JANUARY 1966

the Journal of the American College of Dentists

The Attainment of Optimum Health

Health Legislation—The 89th Congress

Dental Care Plans for All of the People

the Journal of the American College of Dentists

A QUARTERLY PRESENTING IDEAS IN DENTISTRY

T. F. McBride, *Editor*
4236 Lindell Blvd.
St. Louis, Missouri 63108

O. W. Brandhorst
Business Manager
4236 Lindell Blvd.
St. Louis, Missouri 63108

JANUARY 1966

Volume 33—Number 1

The Journal of the American College of Dentists is published quarterly—in January, April, July, and October—by the American College of Dentists at 1201-05 Bluff Street, Fulton, Missouri 65251 • Subscription $10.00 a year; single copies $3.00 • Second class postage paid at Fulton, Missouri •

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

All correspondence relating to the Journal should be addressed to the editor at 4236 Lindell Blvd., St. Louis, Missouri 63108.

The Journal is a publication member of the American Association of Dental Editors.

For bibliographic references the Journal title is abbreviated J. Am. Col. Den. and should be followed by the volume number, page, month, and year. The reference for this issue is J. Am. Col. Den. 33:1-80, January 1966.

Contents for January, 1966

Editorials

Assistant Secretary Appointed

The American College of Dentists is pleased to announce that Thomas F. McBride, Editor of the JOURNAL, has joined the staff in the Central Office at St. Louis as Assistant Secretary. He will continue as Editor.

Dr. McBride comes to us with an unusual background that uniquely has prepared him for the responsibilities and duties he will assume.

His dental education at the University of Pittsburgh—he was graduated cum laude in 1929—was under the tutelage of one of the Founders of the ACD, H. E. Friesell. He began his teaching career at Pittsburgh, first full time then part time until 1945, and during this period he extended his knowledge in several related fields: English literature, journalism, biology, and dental research. This included short Summer courses at Harvard School of Education, New York University, Graduate School of the University of Pittsburgh, and two Summers at the Marine Biological Laboratory, Woods Hole, Massachusetts.

His early interest in journalism was projected through *Dental Rays,* the student-alumni publication of the School of Dentistry at Pittsburgh. This led to numerous other editorial appointments—local, state, and national—culminating in the editorship of the JOURNAL.

During this time, his interest in the American Association of Dental Editors and in the journalistic principles promoted by the College, continued to assert itself. He became acquainted with William J. Gies, who fought so valiantly for these same principles, worked with him closely and, as it were, "sat at his feet" as a truly professional dental journalism developed and became a reality. He was thoroughly indoctrinated with high ideals for the profession.

In 1945, he entered full time practice in association with another member of the College, Bruce P. Rial of Pittsburgh. Then, ten years

later in 1955, he accepted an offer from the Ohio State University and returned to teaching, becoming Chairman and Professor of the Department of Fixed Partial Prosthodontics.

He has held the position as Editor of the JOURNAL since 1959 with distinction. As such, he has been a member of the Board of Regents, without vote, and has a full knowledge of the plans and objectives of the College as projected by the Board.

The American College of Dentists is fortunate indeed to find a man so steeped in the traditions of the College, to become associated with its staff. We welcome Tom McBride to ACD headquarters and to St. Louis.

O.W.B.

Optimum Health for the Individual

The papers that follow deserve thoughtful reading. They represent a major contribution of the College in "planning the good life."

A broad biocultural perspective is oriented to health care; medicine's potential and performance are high-lighted; the facts of financing health care and the insurance mechanism—voluntary or compulsory—are stated openly; and the excellence of health services is stressed.

Recent health legislation is brought into an understanding focus. Three great dental care programs are projected. Already the American Dental Association has initiated steps to develop a national program for children.

All of us will have a part to play in this imminent expansion of dental care programs. As Ryan states, "It is imperative that all dentists . . . be informed." A study of the papers in this issue is an opportunity to become a knowledgeable citizen and professional.

T.McB.

OPTIMUM HEALTH FOR THE INDIVIDUAL IN THE SOCIAL ORDER: PLANNING THE GOOD LIFE

This panel discussion was presented at the Las Vegas Convocation, November 6, 1965. President Harry Lyons presided; Gerald D. Timmons acted as moderator. The Panel Program Committee consisted of W. Magill Burns, Cozier W. Gilman, Richard L. Simpson, Bruce B. Smith, Chauncey D. Leake (consultant), and Harold W. Krogh, chairman.

Introductory Comment

HAROLD W. KROGH, D.D.S.

For nearly two years we have been in the planning phases of developing a broad discussion of the problem of providing optimum health to the individual in the social order. That the subject is timely is evidenced by the recent White House Conference on essentially the same subject.

In this nuclear era with rapid expansion in communications, in travel, in automation, in our intricate and intimate involvement with millions of less fortunate individuals in lands which yesterday were but strange sounding names, it is fitting that we pause a moment to see where we are, where we would like to be, and what our plans should be for getting there.

The unprecedented rate at which science has advanced in the past few decades and the parallel advancements in the effectiveness of the health services in the diagnosis and treatment of disease have

thrown nature out of balance, causing a world-wide disruption of centuries-old social, economic, and health patterns. We must believe that the discovery of new truths in all fields eventually will act for the best interests of all. But for the present and foreseeable future, civilization will be faced with enormous problems of adjustment to the new knowledge that will some day afford a happy and healthful life for all. Is it not reasonable to expect that the brains and energies which have gone into producing our disrupted total environment could also be the means of solving the human problems which recent scientific discoveries have brought upon us?

No one, in the face of the population explosion, would argue that all the progress made in reducing infant mortality and increasing longevity is an unmixed blessing.

Nor that bringing up preponderant numbers of our youth who cannot pass minimum health standards can be viewed with complacency. Physical and mental breakdowns in the productive years should make us concerned with the means for prevention and with measures to increase the salvage rate.

Compulsory retirement of workers whose mentality is unimpaired and whose physical status would permit at least part-time productivity may be a luxury even our rich country cannot afford. As our population ages, health needs will continue to increase. Can these needs be met without destroying our traditional system of private health care? Are we ready as a people to face up to the fact that the productive must support the non-productive and some of the partially productive, but in a manner not related to the poorhouse over the hill?

How do these health problems, which should begin with family planning and continue to the grave, appear to the broadly trained scientist and psychologist? Can peoples widen their regional or national horizons and adopt a world vision? Can a note of morality be injected which will make the strong willing to support the weak? In short, can human beings learn and be motivated to take steps necessary to gain optimum health for all?

This panel discussion should give some of the answers to these questions.

The Good Life for Man: Tomorrow's Horizons

WILTON MARION KROGMAN, Ph.D.

Prelude

I think it is a splendid tribute to the unique genius of the American way of life that the overall title of this panel discussion stresses the role of the *individual* in our social order. In last analysis Man's "good life" is the sum of individual good lives—of the well-being, physical, mental, socio-economic, psycho-behavioral, and spiritual, of each person in our vast socio-cultured complex.

In the last sentence, above, I have sounded the scope of the remarks I wish to make. I am a physical anthropologist, true, but I am keenly aware that human biology is not an isolate, and that in looking to "tomorrow's horizons" we must adopt a broad biocultural perspective. We must view man as a biological organism shaped by, and adapted to, cultural influences. It is well-nigh impossible to say where biology ends, sociology begins. Our view, then, shall be bifocal: trends in *Homo sapiens,* per se, and trends in his way of life.

Man's Masses

What could be more fundamentally biocultural than the world population? Biologic in the sense that the greater the number the more intense the survival struggle. Cultural in the sense that competition ramifies into every sphere of human living. It has been said, roughly, that Man took a million or two years to achieve his first billion (1800), 150 years to achieve his second (1950), 15 years each to achieve his third (1965), and fourth (1980), and 10 years each

---

Dr. Krogman is Professor and Chairman, Physical Anthropology, Division of Graduate Studies, School of Medicine, University of Pennsylvania. He is Director of the Philadelphia Center for Research in Child Growth.

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 6, 1965.

to achieve his fifth (1990), and sixth (2000). A more detailed breakdown is that by Halle ('64).

ESTIMATED POPULATION

Years Ago	*Numbers*
2,000,000	125,000
300,000	1,000,000
25,000	3,340,000
10,000*	5,320,000
6,000	86,500,000
2,000	133,000,000
310†	545,000,000
210	728,000,000
160	906,000,000
60‡	1,610,000,000
10‡	2,400,000,000
0	2,700,000,000

* Agricultural Revolution;
† Industrial Revolution;
‡ Scientific Revolution.

Where do we go from here? Brown ('54) and Darwin ('56) are inclined to support what has been said above. Davis ('57) agrees to 6 billion by 2000, and goes to 13 billion by 2050. Harrison ('56) points out that one of twenty men who have ever lived is alive today. He further avers, "The time may well arrive when a tenth of all of the souls of men, in the strictly Biblical sense, will be inhabiting mortal bodies at one time." The rate of world population increase is near 1.33 per cent: 34 million people per year (90,000 per day, 4,000 per hour)!

What does this mean? There are only two major options: *reduce* numbers and/or *feed* them all properly. I think the first is the more readily workable, though not culturally the easier because of the ethical and moral issues involved. Controlled or limited breeding is the only solution: world-wide contraceptive measures. We pose the problem of under-privileged conditions for half of a tremendous population, or more evenly distributed cultural and material values for a smaller total group. We must answer the question: Have we the moral right to subordinate *quality* of population to quantity, *adequacy* of cultural blessing to raw want? Put more simply, do we want a lot of "have-nots" or fewer "haves"?

I do not regard horizons here as dim as they may seem. Actually,

as in so many things, Man himself holds the answer. In broadest evolutionary terms Man will literally *make himself*. For the first time in evolutionary history the organism—not the environment—may direct future adaptive course. We can be what we want to be! We shall reduce relative number increase (in rate and total number), I am sure. But we shall, as I shall demonstrate later, probably do two other things: 1) increase food supply; and 2) equalize the standard of living. We shall, I am convinced, reduce the cleavage between haves and have-nots the world over.

Age's Aspirations

A major way in which Man has swayed his own destiny is to increase his *longevity*. Up to 1800 he might look to 35 years of life, in 1950 the expectancy had risen to 70 years*—in 150 years Man has made twice the progress in longevity than in his whole previous history! In recent decades the gain has been almost five in every ten years.

It must be pointed out that the above trends are most strongly emphasized in the United States, but they are present, to a very high degree, in all countries with an Occidental culture and living standard.

Here, in the United States, says Miller (64) we will be a five-generation Society by 2000. Many children will know, and will be known by, their great-grandparents.

What does all this mean? It means, of course, that the problem of the aged is with us at an increasing rate. In 1960 there were 16.5 million aged 65 years plus. By 2000 this number will be 32-33 million—just about doubled. In purely biological terms we have no real data (though there are reference volumes available, e.g. Lansing, '52), on what an "old person" really is! We know there are no real "diseases of old age," and that malignant neoplasms and cardiovascular diseases are the major causes of death. We have, amazingly enough, no effective serial data on aging; we have no data on age-changes of the entire life-span; we do not know the relation between the pediatric years (growth, per se) and the geriatic years (age-changes, per se).

---

* In 1955 the figures for American Whites was 73.6 years for females, 67.3 years for males; for non-White 65.9 and 61.2 years, respectively.

We shall conquer, to a high degree, the diseases of mortal flesh; but as we do this then death in old age will be from general deterioration, a series of run-downs, so to speak, in which processes are still obscure. We may develop organ banks of one kind or another for replacement therapies but their efficacy, at different age-stages, remains to be tested.

The real problem of old age is less purely biological, far more psycho-social. The 65+ bracket is not a single one: there are the "young" oldsters who are still in good health and who can get around on their own, and who winter in South or West; there are oldsters who "feel their years," chronically ill, unable to drive a car, and who need a measure of special housing facilities plus community care; there are the really aged oldsters who are almost totally incapacitated. Thus, the statement "we must care for the aged" is not simple, intrinsically.

The economics of the 65+ group is a very real problem. By 2000 for every five persons in the productive labor force there will be one in the 65+ group. At that time the 65+ individuals will be more able-bodied; today they are *not* a real asset in the labor pool. Their role in productive labor is a problem to be faced. Today one of six persons over 65 years receives some form of public assistance, though some 75 per cent have annual incomes up to $3,000. With the present *Employment Opportunity Act* it is possible that the present total disadvantaged group, now 15-20 per cent, may drop in a few decades to 5 per cent (this holds for the 65+ group, also).

The 65+ group in 2000 will be better educated. In 1960, in our 18-year old population, 10.7 per cent dropped out before the eighth grade; 43 per cent had a high school education; 18 per cent had some college education already. In 1960, in the 60-69 year old group, 66 per cent had only an eighth grade education, 10.5 per cent high school, and 9.4 per cent some college.

We may expect that the 65+ group will increasingly form a political (voting) bloc. In 1960 the 65+ comprised 1.7 million in New York, 1.5 million in California, and over one million in Illinois and Pennsylvania. The voting curve rises sharply to a peak at 35 to 60-65 years and levels off at 80 years. The peaking at 60-65+ will be an effective force. Already, where there are bond issues for schools and care for the aged, the dichotomy of conflicting response is clear.

The horizons for the 65+ group will encompass a better use of

leisure and better housing facilities. In a sense the two go hand-in-hand. In 1960, of the 16.2 million aged 65 years +, some 12 million lived in their own homes, 2.9 million lived alone (a 94 per cent increase in the 1950-1960 period), and 2.7 million lived with relatives. Housing for older people, whether in single dwelling units or in multiple units, must be in full association with a complete population cross-section, age-wise. This heterogeneity, in contradistinction to an institutionalized or building-focussed homogeneity, will achieve two things: 1) it will provide diversified social contacts and will grant a greater measure of participation as "elder statesmen"; and 2) it will give more opportunity for employment, especially self-employment (of the 3 million 65+ who do work, 33 per cent are self-employed).

I like Miller's ('64) observation that the social structure "in whose benefits aged members share will accent concepts more than costs." Those who are 65+ cannot be consumers alone; they must have some share in production as well; and by production is meant not economic alone but the far more basic, in terms of total well-being, psycho-social active participation rather than passive reception.

One might, slogan-wise, say, "give a hand to the aged, not a hand-out!"

