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American College of Dentists

Objects: The American College of Dentists "was established to promote the ideals of the dental profession; to advance the standards of efficiency of dentistry; to stimulate graduate study and effort by dentists; to confer Fellowship in recognition of meritorious achievement, especially in dental science, art, education and literature; and to improve public understanding and appreciation of oral health-service."—*Constitution, Article I.*

Announcements

Next Meeting, Board of Regents: Chicago, Sept. 11, 12, 1948.

Next Convocation: Chicago, Sept. 12, 1948.

Fellowships and awards in dental research. The American College of Dentists, at its annual meeting in 1937 [*J. Am. Col. Den.*, *4*, 100; Sept. and 256, Dec., 1937] inaugurated plans to promote research in dentistry. These plans include grants of funds (The William John Gies Fellowships) to applicants, in support of projected investigations; and also the formal recognition, through annual awards (The William John Gies Awards), of distinguished achievement in dental research. A standing committee of the International Association for Dental Research will actively cooperate with the College in the furtherance of these plans. Applications for grants in aid of projected researches, and requests for information, may be sent to the Chairman of the Committee on Dental Research of the American College of Dentists, Dr. Albert L. Midgley, 1108 Union Trust Bldg., Providence, R. I. [See "The Gies Dental Research Fellowships and Awards for Achievement in Research," *J. Am. Col. Den.*, 5, 115; 1938, Sept.]

American College of Dentists

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THE EFFECTIVENESS OF METHODS FOR THE CONTROL OF DENTAL CARIES

ALLEN O. GRUEBBEL, D.D.S.*

Wilmette, Illinois

One of the most interesting developments in dentistry at the present time is the progress that is being made in dental caries research. For many decades the dental profession has recognized the fact that dental caries is the chief cause of the loss of teeth. Until about twenty years ago this assumption was based solely on clinical observations. However, at least two investigators believed it was important to determine if the opinion generally expressed by the dental profession could be substantiated by statistical analysis.

In 1929 Brekhus reported that dental caries was chiefly responsible for the loss of teeth in persons under thirty years of age[1]. This conclusion was based on a study of approximately 14,000 permanent tooth extractions for 2,733 patients in the clinic at the College of Dentistry, University of Minnesota.

Allen, in 1944, made a similar study of the causes of extraction of 1,424 permanent teeth for 1,167 consecutive registrants at the University of Michigan dental school clinic[2]. Allen's study corroborated that of Brekhus, particularly in the finding that caries was the chief cause of the loss of teeth in patients under 30 years of age. Both investigators found that, for all ages, caries and periodontoclasia ranked first and second as causes for extractions, but for single ages the higher percentages were associated with caries in persons under thirty and with periodontoclasia in persons over forty. The results of these studies justify the emphasis that currently is being placed on caries research and on caries control programs for children.

Every dentist who treats children feels a sense of helplessness when he finds several carious lesions each time the same child reports to the dental office for an examination. Dentists have learned through experience that nearly all the procedures advocated in the past for preventing the occurrence of caries have been more or less ineffective.

About two decades ago it was common practice to prescribe dicalcium phosphate tablets, but dentists soon learned that children to whom these tablets were given continued to exhibit the same susceptibility to dental caries. Skepticism over the importance of nutrition in caries control has been heightened as a result of the reports of the *decrease* in dental caries rates in Dutch and Italian children during the last war when the nutritional standards were reduced drastically[3, 4].

* Executive Secretary, Council on Dental Health, American Dental Association.

Many dentists also have expressed disappointment with oral hygiene practices as they relate to caries control. They point out that several recent surveys indicate that caries incidence is increasing in this country in spite of the steady increase in the sale of toothbrushes. The assumption based on this evidence alone, that toothbrushing does not aid in controlling caries, is not necessarily a valid one. There are many factors which need to be considered before we can evaluate the effectiveness of toothbrushing. Unfortunately, the value of toothbrushing in caries control has not been established by adequately controlled studies. In the absence of acceptable evidence the members of the dental profession can only express personal opinions on the subject. Studies of the beneficial effects of oral hygiene practices should be undertaken because it is good scientific procedure to base treatment and hygiene practice on research findings which have proved their effectiveness. Plans are now being considered by two universities to conduct research projects to determine the value of dental prophylaxis and toothbrushing in the control of caries.

For a considerable number of years prior to 1940 the topical application of ammoniacal silver nitrate was advocated extensively for the prevention of dental caries. As in the case of some of the other procedures, dentists applied ammoniacal silver nitrate to the teeth of children primarily because several prominent dentists had expressed the opinion, but without substantiating statistical evidence, that such treatments would prevent and control caries. This theory was disproved in a study of 474 children by Klein and Knutson in which it was found that teeth treated with silver nitrate decayed at about the same rate as teeth that were not treated, and that the original carious condition extended to about the same degree in both treated and untreated teeth[5].

The restricted carbohydrate diet, developed by the Michigan group, was the first caries control procedure tested on a scientific basis before it was advocated to the dental profession and the public. Other competent investigators have repeated the work of Bunting and Jay and have shown that dental caries can be controlled by prescribing low carbohydrate diets for patients when saliva tests show high lactobacillus counts[6]. Although this caries control process is scientifically sound and, therefore, should be employed by dentists as extensively as circumstances permit, nevertheless its success depends in a large measure on unremitting effort by the dentist in securing the continuing cooperation of the patient in the elimination or reduction of his intake of carbohydrates, principally sugars. Many dentists find it difficult, if not impossible, to persuade patients to eliminate sweets from their diet since many of them seem to want sugar more than they want caries-free teeth. Thus, it is doubtful if this method will be used extensively enough to cause a significant reduction in dental caries in the general population.

The results of recent studies give strong support to the belief that several other caries-control methods may be much more easily applied and will reduce caries incidence to a sufficient degree to warrant their use. With the exception of one of these methods, routine use of the new procedures should be postponed until more information is available.

The public water supplies in more than ten communities are being fluorinated to test the effectiveness of preventing the occurrence of caries by the addition of sodium fluoride to communal waters. In all probability, dental research authorities agree with Jay in suggesting that "until such time as the progress of these studies can be evaluated, the universal treatment of water with fluoride, except under rigidly controlled experimental conditions, is not indicated."[7]

Burrill, Calandra, Tilden and Fosdick reported a significant reduction in caries incidence resulting from having dental students chew gum containing menadione[8]. Additional studies are needed to demonstrate the practicability of reducing caries incidence by having caries-susceptible individuals chew gum containing synthetic vitamin K.

Kesel and others obtained a marked reduction in oral lactobacilli counts by incorporating dibasic ammonium phosphate and urea in a mouthwash and a dentifrice[9]. Some day the use of dentifrices and mouthwashes that have been fortified with ammonia and urea compounds may be found to be a simple and effective method for controlling caries; but, again, their routine use cannot be justified until the available information is supported by confirmatory evidence and clinical demonstrations.

McClure and Hewitt have presented evidence that penicillin may be useful in preventing caries[10]. Their studies also are in the preliminary stages; therefore, the evidence thus far is inconclusive.

The most favorable possibility for immediate use of a caries-control technic exists in the topical application of a 2% solution of sodium fluoride to the teeth of children under fourteen years of age. A series of studies involving several thousand children in which from one to fourteen applications of the fluoride solution were made, confirmed the original finding that a reduction in caries of approximately forty per cent can be obtained in groups of children. It was also found that the use of four applications, spaced a week apart, following a prophylaxis is as effective as any method of control tried thus far[11–16].

After carefully considering these findings the Council on Dental Health of the American Dental Association expressed the opinion that "topical fluoride therapy should be used routinely in private dental offices and in school and community dental health programs."

The facts outlined above provide ample proof that progress is being made steadily in the field of caries research. It is also apparent that the dental profession can now apply caries-control technics with the assurance that the

rationale of these technics is based on acceptable scientific findings instead of on untested clinical observation, which too often was the case in the past.

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ERRATUM

In the Book Review Department of the December *Journal* there is announced the *American Textbook of Operative Dentistry*, edited by Arthur B. Gabel. Dr. Gabel was indicated as being Professor of Operative Dentistry, School of Dentistry, University of Pittsburgh. This should have read University of Pennsylvania.

A COMPARATIVE STUDY IN DENTAL EDUCATION

E. FRANK INSKIPP, B.S., D.D.S.
San Francisco

Dental education, leading to a college or university degree, is actually older in the United States than in any other country, in spite of this country's youth in almost all other matters.

A recent visit to England and a study of present-day education there, both academic and professional, revealed to me many differences, largely based upon age-old traditions, which die hard in the old country. Perhaps this circumstance is what makes a visit to the ancient colleges and universities so fascinating. Frankly, it is sometimes difficult to ascertain whether the English are really sacrificing progress to these traditions; particularly when we note that, when certain deficiencies do appear, they are due to other factors and are not the result of customs of educational procedure.

