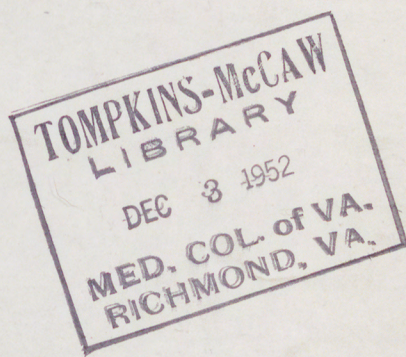


THE *Bulletin* OF THE

VIRGINIA STATE
DENTAL
ASSOCIATION

VOLUME XXIX

No. 3



OCTOBER, 1952

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VOLUME 27



OCTOBER 1953

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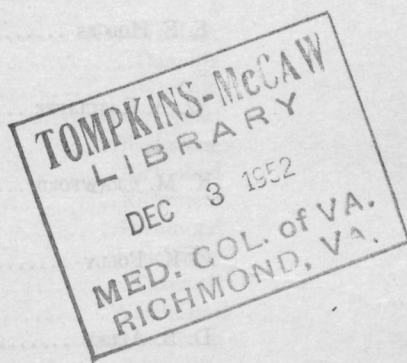
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415 Shenandoah Building, Roanoke, Virginia

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EDITORIAL

INFORMATION CONCERNING PHYSICIANS AND DENTISTS DRAFT ACT

The following information was published in the Daily Bulletin at the 83rd annual session of the American Dental Association in Saint Louis, under the title "Dental Corps Chiefs List Man Power Needs."

Estimated needs for dental officers in the armed forces were presented by chiefs of the military services and Defense Department and Selective Service officials at a panel Tuesday at the Hotel Jefferson.

Col. Richard H. Eanes, chief medical officer of Selective Service, said the October call for 200 dental officers in the armed forces will be filled mainly by Priority III men.

He reported that 14,724 dentists were in Priority III out of a total of 36,788 special registrants classified under the dentist-physician draft act.

The forum was sponsored by the A. D. A. Special Committee on

National Emergency Dental Service. Dr. Rudolph Friedrich, of Plainfield, N. J., chairman of the Council on Federal Dental Services, was the chairman.

Maj. Gen. Walter D. Love, chief of the Army dental division, said the Army would require 1,198 men from Priority III between now and next June 30.

He said November and December calls for dental officers in the Army will probably be filled by recent graduates in Priority III and estimated that the largest monthly call would be for 500 dentists next February.

Rear Adm. Daniel W. Ryan, chief of the Navy dental division, reported that the Navy would probably not require any dental officers from civilian life until next March.

Current needs, he said, are covered by the Navy's own Priority II's. He estimated that a total of 2,065 new navy dental officers will be needed through 1955, out of which 550 volunteers are anticipated.

Adm. Ryan reported that the average prevalence of dental caries among new recruits at large training centers was found to be 10 cavities for each man. He said efforts were made to give essential treatment.

He pointed out that by law the Navy also is required to provide dental care for some 55,000 retired navy personnel.

Brig Gen. Marvin E. Kennebeck, head of the Air Force dental service, said an estimated 1,005 new dental officers would be needed by next July.

From July, 1953, to July, 1954, he estimated 679 new dental officers would be needed; from July, 1954, to July, 1955, an estimated 1,005 new dental officers, and from July, 1955, to July, 1956, a total of 679 new dental officers.

Gen. Kennebeck said that, ideally, 30 per cent of the dental officers in the Air Forces would be specialists.



PRESIDENT GREETES PRESIDENT-ELECT

Dr. Otto W. Brandhorst (left), of St. Louis, new president of the American Dental Association, is shown congratulating Dr. Leslie M. FitzGerald, of Dubuque, Ia., new president-elect of the A.D.A. Dr. Brandhorst was installed as president, succeeding Dr. LeRoy M. Ennis, of Philadelphia, at the close of the Association's 93rd annual session at St. Louis on September 11.

AMERICAN DENTAL ASSOCIATION RELIEF FUND CAMPAIGN

The annual fund drive of the American Dental Association Relief Fund has been formally opened this month with the distribution of the traditional Relief Fund Seals to all members of the dental profession throughout the nation.

Every member of the Virginia State Dental Association is asked to support the 1952-53 campaign as generously as possible.

The Council on Relief has urged that every effort be made to send the 1952-53 campaign well over its national quota of \$100,000 for the first time in history. Last year's total contributions reached \$94,204.

"I am confident that the mounting appeals for aid from the Relief Fund will find a whole-hearted response from every more fortunate member of the profession," Dr. Leo W. Kremer, of Chicago, chairman of the A. D. A. Council on Relief, said.

"Accident and illness are respecters of no one and there is an increasing number of members of the profession who through no fault of their own find themselves unable to meet the cost of the bare necessities of life for their families and themselves."

The quota for the Virginia State Dental Association has been set at \$1,140.00, a sum which state society officials are certain can be exceeded.

As in former years, contributions will be divided equally between the A.D.A. Relief Fund, which pays one-half of all relief grants, and the Virginia Relief Fund.

All contributions should be sent to the A.D.A. Relief Fund, 222 E. Superior St., Chicago 11. Each contribution will be recorded and one-half returned to our own state Relief Fund.

THE AMERICAN ACADEMY OF IMPLANT DENTURES

Secretary: P. S. Loechler, D. D. S.
215 Tenth Street Southeast, Rochester, Minnesota

MEMORANDUM REGARDING IMPLANT DENTURES

At the first annual meeting of the American Academy of Implant Dentures at St. Louis, the Constitution, By-Laws, and Articles of Incorporation of this Academy were adopted and accepted.

It was noted in the foregoing acceptance that it shall be the duty of the Secretary or appointee to audit or edit all papers, essays, and/or oral discourses of its members sixty (60) days before their presentation. We, therefore, would appreciate the cooperation of your publication or group when anticipating publishing or programming articles of any author on implant dentures.

We realize that this By-Law is not applicable to non-members; however, we are certain that since this office is gratuitous in its service, it can work to our mutual advantage.

Not many dentists are gifted writers or orators, and very few of us have undertaken the very serious training necessary to qualify for these perplexing problems. If personal publicity is involved in regard to the laity or the profession, such papers or clinics react unfavorably on the publication, the society, and the author-dentist. These create an antagonistic attitude toward the publication, meeting, program, and/or the society involved. A few moments of sober deliberation will often demonstrate the folly of the dentist's impulsive decision. Expansion of statements is certainly dangerous, and even copies can be embarrassing.

We prefer articles to qualify under the following points:

- (1) Articles shall be factual.
- (2) Articles shall not be sensational.
- (3) Articles shall represent the consensus of opinion.
- (4) Articles shall be written with adequate time and due deliberation.
- (5) Articles shall be coherent, accurate, and concise.
- (6) Articles shall be submitted sixty (60) days before programming to Marshall W. Mueller, D. D. S., 1172 Medical Arts Bldg., St. Paul, Minnesota.

INFORMATION ON OFFICERS DRAFT ACT

Executive Office of the President
Office of Defense Mobilization
Washington 25, D. C.

Stating there is probably no other phase of mobilization in which more effective planning and coordination had taken place than in health, Dr. John R. Steelman, Acting Director, Office of Defense Mobilization, made public today a summary report of the Health Resources Advisory Committee, Office of Defense Mobilization, covering the period of August 1950 to August 1952.

The Health Resources Advisory Committee was established in August 1950, shortly after the outbreak in Korea, at the suggestion of the President by the Chairman of the National Security Resources Board to advise that body on matters concerned with the health resources of the nation as they relate to national defense. The Committee was later designated by the President to serve as the National Advisory Committee to the Selective Service System on the "doctor draft" law. In April 1952, it and its supporting staff were transferred to the Office of Defense Mobilization.

The key to the splendid achievements of the Committee, Dr. Steelman declared, has been the close and effective working relationships it has developed not only with the Government agencies, but with the national professional organizations, voluntary agencies, educational institutions and other groups concerned with health. He said, "The Committee has enjoyed the confidence of all the groups with whom it has worked as its doors have always been open to them to discuss any problems of mutual interest. Those professional and civilian organizations concerned with health problems have played a major role in the determination of the national policies concerning health resources that affect them."