Youth's Yearnings

Let me come to grips with definition at once: what is "youth"? I can give a biological definition, equating it with full pre-adult reproductive maturity (between puberty and adulthood, roughly 13-14 to 20-21 years), but I can't define youth in terms of a social situation. A southern Negro lad, on a run-down share-cropper's farm, may span his youth between 10-15 years; a more advantaged white lad, in college, may see his social "youth" extending up to—or past—21 years of age. When is youth "mature"? When he's learned the hard facts of socio-economic life? When he faces the demands of self- or own family-support?

According to recent census data we are a "young" people (despite the 65+ age profile above discussed): in 1960 one of three United States persons was below 17 years of age, and in 1965 the ratio is two in five. Today there are 17 million in the birth to 17 years group, 63 per cent more than in 1945-50. In the last five years (1960-

65) the annual rate of increase in the birth to 17 year group was 6.6 per cent, which is 4½ times the increase-rate in the total population. Equally pertinent here is the fact that the number of females in the 20-22 year bracket will almost double by 1990. This suggests that the annual number of births (4 million in 1960 and 5 million in 1965) will also double.

There is another trend to be noted, i.e., the secular increase in the child's sheer physical growth. Our children are certainly getting bigger, if not better (however this be defined!). Look at these data for boys from Meredith ('65).

GROWTH GAINS 1880-1960

Age	*Height (in.)*	*Weight (lbs.)*
1 yr.	+1.6	+ 3.5
3 yrs.	+2.6	—
6 yrs.	+3.1	+ 6.0
10 yrs.	+3.8	+13.0
15 yrs.	+5.4	+33.0
17 yrs.	+2.6	+21.0
20 yrs.	+1.2	+16.0

Boys (and the gain holds for girls, too) are not only getting bigger —taller and heavier, hence stockier—but they are doing so earlier. Puberty has moved up almost one year earlier since 1900. When today's children assert, rebelliously, that "we belong to a brand-new and different generation," they are so right, both biologically and culturally!

From reports and studies of our "juveniles" from all behavioral angles I glean that youth "wants"—and certainly needs and is entitled to—at least four biosocial situations: 1) he is entitled to better health and improved health circumstances and environment; 2) the expectation of job-security; 3) a learning situation that will stimulate by challenge, not sedate by indoctrination; 4) a sense of individual and cultural worth in terms of participation and in terms of values geared to youth's present and future roles. Some of these sound "far out" in the sense of being not only poorly-defined but being almost abstractions. There are no ready answers that anyone seems to come up with. In one way the clamor of youth is as it has been each generation; in another it is more insistent, more demanding, because there are more of them, they are better organized and have a clearer focus of their total social structure, and they are in basic doubt and in-

security—and even fear—in an age when "genocide" is a threat rather than a definition.

In 1960-1970 about 7 million boys and girls will be drop-outs before graduating: 1/3 will have an eighth grade education or less. If the boys look then to Selective Service, 1/3 of those now 18 will be rejected, 1/2 because of physical defects, 1/2 because of mental inadequacy.*

The problem of youth in the U. S. is a differential one, for we are superimposing caste upon race. The poor young Negro has less job-chance than the poor young white: in the 16-19 year bracket, 17 per cent more young Negroes are jobless than in the total population sample of that age category. A penologist, speaking of the oft-quoted higher crime-rate of the Negro, opined "it's probably the one kind of job they can get: stealing."

In terms of overall crime—which we may generalize as antisocial behavior—the FBI Reports tell us that 88 per cent of all car thefts are by males under 25 years, and that in 1963 all criminal acts (except those involving traffic) increased 40 per cent in youths below 18 years of age (in suburban areas the 'teen crime rate increased 15 per cent). Crime and delinquency are no longer "a big-city problem," "a lower-class problem"—the suburbs, and the smug middle-classes, must awaken to reality. The under-privileged, it may be argued, are driven to crime by need; the more privileged turn to crime from ennui.

The struggle, as I see it, is for the mind and the spirit of youth so that goals and behavior may be socially acceptable. This need does not mean arbitrary conformity, but rather oriented participation; a role not of blind imposition and rebellious acceptance and/or rejection, but one of cultural integration, one of defined role (both by youth and by his elders). Youth must not be the object of social stricture and structure, rather he must be the concern of a total social process that accepts him in his present niche, prepares him for his future status as cultural leader, planner, executor. This says, in fine, that we owe to youth a clear, and to him and to his elders acceptable, forseeable future. Goals are not enough; there must be added the social implementation to achieve them realistically and satisfyingly.

---

* Of these rejectees 80 per cent will be "droppies," 9 per cent will have court records, and 28 per cent will be unemployed. On problems of youth's physical fitness see Cureton ('65).

Education's Endowments

In a very real sense problems of education flow from problems of youth—let us say, indeed, that they are practically one.

A little bit of historical perspective is in order here. In the late nineteenth and early twentieth century our society was geared to the child as a familial economic asset, so that he left school and began "to help at home" at about 13-14 years of age (this is, say, 1860-1920). By 1940 the age-level of school-leaving rose to about 18 years. From then on, and into the immediate future, the level will center around 21 years. The total period of socio-economic "infancy" (in the sense of dependence) has increased by over ½ in the last century.

The individual in elementary and high school spends some ½ of his working hours apart from parental guidance, in an environment where age-peers outnumber adults by 25:1, and where peer-values become self-mirror values. This is why I said, a paragraph or two ago, that education must challenge; but this is only part of the picture, for education must *meet* a challenge. Learning is not a fact-assimilating process; it must increasingly be a fact- or theory-evaluating process: to doubt, to test, to redefine, to reject, to establish newly or differently—these are the rights of the learner, these should be the orientations of the teacher and the teaching system.

The ideology of the school, says Jencks ('64) is that of "majoritarian minorities": if they are ethnic they are assimilated; if they are religious they are ignored; if they are socio-economic they are mistrusted; and if they are racial they are (not legally, but too often nominally) segregated. This sort of hierarchy, of statification, must yield to a structured equality of rights to and for all.

There are, I feel, several recognizable trends in the direction of reduced formalization of education: the greater availability of education; the possible "replacement" of higher education; and changing emphasis.

Today we know that educational ability is a function, in part, of developmental age, that educational aptitude is individually greatly diversified as to interest and achievement, and that educational focus on the mind, alone, to the detriment of neuromuscular (manual) skills, may be a grave disadvantage in individual instances. All of these factors channel in but one direction: a greater recognition and facilitation of individual interests, drives, and skills. The three

R's are not enough*—we must give more than lip service to a total variety of interests and skills.

It may be that, as a nation, we shall urbanize higher education as in California, where ⅔ of the younger generation go to college (U. of Cal.). There are seven university campuses in major population areas that cater mainly to graduate education; there are 16 state colleges at B.A.-M.A. level; there are 70 public junior colleges. The result is that 95 per cent of all California households are within commuting distance of some kind of public college or university. With this kind of geographical convenience, and with present state and federal aid programs, the average individual will have maximum opportunity for education beyond elementary and high schools.

We shall continue to have compulsory elementary school education, and I think this will be extended through high school. After that there are three choices: on to college; on to vocational training; or on in some sort of federally-sponsored area, e.g., military service; something like the CCC or Job Corps, or VISTA ("the domestic Peace Corps").

Up to recently the on-to-college choice has been basically caste-race oriented. J. George Harrar, President of the Rockefeller Foundation (in Schickel, '65) states that, "only half as many adult Negroes have gone to college as have whites, and most of them have had to settle for institutions which perforce can offer only a meager substitute for the best in higher education." As a result the Foundation set as a goal, "how can intellectually promising high-school students from deprived backgrounds be prepared for first-rate colleges?" In the Summer of 1964 the Foundation began a three-year $450,000-action program (cost $1,500 per student). At Dartmouth, Oberlin, and Princeton Summer classes for Negro boys and girls were set up with courses offered in science, mathematics, literature, English, biology, sociology, physical education, and so on. The results, available only from Dartmouth, are good: of 55 students, 35 were recommended for preparatory school admission without reservation, 12 with reservations, and 8 not recommended. The first 47 were accepted without question, and two of the eight were accepted; to date not one of the 49 has fallen by the wayside! (Shickel, '65). The

* Or, as Hutchins recently put it, the six R's: remedial reading, remedial 'riting, and remedial 'rithmetic!

long-run goal of this program is aimed at: 1) to improve primary and secondary levels of public education; and 2) to create new values and attitudes—across all barriers of race, creed, or color!

Wealth's Workings

If we express the total United States economy in terms of wealth ($ and ¢) it is revealed that in 1964 we produced $600 billion of goods, or in theory, $2,500 for each man, woman, and child. By 1980 we shall produce at least $1,000 billion ($ one trillion). Figures such as these are meaningless unless we see how wealth works, i.e., how it facilitates the socio-economic well-being of the individual.

In the United States today one of every five families has an income below $3,000. In terms of work, per se, four million, or 5.5 per cent of the total work-force, is unemployed; to this must be added the million part-time workers. This situation will certainly remain fairly static, and it may get worse because of *automation*—linking of factory processes by automatic controls—and *cybernation*—the fusing of these controls by computers (Harrington, '65). Our economy is surging ahead at the rate of 3.5 per cent per year, and our labor force is growing. As a result the growth in labor force is scarcely balanced by increase/decrease in jobs. Hence, the problem of the "hard core" of the unemployed will hardly be resolved.

Present efforts to handle the labor-job issue represent a beginning which, hopefully, will extend into the decades ahead, viz., the Area Redevelopment Act of 1961 and the Manpower Development and Training Act of 1962. To equate with these we must develop more and diverse and longer periods of vocational training.

One last word about the United States economy demands that both labor and management should eschew what Malmgren ('64) calls the "shared plundering" of John Q. Public, i.e., an endless cycle of pay raise-price raise, *ad nauseam*. Further, both sides of this financial tic-tac-toe should take a long-run view of the United States total economy. Financial well-being for the individual can come only after vested interests and pressure groups drop their "me first" philosophy!

Environment's Enigmas

The physical world that Man lives in—the land, the air, the water, the rocks, the minerals—poses contradictions, threats, and failures

that are due in large part to Man's carelessness and his flaunting of natural laws.

The land area of the earth is 55 million square miles (36 billion acres). The easily tillable area is only 2 per cent, though Man squeezes out almost 10 per cent. If the world population were evenly distributed there would be 40 people per square mile; but, 66 per cent of all people live on about 4.25 million square miles, or 8 per cent of the land surface (cf. Cook, '51; Brown, '54; Bates, '55; Darwin, '56). This land:population imbalance means this: 66-75 per cent of the people of the world live on a subminimal diet, i.e., they go to bed hungry every night. What can be done about it? The answer is complex and costly as far as land use is concerned: 1) additional and supplementary irrigation; 2) more extensive use of fertilizer; 3) plant breeding selectively for specific environments; 4) better safeguards against parasites, insects, and plant diseases; and 5) the use of special chemical media. If all this be followed-through, says Brown ('54), we'd have a 25-fold food increase, which could support 50 billion people, world over.

There's another avenue of solution, viz., lowered caloric level, or food standard of living (Krogman, '58). For example, if in the United States we secured a yield per acre similar to that of Eastern Asia, we could support 350 million people; if the yield were as in Western Europe, the figure could be 670 million. If yield were maximum and caloric standard lowered to that of Asia we could support 1.3 billion "without increased acreage of our crop lands" (Brown, '54). Again, if crop yield were as in West Europe on the 36 billion acres of the earth the population could be 35 billion at United States levels of food use, or 90 billion at Asiatic levels.

So much for the world's land, people, and bread-baskets. How about the United States?

One of our founding fathers, Jefferson, had an agrarian dream based, I am sure, on the eighteenth century solidity of the English yeoman. The small landholders, averred Jefferson, are "the chosen people of God . . . whose breasts He has made His peculiar deposit for substantial and genuine virtue. . . ." Alas for the vision! Instead, were he alive, Jefferson would gaze upon the most intense aggregation of city dwellers in the world. In his day 10 per cent of people were in cities, now it is 70 per cent. In 1790 there were 24 places with over 2,500 people; in 1960 there were 5,000. In 1790 only New

York and Philadelphia had over 25,000 people; in 1960 there were over 500 such cities (27 of them each with more people than in ancient Rome). By 2000 our urban population will be 270 million, over twice that in 1960; four of five Americans are city or town dwellers on only 2 per cent* of the total United States land (not including Alaska). The land areas in cities equalled 20 million acres in 1960; it will be 40 million in 2000. The sad truth is that much of this land is peripheral and wasted; such run-down areas are called "slurbs." Our Urban Renewal Projects are focal here.

Revelle ('64) says that "the real architects of modern cities are the road engineers," for they encourage parallel urbanization along main highways. This has led to the possibility of what Hauser calls "Atlanticopolis" (from Boston to Richmond), and "Lake Michiganopolis (Milwaukee, Chicago, South Bend, Peoria, St. Louis). These new megalopoli will cut across city, county, and state lines; new federal laws governing them will be needed, to bypass local or regional jurisdictions. City land use ("slums") will also need new laws: 1) income tax changes to compel use of depreciation allowances for property upkeep; 2) property assessment procedure changes to penalize landlords who permit property to deteriorate; 3) compliance with building code before property can be sold; 4) prices for public acquisition cannot be based on incomes from illegal use; 5) municipal use of rents to remedy building violations.

Now, let's take a look at our resources. If by 2000 our incomes and population double we'll need a $2,000 billion income, two to three times more iron and copper, six times more bauxite (for aluminum), three times more oil and natural gas, and twice as much coal, water, and wood products. By this time 50 per cent of our electricity and 15 per cent of all energy will come from nuclear reactors.

The total rainfall in the United States is at present some 50 times our needs; but this is not the point, rather it is a problem of what is termed "consumptive use": only 25 per cent of our rainfall gets into rivers, etc., in a usable form; over 90 per cent of our river flow is either East of the 100th meridian or in the Pacific Northwest; with present practices of sewage and waste disposal we'll need 50 per cent of our total river flows to dilute and oxidize all wastes; irrigation in the West will need 25 per cent more water than there is now avail-

---

* If public facilities are included then the figure is nearer 5 per cent.

able. Ours is really the problem of H_2O *quality*. Rachel Carson has called this the *Age of Poisons,* for many of the 10,000 new chemical compounds turned out annually are both toxic and persistent contaminants.

