systems in the future will be more and more likely to include payment for the services of auxiliaries. Finally, state dental practice acts and licensure laws will be changed to respond to these economic realities.
FINANCING DELIVERY OF HEALTH CARE

Turning to the question of financing and the great debate on national health insurance, we need to look at the system of health care delivery to determine whether or not the financing proposals will, in fact, provide access to needed services. There are at least five important problems facing us in the delivery and financing of health care:

1. Rapid and continuing increases in costs;
2. Growing shortages and maldistribution of manpower, by geographic area and field;
3. A fragmented delivery system, with inadequate provision for preventive services, continuity of care and comprehensiveness;
4. Failure to provide the poor with adequate access to quality care; and
5. Inadequate health insurance for most Americans.

The rapid and continuing increase in health care prices and costs stems from a variety of factors: a steady increase in the per capita demand for services; the removal of financial obstacles to high cost services, such as hospital care; the fragmented nature of the system, and the "cost plus" character of our fee-for-service system for professional and institutional services.

The magnitude of the cost increases is difficult to appreciate. Twenty-five years ago, when President Truman proposed national health insurance the total health expenditures for the country were $8 billion annually. In the past two years health care and related expenditures have increased by $10 billion to over $75 billion annually.

I stress the problem of rising costs because this fact, more than any other, is providing the momentum for greater government participation in the financing of health care. Yet, in dental care rapidly rising costs have not been the primary problem.

The impact of national health insurance, or universal health insurance coverage through public and private means, will depend on the nature, scope and financing of the program. President Nixon has proposed an approach that might eliminate even the present limited coverage for dental care. Proposals range from those of Senator Kennedy to the Mediceredit proposal of the AMA. The views of the dental profession were expressed in a statement last April by the President of the American Dental Association, Dr. John Deines. He said:
“The ADA is deeply disturbed by those legislative proposals for national health insurance which propose to be complete health programs and yet exclude dental care. Dental care is an integral part of total health care, and no national health proposal can be considered sound or responsible to public need if it does not include a realistic dental program, particularly one for children. Some of the health proposals—such as the Nixon Family Health Insurance Plan—not only ignore the need for dental care but, by elimination of Medicaid, apparently do away with such dental care as is now available to several million needy children. Passage of this kind of proposal would be intolerable. The Nixon proposal for national health standards is similarly deficient in that it does not include dental coverage. Though the funding principles of the Nixon standards proposal are basically consistent with Association policies, the Association could not support this plan unless it is sharply remodeled to include dental services. The Kennedy-Griffiths Bill, in contrast, includes a comprehensive dental program, and its designers are to be complimented on that score. But the overall proposal is seriously deficient in other respects. The Association is not impressed with the argument that eliminating existing health insurance programs is in the best public interest. Further, the Association is opposed to the use of government funds for personal health care for those who can afford to pay for it. Association officials are even more sharply disappointed by the proposal of another health organization, the AMA, which also totally excludes provision for dental care. Such exclusions ignore thoroughly documented public need and clearly demonstrated public desire. On behalf of the ADA, its 113,000 members and the public which we serve, we urge the Nixon administration and the Congress to recognize the essentiality of dental care to the total health of this nation.”

Goals of National Health Plans

As you consider the various proposals for national health insurance or for universal coverage with private insurance it is important to view them in relation to the problems we face and the goals we seek to accomplish. There are four goals that might be accomplished by national health insurance:

1. Increasing the availability and accessibility of quality health care services. This implies more than just money. It implies changes in the delivery of services and expansion of the system’s capacity to include the millions of Americans who do not now have adequate access to services.
2. The second goal is the encouragement of high quality care. Health care implies an emphasis on health education and prevention, not just diagnosis, treatment and rehabilitation.
3. A third goal should be to distribute health care costs in such a way that income is not a determining factor in access to needed services.
4. The fourth goal might be to provide more predictable costs and mechanisms to curtail rising costs more effectively than present publicly and privately financed programs.
None of the present proposals would, in my judgment, effectively achieve these goals. I firmly believe that major regional experiments in the financing and delivery of health care must be introduced prior to initiating any program of national health insurance. Many schemes have been debated in the abstract and then adopted prematurely. It is impossible to predict the practicalities and pitfalls of a program that would affect the health of every man, woman and child in this nation without trials. Yet it has been proposed that we embark on a multibillion dollar program of national health insurance without prior experiment. Medicare and Medicaid, of course, remained essentially within the confines of our traditional fee-for-service system and they cannot be considered adequate models for an undertaking of this magnitude which would include rich and poor, young and old alike. I would urge that about a dozen major regional experiments be instituted, including people of all ages and socioeconomic groups.