Every American dentist receives the degree of D.D.S., with the exception of those graduating from a few institutions granting the accepted equivalent, D.M.D. This degree is granted by established and chartered educational institutions and has been their sole prerogative since 1843. Prior to that date membership in the American Society of Dental Surgeons automatically carried with it the diploma of Doctor of Dental Surgery. This practice, which ceased with the advent of the dental college, was considered a natural concession on behalf of the Society in the wake of educational progress in the profession. Today, none but dental colleges and their respective universities grant dental degrees, and then only the doctorate. Each state, however, does not accept the possession of a degree as the sole qualification for practice. It also requires the candidate to pass an examination given by an appointed state board of examiners.

In England today the situation is much more complicated, but nevertheless interesting and historic, and still full of future possibilities.

Passing over the centuries when anyone who had a lusty arm and a yen for working out on his fellow man could practice the art of both medicine and dentistry, we find attempts to control these individuals in England beginning in the early part of the fourteenth century. The health of the community at that time rested in the hands of two separate Fraternities or Guilds: the Barbers' Company of London, first mentioned in 1308, and the Fellowship, or Guild, of Surgeons, 1369. The physicians formed still another group.

The Barbers' Company and the Surgeons' Guild formed an alliance in 1493. Later an act of Parliament required examinations to be approved by the Bishop of London or the Dean of St. Paul's. It is interesting to note here that

the church once had even a greater scope of activity, for many types of degrees could be granted by the Archbishop of Canterbury. It is the writer's belief that these privileges have never been officially withdrawn, but are no longer exercised.

The two companies separated in 1745. In 1800 the surgeons became the Royal College of Surgeons of London, a new charter in 1843 making it the Royal College of Surgeons of England. Members held the diploma of M.R.-C.S., a higher class being granted Fellowship. In 1884 an agreement between the two organizations (physicians and surgeons) established a Conjoint Examining Board granting the diplomas L.R.C.P. (Licentiate of the Royal College of Physicians) London, and M.R.C.S., England. The more extensive details regarding medicine and surgery are interesting reading.

Dentistry entered the picture in 1859 when the Council of the Royal College of Surgeons was given the power of holding examinations and granting certificates of fitness. The letters L.D.S. were in use about 1878. Today the Royal College of Surgeons still conducts the examination, and grants the diploma of L.D.S., R.C.S., Eng. (Licentiate in Dental Surgery, Royal College of Surgeons of England). The requirements for taking this examination have, of course, changed considerably since the original charter was granted.

Throughout these years, however, many men practiced dentistry under the apprentice system, and it was not until 1921 that more stringent requirements came into force. Then, because of the current needs in dentistry, men who had practiced a number of years were blanketed into the Dental Register as "Dentists, 1921". Thenceforth, all seeking the privilege of practice had to have a Registrable Dental Qualification. Today, there are two of these, the L.D.S., R.C.S., Eng. and the B.D.S. (Bachelor of Dental Surgery).

The latter is definitely a university degree, as compared with the above described diploma. A number of the London hospitals are integral parts of the University of London, and students attending the dental schools may study courses there leading to the B.D.S. University of London, or to the examination by the Royal College of Surgeons. Nearly half of the registered dentists in Britain have the diploma.

While the two courses are given at the same institution the requirements differ. For the L.D.S. course, entrance requirements include a preliminary examination in general education, a premedical examination in Science (as Physics, Chemistry, etc.), and a certificate of training as a dental mechanic with a practicing dentist.

A full five-year course follows, paralleling to some extent the four years in our curriculum, although a close examination shows a greater emphasis on subjects of a medical nature and less on those of a strictly dental nature. Such a course content makes it possible for the student to take the medical and dental courses jointly. To do this, the candidate for the two degrees

takes time out for six months from the strictly dental course, completes additional dissections and revision work for his medical examination, then resumes the dental course. After receiving his dental diploma he may begin a clinical period to complete a total of seven years, then receiving the L.R.C.P., M.R.C.S. This combined plan, however, has been temporarily suspended by the Ministry of Labor.

For the university degree of B.D.S., the applicant must pass the matriculation (university entrance) examination, which is followed by a five-year course of study. This course, while also covering the dental subjects, requires the student to spend more time on those subjects of a general medical nature, and includes much experience in general hospital routine.

From the standpoint of actual practice in Great Britain there appears to be little advantage of one course over the other; both are registrable and requirements for appointments mention both as alternatives in dentistry. However, in advanced educational work, the possession of the university degree is a requirement for other degrees. This is noted in connection with one of the scholarships which grants a year's tuition at another university (U. S. A.) leading to an advanced degree for one possessing the B.D.S. and a year's tuition *without a degree* to one holding the L.D.S. diploma.

A visit to two of London's Dental Schools finds them well equipped and with enthusiastic faculties. Compared with institutions in the United States they may appear on the surface to be lacking many of our facilities, but that circumstance is due largely to the general condition which prevails everywhere. England concentrated on putting everything into a war effort for more than seven years, and everything else suffered, including the health facilities of the nation. Hospital authorities have hopes for future building but in the meantime are doing their best with what they have. Probably one of the most discouraging features of the practice of dentistry is that the type of work done by the average practitioner in our country does not seem possible in Great Britain. One reason is that few patients know the possibilities of dentistry; another is that standards have already been set by insurance systems. With a people who are paying into a system, few are willing to pay for a service greater than that which the system provides, particularly if all of one's associates are also limited in their desires and expectations. The dental profession in England is conscious of these handicaps and is sincerely doing its best to correct them and to advance the profession. The medical aspects of the dental course are emphasized even more than in the dental colleges of the United States, but the restorative dental side offers a somewhat different picture. It is difficult for educators to stress effectively a type of work that they themselves feel will be practiced to a limited degree on a very few selected patients.

Degrees in dentistry may be earned at a number of British universities,

notably London, Belfast (Queen's), Manchester, St. Andrews, etc. These institutions also have courses leading to the diploma of the Royal College of Surgeons. Educators will note that the two oldest universities of the English-speaking world, Oxford (1150 A.D.) and Cambridge (1190 A.D.), do not yet grant dental degrees. Here educational history is ancient, absorbing and fascinatingly evident in every building. Medical degrees obtained from one of these—Cambridge, for example—are earned by first taking a Tripos (three major parts of a course leading to the bachelor's degree) at the university, "keeping" (being in residence) at one of its colleges. The subjects are usually Anatomy, Physiology and Pharmacology. The remainder of the medical course is taken at a hospital—frequently in London. At its completion the student returns to receive the combined university degrees, listed as M.B., B.Chir. (Cantab.), meaning Bachelor of Medicine, Bachelor of Surgery, Cambridge. (The M.D. may be earned later.) This diploma, like the conjoint diploma of L.R.C.P., M.R.C.S., is registrable for medicine.

Whether Oxford and Cambridge will eventually follow a similar pattern for dentistry is not known; or, at least, if any plans are contemplated, they have not yet been made public. The standing of these two great institutions is such that the status of dentistry in Great Britain would receive a tremendous stimulus if this should happen.

THE UTMOST FOR THE HIGHEST*

REV. DR. H. J. CODY

President Emeritus and Chancellor of the University of Toronto

I am fully conscious of the temerity which may be ascribed to a non-expert who addresses a body of eminent experts, but we are all deeply interested in maintaining high standards of scientific and technical knowledge and in raising them to still higher levels. You are concerned with Dental Education (the teaching of a subject and of a student), Dental Literature, Dental Research and Public Health. The standard we try to set is the highest and the effort we try to put forth is the greatest. A famous English painter, George F. Watts, chose as his motto "The utmost for the highest." This may well express the aim of a profession. It is an ideal for the individual and for the group.

The *place* of your meeting should in itself be a stimulus. What *historical* associations cling to Boston! The "Tea-party" of 1773 and the "embattled farmers" of the Revolutionary War occur at once to our memories.

What *literary and intellectual* light has shone forth from this district! During much of the nineteenth century it was the literary capital of the United States, as the names of Emerson, Holmes, Hawthorne, Thoreau, Longfellow, Lowell, and Whittier bear witness. Here are situated great seats of *learning and research*, as Harvard, Boston University and the far-famed Institute of Technology. What great preachers have linked their names with Boston! Such were Channing and Phillips Brooks. Great *moral movements* found here a home. Who can forget the burning appeals of the Abolitionists? What advances in pure and in practical *science* have been made in these regions! Wells and Morton by anesthesia, Alexander Graham Bell by the telephone, and Minot and Murphy in fighting pernicious anemia, have added to the health and happiness of mankind.