Air pollution—the "urban sickness"—is with us. The weight of air used in the combustion of gasoline, diesel oil, coal, and natural gas is 150 tons per person per year. The amount of water we use is but 200 tons. By 2000 the amount of CO_2 in the air will have increased by 50 per cent, an alteration in our atmosphere (our "thermal blanket") so drastic that it may well change the world climate.

Culture's Construction

This complex American cultural structure . . . what sort of a community-life may it look forward to? In a sense an answer, in terms of possible trend, has already been envisioned in the potential megalopoli already a-building. Is there but this answer? There are several planning agencies in the world that say No! (von Eckhardt, '64). In England, under the New Towns Act of 1946, there are 18 new towns in various stages of emergence, of which Coventry is a good example. Germany has its Wolfsburg, Sweden its Farsta, near Stockholm, and Finland its Tapiola, near Helsinki. The United States has Reston (after *R. E. S*imon, its builder) in Virginia, 48 miles west of Washington, D. C.*

Reston is on 6,750 acres, with houses in the $23,000-$46,000 class. By 1980 it is planned that there will be 75,000 people in seven "village" neighborhoods, plus an urban town center. Each "village" will have its own 35 acre lake. Autos will be limited to "village" peripheries. According to Simon, Reston will be "a self-respecting admixture of aloneness and togetherness." While this sounds a bit platitudinous yet it key-notes the goal: a community planned for people, for human values, for a place where there may unfold a culturally rounded socio-economic milieu. There is no need for such a place to be merely a dormitory community; there is no reason why it cannot combine the desirable qualities of an urban-rural unit in terms of work (industries), service (stores), living (housing adequacy with space), and socializing (meeting facilities for music, drama, recreation, socio-political affairs, etc.).

---

* In January, 1964, President Johnson asked for funds to acquire new lands for "the orderly growth and development of new communities," under the FHA.

One has the feeling that the "village green," "the town hall" "the town center," have not been lost, that they are attaining new status in terms of planned, spatial living. The New York *Citizens Housing and Planning Council* is on the right track with its idea of "community districts," each with local administration and planning boards, plus certain overall city administrative functions. Most important, each will have its own civic center for health, welfare, police, library, courthouse, schools, municipal (meeting) hall, and so on.

In these planned communities there will be a certain amount of homogeneity that is more apparent than real. The range of social class (lower to middle to upper) can and will be encompassed by having lower-income houses (subsidized) side by side with higher-income houses (self-sustained). It is not so much a matter of *telling* people how to live as *guiding* them!

Genetic's Goals

The science of cytogenetics has opened up incredible possibilities of the absolute control of human heredity (see Sonneborn, '65). I shall do no more here than offer a few quotations from the contributors to Sonneborn's exciting book.

> If the code sequence of a given gene can be deciphered, it might then be feasible to synthesize *in vitro* a segment of the DNA with a desired "improved" sequence, but with enough similarity to the recognized sequence of the gene in question to be able to replace it in the genetic apparatus.
>
> —S. E. Luria

> Cells of certain strains, derived from mice, can fuse, producing hybrid cells that combine the chromosome sets of the parent cells.
>
> —R. De Mars

> Genetic analysis through recombination in somatic cells is via *transmission,* "the virus-mediated transfer from one cell to another of genetic material"; *transformation,* "the incorporation into the genetic material, the DNA, of a cell of a segment of DNA from another cell"; *somatic* segregation, "the production by a cell of daughter cells containing its genetic material variously assorted."
>
> —G. Pontecorvo

In a stimulating essay H. J. Muller refers to "genetic surgery" and "germinal choice." The former has two major aspects: 1) *directed mutation* "of a given nucleotide in a DNA thread"; and 2) *partial crossing,* "an already improved portion of a chromosome would be substituted for the inferior portion originally present in the cell." The latter refers to artificial insemination from carefully built-up "seminal banks."

Tatum speaks of "biological engineering" as a means to modify organisms: *eugenics,* or the recombination of existing genes; *genetic engineering,* or the production of new genes via directed mutation; *euphenic engineering,* or modification or control of gene expression.

In a recent report of research Babich et al (65) have offered an exciting insight into what may be termed the genetics of learning. Starting with the hypothesis that RNA is involved in memory storage, and accepting that different types of neural RNA are produced in early vs. later learning stages, they trained rats in a Skinner box to approach a food cup upon the stimulus-signal of a "distinct click." RNA was then extracted from the brains of these rats and injected into naive or untrained rats. The latter then showed a significant tendency, as compared to controls, to approach the food cup when the "click," unaccompanied by food, was presented. What transpired here is not clear, but one may ask questions: Were there changes in the linear sequence of the bases? Were there changes in the helical structure? Were these changes in the overall configuration or composition of the RNA molecule? As the authors state, we must still learn "how the injected material acts to affect the behavior of the recipient animal."

POSTLUDE

Much of the data up to this point have seemed rather overwhelming, and some of them well-nigh frightening and depressing. It need not be, for not only do we recognize our problems, but we are facing up to them—and doing something about them, however slow the progress may be. Trends and paths are discerned, some are outlined. It behooves us to follow them to *Tomorrow's Horizons!*

There is every reason to believe that we shall eventually control our populations in terms of *quantity*. This can be done only through education in preventive measures; obviously, progress will be differential, i.e., more rapid, in general, in Occidental countries. Progress, in terms of control, will proceed as peoples gain insight. In terms of *quality* of population one can but point to the incredible potential of genetic selection. Progress in both the physical (health, structural, functional) and mental (health, intellectual) areas are theoretically without limit.

We have before us the need for research in geriatrics (including geriodontics). Here may be quoted Kallmann's ('56) admonition:

> Since genetic phenomena are the cause of many individual differences in

> the degree of aging, it is inadvisable to approach geriatric problems with the preconceived notion that the adjustive difficulties of the aged are more or less the same for all persons and thus conducive to management by sterotyped methods. . . . Biological factors advantageous to adjustment in aging include healthy and longevous parents, the efficacious use of genetic potentialities for physical and mental health throughout life, and the establishment of adequate emotional adjustment before senescence.

With our present reasonable awareness of the bio-psycho-social problems of the oldster there is no reason why "to be old" should set an individual apart. The present trend is certainly toward recognizing an older person's right to be an integral part in an on-going cultural complex. This extends all the way—in prospect at least—from community planning to health care and a greater measure of economic security.

Youth *will* be served, and that in both his behavioral and intellectual spheres. I think that studies undertaken of the role of youth in society have high-lighted his aspirations and needs for recognition and for security; recognition not in mere status alone, but recognition in terms of the dynamic of present-to-future roles. Youth as the "leaders of tomorrow" is a slogan more honored in the breach than in the observing. What is going on today, in terms of programs such as that of the Rockefeller Foundation, suggests strongly that equality of opportunity in education will be an accomplished fact. If this be so, if, as in California, educational opportunity becomes community-centered and community-available, then the destructive rebellion of ignorant youth must yield to the constructive revolution of intelligent youth . . . for it seems that youth hates the static, literally worships the dynamic.

In another respect youth will be served, viz., his educational opportunities will be in the direction of challenge rather than of doctrinal inculcation. This, of course, is the other side of the static-dynamic coin, in terms of rejection-acceptance of cultural pattern.

I shall speak no more of problems of land use, food production, cleansing of air and water, and so on. In large part they are technical problems. They will yield, one by one, to the know-how of our own society, highly advanced and skilled in an infinite number of technologies. There may be crises of the moment, to be sure, but in the long view we will till enough land, produce enough food, drink enough pure water, breathe clean air, and so on. What Man has wrought he can undo, change, redo, as the case may be.

Tomorrow's Horizons for the individual will go far beyond the satisfying and surfeiting of purely creature wants. I look to a redefinition, a refocus, and an expansion of human *needs*. We shall go beyond the purely organic drives of reproduction and survival, basic though they be. We shall, I venture, develop a sense of values which take on qualities of the spirit of Man and of his very soul. I say this awkwardly, for it is difficult via the pen or word to encompass the variable quality of human aspirations. One may say that Man must have a "feeling of certitude" which is inherent in knowledge and in deep faith. This struggle for existence (which rules the organic world) has, in part at least, given way in Man to what Huxley ('53) calls "the struggle for fulfillment."

It is here, I think, that we meet the individual in his aspiration to "the good life." There are social values, some of which are codified as laws, others of which as custom, and most of which as ethical and moral ways of doing. We all share here, to a greater or lesser extent, in terms of degree of conformity. But in terms of the individual—each human individual in our total social structure—here is what I think fulfillment means, the richness of fulfilled oneness and otherness in our American culture.

> To the individual fulfillment means the facilitation of his own personality, the realization of his own innate and learned capacities, the satisfaction of material and spiritual needs and drives, and the development throughout life of new qualities of experience. These are enriched by cultural sharing, not alone in the formative and productive years, but, most of all, in the rich fullness of later, contemplative years. (Krogman, '58)

Pertinent References

Babich, F. R., Jacobson, A. L., Bubash, S. and Jacobson, A. Transfer of a Response to Naive Rats of Ribonucleic Acid Extracted from Trained Rats. Science, 149 (3684):656-657, Aug. 6, 1965.

Bates, M. The Prevalence of People. New York, Scribner's, 1955.

Brown, H. The Challenge of Man's Future. New York, Viking Press, 1954.

Cook, R. C. Human Fertility: The Modern Dilemma. New York, Wm. Sloane Assoc., 1951.

Cureton, T. Improving the Physical Fitness of Youth. Monog. Soc. Res. Child Dev. Serial No. 95, Vol. 29 (4), 1964.

Davis, K. Analysis of the Population Explosion. New York Sunday Times Mag., Sept. 22, 1957.

Harrington, M. The Accidental Century. New York, Macmillan, 1965.

Harrison, G. R. What Man May Be. New York, Morrow, 1956.

Huxley, J. World Population. Scient. Amer., pp. 64-76, March, 1956.

Kallmann, F. J. The Genetics of Aging. (pp. 95-111 in Moore, J. E. (ed.).

The Neurologic and Psychiatric Aspects of the Disorders of Aging. Baltimore, Williams & Wilkins, 1956.)

Krogman, W. M. Changing Man. J. Am. Geriat. Soc. 6 (3) :242-260, 1958.

Lansing, A. I. (ed.). Cowdry's Problems of Aging (ed. 3). Baltimore, Williams & Wilkins, 1952.

Meredith, H. V. Change in the Stature and Body Weight of North American Boys During the Last 80 Years. (pp. 69-114 in Lipsitt, L. P. and C. C. Spiker (eds.) Advances in Child Development and Behavior. Vol. I. New York, Academic Press, 1963.)

Metropolitan Life Insurance Co. Gains in Longevity Since 1900. Statist. Bull. Vol. 38, July, 1957.

New Republic. America Tomorrow: Creating the Great Society. W. von Eckardt, The Community: Could This Be Our Town? pp. 12-24. R. Revelle, Environment: Land, Air, Water, pp. 25-32. C. Jencks, Education: Cultivating Greater Diversity, pp. 33-40. H. Malmgren, The Economy: A Case for Efficient Planning, pp. 41-47. R. Coles, Youth: An Opportunity to Be What?, pp. 59-64. H. M. Miller, Over Sixty-Five: Beyond the Merely Bearable, pp. 65-74. L. J. Halle, The World: A Sense of History, pp. 92-107. New York, Nov. 7, 1964.

Schickel, R. The Long Road to College: A Summer of Opportunity. Special Report of the Rockefeller Foundation's Program Toward Equal Opportunities for All. New York, 1965.

Sonneborn, T. M. (ed.) The Control of Human Heredity and Evolution. S. E. Luria, Directed Genetic Change: Perspectives from Molecular Genetics, pp. 1-19. E. L. Tatum, Perspectives from Physiological Genetics, pp. 20-34. R. De Mars, Investigations in Human Genetics with Cultivated Human Cells: A Summary of Present Knowledge, pp. 48-79. G. Pontecorvo, Prospects for Genetic Analysis in Man, pp. 80-89. H. J. Muller, Means and Aims in Human Genetic Betterment, pp. 100-122. New York, Macmillan, 1965.

OTTO W. BRANDHORST HONORED

The highest award of the American Dental Association—honorary membership—was conferred on Dr. Brandhorst, Secretary of the American College of Dentists since 1935. He is a past president of the ADA and former dean of the School of Dentistry, Washington University, St. Louis.

Also at Las Vegas, Delta Sigma Delta fraternity presented him with their Annual Award for distinguished and meritorious service to the dental profession.

And in December, Dr. Brandhorst received a Distinguished Service Award from the Tri-State Section of the ACD at Memphis.

Medicine's Contribution to the Attainment of Optimum Health

LUTHER L. TERRY, B.S., M.D.

Even in our country, one of the few in the world where it is possible to view the attainment of optimum health as a feasible as well as an ideal goal, this is an unusually propitious year for this panel discussion.

Never in our history has there been so clear a demonstration of the national will for health as in the session of the Congress just ended.

Never has there been so strong a determination to check the drain of intelligence and initiative arising from unattended health needs as that demonstrated in such national endeavors as the war on poverty.

Never has there been a greater capability for the improvement of health nor a brighter prospect for new knowledge.

In this year, the Congress enacted legislation which strikes at two of the longstanding barriers to improved health care: the cost to the individual, and the gap between medical potential and medical performance. It acted to check pollution of air and water and the growing health hazard which they represent. It offered direct assistance to schools of medicine and dentistry, and appropriated the largest sum in history for medical research. These actions in any one year would be impressive, yet as you know there were many others in 1965.

With these measures, the nation moved forward toward improved health, for they at once enhance medicine's capability and summon the profession to higher achievement.

Dr. Terry is Vice President for Medical Affairs at the University of Pennsylvania; last year he resigned as Surgeon General of the U. S. Public Health Service to accept this position.

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 6, 1965.

This capability is already substantial. It is within our means to eradicate in this country infectious diseases which have long been under control—polio, smallpox, tetanus, pertussis, and now measles. I believe that we are beginning to grasp this fact and to act upon it.