The regional prepaid experiments that should be undertaken must be designed locally to take advantage of the variety of resources within a region and to take cognizance of the special problems that may exist.

The Children's Dental Health Act of 1971, introduced by Senator Magnuson would provide the authority for just such needed experiments in a top priority area in terms of dental health care.

In closing, let me stress again the need for leadership by the dental profession. To accomplish our national health goals will not be an easy task. Many problems confront us. Too many simple solutions have been offered without an adequate assessment of their possible consequences. I will leave it to another day and to your vision and energy to determine how best the job should be done.

References
Doctor Lee was graduated from Stanford University School of Medicine in 1948 and received the Master of Science degree from the University of Minnesota in 1955. He joined the faculty of New York University School of Medicine in 1955-56 and the Palo Alto Medical Clinic and clinical faculty of Stanford University School of Medicine from 1956-63.

In 1963, Doctor Lee was appointed Director of Health Services, Office of Technical Cooperation and Research, in the Agency for International Development. In 1965 he became Assistant Secretary for Health and Scientific Affairs in the United States Department of Health, Education, and Welfare and on March 1, 1969, he became Chancellor of the University of California, San Francisco. He also serves as Professor of Social Medicine, Department of Medicine, UCSF.

In recent years, Doctor Lee's interests and writing have been focused on health care; population; health manpower and the impact of environmental, social, political and economic changes on the health professions, including needs for the future; and national health policy.

He is the author of more than 65 articles, including, "Has the World Grown Too Small?", "Medicine and the Four Revolutions," and "Equal Opportunity—A Reality for Minority Students in the Health Profession?" He has also contributed to half a dozen textbooks in medicine.

Ageing

In an attempt to determine whether differential ageing varies with occupation, a study was made of 116 Parisian school teachers, whose muscular strength and psychological capacities were compared with those of a random sample of the population. The results show little difference between the two groups as regards hand-grip strength or learning, but very marked differences in the tests of mental efficiency, memory, vocabulary, and general intelligence. This suggests that a profession calling for a constant effort of memory and mental efficiency slows down the ageing of these functions.

The ageing of physical functions is probably likewise affected by usage. There is some evidence, for example, that strenuous physical activity maintained throughout life has a beneficial effect on the ageing of the cardio-vascular and respiratory systems.

—WHO CHRONICLE, September, 1970
The Ethical Dilemma of the Dental Hygienist

NATHANIEL H. BARISH, Ph.D.
ANNA M. BARISH, R.D.H.

ONE WOULD assume, or at least hope, that when he required the services of a physician or dentist, he would receive the best treatment and care possible. This assumption would be logically based, in part at least, on the ethics of their professions. "Physicians should strive continually to improve medical knowledge and skill and should make available to their patients and colleagues the benefits of their professional attainments." Dentists have a similar requirement in that "The dentist's primary duty of serving the public is discharged by giving the highest type of service of which he is capable and avoiding any conduct which leads to a lowering of esteem of the profession of which he is a member."

Unfortunately the best, or even adequate, care is not always administered, and examples have been reported both in the lay press and the professional journals. "Paul Revere's" book, published in 1970, pointed out that "the carefully planned, meticulously constructed restorations we had been taught to do in school were not characteristic of the dental work I saw in the mouths of the public. As time passed and I compared more and more examples of dentistry as actually practiced with dentistry as taught, I began to understand that an uncomfortably high percentage of dental work was substandard, much of it disgracefully so."

Bellin reported on patients who received treatment from private dentists under the New York City Medicaid Program, and whose care was later assessed by staff dentists. He noted that about nine percent showed evidence of poor quality dental care, while an additional nine percent revealed discrepancies between the work performed and the services claimed to have been performed. He mentioned specifically "the work of a group of dentists who had billed the city for more than $500,000 in less than a year was of inexcusably poor quality and showed significant evidence of fraud."
There is little doubt that the quality of care should be monitored or evaluated, but by whom? The physician and the dentist are bound by different standards in this regard. "The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession."5

One would believe that the dentists should think and act along the same lines, and many of them do. As Nelsen has stated, "If the individual dentist is to survive as a professional, he must present himself to the patient dedicated to upholding that which he professes, which is placing the welfare of the patient unequivocally first and foremost. If he does not live up to this, if he tolerates abuse of this privilege by his colleagues, other agencies of society will step in, develop criteria, set specifications, establish legal codes, allocate and then supervise. . . . The dentist is also obliged to correct or eliminate deviate practitioners and to subject them to measures that will assure professional deportment in all ranks of dentistry."6

