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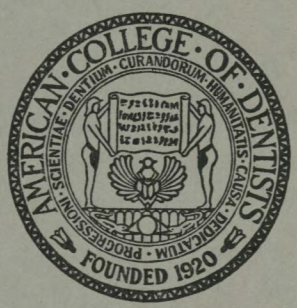

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The Need, Demand, and Program For Providing Health Service For the American People

HAROLD HILLENBRAND, D.D.S., B.S.D.

I have been asked to discuss formally "The Need, Demand, and Program for Providing Health Service for the American People" and it seems to me there are two approaches to this problem. The first is the technical approach, and this will be made by the distinguished panel of speakers. The second approach is in terms of our own professional contribution to the American way of life.

Let me oversimplify the first approach. The United States has the largest dental profession in the world. We believe—correctly, I think—that the United States dentistry has the highest level of professional service in the world. We believe—correctly, I think—that the United States has, if not the highest, one of the highest standards of living in the world. We believe that the United States considers health care as an essential part of this high living standard, and we believe that the people of the United States want and need dental care as a part of an essential health service.

Even if this were the best of all possible worlds—which it is not—I think we could all quickly come to agreement that many areas of need exist in the dental profession and in the services it renders to the people of this country. We know that the demand exists and that this is not static, for we have seen the demand for dental care rise to where now most Americans consider it a part of their way of life.

If, then, there is need and if there is an increasing demand, surely it is our task to develop a program in order to give better dental health care to more of the people.

The speakers on the panel will each place one or more small parts in the mosaic that they will reveal to you this morning and I think we should look briefly at some of the main features of this mosaic.

A recent study by the Bureau of Economic Research and Statistics of the American Dental Association revealed that 80 million, or 47 per cent, of the civilian population went to self-employed dentists in 1958. If only 47 per cent went to the dentist, it is obvious something needs to be done for the remaining 53 per cent.

Based on the gross income reported by self-employed dentists in the survey, it was estimated that consumers spend two billion dollars per year for dental care. This figure has increased consistently over the past decade, and surely this is evidence that there is a rising demand for dental care in the United States.

But what are some of the dimensions of this problem?

In 1958, according to the survey, there were 60 million extractions. Surely this is a greater tooth loss than the American nation need have.

The profession placed 200 million fillings in the same year. Surely this indicates that we are not effectively preventing and controlling dental caries.

There were only 200,000 fluoride treatments in 1958, revealing clearly that we are not using to the utmost one of our best preventive procedures.

There were 8,800,000 orthodontic sittings in 1958 and surely this number of sittings is not adequate to meet the needs of American youth.

There were 5,600,000 complete dentures produced in 1958 and surely this is confirmation of the fact that too many people are not keeping their natural dentition for all of their lives.

These are some of the pieces of the mosaic which I know that the members of the panel will fit into place during this session.

The second approach is to try to relate what the panel will do to the framework of American life. For those of you who have not read it, the recent Rockefeller Brothers' Report on *The Power of the Democratic Idea,* from which the following quotations are taken, would well be worth reading. In one of its eloquent passages the report says:

"In the past, Americans have responded well when confronted by immediate emergencies. The great question is whether a comfortable people can respond to an emergency that is chronic and one that requires a long effort and a sustained exercise of the will and the imagination."

Surely this is descriptive of the dental health problem in this country.

The report continues: "There is no alchemy that will make the problems of the contemporary world simpler than they are. Their solution in every social system depends on four essential conditions and on the quality of the men who occupy positions of leadership."

Surely we are addressing ourselves to the leaders of American dentistry this morning on the information and resources available to them, and surely this morning we will try to impart information to you on the circumstances in which they work and on the support they raise from their fellow citizens.

The report concludes: "At the greatest moment in the American past, Americans had an image before them of what free men, working together, could make of human life. The great question that the present generation of Americans needs to answer is whether the American democratic adventure can be continued and renewed, and whether American life can be lit by a sense of opportunities to be seized and great things to be done."

This morning, then, the panel will examine those things which need to be done, and dentists everywhere and society at large must decide if there is both the will and the capacity to do it.

I think this provides sufficient background against which the members of the panel will make their remarks on the need and the demand and the program for dental care.

We will now proceed to a detailed examination of the various aspects, and the first area which will be covered is "The Preventive Aspects of Oral Disease."

I take pleasure in introducing to you Dr. Rulon W. Openshaw of Los Angeles, the chairman of the Council on Dental Health of the American Dental Association, who will address you, hopefully in a brief way, on fluoridation.

Fluoridation

RULON W. OPENSHAW, D.D.S.

Newspapers and periodicals you read these days, newscasts you hear, television programs you see, discussions you have with your associates and your patients frequently touch on the health problems of the aging. Do you find yourself wishing, wearily, that the whole process of aging could be legislated right out of the American way of life? Or do you confine your wishes to the area of your expertness, and resolve to do your part to enlighten the public on the effectiveness of prevention and the folly of neglect which is demonstrated overwhelmingly in the accumulation of dental needs found among

the aging population today? Do you consider, then, how much that burden of neglect could be reduced in the future if all communities with public water supplies had fluoridation programs today?

The Commission on the Survey of Dentistry answered the last question with a recommendation that "All public agencies, with the assistance of voluntary associations and professional societies, make greater efforts to promote water fluoridation. . . ."[1] The White House Conference on Aging had even more specific answers. The Section on Health and Medical Care of that conference recommended "Fluoridation of water supplies as a long-range benefit for the dental health of the aging group of the future."[2] The Section on Research stated that "Since the beneficial effect of water fluoridation is a lifelong phenomenon, it is recommended that behavioral scientists focus attention upon the causes of resistance found in some communities toward institution of this public health measure. Preservation of natural teeth in later years is considered highly significant to the well-being of the aged."[3]

The latter recommendation of the White House Conference holds the clue to the problem facing the dental profession today in bringing the benefits of fluoridation to all communities: the word "resistance." There is no question as to the soundness of fluoridation; the question is one of achieving community acceptance.

Eleven years ago, the American Dental Association officially endorsed fluoridation as a safe and effective preventive measure.[4] Its action was duplicated by the entire scientific community. Little did the professions realize that their carefully considered actions in the interest of the health of the public would precipitate a political controversy that would split communities into war-like camps, set brother against brother, so to speak, and bring charges of "Poison!," "Murder!," "Communism!" Ridiculous though they are, these charges have been bewilderingly successful in denying the benefits of fluoridation to millions of persons in this country.

Where are these charges coming from? How can they be rebutted successfully?

Following the rejection of fluoridation in countless referendums last Fall, the Council on Dental Health of the American Dental Association decided that the time had come to find out why, and that the 12th National Dental Health Conference, held April 1961, was the place. Accordingly, a full day of the conference was set aside to

determine the answers to these questions, and a panel of experts as leaders from the fields of communications, law, and public health, as well as leaders from communities where the procedure had been attempted, was brought together to assist in the discussion. As a result of those deliberations, I say that the soundness of fluoridation should become the refrain of every campaign in every community in this nation that has a public water supply. By "every community," I include those with programs in operation—and intentionally so, for the forces of willful ignorance do not relent in their efforts even when fluoridation becomes a reality. And I use the word "campaign" deliberately, for, as it was so dramatically pointed out at the National Dental Health Conference, the small group of individuals who oppose the measure has "wrested [fluoridation] from the scientists and deposited [it] squarely in the middle of the political arena. . . . A thousand or ten thousand and more scientific experiments will not help. . . . By posing as guardians of the public health in this matter of fluoridation, opponents use it to arrogate to themselves the mantle of righteous protectors in other fields, including medical treatment, theory, diet control and political behavior."[5]

In summary, fluoridation is a sound preventive measure for reducing the incidence of dental decay. It has become a political issue and, realistically, its attainment must be approached on that basis. The first step will be the development of a manual to guide dental societies and other appropriate community agencies through the political arena.

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Moderator Hillenbrand: I think Dr. Openshaw has revealed one of the great areas in which things need to be done. Surely the

lack of progress in fluoridation, although it has been adopted perhaps more rapidly than any comparable health measure, still should not satisfy either the dental profession or the people of this country.

It is difficult to know whether the defeats of fluoridation in various cities throughout the country is a part of a trend toward rejecting the leadership of the professions (and this type of rejection does exist). It seems to me that one of the problems the profession has is to try to conquer this trend by better leadership and, as Dr. Openshaw so ably said, by campaigns of a political nature.

The next speaker in the area of "The Preventive Aspects of Oral Disease" was to have been Mr. Perry J. Sandell, the director of the Bureau of Dental Health Education of the American Dental Association. The State Officers' Conference is being held at the Sheraton Hotel this morning and Mr. Sandell had commitments there. But he has sent his able assistant, and I take pleasure in introducing to you Mr. Charles French, the assistant director of the Bureau of Dental Health Education, who will read the paper.

Public Dental Health Education

PERRY J. SANDELL, B.S., M.Ed.

The Commission on the Survey of Dentistry made one recommendation which relates specifically to public dental health education. It is as follows: "The Commission recommends that: (1) The American Dental Association expand the activities of its Bureau of Dental Health Education; the Public Health Service increase its dental health education activities directly and through provision of assistance to states; and that state and local public health agencies and dental societies initiate or expand public health education programs. (2) The number of trained health educators employed by official health agencies and dental societies be markedly increased, and that educational efforts be guided by their recommendations."

As a first step in implementing this recommendation, the Bureaus of Dental Health Education, Public Information, and Audiovisual

Service held a conference with representative dentists from throughout the country to determine their views on priorities for future programs of these bureaus.

Public dental health education programs fall into two areas—school dental health education and community dental health education. In these two areas there are educational activities that are appropriately the responsibility of the Association's bureaus and others that are the responsibility of constituent and component dental societies.

School Dental Health Education: The Bureau of Dental Health Education has produced and made available considerable material for use by schools in teaching dental health. Included in this material are teachers' guides, a manual for school dental health programs, a booklet on basic dental health facts, various pamphlets for pupils, posters, and films. There are available at the present time four teaching films, two for high school use and two for use in the elementary school.

The Bureau staff has also worked with textbook publishers and authors in reviewing materials on dental health and encouraging more dental health education material in textbooks.

The Bureau maintains liaison with a number of educational associations in the interest of keeping dental health in its appropriate perspective in the total educational program.

The only direct relationship the Bureau has to schools is through requests it receives for material. It is the local dental society which must establish a working relationship with the schools so that an adequate dental health education program can be established. The Bureau, through its printed material and through direct consultant service, can assist local dental societies in planning dental health programs with their schools.

State dental societies may develop liaison with appropriate officials of state departments of education so that joint plans can be developed for improving the dental health of school children.

What has been said about public schools applies equally to church supported schools.

Community Dental Health Education: When one thinks of community-wide education programs, the various mass media come to mind. Television, radio, and the press may be used if a program of education is planned in advance.The newspapers are eager for news stories related to health, particularly if they have a local flavor. Tele-

vision and radio stations are looking for interesting programs to meet their public service requirements.

It is the local society that must make contact with the media and have program material available. It is important that the local dental society survey its members to discover those who may have talent adaptable to television or radio and those who may have writing ability. It is equally important that the society maintain a roster of members who are skilled at speaking to lay groups of various types.

The society should make known to the many community organizations that it has speakers and programs which would be of interest and of educational value to any group.

The role of the various bureaus of the Association is to provide material suitable for use on radio or television, and material which can be adapted for use in the local press. Much of this material is available. It is important that the local society know what is available and plan in advance for its use. It is important that members of the society prepare themselves to appear on television, radio or before local groups. Presenting programs on any media can be disastrous if preliminary planning has not been done.

Moderator Hillenbrand: You have seen now two parts of the mosaic: fluoridation of public water supplies, and the use of dental health material for public health education. But even if both of these programs were fully operative there would still be need for one other piece of the mosaic. And that is, what the dentist does in his type of practice in the way of preventing and controlling dental disease. Our next speaker will discuss that topic: Dr. Robert E. DeRevere.

Preventive Efforts in Practice

ROBERT E. DeREVERE, D.D.S.

The general practice of dentistry as we know it today is, for the most part, one of correction of defects and treatment of diseases of the hard and soft tissues of the oral cavity. The preventive program develops after recognition of the need for a more thorough and com-

plete method of elimination of the ravages of the disease other than mere correction or restoration. This is a typical trend in the development of a health profession.

Planning a prevention program in practice depends on the practicality of the program, the patient's receptiveness to it and dentist's motivation and enthusiasm to provide it. So far, there have been restraints manifested in each of these conditions.

Ideally, the practice of dentistry should only encompass preventive measures such as the application of fluorides, occlusal equilibration, prophylaxis, and the like. However, the immediate goal of the profession is the control of dental disease which prevents the necessity of further and more radical treatment. Thus, control is prevention in a broad sense. It is this broad application in the practice of preventive dentistry which is presented here. As a matter of fact, the existence of completely effective and true preventive measures is nil in the office of the general dentist. Dentistry does not have office procedures such as inoculations and vaccinations which are true preventive measures.

As the concept of the practice of dentistry emerged from the limited area of treatment of decayed teeth and expanded in scope to include the total care of the patient's oral health, so then, must the scope of the practice of preventive dentistry be expanded to include procedures other than those related to the prevention of the initiation and development of carious lesions.

The complexity of the exciting and predisposing etiologic factors and conditions involved in the initiation and development of oral diseases is reflected in the multiplicity of the measures which can be instituted to reduce or prevent the manifestations of these oral diseases. These preventive measures (and here again, prevention is used in the broad sense) fall in three general categories: (1) those directly under the control and influence of the dentist, (2) those directly under the control of the patient, and (3) those under the control of both of these individuals acting as a group for the health of the public. This discussion is limited to those measures applicable to preventive efforts in practice. This then includes those under the direct control of the dentist and the extent to which he can influence the initiation and practice of those measures under the control of the patient and the public acting as a group.

A thorough examination of the teeth, supporting structures, and

intra- and extraoral soft tissues for the earliest detection of pathology is a precursor of any treatment preventive in nature. A more propitious time does not exist than during the examination to discuss with the patient those measures which may have prevented the condition detected or which will help to bring it under control. These measures should be based on the results of sound scientific and clinical investigations. Inherent in the physical examination is a careful history of the general health of the patient and the history of the existing diseases, if one is to arrive at a logical diagnosis and related therapy. Periodic routine roentgenographic examinations may reveal hidden conditions in need of intervention in order to prevent serious sequelae. Other roentgenographs and laboratory procedures are in order as the oral findings dictate in order to confirm or refute clinical impressions. These include blood and urine studies, palpation, percussion, transillumination, electric pulp test, and other special procedures. Just as a biopsy is a determining factor in the early detection of oral cancer, these other diagnostic aids and laboratory procedures are important adjuncts in pinpointing a diagnosis. Early diagnosis and early treatment is preventive in nature.

Limitation of time for this discussion prevents other than the mentioning of the many and varied procedures available to the dentist in his everyday practice. Motivating patients to practice better home care for the benefit of their oral health is a prime responsibility which, unfortunately, is often overlooked, because of the lack of material financial return to the practitioner. This includes oral hygiene, dietary habits, good nutrition, supportive therapy, and the periodic seeking of dental care.

The benefits derived from the fluoridation of public water supplies are not the result of the practice of preventive dentistry in the offices; but the patient's dental-education potential in the dental office on this measure is an influential media which has been grossly neglected. The dental profession and the Public Health Services are beginning to realize that the fluoride program is being defeated in the dental office through neglect of dissemination of scientific information to the patient. The topical application of fluorides to the teeth of children and caries susceptible adults should be synonymous with the prophylaxis-examination-roentgenographic visit. A technic permitting the application of fluoride following the prophylaxis at each recall visit is realistic and effective.

The treatment of a tooth by repair of a carious lesion in itself is preventive. However, the treatment must be the best possible service which the profession is capable of rendering. If the operator knows his therapy does not measure up to the highest standards, then it behooves him to seek refresher courses in order to provide the most recent developments in the application of existing procedures for his patients. By not too much of a stretch of the imagination, continuing education is directly applicable to the practice of preventive dentistry.

It would be interesting to know how much operative dentistry entails the replacement of restorations because of factors other than recurrent caries, such as ditched or fractured marginal areas, overhangs, poor contact areas, poor contour, occlusal trauma, inadequate functional relationship of the restoration, food-traps, etc. How many artificial replacements of teeth are remade because of some defect in the design or construction of the original? How many teeth are lost because of inadequate concern for the pulp and surrounding supporting structures of the teeth during restorative procedures? If manpower is needed and prevention is a partial solution, the practice of high quality restorative dentistry should be a major contribution to reducing the need for dental care.

An office concerned with prevention and control of dental disease will have an efficient and effective recall system. The prevention of dental disease reflected in early detection and diagnosis depends on regular periodic visits to the dental office. This cannot be the patient's responsibility alone.

The practice of preventive dentistry in current times does require an effort—an all-out effort. It is easy to fall into the rut of caring for the physical needs of the patient as demanded by the patient. It is the responsibility of the practitioner to initiate every practical preventive measure available to him. It is his responsibility to present this to the patient in such a manner that the patient is receptive to the recommended procedures. All this depends on the enthusiasm of the practitioner to attain the ideal goal of dentistry. Only then will the rewards of a conscientious dentist be realized.

Moderator Hillenbrand: Walking up from that great big red chair to the podium here reminds me of Casey Stengel coming

out from the bench to change pitchers. It happens that we are going to do just that because the next speaker, Dr. Harry M. Klenda, of Wichita, Kansas, is not able to be with us this morning and I am taking the liberty of substituting someone known to all members of the College, Dr. Henry Swanson, who will read the paper.

Organization for Increased Patient Care

HARRY M. KLENDA, D.D.S., B.S.

The profession is always on the alert and increasingly involved in "product development." This speaks for the high quality dentistry enjoyed today. Another progressive step is a trend toward simplified work methods, conservation of the dentist, and increased "output index" on the part of dentists we now have and hope to graduate.

During the course of a work year the dentist has a certain number of productive hours. It is estimated that this amounts to about 1500 hours. A productive hour is a "unit of time for which a doctor gets a fee." This is a definition developed at the Michigan Practice Administration Workshop held in the year 1953. Therefore, for office organization principles, one must study carefully the appointment book.

"What is an appointment book?" An appointment book is a record keeper containing the arrangement of appointments for patients in the dental office. An appointment is a period of time allotted to a patient for the purpose of doing work. Basically, the appointment book controls the dentist's time, which is his capital; his knowledge and skills are his commodity. This knowledge and these skills he hopes to dispense efficiently, because there is only a limited time in which to do work. Every hour that is lost through mismanagement and frustration is lost forever and, in a sense, takes away one hour from the precious capital. The dentist should analyze just how much time is lost through inefficient routine, doing work that should be delegated, such as change of patients, preparation and sterilization of

armamentarium, tray set-ups, answering telephone, sending out statements, making appointments; these chores, completely enumerated, could go on and on. This totals to a staggering amount of lost productive potential that can be otherwise devoted to broadening of services to care for more of the public needs. Obviously the farsighted dentist must efficiently organize auxiliary personnel and should also include duplicate or multiple operating rooms. Objectively this means that the dentist must be organized within himself. Through the exercise of his imagination, useful application of sound office practice administration principles must be applied to every angle of work. A general practitioner performs a large variety of dental services requiring variable amounts of time, depending on the services rendered, with known conditions under which each is performed.

This basically must be known to the appointment book. Let me cite this example. If a person is scheduled for an extraction, the appointment book should know that about five to ten minutes of actual time need be drawn from the dentist's precious capital to perform this particular operation, even though the appointment actually requires thirty minutes of the patient's presence in the dental chair. The appointment book therefore contains the dentist's time, but in the overall use of auxiliary personnel and multiple operatories, it represents many more man hours than indicated on it.

The point I wish to make clear is that a great percentage of the time needed and the overall services required can be delegated. This obviates any debate as to whether one should have duplicate or multiple operating rooms. I do not like to think of a multiple chair office as one that may be used for emergencies, X-rays, or other limited dental operative work. I think of a multiple office arrangement as one where a practice is managed in each operating room. Hence, each operating room must be completely equipped with basic as well as hand and other armamentarium.

Dental assistants must be trained to handle all details except those that require the scientific, digital, and operative skills possessed by the dentist.

Toward this end the dentist must diagnose, recommend, plan, and record completely the treatments needed for each case. Organizationally this develops a pattern for assistants to use as a guide in preparatory as well as operatory work which they need to know about in advance.

Dental operations may be performed in many different ways. Experience has already convinced a few professional men that we are most likely to conduct our own operations efficiently if we think of them always in terms of delegating all motions not requiring the scientific digital and operative skills of the dentist.