You are members of a *profession*. What does this involve? In developing our civilization, we find few things finer than the *growth of the professional spirit*. The areas of enterprise steadily widen in which not personal gain but fine workmanship and public service become the main motives of action. This spirit is not confined to what were called "the learned professions", represented in the past by the traditional Faculties of Universities—Arts. Theology, Medicine and Law. Today, the term "profession" is widened; it is generally considered to include Engineers, Dentists and Nurses, at least. These men and women have a reasonably broad basis of liberal knowledge, together with a specialized training in science and a specialized application of general principles to practice in

* Presented at the Convocation of the College, Boston, August 3, 1947.

particular fields. This broadening of the application of the term "profession" is not a break with the past but an effort to bring the change into harmony with the fundamentals drawn from the past. Lord Tweedsmuir (John Buchan), a former Governor-General of Canada, in his autobiography wisely remarks on this kind of development: "I have small patience with the antiquarian habit which magnifies the past and belittles the present. It is a vicious thing to look backward unless the feet are set steadfastly on the forward road . . . An open and flexible mind which recognizes the need of transformation and faithfully sets itself to apprehend new conditions is a prerequisite of man's usefulness." This extension of the work *profession* is not a revolution but an evolution.

What, then, are the true marks of a *profession as describing a group?* Dr. Vannevar Bush says that a profession is "not a matter of labels or trappings, but has two inherent essential characteristics: the possession of special knowledge; and adherence to the professional philosophy." The professional group will have the following marks:—

1. The possession of a body of knowledge (science) and skill (art) so extensive and so complex that it cannot be acquired speedily or easily by a versatile amateur or a laborious apprentice. Specially trained *instructors* are needed to give a course of training by which this inherited and accumulated knowledge and skill may be thoroughly and patiently acquired. Such a course may demand several years of steady application.

2. Professional schools will be required, with adequate equipment, laboratories and library, if the proper educational courses are to be given. These can best be secured as faculties in a university. It is by reason of such excellent schools that American dentistry stands in the front rank of the world's dental profession.

3. *The standards for admission* to such schools will be adequate. The conditions of entrance should be based on broad preparatory education, general competency and good character.

4. High standards of personal conduct must be demanded in relation to one's colleagues in the profession, to one's clients and to the public at large. These will be based on courtesy, honor and ethics. The three principles which Sir William Osler advocated in the case of medical practitioners may well be applied to dentists: (a) Do the day's work in the Day. Don't carry the burden of yesterday and tomorrow. (b) Practice the Golden Rule of Jesus in relation to patients and people generally: "Whatsoever ye would that men should do unto you, even so do unto them." (c) Learn that equanimity which is neither unduly elated by success nor depressed by failure. Over an entrance to the University of Pennsylvania are carved these wise and challenging words: "In the dust of defeat as well as in the laurel of victory there is glory to be found, *if one has done his best.*"

5. The status of the group, its good standing with the public at large, will depend on the realization of worthy ideals by the members of the group. On each individual rests the responsibility for maintaining the honor of the profession. One delinquent can soil the escutcheon of the many.

6. The professional group will become *organized* to protect its common interests, its relation to society, and the development of research into the fundamental and special problems that confront it. This is really the aim of your great organization as a "College of Dentists," and in your aims you are linked with similar bodies throughout the world.

What, now, are the ideals of the individual member of the profession? These will constitute the *differentia* of the man in the profession, his underlying philosophy.

1. The fundamental motive will be *service* to others, rather than the consideration of personal gain. I quote Dr. Vannevar Bush again: "While a profession does not prevent one from accepting the material rewards of the world; yet the individual whose primary objective is material acquisition, no matter what degree he may append to his name or how prominent he may become in the public eye, is not entitled to admission to the select company of those who truly possess and act upon the professional philosophy." To make an honest and honorable living is a worthy motive, but the supreme motive is to contribute *service* to mankind. Some of the great Service Clubs recognize that this principle should apply to business. "He profits most who serves best."

2. The standard of workmanship or of service is *excellence, one's best.* This implies *joy* in one's work. Work is worth doing well. Every true professional man feels deep satisfaction in work well done. Indeed the only happy man is the man who works, and the only good man is he who does his work well.

3. The *members* of the profession maintain and enforce its discipline. Its standards, its ideals, its traditions are guarded by its own members. By them, also, its advance in public esteem will be furthered. In brief, the profession is self-disciplined.

4. There is a conscious recognition of a duty to society, both by giving a discovery freely to all humanity (as did the medical discoverers, Banting and Best, with insulin and Minot and Murphy with liver extract for pernicious anemia), and by rendering much public service gratuitously (in addition to direct professional services to patients), as a return for the special advantages of status and education.

5. Like every professional man, the dentist is called to be a *leading citizen.* With his privileges and powers go his responsibilities and duties. In ancient Greece the man who shirked his public service as a citizen was called *idiotes*, one who looked solely to his own personal affairs. It was a term of contempt or disapprobation. It has in meaning degenerated into the word *idiot.* Over

against it might be placed a phrase used by Bishop Hacket of Lichfield, in the days of the English Civil War—"public souls." The whole prayer he used is relevant today: "Lord, lift us out of private-mindedness and give us public souls to work for Thy Kingdom, by daily creating that atmosphere of happy temper and generous heart which alone can bring the Great Peace." The professional man has singular opportunities of giving good leadership to his community. As an educated man, he has gained a spirit of moderation, a love of truth and a belief in progress. The permanence of democracy depends on the intelligence, the interest and the integrity of the citizens, and of these requisites the professional man should be the embodiment and example

I turn now to the *preparation* of the professional dentist. Dental education has passed through several stages of development. A period of experiment has generally come first; then followed the bacteriological stage, which in turn has led into the stage of prevention. Today, dental preparation is related to general science and humanistic culture. A broad foundation of general education not only will be the best basis on which may be built the scientific and technical training but also will widen the outlook and enrich the personality. I believe that the best school of Dentistry will be a Faculty in a University. This will provide a broad background of general learning, as well as a link through the University and the Hospital with the full range of science, and particularly with the teaching of Health. Health, not disease, is the norm and is the natural starting point for the study of all aberrations from this norm. This University connection gives the environment which should make possible the equipment and inspiration of the finest professional workers. National movements are now seeking to give to all people the benefits of progressive medical and dental care. Preventive measures have special relevance to children. This new point has been aptly described as "the rapidly sharpening focus of social security on child health."

Behind all the knowledge and skill that professional training can give, lies the *personality* of the practitioner. While this does not compensate for ignorance and inefficiency, it is an invaluable element in a man's effectiveness. Phillips Brooks of Trinity Church, Boston, defined preaching as the transmission of truth through personality. In essence, the success of a professional man in the long run depends on his personality and his character. Personal integrity is the only dynamic that endures. A man's character and his capacity, what he is and what he can do, are the only possessions he can carry out of this life. They have been termed "the only coins that ring true on the counters of this life and the next." Let every professional man cultivate and hold fast and practice those virtues which constitute good and winsome character. Can you trust him? Is he loyal to family, to friends, to country, to God? Can he engage with others in seeking to realize desirable ends? Is he sympathetic,

kindly, helpful, hopeful? Does he think more of his duties than of his rights? Has he any magnanimity in his make-up? Is work to him a blessing or a curse? Has he the fear of God before his eyes?

Finally, I wish to say a word about the *patriotism* of the professional man. All sound internationalism must be built on a sane nationalism. True patriotism has two characteristics which distinguish it from false. (a) While it loves its own country, it does not necessarily hate all other countries, merely because they are "other." It believes, with Mazzini, that God has written one line of His history on every nation. Each has some glory or special offering to bring through the gate to the City or Commonwealth of God. Because a man loves his own mother, he does not hate all other women; rather, he sees in them all, because of his love for his mother, the potentialities of motherhood. Therefore, he respects them. (b) True patriotism regards the direct foes of its country to be its own sins, weaknesses and follies. Against these the patriot wages perpetual warfare. At a time when the means of living are increased, the aims of living are in danger of deteriorating.

Every man, and especially every professional man, can make a contribution to his country's greatness by standing for the highest things. Cultivate a richer intellectual life; cultivate the neglected art of thinking; cultivate faithfulness to the moral elements of every situation; above all, cultivate the religious sense. No state can long endure unless it has spiritual ideals, spiritual guidance and spiritual control. God has given us on this continent a marvelous heritage; may He also give us the will, the wisdom and the power to adorn it!

JOURNAL
American College of Dentists

EDITORIALLY EXPRESSED

At no other time in its history has the dental profession faced so many and such perplexing problems as those that now confront it. The best thoughts and energies of its leaders are being sharply challenged by many major problems of far-reaching possibilities. These problems cover a broad range of unsettled situations which require careful study and wise decisions by dental leaders in order to adjust them permanently to the advantage of both the profession and the public.