Dr. Steelman called particular attention to the work of the Committee in reviewing and advising the Secretary of Defense on the effect of the projected overall requirements of the Armed Services for health personnel upon the civilian health economy of the nation. This close cooperation with the Department of Defense, he stated, has enhanced the nation's ability to meet both the current and future health needs of our civilian population and the Armed Forces without endangering civilian health services. This is evidenced, he stated, by the section of the report which states: "At one time during World War II, the ratio of physicians to troop strength in the Armed Forces reached a high of some 6 physicians per 1,000 troops. The ratio of effective physicians

in civil life was reduced at that time to the dangerously low level of considerably less than 1 per 1,000. The overall average ratio of approximately 5 physicians per 1,000 troops during World War II has been reduced since the outbreak of Korea to about 3.7 physicians per 1,000 troops through greatly improved utilization. Despite this reduction our Armed Forces are receiving the best medical care known in the military history."

"As a result of these reductions, there have been about 5,000 physicians available during the past two years for civilian health services who otherwise would have been in military service. The importance of this to the general health and welfare of our civilian population, particularly in view of the national shortage of physicians during this mobilization period, cannot be over-emphasized. This reduction in ratio has also saved the Department of Defense from 40 to 50 million dollars during the past two years."

Dr. Steelman also congratulated both the Health Resources Advisory Committee and its State Advisory Committees on the methods they have developed for determining the civilian essentiality of individual physicians and dentists who are liable for military service. Through the efforts of these state and local advisory committees, he declared, the Health Resources Advisory Committee in its dual responsibility as the National Advisory Committee to Selective Service System has assured our local communities they would not be deprived of essential local health services or that vital research or teaching programs would not be disrupted. He credited the excellent cooperation of the medical, dental and health professions to the success of this program.

Other particularly significant achievements of the Committee he stated have been (1) the development of a single National Blood Program that can serve the needs of the Department of Defense, Federal Civil Defense Administration, and American National Red Cross and at the same time assure the normal day-to-day needs of the civilian population; (2) the analyzing and coordinating of information on better utilization of hospital personnel in order to alleviate the critical shortage of nurses by the newly formed Subcommittee on Hospital Services; (3) its work with the Federal Civil Defense Administration in post-disaster planning; (4) its activities in industrial health; and (5) its many surveys, inventories and analysis of the nation's health resources.

Dr. Steelman stated that continuing effort in these and other areas will be necessary so long as the mobilization effort lasts and that he is in complete accord with the recommendation of the Committee that

"it is vital that somewhere in the Federal Government at a sufficiently high organizational level to make its work effective, there must be a coordinating body in the health field if full utilization for both civilian and military needs is to be made of the health potentials of our nation." The achievements of the Committee, he said, show the importance of this recommendation.

The membership of the Health Resources Advisory Committee consists of:

Dr. Howard A. Rusk, Professor and Chairman of the Department of Physical Medicine and Rehabilitation, New York University, Bellevue Medical Center, New York, New York

Dr. Edwin L. Crosby, Director, Joint Commission of Accreditation of Hospitals, Chicago, Illinois

Dr. Harold S. Diehl, Dean of Medical Sciences, University of Minnesota, Minneapolis, Minnesota

Dr. Alan Gregg, Vice President, Rockefeller Foundation, New York, New York

Mrs. Ruth Kuehn, R. N., Dean of School of Nursing, University of Pittsburgh, Pittsburgh, Pennsylvania

Dr. James C. Sargent, Chairman, Council on National Emergency Medical Service of the American Medical Association, Milwaukee, Wisconsin

Dr. Leo J. Schoeny, Member, Special Committee on National Emergency Dental Service, American Dental Association, New Orleans, Louisiana

Dr. William P. Shepard, Vice President, Metropolitan Life Insurance Company, San Francisco, California

THE PAST YEAR IN DENTAL RESEARCH

S. J. Kreshover, D. D. S., M. D., Ph. D.

Professor of Oral Pathology and Director of Dental Research

O. W. Clough, B. S., D. D. S., M. S.

Professor of Operative Dentistry

Medical College of Virginia School of Dentistry

Richmond, Virginia

(The authors acknowledge with appreciation the assistance given by Miss Charlotte Williams in the preparation of this paper.)

It would seem necessary, in order to evaluate adequately the significance of contributions to the science and art of dentistry, that they be viewed with perspective. It is undeniable that distance and time have an effect upon the appearance of objects and events. Thus, that which may appear important today may be dimmed to near invisibility tomorrow. Conversely, contributions of seeming smallness today might, at some later time, be gathered together to make for a significant and understandable entity, or provide a missing block in the ever-building monument to scientific knowledge.

To review the past year in dental research, some objective should be in mind; and with that established, a certain amount of selectivity would be possible. Certainly, to presume an ability to select wisely would be to demonstrate a certain degree of conceit if not deceit. It is, therefore, with some hesitancy that we present for your consideration a selected series of contributions to dentistry during the year 1951-52 which may be of special interest to you. What the verdict of your twenty-first century brothers might be is beyond our horizon.

As in past years, the quest continues for more information about the exact nature of the pathogenesis of dental caries and satisfactory measures for control. While accepting the essential role that in vivo study must play in this quest, two undeniably important experimental tools remain in popular use; namely, the test tube and the laboratory animal.

Hurst et al¹, in a preliminary report, indicated that at least several groups of oral bacteria, commonly associated with caries, possess the ability to initiate enamel caries in vitro experiments on hamster teeth. They further reported that such lesions could occur at a neutral pH and in the absence of fermentable carbohydrate. The assumption of the authors, based on additional experimental study, was that the observed microscopic caries-like lesions were the result of the bacteria attacking the organic constituents of enamel. It is apparent that there remain

those who would believe that the principal mechanism of enamel caries is not acid decalcification but rather a breakdown of the organic structure by proteolytic bacteria.

In another bacteriologic study of caries, Burnett and Scherp² directed their attention to determining the nature of the bacterial flora in the deeper layers of dentinal caries. Since it could be presumed that such organisms must have reached that location by invasion of the dentin, the assumption might be that they played an active role in the destructive process. Employing careful technics, the authors isolated three groups of microorganisms: cocci, lactobacilli and actinomyces. Although 90 per cent of the total count was comprised of gram positive cocci, only 3 per cent of these were aciduric. On the other hand, the lactobacilli and actinomyces were found to produce appreciably more acid than the cocci and in amounts sufficient to decalcify enamel and dentin in vitro. Despite the high percentage of cocci being neither aciduric nor proteolytic, the authors caution against too ready an acceptance that these bacteria do not play a role in affecting the carious process.

The relation of foodstuffs to the caries picture continues to occupy the attention of investigators. Bibby and his associates³, in an attempt to correlate the so-called "decalcification potential" of various foods with caries production in animals, fed hamsters both high potential and low potential foods. Their findings, thus far, would indicate no direct parallelism between decalcification potentials and caries production. Nikiforuk⁴, moreover, pointed out that the problem of food retention and "decalcification potential", as determined in the test tube, may bear little relation to the cariogenic properties of food, this especially in light of the ready solubility and short retention of monosaccharides and polysaccharides on tooth surfaces.

In a determination of the extent to which size and shape of the interproximal spaces can affect the rate of diffusion of acid from these regions, Nevin and Walsh⁵ measured the pH changes of an acidified solution contained in the space between two contiguous pyrex rods when immersed in solutions of known composition. It was concluded that these physical factors of spacing and contour were of much greater value in affecting the rate of acid diffusion than was the buffering capacity of the external medium, corresponding to saliva in this experiment.

With further relation to saliva, Rathje⁶ explored the possible significance of viscosity in dental caries. In an in vitro experiment to demonstrate the effect of viscosity of agar media on the diffusion of acid, Rathje incubated lumps of white bread which were inoculated with acidogenic bacteria. By then placing these lumps in agar solutions of varying viscosities, he determined that acids were neutralized or elim-

inated most rapidly in the lower viscosity agars. Testing this finding in 100 human subjects, the author observed that caries susceptibility was less in those whose saliva had lower viscosity and less speed of flow.

At this point, two clinical studies on dental caries seem to warrant attention. Mellanby and Mellanby⁷ compared the teeth of two large groups of children from different environmental backgrounds. Comprising one group were 542 children from nurseries and schools representing the products of broken homes and unmarried mothers. The second group of 560 children was from private schools representing the offspring of well-to-do parents. Dental examinations, without the benefit of roentgenographs, showed a uniformly lower incidence of caries and a higher proportion of hypoplastic defects in the underprivileged children than in the private school group. A similarly interesting study by Dunning and associates⁸ showed that a group of over two thousand psychiatric patients had a somewhat lower DMF rate than other groups comprised of military selectees and industrial workers.