As far back as 1967, the National Advisory Commission on Health Manpower recommended that "professional societies, health insurance organizations, and government should extend the development and effective use of a variety of review procedures in maintaining high quality health and medical care. . . . Emphasis should be placed on assuring high quality of performance and on discovering and preventing unsatisfactory performance."7

These concerns, for exposing the poor work of individual practitioners, have apparently not affected the American Dental Association to any great extent, for in its Principles of Ethics revised to January 1, 1971, it is stated that "The dentist has the obligation of not referring disparagingly, orally or in writing, to the services of another dentist to a member of the public. A lack of knowledge of conditions under which the services were afforded may lead to unjust criticism and to a lessening of the public's confidence in the dental profession. If there is indisputable evidence of faulty treatment, the welfare of the patient demands that corrective treatment be instituted at once and in such a way as to avoid reflection on the previous dentist or on the dental profession. The dentist also has the obligation of cooperating with appropriate public officials on request by providing expert testimony."8
It appears that the private dental practitioner is expected to cover up poor quality work rather than expose it. His obligation to his colleagues evidently takes precedence over his duty to the patient. This professional loyalty has been endorsed by at least one attorney whose firm specializes in providing malpractice insurance for dentists. In answer to the question of whether a dentist has a moral obligation to help a patient seek redress for poor treatment by a previous one, he stated, "I'd say yes and no—but mostly no. In the first place, most patients who receive clearly bad dental care know it without being told. If they want to bring suit, they're apt to do so without a word from you. In the second place, you could find yourself called to court as a witness in a case in which you'd rather not testify—say, as a witness against a dentist you know and like."

Very few patients can judge the quality of their dental treatment. How many would know whether an under-cut had been made in the cavity preparation for a filling? How many could look at an occlusal amalgam filling and know whether the anatomy had been carved properly and whether there were good margins? Let us assume for the moment that a patient was qualified to make such judgments. He would then have to ask for mirrors and examine each phase of the treatment before allowing the dentist to proceed. This would immediately disrupt the patient-practitioner relationship, for the former would be demonstrating that he did not trust the latter.

The only other individual who could or should be concerned with the quality of care the patient receives would be the auxiliary—that is, the Registered Nurse or her counterpart, the Registered Dental Hygienist. "The nurse acts to safeguard the patient when his care and safety are affected by incompetent, unethical or illegal conduct of any person." "The dental hygienist is obligated to report unethical practice to the appropriate authority."

The question now naturally arises. Is the auxiliary, in this case the hygienist, qualified to recognize poor quality dental treatment? The answer might be no, if we are limited to the hygienist who completed her training twenty years ago; has not had any refresher courses or kept up with progress in the field since that time; and has received no training from her employer. The answer would be yes, if we think of those who are recent graduates, and especially if they have been or are involved in programs of expanded duties.

A well trained hygienist can certainly determine if fillings have been inserted properly, if there are overhanging margins, if crowns or inlays are cutting into the gingiva. She can examine the perio-
dontium and ascertain if there are pockets deep enough to require curettage, if there is mobility in the teeth, if dentures are seated improperly to the point of causing gingival damage. Naturally, she would not be qualified to judge or evaluate all types of treatment such as should a patient be given a fixed or a removable bridge.

The hygienist would now be put in a very difficult position. If she worked for a government clinic and became aware of a patient who had received poor care, she could in good conscience bring this to the attention of the authorities in that facility for whatever action they chose to take against the offending dentist. However, more than 80 per cent of dental care is given by private practitioners in solo practice and most hygienists work for them. If she were to complain to her employer about the quality of his work, she would probably find herself looking for another position in short order. If she were to report, what she considered to be poor treatment, to the local dental society, she would probably still end up in the ranks of the unemployed. In addition, she might be blacklisted by friends of her former employer. Other alternatives, such as advising the patient to see another practitioner, might help him to get better care but would not solve the problem—making her employer improve the quality of his work.

The dental hygienist would be left with only two practical choices: resign and seek employment elsewhere, or remain silent. In the former situation, she leaves the patient to continued low quality care; and in the latter, she violates or at best ignores the code of ethics of her profession. This then is the ethical dilemma of the dental hygienist.