We can reasonably expect that other vaccines will lead to the control of virally caused diseases within the near future—rubella, hepatitis, and the acute respiratory diseases which are the leading cause of illness among children and young adults and which account for more time lost from work and school than any other diseases. The first successful field testing of a live oral vaccine against adenovirus-4 was made earlier this year, giving substance to the promise.

Organ transplants, despite the very great problem of immunology, promise to be one of the great breakthroughs of our time offering life to the victims of degenerative diseases.

Predictions range from three years to a decade or more for the development of the artificial heart, a short time indeed for so difficult an undertaking.

The chronic diseases are more stubborn and unyielding. Yet science continues to give us new insights into such long-term illnesses as diabetes and arthritis. Recently, for example, the discovery of an insulin-destroying enzyme synthesized by the liver has added impetus to the revaluation of the classic concepts of diabetes.

Against cancer, conquest will come through a series of small victories rather than a miraculous cure. Cancer comes in many forms and it has a variety of causes. One of the most promising areas of cancer research is in acute leukemia. We now feel sure that it is caused by a virus, and the search for effective vaccine or other methods of prevention is intensive. And in the meantime, new methods of treatment—suitable drugs in combination with supportive therapy in the form of transfusions of specific, important elements of the blood—is adding five, sometimes more, years to the life of its victims. It was not so long ago that those years were only weeks.

Acute leukemia illustrates the key point in any discussion of medcine's contribution to optimum health now and in the future: that confident of ultimate victory in the research laboratory, we must use whatever knowledge is available to us for treatment and diagnosis and prevention for improved health.

This is a precept of medical practice, but it is one that not all of us have followed faithfully. There are many reasons—too much knowledge to keep up with and too little time in which to do it—patients who come too late—we all know them. They are understandable and legitimate. But their result is inescapable. With the three major diseases, it was documented for history by the President's Commission on Heart Disease, Cancer, and Stroke.

Should there be a second such report, ten or twenty years hence, however, I believe that its findings will be more reassuring, though I would hope no less objective.

I base my conviction upon medicine's record of service and upon the forces at movement in our society, forces which found expression in legislation.

Cost has been probably the most formidable of all the barriers to health. For the aged and the very young, the most dependent of our people and the most in need of health services, it has meant a good deal less than optimum health. With diminished incomes and limited earning power, the aged were often reluctant to seek medical attention at the first sign of illness or to adopt preventive measures such as annual health examinations. That time is past.

And so for many of our children. For the 1965 amendments to the Social Security Act also consider the young. In addition to authorizing a three-fold increase in federal appropriations for maternal and child health services and crippled children programs over the next five years, the amendments extend the old Federal-State program of medical assistance to the aged—the Kerr-Mills program—to cover *all* those who benefit from federally-aided public assistance programs. These include families receiving aid to dependent children, the blind, and the totally disabled. States which wish to do so may also include all other medically indigent children. This means that families formerly excluded from receiving assistance in meeting the cost of health care for their children—those who could pay a part but not all of the expense—will now be eligible for assistance.

Implementation of the Kerr-Mills program has always been in the decision of the individual states, and not all of them have chosen to participate. The new law stipulates, however, that after 1970, states which do not adopt the new provisions may no longer receive federal funds for medical care in public assistance programs.

Finally, the amendments—and I spell them out because they have been partly eclipsed by the health insurance program—authorize a new five-year program of special project grants to provide health services for children, particularly in low income areas. Conducted by official health agencies and the teaching hospitals of medical schools, the projects will offer screening, diagnostic, and preventive services for all children in a project area. They will provide needed health care, including dental services, for children whose parents cannot pay. Others will be referred to their private physicians and dentists.

For the medical profession, measures such as these are portents of a future in which it will be able to emphasize, as never before, prevention and health maintenance. Seeing aged patients on a routine basis, physicians will be able to detect incipient illness and to act to prevent its development. Comprehensive care can be a watchword rather than a goal. With children, where surgical intervention in a cardiac case can change a whole life, and a pair of glasses can mean the difference between success and failure in school, the potential for improved health is equally great.

The establishment over the next few years, of the regional medical programs in heart disease, cancer, and stroke for which Congress has authorized federal grants, will also have a major impact on the betterment of health. For their purpose is to help the medical profession make available to its patients the latest in the diagnosis and treatment of these diseases.

It will be achieved through cooperative arrangements linking medical schools and clinical research centers with the hospitals of a given geographic region in programs of training, research, and demonstrations of patient care.

There are perhaps a handful of such cooperative programs already in operation, although not limited to a concern with these three diseases. Generally, the pattern is one in which a small hosptal can refer patients with conditions beyond its capability to a larger medical center or teaching hospital. Staff of the center visit the participating community hospitals for consultation and "teaching rounds," so that the continuing education of the local practitioner is an important benefit of the program. This is also a purpose of the federally-aided programs.

The new regional programs are based upon a recommendation of the President's Commission on Heart Disease, Cancer, and Stroke,

which envisioned them as a means for uniting the worlds of medical research, education, and practice.

Every death from cervical or oral cancer—every blinding from glaucoma—every child with rheumatic heart damage—underscores the urgency of accomplishing this union. I hope and expect that, in the years ahead, the cooperative programs planned in heart disease, cancer, and stroke, will characterize the whole of medicine—that medical practice may come abreast of medical research.

I have emphasized the chronic diseases because they will continue, as far ahead as we can see, to represent the dominant health problem of Americans. Innovations in the management of these diseases will be matched in the treatment of mental illness.

Even now mental patients are being cared for in ever larger numbers in their own homes and communities, through community mental health clinics, rather than in the huge mental hospitals. About 500 additional community mental health centers will be established over the next five years, stimulated by federal grants for construction and, in the first years of operation, for staffing expenses. New drugs and treatment methods, as well as a new public understanding, have helped to make this advance possible. I believe that, in the years ahead, the community centers will in themselves help to forestall mental breakdowns simply by making help available when it is first needed.

We should also come to a better understanding of mental retardation and congenital malformations in the next few decades. Against these conditions, where the cause lies hidden in the mysteries surrounding birth, I see great promise in the new concept of health research that is embodied in the young National Institute of Child Health and Human Development of the Public Health Service. This concept is that medical science, while continuing to search for solutions to specific diseases, must also probe deeply into the life processes—normal and abnormal—as a basis for maintaining health as well as for conquering disease. The Institute's research, intra- and extramural, therefore is process rather than disease oriented. Its focus is the entire process of human development—from the preconception period through senescence. Its approach is multi-disciplinary; study the social and behavioral as well as the biological development of the human organism.

Reproductive and perinatal biology, as well as mental retardation,

are among the Institute's major areas of interest, and grantees in these areas already have reported advances which show promise of improving health and well-being. One investigator, for example, has been able to identify the category of infants who are most likely to develop hypoglycemia, which can cause death, brain damage, or other forms of incurable disability; and he has been able to correct the condition on an emergency basis. Major advances have been made in understanding the processes by which heat is exchanged between a newborn infant and his surroundings, and studies have already shown that the knowledge can contribute to the survival of small premature infants.

This whole concept, this developmental approach, I believe to have other long-range implications for medicine. Neither the obstetrician nor the pediatrician now has the knowledge to provide medical care for an unborn child. As research illuminates the prenatal development process, it may lead the way to a new branch of medicine and specialists who will be physician to the fetus.

I would suggest, too, that as research adds to understanding of the long-range effects of some childhood illnesses, as in the recent discovery that many women suffering from hypertension today suffered from infections of the urinary system during childhood, physicians will be able and expected to anticipate adult health problems in their young patients, and to do everything appropriate to solve or minimize those problems.

Medicine's potential in the drive for optimum health is as unlimited as the profession itself chooses to make it. With dentistry and all of the health professions, it shares unprecedented public support for its goals. Science will continue to provide it with tools and materials of wonder.

Matching potential with performance will be for the practitioner of the future, as of today, a very personal challenge—to remain abreast of medicine, to contribute to society's work as it contributes to his.

The Economics of Providing Optimum Health: A Summary Statement

DONALD H. STUBBS, A.M., M.D.

Optimum health as viewed from various angles by this distinguished panel is far more than the absence of specific disease; and, we must do more than diagnose and treat disease to achieve it. All of us here are privileged to share in defining more sharply this vision; and, in this way, we can help devise practical ways to make it real. Although food and shelter as contributions to optimum health are outside our immediate purview today and are largely taken for granted in our own affluent society, they are actually factors of dominance as related to world economics. Our enforced role as citizens of the world requires that these broad needs be in the background of our domestic considerations.

Facts of finance for health care in America during the last 25 years give firm basis for disclosing trends in methods of pay, probable systems, and amounts of expansion, and even for educated guesses as to acceptable limits in the several categories involved.

In this period, the amount spent on health care has grown from 4 to 35 billion dollars annually. Even more significant is the fact that the percentage share of all disposable income has nearly doubled. Inadequately appreciated is the fact that during all this amazing growth, the share of government at all levels has been fairly constant at about one-fourth of the total. The truly dramatic financing change has been the growth of health insurance from a

---

Dr. Stubbs has had a long experience in the development of voluntary prepayment medical expense through his activities in Blue Shield. He is now the Blue Shield representative on the Government's Advisory Committee on Dependents' Medical Care, and a member of the Joint Contract Committee for the Blue Cross-Blue Shield Federal Employees Program. In addition, he is active in the field of anesthesiology.

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 6, 1965.

relatively insignificant level to one approximately equal to the government total.

Government responsibility for health costs has traditionally been related to such things as war and defense, tuberculosis and mental disease, public assistance, and workman's compensation. Voluntary health insurance has grown to cover about two-thirds of all hospital bills, one-third of all physicians' charges (including most of the more extraordinary ones), but practically nothing of dental, drug, and other costs.

The increasing desire of the public for more health insurance and the willingness to pay for it has been most dramatically shown by more than four-fifths of all federal employees choosing high option rather than low option programs, although the full additional cost has had to be borne by the employee.

It has thus become clear that the insurance mechanism is here to stay and is to be increasingly employed, with the major question being whether it will be voluntary or compulsory. Despite the rapid growth and wide acceptance of health insurance, it has not been enough to forestall the movement of the federal government into the role of financing health care for the aged.

Next July 1, in a mammoth program seven times as large as the entire Federal Employee Health Benefits program (previously much the largest in existence), the federal government increases its share in the 35 billion dollar health corporation from one-fourth to one-third of the total. Among the effects of this remarkable law, which is a tribute to the legislative genius of Wilbur Mills, the following are outstanding.

1) As a showcase operation, with nearly 20 million patient histories on one computer tape, Medicare will unveil much of the mystery left in medicine, especially as to financing detail.
2) Physician-Hospital relations will be notably modified by review boards and hospital-based specialist changes.
3) There will be clarification of the relations of physicians and institutional providers of health care to third parties using payment systems to influence quality of care.
4) There will be expansion and strengthening of the health care system partnership with government.
5) Clinical teaching with private patients as the subjects for student study will rapidly supplant the heavy dependence on charity ward patients for this purpose.
6) There will be a review of values (aside from money alone), based on

professional satisfactions of achievement under motivations of high purpose.

7) Voluntary health insurance for the rest of the people will have added stimulation to expand and improve.

From all of this, it is evident that our people are willing and able to pay more for more health care; but, with 6 per cent of gross national product already going for what this panel is showing to be a narrow range of benefits, there are definitely foreseeable limits. Therefore, we must establish a carefully designed system of priorities. Those based on relative necessity will be financed by government and by voluntary health insurance. Those related to want rather than need will continue to be paid for directly.

The role of government is apt to expand as a catalyst supporting research leading to innovation. Government aid to education, hopefully, may set the stage, (1) for improving the tragic relation of population to food supply; (2) for expanding preventive health measures enormously to better balance in the search for optimum health; and (3) for broadening the concept of rehabilitation especially to include a happier role in our society for the aged.

The voluntary role must be to concentrate on efficient uses of limited manpower and to expand both organized professional guidance and the accommodation to onrushing changes, both technological and economic. The survival of fee for service forms of payment will depend largely upon the ability and willingness of physicians, and increasingly of dentists, to devise satisfactory controls of utilization while ensuring high quality of care.

Man will continue to brood upon his ancient miseries, but with a new imagination made sharper by both the wonders and the terrors of the atomic age. The role of professional leadership, made more difficult by emerging complexities and awakened responsibility, nevertheless is one of greater promise.

Dentistry's Responsibility in The Attainment of Optimum Health

ROY T. DUROCHER, D.D.S.

In reconsidering my concurrence with the title, "Dentistry's Responsibility in the Attainment of Optimum Health," I thought about requesting that the planning committee entertain a suggestion that the word "health" be changed to "well-being," particularly in view of the subtitle of this meeting, "Planning the Good Life." However, it occurred to me that I should review the definition of "health" as suggested by the World Health Organization. According to WHO, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." It seems, therefore, that this definition does permit us today to consider not simply what dentistry can contribute to physical health, which Thomas More's Utopians regarded as a "sovereign" pleasure, but also what responsibility the profession has toward the general well-being of society. This I propose to do, through a discussion of what the individual dentist can do for the individual patient. My tack in emphasizing the role of the individual dentist stems from an observation that there has been much attention drawn in recent years to the responsibilities of the profession as a group. My conviction that the individual dentist's contribution to optimum health be examined in the context of general well-being is further confirmed by the highly commendable and foresighted decision of the planning committee to include in today's panel a discussion of the future "good life" in the light of social anthropology—a belated but refreshing approach.

Dr. Durocher is Assistant Dean and Professor of Oral Diagnosis at the University of Pittsburgh. Also he has taught at the University of Pennsylvania and the University of Kentucky. He has been active in the Pan American Health Organization of WHO, and has served on several occasions as consultant in dental education.

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 6, 1965.

With the St. Louis Workshop on the Image of Dentistry as a precursor, it appears to me that the American College of Dentists has offered us today a timely opportunity for personal introspection. Timely, because we are in an era not simply of change, which has always been the essence of history, but of dramatic change in breadth and in depth. Change has become a propulsion over the four corners of the earth, and no one will escape it. Change has even invaded that aspect of motivation which permeates and energizes human thought and activity—our value system. Should nothing else come of today's discussion, it is hoped that each of us on behalf of the welfare of our patients, will strive with renewed determination to evaluate our role as dentists in relation to the changes occurring about us, among us, and within us.