Evidence of current pressures in the field of dentistry is found in the facts that more aspirants are attempting to gain admission to the profession, more money is being sought and provided for dental education, more dentists are taking advantage of advanced educational opportunities, more serious thought is being directed towards expanding the scope of dental research, more concern is being manifested toward applying the findings of research to the benefit of society, more people are becoming interested in the good which dentistry can contribute to the public, and more people are concerned about procedures that will ensure a greater and more equalized distribution of oral health care to the American people. The demands of the public for oral health care and an adequate supply of dental manpower to meet these demands lie at the bottom of these several specific problems.

Any consideration of the supply of dental manpower with a view to increas-

ing the facilities necessary to provide oral health care for a greater number of people should be based on realities. It should recognize clearly the difference between the potential needs of society for total oral health care for all the people and the effective demand being made currently on the profession by those who actually seek dental services. Oral health care for all the people is an ideal and cannot be immediately attained; but the current effective demand for health care is a reality and adequate personnel to satisfy it can be provided. The effective demand for oral health care is not constant. It should increase in quantity with increases in the population; it will increase in volume with a growing public appreciation of the value of health care; it may rise and fall with economic changes. Greater permanent demand for dental services which results from any causes calls for a corresponding greater supply of dentists. Therefore, the task set for dental education is to produce a quantity of dental manpower that will be commensurate with the effective demand for oral health care. At the same time, the profession should attempt to extend the scope of effective demand to include more and more of the total population.

The supply of dental manpower at any time in the past has been approximately equal to the effective demand of the public for dental care. There have been exceptional instances such as the depression of fifteen years ago when the supply of dental manpower was much greater than the demand; or the situation during World War II when the demand for dental services far exceeded the supply. These conditions were created by a reduction in the purchasing power of the public in 1932, and a reduction of manpower plus the increased purchasing power of the public during World War II. The tendency of the supply of dentists to keep pace with the effective demand for oral health care is demonstrated by the fact that the supply of dentists and the supply of dental manpower have during this century increased in proportion, both to the increase in the population and to the advances in appreciation of oral health care by the public.

During the forty years from 1900 to 1940 the population of the United States increased 73%; during the same period the dental population increased 138%. Prosthetic technicians as aids to the dentist, few in number in 1900, reached by 1945 the total of 33,000 persons; dental hygienists, unknown in 1900, claimed a total of 7505 in 1940. Both the technicians and the hygienists served to augment greatly the total productivity of the dentist. These larger numbers developed in response to an increased effective demand for dental services, a demand which resulted from the cultural advancement of the American people, from the success of health education programs which were so extensively sponsored by the dental profession, and from a greater general health consciousness of the public brought about by an improved understanding of health values. The effective demand for oral health care continues in the ascendancy. The profession is conscious of these advances and is preparing to meet its larger

responsibilities in providing at all times sufficient dental manpower to maintain a balance between the supply of personnel and the demand for dental services.

Spokesmen for both the public and the profession have expressed concern over the recent and current short supply of dentists. This concern is based on the comparatively large reduction in the number of dental graduates from dental schools in recent years. During the decade of 1931–1940 there was an average of 1810 graduates per year, as against 2400 for the decade 1921–1930, or a falling off of 25%. The sharp decline in student enrollments for this period was caused by two factors: one, the rapid advance in quantitative standards established by dental education for admission to dental schools; the other, a severe economic depression in the early thirties which affected the plans of many persons who, under normal conditions, would have found their way into dental schools. The actions taken to advance educational standards for admission to dental schools were very necessary in a country where the educational level of the people was rapidly rising and where scientific progress was going forward by leaps and bounds; the economic depression was, in the nature of things, unavoidable. Conditions such as these which may alter the effective demand for dental services must be expected and considered in connection with plans for increasing the supply of dentists.

It is estimated that during the decade of 1941–1950 there will be an average of 1825 graduates per year entering the profession. This number is only a very slight increase over the number of graduates for each year during the preceding decade. Enrollments in 1941 and 1942 still exhibited the depressing effects of advanced admission standards; enrollments in 1943 and 1944 were favorably influenced by military considerations and showed appreciable advances because of the arrangements for educating dental students under the A.S.T.P. and V-12 programs; enrollments in the second five years of the 1941–50 decade declined materially because of the termination of the A.S.T.P. and V-12 programs and the unsympathetic attitude of Selective Service which refused just before and after V.J. Day to defer dental students. These several factors have operated to reduce appreciably the total number of dentists admitted to the profession during the decade 1941–50. Just how injurious the effects of these numerical losses may ultimately be, remains to be seen.

For the school years beginning 1946 and 1947, there were full enrollments in the freshman classes throughout the country. In 1946, there were 2974 freshman students enrolled, and in 1947 there were 2942. If a 10% allowance is made for loss by failure and withdrawal, 2677 dentists should graduate in 1950, and 2647 in 1951. A maximum number of students will enroll in the dental schools in 1948, with a resultant maximum senior class for 1952. There seems to be every indication that this increased production of dental personnel will continue through the decade 1951–1960. If so, the average number of dentists

graduated annually in this decade will be 55% greater than the average number graduated annually during the twenty years from 1931 to 1950.

For the first time in the history of dental education, all dental schools in the United States now have more applicants for admission than they can accommodate. The demand for places in dental schools is so great that admissions officers *can select*, on a basis of quality scholarship, a superior type of student. In 1947, 17,621 applications were filed in the dental schools by 10,313 applicants, from whom 2942 were selected. Of the number not admitted, probably half would qualify for admission to dental schools. While the G.I. Bill of Rights has encouraged many splendid young men to enter dental schools, it has at the same time stimulated many unqualified aspirants to seek admission to the professions. The members of the dental profession must not be deceived by mere numbers of applicants; they must understand that this total number of applicants contains one in three not prepared to begin the study of dentistry.

For the first time in the history of dental education all dental schools can select from multiple numbers those students whom they regard as superior in the several characteristics thought to be essential to the successful dentist. It is probable that this greatly increased demand for admission to dental schools will exist for many years. In view of the opportunity provided admissions officers for the careful selection of future dentists, it is imperative that dental schools choose from among the great numbers of applicants those students who offer greatest promise of high success in the profession. It would be tragic for dental education to fail to utilize this vast array of promising material in such a manner as to ensure the greatest good to the profession and to the public.

REPORT OF THE COMMITTEE ON CERTIFICATION OF SPECIALISTS

EARL W. SWINEHART, Chairman*

Baltimore

At the time the Committee began its work, only minor consideration was being given to control of specialization. Some years before, the American Society of Orthodontists had set up a board for certifying those of its members who chose to apply for examination. Through the years, the number of these grew slowly, but consisted mainly of the experienced and qualified men who cared to be in an honored group. As far as the public, in whose interest certification is paramount, was concerned, this plan offered no protection whatever against the unqualified or dishonest who chose for various reasons to proclaim themselves as specialists. Prior to the war, the dental associations in four states had sponsored amendments to their dental laws whereby special certification was required of all proclaiming themselves as specialists in those states. However, at the time there was little interest in the subject among the profession at large, and the American Dental Association had not taken cognizance of the matter.

The province of Committees of the College such as the one on Certification of Dental Specialists is two-fold: first, to make a thorough, comprehensive and impartial study of fundamental problems of dentistry as they involve both the profession and the public; second, to acquaint leaders of organized dentistry with the truth, in the effort to inspire them to initiate concrete measures whereby the knowledge gained will be translated into basic benefits for the profession and the public. Causes that are just and right tend to grow and draw to their support willing and capable volunteers. Such has been the case in the effort to bring about control of specialized dental practice.

As is well known, the American Dental Association at its meeting in Miami took formal action designed to control special dental practice. The House of Delegates empowered the Council on Education to set up standards by which it can accredit Examining Boards of Specialty Societies to certify eligible members. The Board of Oral Surgery has already been so accredited and has begun giving examinations. It is understood that other boards will soon apply for accreditation. This is a long and positive step forward toward protection of the public against indiscriminate special practice.

The action by the American Dental Association has accomplished this main objective of the Committee: control of dental specialization as a project of

* The other members of the committee (1946–7) are Max E. Ernst, Henry C. Fixott, William E. Flesher, Daniel F. Lynch and John O. McCall.

organized dentistry. At this early stage, there exists much difference of opinion as to what are the best methods to be employed. However, acting upon these problems is the work of the Association and its component state societies. It remains the duty of the College to contribute toward early adoption of the right methods by continuing to make available to state and national leaders thoroughgoing factual studies of the subject.

The Chairman takes this opportunity to commend the fine work done by the members of the Committee. He wishes, also, to thank them personally for their unfailing courtesy and willingness manifested throughout the term of the Committee.

REPORT OF THE COMMITTEE ON DENTAL STUDENT RECRUITMENT

STEPHEN P. MALLETT, Chairman*

Last October, your chairman recommended a five-year program on dental recruitment. Since that time I have been convinced that such a project is not a five- or a ten-year program, but a timeless one, one of continuing importance. There is no cut and dried plan for such a project. Various patterns, molds and methods will be tried, changed and improved. To me, one thing *is* certain, and that is that my committee can best serve the interests of the College by making every effort to keep constantly alive interest in the recruitment of dental personnel.