As you might suspect, this ability on the part of a practitioner is hard to come by but, in these times looking toward the projected population explosion, practitioners we now have and hope to graduate can become more efficient and handle more people.

In this short discussion it then appears we must place some emphasis on organization that composes physical and human factors. The foundation for increased production to meet the demands of the public for more dental care will require an aggregate of the dentist's technical operative know-how, his resourcefulness in training and the acquiring of trained personnel communication and utilization.

In conclusion: Collectively, much time capital on the part of the dentists we now have is being wasted. This potential must be recovered and fully utilized, which in turn will meet the demand made on the profession today. The profession has a large volume of production potential. Individually, practitioners are not too clear on this point. Those that are, have a meaningful as well as a sound grasp of their own practice potential, with increased production, qualitatively and quantitatively.

Moderator Hillenbrand: The second paper in this series on "Office Organization and Procedure" will be given by the busiest man in Philadelphia. For purposes of the Annual Session, Philadelphia is beginning to include (on the basis of hotel rooms) both Atlantic City and Wilmington, Delaware. So if any of you are unhappy about the size of your rooms at the Sheraton and wish to move around a little bit, simply talk to the next speaker. I can tell you in advance his answer is that nothing at all can be done.

I am talking about Dr. Jay H. Eshleman, who has addressed this group earlier this morning. He is General Chairman of the Local Arrangements Committee for the American Dental Association meeting. He speaks now as an educator.

Diagnosis and Treatment Planning

JAY H. ESHLEMAN, D.D.S.

Modern concepts of diagnosis and treatment planning place strong emphasis upon dental health education, prevention, and early detection of dental disease.

The care which the oral cavity and the associated parts receive is vitally related to the total health of the individual. This is an accepted fact, a philosophy now embraced by those engaged in dental education, research, public health, and to a more limited degree to those engaged in dental practice.

A review of the literature reveals at once the sharp contrast with concepts which were embraced a generation ago, when teaching and practice were more limited in scope, and somewhat confining in nature.

There is little doubt the public image of dentistry today has been created by what the profession accomplished in the past, rather than what we are doing at present, or planning for the future. Indeed, there is strong evidence to support the theory that many men now engaged in private practice should be awakened to the new concepts of diagnosis and treatment planning.

It is rather alarming to learn from the recent *Survey of Dentistry* the low priority given to preventive measures in private practice. After excluding from the sample all specialists except pedodontists and periodontists, the National Opinion Research Center rated practices as follows: 20 per cent highly preventive, 29 per cent moderately preventive, 25 per cent somewhat preventive, 26 per cent negligibly preventive.

A ray of hope does exist however, for the National Opinion Research Center also reports a higher level of interest in the principles of preventive dentistry by the recently graduated dentists than among older practitioners. For this accomplishment the dental schools should receive a major share of credit.

States which have achieved a high level of accomplishment in the area of prevention and dental health education have demonstrated the effectiveness of the team approach, using all public agencies,

volunteer associations, and professional societies to reach dental health objectives.

Regardless of what approach is used, there is no substitute for the individual practitioner, who can and should be the most effective good will ambassador for dentistry in the world today. The human relations atmosphere or climate which he creates and maintains in his personal contact with patients, both within the office and beyond, determines in large measure the success or failure of all diagnosis and treatment planning.

The mass application of a treatment plan rules out the opportunity to develop a personalized approach which is the key to any program designed to develop confidence, the precursor to acceptance. What is accomplished by talking to a patient? Obviously to learn something about symptoms, subjective and objective, their nature and history.

True, but though this approach is used by the majority of men today, it fails to take advantage of the most important aspect of patient-dentist relationship, for it focuses attention on effect with too little thought about cause. Dental defects do not just happen. There is usually a cause.

Accordingly, the aim of talking with a patient is to find out not only about the immediate symptoms, but something about himself personally, his strengths and weaknesses, his experiences through life not only as related to dental care, but experiences in general, and his reactions to them. Learning about these things will help us better understand not only the approach to the patient, but more important his behavior once we have reached him.

Lasting impressions are formed during the initial interview and the wise practitioner will:

Take time to absorb and reflect.
Permit no interruptions.
Eliminate noisy competition.
Speak on patient's level.
Be friendly, relaxed and smile.
Avoid quizzing or grilling.
Try to detect signs of distress, anxiety, pain, sadness, fear, anger, depression and cut your cloth to fit the pattern.
Talk little but listen much.
Avoid writing if possible.
Appear unhurried.
Be interested.

Be charitable.
Be tolerant.
Be truthful.
Be humble.
Be patient.

Proper attitudes precede proper treatment, and he who projects himself into the patient's position will most likely be faced with most of these questions, and be prepared to supply a suitable answer.

Does he know how frightened I am?
Does he know why I came, what I want?
Does he know what I need?
Will he be gentle?
What is he planning to do?
Why?
How?
When?
How much will it cost?
How will it look?
How can I pay?
How long will it last?

By anticipating these questions in advance, most of which will never be expressed by the patient during the initial interview, one can develop an approach designed to clear the human relations climate, removing the haze of doubt, fear, anxiety, distrust, and similar hazards which impede an effective patient-dentist relationship, an essential prerequisite to sound diagnosis and effective treatment planning.

In this atmosphere of understanding and mutual confidence, the diagnosis of the patient's problems can be discussed and the treatment outlined. Every patient is entitled to know the conditions and the plans for treatment.

Again, in this atmosphere of understanding, the cost elements of the services become a natural point for discussion, and acceptable payment methods can be agreed upon. Open discussion of this kind paves the way for cooperative efforts that will have very favorable influences on a a broad continuing health service for the patient and a satisfying practice for the doctor.

Moderator Hillenbrand: We have just heard discussion in two areas of this panel, and we come to a third and very important

one. This is "Dental Care for Various Population Groups," including the child, the aged, the chronically ill, and the hospitalized. The first speaker is John M. Frankel.

The Child: An Incremental Care Program

JOHN M. FRANKEL, D.D.S., M.S., M.P.H.

One of the most challenging recommendations of the Report of the Commission on the Survey of Dentistry is incremental dental care for the entire child population of the nation.[1] What is incremental dental care? Simply stated it is a system for meeting the dental needs of a population as they occur. When such a system begins with the treatment of an individual's first dental decay and continues with treatment of successive new lesions as they appear, there never is any large accumulation of unmet needs. To date, experience with incremental dental care has been in public programs and for school populations. The programs began with five or six year old children in kindergarten or first grade, and it was necessary to treat the accumulated needs of these children before entering upon the incremental program itself.

In the example shown (Fig. 1), the first round of treatment is at age three, caring for the first increment of dental decay in the primary dentition during the hypothetical year 1961. A child in this group is in cohort A and remains in this group as long as he is in the program. His new increment of dental caries is treated during the treatment rounds of each successive year. Each year a new cohort of the youngest age group is added until the desired age spectrum is covered in the program. The children in cohorts D through K are not yet born, but they will take their places in the program when they reach age three. The child in cohort A first treated at age three in 1961 will have had eleven treatment rounds by the time his cohort has reached age thirteen in 1971.

The incremental approach permits beginning on a small scale, with gradual expansion of the program's size. Also, it is possible to

anticipate administratively the manpower and costs requirements in advance of budget deadlines. When the desired age spectrum has been covered, these manpower and cost requirements become relatively stable.

The Richmond and Woonsocket studies[2] did not adhere to successive age groups rigidly. Children of a wide age-range were treated at the outset in order to eliminate accumulated neglect. In Richmond,[3] where approximately 5,000 children, age six to sixteen, had an average number of 5.8 carious teeth per child, one dentist spent an average of 2.88 man hours per child caring for 508 children in the first treatment series. At the time of the fourth and final treatment series, the children had an average of only 1.32 carious teeth, the dentist needed to spend only .75 man hours per child, and he

PATTERN OF INCREMENTAL DENTAL CARE

Year of Program	*Age of Child*											
	3	4	5	6	7	8	9	10	11	12	13	ETC.
1 (1961)	A											
2 (1962)	B	A										
3 (1963)	C	B	A									
4 (1964)	D	C	B	A								
5 (1965)	E	D	C	B	A							
6 (1966)	F	E	D	C	B	A						
7 (1967)	G	F	E	D	C	B	A					
8 (1968)	H	G	F	E	D	C	B	A				
9 (1969)	I	H	G	F	E	D	C	B	A			
10 (1970)	J	I	H	G	F	E	D	C	B	A		
11 (1971)	K	J	I	H	G	F	E	D	C	B	A	
Etc.												

FIGURE 1.

was able to care for 1,343 children. During each of the four treatment series there were new children entering the program who had accumulated dental needs which required treatment and other children whose backlog of need had not been completely eliminated. Thus, even in the fourth series the dental man hour requirements were probably higher than in a program limited to incremental care. Brazilian experience[4] adhering to successive age groups more rigidly and increasing the age spectrum more slowly, produced similar results.

Certain aspects of the incremental principle are inherent in well run private practices. For example, regular recall programs are designed to treat the private patient's incremental needs just as successive treatment series do for patients in public programs. In fact, the use of the incremental principle in private practice has definite advantages over its application in public programs. Private practice can more easily include the care of preschool children instead of waiting until age five or six as is done in school based programs. Furthermore, private practice has more ready access to parents than does a public program, and parent indoctrination is a necessity to the successful operation of any children's program, public or private.

One of the established values of a public dental program on an incremental basis is the opportunity to measure the impact of the program on the oral health of the population served. When the incremental principle is applied to private practice, the practicing dentist also should be able to view the same kind of progress for his patient roster. This can be done by dividing his patients into identifiable groups and measuring the accomplishments of each group. The groups used might be all new patients, regardless of age, admitted each month or calendar quarter or each new family group added to the practice. A dental service corporation in its contract with a labor welfare fund might consider new employees added to the program each month or each quarter as a group for program purposes. Similarly, in a hospital or institutional setting all new admissions during a month or quarter could be considered a group.

Private dental practice represents the greatest resource available to meet the challenge of the *Survey of Dentistry* recommendation on incremental dental care, and we must exploit the potential of private practice to the maximum. Nevertheless, many communities may prefer public programs or require such programs to supplement

the efforts of practicing dentists, especially where a substantial portion of the population cannot afford private dental care.

Whether in public programs or private practice, the application of the incremental principle permits an orderly system of accomplishing the main objective: regular and complete dental care for as large a segment of the nation's population as is possible. By coupling the increment principle with maximum use of preventive measures, effective patient education, and modern practice methods including optimum use of auxiliary personnel, it should be possible to achieve the fullest use of the country's dental manpower for the fulfillment of dentistry's professional obligation.

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Moderator Hillenbrand: I think we will continue to hear a great deal about the incremental care program in the predictable future. For some reasons which are not quite clear to me, the incremental program is the subject of debate and controversy in some areas. I hope that after the debate and controversy are over that we will have a better result than the farmer who attempted to cross two roosters. His end result was two cross roosters.

In the past few years the nation has concentrated its attention on one area of our health problem, the health care for the aged. This, as you know, is now under national debate and the dental profession has an important stake in its outcome. Dr. Albert H. Trithart will discuss this topic.

Dental Care for the Aged, Chronically Ill, Institutionalized, And Homebound

ALBERT H. TRITHART, B.S., D.D.S., M.P.H.

Dental health problems of the aged, chronically ill, institutionalized, and homebound are receiving increased attention these days. Several factors account for this increased interest. These people constitute a greater segment of our society than ever before, and this segment is growing and will continue to grow in proportion to our total population.

The National Health Survey reports that seventeen million people, or 9 per cent of our nation's people, are sixty-five years of age or older. The Survey also reports that 10 per cent of our population has one or more chronic conditions with some degree of activity limitation.

Although the conditions of old age and chronic illness are not synonymous there is a clear relationship between the two. It is reported that chronic illness is thirteen times as prevalent in people sixty-five years of age and older than persons under forty-five years of age. The health picture becomes worse with advancing years and more and more of these people become homebound or institutionalized. Among those seventy-five years of age or older almost one-third are homebound or institutionalized and need help in getting around.

Since there is substantial overlapping of the aged, chronically ill, homebound, and institutionalized in our society, for purposes of this brief discussion they will be considered together.

How much medical and, more particularly, dental care do these people receive? The National Health Survey reports that people age sixty-five and over average 6.5 physician visits per year. Those with partial physical limitation averaged 11.4 visits per year and those with major limitations 18.9 visits. It is not particularly surprising that the rate of physician visits per year is substantially higher for the aged and chronically ill than for younger, healthier age

groups. A similar situation does not prevail in regard to dental care. People sixty-five years of age and older average only 0.8 dental visits per year, which is substantially less than 1.4 visits for younger age groups of our population. Apparently, as people get older they seek more and more medical care and less and less dental care. This paradoxical situation has been attributed by some to the fact that many of these people are edentulous and no longer need dental treatment. Being endentulous may provide a partial explanation for the limited amount of dental care these people receive, but I do not think it is an adequate explanation. In fact, an adequate explanation is not readily obtainable, and that is why we need a great deal more information about the dental health of these people. We also need much more information on the availability of dental care for these people.

A wealth of information is being gathered in studies around the nation to show the dental health status, levels of dental care, and treatability factors associated with providing dental treatment for these people. Special treatment facilities and equipment are being developed. Dental manpower needs and treatment cost are being studied. Dentists and auxiliary personnel are being trained to train others in some of the special techniques and methods of treating bedfast patients. Already much information is available, and more will be forthcoming.

Most of the pilot studies and demonstration programs that have been done at the state and national levels have been in metropolitan areas, such as New York, Chicago, and Kansas City. Information obtained in these studies and demonstrations will provide the basis for sound, well thought out programs in small towns, as well as large cities. The data obtained from these studies will only be as valuable as they are used to plan sound dental health programs for the aged and chronically ill everywhere.

One of the major responsibilities of organized dentistry is to see that this valuable information which has been so painstakingly gathered is put to practical application. The American College of Dentists, and more specifically the individual Fellows of the College, are in a position to provide the leadership needed to utilize this information at the local level. Usually those agencies which are concerned with and responsible for the health and welfare of the aged

and chronically ill will welcome assistance and counsel from the dental profession. A well informed local dentist can provide much guidance for local programs which can be obtained from no other source.

Little has been said or written about dental health education for the aged and chronically ill. The National Health Survey reported that more than half of those persons sixty-five years of age and older thought the loss of teeth was inevitable, regardless of the care taken of them. This attitude is in contrast to that of young people who think natural teeth, with adequate care, should last for a lifetime. We seek to foster a favorable attitude toward dental health among our young people by all the educational methods at our command. However, almost nothing has been done in the area of dental health education among the aged and chronically ill, or the persons who care for these people. Admittedly, the task would not be an easy one, but experience with other population groups has shown the value of supplementing dental treatment with dental health education. Dental treatment for the individual, or a community of individuals, can always provide a sound springboard for dental health education.

In this brief discussion, I would not suggest what methods of dental health education should be used with the aged and chronically ill. This area needs exploration by health educators, social scientists, as well as dentists. I think we need to know much more about the attitudes of these people toward dental health and dental care, and what motivates them to want and seek dental treatment. We already have a good deal of information on what their dental needs are and what is required in time and money to treat these needs. But what do *they* think of their own dental health status, and what do *they* or the *people* who care for them, think they need in the way of dental treatment? Obtaining this information should provide a challenge to those who want to explore the whole problem.

Luther L. Terry, Surgeon General of the Public Health Service, in a recent address, stated that nursing homes and home care are fields virtually untilled by the dental profession, and are the two most profitable locations for the improvement of services to these large groups of people. He further expressed the hope that practical proposals for the delivery of dental services to the chronically ill and aged will be forthcoming.

Until the presently proven methods of prevention catch up with the aging and chronically ill segment of our society, their dental health problems will continue to be of substantial proportions. Perhaps in thirty or forty years, when most of a nation of people will have had the benefits of fluoridation for a lifetime, the dental health problems of the aged and chronically ill will be greatly reduced. Until that time comes, it is a moral and professional responsibility of organized dentistry to provide active guidance in the development and operation of dental health programs for the aged and chronically ill.

If dentistry is an essential health service, it is a health service for the aged and chronically ill as well as everyone else, and includes dental health education as well as treatment.

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Moderator Hillenbrand: There is another area of our population which requires greater attention from the members of the dental profession in their planning. This is the hospitalized patient. We have a competent expert to discuss this problem with you who I assume is known to everyone in this room, Dr. James R. Cameron.

Dental Service for the Hospitalized

JAMES R. CAMERON, D.D.S.

The scope of dental service in a hospital will be governed largely by the type of hospital, its location, and its patient load.

A general hospital whose patient load leans more toward surgical than medical cases, will, naturally, have a more rapid turnover of patients and fewer hospital days than would a hospital whose services are mostly medical. The dental service in such a hospital might serve the care of patients best when limited to diagnosis and oral surgery procedures.

In hospitals where the patients on the medical service outnumber those admitted for surgery, bed occupancy will be more lengthy and dental problems may arise requiring attention from the dental staff on a wider scope than that covered by diagnosis and surgery alone. In such hospitals, the dental staff should be so organized to cover the wider scope of dental practice and that this service be rendered by dentists best qualified in each particular branch of dentistry. Broad dental coverage in the care of aged and handicapped patients, who are institutionalized, will require a staff of capable, interested, and sympathetic general practitioners of dentistry.

Most teaching hospitals offer residency training programs. In the rapidly expanding field of oral surgery, it is advisable that applicants for an oral surgery residency of two or more years complete, prior to their hospital residency, a year of basic science study on the graduate level. This year of basic study directed to the clinical practice of oral surgery offers the student a firm foundation for development in practice. To mention but one study: that of training in physical diagnosis. This will afford the resident an excellent background for the necessary evaluation of oral surgery patients.

An oral surgery service in a large hospital will, of necessity, be both an in-patient and out-patient service. The chief of the service, and as many associates as possible, should be Board qualified and devote time by way of daily visits to the hospital in order to adequately supervise the training and guidance of the residents in their care of patients on the service.

The oral surgery out-patient clinic will afford community service

and be a feeder for the in-patient oral surgery service, as is the accident ward of the hospital. In order to function more efficiently, an out-patient clinic should have stated hours of operating, and the attending staff be punctual and regular in its attendance. The resident staff should be assigned certain hours in the out-patient clinic as part of its overall training. This should be under the supervision of the attending members of the dental staff who need not necessarily be Board certified, but should have some formal training in the care of ambulatory oral surgery patients. Board certification in the area of orthodontia or periodontics may be an advantage, if such services are rendered on an out-patient basis.

The chief of the oral surgery service, and the chief of the department of dentistry, if such exists, should be eligible for appointment to the executive committee of the medical staff and be willing to serve on other committees. All members of the dental staff, both in-patient and out-patient, should be considered as part of the general medical staff and observe the same disciplines as do other specialty services in the hospital family. Dentistry, in whole or in part, should be an integral part of every well conducted hospital caring for the sick and injured.

In summary, the modern hospital is an institution that exists for the prevention of disease on the broadest possible scope, as well as for rendering curative therapy in all branches of the healing arts. The hospital is, of necessity, a major asset in all communities and to meet present requirements for a full coverage of health service, dentistry like that of medicine, must assume its full responsibility as an important part of the health team.

As stated earlier in this paper, the scope of hospital dental service will depend on the type of institution being served. Operative dentistry in the various branches will occupy an important role in a children's hospital, whereas prosthetics will be the major part of dental service in hospitals and/or convalescent homes caring for the aged and chronically ill. Hospitals for nervous and mentally sick patients should, likewise, have full coverage of all phases of dental practice.

As the progress of dental education and practice continues to embrace a wider concept of rendering a health service to the community, dentists must be willing to cooperate to the fullest extent with other health agencies in the interest of patients.

Moderator Hillenbrand: I am sure you will agree that Dr. Cameron's boss, Dean Timmons, will approve of Dr. Cameron's paper. Dr. Cameron later in the program will have an opportunity to be critical of Dr. Timmons when the dean rises to his little feet.

Having considered the dental care available to the American people, we come to the critical problem of paying for it. This is the discussion of "Payment Methods for Dental Care," particularly in the area of pre-payment plans. The speaker is Dr. Carlton H. Williams of San Diego.

Pre-Payment Dental Care Plans

CARLTON H. WILLIAMS, D.D.S.

The appearance on the American scene of pre-paid dental programs should certainly be met by the profession with a feeling of confidence, provided the proper foundation has been laid for the programs. Pre-payment is just another form, or method, for paying the cost of repairing dental destruction, and since the dental profession has effectively convinced the public that dental care is an important and necessary portion of the total health picture, it is only natural for the general public to look for any means whatsoever to pre-pay this as they have other medical and hospital needs. In the past we have used the usual concept of the patient or his family paying for the work upon completion; then a few years ago, there appeared the post-payment plan wherein a third party, usually a bank, bought the account and the patient paid the third party. These post-payment plans have spread rapidly and are used across the breadth of our land.