In the past many months, a number of people have remarked that dentistry is on the threshold of a golden era. In my opinion, whether dentistry will step beyond the threshold will depend on whether the leaders of the profession—the leaders who are here today—will make the courageous effort of introspection. Alfred J. Marrow, industrial executive turned social psychologist, has observed that "without . . . a self-examination, the man with 25 years' experience is really only a person with one year's experience repeated twenty-five times" (1). It seems to me that such an examination must be one of humility, and it must be analytical to the point of self-criticism. The question is, what can we do for optimum well-being?

The Fulfillment of Man

One might partly respond with an answer to another question, "What is the purpose of our existence as dentists?" Is it to preserve the dentition—or the stomatognathic system—only for the sake of saving an organ or a complexity of organs? I would like to propose that our mission is far more fundamental. The underlying essence of our responsibility in the attainment of optimum well-being is an apostolate in the fulfillment of man.

The fulfillment of man will become more attainable as a consequence of the many changes which are occurring. Twenty years ago, Pierre Teilhard de Chardin, scientist, philosopher, theologian, prophetically spoke of an "ultra-humanity" (2), a concept which is being wittingly echoed today by Max Lerner as the "emergence of man" (3). Contemporary trends as also observed by many other

social scientists were succinctly described by Gerard Piel, president and publisher of *The Scientific American,* at the 1964 Conference of the Association for Higher Education: "No rate of expansion in the output (Gross National Product) of our economy can overtake the rate at which human beings are being displaced from the *productive* process. There are signs that people can be and are being displaced even faster from such *non-productive* . . . functions as clerking and selling. Work that can be done by machines is either too dull, repetitive, demanding, dangerous, or degrading for human beings; it is better done by machines. The liberation of people from such servitude should set them free for the exercise of their more recognizably human capacities."

The fruition of these capacities constitutes the fullness of man, and to this end we must make it possible for the individual to fulfill his potentialities. First of all, the patient must be treated as a *person*—that is, a human being who possesses individuality which distinguishes him from every other human being and which characterizes him by a unique physical appearance, by a unique intellect and will, by a set of complex emotions—all of which blend into a oneness which has hopes and aspirations of occupational, moral, religious, political, cultural, and social overtones. Secondly, our concern with our patient's well-being must not be simply limited to the *immediate* consequences of our service. For example, our interest should be in more than the relief of pain by the skillful removal of a tooth for the sake of that accomplishment itself. Rather we should contemplate the spectrum of potential consequences of saving or not saving the tooth. We must be concerned with the bearing our decision and the manner in which we perform our service will have upon those thoughts, emotions, and activities of the patient which are characteristic of his potentialities as a man. He has the potential to learn, whether the alphabet as a child or appreciation of the arts as a retired elder; he has the potential to teach, whether nulcear physics as an educator or motor tuning as a co-worker mechanic; he has the potential to serve, whether the church as a deacon or the country as President. Provided with the comfort of health, the attractiveness of a pleasant personality, the skills of verbal and nonverbal communication, of what is he capable in the crafts, the arts, and letters? What is more characteristically human than speech and facial expression? Who can deny the signficance of these character-

istics in the unfolding and the flowering of the affairs of the heart, and intellect, and the will? Here the pertinence of the dentist's involvement in the fulfillment of man—or optimum well-being, if you will—becomes more specific and more obvious.

The characteristics, the potentialities, the activities, we have described are creating a shift from interaction between man and things to much greater interaction between people. And who shall assist people in preparing themselves to interact more and better with other people if it is not the professional person? What an awesome responsibility indeed!

Types of Services

In thus far answering the question, "What can the dentists contribute to optimum well-being?," one might say we have proposed a substrate for the dentist by which services rendered the patient may be more fully contributory to the achievement of optimum well-being. What of the services themselves? In speaking to dentists, one hesitates to offer a list from the past for fear of omitting some detail and for fear of boring the audience. The relationship of oral health to general physical health is a hackneyed point. It may be better to highlight the shifts in emphases of the present as indicative of trends for the immediate future, and then perhaps to chance a word about the distant future.

Surely at the top of anyone's suggested list of services would be prevention. Historically, prevention has generally meant toothbrushing instructions, scaling and polishing, and extension for prevention in cavity preparation. More recently, the concept has included the use of fluorides, mouthguards, and interceptive orthodontics. Prevention is now becoming a matter of attitude and action on the part of the dentist as he approaches the solution of any and every therapeutic problem. Concomitantly, our researchers are concentrating on the preventive aspects of virtually all oral diseases. In the near future, preventive measures will probably be utilized through the medium of "well-patient programs," and there will be much time devoted in the private office to patient education. For example, one's auxiliary will not only give instructions on toothbrushing, but the patient will be requested to rehearse, to return to the office to be checked on the progress of his oral hygiene habits, to be shown his errors, and to be reinstructed; and then to repeat these visits until he

has mastered the techniques designed for his particular problem. Prevention will further be accomplished through the control of habits, the use of various indices comparable to the caries susceptibility tests and cytology smears, and instructions on proper diet and nutrition.

The dentist continues to assist the physician in the identification of systemic disease. However, his role as a case finder and as an advisor is becoming more and more significant as dental schools and sponsors of continuing education bolster their programs in diagnosis. Furthermore, discerning physicians increasingly appreciate the potential value of the dentists as diagnostic consultants. Nevertheless, in the selection of treatment for which he is responsible, there has been too much trial-and-error. True, in the past our knowledge has been limited, but much has been learned in recent years. The practicing dentist, not only the researcher, must develop an attitude of inquiry in order to answer the "whys" and "wherefores" of the everyday problems that face him. Optimum oral health achieved by any other fashion is fortuitous and likely transitory.

As the approach to diagnosis and treatment planning continues to broaden, so shall the outlook upon restorative dentistry. For years we perpetuated the notion that the loss of oral tissues and the deterioration of facial features were inevitable. Furthermore, we have taught and practiced restorative dentistry on the premise that dentistry's primary role is to prolong the inevitable. Thus we practiced on a patchwork basis rather than from the vantage point of comprehensive and integrated care. Through inquisitiveness and the development of more encompassing techniques, such as cephalometry, laminography, and cinefluoroscopy, improvement in diagnostic acumen will lead to a more accurate selection of, and therefore to more serviceable, restorative measures. Accepting our role in the fulfillment of man, we will make each decision in the light of the consequences for that particular personality in his exploration of his full potential.

By this conviction we will be influenced to bring active orthodontic treatment to the country dweller as well as to the urbanite; to provide regular care for special groups such as the aged, the handicapped, and chronically ill in institutions, private homes, and in private offices; to consult freely with the psychiatrist and the social worker; to solicit unabashedly the advice of our fellow general

practitioners as well as specialists. We, individually, will be motivated to cooperate with physicians in facing special medical problems, for instance, civil disasters; to contribute to social action for meeting health needs, for instance, prepayment plans; perhaps on occasion even to share our professional competence at the international level, for instance, serving on S.S. Hope or projects of organized dentistry.

In predicting the future responsibility of the dentist in the attainment of optimum health one struggles to schedule a timetable. But it is impossible to fill in little blocks of time periods, each neatly containing a new step in the development of a profession's services. We have talked about likely events in the immediate future on the basis of recent trends. In the not-too-distant future, prevention will be achieved in a far broader respect by practitioners at large through control of the growth and development of the cephalo-oro-facial structures. More dentists will play a greater role in the correction of developmental abnormalities which in the past have served as a serious obstacle to the fulfillment of too many personalities. The elderly of our times are seeking to grow old more gracefully than ever, and they spurn the notion that certain structures and functions must continue to deteriorate with aging. It will be the dentist's responsibility to preserve the elderly's proud features by maintaining the maxillary-mandibular relationship. The youth of the world are taking for granted that they will travel the orbits of space. It may be years, if ever, before the environment of earth can be simulated in space. In the meanwhile, unquestionably many factors in space will modify the problems in and about the oral cavity for space travellers of the not-too-distant future.

Is it too soon to consider the distant future? When one realizes that the Wright brothers were airborne only 60 years ago, when one compares the standard of living of 1945 and the affluence of 1965, one is amazed at the swiftness of twentieth century change. When one reviews the duties of the pre-World War II nurse with those of her 1965 colleague, when one compares the formal education of the oldest of us here with the youngest, one is impressed by the subtleness of twentieth century mood. With the increased needs and demands of society as man continues to emerge in the fulfillment of his potentialities, with an apparent reshaping of the professional responsibilities of the physician and other health agents including

auxiliary personnel, there is the need to begin to speculate soon over the dentist's scope of patient management in the year 2000, irrespective of the rather rigid lines of demarcation imposed at the moment. The time is appropriate for the profession to formulate concepts and to devise an educational program which will provide the dentist with a basis whereby he can readily adapt to any reorganization of services which may arise among the health professions in the future. The extent of orofacial abnormalities and diseases and a large population of oral health personnel will undoubtedly preserve the premise for an autonomous professional organization. However, it may well be that in the late twentieth century there will have evolved a person who, in terms of traditional concepts and semantics, is neither physician nor dentist.

Excellence of Service

Providing a broad and comprehensive oral health service is indeed well and good. But does it fully satisfy our responsibility in the attainment of optimum health for the individual? Responsibility in any endeavor is of a dual nature: quantitative and qualitative. As one searches his memory and the literature, one begins to realize that most of the attention directed to dental service in the past and present and predicted for the future has been in terms of mathematics. It would seem that a searching introspection should consider the qualitative aspect of one's responsibility. If the dentist accepts the thesis that he assumes a significant role in such an intimate and vital endeavor as the fulfillment of man, he must engage in that corollary endeavor, the pursuit of excellence. A goal cannot be achieved in the superlative without superlative effort. Excellence of service is a condition of optimum well-being.

When one considers that the first dental school in the world was chartered only in 1840, it is not difficult to appreciate the strides that dentistry has made as a profession. Membership of the dentist on municipal and national health councils, hospital staffs, cleft palate teams, cancer committees, and community health programs such as Project Head Start give testimony to the value of his professional services. We are well aware of the accomplishments of the American dentist in his office. Certainly we are not gathered here to pay ourselves tribute. Where we are deserving of praise we will hear it sung for us by others. Let us not be counted among the majority of Americans described by a university expert in communication arts

as "so chary . . . of proclaiming their convictions" that they chose . . . to communicate only that little stock of what is commonly held and felt, the surface patter and chatter of life, not its shaping ideas and forces" (4). We must not compare our contributions to optimum health with that of others in the profession or in other professions. Rather we must evaluate our contribution in relation to what we are capable of accomplishing. What will count in the eyes of the public, our fellow dentists, and our Maker is whether we are doing what we are supposed to be doing and doing it to the *best* of our ability.

This year's publication (5) of the dental findings of the 1960-62 National Health Survey by the United States Public Health Service should give us cause to raise the question as to whether we have in fact been doing our best. As a result of this survey, it was estimated that more than 20 million of the total U. S. civilian, non-institutional population of 111 million adults (age 18 to 79) had lost all 32 teeth; that nearly 10 million more had lost all 16 teeth in either the maxilla or the mandible; that nearly 15 per cent of the population from age 18 to 24 were edentulous; that by age 65, nearly 40 per cent of the males and nearly 45 per cent of the females had lost all their teeth; that three out of four persons with natural teeth showed evidence of gingivitis or destructive periodontal disease! Notwithstanding the fact that many people do not want or cannot obtain the services of a dentist, it would be interesting to speculate to what degree these statistics may be the consequence of quality of service. For several years prior to the survey period, we knew how to extend the cavity outline for prevention; we knew how to execute the principles of retention; we knew that teeth could almost invariably be successfully treated endodontically; we knew that subgingival calculus and overhanging margins lead to the loss of the supporting structures; we knew that the loss of supporting structures means the loss of teeth.

John W. Gardner has made a host of penetrating observations on excellence. Among them are the following: "Our society cannot achieve greatness unless individuals at many levels of ability accept the need for high standards of performance and strive to achieve those standards within the limits possible for them." . . . "But many more can achieve [excellence] than now do. Many, many more can *try* to achieve than now do. *And the society is bettered not only by those who achieve it but by those who are trying.*" And particularly

pertinent for this assemblage is the reminder that ". . . the varied leadership of our society must come to recognize that one of the great functions of leaders is to help a society [profession] to achieve the best that is in it" (6).

Gardner also observed that, "Very few have excellence thrust upon them. They achieve it. They do not achieve it unwittingly, by 'doin' what comes naturally'; and they don't stumble into it in the course of amusing themselves. All excellence involves discipline and tenacity of purpose" (6). Excellence *must* be a hallmark of the doctor of dentistry. We are all fully aware that there are factors which are inimical to the pursuit of excellence, but a truly professional person must ever be on the alert to suppress them. It is my firm belief that the professional man can find the courage to strive for excellence. Looking upon his patient as a person, another *ego;* discovering the complex factors underlying the patient's problems; serving with compassion, the doctor is inspired to excellence.

In meeting his responsibility in the attainment of optimum well-being, the dentist must look to his role in the emergence of man, which is to contribute to the development of those distinguishing features in his patient which are characteristically human. As he strives more than ever to prevent disease, as he fathoms its identity, and as he restores its ravaged object with standards of excellence, the dentist must relate his services to his patient's capacity to achieve the "good life" in full measure.

References

1. Marrow, Alfred J. *Behind the Executive Mask.* New York: American Management Association, 1964. p. 73.

2. Teilhard de Chardin, Pierre. *The Future of Man* (a collection of essays). New York and Evanston: Harper and Row, 1964. pp. 319.

3. Lerner, Max. Six Revolutions in America. Lecture, University of Pittsburgh, June, 1965.

4. Stritch, Thomas J. Communications Criticism and Artistic Change, in *Values in America.* D. N. Barrett, Ed. South Bend: University of Notre Dame Press, 1961. p. 172.

5. Johnson, Elizabeth S., Kelly, James E. and VanKirk, Lawrence E. *Selected Dental Findings in Adults by Age, Race and Sex.* Washington: U. S. Government Printing Office, 1965. pp. 35.