As is to be expected, the subject of caries control continues to receive considerable attention. With regard to ammonia, reports would indicate that a certain degree of lessened enthusiasm is, perhaps, justified. Bibby and Nevin⁹, in order to establish an experimental basis for the effectiveness of ammonia compounds and dentifrices against oral microorganisms, carried out a number of interesting in vitro tests. These indicated that such compounds exerted no significant influence on acid production in carbohydrates. Following this preliminary study, the authors divided 75 young women into three groups so that one used an ammoniated tooth paste exclusively, another used a standard non-ammoniated dentrifice, and the third group used its usual routine methods of oral cleansing. By repeated salivary samplings for lactobacilli, it was found that during a period of seven months there was no significant reduction in lactobacilli counts in the first experimental group.

Last year¹⁰, your attention was called to a report by Kerr and Kesel¹¹ in which the percentage of teeth attacked in children over a two year period was less in a group using an ammoniated dentrifice than in a group using a non-ammoniated dentrifice. Observations were made under the same controlled conditions in both groups. Recently, Davies and King¹² analyzed the data of Kerr and Kesel statistically, and showed that the evidence given in favor of the ammonium iron tooth paste must be viewed with some circumspection. They had sought to determine the effectiveness of an ammonium iron dentrifice in a group of children and young adults when the tooth brushing technic was not rigidly supervised. Under these conditions, ostensibly simulating

actual practice, the findings indicated no significant differences in the lactobacillus counts of the experimental and control groups.

Another approach to the problem of caries control has been under consideration by some workers in New Zealand during the past year. Previously, these investigators¹³ demonstrated, with extracted teeth, that mineral oil containing a small quantity of an aliphatic amine forms an oily film with the ability of markedly inhibiting decalcification of the enamel surface by acid. Continuing this line of investigation¹⁴, they recently found that a one per cent solution of tetradecylamine in medicinal paraffin provided more than an 80 per cent degree of protection against the action of acid. On the basis of these in vitro findings, the authors believed that a clinical trial might be considered. Following a report by Malcolm, Deaker and Bell¹⁵ that the primary aliphatic amines are non toxic, King¹⁶ conducted a study on 39 dental students over a three week period which indicated a 40 per cent reduction in plaque formation when tetradecylamine was used in a dentifrice.

Interest in the fluoride ion as a caries control measure continues to hold the center of the stage. Hill, Blayney and Wolf¹⁷ reported the caries experience of 12, 13, and 14 year old Evanston, Illinois school children exposed to a fluoridated drinking water for a period ranging from 23 to 34 months. The rates of caries incidence showed a reduction of approximately 12 per cent in DMF for the permanent teeth. However, the authors hesitated to attribute this reduction to fluoridation alone since the use of urea dentifrices and sodium fluoride for topical dental application is so widespread. Perhaps a longer period of observation will permit a more definite conclusion.

The small town of Lavrion, Greece, where mottled enamel is endemic, provided Mavrovordato¹⁸ with sufficient data for a most interesting report. Of 291 children between the ages of 6 and 12 years who were born and raised in Lavrion, only 4.8 per cent showed caries. On the other hand, of 118 children in the same age group who came to this town after calcification of their teeth was completed, 14.6 per cent had carious lesions. In a 12 to 18 year group of children whose teeth were calcified in Lavrion, all but 22 per cent were caries free. This was in marked contrast to the 42.8 per cent caries incidence in a similar age group that had not lived in Lavrion prior to completion of tooth calcification.

It may be noted at this point that the satisfactory experience of various communities using fluoridated drinking water is not shared by the town of Ottawa, Kansas. Scrivener¹⁹ reports that after the first three years of a projected ten year trial period, the caries incidence of 100 children in the 5 to 6 year age group showed no favorable

change. This report possibly is premature, and the trial period is to continue.

A valuable contribution has been made by Gardner et al²⁰ who studied the fluoride content of placental tissue. Comparing the placentas of mothers living in Newburgh, New York, where the water is fluoridated, with placental tissue of mothers living in the low fluoride city of Rochester, New York, they found that the former specimens contained about three times more fluoride than did the latter. It should be noted that the placental samples from both cities had higher concentrations of fluoride than did blood samples from persons in the respective communities. The authors offer two possible explanations for this: either the placenta may act as a concentrating organ to ensure an adequate fluoride supply to the fetus, or the placenta may act as a barrier to prevent toxicity of the fetus. How much of the accumulating fluoride passes from placenta to fetus is yet to be determined.

Several reports concerned with topical applications of fluoride might be mentioned at this time. Rickles and Becks²¹, in a study of 143 young adults, reported that treatments with a 2 per cent aqueous solution of sodium fluoride did not alter appreciably either the acidogenic properties of the oral flora or the lactobacillus acidophilus indices. Although these findings do not support an enzyme inhibitor explanation for caries reduction by fluoride, they do not necessarily disprove it. Kitchen et al²² also found no consistent differences in salivary lactobacillus counts following topical fluoridation, but point out that it is not an inconsistency since only an average of 40 per cent caries reduction is claimed in population groups, and not a complete cessation of caries activity.

With the general acceptance that topical fluoride applications are a valuable adjunct to caries control methods, much attention has been directed toward a better understanding of its mode of action. To date, the most prevalent opinion is that there is a chemical combination between the fluoride and the hydroxyapatite of the enamel, resulting in the formation of a calcium fluoride layer of decreased permeability and increased acid resistance. In order to investigate this possible change in enamel permeability, Berggren and Hedstrom²³ treated the left upper and lower cuspid teeth of 16 dogs with sodium fluoride. The total duration of treatment for individual teeth varied from 30 to 90 minutes. The right cuspid teeth served as untreated controls. Following therapy, all the teeth were fitted with copper bands sealed at the cervix, and the crowns exposed to a mixture of tetanus toxin and fructose for 38 to 44 hours. The results showed toxin penetration in both fluoride treated and untreated teeth with no apparent variation in degree. The basis for this technic was the preliminary work of the same authors dem-

onstrating the permeability of enamel to various sugar solutions²⁴. Using the described method of copper band fittings to the teeth of dogs, the crowns were exposed to selected mixtures of tetanus toxin and sugars. The pulps of the teeth then were removed, finely ground, and a suspension prepared for inoculation into mice. The onset of symptoms of tetanus provided evidence for the permeability of enamel. From this study, it was concluded that glucose and fructose increase the permeability of enamel and that there is a direct correlation between sugar concentration and degree of tooth penetration.

With reference to passage of substances through enamel, the evidence for and against metabolic activity versus simple permeability remains a debated question. Bartelstone²⁵ demonstrated passage of radioactive iodine through the intact enamel of cat teeth with uptake of the tracer substance by the bloodstream and thyroid gland.

It is of interest to note that although many enzyme inhibitors and antibiotics have proved effective in inhibiting acid production in the mouth and in sugar-saliva mixtures, none have proved as successful as penicillin from the standpoint of prolonged activity^{26, 27}. For example, when aqueous solutions of nickel and copper salts were used as a dentifrice and mouthwash, Forbes and Smith²⁸ found that acid production was markedly reduced for several hours. A more prolonged effect over a period of 4 hours was only obtained when the dentifrices were used four times a day. Because of the differences reported by investigators relative to duration of action of tested substances, Fossdick, Ludwick and Schaltz²⁷ set up an experiment to determine the mechanism of such action. They reasoned that some chemical or physical phenomenon must account for the retention of water soluble substances about the teeth and that this activity is poor or probably lacking in most cases other than penicillin. After exposing dental plaques to various enzyme inhibitors or antibiotics, incubation was carried out with the saliva from caries active individuals, and the amount of acid production estimated. A low production was accepted as an indication of effective impregnation of the plaque by inhibitor. Of the many substances tested, including penicillin, streptomycin, bacitracin, menadione and ammonia, only the first named was effective. These results indicated to the authors that the ability of a substance to attach to plaque material is the measure of its success as a caries inhibitor.

Considerable interest has been shown in the field of dental materials during the past year. Not the least of this attention has been given to the direct resinous filling materials. In a study of the clinical value and pulpal response to the acrylics, Coy, Bear, and Kreshover²⁹ emphasized the importance of technic and the intelligent selection of cases. Despite

their favorable findings, the recommendation was made that there be further study before the material is accepted for general use.

Calling attention to certain of the serious defects in the direct resinous filling materials, Paffenbarger³⁰ discussed their shrinkage during polymerization and their high coefficient of thermal expansion. The author then indicated various procedures for lessening these shortcomings.