It must be remembered that the Registered Dental Hygienist is not an independent practitioner or a professional in her own right as is the Registered Nurse. The latter, aside from working for a physician in private practice, is usually employed by a hospital or clinic, an educational system, or even by a patient. She is not responsible to any single physician in these latter instances. Her license is issued by a State Board of Nurse Examiners which consists of nurses. The hygienist, if she wishes to practice all of her professional functions, must be employed by a dentist. She could work in a school system, but there mainly as an educator. Her license is awarded and controlled by a State Board of Dental Examiners which generally has no hygienists as members. Thus, the livelihood of the Registered Dental Hygienist is literally controlled by the dentist.
One would readily agree that an individual should not be forced to make a choice between his conscience and his livelihood. There may come a time when most dental care will be given in a group practice setting in which peer review will be routine. It has been pointed out that "The dentist as differentiated from the physician usually performs in a self-monitored atmosphere, to a large extent free of external influence over the competence of his service. The physician, to a major degree, practices in a group environment subject to his colleagues. Tissue committees have for some years been effective monitors over possible operative abuse in hospitals. Committees of county medical societies pass upon the competence of their associates to practice before the Workmen's Compensation Board. The physician performs in surroundings in which a colleague figuratively looks over his shoulder. Not so the dentist. This is not to say that dentists are less able or less honest in their practices, but that they are liable to greater question and scrutiny due to the lack of self-regulation, however devised." For the time being, however, the most practical solution would be a revision of the Principles of Ethics of the American Dental Association along the lines of the medical code. In other words, the dentist's primary loyalty should be to the patient and not to the colleague. His willingness to expose the poor work of others will result in an enhancement of the image of dentistry and the competent and honest men who practice it.

BIBLIOGRAPHY

1. American Medical Association: Principles of Medical Ethics, Sec. 2.
5. American Dental Association, op. cit., Section 8.
Nathaniel H. Barish holds the Bachelor of Arts and Master of Arts degrees in Zoology from the University of California, and a Master of Arts in Education from Columbia University. The doctorate, with a subspecialty in Research Administration, was received at the American University.

Dr. Barish is with the National Center for Health Services Research and Development, Health Services and Mental Health Administration, DHEW. Prior to his present affiliation, he held research administrative positions with the Division of Hospital and Medical Facilities, and the National Institute of Dental Research. He has served as a consultant to the Veterans Administration, and is also a Professorial Lecturer at the American University.

Anna M. Barish received her training as a dental hygienist at Howard University College of Dentistry. She is presently a Clinical Instructor in that school's Department of Dental Hygiene.

15A-32 Parklawn Bldg.
5600 Fishers Lane
Rockville, Md. 20852

Communications in Science

A constant worry today is how to remedy, if possible, the problems of getting facts and ideas across from one scientist to another and even more importantly, I believe, from scientists in general to the non-scientist. There is too much superficiality about reporting science in the mass media and unfortunately there are ever present those in science who achieve success by the means of sensationalism in reporting new ideas. Neither science nor the community in general is best served in this manner.

Perhaps the recent estimates of the number of worthy scientific journals now published may be of some interest if only to confound those who do not read such journals as much as it does those who do try to keep in touch with the outpourings in their own discipline. Some 33,000 periodicals are now published annually, each containing about 100 articles a year—little wonder many scientists have given up any pretence to read widely.

—Bernard Lilienthal
PRIVATE DENTAL practitioners have generally limited their professional activity to service for private paying patients and dental society activities. However, changing demands for health services now require dental practitioners to fulfill a more active role in community oriented activities. Dental educators have sought, by broadening and liberalizing the practitioner’s educational background, to extend the dentist’s understanding of this need for participation in the general community. One method employed has been to encourage dental school applicants to emphasize liberal arts and social science undergraduate predental courses beyond the minimum social and natural sciences established for admission to schools of dentistry. However, no apparent effort has been made to determine how the variations in a dentist’s career modify the relation between predental course emphasis and the practitioner’s subsequent involvement in community oriented activities.

As part of a comprehensive study to consider the relation between predental course majors and the subsequent performance of community oriented activities by private dental practitioners, an effort was made to describe the modifying effect of practice intensity—as

* Support for this research project was provided by a National Institute of Health Fellowship, No. 2-503-DH-35,158, Division of Dental Health.

** Associate Professor of Community Dentistry, School of Dental Medicine, State University of New York at Stony Brook.
defined in terms of a dentist's age, his income, and practice busyness—on the performance of community oriented activities by "liberal arts"* and "extended science"** full-time private dental practitioners.

An earlier report on this study, which appeared in the Journal of the American College of Dentists, was concerned with the performance of community oriented activities by specialist and generalist practitioners.2

More,3 Jaco,4 Mann and Parkin,5 Quarantelli,6 as well as many other investigators report the dental student (and applicant) to be upward aspiring and primarily motivated to enter the dental profession by a desire for financial improvement—in addition to motives of human service, autonomy, and technical skill considerations.

While the dental student, and later the practitioner, may be viewed in terms of general pervasive tendencies and motivations, one may not assume that the practitioner is similarly affected by these values throughout all stages of his professional career. The practitioner's age, his financial status, and practice busyness (the time a patient must wait for a nonemergency appointment with a full-time private dental practitioner) may well be associated with the practitioner's motivational orientation and the extent of his involvement in community oriented activities.