6. Gardner, John W. *Excellence.* New York and Evanston: Harper and Row, 1961. pp. 171.

Summary of the Panel Discussion

"Optimum Health for the Individual in the Social Order: Planning the Good Life"

DALE WOLFLE, Ph.D.

My role is to summarize the preceding discussion. I shall try to do that and to point out some major implications of what the other speakers have said.

A logical place to start is with the title, "Optimum Health for the Individual in the Social Order: Planning the Good Life." This title presents a large order indeed, and the previous speakers have ranged over an extensive amount of health, intellectual, and social territory. The social order, as Dr. Krogman in particular, pointed out, has been changing dramatically and will continue to change. The good life has many facets, and would be defined differently by different persons. Optimum health, as Dr. Durocher defined it, means "complete physical, mental, and social well-being." To provide optimum well-being to all individuals in a rapidly changing social order may be more than we can realistically hope to accomplish. Yet the nation is aiming in that direction, and the goals for American society are high. In opening the White House Conference on Health three days ago, John Gardner, Secretary of Health, Education, and Welfare said:

> If the Great Society is to mean anything, it must mean something for the quality of our lives. And health, as all of us except the very young

---

Dr. Wolfle is Executive Officer of the American Association for the Advancement of Science. He is a member of the National Advisory Health Council, the Commission on Graduate Medical Education, Advisory Committee to the National Science Foundation, and he is chairman of the Commission on Human Resources and Advanced Education.

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 6, 1965.

> have had occasion to know, has a great deal to do with the quality of our lives. It is both an end and a means in the quest for quality. It is desirable for its own sake, of course, but it is also fundamental if people are to live creatively and constructively. Health frees the individual to live up to his potential.

It is to this high goal that we address ourselves.

In describing the changing social order, Dr. Krogman considered the growth of world population. In order of importance, this is surely the first or second most important problem that faces the world. That the rate of growth must decline until it reaches zero is absolutely inevitable.

If we are stupid, we will wait until death rates and birth rates are brought into balance by famine, disease, pestilence, and perhaps war.

If we are intelligent, we will adopt more humane methods of preventing over-population.

One way or the other, we must anticipate a strange, new stage in world history, one in which we have a stable population, or perhaps an alternation of small cyclic increases and decreases that will provide long-range stability. The wiser course, I believe, is to be optimistic and to expect and to work for early and world-wide methods of checking the growth of population.

If this optimism is justified, we will have a marked change in the age composition of the population. All of us have grown accustomed to seeing figures on the increased number of oldsters in our present population. In a stable population, however, the percentage of older members will be much larger, for the number of newborn will balance the number dying.

In such a population, we will have a quite different distribution of medical, dental, and health needs than we find in our present population.

In our social order, there are other changes of note. Mention has already been made of increased urbanization, higher levels of education, and other changes that have obvious implications for health practices and for what constitutes the good life.

For a time, as productivity increased and as mechanical power replaced muscle power, man chose to reduce his hours of toil. But in recent decades, as productivity has continued to increase, man has chosen higher pay and the greater goods and services that higher

pay could buy rather than shorter hours of labor. Forty hours a week, more or less, seems to be a comfortable and acceptable norm. The labor force generally seems to be more interested in buying more goods than in working fewer hours.

Among the goods that people want to buy, one is better health. There is a great social demand, manifested in a variety of ways, for better health care and protection. Dr. Stubbs has discussed the increase in private expenditures for medical services and the growth of health insurance. We are, however, still a long way from complete health coverage of all the population. Some aspects of health care are not covered by insurance schemes. Significant numbers of the population have no insurance to help pay medical and dental bills. Many persons receive only minimal health care. Dr. Durocher has described the dental status of the population. Another report that I saw recently estimated that there are approximately three quarters of a billion unfilled cavities in American teeth. Clearly there is much to be done.

There is much to be done, and we are starting to do it. Dr. Terry gave an accounting of the health legislation adopted by the remarkably busy session of Congress that just ended. Most attention has gone to the Medicare bill and the legislation establishing regional medical programs, the heart, cancer, and stroke bill. But legislation has also been adopted or amended covering drug controls; the extension of a number of existing health programs—for example, immunization; for the staffing of community mental health facilities; for the support of health research facilities; for student loans and construction of library, laboratory, and other educational buildings. There has been legislation on air pollution, water pollution, water resource planning, and rural water improvement and waste disposal.

This is a remarkable list for a single session of the Congress, and some of the congressional actions have been criticized severely. For there are conflicting points of view regarding the proper role of the federal government in health matters.

I am not going to take sides on this issue, for it seems to me that considering the matter as a question of the federal government versus medical organizations is too narrow a view.

Instead, I think we should consider the outpouring of health legislation in a different light. The federal government is the agent

of society. Sometimes it lags and sometimes it leads social aspirations, but in general it reflects and tries to implement social needs and demands. Senator Maurine Neuberger of Oregon said at the White House Conference on Health a few days ago that she did not think that Congress deserved much credit for the new medical legislation, that Congress was simply responding to a great social demand. I do not mean that Congress and the Executive Branch have not shown leadership. They have, but it has been leadership in a cause that has wide and deep roots.

There is other evidence of a national demand for better health services. A variety of commissions and committees and special panels —under government auspices, under foundation support, or appointed by such organizations as the American Medical Association —are actively concerned with various facets of the complex set of problems involved in meeting this social demand. This panel discussion is one example.

The basic problem of the health professions, as touched upon in one way or another by several of the previous speakers, is to bring practice and performance up to the level of what we know to be possible. The advances in knowledge and the improvements in skill that have resulted from intensive effort over the whole biomedical domain have been widely publicized. Yet much of actual practice lags behind the highest level of which we are capable. Society is asking that that gap be narrowed. Society is saying that excellent health services, readily and widely available, are no longer a luxury but a right; and society—through the agency of the federal government—is proposing means as well as ends. It is in this light that the congressional record should be viewed. And it should be added that this is not a national phenomenon. The demand is world-wide.

All of this poses a real challenge for the health professions and the organizations that represent them. Edward Kuhn, president of the American Bar Association, was speaking to his legal colleagues earlier this year, but he might just as well have been speaking to dentists or to members of some other health profession when he said, "If you don't serve the public as it needs to be served, the public will force some kind of change in the profession."

My own addition to Mr. Kuhn's comment—or call it a threat, if you wish—is that it will be better for a profession, and in the long range better for society, if most of the necessary change is initiated

within the profession than if the profession waits to be forced by social pressure.

There are four changes—or perhaps I should call them continuations of trends, for none is wholly new—that seem to me to be clearly foreseeable as the health professions try to meet the challenge of our panel topic.

One is a continuing, heavy emphasis on *research,* for research provides the greater knowledge and understanding that lead toward improved practice. Dr. Terry has given us some hopeful accounts of the improvements that he expects as relatively near-term outcomes of our biomedical research programs. Speaking specifically of research in dentistry, Congressman Fogarty, at the International Association for Dental Research meeting in Toronto last June, pledged his support for a greater amount of dental research. Congressman Fogarty's support on health matters is almost as good as a signed bill.

Second, there will be a greater emphasis on *prevention.* This is an accepted and congenial concept in dental practice. But we must extend it and give it greater emphasis. As we continue to master the acute infections, and as we learn better to treat and repair traumatic conditions, we have left as major afflictions the chronic conditions and those of multiple causation. In a society with a larger percentage of elderly members, and in a society that places an increasingly high premium on good health at all ages, such conditions call for increased attention to early diagnosis and early, preventive treatment.

In one way or another, greater emphasis on prevention has been stressed by every one of the previous speakers. Dr. Durocher took it up quite explicitly. The changing age composition of the population, as described by Dr. Krogman, requires greater attention to keeping our bodies healthy and vigorous. Some of the actions that Dr. Terry has described are pointed in this direction, and the more widespread adoption and use of the kind of insurance programs that were considered by Dr. Stubbs will make it easier for the population at large to seek preventive care instead of waiting until acute difficulties arise.

The third change will be the most difficult of all. It cannot be accomplished without wisdom, statesmanship, and some adjustment of traditional customs and values. It is a greatly increased emphasis on *comprehensive health care.* The insistent demand for more con-

tinuing and comprehensive health services carries profound implications for the way in which members of the health professions organize their practices. Dr. Durocher did not use the term, but much of his discussion pointed clearly in the direction of a greater dependence upon group practice and closer integration of the several professions that constitute the health team. Knowledge has grown at such a pace that no man can comprehend the whole. Specialization has become necessary, and specialization of skill and knowledge benefit the patient. But the patient does not arrive separated into neat little fragments, each labeled as the province of a particular specialist. The specialists in the several health professions can best contribute their expert knowledge and can best cooperate in providing continuing, comprehensive health service if they work as a group, in a hospital, or in some other closely integrated form of practice. The solo practitioner who does all things for all patients is becoming obsolete.

Fourth and lastly, these several important trends require some major alterations in *professional education.* The exact nature of these changes must be a responsibility of the professions. Society can set the goals, and society can make its demands, but the professions themselves must decide how they can best provide their neophytes with the knowledge and skills that will bring practice up to its ever-rising potential, and that will best inculcate the attitudes and encourage the forms of practice that will best help dentistry and the other health professions to provide optimum health for the individual in the social order, and thus make their full contribution to the achievement of a good life for us all.

In any discussion related to health care for the American people it would be pointless to exclude the activities of the federal government. The 89th Congress passed more significant health legislation than any other Congress in history. Hal Christensen is in a unique position to report on this legislation. He is Director of the Washington Office of the American Dental Association, and has been Secretary of the ADA Council on Legislation. Prior to joining the ADA staff, Mr. Christensen was associate counsel to the subcommittee on legal and monetary affairs of the Committee on Government Operations, U. S. House of Representatives.

What is Happening In Washington?

HAL M. CHRISTENSEN, LL.B.

WHEN Dr. Brandhorst asked me to speak at this meeting, he told me that the overall theme of the program would be "Health Care for the American People" and in that context he wanted me to talk about 'What Is Happening in Washington."

I have considerable doubt about Dr. Brandhorst's judgment in the selection of a speaker, but I have no doubt at all about his judgment in the selection of topics. I am sure it is quite obvious to everyone in this room that it would be pointless, perhaps even ludicrous, in these days and times to exclude the activities of the federal government from any discussion related to health care for the people of this country.

While our federal government for a very long time—almost since the beginning of the Republic—has been involved to some degree in the provision of health services for some of our people, the year 1965

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 7, 1965.

marks a historic turning point in the governmental role in health affairs.

The first session of the 89th Congress that just adjourned passed more significant health legislation than any other Congress in history. In the years to come, all of you and all of your colleagues will feel the effects of this legislation both as professional men and as citizens.

Whether the long-term results will be good or bad for the country is a matter of conjecture.

The Administration has no hesitation in predicting that the programs will be marvelous and the benefits monumental.

Partisans on the other side do not hesitate to predict that the benefits will be overshadowed by bureaucratic confusion and boondoggling.

As with every new undertaking, the truth probably lies somewhere between these extremes.

In any case, the ultimate verdict will be determined by experience. Certainly, all professional men hope and will work to assure that the outcome will be to the benefit of the health of the public.

But let us take a careful look at what Congress did and then perhaps we will be in a better position to make our own judgments regarding the future.

When Congress closed up shop on October 22, 1965, it had passed the following major health bills:

—A compulsory hospital insurance program for the aged under the Social Security Administration together with a voluntary, federally subsidized, medical insurance program, and an expanded and liberalized Kerr-Mills program.

—Regional complexes for research and treatment in the fields of heart disease, cancer, and stroke.

—Extension and expansion of the program to provide financial assistance to dental and medical schools and students.

—Extension and expansion of the program for construction of health research facilities.

—Increased regular grant funds for Children's Bureau programs.

—A new training program for physicians, dentists, and others to provide care to mentally retarded and other handicapped children.

—A new five-year grant program under which the government will

finance up to 75 per cent of the costs of projects to provide comprehensive health care, including dental services, for needy school and preschool children.

—A new administration on aging and a grant program for projects to assist older Americans.

—The Appalachia program authorizing construction of health and medical facilities in economically deprived areas.

—Extension and expansion of the existing community health program.

—A program to finance initial staffing of community mental health centers.

—A program to provide assistance for medical library services and facilities.

—New air and water pollution programs.

—New controls on certain psychotoxic drugs.

Additionally, and outside the traditional health agencies of government, significant health programs were launched as a part of the so-called "War on Poverty." Operation Head Start, the Vista Program, the Job Corps all had and have important health aspects, and will have more as they are continued.

It is difficult to put a price tag on all these programs but, exclusive of medicare and the poverty programs, the newly enacted programs involving established Public Health Service agencies probably will cost upwards of 2½ billion dollars over the next five years—more than double the present annual budget of the Public Health Service.

The medicare program, of course, is a multi-billion dollar program even though it is confined to 20 million people comprising only about a tenth of our population. Likewise, the health aspects of the poverty program may later evolve into the multi-billion dollar category if they are continued and expanded.

But the importance of the new federal programs to those in the health professions is not primarily their cost in dollars; it is the effect they will have on the system of providing health services in this country.

In this connection, it should be emphasized that many of the new programs are desirable and needed and will complement rather than disturb the private health care system. At the same time, it is necessary to recognize that, as a result of some of the programs,

things will not be as they were and adjustments to change will be necessary.

Let us talk for a moment about King-Anderson, the "medicare" law.

Heretofore, the beneficiaries of government health services or the financing thereof have been people to whom the government bears a special responsibility or relationship such as seamen, military personnel, government employees and, of course, the needy. This year, we have altered significantly the role of the federal government by embarking upon a program of financing health services for a segment of the population who are not in need and who have no special relationship to the federal government. Eligibility for benefits is to be determined solely on the basis of age.

Thus, while the number of non-needy aged in relation to the total population may be small, and while it may be argued that the number of needy aged is relatively large—the fact remains that we *have* taken a new philosophical approach and in doing so we have crossed the threshold of a new era. The decision has been made to discard the criteria of need in determining eligibility for government assistance in meeting health care expenses of people over 65, and in consquence an important area of responsibility and judgment has passed from the private sector to the government.

With respect to the aged, this decision, in my opinion, is irrevocable, but for the vast numbers of people below 65, the future course is *still* to be determined and *can* be affected by private action.