Both the above reports discuss briefly the so-called "painting" technic for insertion of acrylic fillings. This procedure, first described by Nealon at the 1951 meeting of the International Association for Dental Research, appears to hold much promise. Seelig³¹, in an experiment set up to study the adaptation of resins to cavity walls, filled freshly extracted teeth by both the pressure and "painting" technics. Ground sections showed that the fillings adapted to the dentin wall in excellent fashion regardless of the method used, although the Nealon technic gave a more homogeneous and fine structural compound.

One of the more interesting reports concerned with marginal seal of fillings was that of Nelsen, Wolcott and Paffenbarger³². In order to determine whether thermal changes in self-polymerizing acrylic restorations would cause a perceptible dimensional change, extracted teeth were filled and then immersed for 30 seconds in ice water. After drying with a towel, they were examined under a microscope to observe the effect of finger warmth on the seal. In all cases, regardless of technic used, small droplets of fluid were seen to exude from the margins. This same phenomenon was found to occur around amalgam, gold inlay, gold foil, silicate, gutta percha and zinc oxide eugenol fillings. The authors suggested that the moisture reached the margins as a result of differences in the coefficients of thermal expansion of tooth structure and filling material, as well as a thermal expansion of fluid present between restoration and cavity walls.

The use of radioactive isotopes has proved of great value in further investigating the question of adequacy of cavity seal by fillings. Simon and Armstrong³³ prepared class V cavities in eight wet, sound, extracted teeth. These were filled, respectively, with amalgam, gold inlay, gold foil, zinc phosphate cement, silicate and acrylic resin. Following placement of the restorations, the roots were coated with wax, and the clinical crowns were immersed in a solution of radiocalcium for 48 hours. The teeth then were washed with distilled water, sectioned horizontally and radioautographs taken. The results demonstrated penetration of radiocalcium at the margins of all fillings. However, the authors make no mention of differences in degree, if any, between the various materials tested.

Further use of radioactive materials has been made to study tooth permeability as affected by various drugs commonly used in dental practice. Wainwright³⁴, in the course of his studies, classified substances on the basis of, first, their ability to penetrate intact enamel; second, their ability to attach to tooth surfaces without penetration; and third, their inability to penetrate enamel at points of damage or defective development. He further demonstrated that zinc ferrocyanide, the drug advocated for caries control by Gottlieb and associates, penetrated lamellae to the same extent as silver nitrate but did not plug completely.

The influence of medicaments on dentin permeability was studied by Amler and Bevelander³⁵, who measured the penetration of radioactive phosphorus after established time intervals, during which period various medicaments were in contact with the dentin. Using 6 adult dogs, cavity preparations were made on their canine and molar teeth. Applications of 2 per cent fluorine, 70 per cent alcohol, 10 per cent phenol in alcohol, zinc phosphate cement, cavity varnish, and silver nitrate and eugenol were made to respective cavities, following which silver amalgam seals were placed. After time intervals of 7, 14, and 70 days, the cavities were reopened with a solution of P^{32} sealed in place with cotton pelletes and amalgam. After a uniform time interval the animals were sacrificed and the teeth prepared for radioautography. It was observed that phenol, cavity varnish, and silver nitrate followed by eugenol resulted in a deeper penetration of P^{32} after 70 days than at earlier time periods, thereby indicating that dentin permeability was increased. Seventy per cent alcohol caused no progressive permeability of dentin beyond the 7 day limit. With respect to 2 per cent fluorine, there was a moderate P^{32} penetration after 7 days, but thereafter there was a diminished degree of permeability. In contrast to the pattern of changes observed thus far, zinc phosphate cement caused a most unusual picture. At both the 7 and 14 day periods, there was apparently a limitation of P^{32} penetration. However, when the cement was removed after 70 days and P^{32} inserted, there was an extensive penetration into dentin. According to the authors, this seemed to indicate that the failure of the isotope to penetrate after the 7 and 14 day period was due to the blocking action of the cement.

A study by Henry and Peyton³⁸ of the cutting efficiency of dental burs for the straight handpiece warrants some comment at this time. They reported that tungsten carbide burs cut at essentially the same rate as steel burs when operated under comparable conditions. Although the former burs retained their cutting edge longer, they had the shortcoming of being more brittle and susceptible to breakage when subjected to side pressure and torque. The investigators further demonstrated that the number 557 fissure bur, with spiral axial grooves, re-

moved more material per unit of time than burs with straight grooves. However, the spiral type bur showed a little greater tendency to become clogged. Of considerable interest was the 37 inverted cone bur, which, although having only one-third as much active area as the 557 fissure bur, was capable of removing about five times more material per unit of time. On the basis of unit active area, this indicated a ratio of approximately 15 to 1 in favor of the inverted cone type. Also influencing cutting efficiency was the speed of bur rotation. As an example, using the 557 bur and maintaining a constant pressure, it was observed that each increase of 2000 r. p. m. between the ranges of 2000 and 8000 r. p. m. caused a doubling of the amount of material removed per unit of time. With an increase in applied pressure from 200 to 500 grams, the amount of material removed was markedly increased. However, a further increase of pressure to 750 grams caused a less pronounced increase in material removed. This pattern, using the fissure bur, was reversed in the case of the inverted cone bur.

As was apparent in the field of operative dentistry, so in that of dental prosthesis, the self-curing resins have received considerable attention. Caul, Stanford, and Serio³⁷ tested various properties of these resins in order to determine how they measure up to the specifications for denture base materials established by the American Dental Association. Although the working time of the auto-polymerizing denture resins was shown to be of short duration (5 minutes or less), the time was considered adequate for proper trial mixing. With reference to color stability, the authors tested 6 commercial brands, and found only 2 that appeared satisfactory. Despite this poor showing, it is encouraging to note that improvement in color stability has been attained by the manufacturers and that there is cause for further optimism. Similar satisfaction was felt with the tested properties of solubility and water sorption. On the other hand, two rather serious shortcomings of the self-curing resins were noted. First, there was a decrease in strength which was calculated to be from 70 to 90 per cent of that possessed by the heat cured resins, and second, there was the failure to get a satisfactory bond between plastic teeth and resins during processing. The authors believed this latter defect to be due to rapidity of polymerization and low temperature of curing; both of which would interfere with diffusion of monomer into tooth substance.

The various properties of denture resins, as effected by different methods of curing, was studied by Grunewald, Paffenbarger and Dickson. Using several injection technics, as well as a compression method by which heat is obtained from the tip of a soldering iron inserted in the upper half of the flask, they found that the dimensional change was approximately the same in all procedures. Similarly, there were

no important differences in water absorption, hardness, transverse deflection of the resins, or checking of the teeth. It was observed, however, that the soldering iron method caused the presence of bubbles in the denture resins.

Although the bonding of plastic teeth to self-curing resins is faulty unless mechanical means of retention are used, the difficulty encountered with heat cured resins is due to incomplete removal of wax or tinfoil substitutes from the tooth surfaces. This was demonstrated by Fischer and Serio³⁸ in the course of testing seven brands of denture base resins for the amount of force necessary to break the union of plastic teeth. They further discovered that hot water alone is not adequate for wax removal. However, when a hot detergent solution was used, there was no failure of chemical bonding of teeth to base material.

That imperceptible traces of wax are the primary causes for failure of chemical bonding of plastic teeth to heat cured resins was demonstrated also by Schoonover et al.³⁹. Since the waxes are not removed adequately by conventional methods of elimination, numerous other techniques were tested. Of these, a hot 1.5 per cent aqueous solution of a modern synthetic household detergent was found to completely remove all wax, and thereby insure a good chemical union between tooth and denture base.

The use of the self-curing resins as repairing and relining materials was reported by Jeffreys⁴⁰. He pointed out that, although these resins have less strength than the heat cured varieties, their extremely short processing time and great dimensional accuracy makes them excellent for relining and repairing acrylic dentures. However, their deficiency in transverse strength makes them unsuitable for complete, permanent denture bases.

Some valuable information about dental gypsum materials was given us by Peyton and Mahler⁴¹. Employing an accurate method of measuring dimensional changes, they found that gypsum, when subjected to repeated wetting and drying at room temperature, showed only negligible changes of contraction and expansion. However, when the gypsum was dried at room temperature and then heated at 90 and 110 degrees, there was appreciable contraction. The explanation for these findings is that excess water is present in water spaces throughout the set material. This excess, beyond that needed for physico-chemical combination, invariably is present since it is necessary for a workable consistency of a plaster mix. It follows, therefore, that when the material is subjected to a drying atmosphere only excess water is lost, there will be no appreciable dimensional change. However, subsequent

heating, with loss of water of crystallization, will result in severe contraction.