Most pre-paid programs are the result of fringe benefits of employment, determined at the bargaining table, where management and labor have agreed that dental care is the next necessary benefit for employees. These types of union sponsored—employer financed programs are bound to grow, and it is up to the dental profession to see that the principles that have led our profession to the pinnacle

of perfection are not destroyed, lest we see a degrading influence creep in and a general retrogression of our profession result.

The foundation upon which the programs should be built, or the yardstick by which they can be measured is extremely important and the following points are essential to preserve our independence, and our independence is imperative.

Open Panel Programs Are Necessary

The open panel is necessary because in the closed panel operation the dentist loses his right to accept or refuse a patient, the patient loses the same right and it puts undue duress on the patient because if the patient refuses to go to the closed panel he loses all of the benefits for which he has paid in any pre-paid program. Further, the closed panel leaves us very vulnerable to non-professional domination. The closed group has only one patient, and if any one of us should have only one patient, that patient's desire would be a dictated decree, and independence would surely be lost.

Payment for Services Not on a Fixed Schedule of Fees

The flexible fee approach is absolutely imperative if we are to remain free to use professional judgment in professional decisions. The average American is not average in any respect. Our patients demand different and individual treatment, and cannot be treated as a commodity, or a can of groceries. Private practice is a complicated business; it embraces men of varying skill, varying clinical experience, varying levels of education beyond graduation, varying economic areas and communities, and varying individual responses. In order to allow for these variables, some flexibility must be preserved in the fee. This great profession was developed under a free system wherein each doctor could seek his own level of education, his own level of training, and his own standard of living. We must preserve the incentive. Any program of averaging is a program of planning for mediocrity.

Patient Financial Interest

The patient should share some financial interest in his dental care; therefore, a co-insurance, or co-participation factor should be

encouraged. This makes for a more interested patient, and one that also acts as comptroller of the program.

Pre-Statement of Cost to Patient

This is necessary to prevent misunderstanding and is in itself a time tested economical law.

Professional Review Committee

The profession should establish a committee to review the programs to insure that the program does not fail because a few unscrupulous operators give it a bad name. This committee must have authority to deny further participation to those found to be consistently doing substandard dentistry, or employing unreasonable economic policies.

At the present time there are a number of programs operating which do measure favorably when judged by these standards. They are administered in a number of ways, and the details of administration must not be confused with the fundamentals of operation. All programs by and large must leave the professional decisions to the profession, and no form of administration that would encroach upon this premise can be embraced.

With these fundamental points in mind, and I realize all too well that there is great room for expanding the reasoning behind them, I believe the dental profession can look with great confidence to the future. However, this may not be all a bed of roses. To sincerely do a study of self-analysis is not easy, and then to have the intestinal fortitude to carry through and actually police the programs will take men of courage, but it is my belief that we should insure the pre-paid purchaser that he will get value received for funds expended, and that if he does, the other concessions he has requested, such as reduced fee programs, closed panels, or preferential fees will be doomed.

Moderator Hillenbrand: As a matter of information, I think you may like to know that the American Dental Association will provide pre-payment insurance for its employees and their dependents on a co-participation basis. For many years the dental

profession has been looking for an insurance program and one of the trends, as Dr. Williams indicated, is the use of the prepayment mechanism. If this grows—as grow it must and grow it should—we will see one of the important changes in the practice of dentistry and the provision of better dental health services to more of the people.

We come to one of the papers that I think we might call the heart of the panel discussion because you have heard from all of the technicians as to how various aspects of various programs could be administered, but the responsibility for such programs must fall somewhere and the next topic is where this responsibility falls. The speaker is Dr. Carl L. Sebelius, recently of Nashville, now of Chicago.

Responsibilities for Health Care As They Rest With the Profession And the Community

CARL L. SEBELIUS, D.D.S., M.P.H.

A principle used in social, political, and administrative science should apply to a program of dental health for the American people. The principle is that the responsibility for the development and conduct of any program should rest with the smallest unit which has the capacity and is willing to carry out the delegation. This principle is carried out in the long-standing statement of the American Dental Association when it is stated that dental health should be the concern first of the individual, then the family, the community, the state, and the nation, in that order.

To set forth and reach the long-range objective of developing a dental health plan for the American people, it seems certain that such a program cannot be put into operation overnight, but must develop project by project over a period of time, with parts of the

program put into effect that seem to have the highest priority. One can be certain that communications between the profession and the community must be strengthened, and that dental problems are understood by both groups. The dental profession must be in a position to shoulder much of the responsibility of initiating such a program, since dental diseases generally are not considered by the public to be dramatic, and oftentimes are overlooked due to the fact that there seem to be other problems of a more urgent nature. If the dental profession is not strongly motivated by a conviction that dental health of all people must be improved, many delays in the development of a dental program will take place and little will be done to raise the level of dental health in our country.

The dental profession needs to face up to the fact that what happened in countries where the profession was not well organized, and without a policy in regard to dental care, can happen to us. It had little to say about the type of dental health program these countries have today. In other countries, however, the profession has had a definite part in the development of their program which usually has been directed toward dental services for children.

Social changes are rapidly taking place throughout the world. Recently a physician well versed in social security programs of a medical nature stated that "the horse of social security is galloping very fast indeed." Factors such as are suggested in his statement need to be recognized by the dental profession so that a realistic and strong policy can be taken which meets the needs of the citizens of our country and is satisfactory to the profession. We need to tackle this problem together.

The Profession

Some of the responsibilities of the profession are to work out ways of providing dental services to groups such as welfare recipients, the handicapped, aged, institutionalized or hospitalized patients, unions seeking care for their members and families, and others; to cooperate with agencies designed to promote better dental health and to understand their aims and objectives; to maintain standards so that all people have a higher regard for dentistry and do not consider it a luxury service; to take its rightful professional place in the community by being active in civic affairs and participating in dental programs of education, prevention, and care; to participate

in program planning which places special emphasis on the prevention and control of dental diseases; and to promote dental health through organized community efforts.

The Community

While leadership and responsibility for good dental health rest primarily with the profession, the community has many responsibilities in this field. The slow acceptance of fluoridation as a public health measure is an example of community apathy. Here is a method by which dental caries can be reduced by two-thirds. Communities have set up voluntary agencies for many diseases, many of which affect only a small percentage of the population; yet, no voluntary agency has been set up for dental diseases which affect most all people. There is more misinformation on the subject of dental health than in any other health field. The people of the community should realize their responsibility and place the dental health program high on the list of items which should receive attention.

To summarize: It is essential for all groups to work together. The responsibility for dental health care rests both with profession as well as with the public. Prime responsibility should be taken by the group which has the capacity and is willing to take such responsibility. Planning, communications, and teamwork are essential for the development of a program of dental health for the American people.

Moderator Hillenbrand: I am sure you are all agreed that in the ultimate, dental health care depends upon dentists. This depends upon the reserve of dental manpower, and to a lesser degree, the dental hygienists and dental assistants are able to become members of the dental health team. We will now examine this area briefly with several speakers. The general topic is "Need and Availability of Health Service Personnel."

The first speaker is B. Duane Moen, director of the Bureau of Economic Research and Statistics of the American Dental Association, who probably knows more numbers about the dental profession than any other man in the country.

A Statistical Analysis of Dental Manpower

B. DUANE MOEN, M.A.

The population in the United States is growing at a faster rate than is the number of dentists, and chances of reversing this trend are slim. However, it is useful to analyze, from time to time, the latest quantitative information available on this problem, as a measure of its seriousness and as a basis for planning remedial action.

A bit of history of the supply of dentists may help to place in perspective the current situation. According to the decennial census, in 1840 there were 1,200 dentists, or one dentist for every 14,224 people. Ten years later the situation was much improved, with one dentist for every 7,934 people. The ratio continued to improve until the 1930 census, when there was one dentist for every 1,728 persons. Since 1930, the supply of dentists in relation to the population has declined. The ratio was 1,865 in 1940 and 2,009 in 1950. The count of dentists from the 1960 census has not been released, but it will probably be in the neighborhood of 84,000. If so, the population per dentist based on the 1960 census will be about 2,150.

Dentists in the armed forces and on staffs of dental schools are generally not counted as dentists in the census. The population-dentist ratio based on all professionally active dentists is approximately 1,950 persons per dentist. In 1955, this ratio was estimated to be 1,888.

A comparison of population increases in past decades provides a basis for future expectations. In the 1930's, the population increased by 9 million; in the 1940's, 19 million, and in the 1950's, 29 million.

The Bureau of the Census in 1958 issued population projections to 1980. Actually, four projections were issued, based on various assumptions regarding the birth rate. The second highest projection (Series 11) is often regarded as the "most likely" of the four projections. Since these projections were issued, the population has grown faster than indicated by Series 11, but not quite as fast as indicated by Series 1.

If the population does increase as expected by the Series 11, the increase will amount to 33.7 million persons in the 1960's, and 46.2 million in the 1970's. This would mean a total population of 213.8 million people in 1970, and 260,000,000 in 1980.

There appears to be no chance that increases in number of dentists will keep pace with population growth. Currently, dental schools are graduating about 3,250 dentists per year. However, when losses to the profession through death and retirement are taken into account, the net gain of professionally active dentists is estimated to be 1,000 or less per year. In order to keep pace with current population growth of about 3,000,000 per year, the increase in number of dentists would have to be about 1,500 per year instead of 1,000. The average dental school graduates about 72 dentists per year. Thus, it would require about seven additional dental schools of average size right now to maintain the existing population-dentist ratio. The schools established since World War II average only about 50 graduates per year and it would require ten schools of this size right now to maintain the existing ratio.

Population growth is expected to average 3,620,000 per year during the period 1965-1970, and 4,620,000 during the 1970's. In the 1970's, then, a net gain of 2,370 dentists per year will be required on the basis of one dentist per every 1,950 persons added to the population.

Whether it will be necessary to maintain the existing ratio of dentists to population is a debatable question. The supply of dentists in relation to the population has been declining since the 1930's. The decline continued during the 1950's. Yet, the Bureau of Economic Research and Statistics has found in its surveys of dental practice that dentists are not falling behind in their ability to meet the demand for dental care. The average wait for an appointment actually decreased slightly between 1952 and 1958, and the ratio of dentists who reported they were too busy to those who reported they weren't busy enough, remained almost constant. The use of auxiliary personnel has increased greatly, and the majority of dentists now have high-speed handpieces. Office efficiency has been increased in other ways. As a result, the productivity of the average dentist has increased during the last decade at a rate of approximately 3 or 4 per cent per year.

Whether dentists can continue to increase their productivity at

this rate is uncertain. There is no certainty of any future development in dental equipment that will promote productivity to a degree comparable to that of high-speed drilling equipment. There is some uncertainty, too, regarding the potential of auxiliary personnel as a means of increasing productivity. Some dentists do not have the training or the temperament to utilize additional personnel. With the complete freedom of location that dentists enjoy, there will always be concentrations of dentists in certain desirable places, and many of these dentists will not be busy enough to warrant the employment of auxiliary personnel.

Some concern has been expressed regarding the ability of dental schools to attract a sufficient number of qualified students. It should be noted that the pool of potential dental students will increase greatly in the near future. In the age group 18 to 21 years, there were 9,605,000 persons in 1960. This figure will grow to 12,153,000 in 1965, 14,573,000 in 1970, 16,265,000 in 1975, and 18,634,000 in 1980. In other words, the number of people of undergraduate college age will about double in 20 years.

Not only will the population of college age increase markedly, but the proportion of this population going to college will also increase. The Office of Education, U. S. Department of Health, Education and Welfare, issued projections of earned college degrees to 1970. The projections of bachelor's and first professional degrees were 405,000 for 1960; 534,000 for 1965, and 718,000 for 1970. This is a projected increase of 77 per cent in bachelor's and first professional degrees from 1960 to 1970, which compares with a projected increase in the population 18 to 21 years of age of 52 per cent. On the basis of these two figures, 77 per cent and 52 per cent, it would appear that the expected increase of 94 per cent in population by 1980 would bring an increase of 139 per cent in the number of earned degrees.

Unless formation of new dental schools occurs much more rapidly than in the recent past and in the foreseeable future, it appears likely that many qualified aspirants will be denied the chance to study dentistry.

In summary, I should like to make the following salient points with respect to the supply of dental services:

1. The population has for three decades been growing faster, proportionately, than the number of dentists, and this trend will continue in the foreseeable future.

2. Dentists have been able to increase their productivity to such an extent that the length of wait for an appointment has not increased, at least during the last decade.
3. Not only is the population growing tremendously, but per capita consumption of dental care is increasing rather rapidly.
4. Whether dentists can continue to "keep ahead" of dental demand is uncertain, because the effectiveness of future technological developments and preventive measures is uncertain.

Moderator Hillenbrand: When we discuss manpower needs there are many people who think that the numbers game is being played. This consists in taking a variety of figures and statistics and coming out with the answer you want. I am sure after hearing Mr. Moen, however, we are convinced that there is a problem, but this problem must be approached realistically.

In order to tell us some of the realistic approaches to the manpower problem, we have asked Mr. Reginald H. Sullens, who is executive secretary of the American Association of Dental Schools, to participate in this panel.

Realism in Meeting the Personnel Problem

REGINALD H. SULLENS, B.M.E.

Injecting "realism" into a complex of circumstances as variable as those under discussion here today is indeed a challenge. In order to reduce this assignment to reasonable dimensions, I have elected to pass over several of the approaches which appear to provide some of the most practical solutions to future dental manpower problems because such activities as the broader application of preventive measures, the more efficient and effective use of auxiliary personnel, and a continued improvement in office efficiency have already been treated in some detail by previous speakers.

I would like to focus this discussion on three programs which appear to have merit, both in terms of financial realism and in terms of possible attainment. First, and of extreme importance, is the need

to continue our studies of increasing the efficiency of existing facilities. Even though the attrition rate in dental education is as low as that in any field of professional education, we know that there is still about a 7 per cent loss of students during the four year dental curriculum. Reasons such as illness, catastrophic financial reverses, and other circumstances beyond control will undoubtedly always exist, but we can and should strive continuously to eliminate the loss of students through academic failure and various types of emotional disturbances.

Continued and increased emphasis on testing programs for the selection of students and on counseling programs throughout the four years of dental school will bear large dividends for the small amount of effort and money invested. For example, if the mortality rate can be reduced by only 2 per cent, there will be 72 more dentists graduated in 1964—the equivalent of one new dental school of average size.

Many dental educators will admit that it may be possible to increase the utilization rate of their existing facilities. The accelerated programs of World War II are one example of a way in which space can be used more of the time. However, for a solution of this type to be truly "realistic," there must be careful consideration given to the problems which are generated by an accelerated educational program. For example, there needs to be an increase in the number of faculty available, a fact which may make "acceleration" unrealistic. There are many special scheduling problems which must be confronted and solved. In spite of all of these problems, it is my personal view that we should give careful consideration to some type of accelerated program as one means of increasing dental manpower in the future. In this connection, it should be mentioned that several of the liberal arts colleges and universities have already embarked upon accelerated programs and many others are giving this possibility serious consideration.

The second area in which there seems to be need for mature and unemotional evaluation is the construction of new dental schools. Even though we may not all agree on the precise number of new schools needed, there are few who deny that some new dental education facilities will be needed within the next few years. In my personal view, a realistic evaluation of this question must include a recognition of the severe financial problems involved in building

and supporting new institutions. Recent estimates place the cost of building and equipping a dental school for 100 freshman students at about $6,000,000. Annual operating expenses for a school of this size are at least one and one-quarter million dollars. To be realistic, it seems to me that the search for funds needed for new schools—whatever the number—and the rehabilitation and expansion of existing schools must include all possible private, state, and federal sources. The solution of a national problem—which dental health most certainly is—seems to me compatible with the utilization of national resources under the proper conditions.

In the planning of new schools, we need to increase our effort to determine the approximate geographical locations in which additional schools might be most effective in meeting the manpower problems during the coming years of rapidly changing population distributions. A better understanding and broader support for the various regional compact programs which are now in existence could do a great deal in spreading the base of financial support and might, if properly planned and directed, make it possible to start a dental school in areas which otherwise could not support one.

Third, and finally, there is tremendous potential in studying the changes which might be made in the dental curriculum to bring about increased efficiency and productivity by the dental graduate. Many of you are undoubtedly already familiar with the programs which are now conducted in 40 of the dental schools in the United States designed to increase the dental student's ability to operate efficiently with a chairside assistant. We do not yet know precisely what the impact of this program will be but it is nearly certain that it can and will alter materially the long range projections which have been made on the number of dentists needed by 1970 or 1975. A continued emphasis on teaching the concepts and application of principles of preventive dentistry at the undergraduate dental student level will certainly have its effect.

Perhaps not really "realistic" at the *present* time, is the thought that dental education might well experiment with the two year biological science school, following completion of which the student would transfer with advance standing to a regular four year dental program. To be sure, there are many difficult problems involved in this approach, but the seriousness of the impending dental manpower shortage justifies the *consideration* of all feasible solutions.

At its 1961 annual session, the American Association of Dental Schools adopted a resolution:

> To the effect that the Association encourage investigation of and possible experimentation with a two-year biological and preclinical science program in dental education, upon completion of which a student could transfer with advanced standing to an established dental school.
>
> It was further recommended that consideration of such a program should be on a "regional" basis, because of the possibility of preclinical problems, . . . that consideration should be given to the location in an area and in a relation that may lead eventually to expansion to a four year school.

It is entirely possible that an experimental program with a two year dental school may be started within the next year. It is equally possible that an evaluation of this experiment will demonstrate that dental education is not amenable to the two year biological science school. Within the context of the problem this morning, however, it seems proper that we give consideration to all reasonable efforts of the dental profession to find solutions for the obligations which have been intrusted to it by the public—the highest possible level of dental health for all of our people.

Moderator Hillenbrand: Recruitment is a problem in which the profession and the American College of Dentists have had very large interests and I would hope they would have increasing interest in the years to come, for it is important to the maintenance of a satisfactory level of health personnel. The member of the panel who has been asked to speak on this subject is Dr. J. Wallace Forbes.

Recruitment of Health Service Personnel

J. WALLACE FORBES, D.D.S.

The dedication of our program this morning to "A Dental Health Plan for the American People" will have been in vain indeed, if we cannot increase our recruitment for more and better personnel for health service. The entire basic foundation of the many facets of the dental health plan that have been discussed and presented on this

platform depends upon the quality, number, caliber, and stature of the youth who are to carry it to fruition. Therefore, the very success of this undertaking will be directly proportionate to the constant flow of qualified recruits into the profession.

What can we accomplish if we plan to build more dental schools if they cannot be adequately staffed? How can we increase dental services for the hospitals, encourage more dental research, take care of the dental needs of an expanding population, if we do not attack the fundamental problem first? None of our fondest dreams will be satisfactorily realized if we do not concentrate our efforts on the most important problem of all—*the recruitment of health service personnel.*

Maybe we should return to a study which originated in 1958 in the Committee on Recruitment of the American College of Dentists. Under professional guidance the assimilation of data resulted in a comprehensive and pertinent report. This was published in the JOURNAL OF THE AMERICAN COLLEGE OF DENTISTS in March 1961, titled "The Dental Student."

It is amazing how many surveys we, as Americans, are willing to undertake and yet never make any tangible use of the results. We are willing to spend valuable time and money to assemble these facts and publish the reports so that we may distribute them to supposedly interested parties. The statistical data, in most instances, is then filed on dusty shelves never to be used. Of all the surveys made each year in this country, it would no doubt be alarming to learn how few are ever used for the purposes for which they were originally intended.

The aforementioned study, "The Dental Student," which I recommend for your thoughtful consideration and study, has brought forth many exciting and provocative reflections. In fact, too many are presented to critically examine all of them at this session. The study was originally undertaken because members of the American College of Dentists were seeking to learn what motivating forces encouraged youth to enter dentistry. If we could discover this, it would be possible to focus and intensify our efforts at recruitment. The American College of Dentists is not in a position to continue on where this report leaves off. This College as an institution never presumes to speak or act for organized dentistry. However, being composed of the higher echelon of the profession, the College merely

suggests guideposts for the best interests of dentistry. Each Fellow then has the opportunity to carry back the findings of this study to the area of organized dentistry or to the community in which he has the most influence. In this way the efforts of the committees of the College will not have been unproductive.

Our immediate problem resolves itself into one simple question: How do we encourage high caliber youth to enter dentistry?