During the long years of controversy preceding the enactment of medicare, the American Dental Association along with other professional organizations resisted consistently and I believe constructively this change in our health care system. We pointed out the preferable alternatives, and the dangerous potentialities of the King-Anderson proposal. We fought the good fight and though we lost, our efforts were not wholly in vain. The law that finally emerged is significantly different from and improved over its predecessors largely as a direct result of the criticisms and suggestions of those who opposed it.

As you know, the compulsory section of medicare is limited largely to institutional care in hospitals and nursing homes. The so-called voluntary portion covering medical services is patterned closely after existing private health insurance policies; private commercial and

non-profit health insurance agencies will have a significant role in its administration. At the request of the American Dental Association, the bill was amended to include a "dentist" within the definition of "physician" insofar as covered oral surgical services are concerned. In offering this amendment, the Association did not seek an expansion of benefits, but did seek and achieve equality between physicians and dentists. Certain other minor amendments were offered and accepted for the same reason.

The Association also offered an amendment to make dental services mandatory for children under the Kerr-Mills portion of the Social Security Act. The amendment was accepted by the Senate but was lost in Conference. I mention these items only to indicate that while it was not possible politically to defeat medicare, it was possible to modify it in some respects. The Association and other private groups now are working with social security officials hopefully to devise regulations that will reduce as far as possible the red tape and other burdens that inevitably will be associated with it.

We don't yet know how medicare will work. Only after it is put to the test of use will we know its faults and its virtues. Perhaps it will be several years before a concrete judgment can be made. We must face the possibility, however, that before all the facts are in, there will be efforts to expand medicare both in scope and in coverage. In fact, bills to do just that already have been introduced.

There is, however, evidence to support the opinion that medicare will not be expanded substantially in the very near future.

First, there is the element of cost. Under the existing schedule of increases, taxes will soar above 10 per cent of payroll, a fact that has given and will continue to give pause to all politicians.

Second, there is the fact that a larger percentage of the work force below age 65 and their families are covered by adequate private health insurance programs.

These benefits flow directly from employer and union to employees and there is no indication that labor and management are anxious now to turn over to the government responsibility and control of these fringe benefits.

So, for these and other reasons, it is my opinion there will be a respite in the pressure for an expanded medicare program—a respite which professional organizations can use to good advantage.

If the dental profession, for example, remains committed to its

long-standing position that health services can better be made available and distributed through the private system, then it should start now to look at whatever deficiencies exist in that system and begin to devise programs to remedy them.

With the benefit of hindsight, it is clear that the private sector did not start early enough to deal with the problems of aging. While the health sciences were achieving remarkable success in raising the normal life span to the biblical three score and ten, not enough was being done to meet the social and economic problems that their scientific success was creating. Private health insurance programs were not adequate in scope and coverage, nor were public assistance programs. Many now admit that Kerr-Mills and the efforts of private insurance both were too little and too late to meet the problems of the aged and thus we have medicare.

Now, somewhere in all this there ought to be a lesson to us.

The clear and unmistakable signs are all around us that the people more and more will demand all health services including dental services not as a privilege but as a right. If they don't receive such services through the voluntary system, they will seek a political solution. It therefore behooves the professions now to sieze the initiative rather than lose it by default.

In connection with dental services, it appears that care for children is the most likely area for concern. It is here that signs of pressures already are beginning to mount. Two of the bills to amend medicare are aimed at extending coverage to certain children. With this and other signs on the horizon, consideration ought to be given now to acceptable programs of government support for dental care for poor children with administration at state and local levels. Concurrently, expansion of private prepayment programs for children of self-sufficient families and other means of extending the availability of care ought to be encouraged. All other reasonable action that can be taken in the private sector ought to receive immediate attention by the profession so that "too little and too late" will not be the answer to a national "denticare" program of the future. And while we are about this, we should continue as we have in the past, strongly to support advancements in dental research, dental education, and traditional public health programs. All these things and more are necessary to be done in order to maintain our existing, excellent health care system, to maintain it for the benefit of the profession.

but more importantly, to maintain it for the benefit of the public.

Now, let me turn briefly to another facet of "What Is Happening in Washington" that should be of some concern to the organized health professions.

We have seen in this year a marked acceleration in the gradual trend toward chipping away at the existing responsibilities of the Public Health Service and toward launching new health programs under the jurisdiction of non-health oriented agencies. Examples of this are the poverty programs, the new water and air pollution control programs and, of course, the programs under the Social Security Administration such as medicare, and the child health and Kerr-Mills programs under the Welfare Administration.

Many people, including myself, believe it is unfortunate to see the role of professional Public Health Service personnel eroded and their guidance avoided and in some cases ignored. But this is what has happened and will continue to happen unless new life is infused into the traditional health arm of the government and its mission reoriented to the changes that are taking place in government and in society in general.

HEW Secretary Gardner recently ordered the Surgeon General to undertake a thorough reappraisal of the Public Health Service and the relationship of its activities to other government health programs. Secretary Gardner said the Public Health Service "stands at a critical point in its history. It will either take a leap forward, or it will become mired in its own internal conflicts and history will pass it by."

I believe all of us can join in the hope that the leap forward will be taken. Certainly, I think we can agree that professional guidance and control of government health programs is preferable to administration by laymen. Perhaps the time has come when the health professions should renew their support for a separate Department of Health with real, rather than illusory jurisdiction over the far flung health activities of the federal government.

Parenthetically, I might say that what is apparent at the federal level also is apparent at the state level. State health departments increasingly are losing out to welfare and other agencies. State and local dental and medical associations would do well to increase their efforts to restore and maintain professional direction and control over the administration of government health programs.

While I am on the subject of administrative agencies, I believe it is of great importance to stress the fact that the passage of legislation is by no means the end of the ballgame so far as the interests of private organizations are concerned.

In this Congress, because of the heavy majority of members favorable to the health programs of the Administration, there has been little or no practical opportunity to influence the passage or rejection of legislation. However, as I have stated, we have succeeded in several instances in amending bills to make them more acceptable from our viewpoint. In several cases, additions have been made to give private individuals some say in the manner in which the programs will be administered. In other cases, safeguards have been inserted to limit bureaucratic discretion. Many of the programs leave general design and control to state and local agencies. In other programs, advisory committees made up of private individuals have significant powers. These provisions, however, are of no avail unless they are used.

It is incumbent upon us as citizens and as professional men to participate to the greatest extent legally permissible in the administration of the programs that affect us, to influence the direction they will take, to make them work as well as possible, and to disclose to the public their strong points and their weaknesses. It is a field we cannot abandon if we wish to make an acceptable adjustment to the changes that the new laws are creating.

Now, to get back generally to the subject of "What Is Happening in Washington," I think it should be said that what happens there really is but a reflection of what has happened elsewhere in the country. The great amount of emphasis on health in the program of the "Great Society" is not there by happenstance. It is there because the people everywhere in this land are becoming more and more health conscious. They are becoming better educated. They are becoming more prosperous. The President and the majority of our elected representatives in Congress apparently are convinced that the people are willing to spend ever-increasing amounts of public and private funds in order to attain better health.

It is my opinion that this situation is not likely to change in the near future and we will be contending with more new ideas and many more new legislative proposals in the years to come.

This year we had introduced in Congress 940 bills having some relationship to health affairs. Many important ones were enacted.

Others will be proposed next year and are likely to be enacted.

There are indications that the Administration will sponsor legislation to increase the number of so-called paramedical personnel; that a bill will be sent to Congress to revamp the longstanding program of grants-in-aid to state public health agencies. There may be a revival of the bill to encourage the development of group medical and dental practices. There may be legislation to reorganize the Public Health Service.

All these and perhaps more are on the horizon. Some of them are desirable. Some of them are objectionable. All of them are important to the dental leaders here now and to your colleagues at home.

So I give to you my opinion for what it is worth that what we are seeing today in Washington is not a passing thing. Health affairs are in the public domain and will stay there for a long time to come. Elections will come and elections will go. There will be ups and downs, but over the long pull I do not foresee a waning of the public and political interest in health affairs.

And I do not wish to leave the impression that this forecast necessarily is bleak. Indeed, it is entirely possible that out of all this much good will comes and progress will be made.

Reasonable men today would not wish to turn back the clock on the discoveries that have led to the eradication of many contagious diseases, or the life-saving surgical technics that recently have been developed, or the miracle drugs, or fluoridation, or on the progress that has been made in the building of hospitals and the establishment of great research centers. Many of these projects have been achieved with government financial support, and they have benefited all. Unquestionably more good and necessary things will be done by government in the future. And, as in the past, I am sure we will support those activities that can better be done by government, and oppose and offer constructive alternatives to those that cannot.

But certainly we need not agree that everything in health should be done or can be done satisfactorily by government. Most of our remarkable progress in health has been made with the private sector in the dominant role. In fact, it is in the dominant role today and, unlike some, I am not pessimistic about the prospects for keeping it there.

Most of the expenditures for health in this country still are private expenditures. Most of our people still make private arrangements

for financing their health care. Most of them still want to select and do select their own doctors and I believe most of them appreciate the system—the system that has given them the highest standards of health in the world.

If this is true, then I believe it is fair to say that the people through their elected representatives are not yet ready to upturn the existing system and replace it with something else.

The private system has demonstrated its ability to produce excellence in the treatment and cure of disease. Its challenge now is to assure that the product of its excellence can be made available to all who want and need it. I am optimistic that this challenge is being met and will be met.

The proposals that are being studied, debated, and evaluated at this annual meeting of organized dentistry are evidence of the willingness of the profession to come to grips with the social and political problems that face us. They also are evidence of the profession's willingness to take the leadership role that is necessary.

In the final analysis, I think it should be said that what happens in Washington with respect to dentistry in the coming years will depend to great extent on what is done here and now—the decisions you and your colleagues make and the subsequent actions you take.

If these decisions and actions are reasonably responsive to the changing demands and needs of our people, we will continue to advance under a system acceptable to all.

In a 1949 policy statement, the House of Delegates of the American Dental Association went on record that "Dental care should be available to all regardless of income or geographic location." Dr. Ryan bases his discussion on that statement, and outlines three programs that would make possible the availability of such care. He says that "the profession is long on policy but short on action" and that dentists can no longer afford the role of "interested spectators in the social revolution." The hour is late, perhaps too late—the time is now for action. Dr. Ryan has been a diligent worker in dental organization for many years. He has served since 1960 on the ADA Council on Dental Health and is now Chairman. He knows "for whom the bell tolls" and he tells you in this paper.

Health Care Plan by the Dental Profession

KENNETH J. RYAN, D.D.S.

THE present Washington Administration's preoccupation with social welfare—particularly its emphasis on health care—makes it mandatory that, once again, the dental profession examine its policies and attitudes in regard to extending dental care to a larger segment of our population.

Mr. Christensen's résumé of what is happening in Washington (1) should alert every dentist to the inherent danger of maintaining the posture of "status quo." While Mr. Christensen gave us a picture of official actions in Washington, I believe we should compare it to that of an iceberg where only one third of the mass is visible above the water level. The hidden portion still below the surface—that is, what the social scientists, influential labor leaders and, particularly, am-

This paper was read at the Las Vegas Convocation of the American College of Dentists, November 7, 1965.

bitious politicians have in mind for the health professions—bears close scrutiny, especially by our dental leaders.

The situation is so grave that top priority should be given to the development by our profession of sound voluntary plans for bringing dental care to all segments of our population. Our profession should strive to develop its social and economic proficiency to the same level as that of our scientific knowledge.

The preparation of this paper consisted of a review of official actions of the American Dental Association from 1945 to 1964, and a review of the literature for the same period. A part of a 1949 policy statement of the House of Delegates that "Dental care should be available to all regardless of income or geographic location" (2) was selected as the premise on which I shall base our discussion today. Since 1949, the Association has made many additional statements that further define our role in providing dental care under a variety of circumstances, but the 1949 statement is the keystone. If the profession sincerely believes in this statement, it would seem that the time has come for implementation.

If I were an interested layman or a politician evaluating dentistry's position in regard to providing dental care to a greater segment of our population, my comment would be: "the profession is long on policy but short on action." However, having been an active participant in dental affairs over the years, I recognize many valid reasons why the profession has not taken more positive action in developing care programs. As a member of the ADA Council on Dental Health for five years, and chairman for the past year, I know, for example, that it not only takes time but money to implement at the state level the recommendations made at the national level. Nonetheless, had all state dental societies strengthened the dental division in their state health departments as long urged by the American Dental Association (3), not only would funds now be available for effective dental programs but the influence of dentistry would be reflected in more adequate dental care programs under the state welfare department.

The profession as a whole must bear the blame for our present position of unpreparedness in this rapidly changing social world. However, it is difficult to arouse interest at a time when the majority of dentists are busy and the whole economy is at its highest level in

history. Yet, this is the ideal time for the social planners to strike.

Most dentists have, to date, been interested but casual bystanders in the social revolution going on about us. We knew we should be interested, but we hoped the holocaust would somehow pass us by. Our Association has taken a vigorous stand against medicare, but I wonder how many dentists took the trouble to inform their legislators of their individual views.

The time has come for positive, aggressive action in developing dental care programs. We can no longer afford the role of interested spectators in the social revolution. Past experience in other countries should provide us with a guide for our future actions. In those countries where the profession took the lead in developing plans for providing widespread dental care, government was more amenable to accepting and using the profession's ideas. In those countries where the profession was poorly organized, or refused to accept its responsibility, government developed its own plans with little or no consideration for the professional point of view.

The dental profession must realize that government is all-powerful. Our professional life is dependent upon forces far removed, namely, the forces of government. Our political power is minimal except in purely professional areas. The experience of the past year by our medical colleagues should not be glossed over or taken lightly.

Well-informed sources have indicated that if the medical profession had been less dogmatic and had presented its "eldercare" concept three or four years ago, Congress would have been happy to accept many of its features, and, perhaps, a more professionally acceptable medicare package would have been legislated. As matters now stand, a hybrid medicare program is the law. It incorporates many of the features of "eldercare," but all the credit goes to the "Great Society" and its leaders. The medical profession's image has suffered, because it did not recognize the inevitability of social change. It hoped that professional judgment would outweigh political pressures and expediency. Professional people are long on scientific knowledge but woefully inept in political know-how.

Let us now turn to dentistry and explore our profession's position in relation to the health expectations of the "Great Society."