Phillips and Ito⁴², in their study of hydrocolloid materials, reported on the factors influencing the accuracy of impressions. Using 5 different brands, they made over 3500 stone dies from impressions of porcelain teeth in which MOD cavities had been prepared. Master castings for the teeth were used to test the accuracy of the dies. The results indicated that most perfection was attained when the teeth were centered in the impression, the colloid cooled with tap water rather than ice water, and the impression removed quickly by a snapping motion rather than a slow, teasing one. Finally, it was determined that pouring of the impression should be within 15 minutes after removal from teeth.

The relation of systemic disturbances to periodontal disease has long occupied the attention of clinicians and researchers. Implicated as predisposing or contributing factors have been a number of chronic, debilitating diseases such as tuberculosis. In an attempt to clarify some of our conceptions and misconceptions, unfortunately based on clinical impression, Ramfjord⁴³ reported findings in a scientifically controlled study of 10 tuberculous monkeys. Clinical, radiographic and microscopic examinations of the periodontal tissues in the experimental group disclosed no significant differences from a control group of seven non-tuberculous monkeys. As a result of these findings, Ramfjord concluded that any increase in incidence of periodontal disease associated with tuberculosis must be produced by local factors, of which oral hygiene is probably the most significant.

In another clinical and histo-pathologic study concerned with the gingival tissues in diabetic individuals, Ray and Orban⁴⁴ concluded that there are no characteristic changes in the gingiva related to diabetes. However, they listed certain changes, such as lack of stippling and increased cytoplasmic vacuolization which appeared to be accentuated in the diabetic and might represent an increased reaction to local irritation.

In acute infections of the periodontium, the practitioner is often faced with the problem of a choice of therapy. Certainly, the question of whether or not a tooth should be extracted at the time of acute inflammation is controversial. Employing proper surgical technic and the antibiotics where indicated, Krogh⁴⁵ performed 3,127 consecutive extractions without a single instance of post-operative osteomyelitis or septicemia. From this experience he concluded that the general belief that teeth should not be removed in the presence of acute infection is an erroneous one.

The use of the antibiotics in dental infections continues to give evidence of real value. Rovelstad and Castaldi⁴⁶ reviewed the case instances of children treated at Children's Memorial Hospital during the past 15 years for acute alveolar abscesses. In this group, 16 were treated with hot applications, 27 with sulfonamides, 22 with penicillin, and 28 with aureomycin. A comparison of results showed that the symptoms subsided most rapidly with aureomycin therapy and that the need for incision and drainage was, likewise, reduced.

A number of other studies relative to the use of antibiotics in infections of the oral cavity further indicate the benefit of such therapy in dental practice. With respect to the treatment of pulpless teeth, Grossman⁴⁷ pointed out that although penicillin was effective in a concentration of 600,000 units, it did not destroy the yeasts, gram negative organisms or certain enterococci. The addition of streptomycin corrected this shortcoming in so far as the gram negative bacteria were concerned, but left the field open for greater growth of yeast organisms. Further study demonstrated the value of adding bacitracin to the penicillin-streptomycin mixture for eliminating the persisting enterococci. It was also demonstrated by Grossman, as well as Seltzer and Bender⁴⁸, that addition of sodium caprylate eliminated the yeast organisms. Evaluating 250 consecutive cases treated with the polyantibiotic mixture, the former author reported an average of 1.4 treatments to obtain negative cultures. This compared to advantage with the previous average of four treatments when the old antiseptic technics were used.

We are indeed grateful to those who have contributed so much to the advancement of dental science and art. As B. G. Anderson⁴⁹ so aptly said, "research gives life to teaching, and teaching gives permanence to knowledge, and practice gives meaning and direction to research and teaching."

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ANNUAL REPORT OF THE MEDICAL COLLEGE OF VIRGINIA SCHOOL OF DENTISTRY — 1951-52

Dr. William T. Sanger, President
Medical College of Virginia
Dear Doctor Sanger:

I have the honor of submitting my annual report to you on the activities of our School of Dentistry for the fiscal year beginning July 1, 1951, and ending June 30, 1952.

ENROLLMENT

During the past academic session we were privileged to have the largest dental enrollment in our history. Two hundred and two dental students were enrolled as noted in the following table:

Freshman	53
Sophomores	51
Juniors	50
Seniors	48
<hr/>	
Total	202

One hundred and seventy-five of our students this past session were from Virginia; 12 were from North Carolina, 12 from South Carolina, and one each from Ohio, Oklahoma and Texas. Eighteen of our out-of-state students were admitted under provisions of the Southern Regional Education Board. Sixteen of these are still carried under this program.

One hundred and forty-seven of our 1951-52 students were veterans of World War II.

All of our 1951-52 students had a minimum of ninety semester hours of academic credits, the equivalent of three years of college work. One hundred and fifty-one of these had academic degrees.

For the next session we have accepted 52 students for our freshman class. These appointments were developed from 877 inquiries. Two hundred and twenty-four completed applications were received. The dental aptitude test, developed by the Council on Dental Education of the American Dental Association, was required of all applicants for admission to this class.

Two hundred and six students are expected for the next session. This will set another record in our enrollment.

THE FACULTY

Our faculty deserves special commendation for their superior efforts in the face of unusually heavy teaching loads. The latter continues to be a "burden of necessity" due to our inability to find qualified persons to fill the four existing vacancies on our staff. The Council on Dental Education reports that there are 200 full time vacancies on the dental faculties of this country. This is cited to point out that the problem is not one peculiar to our school.

The past session was a very satisfying one from the standpoint of academic attainment. All of our seniors were graduated and only one student in the lower classes failed outright to gain promotion. (A few students are at work this summer removing conditional grades). All of our graduates who took the examination for licensure before the Virginia State Board of Dental Examiners were certified for practice in Virginia. I would hope that this record reflects the care exercised by our Committee on Admissions in the selection of our students and the fine efforts of our faculty in our program of instruction.

During the past session our faculty was active in a number of important extra-curricular activities. The dental members of our faculty presented ninety-five (95) addresses and clinics before dental societies over a wide geographic section of our country, submitted seven (7) papers for publication, received recognition by many appointments and honors, and participated generously in community affairs. The numerous invitations now coming from dental societies to members of our faculty for their services as essayists and clinicians are sources of great satisfaction.

The following is a summary of faculty changes which occurred during the fiscal year 1951-52:

New Appointments:

- John D. Beall, D. D. S., Instructor in Operative Dentistry
- S. Elmer Bear, D. D. S., Instructor in Oral Surgery
- Dewey H. Bell, Jr., B. S., D. D. S. (Effective July 1, 1952), Instructor in Clinical Dentistry
- Paul P. Biedlingmaier, D. D. S. (Effective July 1, 1952), Instructor in Oral Surgery
- R. H. Bruni, Jr., D. D. S., Instructor in Operative Dentistry
- Robert S. Burford, Jr., B. S., D. D. S., Instructor in Orthodontics
- S. Guy Hall, B. S., D. D. S., (Effective July 1, 1952), Instructor in Clinical Dentistry
- Hugh O. Wrenn, D. D. S., Instructor in Orthodontics

Promotions:

- Alton D. Brashear, B. S., A. B., M. S., D. D. S., Professor of Anatomy
 Leigh C. Budwell, B. S., D. D. S., Instructor in Denture Prosthesis
 William B. Fitzhugh, D. D. S., Instructor in Operative Dentistry
 James E. McIver, D. D. S., Associate Professor of Denture Prosthesis
 Robert I. Miles, D. D. S., Associate in Operative Dentistry
 Leroy Smith, M. D., Associate Professor of Oral Surgery

Resignations:

- Nathan R. Callaghan, M. S., D. D. S., Assistant Professor of Denture Prosthesis
 William J. Caroon, Jr., A. B., D. D. S., Associate in Operative Dentistry
 Lawrence G. Mathews, B. S., D. D. S., Instructor in Denture Prosthesis
 Walter J. Newton, B. S., D. D. S., Associate Professor of Oral Diagnosis
 Charles M. Westrick, D. D. S., Assistant Professor of Oral Surgery

RESEARCH

It is particularly gratifying to report good progress in our research endeavors. During the past year our Department of Dental Research had eight projects under investigation, three of which were supported by a grant from the U. S. Public Health Service. Two papers reporting research findings were submitted for publication during the year; one of these has already been published. Our director of this department, Dr. S. J. Kreshover, appeared on the program of the 1952 meeting of the International Association for Dental Research to report some of his findings.