Chart I, which is a composite adapted from the American Dental Association's 1965 and 1968 Survey of Dental Practice report on the income of nonsalaried dentists and practice busyness,7,8 indicates that income and practice busyness are greater in the middle years of practice and less during the earlier and later years of practice.

Based upon this income and busyness presentation, the dental practitioner's career cycle may be divided into the following three categories:

35 and under—the period of practice development
36-54—the period of maximal income and practice busyness
55 and over—the period of gradual retirement

---

* That individual who, as a predental student, majored in or emphasized the liberal arts and social sciences beyond the minimum requirements established for admission to schools of dentistry. (The 1970 House of Delegates of the American Dental Association eliminated specific requirements for admission to schools of dentistry.)

** That individual who, as a predental student, majored in or emphasized the traditional scientific fields of biology, chemistry, physics, mathematics, and related areas beyond the minimum requirements established for admission to schools of dentistry.
Chart 1. MEAN NET INCOME (IN THOUSANDS OF DOLLARS) OF NONSALARIED DENTISTS IN 1964 AND 1967 BY AGE; AND PERCENTAGE DISTRIBUTION OF NONSALARIED DENTISTS BY AVERAGE WAIT FOR AN APPOINTMENT IN 1964 AND 1967 BY AGE.
Assuming 1) a dentist’s motivation is to secure some degree of financial security*, and 2) he attains this security during the period of maximal income, it was hypothesized that a practitioner in the middle years of practice (ages 36 to 54) with maximal income and practice busyness, is willing to perform more community oriented activities than practitioners in other age periods, since his practice is providing him with a “satisfactory” income.

**THE STUDY**

A one-third systematic selection of private dental practitioners who were active or life members of a large midwestern dental society and who had been graduated from the two schools of dentistry—one a private controlled institution, and the other, a state institution—which provided 90 percent of all dental practitioners for the community, were selected for study. The study was based upon responses to a short mailed questionnaire—with telephone follow-up of nonrespondents—which asked about the practitioner’s undergraduate predental education, his participation in community oriented activities, and practice characteristics. Of the defined sample of 261 practitioners, 235 practitioners, or 90.1 percent, responded to the questionnaire or follow-up interview.

Based upon the information supplied by respondents about their predental course emphasis, 78 practitioners, or 33.2 percent, were recorded as “liberal arts” (“1.a.”) practitioners and 157, or 66.8 percent, were recorded as “extended science” (“e.s.”) practitioners.**

Community oriented activities were considered in terms of three general categories of practice (or clinical) oriented activities:

- dental care (in office)—e.g. Head Start activities
- dental care (out of office)—e.g. health department dental clinic activities
- hospital activities,

and three general categories of other-than-practice-oriented activities:

- civic—e.g. service clubs, political group activities
- educational—e.g. dental school teaching
- dental society activities.

* Based upon the reports in the literature.

** A detailed presentation of the specifics of the categorizing procedures, and the development of the scales of community activity (discussed in the next section) have been reported by this writer.
Practitioners were asked to record their performance (in hours—for the previous two months) of community oriented activities in terms of these six categories of activity. Since the performance of various activities may be closely related, a series of combinations of categories (or scales) were developed where respondents indicated the associated performance of two or more activities ($p \leq .05$). Two practice oriented and one other-than-practice-oriented scales were so developed.

Scale A—dental service (in office) + dental service (out of office) activities
Scale B—dental service (out of office) + hospital activities
Scale C—dental society + educational + civic activities

ANALYSIS AND DISCUSSION

(Age)—The Mann-Whitney U testing procedures were carried out to test the hypothesis of no systematic difference in the order of "l.a." and "e.s." practitioner hour rankings for practitioners in the three age groupings. The number and percent of practitioners in the higher halves of the ranks of activity were used to determine the direction of any differences that were noted. The results of these procedures for comparison of the younger and middle age periods, and the middle and older age periods are graphically presented in Chart II. The presentation is in terms of the percent of "l.a." and "e.s." practitioners in the higher half of their respective rankings of community activity as measured by the scales of community activity.

As reported in Chart II, the effect of a practitioner's age on the relation between undergraduate predental education and the performance of community activities were found to be:

For practice-oriented community activities (Scales A and B).

1. "liberal arts" practitioners perform practice oriented community activities at some "general level" which is sustained until a decrease in the later years of practice,
2. while the performance of practice oriented community activities by "extended science" practitioners in the younger and middle age categories varies as measured by the two scales, both scales record a decrease in activity during the later years of practice.