I have talked with President Conant of Harvard, deans of dental schools, professors in colleges, and principals of high schools. The consensus of opinion is that a better type of student for dentistry should be sought and his interest stimulated at the proper time to consider the field of dentistry for his life's work. It seems that the students in high school or private school are more likely to become interested in dentistry in the senior year than at any other time of their educational training. Groups of high school principals, school superintendents, associations of vocational counsellors, parent-teachers groups and the like should be well informed so that their training would result in a greater interest with the students. The value of this would depend upon the careful working out of all the intricate details, and the members of the committee must understand completely the problems involved. They must appreciate, too, that young people are much more impressed by performance than by glossy talk. Plans should be instituted calling for dentists in small communities to talk to

* Other members of the Committee (1946–7) are O. W. Brandhorst, L. E. Blauch, J. R. Cameron, W. C. Fleming, B. S. Partridge, C. R. Wells.

young men about dentistry and thus attack the problem at the grass roots level. Here is an opportunity for the Public Welfare and the Public Health worker to be alert in observing the proper type of student and to make an attractive presentation of dentistry as his life's work.

Now the question arises, "Can our dental schools accommodate all those who apply for enrollment?" The answer is "No." If, for example, in one school a limit of 80 students were to be selected from an application list of 1200, it would seem that our problem is not to interest *more* young men, but a *better* type of young man to study dentistry. Every year we read in the local press about the honor bestowed upon some local lad by his appointment to Annapolis or West Point. We know the number of young men who aspire to enter military or naval academies and we think lightly of the disproportion between those who apply and those who are accepted. We feel that this disproportion expresses the excellence of those accepted. Why don't we, then, accept the disproportion between those who apply for dental schools and those who are accepted? Dental schools, at present, cannot accommodate the total number requesting admission. Of the number rejected, a certain percentage would be acceptable if accommodations were available.

I believe that administrators of dental schools are aware of their inadequate facilities to meet the demands of young men currently interested in the field of dentistry or to anticipate a greater need for dental services in the future as a requirement for public health. These administrators recognize that the conventional source of income available in the past for expansion is fast disappearing. Our present national debt, with its accompanying problems in internal finance, will require, for an indefinite period, a continued tax load which will not free wealth for beneficent purposes. Concerted drives made for funds in the past several months by many types of agencies and institutions have not proved to be as successful as had been hoped. This circumstance, too, is understandable, for, as our national government finds it difficult to accommodate an increased debt, so do its citizens find it increasingly difficult to maintain customary standards in the face of the problems arising out of that public debt. This fact, together with the tendency toward socialized medicine and dentistry, would prohibit an appeal to the government for money, because with government assistance comes government control in *some* measure, whether this control is right or wrong. It is equally unlikely that our present Congress would listen to an appeal for an appropriation to increase, improve, or enlarge our professional schools, and no governmental body or agency moves fast anyway. If Federal aid were a solution to our problem it is best forgotten, although we should be aware of the possibility. The only other source from which to obtain money would be some national manufacturer of consumer goods, and I can think of two.

Another question of the present is this: When the present G. I. educational program endorsed by the Government has been terminated, will there be a greater or lesser number of young men interested in dental training? I predict that there will be an increasing need and demand for dentists each year for years to come.

My committee is an excellent one and is capable of great results. I express to them and to Dr. Hodgkin and Dr. Brandhorst my thanks for their help.

May I repeat in closing that the task of recruiting dental personnel for better dentistry of tomorrow is a timeless task, a continuing project—one that must be considered every day by every dentist in every human contact he makes, ever in search of another Morton, another Wells, another Black.

REPORT OF THE COMMITTEE ON EDUCATION

S. Ellsworth Davenport, Jr., Chairman*

New York City

I

In this section of its report your Committee wishes to stress some of the ideas and recommendations set forth in the 1946 Report and also to present certain fundamental thoughts which seem important to its members.

A. Dentistry is a component part of medical science, but not a department of medical practice.

B. Both dentistry and medicine as health-service professions should be permitted autonomy and freedom of action in their respective fields of endeavor. However, since each profession needs the other urgently, a warm and friendly relationship of cooperation and understanding should be developed between them, with each endeavoring to encourage and supplement the other in achieving the common goal of health service to mankind.

C. Dental education should be planned not only to prepare dental students to pass their respective State Boards and practice dentistry, but also to serve as an important vehicle in bringing about deserved recognition of dentists, as the cultural and scientific equals of their medical confreres.

D. Whenever possible, dental schools should be centers of research. As far as endowments and finances permit, dental research should be encouraged and greatly expanded. Scientific researches should be placed in charge of the very best personnel available and many dental teachers should have sufficient intellectual curiosity to cause them to undertake extracurricular activities for the

* The other members of the committee are Oscar J. Chase, Jr., William H. Crawford, Harry Lyons, T. M. Barlow.

extension of knowledge. This aliveness to research should create a stimulating intellectual climate for the undergraduate, which later would be reflected in the broader understanding of the average practicing dentist.

E. Where dental and medical students have had equivalent preliminary education and approximately the same entrance requirements, a reasonable integration of the faculties would seem desirable in order to permit identical training in the basic biologic sciences. Furthermore if physical conditions at a university are favorable, it would seem to be advisable for dental and medical students to live together and quiz together during the first year or two of their respective courses.

F. In the future most dental schools should provide for the continuing education of the practicing dentist by the establishment of appropriate graduate and postgraduate courses.

G. With dentistry on an improved cultural, intellectual and educational plane a larger number of the very highest type of young men and women should be attracted to it as their first choice of a profession, in place of adopting it because there is no room for them in the medical schools. In this connection, financial remuneration must be sufficient to permit qualified and successful dentists to maintain themselves and their families in a manner which will invite the respect of their neighbors in their respective communities. Because of the unquestioned lack of dental care in rural communities, it might be advisable for Departments of Health or Education to recognize this economic situation in a practical way by offering staff appointments with salaries to young dentists and by sending them to make their homes and build their practices in areas where the need for their services is great.

H. The active accomplishment of many of dentistry's hopes and dreams for the future will require time, money and cooperation. Therefore increased and sustained education of the public should be undertaken, and the aid of foundations and philanthropically minded individuals should be invited and encouraged.

II

In the second section of this report, your Committee would like to consider briefly one of the great weaknesses in present-day dental education: namely, the inadequate preparation of dental teachers for teaching in the dental schools.

In the 1946 Report the thought was expressed that teachers should be chosen from among men with the highest concepts and ideas. Never should the teaching of dentistry be placed in charge of those who wish merely to enhance their personal prestige or those who have not been successful in private practice. Clinical subjects should be taught by successful men who have had thorough, practical experience in clinical practice. It is probable that a mixture of full-

time and part-time teachers is desirable in any professional school, but the opinion is widespread and presumably a fact that the training of dental students often is not in the best hands.

Dr. Harlan H. Horner, Secretary of the Council on Dental Education, recently reported some interesting data in relation to dental teachers (Proceedings of the Twentieth Annual Meeting, American Association of Dental Schools, 1943). At the time of Dr. Horner's report, there were 1669 clinical teachers in 38 dental schools in the United States. Of these, only 384 were full-time teachers; 252 were half-time teachers; and 1033 were devoting less than half time to teaching.

These figures reveal the startling facts that in 1943 only 23 per cent of clinical teachers in dental education were making teaching their full-time vocation, that 77 per cent of all clinical teachers in dentistry were on a part-time basis, and that 60 per cent spent less than half time in teaching. Therefore, irrespective of the merits of the full-time and the part-time teachers in the clinical dental subjects, it is apparent that all too few clinical teachers are making teaching their major interest.

The reasons for this situation are, no doubt, many and varied. Limited opportunities for teacher training, inadequate dental school budgets and low salaries, insecure tenure, lack of adequate provision for retirement benefits, heavy teaching schedules, with little or no opportunity for advanced study and research, and many other factors are involved.

Annually a majority of the new appointees to dental school faculties are recruited from the immediate graduates of their respective dental schools. These recent graduates are assigned to tasks of instruction with little or no additional technical training in dentistry and with no training, usually, in teaching methods and techniques. Among other things this practice has led to marked faculty inbreeding; for, as reported by Horner in 1943, 1406 of the 1669 clinical teachers in dentistry had had no teaching experience outside the schools in which they were teaching at the time of the report. Of the 1449 clinical teachers holding dental degrees, Horner reported that 1146 had earned degrees in the dental schools in which they were teaching.

These facts are not cited in criticism of the many fine men now engaged in dental education. Their contributions have indeed been noteworthy and the sustained progress of dental education must be credited largely to them.