A significant number of the dental members of our faculty are now engaged in research projects. It is pleasing to note an ever-increasing interest in research in our school. A fine spirit of inquiry seems to pervade the staff.

Looking forward to the facilities which will be available for research in our dental building we hope to institute a program of graduate study with original investigative work in the dental sciences.

ALUMNI RELATIONS

On January 28 and 29, 1952, we held our first Alumni Homecoming Program. This event was attended by 304 alumni, approximately 30%

of all our living alumni. Those in attendance were generally so complimentary about this project that we are planning another Alumni Homecoming Program for next February 2 and 3. The planning committee for this project is already at work.

In an effort to arouse a greater interest in our school on the part of our alumni a Newsletter to alumni was developed last Fall. Six issues were mailed during the past session. Our Alumni Association contributed the envelopes, postage and mailing services for which we are most appreciative. It is planned to continue the issuance of these Newsletters during the next session.

The Winter issue of the College Bulletin was especially prepared for the dental school. Carrying the title "Milestones" it included a history of our school, the program of our Alumni Homecoming and tributes to the late Dean Harry Bear delivered on the occasion of the presentation of his portrait to the College. Miss Thelma V. Hoke edited this fine publication.

PHYSICAL FACILITIES

It is a thrilling experience to watch the progress being made in the construction of our new dental building which is scheduled for completion next summer. The task of designing and selecting equipment for the clinics and laboratories in this new building is a most formidable one. Some of the especially designed equipment is already on order. It is planned to ask for bids on the remaining necessary equipment in the next few weeks. Those items of our present equipment that may be serviceable in our new building will be rehabilitated during the next session. I am confident that, when completed and equipped, our new building will be the best designed and equipped dental building in this country.

PROGRAM OF CONTINUING EDUCATION FOR PRACTITIONERS

Plans for an extensive program of continuing education for dental practitioners of Virginia and the adjoining states are being developed for implementation after completion of our new building. A fine beginning in this area of activity was made during the week of June 16-20, 1952 by our Department of Pedodontics. A refresher course was staged for the dentists on the staff of the Virginia State Department of Health, Bureau of Dental Health. This course was designed to standardize procedures in dental care for children under the Bureau's program.

MEDICAL COLLEGE OF VIRGINIA—CITY DENTAL CLINIC

On July 2, 1951, we began operation of the Medical College of Virginia—City Dental Clinic. This clinic is housed in a separate facility and is staffed by three dentists, two full time and one half time. It is supported by a grant from the City of Richmond and its services are limited to indigent citizens of the city. This clinic was developed after extended study by a joint committee of the Richmond Dental Society and the Richmond Area Community Council. The services offered in this clinic have been the subject of many favorable comments by persons interested in the problem of health care for indigents.

DENTAL CLINIC DATA

Data on services rendered in our dental clinic during the year 1951-1952 are now being compiled and will be forwarded to you at an early date. The great volume of dental services rendered in our clinics is an index of the excellent training which our undergraduate students are receiving.

INVENTORY

A complete inventory of equipment and supplies in our school was prepared at the end of the past fiscal year. A copy will be submitted to our Comptroller.

THE FUTURE AND ITS CHALLENGE

I believe it would be wise for us to set forth, at this time, the objectives which should be set for our school in relation to the dental health needs of the population of Virginia and our responsibility toward the dental personnel needs of the nation's armed forces. Beyond these, there is also to be recognized a relationship to our neighboring states, especially those cooperating in certain realms of professional education through the Southern Regional Education Board.

Dental personnel in Virginia is woefully inadequate to provide an acceptable level of dental care for our population. The dentist: population ratio for the nation is approximately 1:1800. The dentist: population ratio in Virginia is approximately 1:3200. In a few states this ratio approximates 1:1200. It is the opinion of many that a ratio of 1:1000 should be set as the minimum goal for the nation. It is believed by some that this is the essential basis for provision of an acceptable level of dental care for our population. The military services provide one dentist for every 500 persons.

If the Commonwealth of Virginia is to aspire to an adequate level of dental care for all its citizens it is apparent that our School of

Dentistry has a big task ahead. There are approximately one thousand dentists practicing in Virginia now. To meet the present national dentist: population ratio the number of dentists practicing in Virginia would have to be increased by approximately eight hundred. To meet the ratio believed by some to be essential for an acceptable level of dental care the number of dentists in Virginia would have to be trebled. These figures appear fantastic and yet it is well to recall that only approximately 25% of our population now receives dental care. Many dentists, particularly those practicing in small communities, are not able to offer the citizens of their communities dental care remotely approximating an acceptable level. They are able to give those who apply for dental care only the minimum care believed necessary to keep them comfortable. Many communities in Virginia are without dentists.

An adequate level of dental care can be provided only after an adequate number of dentists are made available and after the public is enlightened through a program of dental health education to appreciate the benefits to be derived from adequate dental care as a health measure. As a school devoted to health service education it would appear to be partly our responsibility to promote these objectives for the population of Virginia.

Some years ago one of the country's larger life insurance companies estimated that the average useful professional life of the American dentist was 17 years of practice. While I am not in a position to question this figure it appears rather low. If we are to assume that the average useful professional life of a dentist is between 30 and 35 years, then it becomes apparent that approximately 30 new graduates are required each year to replace those who are lost from the profession in Virginia through death or retirement. This does not take into account the decreased efficiency of our dental practitioners with advancing age.

If we continue to graduate about 50 dentists each year and assume that all of them locate in Virginia for practice, we would be adding only approximately 20 additional dentists per year to our dental population. This assumption does not take into account military service that is required of most non-veteran dental graduates nor the fact that our limited number of out-of-state students are likely to return to their home states. A more logical assumption would be to assume that while some of our graduates practice elsewhere than in Virginia these are offset by dentists moving to Virginia from other states and by Virginia students attending dental schools out of state returning to Virginia for practice. However, at the rate of 20 additional dentists per year it would require more than 40 years to bring the dentist : population ratio of Virginia to the currently prevailing national ratio.

In light of the above discussion it appears urgent that we increase our enrollment at the earliest possible date. If we could increase our annual enrollment to 80 students per entering class and graduating approximately 75 of this number annually, we would then be increasing our dental population by approximately 45 dentists each year. On this basis Virginia would attain the current national dentist : population in about twenty years.

I believe it to be our responsibility to make these considerations known to the population of Virginia. If we are to ward off a nationalized health service in this country, adequate health care within the reach of all our citizens must be made available by prevailing institutions under private sponsorship or with local community or state support. In this connection we have an important part to play in the education and training of adequate professional personnel. This is a challenge that we may ignore only at the risk of losing much that we now hold dear.

Our new dental building, the annex to McGuire Hall and the proposed new building for basic sciences will provide the physical facilities for the expanded program in dental education necessary to meet this challenge. The recruitment of additional faculty personnel poses the biggest problem. This problem, however, may be solved in due time if the financial means necessary to attract qualified persons to enter the profession of dental education are made available. We must address ourselves to this task at an early date in relation to our responsibilities and the challenge before us.

ACKNOWLEDGMENTS

This report at best affords only a limited insight to the activities and accomplishments of our faculty. It cannot possibly convey a full picture of the sincerity of purpose and the dedication to duty which characterize the work of our faculty members. These qualities and their basic professional calibre provide the basis for confidence that the task at hand is being done well and that the future holds great promise.

Special commendation is also due our secretarial, clerical and technical staff.

I am sincerely grateful for the invaluable help that many have given me in my administrative duties. The sympathetic understanding of the problems of our dental school and the assistance so freely given by you, General William F. Tompkins and our Board of Visitors have been indispensable to the conduct of our activities.

Respectfully submitted,

HARRY LYONS, Dean

EXPENSE ACCOUNT: CONFERENCE ON DENTAL HEALTH EDUCATION

Programs	\$ 67.00	
Signs and Lettering	30.00	
Stationery & Supplies: Study groups and registration desk	91.20	
Reception: Officers and Group Leaders	52.10	
Tickets for luncheon	4.00	
Postage: stamps and registered mail	7.60	
Travelling expenses, Chairman: five overnight trips	72.00	
Long distance telephone calls	18.40	
Registration and other secretarial assistance	75.00	
Seven stenographers for final study group reports	50.00	
Luncheon: Hotel bill for outside guests	\$130.50	
Sale of luncheon tickets	112.25	
	\$ 18.25	18.25

(Note: The above difference
is for table-flowers, tips, etc.)