For other-than-practice-oriented community activities (Scale C),

1. "liberal arts" practitioners perform more other-than-practice-oriented community activities during the middle years of practice than during either the younger or older years of practice,
Chart II. THE PERCENT OF "L.A." AND "E.S." PRACTITIONERS IN THE HIGHER HALF OF THE RANKINGS OF COMMUNITY ACTIVITY BY THE UNDER 36 AND 36 TO 54 AGE PERIODS; AND THE 36 TO 54 AND 55 AND OVER AGE PERIODS, AS MEASURED BY THE SCALES OF COMMUNITY ACTIVITY.*

Scale A

Percent of Practitioners

<table>
<thead>
<tr>
<th></th>
<th>Scale A</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Practitioners</td>
<td></td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>under 36</td>
<td></td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>36-54</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>55+</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>40</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>20</td>
<td>10</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Scale B

Percent of Practitioners

<table>
<thead>
<tr>
<th></th>
<th>Scale B</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Practitioners</td>
<td></td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>under 36</td>
<td></td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>36-54</td>
<td>50</td>
<td>42.5</td>
<td>15.4</td>
</tr>
<tr>
<td>55+</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Scale C

Percent of Practitioners

<table>
<thead>
<tr>
<th></th>
<th>Scale C</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Practitioners</td>
<td></td>
<td>50.0</td>
<td>42.5</td>
</tr>
<tr>
<td>under 36</td>
<td></td>
<td>30</td>
<td>20</td>
</tr>
<tr>
<td>36-54</td>
<td>50</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>55+</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>30</td>
<td>20</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

The percentage figures have been entered for those differences that are significant (p ≤ .05).

---

*Note: the two different percent values for the 36 to 54 age period indicate two different comparisons.
2. "extended science" practitioners perform other-than-practice-oriented community activities at some "general level" which is sustained throughout a practitioner's life.

One possible explanation for a finding of no difference between the performance of community oriented activities by practitioners in the younger and middle age periods—following the assumption of a practitioner's motivation for financial security—may well be that practitioners who are between the ages of 36 and 54 (the period of maximum income and practice busyness) are willing to perform community oriented activities since their practices are providing them with a "satisfactory" income. Practitioners who are under 36 years of age (the period of practice development) are also performing community oriented activities (e.g., working in city health clinics and hospital clinics) which will supplement their incomes until such time as their private practices are sufficiently developed to provide them with a desired income. However, since no attempt was made in this study to secure data so that community oriented activities could be considered in terms of whether or not practitioners received payment for their services, this explanation could not be explored. Further study of this question, in terms of payment vs. nonpayment activities, may add to an understanding of the performance of community oriented activities.

The findings, comparing the two older age periods would seem to indicate that there is a general tendency for both "1.a." and "e.s." practitioners in the period of gradual retirement (ages 55 and over) to also retire from involvement in community oriented activities.

Income—Goodman and Kruskal's coefficient of ordinal association, gamma, was separately used for "1.a." and "e.s." practitioners to test the degree of association or predictability that existed between the performance of community oriented activities and a practitioner's reported net income. The results of these tests are presented in Table I.

The results of the gamma tests (Table I) indicated that, as measured by all three scales of community activity for both "1.a." and "e.s." practitioners, there was no relation between the performance of community oriented activities and a practitioner's income (\(p_{.1.a.} \geq .13, p_{.e.s.} \geq .22\)).

Practice busyness—Goodman and Kruskal's coefficient of ordinal association was used next to test the degree of association that existed between the performance of community oriented activities and practice busyness. The results of these tests are presented in Table II.
Table I. The coefficient of ordinal association and associated probability for the gamma values for "l.a." and "e.s." practitioners for the performance of community oriented activities and practitioner reported net income by the scales of community activity.

<table>
<thead>
<tr>
<th>Scale</th>
<th>&quot;Liberal arts&quot;</th>
<th>&quot;Extended science&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g value</td>
<td>prob.</td>
</tr>
<tr>
<td>A</td>
<td>.08</td>
<td>.37</td>
</tr>
<tr>
<td>B</td>
<td>.12</td>
<td>.33</td>
</tr>
<tr>
<td>C</td>
<td>.24</td>
<td>.13</td>
</tr>
</tbody>
</table>

Table II. The coefficient of ordinal association and associated probability for the gamma values for "l.a." and "e.s." practitioners for the performance of community oriented activities and practice busyness by the scales of community activity.