With improved facilities and increased support for more adequate preparation for the dental teacher, the field of dental education may well become more attractive to our finest young men and women, and it is likely that in greater numbers they will be keen to fit themselves for the role of dental teacher on a full-time or half-time basis, with dental education as their major professional interest.

It is this phase of the subject that your Committee wishes to call to the attention of the College. With this definite objective in mind your Committee recommends that the College authorize, undertake and financially support a study of:

(1) the current status of dental teachers, with special regard to their preparation for teaching;
(2) the need for more adequate preparation for dental teachers;
(3) the existing university facilities for providing graduate and post-graduate training in preparation for dental teaching;
(4) the need for grants-in-aid, fellowships, or scholarships to create and support additional facilities and opportunities for dental teachers;
(5) possible methods by which such grants-in-aid, fellowships or scholarships could be created and established.

REPORT OF THE COMMITTEE ON RELATIONS

HOLLY C. JARVIS, Chairman*

Cincinnati

Your Committee on Relations, the personnel of which is largely new this year, has spent considerable time in becoming acquainted with its responsibilities; trying to maintain some of the contacts which were established by its predecessors; re-establishing some of those lost during the weary war years and also making some new ones.

Dr. Otto W. Brandhorst, as chairman of the Relations Committee, in his report in 1939, defined the work of this Committee:

> The title implies that the activities of this Committee might be rather widely flung inasmuch as public relations could easily be interpreted as including practically all our activities. While this is true, the Committee actually has been trying to limit itself to those relations not covered by other committees.
>
> The objectives of the American College of Dentists might be easily summarized into
>
> (a) Elevation of the standards and efficiency of dentistry through the promotion of ideals, encouragement of further study and recognition of such service; and
>
> (b) Improvement of public understanding and appreciation of oral health service.
>
> This latter objective becomes the basis for the activities of the Public Relations Committee.

With this thought in mind, your Committee, in studying the over-all picture

* The other members of this Committee (1946–7) are C. Willard Camalier, Washington, P. L. Chevalier, Richmond, P. H. Hoeffel, Chicago, and Charles A. Sweet, San Francisco.

of relations, has been in contact with the following local, state and national organizations:

Parent-Teachers Associations
Boy Scouts
Girl Scouts
Camp Fire Girls
4-H Clubs
American Red Cross
United States Public Health
Young Men's Christian Association
Young Women's Christian Association
American Medical Association
American Dental Association
Recreation Commissions
Relation Committees of local and state dental societies
Veterans Administration

Aside from the contact with these organizations, the Committee decided to conduct an intensive study of radio programs and make some attempt to correct some of the blurbs and obnoxious statements used by manufacturers of mouth washes, tooth pastes and other dental products. After this material is gathered together, it is the hope of the Committee that many of these evils can be corrected by direct contact with the manufacturer of the product or by bringing them to the attention of the Federal Communications Commission.

In an effort to secure all the information possible on radio programs, various suggestions and methods have been tried. In one state a member of the Committee sent out a letter to all the members of the College as follows:

Dear Doctor:

The Committee on Relations of the American College of Dentists desires to compile all of the information possible on the subject of radio advertising which is pertinent to dentistry. We are particularly interested in those advertising programs which include false claims or statements which may be considered obnoxious by our profession.

Will you please give this matter your serious consideration and advise me at once about such programs that you may be familiar with? Furthermore, if you have any suggestions on this or other subjects within the scope of this Committee, please feel at liberty to suggest them.

With kindest regards, I remain
Fraternally yours

The response to this letter was, to say the least, very discouraging. Perhaps the best sources of information will be the office of the American Dental Association and the Federal Trade Commission in Washington.

Another very interesting observation made by the committee was the work done by the Committee on Dental Education in the State Public Schools in

Tennessee. The members were asked to review and evaluate all textbooks designed for use in the teaching of Dental Health in the Public Schools and to recommend to the Tennessee State Text Book Commission those books which should be adopted for the teaching of dental health to the children of the State.

The Committee undertook to get a complete set of textbooks published in the State. The publishers were very cooperative and some sixty-five books were received without charge. After reading these books, the Committee found that this evaluation was a gigantic undertaking. They comment as follows:

In practically all the textbooks the nutritional aspect of good dental health was adequately and completely covered. However, in one case the therapeutic value of good nutrition was grossly misconstrued, for example:

"A school dentist spent a week examining the teeth of all the girls and boys in school. He found that about one-quarter had soft gums that bled easily. Many more had poor teeth. He asked those children who had strong straight teeth and firm pink gums what they had for breakfast. All the children had milk and dark cereal. They had toast or crust rolls made of whole wheat. They had an orange or grapefruit, or a glass of orange juice or tomato juice. Some of them had a soft boiled or poached egg besides.

"Then the dentist asked the children with poor teeth what they had for breakfast. Many of the children said they did not like milk. They drank coffee instead. They liked to eat white bread and soft sweet buns with their coffee. Some of them said they never had oranges or grapefruit because they cost too much.

"These children learned that canned tomatoes are much cheaper than oranges and grapefruit, and are just as good for teeth and gums. [The dentist neglected to tell the children that they would have to drink twice as much tomato juice as orange juice to get the same amount of food value, and ascorbic acid.]

"They learned that whole grain bread and cereals are usually about the same price as white bread and buns. The dentist told them that the crusts of bread and hard toast, raw vegetables, such as cabbage and carrots, are good for the teeth because these foods give the jaws exercise and help to improve the circulation of blood in the teeth and gums. The children learned that coffee does not contain any food at all, but milk is cheap at any price, because it contains about everything that boys and girls need to grow big and strong on. The children asked their mothers to let them have for breakfast the foods that would help them to build strong straight teeth and firm pink gums. *Six months later, the dentist found that the children's teeth and gums were much healthier.*"

In a letter the chairman of this Committee offered further comments:

Our textbook writers have done a splendid job with what they had, but our Committee believes the American Dental Association should put its stamp of approval on facts that have been proven by research and investigation so that the writers might incorporate these truths in the textbooks that are taught to our children. A good example is that children's teeth should be filled and prophylaxes given—yet there are many men in the profession advising against it. What is the public to believe? It is time organized dentistry took a definite stand on the facts the public should know.

Recommendations of the Committee for study next year:

1. To study and consider the over-all picture of relations.

2. To continue the study of radio programs.

3. To assist State Committees in the study and evaluation of textbooks that are used in the teaching of oral health in public schools.

REPORT OF THE SOCIO-ECONOMICS COMMITTEE

ERNEST G. SLOMAN, Chairman*

Boston

After some correspondence with the four College Sections assigned to the committee on Socio-Economics, and after studying the problem, we have become entirely of the opinion that much constructive work can be done for the College and for dentistry at the College Section level.

This first year of the new arrangement suggesting collaboration between your Committee and the sections required correspondence and meetings of the sections (or committees thereof). While this arrangement consumed much of the available time between the appointment of your Committee and this meeting, the indications are that if workable plans are well made by your Committee a full year, and for some plans more, in advance of annual meetings, considerable good work can and will be done by the sections assigned to your Committee.

The newness of the idea of assigning sections to the Committee, the reluctance of your Chairman to seem to direct the section committees, and the calling of meetings of these section committees without solid projects upon which to work, all served this year, as might be expected, to delay results which we now believe are thoroughly possible of achievement.

Your Socio-Economics Committee is of the opinion that because conditions are now well on their way to normalcy and because we can look forward to yearly meetings of the members of the College, active committees within the sections can be counted upon for constructive and painstaking work.

With these circumstances in mind your Committee recommends that our objectives for the next year consist of initiating and supervising—where supervision is wanted—projects for investigation at the College Section level. Much good work can be accomplished at this level that would be difficult, or impossible, of accomplishment by the College Committee itself.

Committee work usually assumes that a selected group will meet, discuss, study, and arrive at a basis of a report, then draft, approve, and present the report. This procedure is especially true of the work of a committee such as the Socio-Economics Committee. Such an arrangement for a committee in which

* The other members of the committee are E. C. Armbrecht, A. O. Gruebbel, D. W. Gullett, H. W. Krogh, K. C. Pruden, E. W. Swanson, G. W. Wilson.

the personnel is spread over the expanse of our country would be costly and probably beyond the present means of the College; on the other hand, interested and constructively thinking groups of members within our sections can meet, study and plan, make constructive reports, with fruitful accomplishments and satisfaction to themselves. Anticipated results can be multiplied by the number of sections assigned that can and will meet, study, plan work, and report their results.

With these convictions in mind we suggest a few of many projects that we believe will be accepted by the sections. Our belief is based on correspondence during the past seven months with the four sections assigned to this Committee.

SAMPLE PROJECT 1

PURPOSE: To make a current determination of the primary reasons why permanent teeth are lost and to anticipate comparative trends by showing data secured through periodic repetitions of the project.