Total cost of Conference\$485.55

One third of \$485.55 is \$161.85.

M. P. Doyle, Chairman

COMPONENT SOCIETIES

Component No. 2—Peninsula Dental Society

ISHAM HARDY, Newport News	<i>President</i>
A. G. ORPHANIDYS, Newport News	<i>Secretary-Treasurer</i>
JOHN B. TODD, Newport News	<i>Counselor</i>

The following is a list of programs that have been held by the Peninsula Dental Society this year:

January—"Common Faults In Fixed Bridgework," Dr. R. S. Simpson, Richmond, Va.

February—"What a Dentist Should Know About Himself," Dr. J. T. Ransone, Newport News, Va.

March—"Surgical Therapy In Cancerous Lesions of the Head and Neck," Dr. Elmer Bear, Newport News, Va.

April—"The Role of the Dentist in Civilian Defense," Dr. Russell Bunting, Ann Arbor, Michigan.

May—"Two Films on Cancer from the Army Dental Corps," William H. Traynham, Jr., Hampton, Va.

September—"Business Meeting," Dr. Isham Hardy, Presiding, Newport News, Va.

October—"The Indigent Dental Patient," Dr. E. J. Binder, Newport News, Va.

A. G. Orphanidys, Secy.-Treas.

Component No. 3—Southside Dental Society

BARNEY STARR, Franklin	<i>President</i>
W. E. SNIPES, JR., Farmville	<i>President-Elect</i>
D. H. REAMES, JR., Petersburg	<i>Secretary-Treasurer</i>
E. F. HODGES, Petersburg	<i>Executive Council</i>

The annual meeting of the Southside Dental Society was held at Indian Swamp Club near Petersburg on Wednesday, September 17, with President Barney Starr, of Petersburg, presiding.

The meeting was opened at 10:30 a.m. by the president. The invocation was by Dr. A. L. Raab, of Petersburg; the address of welcome by Dr. F. R. Talley, of Petersburg; and the response by Dr. A. M. DeMuth. President Starr gave an excellent address explaining social security for the profession as well as the voluntary old age pension.

Dr. Clark Bradshaw, of Blackstone, reported on the activity of the component Dental Health Council.

The clinician of the morning session was then presented. Dr. George W. Bousum, of Downingtown, Pennsylvania, who gave an excellent presentation of "Stabilization of Upper and Lower Full Dentures," pointing out the importance of control of horizontal stresses and the use of cusplless teeth in stabilization.

Following lunch the business session was held.

The afternoon program consisted of talks by Dr. W. H. Rumbel, of the State Department of Health, and Dr. J. P. Stickley, of Lynchburg, President of the Virginia State Dental Association.

Following these talks were the following table clinics:

- (1) Stabilization of Full Upper and Lower Dentures—Dr. G. W. Bousum.
- (2) Apicoectomy for the Child Patient—Dr. W. R. Bowerson, Crewe, Va.
- (3) Handling of Jaw Fractures—Lt. Philip Overman and Capt. Carl Fuardo, Ft. Lee, Va.
- (4) Pulp Capping Technic—Dr. Martin Scheintoch, Petersburg, Va.

The meeting was closed with a dinner at which time the guests were introduced and Dr. Barney Starr, retiring president, presented the gavel to incoming president Dr. W. E. Snipes, Jr. The meeting was well attended by members and guests.

Respectfully submitted,

David H. Reames, Jr.

Secretary-Treasurer

Component No. 4—Richmond Dental Society

WM. BROADDUS MASSEY, Richmond	<i>President</i>
W. C. HENDERSON, Richmond	<i>President-Elect</i>
WM. J. LONGAN, Richmond	<i>Secretary-Treasurer</i>
W. A. RATCLIFFE, Richmond	<i>Executive Council</i>

The Richmond Dental Society, held its first Fall meeting on the night of September 18th. We were honored by the presence of the President of the Virginia State Dental Association, Dr. R. P. Stickley, and our program was given by Dr. M. P. Doyle, his subject—"The Proceedings of the Last Meeting of the Council and the Proposed Plans for the Future."

Dr. George Paffaunbager, will speak for us at the October meeting. His subject being: "The Synthetic Resins", and in November we will have a symposium on the question of "Dentist Falling Under Social Security."

The Society bemoans the passing of one of its loyal members, Dr. Bernard McCray. A copy of the resolutions passed at our meeting is appended.

Component 4 is very proud of its member, Dean Harry Lyons, having been again elected Speaker of the House of Delegates of the American Dental Association, and President of the American Academy of Periodontology.

During the month of September the city of Richmond will put into effect its recent acquired equipment for fluoronating its municipal water supply.

William J. Longan, Secty.-Treas.

IN MEMORIAM

On July 21, 1952, a wise Providence called to His heavenly rest, our friend and colleague, Dr. Bernard VanBuren McCray. He was born September 13, 1875, at Warm Springs, Virginia, and had practiced his profession in the city of Richmond for fifty years.

He is survived by his wife, Mrs. Nellie Winn McCray, one son, Bernard Winn McCray, and five grandchildren.

He was an ardent member of the Presbyterian Church, a loyal friend, father and husband. He enjoyed a large and appreciative clientele and had a wide circle of friends.

We desire to express our appreciation of Dr. McCray's life and work, therefore:

1. Be it resolved, That the membership of the Richmond Dental Society, Component Number 4, of the Virginia State Dental Association, realizes with sorrow the loss of a valued member and friend and joins with his many friends in sympathy to his family.

2. Resolved also, That a copy of this be recorded in the minutes of this Society, a copy be sent to his family and a copy be sent to the Bulletin of the Virginia State Dental Association.

(Signed) John M. Hughes,
G. A. C. Jennings,
W. A. Ratcliffe.

Component No. 5—Piedmont Dental Society

J. RANDOLPH SMITH	<i>President</i>
D. V. DES PORTES	<i>President-Elect</i>
T. T. UPSHUR	<i>Secretary-Treasurer</i>
K. McC. CRAWFORD	<i>Executive Council</i>

The October meeting of the Piedmont Dental Society was held at Martinsville October 10 and 11. The following program was prepared for the occasion:

- 9:00 A. M.—Golf Tournament—Forest Park Country Club
- 10:00 A. M.—Registration
- 2:00 P. M.—Opening session and President's Address.
- 2:30 P. M.—Address, Dr. W. N. Hodgkin, Subject "Dental Ethics."
- 3:30 P. M.—Address, Dr. Roger E. Sturdevant, subject, "Later Trends in Gold Casting Techniques." Illustrated color movie
- 6:00 P. M.—Social Hour—Club Martinique
- 7:00 P. M.—Banquet—Club Martinique

Saturday, October 11, 1952

- 9:30 A. M.—Address, Dr. H. R. Pearsall, M. D., subject "Focal Infection."
- 10:00 A. M.—Ladies Bridge Luncheon
- 10:30 A. M.—Address, Dr. Roger E. Sturdevant, continuation of "Gold Casting Techniques" with demonstration.
- 12:00 A. M.—Lunch
- 2:00 P. M.—Business Session

Component No. 6—Southwest Virginia Dental Society

B. J. STRADER, Big Stone Gap	<i>President</i>
G. L. HAMPTON, Galax	<i>President-Elect</i>
C. M. QUILLEN, Bristol	<i>Secretary-Treasurer</i>
C. K. POLLY, Appalachia	<i>Executive Council</i>

The Southwest Virginia Dental Society held the spring meeting in Abingdon, Martha Washington Inn, February 27th. The clinicians for the afternoon and evening were Holmes T. Knighton, D. D. S., Richmond, and Rowe Driver, M. D., of Bristol, Tenn. Dr. Knighton's subject was "Significance of Bacteria in Relation to Carious, Pulpal and Periodontal Lesions. The Effects of Antibiotics on the Oral Flora." Dr. Driver spoke on "Your Eyes from the Viewpoint of the Ophthalmologist."

Our summer meeting was in Marion, Hotel Lincoln, June 12th. The golf tournament was at the Marion Country Club during the morning and the clinics given in the afternoon. H. W. Zeilm, D. D. S., Elizabethton, Tenn., gave clinic on "Lower Impression Technique (Practical Demonstration)." J. E. Griffiths, D. D. S., Marion, discussed "Dentistry for the Inmates of a Mental Institution." A dinner for the dentists and their wives was given at the hotel at 6:30.