We have reflected many, many times in the past on the need for more dental students each year to retain a sensible proportion of dentists to the expanding population. What Giant Step are we taking to solve it? Our study shows that the public image of the dentist is not as dedicated or altruistic as we would like to believe. There is still a public fear of dentistry, and most editorials treat it with horror or humor. This is mixed with an image of the dentist who is greedy, over charges, and has no desire to take part in public affairs. We know that this is not true of the majority of the profession. However, the public is more apt to hold the minority view. A recent reprint from a highly regarded sociological periodical, *The Midwest Sociologist* in referring to the dentist states, "The general public . . . still considers him something of a mechanic in a white coat."

It now becomes our responsibility to give the public a truer and more realistic viewpoint of the dentist. We must realize that we have to make the public aware of the many outstanding accomplishments and contributions that dentists are making to science and to the community. We too often have a tendency to discourage the publication of those accomplishments under the assumption that they are "advertising" or are being used for "self agrandizement." After all, the attraction to or shunning away from the study of dentistry, by the youth of our country, is based on public interpretation. We find that the greatest influencing factor in encouraging youth to enter dentistry is the dentist himself. Here is proof in itself that the destiny of dentistry lies in the hands of the dentist.

If we are sincere about doing something to solve the problem of the national dentist shortage, we must change the present public image of the dentist. We must also take into consideration the two main road-blocks that constantly arose in the study when dental students were interviewed across the country, they were the time and cost factors expended to gain a dental education.

The old cliché states "time is money." Then we should mainly con-

sider the cost. Financial aid to dental students has been a real problem for most parents. Even with the constant rise in tuition we are all aware that the dental college is never fully reimbursed for its per capita expenditure to educate each student. Some relief must be found for the parent, the student, and the college alike. Most of the dental schools have some form of scholarships. Some have meager loan funds, but more than one-third of the American dental schools have no scholarship aid whatsoever. The few scholarships that are available are in most instances based on the parents' income being below a certain level. The middle income group tends to be caught in a tight squeeze. When the parents in this bracket suddenly come face to face with the financial realities of college costs, the actual figures are a shock. Many promising and talented youngsters will not even consider studying dentistry because it is too expensive. A father's salary may be too high to qualify for a scholarship, but too low to pay all the bills. Annual escalating tuition together with the long time involved in attaining a baccalaureate and dental degree may price us right out of a big piece of the student market. During the study when freshmen dental students were being interviewed, they would reiterate that they had friends in the community or undergraduate college who were good students, and who were interested in dentistry; but because of the possible expenditure of an additional fifteen thousand dollars after college, could not consider dentistry as a profession.

We find that the one real big stimulant to our recruitment problem, will be to establish more scholarships and loan funds for dental students. The County Dental Society here in Philadelphia is cognizant of this problem. A committee has been formed to make a study at the dental schools of the University of Pennsylvania and Temple University with the thought in mind of creating a loan fund for the students. I would suggest that other local dental societies consider forming similar committees to make loans or grants for dental education.

To summarize: The two major objectives brought into bright and revealing focus to encourage high caliber youth to enter dentistry are first, we must be ever vigilant of the proper image of the dentist that is disclosed to the public, and secondly, we must create some financial aid for those highly qualified students who otherwise would not be able to study for our profession.

Editorial Note. After concluding his paper, Dr. Forbes continued:

"That is where the paper was supposed to end, but just before I came up on the platform I was handed a note and asked to announce that the Board of Regents of the College had approved a plan to raise a student loan fund of $1,000,000.00 to be spear-headed by the Sections of the College and in cooperation with the profession at large at the state level. The project is to be administrated by the Fund for Dental Education, Inc."

Later, at the conclusion of the panel discussion, Dr. O. W. Brandhorst, secretary of the College, commented:

"I want to supplement what Dr. Forbes said in relation to the student loan fund to this extent: that the effort the Board of Regents see in the future for the raising of an underpinning, you might say, for the recruitment problem and aid to dental students will be channeled through the Fund for Dental Education, Inc. We will merely use the sections of the College as "needlers" toward that end, and I will probably be doing the needling.

Moderator Hillenbrand: I have an announcement which I think will be of interest to you in connection with what Dr. Forbes said the American College of Dentists will do. The Board of Trustees of the American Dental Association at this week's session will announce to the House of Delegates the contribution of the sum of $150,000 to initiate a student loan fund under the auspices of the Fund for Dental Education. I think we can see the beginning now of the creation of an adequate student loan fund to assist in the solution of the problem of dental manpower.

The next speaker, as you know, is the speaker of the House of Delegates of the American Dental Association and is willing to speak anywhere, any time, on any topic, and at any length. Seriously, the next speaker is a distinguished dean of one of the local dental schools who has had a lifelong experience in the field of dental education. I know he is concerned, as are his colleagues in dental education, about the difficulty of financing the cost of dental education. The speaker will be—and this one really needs no introduction—Dr. Gerald D. Timmons, dean of Temple University School of Dentistry.

The Training of Health Service Personnel—Meeting the Cost Of Such Training

GERALD D. TIMMONS, Ph.G., D.D.S.

It is said that somewhere in this world there is a pin, on the head of which is engraved the Lord's Prayer. I have never seen this great exhibition of engraving art, but I am sure that I now have some conception of the engraver's thoughts as he first began to survey his task. Such were my thoughts when Dr. Brandhorst asked that I take seven minutes to discuss a subject which required 184 pages of careful development in the Final Report of the Commission on the Survey of Dentistry in the United States.

The subjects listed on this morning's program are such as to indicate that many of the other speakers either have discussed or will discuss many parts of the Survey which will have bearing, either direct or indirect, on dental education. For this reason I have elected to discuss but two points, either of which will have great impact on the path dental education is to take in the future. These are: first, the cost of dental education to the schools, and second, the cost of dental education to the student. In both of these areas there are findings of substantial significance to the well being and the future of the dental profession. Also, as a by-product of the discussions, it is my hope that appetites will be sufficiently whetted to create a desire to study the entire report of the Commission.

Cost of Dental Education: To the Schools

In entering the sixth decade of the century, I am impressed that, as in nearly every other aspect of our economy, the cost of educating a dentist has been steadily increasing in every dental school. In the last decade alone, this cost has increased by a striking 129 per cent. Today, among all of the schools, more than $3,000 annually is spent on the education of each student. Obviously, some dental schools are better supported financially than others, and so the range among the best supported schools is as high as $6,400 per student, and

among the less well supported schools as low as $1,860 annually. By 1975, the Survey of Dentistry estimates that all schools may need to spend an average of $5,000 annually for each enrolled student.

To generalize on statistics, particularly if they involve cost analyses, is dangerous business. Fortunately, I do not have time today to indulge in this kind of hazardous prophecy, tempting as it may be. It will, I believe, suffice for me to alert the profession that costs of doing business in dental education—in fact in all institutions of higher learning—are on the rise. Our best accountants and comptrollers cannot predict with any accuracy how far the trend may go, nor at what exact point it may level off and end. To you and me, however, the accent on costs of dental education draws into sharp focus the need to obtain increased and continuing financial support to ensure the continued progress in both education and research which has characterized the recent decades of growth of the dental profession.

Today, the dental schools spend annually more than $43 million for basic operations. By 1971, it is estimated that annual expenditures will be nearly three and one-half times greater, or about $145 million. In this projection of gross annual expenditures, schools either now receive or might anticipate receiving slightly more than $71 million annually. It is disturbing to note, however, that nearly $74 million of additional income—not now identifiable—will be required for total operational expenses in 1971. What is alarming about this $74 million projection is that more than a 100 per cent increase of support from traditional sources seems indicated by 1971. If I understand the full significance of this projection, alumni groups, students, foundations, benefactors, business corporations, universities and public agencies of government very soon must be persuaded that in the public interest, dental services merit sharply increased financial support from all segments of the economy.

Even a cursory view of the problem of financing dental education in the decade ahead confirms a finding of the *Survey of Dentistry* that "the lack of proper financing is the most serious problem of dental schools today." To me it seems likely that proper financing of operations will continue to be the Number One problem of most dental schools. If it is agreed that a primary responsibility of the profession is to provide the highest quality of dental service to the

people, I can only emphasize that the need for continued development of dental education and research, in this decade and forward, will require a full scale fund raising effort of dimensions not thus far conceived by the profession. If this effort is to be successful, all known sources of support—both private and public—must be thoroughly alerted to the importance of dental health to the public health. In my opinion, how best to accomplish these objectives is the primary challenge confronting the profession today.

Cost of Dental Education: To the Student

I have just discussed the fact that deans and university presidents are expecting their share of financial headaches in obtaining further support for operating funds for dental schools. May I now turn your attention to the equally vexing financial problems that now confront dental students.

A current study of the cost of education to dental students has just been completed by the Council on Dental Education and the American Association of Dental Schools, in cooperation with the United States Public Health Service. This study shows that since 1953-54, costs, particularly tuition and other items of school expense, have increased for all categories of dental students. The studies show that a married student should now plan on a cost of $18,300 for the four year dental curriculum; a single student living away from home will spend approximately $12,600 for the four year program, and a single student living at home now averages about $10,000 for the four years. It is generally agreed that the cost of a dental education is among the highest, if not the highest, of the health professions.

While there is much talk currently of federal aid programs for dental and medical students, except for the recently enacted National Defense Education Act of 1958, no such programs have been enacted by the Congress. It is good, therefore, to know that financial aid to dental students is today more abundantly available than in 1954. It still must be noted, however, that the average scholarship or loan awarded to the student supplies less than one-sixth of the average student's annual school and living expenses. Moreover, dental students are now requesting more financial assistance than can be supplied, and many students are now receiving less financial aid

than has been requested. Scholarship aid is increasing in publicly supported schools, and loans are more plentiful in both public and private schools.

All of this information is encouraging. However, perhaps the figures from this study that we should examine more carefully are those which show that in 1961 an estimated 24 per cent of all students enrolled, borrowed an average amount of $625 each. Of these, 12 per cent were recipients of loans made available under the National Defense Education Act student loan program.

Today few schools have uncommitted loan funds in any significant volume. Fourteen schools have no such funds available, and an additional 22 schools have funds at hand of less than $10,000. Eleven of the dental schools reported having funds averaging $30,000, but these same 11 schools also held 80 per cent of all uncommitted loan funds. There is evidence that several of the dental schools having loan funds have imposed such strict conditions of awarding them that students were either discouraged from or unwilling to apply for them.

I must emphasize that there is an immediate need to provide far greater financial support to dental students for their professional education than is now available. The profession is only now beginning to realize the importance of such support in perpetuating the integrity of a proud tradition. While student financial aid is now improved and continues to improve, we must realize that continuing and increasing this form of aid is strongly indicated unless dentistry is to become marked as a profession for only the economically privileged class of our society. Providing sufficient and high quality dental care for the public is the responsibility of the profession. Attracting and motivating young people to study dentistry is also the responsibility of the profession. Scholastically qualified and interested young people wishing to study dentistry must not be deterred from doing so, particularly if the reason for turning to other professions prove to be financial rather than academic qualifications. In my view, this is challenge Number Two confronting the dental profession and dental education today.

Moderator Hillenbrand: The final speaker on our program is a patient man, but I think it is appropriate that he is the final

speaker because all of the things the members of the panel have discussed here this morning are rooted deeply in research. This paper will be given by Dr. Seymour J. Kreshover, the associate director of the National Institute of Dental Research, Washington, D. C.

Research in Dentistry

SEYMOUR J. KRESHOVER, B.A., D.D.S., M.D., Ph.D.

In order for dentistry as a health profession to maintain its major and special responsibility to society, it must continue to recognize and accept the particular task of contributing, through research, to the furtherance of basic and clinical knowledge of the causes of oral and related diseases; to the development of improved methods of treatment, correction, and prevention; and to the consequent maintenance of high standards of health. Obviously, this research challenge can be met only by an availability of scientists qualified in basic biological and clinical fields, the support of research programs and organizations that will correlate and coordinate the skills and talents of scientific disciplines, and the provision of adequate facilities for the conduct of these activities.

Among the more important obligations that we face are (1) an acceleration of fundamental research on cleft palate and other congenital anomalies involving growth and development of the oral and facial region (including malocclusion), and an increasing cohesion of such diverse professional interests as oral and maxillofacial surgery, orthodontics, prosthodontics, speech pathology and therapy, otolaryngology, psychology and genetics; (2) the further development of newer, recently advanced, concepts of dental caries etiology which demonstrate that the disease does not occur in germfree animals, and may, in fact, be caused by specific strains of streptococcal microorganisms; and (3) the further development of an increased emphasis on periodontal disease related particularly to a better understanding of the physiology, biochemistry and morphology of the periodontium; the relationship of general systemic factors

to the disease; the etiological significance of various microbiological and enzymatic factors; the epidemiological patterns of the disease as indicators of socio-environmental influences; and the mechanisms of calculus formation and its relationship as a local factor to the disease process.

In the area of dental caries control, although the benefits of fluoridation have been considerable and provide our most effective measure today, there is no reason for complacency. Rather, we must continue to seek further measures such as additional trace elements, chemotherapeutic agents, and nutritional supplements to effect an even greater control of this disease. With the new evidence that caries in rats and hamsters is a transmissible disease of specific microbial origin, it also is quite conceivable that an effective vaccine may be delevoped.

Turning now to the area of so-called physical biology, today's major effort to more fully utilize the technics of electron and X-ray microscopy, electron diffraction and crystallography have led to the development of important new knowledge regarding the structural, physical and chemical properties of calcified tissues, their development and the calcification process itself. Such accomplishments are providing a base of much needed knowledge upon which to build more practical programs of prevention of oral and dental diseases.

While it is probably true that treatment, correction, and prevention should be considered in the reverse order of priority, it is essential that therapeutic and other practical advances keep pace with basic activities. Thus, to cite but a few examples, there must be an ever-increasing effort to produce more effective synthetic restorative materials; develop technics of instrumentation even beyond the recent major advance in high rotary speed cutting devices; and further prosthetic design and construction so as to assure optimum function for eating, breathing, speech, and esthetics.

Although not generally considered in the category of research, it is, nevertheless, also essential that a major effort be made to expand experimentation in methods of professional education, communication of new findings, training of dental teachers, operating room design, and other practical considerations related to the provision of optimal dental health care. Given a continuance of financial support—federal, state, foundation and other public and private sources

—coupled with a continued striving for new knowledge and a dedicated responsibility for the attainment and maintenance of optimum health for all, the future should indeed be bright.

Moderator Hillenbrand: I should like to express my thanks to my colleagues on this panel. I think you have made excellent presentations. I should also like to express my thanks to the members of the audience—you have done an excellent job of listening.

There are three items left on the program. First, a *Summary* by the Moderator. Well, I think it was a good panel. This takes care of the *Summary*. Second, *Discussion*. This will take place in the corridors after the meeting. That takes care of that item. Now, the third item and my final remarks:

The Future Image of Dentistry

HAROLD HILLENBRAND, D.D.S.

Dr. J. Wallace Forbes has had to leave the meeting; I am sure he did not leave because of what I am going to say. But I disagree with the statement that he quoted: "The general public . . . still considers him [the dentist] something of a mechanic in a white coat." I do not believe that the people of this country hold to that thought.

I think, rather, the public feels that the American dentist is professionally and scientifically competent; that he is the product of a good system of education which, however good, needs some improving; that he is subject to ethical disciplines of the highest order; that his relation with members of other health professions is excellent; that the system of research his profession uses is surely the best in the world; that he is socially aware; and that he is recognized always for his ability and willingness to look at, examine, and hopefully, solve problems as we have tried to do here today.

I think *that* image of the American dentist will brighten as we

solve some of the problems that have been put before you this morning.

And now, as the final note, I return to the one with which I opened the panel. It is a quotation from the Rockefeller Report:

"Democracy aims to provide a mobile society and a free political process that will give the individual the opportunity to participate in the affairs of his community. Are there enough individuals whose sense of responsibility to themselves and their fellowmen will lead them to take this opportunity? Are there enough who will use this opportunity with intelligence, integrity and care? This is the challenge that democracy puts to its citizens. The democratic faith is that they will respond."

My faith is that the dentists of this country will respond.

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THE 1961 CONVOCATION

SUNDAY, OCTOBER 15, 1961
BELLEVUE-STRATFORD HOTEL, PHILADELPHIA

The American College of Dentists was organized on August 20, 1920. The purpose of the founders was to establish an organization that would be imbued with the highest ideals for the dental profession and lend its influence to every movement having for its purpose the advancement of the profession and the betterment of its services to humanity.

The activities over the intervening years record the efforts that have been expended and the successes that have been attained.

However, this is not time to sit back and rest on our laurels over our achievements. Even though the College has contributed much to the health and welfare of our people, we are at the present time faced with many problems that require thought and good leadership. We must, each of us, continue our efforts and give of our knowledge, so that these problems may be met and dealt with in the best interest of the public and the profession.

At last year's Convocation, we were fortunate to have one of the early reports on the "Survey of Dentistry" presented by four staff members of the Commission that made the Survey. They depicted the status and the needs of dentistry and made recommendations for its improvement, not only for the present, but also suggested a long-range program for dental practice, dental education, dental research and dental health.

This year, in response to the recommendations of the Survey, we present ways and means for attaining these objectives.

This panel will present some of the major items that must be given consideration in our continued broad dental health service planning. It is hoped that these discussions will kindle a desire for the further development of details for a broad dental health service for the American people whom we are privileged to serve, and who have reason to look to the dental profession for guidance in such development.

EDGAR W. SWANSON,
President

THE MINUTES

THE MORNING PROGRAM

Edgar W. Swanson, President, presided. The invocation was pronounced by Dr. David H. Wice, Rabbi of Congregation Rodeph Shalom, Philadelphia. In an Executive Session, the following reports were presented and received:

Necrology—Robert P. Dressel, chairman, Cleveland. The Fellows of the College who died during the past year, as contained in the "In Memoriam" booklet (with additions), were:

Charles Barton Addie, Philadelphia, Pa., October 24, 1960
John T. Ashton, Alexandria, Va., May 22, 1961
Adolph Berger, New York, N. Y., April 4, 1961
Irvin Roy Bertram, Denver, Colo., August 2, 1961
Clinton T. Brann, Orlando, Fla., September 8, 1961
John A. Cameron, Dallas, Texas, May 2, 1961
Wilson R. Conran, Hartford, Conn., December 8, 1960
Morris Cramer, Milwaukee, Wis., September 15, 1961
Alfred Cornelius Current, Gastonia, N. Car., October 23, 1960
Lloyd H. Dodd, Decatur, Ill., September 24, 1961
Thomas G. Duckworth, Boerne, Texas, December 29, 1960
E. Walter Edlund, Melbourne, Fla., September 11, 1960
Roy Oscar Elam, Nashville, Tenn., November 30, 1960
George Boyd Finch, New Haven, Conn., January 22, 1961
John W. Geller, Indianapolis, Ind., June 25, 1961
Homer D. Grubb, Cleveland, Ohio, June 12, 1961
Ira Wilson Hamilton, Ottawa, Canada, November 5, 1960
Cloyd Summerfield Harkins, Osceola Mills, Pa., March 22, 1961
Conrad F. Hellwege, Philadelphia, Pa., January 6, 1961
W. Frank Hemphill, Omaha, Neb., May 7, 1961
Charles Joseph Hicks, Sr., McKinney, Texas, April 12, 1960
William N. Hodgkin, Warrenton, Va., September 7, 1961
Charles R. Jackson, La Jolla, Calif., November 11, 1960
Rolland R. Jones, Santa Barbara, Calif., September 22, 1961
Claude M. Kennedy, Des Moines, Iowa, September 13, 1960
John Kuratli, Portland, Ore., April 29, 1961
Raymond Peter LeRoy, Portland, Ore., December 21, 1960
Frank A. McKennon, Waxahachie, Tex., November 14, 1960
Irvine McQuarrie (Honorary), Minneapolis, Minn., September 9, 1961
Jay Phillip Marshall, St. Louis, Mo., April 4, 1961
Arthur H. Merritt, New York, N. Y., February 10, 1961

These Minutes have been compiled and abbreviated by O. W. Brandhorst, Secretary. The panel discussion and addresses appear elsewhere in this issue.