<table>
<thead>
<tr>
<th>Scale</th>
<th>&quot;Liberal arts&quot;</th>
<th>&quot;Extended science&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>g value</td>
<td>prob.</td>
</tr>
<tr>
<td>A</td>
<td>.07</td>
<td>.37</td>
</tr>
<tr>
<td>B</td>
<td>.09</td>
<td>.42</td>
</tr>
<tr>
<td>C</td>
<td>.06</td>
<td>.36</td>
</tr>
</tbody>
</table>

The results of the gamma tests (Table II) indicated that, as measured by all three scales of community activity for both "l.a." and "e.s." practitioners, there was no relation between the performance of community oriented activities and practice busyness (pl.a. ≥ .36, pe.s. ≥ .12).

Practitioner age, income and practice busyness had been identified, for purposes of this study, as components of a single concept—"practice intensity." Based upon the findings presented—for the practitioners studied—it must be assumed that practitioner age reflects different factors than the other two variables.

SUMMARY

A cross-sectional study of dentists who had been graduated from two schools of dentistry was carried out in a large midwestern community to determine the modifying effect of practice intensity—as defined in terms of a dentist's age, his income, and practice busyness—on the performance of community oriented activities by private practitioners with two different predental educational experiences.
The results of the analysis indicated that—for the practitioners studied—1) the performance of community oriented activities to some degree was related to the practitioner's age, and 2) there was no relation between the performance of community oriented activities and a practitioner's income or practice busyness. In general, the findings were similar for practitioners who as predental students had emphasized the social sciences and humanities, and the physical and natural sciences.

REFERENCES


He who has learned to disagree without being disagreeable has discovered the most valuable secret of a diplomat.

—BERT E. ESTABROOK
Community Dental Care for Developmentally Disabled Children
An Overview of the Problem*

JOSEPH L. HENRY, D.D.S., Ph.D.**
AND
JEANNE C. SINKFORD, D.D.S., Ph.D.***

THE HANDICAPPED child has been a national concern for many years. Several major White House Conferences have been held that gave special attention to handicapped children. The most recent was held in 1970. This conference assembled individuals concerned with all aspects of management of the handicapped child and its effects are still focal areas of the present administration.

Any child who is affected by handicapping conditions, regardless of whether these conditions are emotional, cultural, physical, environmental or intellectual, must be accorded the opportunity to achieve his maximum potential. Furthermore, since any child unable to achieve his full potential can be classified as handicapped, it seems wise to consider handicapped children as children first instead of simply considering them as handicapped. Viewed in this light, it becomes clear that in order to meet the needs of the handicapped, we must consider and effectively deal with the problems confronting the total child development and care system.

Magnificent gains have been accomplished in our knowledge of and ability to prevent or treat all types of handicapping conditions: including mental, social, educational, physical and developmental disabilities. Examples of these gains are abundant and only a few will be cited:

---

* Presented by Dr. Henry as the Keynote address for Community Dental Care for Developmentally Disabled Children. Howard University College of Dentistry, Washington, D. C. Sponsored by Department of Pedodontics and Child Development Center, Division of Mental Retardation, Social and Rehabilitation Service, Maternal and Child Health Administration and Howard University, May 3, 1972.

** Dean, Howard University College of Dentistry, Washington, D. C.

*** Associate Dean, Howard University College of Dentistry, Washington, D. C.
a. Prevention of erythoblastosis—a former killer of more than 5,000 infants a year due to Rh factor incompatibility,
b. Control of most epileptic seizures with newer advances in pharmacotherapeutics,
c. Prevention of mental retardation caused by malnutrition during pregnancy, by birth injuries, and by in-utero infections transmitted by the mother,
d. Use of special diets to prevent or reduce retardation caused by inborn metabolism errors such as Phenylketonuria,
e. Development of an interdisciplinary philosophy and treatment effort related to management of the total child, especially affecting attitudes of the general public toward the handicapped child and the individual's own attitude of "self".

Rehabilitative procedures have advanced dramatically. A child without an arm, a leg, teeth, jaws, hearing, sight or other disabilities is now able to be helped to live a normal or nearly normal life. These rehabilitative potentials will be further enhanced as research refines the current experiments in organ transplants.

However, in spite of the great progress, the specific causes of most of the handicapping conditions of children are still unknown and effective treatment of some of these conditions is not possible at present. This is not true for many of the dentally related handicapping conditions such as clefts of the lips, palate, cheek or tongue; anodontia, agnathia, severe malocclusions, etc. Therefore, a great tragedy, in our judgment, has been the failure to deliver the dentally related treatment measures to handicapped children on a broad scale.

We must not use as an excuse the fact that we have yet to develop a viable system for effectively and efficiently delivering adequate social and health services to American children, both normal and handicapped. It is well known that current health services for children are pitifully inadequate in accessibility, in availability, and in quality of care. All too often the parents and child must face a succession of practitioners and/or clinics even before an accurate diagnosis is made and proper treatment begun.