Our fall meeting will be in Bristol, General Shelby Hotel, October 30th. This our last for the year will be the 29th annual gathering with the First District Dental Society of Tennessee. It will be an all day and evening affair.

C. M. Quillen, Secy.

Component No. 7—Shenandoah Valley Dental Society

LEON SLAVIN	<i>President</i>
F. A. LASLEY, JR.	<i>President-Elect</i>
W. H. WUNDER	<i>Secretary-Treasurer</i>
D. B. ALLEN	<i>Executive Council</i>

Two interesting symposiums on timely dental subjects marked the annual meeting of the Shenandoah Valley Dental Society at the George Washington Hotel, Winchester, Friday, October 10.

Dr. J. McSweeney led a discussion on "Oral Dynamics," and Dr. Fred Miller on "The Role Nutrition Plays in Building and Maintaining Mouth Health," illustrated with motion pictures and slides.

At the business meeting the Voluntary Pension Fund and Social Security for dentists were discussed, and many common dental problems were discussed. The program was lightened by a social hour at 6:00 and the banquet at 7:00.

Component No. 8—Northern Virginia Dental Society

G. C. STARBUCK, JR., Arlington	<i>President</i>
N. C. BAILEY, Fredericksburg	<i>President-Elect</i>
B. M. HALEY, Warrenton	<i>Councillor</i>
T. W. PUMPHREY, Arlington	<i>Secretary-Treasurer</i>

Something unique in dental conventions was staged by the Northern Virginia Dental Society in May, 1952, when its annual meeting was held aboard the S. S. Queen of Bermuda. Dr. G. C. Starbuck, president, had been warned it would be a "flop." The reason—too much play and no time for serious business.

Some 200 persons from Virginia were on board when the luxury liner pulled out from Norfolk, its last stopping place in the States, on May 30. There were about 80 dentists in the party, 10 physicians, and representatives from dental laboratories and supply houses. Many were accompanied by their wives.

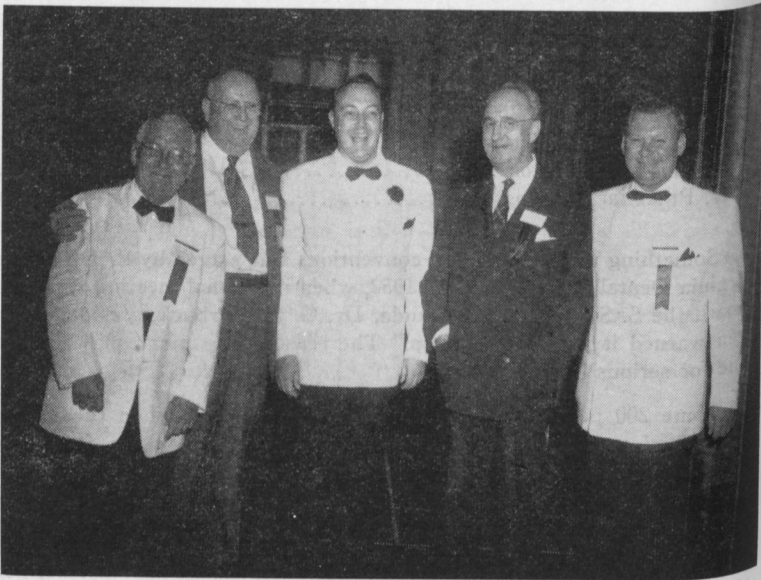
The five-day program got underway immediately with a reception May 30 at which Dr. Leroy Ennis, president of the American Dental Association, was guest of honor.

The business of the convention began May 31 with messages from Dr. Ennis; Dr. R. P. Stickley, president of the Virginia State Dental Society, and from Dr. Starbuck. Dr. Stickley, who gave a formal appraisal of the entire convention in the June issue of The Bulletin, failed to mention that Dr. Ennis was the life of the party.

On May 31, Dr. Dan Lynch, of the District of Columbia Dental Society, discussed "Every Day Problems of Oral Surgical Practice" and Dr. Ennis spoke on "X-Rays of Interest to the General Practitioner." There was also an open forum on "General Dentistry" with a panel of specialists at which Dr. Lynch moderated.

Sunday, June 1, was spent in Bermuda and the convention resumed the following day with the final sessions June 3. The programs included seven table clinics, a further session by Dr. Ennis on "X-Ray Interpretation" and Dr. Lynch conducted a forum on "Surgical Consideration of Immediate Denture Service."

Since a number of MDs were on board, another panel was arranged to discuss "Medical and Dental Problems of Current Interest." Dr. Lynch was moderator and panel members were Dr. W. V. Rucker, Dr. William P. McDowell, Dr. George Stuart, Dr. J. J. Waff, Dr. H. E.



Left to right: Drs. Tom Pumphrey, Leroy Ennis, John Smith, Dan Lynch, G. C. Starbuck.

Sisson, Dr. C. C. Cooley and Dr. W. Withers, physicians; and Dr. C. B. Hall, Dr. L. H. Blevins, Dr. M. B. Walker, Dr. J. J. O'Keefe and Dr. C. H. Barker, dentists.

Awards were presented to the following past presidents of the Society, which was founded in 1932: Dr. L. H. Blevins, Dr. A. J. Bolling, Dr. J. B. Early and Dr. Tom Pumphrey.

Some of the distinguished doctors had a time getting their sea legs. They were really under the weather and strictly because of the swaying of the boat and not from the swaying of the bottle.

The social activities were many and varied and included a number of dances, cocktail and champagne parties and ended with a Captain's party and a gala farewell affair.

The Northern Virginia Society holds two meetings each year—one in the Fall and one in the Spring. Its members are looking forward to a State Dental Society cruise in the near future.

Instead of the initial try at a cruise being a "flop," it was so im-

pressive to our neighbors that the dental societies of South Carolina, Pennsylvania and West Virginia are planning to follow our lead.

Our hats are off to Dr. P. R. Milton and Dr. H. W. Bonifer, who were co-chairmen of the program committee and in charge of arrangements. We can't overlook John Smith, president of the United States Travel Agency, who took care of every little detail.

So much for the cruise. In July the Northern Virginia Dental Society put in effect a Budget Plan for Dental Care in cooperation with the Old Dominion Bank in Arlington, Va. Any individual with a regular income and a satisfactory general credit background is eligible to use the plan.

The participant visits the dentist of his choice, who is a member of the Northern Virginia Dental Society, and though arrangements are made in the dentist's office, payments are made at one of the bank's offices. These may be over an 18-month period.

ANNOUNCEMENTS

THOMAS P. HINMAN MID-WINTER CLINIC

MARCH 22, 23, 24, 25, 1953.

Miss Sara Holbrook, Executive Secretary

15 Peach Tree Place, N. W.

Atlanta, Georgia

Capable young dentist desires association or partnership with other ethical practitioner. Will consider buying good practice. Five years experience general practice; three in own office, two in Air Force. Especially capable with children; can also handle minor oral surgery. Native Virginian, state license. Available February 1st. Draft exempt. Reply care Editor.

THE FACULTY
OF THE
MEDICAL COLLEGE OF VIRGINIA
SCHOOL OF DENTISTRY
CORDIALLY INVITES ALL MEMBERS
OF THE
VIRGINIA STATE DENTAL ASSOCIATION
To ATTEND
THE SECOND ANNUAL
DENTAL ALUMNI HOMECOMING
FEBRUARY 2 AND 3, 1953
AT THE COLLEGE
RICHMOND, VIRGINIA

The program will include scientific lectures, two luncheons, a social hour and a banquet session.

Registration fee—\$15.00



GIVE NOW!

The Relief Fund is a charitable trust supported by voluntary contributions of dentists. It is perpetually dedicated to provide assistance to those unfortunate members of the dental profession who, through accident or illness, are totally unable to help themselves.

Mail your contribution today to

AMERICAN DENTAL ASSOCIATION RELIEF FUND
222 East Superior Street, Chicago 11, Illinois

DEC 9 - 1954



GIVE NOW!

The Relief Fund is a charitable trust supported by voluntary contributions of dentists. It is primarily designed to provide assistance to those unfortunate members of the dental profession who, through accident or illness, are totally unable to help themselves.

Make your contribution today to

AMERICAN DENTAL ASSOCIATION RELIEF FUND
300 West Superior Street, Chicago 17, Illinois