Franklyn Custer Nelson, Loma Linda, Calif., January 7, 1961
Frederick B. Noyes, Lake Worth, Fla., July 24, 1961
Robert Lester Pallen, Vancouver, Canada, December 30, 1960
George A. Phillips, Bangor, Maine, December 24, 1960
Zenas T. Roberts, Denver, Colo., December 29, 1960
Frank C. Rodgers, St. Louis, Mo., April 3, 1961
Louis E. Sager, Roslindale, Mass., June 20, 1961
Frederick W. Schaeffer, Omaha, Neb., September 11, 1961
Philip L. Schwartz, New Brunswick, N. J., December 15, 1960
Donald Meeds Small, Kennebunk, Maine, September 20, 1961
Charles Louis Smith, Washington, D. C., December 21, 1960
Wiley W. Smith, Baltimore, Md., December 21, 1960
Edward B. Spalding, Birmingham, Mich., November 10, 1960
James H. Springsted, Louisville, Ky., March 29, 1961
Leonard P. Wahl, Wausau, Wisc., February 21, 1961
Tyler James Walker, Saratoga, Calif., February 7, 1961
Henry F. Westhoff, St. Louis, Mo., January 23, 1961
Joseph Donaldson Whiteman, Mercer, Pa., April 18, 1961
Claude Somers Williams, Hattiesburg, Miss., August 9, 1961
Frederick L. Williamson, Hamilton, Canada, December 13, 1960
Fred S. Woods, Portland, Maine, July 12, 1961

The audience was asked to stand in silence for a few moments in memory of the deceased Fellows.

Nominating—Jay H. Eshleman, chairman, Philadelphia. The committee recommended the following men for the several offices:

President-elect	Philip E. Blackerby, Jr., Battle Creek, Mich.
Vice-President	Crawford A. McMurray, Ennis, Texas
Treasurer	Fritz A. Pierson, Lincoln, Neb.
Regents	Vincent A. Tagliarino, Louisville, Ky. (to fill the unexpired term of J. H. Springsted, deceased)
	Frank O. Alford, Charlotte, N. Car. (four year term)
	Stanley A. Lovestedt, Rochester, Minn. (four year term)

There being no nominations from the floor, on motion and vote, the men as named by the Nominating Committee were elected by acclamation to their respective offices.

Indoctrination Address—This annual charge to the new candidates was given by Jay H. Eshleman, Philadelphia.

President's Address—Vice-President George S. Easton presided while President Edgar W. Swanson read his presidential address.

After a brief intermission, the panel discussion "A Dental Health Plan for the American People" followed.

THE LUNCHEON

The luncheon was served in the Burgundy-Viennese Rooms of the Bellevue-Stratford; 635 persons attended. This interlude meeting was under the auspices of the Philadelphia Section of the American College of Dentists; Aubrey P. Sager, chairman, presided. The invocation was pronounced by The Very Reverend John A. Kletotka, President of Villanova University.

Guests and dignitaries at the head tables were introduced. After the luncheon the Joseph A. Ferko String Band, Philadelphia's famous Musical Mummers, entertained with their delightful program, "The Blue and the Gray."

THE AFTERNOON PROGRAM

The ceremony began with a procession of the candidates for Fellowship and their sponsors, the Officers and Regents, and the recipients of Honorary Degrees and Awards. Robert W. McNulty, Orator of the College, pronounced the invocation.

President John A. Perkins, University of Delaware, was introduced and delivered the Convocation Address, "The Humanities and Health Services."

THE FELLOWSHIPS

Fellowships in the College were conferred upon the following:

Francis Joseph Acquavella, Flushing, N. Y.
Perry C. Alexander, Navy
Marvin M. Alderman, Syracuse, N. Y.
Norman E. Alderman, New York, N. Y.
James B. Allen, Athens, Ga.
Paul Edward Allen, Selma, Ala.
Jack Alloy, Philadelphia, Pa.
Nels Jerrald Anderson, Los Angeles, Calif.
Robert George Andrews, Costa Mesa, Calif.
Arnold, A. Ariaudo, San Diego, Calif.
David Joseph Baraban, Brookline, Mass.
Robert Everett Bedell, St. Louis, Mo.
Wilfred Bernard Bell, Army
David August Bensinger, St. Louis, Mo.
Christopher Francis Bentley, Livermore, Calif.
Julius Jack Bentman, Lancaster, Pa.
Robert H. Bernert, Hartford, Conn.
Robert Owen Betzner, Helena, Mont.
Basil G. Bibby, Rochester, N. Y.
William Robert Biddington, Morgantown, W. Va.
Alva N. Blaney, St. Louis, Mo.
Harry Blechman, New York, N. Y.
George Nichlos Boone, East Pasadena, Calif.
Allan Arthur Booth, Sharon, Pa.
Leo Botwinick, New York, N. Y.
Fred Earl Boyers, Morgantown, W. Va.
Thomas Clarke Bradshaw, Blackstone, Va.
Bernard Andrew Brann, Leesburg, Va.
Virgil Westley Brown, Los Angeles, Calif.
Karl Wayne Bruce, Omaha, Neb.

Lewis Franklin Bumgardner, Charlotte, N. Car.
Jack Dent Carr, Indianapolis, Ind.
Charles David Carter, Bowling Green, Ky.
Warren R. Cedar, Chicago, Ill.
Neal W. Chilton, Trenton, N. J.
Malcolm R. Chipman, Spokane, Wash.
Paul Wadsworth Clopper, Peoria, Ill.
Bernard Alfred Cohen, Jackson, Miss.
David Walter Cohen, Philadelphia, Pa.
H. Milton Cooper, Hackensack, N. J.
Lawrence William Cowan, Compton, Calif.
Angelo D'Amico, Stockton, Calif.
Edwin Earl Dawson, San Benito, Texas
Michael James Del Balso, Milwaukee, Wis.
Dominick Joseph De Luke, Schenectady, N. Y.
Walter Joseph Demer, Navy
George J. E. Denicourt, Providence, R. I.
Mary Christine De Risi, Washington, D. C.
William Hermon Derrer, Cleveland, Ohio
William C. Dew, Columbus, Ohio
Arthur Raymond Dewey, Ventura, Calif.
Floyd Everett Dewhirst, Los Angeles, Calif.
Russell A. Dixon, Washington, D. C.
Robert Edward Doerr, Ann Arbor, Mich.
Andrew John Donnelly, Muskegon, Mich.
William Craig Draffin, Columbia, S. Car.
Harold Arthur Drummond, Wilmette, Ill.
Roland Wayne Dykema, Indianapolis, Ind.
William R. Dykins, Nanticoke, Pa.
Wilmer Ballou Eames, Chicago, Ill.
Frederick William Ebinger, Casper, Wyo.
Louis Emory, Army
John Austin Evans, Jackson, Miss.
Joseph Wallace Ewing, Akron, Ohio
George Joseph Figlear, Bethlehem, Pa.
Charles William Finley, Lubbock, Texas
Arthur Falden Fisher, Rochester, N. Y.
H. Gordon Fisher, St. Louis, Mo.
Thomas Ryan Flinn, San Francisco, Calif.
John Henry Flint, Jr., San Francisco, Calif.
Bruno Guido Floria, Washington, D. C.
Russell Oscar Ford, Knoxville, Tenn.
Marshall Matthew Fortenberry, Jackson, Miss.
Lyman Ellwood Francis, Montreal, Canada
Harry Fredrics, Veteran's Administration
Alexander Joseph Freutel, Memphis, Tenn.
Vernon Fricke, Air Force
Joel Friedman, Brooklyn, N. Y.
Arnold Gardey, Saginaw, Mich.
Edward Anthony Gargiulo, Navy
Edmund T. Glessner, Denver, Colo.
Frank Ignatius Gonzalez, Jr., Navy
Robert James Gores, Rochester, Minn.
Arthur Sigmond Gorny, Cheyenne, Wyo.
Fred Wayne Graham, Morris, Ill.
Cyril de Vere Green, London, England
Herbert W. Grinnell, Brooklyn, N. Y.
Joseph E. Grodjesk, Jersey City, N. J.
Jules Paul Guidry, Kirkwood, Mo.
Albin R. Hagstrom, Brooklyn, N. Y.
Edwin W. Halvorson, Los Angeles, Calif.
John Weir Hamilton, Philadelphia, Pa.
Julian Churchill Harlowe, Louisville, Ky.
Frederick Noble Harris, Pasadena, Calif.
William Gordon Hazlett, San Francisco, Calif.
Herbert William Heintz, Utica, N. Y.
William D. Heintz, Worthington, Ohio
Myron E. Henderson, Roanoke, Va.

Charles Houston Henshaw, Des Moines, Iowa
Howard Curtis Hester, Upper Montclair, N. J.
Warren R. Hester, Air Force
William Henry Hiatt, Denver, Colo.
William Leonard Hieber, Akron, Ohio
James Wm. Hipple, Trenton, N. J.
Mellor R. Holland, Minneapolis, Minn.
Herbert Otto Hoppe, Milwaukee, Wis.
Robert W. Hornbaker, Worcester, Mass.
Marjorie Houston, Mt. Prospect, Ill.
Leonard J. Huber, Ste. Genevieve, Mo.
Arthur L. Hudson, Glendale, Calif.
William C. Hudson, Jr., New York, N. Y.
Richard Wm. Huffman, Lansing, Mich.
David Edward Hunn, Troy, New York
Edwin J. Hyman, San Francisco, Calif.
Conrad Lucius Inman, Jr., Baltimore, Md.
Gerald Paul Ivancie, Denver, Colo.
Alfred Jaffe, Providence, R. I.
Clifford G. Johnson, Newtown, Conn.
Reginald Harold Johnson, Port Huron, Mich.
Truman James Johnston, Milwaukee, Wis.
Wilbur Dexter Johnston, New Haven, Conn.
Frederick Sadame Kagihara, Honolulu, Hawaii
Frederick Wm. Chas. Karney, Hearne, Texas
Phillip Johns Kartheiser, Aurora, Ill.
Joseph Herbert Kauffmann, New York, N. Y.
Edward G. Kaufman, New York, N. Y.
Harry H. Kazen, Chicago, Ill.
Alfred Joseph Keck, New York, N. Y.
Stanley Ellis Keller, Birmingham, Ala.
Donald R. Kennedy, Berkeley, Calif.
Jack J. Kimbrough, San Diego, Calif.
Frank James Kratochvil, Jr., Navy
Joseph Krohn, Chicago, Ill.
Arthur Joseph Krol, Chicago, Ill.
Abraham Lamstein, New York, N. Y.
Carl Adam Laughlin, Clarksburg, W. Va.
Ben Lawrence, Dallas, Tex.
Archibald Hamilton Leckie, Hamilton, Canada
Nathan Lewis, Brooklyn, N. Y.
Cyrus Melvin Linden, Great Falls, Mont.
Elias Lisman, Irvington, N. J.
Frank J. Lloyd, East Cleveland, Ohio
William Lones Lockett, Knoxville, Tenn.
Theodore Edw. Logan, Louisville, Ky.
Ralph Waldo Ludwick, Jr., Lincoln, Neb.
Melvin R. Lund, Loma Linda, Calif.
Clarence Edwin McIntire, Portland, Maine
Fred E. McIntosh, Los Angeles, Calif.
Malcolm J. McKinnon, Rochester, N. Y.
Lionel Deckle McLean, Jersey City, N. J.
Elwood Forbes MacRury, Manchester, N. H.
Carl J. Madda, Chicago, Ill.
Herman L. Malter, New York, N. Y.
Herman B. Maltz, Manhattan Beach, Calif.
Walter Joseph Mandler, San Jose, Calif.
Richard Christian Mast, New York, N. Y.
Bruce Trafton Mathias, Camp Hill, Pa.
Meffre Rouzan Matta, New Orleans, La.
David William Matteson, Oklahoma City, Okla.
Wallace Charles Mayo, Pensacola, Fla.
Richard Frederick Messing, St. Paul, Minn.
John Hayward Michael, Baltimore, Md.
C. Richard Miller, Harrisburg, Pa.
Ernest Beckwith Mingledorff, Atlanta, Ga.
Monte George Miska, Chapel Hill, N. C.

Charles Fairbanks Moore, Seaford, Delaware
Mary Lynn Morgan, Atlanta, Ga.
Albert W. Morris, Salisbury, Md.
Francis Frederick E. Morse, New York, N. Y.
George E. Mullen, Brooklyn, N. Y.
Claude L. Nabers, San Antonio, Tex.
John Moore Nabers, Wichita Falls, Tex.
Arnol Ross Neely, Portland, Ore.
Ferdinand Gustav Neurohr, New York, N. Y.
Willard LaGrand Nielsen, Army
Oliver Edward Nobert, Rome, N. Y.
Julio Oscar Novoa, San Salvador, Central America
James A. O'Brien, Dubuque, Iowa
Joseph Timothy O'Leary, Girard, Pa.
Lester Bernard Older, Union City, N. J.
Jack H. Oliver, Mexia, Tex.
Einar J. Olsen, Cleveland, Ohio
Morris Orgel, Freeport, N. Y.
William Newton Orr, Littlefield, Texas
William J. Pendergast, Boston, Mass.
John Marvin Pepper, Pensacola, Fla.
Donald Leroy Peterson, New Orleans, La.
Claude Vivien Pettey, Jr., Magnolia, Miss.
Lyle Henry Pitt, Pittsburg, Texas
Roger William Pryor, Cleveland, Ohio
Charles Edward Pugh, Ft. Worth, Texas
James Harrison Quinn, New Orleans, La.
Samuel Maurice Rafish, Butte, Mont.
Vincent E. Ragaini, New York, N. Y.
William T. Ralph, Belhaven, N. Car.
William J. Ream, Akron, Ohio
James Alvin Reber, Pittsburgh, Pa.
W. Marion Reed, Athens, Ga.
Walter John Reuter, Air Force
Quentin Max Ringenberg, St. Louis, Mo.
Richard Cornelius Ritter, Bozeman, Mont.
George Washington Rock, Air Force
Robert Cornelius Roney, Lubbock, Texas
Ira Franklin Ross, East Orange, N. J.
Eugene A. Rothschild, New York, N. Y.
Kenneth Dielman Rudd, Air Force
Stanley Joseph Ruzicka, Cleveland, Ohio
Harry Saul, Atlantic City, N. J.
Clifton King Saunders, Washington, D. C.
Jacob Schaffer, East Orange, N. J.
Ino Sciaky, Jerusalem, Israel
William Jepp Schoverling, Houston, Tex.
Warren Schneider, Detroit, Mich.
Louis B. Schoel, Portland, Oregon
Otho E. Scott, Chicago, Ill.
Jules B. Seldin, New York, N. Y.
Rocco Wm. Vincent Setaro, Huntington, L. I., N. Y.
Thomas Smith Shuttee, Air Force
Martin Theodore Siegel, Poughkeepsie, N. Y.
James Emmett Skaggs, Jr., Louisville, Ky.
Stanley Thomas Smith, Beaumont, Texas
Bruce Wellington Snider, Austin, Texas
Marvin Sniderman, Pittsburgh, Pa.
Robert Samuel Snyder, Jr., Navy
Sidney S. Spatz, Pittsburgh, Pa.
Leo Stern, Jr., New York, N. Y.
Ford Woods Stevens, Philadelphia, Pa.
Charles J. Stout, Portland, Ore.
Walter Joseph Straub, San Mateo, Calif.
George Straussberg, South Orange, N. J.
Hayward Baldwin Streett, Baltimore, Md.
Charles A. Sweet, Jr., Oakland, Calif.
Paul Eesley Suitor, Navy
Dan Asbury Sullivan, Cleveland, Tenn.
Edward J. Sullivan, Skokie, Ill.
Leo Talkov, Brookline, Mass.
Syrus Ephraim Tande, Navy
Irving B. Tapper, Cleveland, Ohio
James Blair Templeton, St. Louis, Mo.

Aung Than, Rangoon, Burma
Cornelia M. Thompson, St. Louis, Mo.
Robert Walter Thompson, San Pedro, Calif.
Wm. McClain Thompson, Jr., Pittsburgh, Pa.
Wm. Kenneth Thurmond, Ft. Worth, Texas
George Nicholas Trakas, Brooklyn, N. Y.
Roy Stanley Turk, Air Force
Myron George Turner, Navy
Robert Burns Underwood, Elmhurst, Ill.
Charles Joseph Vincent, Richmond, Va.
Nathan Wachtel, New York, N. Y.
Daniel Elmer Waite, Iowa City, Ia.
Donald Foote Wallace, Albany, N. Y.
Howard Leon Ward, Great Neck, N. Y.
Paul P. Weaver, Seattle, Wash.
Rudolph Milton Weber, Kansas City, Mo.
Joseph Benjamin Weeden, Palo Alto, Calif.
Carlos Weil, Drexel Hill, Pa.
W. Don West, Dallas, Texas
F. Gordon Westlake, Bozeman, Mont.
Elmer John White, Beaumont, Texas
F. B. Wiebusch, Richmond, Va.
Jarvis M. Williams, Kansas City, Mo.
Walter John Winterhoff, Tucson, Ariz.
Donald G. Wise, Chicago, Ill.
Henry Francis Wisniewski, Camden, N. J.
James Edward Woodard, Columbia, Tenn.
Gerald George Wright, Detroit, Mich.
Thomas Wai Sun Wu, San Francisco, Calif.
Harry Joseph Wunderlich, Navy
William Lloyd York, Cleveland, Ohio
Frederick A. Zulch, San Francisco, Calif.

In Absentia

John Speir Baird, Sydney, Australia
T. N. Chawla, Lucknow, India
Samuel Cripps, London, England
Campbell Harry Graham, Sydney, Australia
William Alan Grainger, Gordon, Australia
Robert Harris, Ashfield, Australia
Jacques Levignac, Paris, France
Everett Randall Magnus, Sydney, Australia
Motupalli Ganga Rao, Hydersbad, India
Antje Tallgren, Aarhus, Denmark
Hamish Thomson, London, England
Sven Gunnar Walden, Saltzjobaden, Sweden
John McFarlane Wark, Melbourne, Australia
William Norton Salter, Houston, Texas

Posthumously

Frank E. Dixon, Garden City, N. Y.

THE HONORARY FELLOWSHIPS

These were conferred upon President John A. Perkins, University of Delaware; United States Senator Lister Hill, Alabama; and United States Congressman John E. Fogarty, Rhode Island.

Citation

By

Philip E. Blackerby, Jr., Battle Creek, Mich.

It is a very real privilege to present, for Honorary Fellowship in the American College of Dentists, John Alanson Perkins, President of the University of Delaware. Long a leader in higher education and public administration, Dr. Perkins in recent years has also rendered a distinguished service to the public and to the dental profession in his capacity as Chairman of the Commission on the Survey of Dentistry. This monumental study of the current status and future needs of dental education, dental health, dental research, and dental practice, which was carried out under his able leadership and guidance, has been acclaimed as one of the most comprehensive and significant investigations of its kind ever conducted.

Before assuming his present position at the University of Delaware in 1950, Dr. Perkins served the State of Michigan with great distinction as state budget director, state controller, as professor of political science and assistant provost at the University of Michigan, and in many other capacities of a voluntary and extracurricular nature.

His numerous contributions to national and international interests of this country have included membership on the special committee on Inter-governmental Relations for the federal government, the Executive Board of UNESCO, President Eisenhower's fact-finding board in connection with the 1959 nation-wide steel strike, the 1960 White House Conference on Children and Youth, and the National Council of the Atlantic Union Committee. And in his own professional field, Dr. Perkins has been President of the American Society for Public Administration. During 1957-58, he served as Undersecretary of Health, Education, and Welfare for the federal

government, with the vast program of the Public Health Service included among his many important responsibilities.

Dentistry owes a great debt of gratitude to Dr. Perkins for his statesmanlike direction of the Survey of Dentistry, and for the time, effort and wise counsel which he contributed so generously to this large and complex undertaking that has such great import for the future of our profession.

Dr. Perkins, the American College of Dentists is deeply honored and privileged to confer upon you Honorary Fellowship in the College.

Citation

By

Harry Lyons, Richmond, Va.

I have the distinguished honor of presenting the Honorable Lister Hill, United States Senator from Alabama.

Senator Hill is recognized by everyone in the health science professions as one of mankind's greatest benefactors. His lifelong interests in health, his dedication to the cause of research in the health sciences, and his skill in the Congress mark him as a man who will surely be recorded in history high on the list of great figures in the realm of the health sciences.

President John F. Kennedy addressed Senator Hill on an occasion as follows: "I am sure that it is obvious to the entire membership of Congress that your great personal interest in the field of medicine and health and your tireless efforts in behalf of furthering medical science and in bringing the benefits of that science to the people of our country have made you the outstanding congressional leader in the field of medical legislation in the nation today."

Senator Hill enjoys a family background which prepared him admirably for his life's work. His paternal great grandfather and grandfather were ministers. His father was the South's foremost surgeon and the first to accomplish successful suturing of the human heart.