The developmentally disabled child is at an even greater disadvantage in our "health care system" because he needs so many types of services. Accurate data concerning the effect of our fragmented "system" of health care as related to handicapped children of minorities are difficult to obtain. Nevertheless, first hand experience with all groups of handicapped children had led us to the firm conviction that the problems encountered by the handicapped minority children of poor parents are at least triple the problems faced by handicapped children of the population at large.
The need for more dental care for developmentally disabled children has reached critical proportions. This fact remains true even though the focus on health, and health care as a right instead of a privilege is making an impact which is observable in the decreasing percentages of developmentally disabled children. However, percentages are frequently misleading. A lower percentage of occurrence of disease in a larger population can actually reflect an increase in the number of individuals in need of treatment. This appears to be the case with the developmentally disabled children (i.e.—3 percent of 210 million people is more than 5 percent of 100 million people). In addition, the miracles and particularly the near-miracles of modern medicine have, without restoring to normal, primarily sustained life for many children who previously died at birth or in the first year of life.

There is no need for children with severe dentally related handicaps not to receive the care which would leave them capable of leading a normal or nearly normal life. This is especially true now that collaborative treatment efforts are being made to bring specialists together to plan and implement the total rehabilitative program—including functional, esthetic and social needs.

There is even less need for handicapped children generally to receive only emergency treatment and extractions and sometimes not even that!

Who is to blame? We all must share the blame for the present status—the profession at large, the dental schools, and society for inadequate legislation, poorly conceived priorities, and inadequate implementation of what could have been done or could be done now. It is understandable that we become irritated and even frustrated that this is the current state of affairs, however, we must not become exasperated and we must not “deal” with the problem by ignoring or refusing to admit that it exists.

Since all of us are to blame for the status quo, we all must strive to rectify it. The College of Dentistry in revamping its curriculum to give proper focus at the undergraduate and postgraduate levels to the recognition and treatment of the problems of the developmentally disabled children.

This conference in concert with the Child Development Center of the Department of Pediatrics of Howard University College of Medicine is a part of the Dental Postgraduate Continuing Education effort to provide immediate improvement in delivery of dental health care to developmentally disabled children.
The success of this conference will not be measured in terms of what we do here today and in the next two days but in what we do after we leave here. We will have been exposed to interdisciplinary input from various subspecialty areas to give us a broader concept of the problem. We must be prepared to cope with the attitudes and inertia that exist which could serve as deterrents to progress in the treatment of handicapped children in the future. We must use our local societies, counsels, and community groups, to see that the problems are dealt with and that comprehensive care is available to minority children, especially those in the ghetto and in rural and other shortage areas of this nation. Further, we must focus on patient education, including parent education, and the increased consumer demand for services as a means of influencing legislative developments related to child health care priorities. Finally, we must all help to develop immediate and long range goals related to implementation of comprehensive health care for the handicapped child when and where needed and at an assured level of quality of care. The future of the health of our handicapped children is in your hands. Let this conference be a catalyst for eradication of neglect of our developmentally disabled children.

Real vs. False Education

To be truly educated means to have one’s insights deepened—not to have one’s information increased. It means to have a clearer, greater understanding of and sympathy for the human race and its problems. There is nothing sadder than a person filled with “book-learning,” but lacking in true awareness and human understanding.

—Norman Vincent Peale
Dear Doctor Kaplan:

Your editorial of January, 1972, was recently brought to my attention by one of our members. We were pleased to read it since ASPD shares your concern that the profession recognize prevention for what it is, and clearly this Society has always recognized its multidimensional nature.

It surprises us, Dr. Kaplan, that occasionally someone will express the view that ASPD is like that national organization you mentioned in your editorial which views preventive dentistry as nothing more than plaque control. As I am sure you would guess, this impression is most frequently voiced by someone who has not read our Journal or examined the Society’s annual Prevention Convention program. Not that the Society doesn’t recognize plaque control as an important and even essential component of preventive dentistry. The second issue of the Society’s Journal was devoted almost entirely to this subject. But as I am sure you know, other issues have been equally devoted to diet and nutrition, fluorides, the role of dental auxiliaries in prevention, and other topics which relate to this Society’s well rounded view of prevention. Program subjects at Prevention Convention ’72 include, among others, preventive dentistry and restorative dentistry, preventive dentistry and orthodontics, preventive dentistry and the removable prostheses and preventive prejudices.

Thank you for your time and attention, Dr. Kaplan. I hope that you will bring this letter to the attention of your readers.

Yours for better dental health,

JOHN S. LoSASSO
Executive Director
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.

Revision adopted November 9, 1970.