This discussion and the recommendations incidental thereto relate to permanent teeth only; for this reason the adjective "permanent" will not be repeated.

Your Committee is aware of the excellent work done in this field by Brekhus and Allen and recommends that some of the fundamental patterns established by their work be used for similar investigations. Brekhus used secondary causes, which may require speculation when used with subsequent surveys to establish trends and the effectiveness of caries-control programs. On the other hand, Allen used primary causes for his small but excellent survey of several years ago.

It has been well established

(1) that girls from six to eighteen years of age are more susceptible to caries than boys and young men of the same age groups even after mathematical adjustments are made for the earlier eruption of teeth in girls as contrasted with boys; and

(2) that girls and young women pay greater attention to their teeth than do young men and boys, through more frequent visits to dentists, through having fewer untreated attacks by caries, and through more satisfactory levels of oral hygiene.

Dentists should have reliable information as to whether these care factors cancel or over-neutralize the greater susceptibility factor. Dentists should know, but they do not, what approximate percentage of the teeth that are removed, are lost because of attacks by caries. It is estimated that a very large percentage of teeth that are removed are lost because of attacks by caries. But we who should know are without much basic information on this important subject, and unless we do something we shall be without progressive information so necessary to the evaluation of trends in dental diseases. Tooth loss

through attacks by caries must be charged to ignorance, neglect, or poverty, with emphasis on the first two causes mentioned.

The public should be informed in a dignified way of the economic waste—of the cost of this neglect—in terms of replacement costs and replacement upkeep, as contrasted with the lesser costs of early treatment with facilities now available. The public should also know that nearly 100% of such losses are preventable.

Your Committee believes that this project will be accepted by a committee of one of the sections. In fact, the Baltimore Section has agreed to accept. A small committee of about six could meet about once a month, develop a questionnaire, arrange for about two hundred or more dentists to fill in the required forms for a period of about one month, and then proceed to develop a first-class report on the questions involved. The information thus obtained would be a statistical analysis of the causes of tooth loss by sex and by age groups.

For the purposes under consideration the causes are attacks by caries, periodontal conditions, convenience of prosthetic restorations, impactions, abrasion, erosion, and, presumably, a very small percentage for "miscellaneous" reasons.

Your current Committee can make several thousand case reports available to the sectional committee that takes on this project. However, these reports should be properly weighed by the sectional committee because they are derived from the department of oral surgery and exodontia of a dental school and, therefore, represent a group of patients perhaps not typical of the country as a whole. It should be anticipated that the survey will be repeated under practically the same circumstances one or two decades from the date of the proposed initial report. Thus dentists can know more about the changing trends in causes of tooth loss.

Your Committee anticipates that in two and three decades ahead the percentages of tooth loss for the various causes are likely to change considerably because of the currently promising programs of reduction in the incidence of dental caries through diet control, topical application of fluorides, and fluorination of drinking water supplies.

It is likely, however, that the conservation of teeth through these programs which now promise a fifty per cent reduction in caries incidence rates in the decades ahead will be offset by the rapid aging of our population groups, which in turn portends a tremendous increase in periodontal disease.

The studies of Thompson and Whelpton supply us with interesting data on the changing age groups of our population. These indicate that during the three decades succeeding 1950 there will be no appreciable increase in the 20–64 group, which is expected to remain constant at around 87 million for the thirty years after 1950. However, it is expected that the over-65 group will just about double from 11 to 22 million people, gradually and regularly, during the

1950–80 period under consideration. About two thirds of the gain in this oldest age group is to be offset by an estimated reduction in the under-20 group, which is expected to shrink from $41\frac{2}{3}$ millions to $33\frac{1}{2}$ millions.

Although we can anticipate that our promising caries-control programs will reduce the percentage of teeth lost as a result of attacks by caries, nevertheless, because people now and in the decades ahead will live longer and because a much larger portion of our population will become members of the older age group, we must assume that without startling progress in the control of periodontal disease the loss of teeth through attacks by caries will, in later years, be nearly completely offset by losses of teeth for other reasons.

Would it not be well for us to have some data on causes of tooth loss as of 1948–49 for the reasons mentioned and also to enable us to contrast this information with similar data in 1958–59 and in 1968–69?

Would it not be reasonable to assume that if such a project were done with thoroughness, although even on a "pilot program" basis, organizations better able to afford a more comprehensive investigative program on the same basis may be induced or stimulated to make a broader based and more comprehensive investigation? A good job of analysis such as is herein proposed would serve one of the objectives of the College, i.e., to make initial explorations in areas in which our knowledge is now much less than it should be.

Such a project could be worked out during the interval between the current and the next annual meeting of the College and at very little expense. A collateral to this project could be undertaken by the same or a different group. This would be to determine by a different method the number and percentage of permanent teeth lost by sex and age groups. This was done by Brekhus for 9450 persons, twenty to seventy years of age, in 1923–25; and by one of your committeemen for 7960 persons, twelve to eighteen years of age, in 1934–36.

Such surveys should be repeated periodically. While the information gained would shed no light on the causes of loss of teeth we would, through them, obtain valuable information on the over-all effectiveness of dentistry's primary obligation of preserving natural teeth. The method would be simply to record the exact teeth lost by extraction for a given number of persons and then tabulate this information by sex and age groups.

SAMPLE PROJECT 2

PURPOSE: To determine percentagewise the income of dentists from

(1) the treatment of caries and its sequelae,
(2) the treatment of periodontal conditions and their sequelae,
(3) oral surgery for other than (1) and (2) above,
(4) prophylaxis, not related to periodontal treatment or caries prevention,
(5) orthodontic service, and
(6) other dental services.

The information obtained from the successful prosecution of this project is somewhat akin in values to the information obtained from Project 1. But its nature suggests the need of a longer period of work and it is being assigned to a different section committee.

It should be noted at the outset that the information sought is not *specific information* as to income but instead the percentagewise earnings of dentists from certain categories of services.

Your current Committee knows of no group more earnestly concerned, more hopeful of, or working more diligently towards eliminating the need for its existence, than is the dental profession.

With attacks by caries assumed to be, but not proved, responsible for an estimated eighty per cent consumption of current dentist manpower hours we should determine now the likely effects of diet control and the two fluorine programs, mentioned in connection with Project 1, which should be expected to reduce caries incidence by fifty per cent; and, in turn, the likely influence of these reductions on the effective demand for dentists' services in the decades ahead. In anticipating a fifty per cent reduction in a disease that now requires an estimated eighty per cent of our manpower hours, one might conclude that dentistry should now think in terms of making an early reduction in the number of applicants accepted for admission in our dental schools. But the needs for dental services and their consequent relation to the effective demand for dental services should not cause us to think in terms of reducing the number of graduates in the decades immediately ahead, if the obvious effect of changing population age groups, also mentioned in connection with Project 1, is likely to more than offset the benefits of the fifty per cent reduction in caries anticipation.

If the caries and periodontal factors only appear to just about cancel each other, then our hope to narrow the great gap between the needs and the demands for services in the decades ahead lies in the rapidly changing levels of appreciation for dental services, which are so largely influenced by education and cultural and economic advancement.

We are without data as to what part of dentist manpower hours is now devoted to the treatment of the two cardinal dental diseases—caries and parodontosis—and without this knowledge we are also without accuracy in predicting what the needs are to be in 1960, 1970 and 1980. If we don't know where we are now, we can't very well tell which way we are going. We need this information if we are to plan intelligently for the future.

In evaluating the workability of this project one might ask how a dentist is to differentiate in allotting time or money charges to the several categories of conditions treated. It must be understood that in some instances it will be impossible to determine the basis or original disease responsible for a given needed service. For instance, if a patient presented himself for a full set of dentures and the dentist could not relate the loss of his teeth to any one disease,

then those hours required (or money charges made) for this service would not be used in the percentage determination. But this situation should not affect the over-all picture for the reason that the undetermined items should be expected to have a constant relation to the determined percentages.

It is anticipated that if this part of the program is followed out the section of the College that agrees to assume the work will be supplied with abundant details of procedure that need not, or at least should not, be included in this report. A study such as this should shed some light on many questions; for example:

(1) If, as is anticipated,
   (a) the number of permanent teeth attacked by caries in the six to twenty group, is reduced by fifty per cent, and
   (b) in the under-twenty group the number is reduced by approximately twenty per cent, what will be the consequent effect—all other factors being equal—on the effective demand for dental services?

(2) If, as is anticipated,
   (a) the over sixty-five group doubles,
   (b) our people will arrive at that age with more and more teeth, and
   (c) there are no consequential changes in methods of treating periodontal diseases which permit a reduction in dentist manpower hours—all other factors being equal—what should be the consequent effect on the effective demand for dental services?