Senator Hill manifested great brilliance of mind at an early age. He was admitted to the University of Alabama at the age of sixteen and was graduated four years later with both baccalaureate and law degrees.

Senator Hill is a veteran of World War I. At the young age of 27 he was elected to the Congress. Re-elected to the House of Representatives seven times without opposition, he was then elected to the Senate in 1938 and has been re-elected to this body four times. He has been awarded seven honorary degrees and has been recognized by citations and awards for distinguished service by 52 organizations.

Senator Hill, more than any other person, is responsible for the provision of hospital facilities all over this country and for the establishment of the National Institute of Dental Research. These stand as monuments to his dedication to the health care needs of our people.

Senator Hill's legislative contributions in other fields such as Rural Housing, G.I. Bill of Rights, Rural Library Service, Transportation, Education, Rural Electrification, the Armed Forces, and the United Nations are in themselves of such monumental importance as to warrant citations. These indicate the breadth of his interests and the tremendous magnitude of his legislative competence.

We are honoring the dental profession and the American College of Dentists in appreciating Senator Hill for his life of service as evidenced by this ceremony.

Mr. President, I present Senator Lister Hill for the award of Honorary Fellowship in the American College of Dentists.

Citation

By

Harold Hillenbrand, Chicago, Ill.

John Edward Fogarty was born in 1913 in Rhode Island, the state which he has represented in the United States House of Representatives since 1940. The data which he supplies for the *Congressional Directory* and for *Who's Who in America* are immoderately modest in view of his outstanding leadership as a member of the Congress, particularly in the fields of health and welfare.

Dr. Fogarty, who received this title and the honorary degree of Doctor of Political Science from Providence College in 1946, indicates in his biography that he is a member, and former president, of the Bricklayers Union. Those who have the opportunity of trying to evade or comprise a reply to one of his direct questions during a

Congressional hearing have quickly realized that he still figuratively maintains his ability to handle "Irish Confetti" in a manner wholly professional.

As a member of the Appropriations Committee of the House of Representatives, and as chairman of its subcommittee responsible for public health and health research appropriations, Mr. Fogarty has rendered uncommon and outstanding service to the health professions of this country. This role has been recognized by the award, in 1957, of honorary membership in the American Dental Association and, today, he receives the same accolade from the American College of Dentists.

More than fifteen years ago, as a member of the House Naval Affairs Committee, Representative Fogarty actively supported the Navy Dental Bill which remains a model for such legislation today. In 1948, Mr. Fogarty was one of the principal supporters of the "National Dental Research Act" which established the National Institute of Dental Research. In May of this year, Mr. Fogarty participated in the dedication services of the new building for the Institute, surely the finest dental research facility anywhere in the world.

As Chairman of the House subcommittee, Representative Fogarty became an ardent proponent of preventive dentistry. He was chiefly responsible for substantial increase in Public Health Service funds for demonstration programs relating to fluoridation, the topical application of fluorides, the care of children, and the effective use of dental auxiliaries. In 1956, he led the efforts of the American Dental Association to increase funds for dental research to almost five million dollars. In 1956-1958 he provided leadership in the legislation to obtain four million dollars for the construction and equipment of the building for the National Institute of Dental Research.

In the last five years Mr. Fogarty, with his colleague Senator Lister Hill, has had the major roles in assisting the American Dental Association in expanding dental research appropriations from two million dollars in 1956 to nearly twenty million in 1962. Mr. Fogarty has also taken an active leadership role in efforts to improve public dental health programs at the state and local level, to provide federal grants-in-aid for dental and medical education, and his plan for grants-in-aid to dental and medical schools is the basis of the present administration's proposal now pending in both the House and Senate.

There is not time here to rehearse Mr. Fogarty's many other con-

tributions in the field of health and welfare, except to say that they are multifold.

To a devoted and distinguished member of the Congress, who has fought long and successfully in the battle to increase the level of health nationally and internationally, who has won the special gratitude of the dental profession for his recognition of its vital and proper role in the health of the American people, and who is acknowledged by all as a leader and statesman in the field of health, the American College of Dentists today bestows with appreciation and gratitude—honorary membership on John Edward Fogarty.

THE AWARDS

The William John Gies Award was given to Edgar D. Coolidge, Evanston, Ill., and Frank O. Alford, Charlotte, N. Car.

The Award of Merit was given to George Hoyt Whipple, Rochester, N. Y.

Citation

By

Robert G. Kesel, Chicago, Ill.

I am privileged to present for the William John Gies Award one of the dental profession's most respected members, Dr. Edgar D. Coolidge. His teaching, research, and authorship have made him renowned internationally. His integrity, dignity, and graciousness have endeared him to those who know him. His intellectual attributes have contributed to the advancement of dentistry as a discipline in science.

Dr. Coolidge was born and raised on a farm in Illinois. He was graduated from the Chicago College of Dental Surgery in 1906 and began a practice of dentistry in Chicago that continued for 54 years. His practice was combined with a career in teaching and research. In 1913 he was appointed Professor and Head of the Department of Materia Medica and Therapeutics at the newly reorganized University of Illinois College of Dentistry, a post he continued to fill until 1923. From 1927 to 1948 he occupied a similar position at his alma mater, now Loyola University Dental School in Chicago, and upon his retirement as Professor Emeritus in 1948, Loyola conferred upon him the honorary degree of Doctor of Laws.

While Dr. Coolidge maintained a busy and an oustanding practice, he has been a student all his life. In 1930 he earned a Master of Science degree from Northwestern University. The clinical and laboratory research that he conducted during the period did a great deal to quell the controversy about the pulpless tooth. He pioneered in placing endodontic practice on a sound and rational foundation.

Dr. Coolidge is the author of several widely used textbooks. He has made prolific contributions to the dental periodical literature. He was originally a country boy—one who came to the city and by the diligent developments of his talents attained accomplishments that have gained for him many deserved honors. The American College of Dentists itself will be honored in granting him this recognition.

Mr. President, I am pleased to present Dr. Edgar D. Coolidge for the William John Gies Award.

Citation

By

O. W. Brandhorst, St. Louis, Mo.

On behalf of the Board of Regents, I wish to present a citation recognizing the unusual services of Frank O. Alford, of Charlotte, North Carolina.

For many years he has served the College as Marshal, shouldering the many responsibilities associated with this assignment. Through his attention to the many details, we have been able to carry on the ceremonial procedures with dispatch and in a manner befitting the American College of Dentists.

Not only has Dr. Alford devoted himself to these and other College activities at section and national levels, but he has devoted himself over the years to the advancement of the profession, wherever and whenever the opportunity presented—at local, state, and national levels.

His constant willingness to serve, in his quiet and unselfish manner, sets a pattern well worth emulating in the profession.

Mr. President, the Board of Regents request that Dr. Alford's services to the profession and the American College of Dentists be recognized by presenting him on this occasion with the William John Gies Award.

Citation to George Hoyt Whipple

By

Harold C. Hodge, Rochester, N. Y.

Your great gifts have long been recognized.

First, as an administrator you organized and built the plant and brought together the faculty, the mortar and the men, to start and lead to a place of first rank the school you served as dean.

Second, as an investigator you received the Nobel Prize in 1934 for demonstrating the curative effect of liver in the treatment of pernicious anemia.

Third, as a teacher and professor of pathology you have led many young students and doctors into the realization of the necessity for accurate and critical observation, judgment, and interpretation.

Your insight into the needs of dentistry and your gift in recognizing ability in young people has made you in dental education, the father of teachers. Beginning in 1929 when it was evident that the training of that day did not equally prepare pre-dental students and pre-medical students to enter professional pre-clinical classes together, with the help of the Rockefeller Foundation, you offered opportunities to graduates in dentistry "to conduct research and to train prospective teachers, investigators and practitioners in the fundamental biological sciences underlying the practice of dentistry." Your three basic principles guided this unique experiment in dental education: 1) the training must broaden and deepen the biological background of graduates of dental schools, 2) their advanced study could lead toward the M.S. degree or the Ph.D. degree but not toward the M.D. degree, 3) the dental fellows should become members of a pre-clinical department. The 72 alumni of this training program came from 40 different dental schools, 24 in the United States, 16 in foreign countries. Forty-four dental graduates have received advanced degrees, 21 the M.S. degree, and 26 the Ph.D. degree. The leadership of this small group in dental education is evidenced by the twelve deans of dental schools, one director of a dental institute, ten directors of graduate training programs in dentistry, thirty-three professors, ten associate professors, eight assistant professors, seven in the public health service or other governmental positions, and nine men in private practice.

The great men of every age leave their permanent record in their

followers and their students. Dr. Whipple, you gave the best possible experience in medical sciences to dental students at the very beginning of their professional careers. The American College of Dentists honors itself by conferring on you its Award of Merit in recognition of your lasting contributions to dental education.

THE EVENING MEETING

Eight hundred guests were present at the dinner in the Grand Ballroom of the Bellevue-Stratford. The invocation was pronounced by the Reverend Paul A. White, Ardmore, Pa., Executive Secretary, Philadelphia Presbytery Homes, Inc.

George W. Teuscher, dean of Northwestern University Dental School, was introduced as toastmaster by President Edgar W. Swanson.

Introduction of Guests—Dr. Teuscher introduced The Honorable Lister Hill, U. S. Senator from Alabama; The Honorable John E. Fogarty, Congressman from Rhode Island; and President John A. Perkins, University of Delaware.

Dr. Teuscher introduced the immediate Past-President of the Federation Dentaire Internationale, Obed H. Moen, of Watertown, Wis., Dr. James Moloney, London, President of the American Dental Society of Europe, and Dr. Cyril de Vere Green, London, who represented the British Dental Association.

Mr. B. Duane Moen, Director of the Bureau of Economic Research and Statistics of the American Dental Association, was asked to introduce the guests from other countries. They were:

Dr. and Mrs. Bernardo Cupertino, Sao Paulo, Brazil. Dr. Cupertino is treasurer of the Sao Paulo Dental Society and the representative of that society at the meeting.

Mr. Albert Sythoff, The Hague, Netherlands, president of the company that prints the *International Dental Journal*; also Mr. John Hamburg, production manager of the company.

Dr. Ino Sciaky, Jerusalem, Israel, dean of the Hebrew University Dental School.

Dr. Julio Oscar Novoa, El Salvador, official representative of the Odontological Federation of Central America and Panama.

Dr. Teuscher introduced the officers of the American Dental Association, the officers and regents of the American College of Dentists, and the officers of the Philadelphia Section.

Dr. Teuscher also introduced one of the founders and organizers of the American College of Dentists, Albert L. Midgley, of Providence, Rhode Island.

Appreciation Award—President Edgar Swanson then asked that Otto W. Brandhorst come to the rostrum, where he was presented with a gift. Dr. Swanson remarked:

"Mr. Secretary, our program is so full that it does not afford me time to recount the many activities and accomplishments which you have attained in the span of 25 years as Secretary of the American College of Dentists, but we could not possibly let this anniversary go by without some recognition. We feel it is through your devotion, your loyalty, and your efficiency that the College has attained the position it holds today, not only nationally but internationally. We officers and regents of the year 1960-1961 hope you will accept this small gift as a token of our appreciation and esteem."

(Dr. Brandhorst was given a standing ovation as he accepted the gift from Mrs. Swanson: a combination clock, calendar, thermometer, and barometer. It was inscribed, "Presented to Dr. Otto W. Brandhorst, Philadelphia, October 15, 1961. In appreciation of 25 years of service as Secretary of the American College of Dentists.")

Dr. Brandhorst modestly expressed his appreciation.

The newly elected officers were installed by President Swanson.

President-elect	Philip E. Blackerby, Jr., Battle Creek, Mich.
Vice-President	Crawford A. McMurray, Ennis, Texas
Treasurer	Fritz A. Pierson, Lincoln, Neb.
Regents	Vincent A. Tagliarino, Louisville, Ky. (to fill the unexpired term of J. H. Springsted, deceased)
	Frank O. Alford, Charlotte, N. Car. (four year term)
	Stanley A. Lovestedt, Rochester, Minn. (four year term)

The gavel was handed to incoming President Henry A. Swanson, who asked former president Donald W. Gullett, Toronto, Canada, to present the *Service Key* of the College to retiring president Edgar W. Swanson. In part, Dr. Gullett said:

"The presentation of the service key to the retiring president is a time-honored custom of the College. As defined in the dictionary, a mace is a heavy, spiked club used as a war weapon. Long since, the mace has become a symbol of authority which is entrusted to the presiding officer during his term of office. It is fitting that the serv-

ice key which is presented to the president at the end of his term is a miniature of the College mace.

No man becomes president of this College until he has served a stringent apprenticeship. His fellowship, in the first place, denotes that he has served his profession well. Election to the Board of Regents means that there is a testing ground, and the office of president offers opportunity to exemplify those attributes which the man has developed over the years.

Dr. Swanson, the College has had a year of progress during your term. Your devotion to service is greatly appreciated and this service key signifies our appreciation for your effort. It is a great honor for me to have the privilege of recognizing you in presenting to you this key."

Dr. Swanson accepted the *Service Key* and expressed his sincere thanks.

Vice-President Crawford A. McMurray presided while President Henry A. Swanson read his Inaugural Address.

The speaker of the evening was Mr. J. Lewis Powell, M.E., Washington, D. C., who gave a unique presentation and talk on "Cave Man to Space Man."

The meeting was adjourned at 10:45 p.m.

The Humanities and Health Services

JOHN ALANSON PERKINS, A.B., A.M., Ph.D.

President, University of Delaware
Chairman, Commission on the Survey of Dentistry

It is a great privilege to be asked by your Regents to attend and speak before this Convocation of the American College of Dentists. This is but another opportunity of many which I have had in recent years to be associated with your important profession. It is a rare privilege for a layman to become so closely associated as I have been, owing to the Survey of Dentistry in the United States, with the aspirations, the problems, and the leadership of as closely knit a group as a great professional one is by nature. You might suppose that in this comprehensive survey of your profession that the subject of dental education was my primary concern and interest. Fascinating and complex as this subject naturally is to an educator, it quickly found its proper relationship to the other equally important objects of our inquiry—dental research, dental practice, and dental health.

Upon this personal side I would dwell for a moment. It may in a measure enlighten the general topic which the wise Dr. Brandhorst assigned me. He suggested that I should address you on the relationship of the liberal arts to the health professions, dentistry in particular. He was searching, out of kindness to all concerned, for some subject which would permit me by reason of my own specialized training to talk to men highly specialized in a quite different field and still enable me to elicit their interest and initial respect. My own undergraduate training was, generally speaking, in the liberal arts. My doctorate was taken in the broad and inexact areas of political science and public administration. While government *is* a specialized field of study, democracy by definition licenses all men upon reaching voting age, as competent in it. Some of your profession think that as dentists you are professionally threatened by invasion from physicians, dental technicians, hygienists and others. To a political scientist, yours is a secure professional haven indeed. By formal education as well as by reason of personal qualities of mind

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Address, Philadelphia Convocation, October 15, 1961.

—they are not all strength by any means—I have been evermore in my adult life practicing as a generalist. Time and again I have been drawn away from my specialty to investigate and subsequently shape a course of action or policy with respect to quasi-public or public activities. Involvement in state-wide planning, public finance, and budgeting, educational administration, settlement of labor disputes, public welfare legislation and health problems have been my experience. This experience adds up to knowing a little about a great variety of human problems, even scientific ones, and not knowing much in depth about any one of them. Such is a generalist, the product of a liberal education. What a contrast such a life presents to yours which I look upon with a certain longing and inevitable respect. All this by way of saying that it was quite a natural thing for me, once involved in the Survey of Dentistry, to be conjuring not only about your education but about such topics as the progress in practical prevention of dental disease, the more rapid and efficient dissemination of dental research findings, and the inclusion of preventive measures in private practice.

In all honesty, until today's happy assignment came along, I hadn't given more than occasional consideration to the liberal arts as they might be most pertinent to the species *homo sapiens dentibus.* Fortunately for you and me, among the more than 25 valuable, special studies published by the Commission on the Survey of Dentistry was Number 6, "Liberal Education and Dentistry," by Charles H. Russell. Let me commend it to you if you have not already read it. It appears in the *Educational Record* for January, 1960.

The truth is that the meaning of the phrase liberal arts, not to mention the subjects of study which comprise it, is very confused. As that vague phrase has related to dentistry over the past hundred years, it has not so much been a matter of studying certain subjects as it has been the amount of preliminary education a would-be dental student should have before beginning his professional training, whether as a preceptor of yesterday or as an enrollee today in a collegiate college of dentistry. As all here doubtless know, debates have raged over the last century about whether a candidate for dentistry should be a high school graduate, later whether he should have at least one year, subsequently two or three years in an undergraduate liberal arts college, or possibily earn the bachelor's degree before being admitted to professional training. These discussions brought

about certain definite objectives for such professional education. Advocates justified proposals to raise educational standards on the grounds that the change would contribute to one or more of the following: (1) professional competence, (2) citizenship, (3) activity in the local community, (4) social status for the dentist, and (5) personal improvement. The first four advantages were, it seems, most commonly called to attention. These virtues of an extensive preprofessional education were also pressed as contributing inevitably to the candidate's level of knowledge, or as proving his capacity for the rigors of dental school, or as ensuring greater competence in later professional practice. Incidentally, there was more than a little concern with the value to the profession and its enhanced status if dentists were civic and social leaders. There is not a thing wrong with this pragmatic emphasis, except that the idea of what a liberal education is has been given a rather narrow turn, so narrow almost as to miss the whole point. That point is that a liberal education according to the time honored concept, is to make a better individual —an individual more capable in every endeavor.

Let us consider a little further the term "liberal arts" and the liberally educated man. Our object shall be not so much to define as to catch the spirit of the term and its human product. In the English speaking world the liberal arts have for centuries been the main vehicles for the education of civilized leadership. Hence the founding of Harvard College—not a theological school, mind you, but a liberal arts one—when the puritan clergy were largely responsible for civil affairs as well as for man's soul. Hence, the ubiquity of the classical curriculum at Oxford and Cambridge Universities in the eighteenth century when the sons of the landed gentry and the squires attended these universities in spite of their then comparatively moribund state. Hence, the education of a considerable portion of the British Civil Servants yesterday and today in the Oxford Honor School of *Literae Humaniores* of "Greats" as this curriculum is popularly called. Also, the heart of this tradition of liberal art study is the profoundly held conviction that pure knowledge is not in itself liberalizing or necessarily educative at all. A man's studies should give him knowledge, yes, but more importantly, the power to think. His studies should familiarize him with what the great men have felt, have thought, have done.

The immediate usefulness of a subject should not be confused with

its value as an educator. Here is the tap root of the conflict which so commonly rages between vocational education and the liberal arts. Lawyers, physicians, and dentists have struggled over the extent to which the undergraduate courses taken by aspiring practitioners should be prescribed ones most likely to be immediately and professionally useful. In recent years these professions have increasingly, fortunately one may say, caught the spirit and sense of the liberal arts. The stress is now upon the more general contributions of preprofessional work. I quite agree with the authority already brought to your attention, Charles H. Russell, who writes: "To the extent that advocates of subsequent increases in entrance standards placed primary emphasis on their contribution to dental practice, even though they conceived that practice more broadly, they also failed to see the dentist in the larger role of the liberally educated person."

The liberally educated man should reveal—in his conversation, his letters, or his more formal communications—high intelligence, a liveliness and originality of mind, allying with his wide-ranging mind sheer horse sense. The outcome of a liberal education should be a man of character as well as brains. Many seers believe that T. S. Eliot is right in his work, *Notes Toward the Definition of Culture.* In it, he suggests, that the great majority of people, and I wonder if he would be so bold as to include some dentists, are not capable of intellectual cultivation to any significant degree. If this is true, then the character outcomes of a liberal education must bulk large in a people's or even a profession's desire for it.

At the risk of laboring the obvious, I should like to emphasize that the word "liberal" derives from the Latin word *liber,* meaning free. The phrase liberal arts in this sense means simply "the arts significant to a free man." For reasons I shall emphasize later, I would note now that a free man must know these arts if he is to be self-governing in either a profession or in the larger sense of the political state. If he is not self-governing in either domain, he obviously has lost his freedom, perhaps because he was lacking in both knowledge and character.

To be emphasized right here, however, is the fact that the liberal arts, the "arts becoming to a free man," have always included the sciences. Those in the professions such as medicine, dentistry, and engineering are not alone in forgetting that the sciences have always been among the liberal arts. The humanists, most of them for such

reasons as not truly understanding science or being jealous of its significance and progress in the modern age, are also prone to forget that as far back as the classical Greeks, the philosophers were also scientists. In the Middle Ages the liberal arts included arithmetic, geometry, and astronomy along with grammar, rhetoric, logic, and music. But to return to you present-day vocationalists. Scientific knowledge is indispensable to you. It is a vital underpinning to your professions. Because it is, you have pushed young novitiates so pragmatically toward greater scientific knowledge as to almost vitiate the larger, deeper, and more lasting contribution science can make to their education. Unfortunately, a widening breach has developed between what is thought of as scientific education and what is thought of as a liberal education.