In addition the study should provide a basis for estimating trends now and by subsequent repetition and comparison afford a better basis for estimating and correcting estimates of trends ten and twenty years from now.

A profession such as ours, that looks hopefully ahead to eliminating some of the principal needs for its existence, should have data showing current trends by which it may intelligently plan for its future.

SAMPLE PROJECT 3

PURPOSE: To determine the best formula—or, probably better stated, the least undesirable formula—by which dentistry may be included in a comprehensive plan for compulsory health insurance.

There is, indeed, very little likelihood of the enactment of a comprehensive plan of compulsory health insurance on a nation- or state-wide basis in the immediate future. Periods of expanding economy do not provide the soil for this kind of broadly based social change. A great majority of those in the professions of dentistry and medicine are violently opposed to compulsory health insurance. But so were the professions in the countries of Western Europe during the times when the systems were adopted there.

Formulas ostensibly designed to protect the private practitioner of medicine

have been studied and worked out with great finesse and detail during the last several decades. Such is not the case with dentistry. The study of prior, untried and even used formulas for dentistry's participation in such plans does not imply that the College embraces the over-all plan or even any formula evolved. On the other hand, to study and to be prepared to offer something developed for the protection of the interests of the public and the profession may possibly afford a protection not available otherwise.

Good reasons as to why dentistry cannot afford the truly temporary luxury of being left out of the scheme—as is often advocated by proponents of compulsory health insurance and some dentist opponents—may be found in the first annual report of the sub-committee of Social Trends of the Council on Dental Health of the American Dental Association. Supporting field data for one of the main contentions of the report may be found in the *Canadian Journal of Economics and Political Science*, reviewed by the Committee on Economics of the American Dental Association in the *J. A. D. A.* for March of 1945.

It is recommended that the study and report on this important question be made by a section committee of the College through studying

(1) the background of compulsory health insurance,
(2) the background of methods of including the services of dentists, and
(3) particularly the proposals made by American legislative bodies as to the ways and means of managing problems peculiar to dentistry in comprehensive plans for compulsory health insurance.

This study should include the successive Wagner-Murray-Dingell bills, and, for instance, six or seven of the important bills introduced in the California legislature during the last decade. The study would likely reveal much important information and probably irrefutable evidence that

(1) the various methods by which dentistry was included in the foreign schemes will not permit the preservation of standards in American dentistry;
(2) the earlier proposals made in our own country severely and unwarrantably reduce areas of service for dentists;
(3) some of the more recent important proposals provide for a volume of services for ninety per cent of our people that could not be more than half accomplished with the dentist manpower hours available now or in the immediate future.

Unless studies are made and answers obtained, while there is time, we are liable to be without needed information with which to preserve some of our most important professional assets.

Some specialists have done some work for us in the past, i.e., the Sinai-Simonds Study and the Dorothy Fahs Beck Study, both of which were accomplished at considerable expense to the College. However, these studies have served only to arouse within us a vague consciousness of a problem. Very

little indeed has been done to provide us with the rapid-fire but authoritative information we should have in order to properly protect the people and ourselves at legislative and other hearings held for nearly the sole purpose of determining the basic provisions of health insurance schemes.

We shall have the help of many groups in preparing arguments against compulsory health insurance itself, but it is left to the dental profession alone to protect itself and the public against intolerable dental provisions that have been included all too often in such propositions. We must know what is intolerable and why. This is a study of vast importance which could be assigned advantageously to two or more sections of the College. Reasonable, sober, and forthright studies made by practicing dentists, while we have the time, should go a long way towards providing some of the badly needed answers.

We do not concede that our country—or any one of the states—needs, wants, or will have compulsory health insurance. But this belief does not warrant our ignoring the problem. Nor does it warrant ignoring a secondary defense. To install a fire escape, other than the front and back doors, does not imply that a devastating fire is inevitable. This project could be well expanded to include similar studies of all periodic payment plans for health services. Indeed, perhaps our most pressing need is to evolve formulas for the growing number of state plans for voluntary health insurance being set up by state medical associations.

The discussion of this project was kept, in the main, on the compulsory health insurance level only to permit a small group within a section that might entertain the idea of making the study to visualize effectively a comparatively small field of investigation.

We would like to suggest three other projects as suitable for studies and reports by the groups we have in mind, i.e., closely knit committees of practicing dentists within the sections of the College. Because of space requirements the outlines of these will be purposefully brief.

SAMPLE PROJECT 4

The study, for comparison and contrast, of statutes governing the practice of dentistry in the forty-eight states and the District of Columbia.

Some three hundred questions should be asked and answered through this study project. The answers could be reduced to YES, NO, and NEUTRAL (or not covered) and compiled in tabular form. The few answers that do not fall into one of these categories would be covered by footnotes.

A study and report such as this should be of incalculable help to those of us who try year after year to improve the status of dentistry by means of amendments to our respective dental practice acts. Other groups have talked about a similar but not an identical project.

If a different agency does or is doing work along this line such activity should not influence this project, for having two of such reports compiled presumably from entirely different approaches would serve well the progress of our profession.

SAMPLE PROJECT 5

To answer the question, How standardized is our diagnosis and treatment planning?

(1) At the teaching level?
(2) At the practicing level?
(3) Do we want it standardized? and
(4) If not, why?

How true is the statement that eight out of ten patients who have any considerable amount of required services will get as many plans of treatments as dentists visited? and How true is the statement that the controlling factor in treatment planning of a great many dentists is the kind of services they prefer to render?

This is not a pleasant project, but it is surely one that we should know more about. As in other projects, suggestions as to procedure, if wanted, would be supplied the section (or sections) that undertakes the work.

SAMPLE PROJECT 6

Teaching laboratory dentistry in our dental schools.

There are three policies in the dental schools in the United States governing the teaching of laboratory work.

(1) To use dental technicians.
(2) To assign a junior or sophomore student to each senior to do most of the laboratory work for the senior's clinic patients.
(3) To require the students in the clinics to do all their laboratory work for the patients assigned to them.

Our group does not want to impose its opinion on dental education. Indeed, we subscribe to experimentation in dental education.

A survey by a committee within a section of arguments both for and against each of these teaching policies may prove of considerable value to those responsible for the policies of dental education, and in the end to dentistry itself.

CONCLUSION

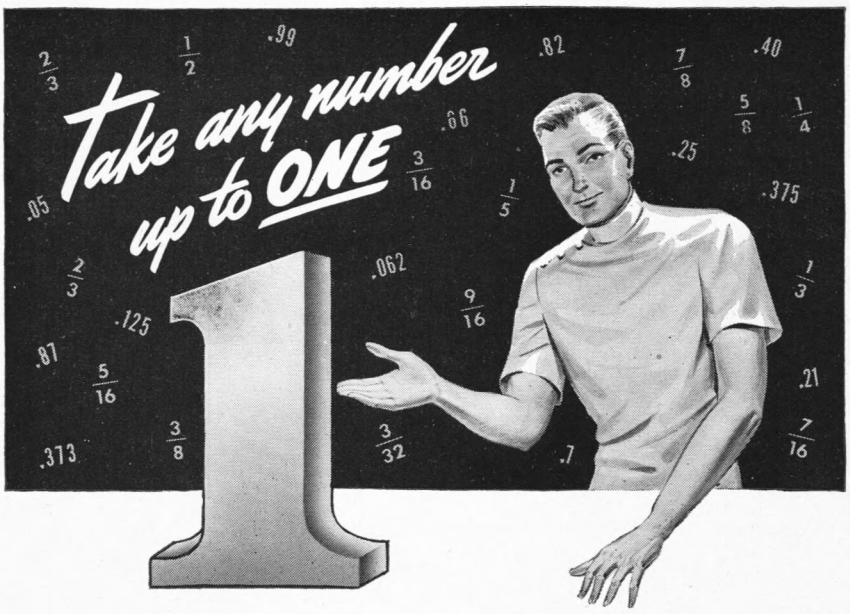
In selecting this method or program of work your Socio-Economics Committee is deeply conscious of the aims, ideals, and objectives of the College itself. We believe that the new policy of associating sections with the work of the College is likely to be even more productive than anticipated.

To facilitate these objectives we recommend that thereafter the Socio-Economics Committee consist of six members appointed by the president on this basis: the first Committee to have two members with terms expiring in one year, two members with terms expiring in two years, and two members whose terms expire in three years; and thereafter two members to be added each year for three-year appointments.

We also recommend that the president appoint the chairman from the Committee membership each year.

We believe that early assignments of projects to the sections by the Socio-Economics Committee in those instances in which the sections are anxious and willing to take on suggested assignments will in the end develop a useful work pattern for the College in this field of interest.

We also believe that in some instances two or more section committees could handle the same project and even work independently of each other to good advantage. The fields of investigation selected are examples. Sections, of course, should, if they choose, suggest other and perhaps better projects.



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