This has been to the detriment of both. The more immediately useful a field is thought to be, the greater is the temptation to teach it simply as practical information. When that subject seems dull, the tendency is to compound the fault by making the teaching evermore down to earth. The biochemistry professor teaching pre-professional students or even pre-clinical dental students, is, I suspect, so busy insuring his students against gaps in their knowledge of this vast and complex field that information is about all that is taught. Little time remains to explain, to evaluate, and to criticize. The student is so busy accumulating facts, definitions, and formulae that he has no time to question, to digest, or to think critically. The high possibility offered by science study to demonstrate how each advance has exhibited the scope and the depth of imagination, the critical mind inquiring and logically reaching conclusions, is lost. To recover this loss would not only put the would-be dental or medical novitiate and his scientific studies into a renewed relationship to the liberal arts; it would make his science courses more meaningful, too! He would no longer proceed to his clinical courses simply stuffed with facts from ever thicker textbooks printed in ever smaller type, praising the Almighty that he is now *through* with science. Such thanksgiving, by good students too, has been given in my presence more than once. It is perfectly possible for a man to go through your comparatively long educational process, replete as it is with science courses, and not really understand science, a vital part of the liberal arts. He may simply have acquired, for the time being, information given in a series of discrete science courses.

If science courses for embryo dentists were taught broadly as well as in depth, truly in the spirit of the liberal arts, not only would the best possibilities of a liberal education be realized. More important for each of you, a dental profession based upon a built-in and dynamic science in the fullest sense of the word would be assured! Such dentists need not look suspiciously upon encroachments by those with mechanical skills.

So much for the establishment of a common background of the liberal arts and its relation to the dental profession. Permit me now to enumerate just a few of the larger problems of the dental profession, upon which your Survey Commission made recommendations. First, only 40 per cent of this naton's population receives what might be called adequate dental care. The American people, even those in the higher income brackets, evidently set a low priority on dental health. Second, our 90,000 practicing dentists are simply not enough to take care of the growing population, especially if they come to have an awakened desire for dental care. Third, many dentists are reluctant to adopt some of the demonstrably practical means of increasing their own productivity. Fourth, the prevention of dental disease or limiting its progression does not have a high priority among many practitioners. There are also a range of problems related to the governing of the profession extending from licensing to the adjudication of fee and other disputes between practitioner and patient. So much for a small sample.

Consider again if you will what already has been said concerning the liberal arts and character education. I told you earlier that I would return to the relationship of the liberal arts, and their high significance to character and a man who would be free both as a worker and as a citizen. I do so now. Freedom's continuance depends upon man's having the ability to run both his profession and his government in a responsible manner. Most of the problems before dentistry that cry for solution require men with more than technical skill! They require ever-more men imbued with the spirit of the liberal arts to such an extent that they make that spirit a way of life for themselves, their profession, and their nation. They must have the knowledge and the character to govern themselves to their profession in the public interest.

To mention government recalls that the Commission's findings and recommendations at many points would bring your profession

more closely into a juxaposition with governmental authority than heretofore. This was particularly true with respect to public health measures such as fluoridation, incremental care programs for children possibly with federal assistance for children of low income families. With respect to dental education, we foresee as inevitable that federal funds will be necessary for dental education and operational expenses of the schools, for new construction and remodeling, as well as for scholarships and loan funds for dental students. With respect to dental research, we need only remind ourselves of the basic role already played by the federal government to realize that if the Survey's recommendations for expanding and augmenting research are carried out, that the governmental role will doubtless grow rather than shrink. To a profession educated as I would have yours be in "the arts significant to a free man" we need not fear on the one hand, a profession overly dependent upon government or on the other, a profession apoplectic about cooperation with government. After all, government is elected by and responsible to dentists and *other free men.* It is now perhaps a good time at which to remind dentists that they must be concerned not only that they themselves are educated in the liberal arts, but that the liberal arts be made available and urged upon their fellow citizens as well!

Dentists are not the only highly specialized group in our society. Specialization is ever-more ubiquitous. Specialization has been one of the means that has helped western civilization so wonderfully to expand human knowledge. There is, therefore, a temptation, Arnold J. Toynbee rightly warns, to carry specialization to too great a length. This could be making too much of a good thing, and specialization is goaded along by the circumstances of international power politics. Now that technology and scientific knowledge may count more in victory than military prowess and administrative skill, governments and non-governmental organizations alike call for specialists. I should like to quote Toynbee again as to the futile consequences of our specialization. He says: "Any state or people that succumbs to this temptation seems likely to defeat its own purpose for even the disinterested pursuit of science becomes sterile if it runs in narrow ruts. Specialization, in particular branches of natural science, runs dry if it is cut off from its source in comprehensive and philosophical scientific thinking." I agree. Over-specialization will be detrimental to the very science that it has spawned. Moreover,

most of the difficult problems of the world, just as in your great profession, depend for solution not upon science and specialization but upon other qualities traditionally developed by the liberal arts.

The dental profession, whether it would save the natural teeth or play the free citizen-role, will educate itself in the liberal studies and do what it can as a leadership group to see that other specialists, whether of a recent or long-standing identity, are likewise educated in a manner and substance fit for free men.

President's Address

EDGAR W. SWANSON, D.D.S., M.S.D.
Chicago

It has been a distinct pleasure and an honor for me to have served as your President this past year, and my only regret is that in this short space of time I could not have done more toward the advancement of the efforts of the College.

There has never been a dearth of problems to challenge the intelligence, the curiosity, the interest, and the enthusiasm of the individual in dentistry nor of the dental society. There are more problems than any of us, individually or collectively, can hope to gather together in one place, or to live long enough to form intelligent opinions about their solutions. The number and kinds of questions which can and will be considered by an organization, such as the American College of Dentists, are dependent upon the caliber and interest of its membership and by the funds made available for the purpose.

We are an organization of dentists selected for the reason that we have demonstrated our ability to contribute outstandingly to the advancement of the dental profession and, therefore, to the welfare of the people whom the profession serves—selected and honored in the fervent hope that we will serve even more and with even greater attainment because of the opportunities to do so provided for us by fellowship in, and by virute of, the program of the American College of Dentists.

How are such advancements and attainments achieved?

Through committees;
Through special studies;
Through support of projects and studies by others;
Through cooperation with other groups;
Through cooperation with dental school faculties;
Through section activities; and
Through such meetings as here in Philadelphia.

Three important areas of dentistry have formed the tripod for the program of the American College of Dentists. First, the College has

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fostered and supported a stronger program of dental education; second, it has been a leader in the advancement of the dental literature; and third, it has lent its support by example and by open discussion to improve dental organizations, based on the principle that their existence cannot and must not be a selfish one, but one primarily for the purpose of improving the dental health of the society which gives license to its fellows to practice dentistry.

Dental education finds itself in a dilemma. The recently published survey, *Dentistry in the United States,* recommends virtually doubling the number of dental schools in the United States by 1975. Should the present schools and their universities support such a recommendation? Should the American College of Dentists support it?

The College has been effective in improving the dental literature, but it must continue this effort and vigilance if the present gains are to be maintained and new ones are to be realized.

By example and by open discussion the American College of Dentists has urged the participation of dental organizations in programs designed to honestly and effectively improve the dental health of the nation. The College has been a staunch advocate for fluoridation of the public water supplies and has pointedly discussed the urgency of dental organizations becoming actively involved in the problems associated with providing more and better care to the public.

These are but a few of the things which have engaged and which will continue to engage the attention and the efforts of the American College of Dentists. But it is for all of us to remember that the College is *you;* it is not just the member at your right or your left—it is *you.* And if the College is to continue to justify its existence and its growth, you will have to do more than just pay your dues. You will have to give of your time, thought, and efforts to work for the goals and the objectives of the College. Anything less than this will not do justice to the person you are.

I wish once again to express to you my gratitude for the high honor which the College has bestowed upon me in having selected me as its President.

The Inaugural Address

HENRY A. SWANSON, D.D.S.
Washington, D. C.

I come before you this evening with a sense of elation for the honor afforded me to serve as President of this outstanding organization, The American College of Dentists, yet with considerable humility for I realize the importance of its objectives and the responsibility of what these objectives imply. The College is strong because of its basic concept of organization, and its officers and all of its Fellows are charged with the responsibility of maintaining and, yes, advancing this concept. Fellows are elected because they were considered meritorious, having rendered superior service to the profession, to their societies, to their communities, and in fact, to every cause that advances the health of people everywhere. Never let it be said that any Fellow upon election to the College, loses sight of this responsibility of the profession or ceases to support actively programs for the advancement of health services.

In forty-one years as an organization, the College has proven the hopes and beliefs of its Founders that "there was need for an organization that would be imbued with the highest ideals of the profession and would lend its influence to every movement having for its purpose the advancement of professional objectives and the betterment of dental service to humanity."

As your President, I have the honor of addressing you briefly on a theme which consists of a three-letter word, *WHY*—W H Y—the "why" of dentistry. This appears to be a peculiar title for an inaugural address, but there is much contained in the word "why" which is not new in our philosophy but which needs to be reiterated from time to time so that we do not lose sight of the basic concept of our profession.

A little child's inquiring mind uses the term "why" to satisfy an inner urge to obtain answers that have either escaped it or with which it has had no previous exposure, or for the plain reasoning of curiosity. In a child it can be annoying at times for those to whom

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it is made, because of a lack of knowledge that will satisfactorily answer the inquiry. The child's "why" is not too much of what I have in mind.

The "why" of dentistry is not always answerable, but it is not from a lack of knowledge but rather in the interpretation and the application of such knowledge. Dentistry's "why" then has a fundamental background and it is a concept to which a profession owes its existence: by demanding of its members total acceptance of definite principles, by demanding adherence to well established laws of procedures, by demanding technical knowledge, and by demanding a professional dedication. All of this definitely within the field of health but not necessarily limited thereto.

What is this concept of dentistry that demands so much of its people? One simple word describes it, that of *service*. Service which is rendered with truth, service rendered with compassion, and service with a sense of morality. This then becomes a philosophical problem for it is a problem of meaning. Its answer is not a statement of fact, but an interpretation of the word, especially the pursuit of its implication. What is meant by service? Webster defines the term in relation to the professions as, "Any result of useful labor which does not produce a tangible commodity."

Service then can be considered as a benefit which a person renders to another. Personal service between dentist and patient is foremost in our thoughts and is the bulwark on which we take our position as a profession. This fundamental fact governs the whole concept, and any extensions or deviations broaden our "why."

Dentistry is a health service and its ministrations are directed within this field. Agreed that its field is somewhat circumscribed it has nevertheless a definite relationship with the total health of people. Certain significant changes have been gradually occurring within the field of practice during the past few years which must have a distinct effect on the future of the profession. One important change has been the weighing of the problems of the health of the mouth more realistically in relation to the body as a whole. The life history of the teeth and oral tissues and the mechanisms concerned require detailed knowledge of the total organism, and it is important to know how the mouth is influenced by the related phenomena. Adversely, how is the body influenced by the oral situation?

Dentistry is quite independent in its approach when dealing with

its many problems of education, dental practice, dental health, and dental research. All the procedures that are necessary to promote, to establish, to operate, and, yes, to finance within these four fields are a very important phase of *service,* and the profession's obligation becomes more acute each year. Dental service is based on the premise that a need exists which requires one who is professionally qualified through educational preparation, who has a development of skill and intellectual effort, a sense of moral obligation, a social responsibility, and an inherent sensitivity for the patients' welfare.

Any philosophy that the dental profession has adopted or professes to adopt must have service as the basis for its continuation. Without this we can easily become relegated to the status of commercialism, and our profession is in jeopardy.

The increase in population and the consequent growth of the profession has assumed such proportions that dental service today encompasses much more than the individualistic relationship; we are faced with problems national in scope, dealing with the dental needs of all the people. There has been much discussion concerning the social responsibility of the dental profession, with the apparent connotation that we have disregarded its major implications. There may be some truth to the latter, but I am firmly convinced that it is not because of a lack of interest but rather lack of understanding as to how this can or should be accomplished. In our daily practices our contacts with social problems are in most cases very limited, and unless we are actually faced with such problems it becomes very easy to ignore them. Because of this broadening concept our dental leaders, several years ago, envisioned the need for a survey of dentistry of such magnitude that every phase would be covered. It was hoped that in studying and evaluating the facts, such a survey would develop recommendations upon which the profession might have a basis for self appraisal, for corrective measures, and for future development. The *Survey of Dentistry* is the result of that bold decision of our leaders and we have before us a master document from which we cannot escape. We must in our service to the profession and to the people be forthright and honest as we search for answers and solutions.

The Survey collected and stated facts and conjectures concerning the past, present, and future of dentistry. This broad-based report is the result of two years of effort by a representative group from the

field of education, from the dental profession, and from groups of varied interests. The coverage is all inclusive, with no particular area given precedence over another, so that it must be considered in its entirety if and when solutions are considered.

The report is a document which denotes the need for much service—service that must be rendered unstintingly, unhesitatingly, and with a dedication that is demanding of all in the profession and those associated with us. Those of you who had the opportunity to participate in the panel discussion this morning, and those who heard the discussion, now realize the enormity of the problem of providing dental health care for the American people.

I take this opportunity to express to the moderator, Dr. Hillenbrand, and to all those who participated, my sincere appreciation for an excellent meeting. May the knowledge we have gained be an instrument for service and an incentive for the continued advancement of health care for all humanity.

Many of us came into dentistry when its philosophy was simple of interpretation and was based largely on technical considerations. As the years have passed we have become scientifically and socially minded for reasons well understood; our professional concept of dental service has broadened and enlarged. Now consideration must be given to the needs of people in their total health problem, rather than to the individual demands of people which have been our daily occupation.

Percy Phillips in a recent address on the "Prospective for Tomorrow's Health Goal" stated, ". . . we should consider total health as the recognized objective of social man and to reflect on the challenging direction the profession of dentistry must authoritatively contemplate as the proper course to adopt in the years ahead. The basic challenge lies in the problem area of expanding quality dental health service to more people in a changing national philosophy."

Briefly, what is this national philosophy and how has it changed? It is a known fact that in every age some advances occur which should be for improvement. The old people look with misgivings on some of these innovations while the young people look with pity on the past. Progress is always accompanied by criticisms from those who prefer the status quo, for any change interferes with their mode of life and living.

In a recent article, Joseph Wood Krutch stated that "welfare is

the key word of our time. What too many men seem to desire is not virtue or knowledge or justice but welfare. To the majority the word sums up the principle object of government and, indeed, of all social institutions."

He goes on to say that if an eighteenth century philosopher was asked what the principle aim of government is, he would have stated that our Constitution grants us "Life, liberty and the pursuit of happiness." Today that does not appear to be entirely satisfactory to most people. They do not reject it, but consider it something less than enough. The addition of "welfare" seems to be the legitimate aim of government which the people are most willing to accept. This then is a changing national philosophy which we must recognize regardless of whether we agree or disagree with it.

The *Survey of Dentistry* has recognized the overall need of dental service for our people. Does all this indicate that there will be a change in our philosophy, our concept and our "why"? If so, then we can no longer maintain a status quo but must be prepared to take a stand which is morally right and which does not place dentistry in a militant position of resisting, but rather in one of defending progressive changes which will increase our basic concept of the best service. Service is the keynote, and any changes must maintain that fundamental principle.

What has this to do with the American College of Dentists? The College is not just another group; it is something specal for its members are elected to Fellowship because they have rendered superior service as professional people. The College has stated objectives and because of those objectives it is a working organization, prepared and ready to serve wherever and whenever the occasion arises. Its Committees are in continuous study of current problems, and the knowledge gained from such activities is made available to those who have positive responsibility for action.

We are not the body politic, responsible for decisions that must be made nor for the policies that should be adopted, but as a group of dedicated professional men and women we do have responsibilities of supporting such decisions and policies. Further, as individuals we have a personal responsibility in the selection of those who are to represent us in all deliberations and in all administrative activities within the field of organized dentistry.

Most of you are vitally interested in dental affairs at a local level

and many of you serve the profession at the national level so that your abilities are utilized in the services that must be rendered.

Because of this you are recognized as leaders within the profession. The College, desiring to capitalize on this wealth of potential workers, set up a section structure within each state so that it might more readily avail itself of your services.

Our Bylaws state: "The function of the Sections is to carry on the activities and to promote the purposes and objectives of the College at the local level."

Leadership is our birthright and our objectives are a measure of our ideals and standards. Willard Fleming, in his inaugural address as President of the College in 1951, had this to say which bears repeating: "Leadership in the dental profession has characterized our actions, and expediency has rarely taken precedence over the principles of right action. In addition to leadership, the College serves the profession at times as a catalyzer to speed up certain actions and progressive development, and again as a governor to control too hasty action. One of its most important functions is to initiate and contribute thoughtful studies of various problems through the action of its nationally constituted Committees."

I would like to go one step farther and say that our Sections today are equally important for they are a most formidable group whose activities and service, at a local level, are as important as any of the functions, actions, and services of our national committees.

Your participation in your Section activities is definitely a service to be rendered and the more that is channeled in this direction, the more effective the Section will be in its operation. No College officer can tell you what to do, but I wish I had the ability to ignite the spark of your enthusiasm and then fan it into a flame so great that your Section would be stimulated to project a vital program of constructive service.

I have two definite objectives for this next year and I call upon each of you and every Fellow of the College for the support of that endeavor. First is the organization of our Sections so that they will be a very positive asset in the determination of the advances in dentistry that will most definitely occur. Secondly, while our services to our own people is a foremost objective there is great need for services in foreign areas which can be helpful to our country and international peace. There are many dedicated dentists who have given

much in the initiation of such dental programs and I hope we can, this year, think clearly and conscientiously of what might be possible to advance the theme of "International Friendship."

The *Why* of dentistry is *Service*: the service you render to your patients, that which is rendered to the profession, that which is rendered to yourself. A dedicated professional person must ever keep in the forefront of his mind that he has been prepared for this role of service and that service rules his life. In a sense it is giving of yourself to others. The art of giving encompasses many areas. Emerson said it well: "Rings and jewels are not gifts, but apologies for gifts. The only true gift is a portion of thyself." Someone else has said that we give of ourselves when:

> "We give gifts of the heart: love, kindness, joy, understanding sympathy, tolerance, forgiveness . . .
>
> —we give gifts of the mind: ideas, dreams, purposes, ideals, principles, plans, inventions, projects, poetry . . .
>
> —we give gifts of the spirit: prayer, vision, beauty, aspiration, peace, faith . . .
>
> —we give the gift of time: when we are minute builders of more abundant living for others . . .
>
> —we give the gift of words: encouragement, inspiration, guidance . . .
>
> —we should give our community a good man, our home a devoted husband and father, our country a loyal citizen.
>
> The finest gift a man can give to his age and time is the gift of a constructive and creative life."

MINUTES OF THE MEETINGS OF THE BOARD OF REGENTS

October 13, 14, and 18, 1961, Philadelphia

First Meeting

The Board of Regents of the American College of Dentists convened in the Bellevue-Stratford Hotel, Philadelphia, on Friday, October 13, 1961, at 9:00 a.m. Thirteen members were present. President Edgar W. Swanson presided.

The Board observed a period of silence in memory of Treasurer William N. Hodgkin and Regent James H. Springsted who died since the last meeting of the Board.

Minutes of the meeting of February 5, 1961, in Chicago, were approved as submitted by mail. Report on Minutes was received.

Reports of Officers and Regents on various activities of the College were received.

The Treasurer's report, presented by the Secretary, showed assets and current funds in the bank totaled $95,817.96. Report was approved.

The Secretary reported on the ad-interim mail ballots taken since the February meeting. This was approved. He also reported the deaths of Fellows since the Los Angeles Convocation. (These appear in the report of the Necrology Committee as recorded in the minutes of the Convocation elsewhere in this issue.)

Unfinished business: H. A. Swanson and C. A. McMurray reported on the development and apparent success of "Operation Bookshelf." This was a project whereby books and periodicals collected from dentists were flown by the U. S. Air Force to countries where such material was needed.

The Secretary reported that the Exchange Fellowship (with Great Britain) would be activated shortly.

New business: Joseph E. Ewing, Philadelphia, was designated the organist of the College.

These Minutes have been compiled and abbreviated by the Secretary, O. W. Brandhorst. The detailed Minutes are on file in the Central Office.

Second Meeting

This afternoon meeting convened at 1:00 p.m. with Edgar W. Swanson presiding and thirteen Board members present.

This meeting was devoted mostly to hearing the reports of Committees, read either by the respective chairmen or a committee member. Discussion followed each report. The reports, together with actions taken, will be presented in forthcoming numbers of the *ACD Reporter.*

Third Meeting

The evening meeting convened at 7:30 p.m. and was adjourned at 10:00 p.m. Edgar W. Swanson presided with twelve Board members present.

The Board voted to hold its Spring meeting in the Central Office, St. Louis, in March, instead of Chicago as formerly.

President-elect Henry A. Swanson outlined his plans for the October 28, 1962, Miami Beach Convocation. He stated that the theme for the meeting would be "International Friendship," and that the program would be slanted toward Latin American relations.

The Ovid Bell Press, Inc., Fulton, Missouri, again was selected as the printing establishment for the JOURNAL.

The budget for 1961-1962 was presented and the various items discussed. (Action on the budget was taken at a subsequent meeting.)

Fourth and Fifth Meetings

This all-day meeting on Saturday was devoted to a discussion of some of the broader problems of the College and a consideration of certain aspects of College activities.

Annual meeting: The Board recognized that the traditional one-day meetings of the College have been "heavy" and "tight," and that there was need for more time to discuss and present the many interests of the College. It was decided that additional time should be arranged on the Saturday afternoon prior to the Sunday Convocation, if meeting facilities could be arranged. The Secretary was delegated to make such arrangements if possible.

Nominations for Fellowship: The present methods and procedures for nominating were reviewed. There were no material changes agreed on.

Section activities: President-elect Henry A. Swanson elaborated on this objective of the College for next year and outlined plans for greater activities by the Sections. In support thereof, it was decided to call a meeting of representatives of the Sections for the promotion of this effort. Each Section will be asked to send a representative to this meeting; travel and hotel expenses will be assumed by the College.

Survey of Dentistry: The interest of the College in this undertaking is well known. Further attention by the College to the Survey recommendations and what may be developed regarding them will be continued. The discussion indicated that wide interest in the Survey findings was being shown.

ACD Lectureship: It was decided to continue the lectureship program on the assumption that certain difficulties can be overcome. Further consideration will be given at the Spring meeting of the Board.

Institute of Graduate Study: The Board approved, in principle, the plans suggested by the ad hoc committee of the Committee on Research as contained in their current report. Details will be discussed and developed during the year ahead.

Sixth Meeting

The first meeting of the new Board was held on Tuesday morning, October 17, from 8:00 to 9:00 a.m. President Henry A. Swanson presided; fourteen members were present.

The new members of the Board were introduced. President Swanson outlined his program for the year ahead, stressing increased Section activities. He discussed plans to further the theme of the Miami Beach Convocation—"International Friendship." He announced his committee appointments, which were approved.

Secretary Brandhorst expressed his appreciation for the gift presented him at the Sunday evening meeting. He also read a letter of appreciation from George S. Easton, the retiring Vice-President.

John E. Gurley was designated Historian of the College for the ensuing year.

The Secretary was instructed to write letters of appreciation for the service rendered to the retiring officers, and to the Philadelphia Section for its gracious cooperation during the Convocation.

William N. Hodgkin

1890-1961

On September 7, 1961 the dental profession, and the American College of Dentists in particular, was saddened by the loss of its beloved and respected Fellow, William Newton Hodgkin.

Dr. Hodgkin was born at Warrenton, Virginia, on December 18, 1890, the son of James O. and Roberta D. Hodgkin.

His great-uncle, Dr. James B. Hodgkin, served on the faculty of the Baltimore College of Dental Surgery and both his father, Dr. James O. Hodgkin, and his uncle, Dr. Frank C. Hodgkin, practiced dentistry in Warrenton. Thus it was natural and fitting that Dr. Hodgkin and his brother, James O. Hodgkin, Jr., shared their interest and chose to enter the dental profession.

Upon graduation from the University College of Medicine, the present Medical College of Virginia, in 1912, Dr. Hodgkin began practice with his father and brother in his home town of Warrenton. In 1949, Dr. Hodgkin's nephew, James O. Hodgkin, III, joined them in practice, making 84 continuous years to date that the Hodgkin family has cared for the dental needs of the people of Fauquier and surrounding counties.

Dr. Hodgkin married the former Bertie Miley Beard of Lexington, Virginia, and had one adopted daughter, Carol B. Miller.

Dr. Hodgkin's was indeed a life lived in service and dedication to the profession, to his patients, and to his community. Though he was repeatedly honored by the profession, because of his inherent modesty it was difficult to learn of his attainments from his own lips. Surely it is worthy of note that he served his profession as President of the Virginia State Dental Association, with twenty years membership on the Virginia State Board of Dental Examiners, six years on the Council on Legislation of the American Dental Association, twelve years on the Council on Dental Education of the American Dental Association, over thirty years as member of the House of Delegates of the American Dental Association, eight years

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This obituary was written for the JOURNAL, at the request of Secretary Brandhorst, by Mrs. Barbara Fisher of Warrenton, Virginia. Mrs. Fisher was Dr. Hodgkin's secretary.

on the Board of Visitors of the Medical College of Virginia, and President and Regent of the American College of Dentists. His many friends throughout the nation deplored the compelling circumstances which precluded his being nominated for the presidency of the American Dental Association.

Endowed with a warm and sympathetic nature, as well as unusual mental capacity, his wise counsel was sought by every organization with which he was associated. It was because of his fine Christian character and sterling qualities of leadership that he was able to make such outstanding contributions to American dentistry.

Dr. Hodgkin possessed a keen and searching interest in history and was a recognized authority in the area of dental and Virginia history. For many years under the auspices of the Virginia State Dental Association he had carried on research looking to the publishing of a History of Dentistry in Virginia. Though this project had not come to fruition, he had published many papers on Virginia dental history.

In addition to serving his profession, Dr. Hodgkin gave generously of his time and abilities in his community as scoutmaster, vestryman, town councilman and bank director.

One of Dr. Hodgkin's favorite prayers was the one which goes—

"O Master, grant that I may not so much seek
To be consoled as to console
To be understood as to understand
To be loved as to love
For
It is in giving that we receive
It is in forgiving that we are pardoned
And it is in dying that we are born to Eternal Life"

Thus it was that he lived his life consoling, understanding, loving, giving, and forgiving. Surely this explains the love and admiration that all who knew him felt for him. Warrenton and the world are better places because Bill Hodgkin lived and worked among us.

American College of Dentists

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KYRLE W. PREIS, 700 Cathedral Bldg., Baltimore, Md. 1966

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KENNETH V. RANDOLPH, West Virginia University, School of Dentistry, Morgantown, W. Va. 1963
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JAMES B. BUSH, State Univ. of Iowa, College of Dentistry, Iowa City, Ia. 1965
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RALPH W. PHILLIPS, 1121 W. Michigan St., Indianapolis, Ind. 1966

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WORLD RELATIONS

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Book Reviews

WORLD DIRECTORY OF DENTAL SCHOOLS. World Health Organization, Geneva, 1961. 288 pp. Price: 1.5s., $5.00, or Sw. fr. 15.

The adequacy of present dental care and the problems implicit in anticipating, and planning to meet, future needs in that field have been studied in many individual countries in recent years. Now, for the first time, WHO has made available a compilation of the basic data, in its *World Directory of Dental Schools,* just published in a format similar to that of its *World Directory of Medical Schools.*

An important trend discernible from this directory is the increasing emphasis on public health dentistry and preventive dentistry in dental education. Of the 70 countries listed in the Directory, 21 report public health courses in their dental schools and 21 report courses in preventive dentistry. Only 8 countries appear in both lists. Not included in these figures are courses whose content may well overlap with public health or preventive dentistry, such as "epidemiology and statistics," "social hygiene," and the like. It is interesting to note that only 8 of the 21 nations reporting public health courses, and only 4 of those reporting preventive dentistry courses, are European, reflecting perhaps a less urgent need in the European nations because of a more favourable ratio of professional dental personnel to population—or perhaps merely a more conservative and a more traditional approach to dental training.

The ratio of registered dentists to population, given in the Directory for each country, serves a useful purpose as a crude quantitative measure of the adequacy of dental care and as a starting point for the public health administrator attempting to determine the optimum ratio for his country. Many factors will affect this determination. Among them are the extent to which available personnel are used in the various forms of what has been broadly termed "social dentistry"; the degree of utilization of dental auxiliary personnel; and the quantity and quality of dental research and its application to the prevention of dental disease. It is precisely because public health dentistry has a large part to play in each of these areas that recognition of its importance in dental schools is growing. The Directory offers no data on dental auxiliary personnel or on dental research; but it is hoped that such data may eventually become available and be incorporated in later editions.

It would be rash indeed to attempt to draw conclusions from, or base predictions on, the admittedly incomplete material made available in the Directory. Terminology is still unstandardized: even a cursory inspection reveals that there is little common ground (other than the function they perform) between the "secondary" or "assistant" dental practitioners, or the unregistered and presumably unqualified ones, still found in some countries, and the physician-dentists of other countries. Methods of collecting data are far from comparable: even the number of qualified dental practitioners given for some countries represents only an estimate, because of varying registration requirements. In countries that have no provision for separate registration of physicians who may practise dentistry as a specialty, the figures include as dentists only those so registered or

those who belong to a professional dental association, and will therefore be too low. Moreover, the tabulation gives no indication of the number engaged in actual treatment of patients, as against those who have retired from active practise or who are engaged in administrative work, research, or teaching. Such a breakdown of the statistics is not yet available; but clearly, the more advanced a nation's dental public health programme, the more extensive its training facilities, and the higher the standards of its dental schools, the more numerous will be these "exemptions" from the statistics on registered dentists.

Nevertheless, the statistics gathered in the Directory, taken together with the descriptions of dental education in the various countries, afford raw material for further analysis, as well as a yardstick against which future progress can be measured in later editions. There are few surprises here; as with the data given in the WHO *World Directory of Medical Schools,* the magnitude of the disparity between the nations of South-East Asia at one extreme and those of Europe and North America at the other is vividly brought home. Even in Europe and North America, it is apparent that no nation has achieved a level of dental care that is fully adequate to the need or the demand—at best one can speak only in terms of relative adequacy. Some countries that seemed to be within sight of such relative adequacy less than a generation ago find themselves losing ground today as their populations increase at a rate that outstrips their professional training facilities. Moreover, even if a nation succeeds in increasing its production of professional dental personnel in proportion to the population, the problem of distribution of the needed manpower is a knotty one in the social context of many countries.

Dental public health administrators and officials of dental schools will be especially interested in correlating the increase in their populations with the current and expected increment in their professional dental personnel, as a help in anticipating and planning to meet future needs. Analysis shows that as dental schools raise their standards and introduce more selective admission procedures, some countries may find it difficult to maintain their present favourable ratios and will probably look to the factors already mentioned—preventive dentistry, social dentistry, utilization of auxiliary personnel, and dental research—for improvement of dental care. But for many countries the problem will perhaps for some time continue to be how to expand existing institutions for professional dental training and create new ones: thus at the XIIth International Dental Congress, held in Rome in 1957, Sweden and Denmark reported twice the number of applicants that could be accepted in their dental schools, Norway three times the number, and Finland ten times. It is significant that, of the 276 dental schools in all countries for which the Directory reports the date of foundation, 91, or nearly one-third, were established within the past twenty years. Among other countries shown by the Directory to be engaged in a determined drive to increase the number, as well as the quality, of dentists is the USSR, which reports no less than 16 new dental schools founded in the past decade (12 of them within the space of two years) as against half that number in the three preceding decades combined.

Certain other trends in dental education, which have important implications for the quality of future dental care throughout the world, emerge from the descriptions of dental education in the various countries, although many more data are needed before the significance of these trends can be properly evaluated. One is the tendency for dental schools to be set up as independent faculties rather than as departments within a medical faculty. Both systems have their

proponents within the dental profession, but the tide seems to be running in favour of the independent dentistry faculty (although often with some affiliation with a medical school), especially in the non-European countries, in spite of the centuries-long history of dentistry as a medical specialty. Of the countries reporting on this point in the Directory, 40 (only 7 of them European) have separate dentistry faculties, whereas only 21 (13 of them European) have dental schools that form part of a medical faculty. In 4 European and 3 non-European countries there are examples of both systems. In this connexion it may be noted that France, where the private dental schools are set up as independent faculties and the State dental schools are incorporated into medical faculties, reported at the XIIth International Dental Congress a strong current of opinion in favour of a uniform system of independent dental faculties.

Nevertheless, as standards of dental education are raised, the prospective dental surgeon everywhere spends more and more of his time on general medical education, often sharing many of his classes with medical school students. Only two or three countries require, for the dental surgeon, the period of internship that has become almost universal for medical school graduates, and there seems to be little tendency in other parts of the world to follow the example of European nations such as Austria and Italy, which require a medical degree as a preliminary to admission to a dental school. But countries that have had shorter dental training programmes on a lower professional level, often designed to meet emergency needs, are discontinuing them. Thus the USSR is increasing enrolments in stomatological institutes and faculties for graduate physicians and decreasing enrolments in the non-graduate schools of dentistry, with the intention of eventually discontinuing the latter; and Yugoslavia, although not requiring a medical degree, has almost completely eliminated "vocational" dental schools.

Finally, one may point to a marked tendency among dental schools in recent years to absorb into the dentistry curriculum proper what was formerly termed "predental" work. More courses in the applied biological sciences are found throughout the average four-year dental curriculum, and the student begins clinical dental work earlier, so that the practical application of the basic sciences to dentistry receives more emphasis. This parallels recent trends that are found in the medical curriculum in many countries.

(This review, under the title "Trends in Dental Education," appeared in the *WHO Chronicle,* 15:338-43, Sept. 1961. The tables and graph are not reprinted.)

ORAL PHYSIOLOGY. By Sidney I. Silverman, B.S., D.D.S. 523 pp. St. Louis: C. V. Mosby Co., 1961. $15.00.

Considering the exceptionally broad scope of this book, the depth of the discussions is commendable. The author's expressed intention is "to abstract the principles of physiologic activity in the oral structures and to relate these processes to normal growth and development, to pathologic processes . . . and to diagnostic and therapeutic procedures." This aim has been accomplished.

The areas covered are many and diversified. Part I is a broad treatment of the structure and function of major tissues and organs and their relation to clinical dentistry. Included are discussions of cell structure and recent methods of studying cells; the circulatory system, its function and some of its disorders; the histology and pathology of epithelium, particularly oral epithelium; the structure, function, and disorders of the central nervous system and the autonomic nervous system; the functions of the cranial nerves; the psychology of behavior

and dental treatment of disturbed patients; the histology, function, and diseases of muscles; the histology, chemistry, and diseases of bone, and the pathology of joints.

Part II treats of the functional anatomy of maxillofacial structures. Included are discussions of growth and development; vertical dimension; occlusion; respiration; speech as it concerns the production of sound symbols, and speech disorders associated with pathosis in the maxillofacial structures; posture and gait and their relationship to occlusion.

Part III discusses the clinical application of physiology to different age groups: childhood, adulthood, and aging. In the discussion of childhood, areas covered include development and function in the prenatal period, infancy, early and late childhood, and dental treatment for children with such handicaps as anodontia, cleft palate, and neuromuscular disorders; in adulthood, among other topics touched upon are oral diseases resulting from blood, nutritional, or endocrine disorders, infections, and tumors; in the aging, attention is given to the biological and psychological problems in prosthodontics, to diseases, and to nutrition.

The author writes from the viewpoint of a comparative anatomist as well as from the viewpoint of a dentist. The introduction of some concepts of the evolutionary development of cells, of the nervous system, of the functions of sight and hearing, and a brief discussion of the evolutionary development of the skull, with some of the classic illustrations of Gregory, give added interest to the text and extend the background of the reader.

The book was not intended to, and does not, duplicate textbooks of basic physiology. It is a survey of, and an integration of, numerous areas of basic biological science and clinical dentistry.

While some readers may wish for more extensive coverage of one or more areas of their special interests, I believe it will be agreed that Dr. Silverman (College of Dentistry, New York University) has done good work in writing an informative and interesting book, one well worth the time and effort of studying.

Dorothy Permar, Columbus, Ohio

APPLIED DENTAL ANATOMY. By Nicholas J. Brescia, D.D.S., M.S. 212 pp. St. Louis: C. V. Mosby Co. 1961. $7.50.

This compact book of dental anatomy is intended for beginning students in dentistry. The author (Chicago College of Dental Surgery) has tried, with commendable success, to associate the basic anatomic facts with a understanding of some of the clinical procedures which the student will encounter at a later time in his clinic experiences.

In addition to descriptions of the individual permanent and deciduous teeth, there are included chapters treating of the periodontium, the alveolar process, the physiology of occlusion, and the comparative anatomy of the jaw complex of eutherian mammals.

Well does the writer of any textbook know that it is a difficult task to maintain a mid-position between over-amplification and under-explanation. For the beginning student, the one fault fogs the view as much as the other. In this book the author seems at times to have erred on the side of under-explanation, and to have assumed a background not usually possessed by beginning dental students. While learning is rapid in such a group of students, the teaching of

tooth morphology should start at the basic level exemplified by the statement, "*This* is a tooth."

This book would be improved by the addition of good illustrations of each tooth and by clearly labelled drawings illustrating the principal grooves, ridges, and cusps of individual teeth. With adequate illustrations the learning of tooth morphology could be accomplished with a saving of both time and effort.

Clear labelling of the good illustrations of the principal fibers of the periodontal ligament, of the stages of tooth eruption, and of supporting tissues showing inflammation and pathologic destruction, would also result in the quick conveyance of a clear impression of these structures. In the absence of such labelling, only those readers already familiar with the structures represented can readily interpret the illustrations.

The author's stated purpose of correcting and clarifying the nomenclature in dental anatomy, and of eliminating the colloquialisms and jargon, is a laudible undertaking. The fact that some of us might quarrel, in a friendly fashion, with his seeming lack of clear nomenclatural discrimination among such structures as grooves, fissures, and the shallow developmental depressions found on the labial surfaces of maxillary first incisors simply points up the need for thorough consideration of nomenclature by dental morphologists.

The material dealing with the periodontium, comparative anatomy, the alveolar process, and the physiology of occlusion is well presented for the use of the beginning student. Accompanied by comprehensive lectures on tooth morphology this textbook should be of great value in the teaching of dental anatomy.

Co-authors of this book include Drs. William P. Burch, Nicholas Choukas, Anthony W. Garguilo, Edward M. Nelson, John J. O'Malley, Marshal Smulson, and Harry Sicher.

Dorothy Permar, Columbus, Ohio

PROFESSIONAL ETHICS IN DENTISTRY. By John E. Gurley, D.D.S. 113 pp. St. Louis: American College of Dentists, 1961.

This fascinating and informative book is an excellent contribution to dental literature. The author establishes the premise of his subject in the preface: "the object or the principle of ethics is to emphasize spirit rather than law, whether dealing with members or fellows of one's special calling or the public in general."

Chapter 1, "The Dental Profession," contains well rationalized approaches to the study and the practice of dentistry. Chapter 2, "The Growth and Development of the Ethical Concept," presents a valuable review of the progress of ethics from the hazy and non-factual ages of tradition, mysticism, and mythology to the modern well founded concepts. It features a sequence of concise historical views and pronouncements during the evolution.

Chapter 3, "Quotes and Mis-Quotes, Paraphrases, Interpretations; Originals, Etc.," provides many appropriate excerpts from the Bible, famous philosophers, and writers on the topic of ethics. In Chapter 4, "Book Reviews and Comments," the author recites the differences in definitions of "moral," "ideal," and "ethics," and summaries of several of the representative works on ethics and its history. Included are a general "Discussion," and a reprint of the Universal Declaration of Human Rights."

Chapter 5, "Codes of Ethics Including Historical Development," carries the

evolution from the Code of Hammurabi to that approved by the American Dental Association, and contains the text of the latter. "Addendum," Chapter 6, discusses "Profession," "Dental Humanism in Public Relations," "The Dentists' Creed," and "The Dentists' Pledge." "Reading References" lists 151 well selected sources of supplemental information.

This book reflects painstaking historical research, a deep comprehension of the subject and the author's ability to present it in simple form. It is a stimulating work, and one which is recommended for thoughtful reading by both students and practitioners of dentistry.

Neal A. Harper, Columbus, Ohio

CALENDAR OF MEETINGS

CONVOCATIONS

October 28, 1962, Miami Beach

October 13, 1963, Atlantic City

November 8, 1964, San Francisco

November 7, 1965, Las Vegas

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