First, the present Administration—the President in particular—

has, time and time again, emphasized concern for the health of the people, with special emphasis on the elderly, the children, and the disadvantaged (the poor).

Second, the Office of Economic Opportunity, the agency for the so-called "Poverty Program," has shown a decided interest in health care, including dental care, notably in Project Head Start, VISTA, Job Corps, etc. The year-round program to continue Head Start, called "Operation Follow-Up," will include a sizable sum of money for dental care.

Third, the 1965 Amendments to the Social Security Act (P.L. 89-98) (4) increases funds for expanding health care under Kerr-Mills and grant-in-aid programs. It is my understanding that the various titles of these legislative programs open brand new vistas for professional health plans, particularly for health programs for children, the handicapped, and the indigent. Large scale dental care programs for children are no longer remote; they are a very distinct possibility.

Many other projects involving dental care are being discussed at health planning sessions.

A corollary to government's interest in the private sector is an increasing interest by labor in providing dental care for its members. The insurance industry is vigorously promoting the sale of dental care programs for groups. Blue Cross and Blue Shield are exploring approaches to the provision of dental care programs. Past and present American Dental Association leaders, the Regents of the American College of Dentists, and many other of our most respected members have attempted to focus the attention of the profession on the hazards involved in the development of government and private dental care plans without the help and guidance of the profession. Owing to the lack of a well-thought-out draft for a voluntary national dental care plan, the profession is being divided and fragmented by both government and private agencies developing care programs. These plans—some acceptable, some not—are being implemented at the community level.

While it is a basic policy to the American Dental Association that all programs should meet the standards set by the profession at the state level, a review of some of the newer government programs will reveal that, at times, dentists and dental societies are accepting substandard programs because of the fear of adverse public relations and

lack of knowledge and guidance from leaders within the dental community.

The profession's position in caring for low-income groups is open to criticism. A 1965 survey (5) showed that 903,190 children of low-income families received some dental care, and approximately $17 million was spent for public assistance dental care in 1964. The fact that we still provide dental care for less than 50 per cent of our population is an imperative reason for developing realistic voluntary programs.

In the area of chronic illness and aging, the picture is similar. The American Dental Association (6), the Public Health Service, and many constituent and component societies have attempted to focus the attention of the profession on this important segment of the population. The Twelfth National Dental Health Conference in April 1961 devoted a major portion of its program to this problem, but a concerted effort has not been made to resolve it.

The profession has also encouraged the development of prepayment programs for groups through the private insurance industry and by professionally sponsored dental service corporations. The growth of prepayment plans has been steady and, for the most part, healthy. Experts in the insurance industry and the "Blues" organizations expect a phenomenal growth in prepaid dental care programs during the next five years.

The development of dental service corporations has been hindered by a number of factors: (1) a philosophical difference within the profession, (2) failure of a large majority of the profession to realize the need for such a mechanism, and (3) the reluctance of dental societies to bear the financial burden in the early developmental stages.

The future role of dental service corporations in providing dental care will depend entirely on recognition by members of the profession that this is the one mechanism which can guide the development of dental care plans in both the public and government sectors. The activation of the National Association of Dental Service Plans by the House of Delegates at this 1965 session is essential not only to the future development of dental service corporations, but to coordination of activities of state corporations dealing not only with national contracts but with government programs. The role the "Blues" will play in administering various parts of the medicare programs point up this need (7).

The foregoing information emphasizes the necessity for a unified approach to the development of a voluntary program, or programs, for providing dental care for the people of the United States. While the basic concept of states' rights and community responsibility are part of our traditional professional policy, we must develop national programs and policies that are realistic as well as acceptable to our constituent societies and individual members. We must recognize that the power and the money are now concentrated in Washington and that if we are to speak from strength, the profession must speak with one united voice. This voice must be firm and clear and not distorted by those who place personal interest above the interest of the public and the majority of the profession.

The hour is late—perhaps too late—but I believe that we must now present to the public and to the government a program for providing dental care for all our citizens. It would be presumptuous on the part of your speaker to say that any components of such a program are his original ideas. They have been proposed and outlined by many individuals and groups, including the American College of Dentists. My purpose is to, once again, introduce these ideas with the hope that they will stimulate action and that, through the great prestige of the College, a sincere effort will be made to implement the policies that have long existed in the American Dental Association. In presenting these proposals, it must be understood that I am outlining a bare skeleton on which the profession, with the help of specialists and technicians, can build the flesh, muscle, nerve, and blood supply, and that the talents of many men will be required. I believe the following programs should be developed.

Before outlining these programs it should be emphasized that I am suggesting *voluntary programs* developed by the dental profession, before government takes the initiative and develops their own programs—as happened in medicare. The area where government would enter these programs is where they already have a legitimate interest, i.e. with the indigent and the aging. Also, where I have suggested an administrative set-up similar to medicare, it is important to understand that in the suggested medicare approach, the Social Security department has placed an administrative agency between government and the physician. Under this set-up an agency such as Blue Cross or an insurance carrier will be the agency that deals directly with the physician.

Program No. 1

A National Dental Care Program for Children

There can be little argument about the need for a national dental care program for children. I believe we are the only major nation not having such an organized program. There is a wealth of data, statistics, and plans available so that this type of program could be implemented without "further study," "pilot programs," etc. If properly structured, its ultimate success would not be endangered by the problem of dental manpower. The program would also lend itself to the use of existing facilities.

Objectives

1. To make dental care available to all children, regardless of family income or geographic location (8).
2. To establish a mechanism to insure high quality of care (9).
3. To stimulate emphasis on the use of preventive measures and health education programs through incentives (2).
4. To stimulate research on the prevention and treatment of dental diseases and application of knowledge (2).
5. To develop competent professional personnel in sufficient numbers in order to provide dental services for all children (10).

Financing

For children eligible for care under publicly supported programs, the financing would be in the traditional method of grants-in-aid. For those children not eligible for public aid, a system of group coverage should be developed. It is believed that, if properly presented and structured, many union welfare funds, now interested in dental care but unable to finance it because of its high cost, could be persuaded to spend available dental funds for children's care. For those groups who do not have the advantage of fringe benefits, organization on a community or school district level would seem to be the correct approach.

Administration

The ideal administrative mechanism would be a single agency at the national level to handle the funds for the government sector, rather than the six or more government agencies that now disburse

funds for dental care. However, whether the ideal can be obtained will depend on many factors.

At the state level, public funds should be administered through the state health department.

The agency that actually operates the program could be an administrative organization, such as a dental service corporation or an insurance carrier, under an administrative set-up similar to that proposed for medicare (7).

At all levels, there should be a dental advisory committee to represent the profession on matters of policy.

Progressive Dental Care

In order to obtain the maximum efficiency and gain experience in financing a dental care program for children, a limited approach is recommended initially. Dental care, at the outset, should be for children in the five-year old group and should be extended to additional age groups on a periodic basis as experience and financing warrant. Maintenance care would be provided for all children who have entered the program, and would be continued through age 17 when personal responsibility for dental health should be strongly established.

A more detailed outline of a children's care program is not feasible here because of time limitations. However, all other components, such as cost, preventive measures, research, can be added by the experts in those fields. The dental profession would be well advised to take *immediate* steps to inaugurate a dental care program for all children in the United States.

Program No. 2

A National Dental Program for the Chronically Ill and Aged

The need for a national dental program for the chronically ill and aged is obvious, as the only component not in medicare is dentistry. It would seem that the dental profession should design an appropriate program and offer it as the profession's solution. The basic research and statistics are available. Care for the homebound, for nursing home patients, and for the aging who are ambulatory, can be provided through the facility of private practice. While this program will not entail the manpower requirements of a children's program, it will need the wholehearted cooperation of the profession.

This program should be developed concurrently with the children's program, but with the help of the experts in this particular field.

In presenting this program, I have purposely avoided the outline of even a skeleton, as my knowledge and background in this area are negligible. However, from the reports available, I am sure that the development of such a program is not only feasible but practical.

Program No. 3

A Dental Care Program for all Citizens of the United States

In the development of a dental program for all citizens, Programs 1 and 2, previously described, are integral parts; however, their development in advance will accomplish two purposes. First, they will give the public, the government, and the profession a chance to evaluate the need for a complete voluntary system of dental care. Secondly, they will provide the experience and guidelines for the development of a complete national program. It would be hoped that, if Programs 1 and 2 were put into operation in the next three years, the profession would gain valuable time for the development of a complete program for all citizens.

The development of such a program would closely parallel the development of a children's program in that we would have a mixing of public and private funds. The government's concern for the poor will not be satisfied by taking care of the two extremes. To use the term of Dr. Donald W. Gullett, former secretary of the Canadian Dental Association, we must come next to the mediatrics (11)—the care of the middle-aged, which must now be interpreted as anyone between the ages of 17 and 65.

I would strongly urge that the dental profession make a continuous effort to develop voluntary plans that make dental care available to all our citizens regardless of age, geographic location, or income. The advantages of the profession's taking the lead in developing such a plan are obvious: a good offense is the best defense.

Necessary Collateral Components

While it is obvious that the profession will have its hands full in developing care programs, a number of activities should be initiated that are essential to the success of the overall program.

The present Department of Health, Education, and Welfare is so

burdened with complex programs of vast proportions that health affairs do not receive the attention which they deserve as one of the nation's major resources. Health activities have been fragmented among so many federal agencies that, at the present time, no one agency has the authority to administer a national health program or even to coordinate the existing programs to eliminate duplication.

With the increasing incursion of the federal government into all areas concerned with health, it seems not only logical but mandatory that all the health professions should be concerned in the establishment of a federal department of health with cabinet status. Since 1949 the American Dental Association has advocated the establishment of such a department, and the dental profession should assume the leadership in enlisting the support of the health professions for the creation of the department.

Fluoridation

The dental profession vigorously has promoted the fluoridation of public water supplies, but this measure has not had like support from government. While dental disease does not have the emotional appeal of the proposed programs for heart, stroke, and cancer, the great savings in health, manpower, and money that are effected through fluoridation should make it clear to all public officials that government, at all levels, should take a more active role in stimulating adoption of the measure. The action of the Connecticut legislature in requiring communities of 20,000 or more to fluoridate their water supplies is an outstanding example. In addition, the dental profession should use all of its available resources to bring about mandatory fluoridation of public water supplies.

Dental Divisions in State Health Departments

The profession has long encouraged the establishment of strong dental divisions in state health departments. However, except in a few states, the dental divisions have neither the manpower nor the funds to carry on an effective program.

The dental profession, and particularly constituent societies, should take the lead in strengthening all state dental divisions. The state association should have a closer liaison with the dental division, and should be vigorous in securing ample funds and top-flight career dentists to staff the division.

If national dental care programs are established, the state dental

division will be the most important liaison between the government and the practicing dentist, as represented by his constituent society.

Informational Program

One of the weaknesses in developing dental care programs is the consumer's almost complete lack of knowledge of the complexities of organization for an expanded dental program and the cost of rendering care.

The lack of knowledge by government leaders, management, and labor is amazing. In the past few years, it has been my privilege to participate in many discussions with representatives of various groups seeking information about purchasing dental care. Without exception, we first had to explain about the prevalence of dental disease and the distinct difference between dental programs and the programs for hospital and medical care.

Even other professions in the health field have no real concept of the practice of dentistry.

To fill the foregoing voids, the profession must develop a group of knowledgeable practicing dentists at all levels—from the national organization to the smallest component—who can present dentistry's case to all interested groups. Such communication is not a function of paid public information experts but, rather, a function of organized dentistry.

Misunderstanding about the importance and objectives of liaison with all groups was graphically demonstrated in the furor resulting over the meetings between ADA officials and representatives of the AFL-CIO that led to the issuance of a joint statement on dental prepayment programs. There is no questions about the right of the Association to meet with representatives of labor, but, even if such policy did not exist, how could the profession ignore a request from a group that had been directed by its official body to seek the advice of the ADA on dental problems?

There is no means of informing people about the problems of providing dental care that is as effective as meeting with groups seeking information. If no other section of this presentation is implemented, this informational section should be a must.

Auxiliary Personnel

For the past few years the profession has been in a heated philosophical discussion over the use and expansion of duties of auxiliari-

aries as one approach to the crucial manpower problem. While we must take a giant step forward in this area, we must encourage the development only of sound professional programs in both the use and the expansion of the duties of our auxiliaries.

Council on Dental Health

Traditionally, councils on dental health, or similar committees, have as their areas of interest problems connected with providing dental care, such as community health, fluoridation, public health, dental health education, prepayment, dental practice, etc. As a result of such diversification, it seems that, at all levels, we are not completely discharging our assigned duties.

A study should be made of the functions of a council on dental health at the national, the state, and the component level. There must be a more efficient structure for handling the multitude of functions connected with providing dental care.

The Dentist of the Future

The dental education of the dentist of today in purely scientific areas is above reproach. However, in our demand for a strong scientific background, the dental student of today will be woefully unprepared to deal with the changing social concepts.

The dentist of the future should be selected not only for his aptitude in the sciences, but he should also have a broad background in humanities, social sciences, and general economics. The dental leader of the future, in a changing social era, may be able to employ experts in all these fields, but unless he can understand and interpret the ideas they present, he will not be able to function as a leader and policymaker for our future generations of dental organizations.

In addition, the profession and the educators should give consideration to the development of dentists with a comprehensive background in administration. At present, and in the future, we shall have a great need for dentists who are capable of assuming administrative duties.

ACD Workshop on Problems of Developing National Care Programs

The American College of Dentists has suggested a workshop on problems associated with the development of national care programs (12), and I would like to expand the concept. Workshops are an ex-

cellent means of focusing attention and developing solutions, but too often the same groups are reached.

I would like to suggest the development of a national conference from which regional task forces would be recruited to carry the information from the national level to all geographical sections of the country. It is imperative that all dentists throughout the country be informed.

Financial Impact on Profession

Without question, the ferment in government activity in the health area will create a momentous stir in the profession of dentistry in the United States. If dentistry is to retain its heritage of professional status and to preserve the traditional dentist-patient relationship, the American Dental Association will need to expand its programs, facilities, and staff to cope with and guide the development of methods of delivering services. Such expansion will require the expenditure of funds that will place a severe financial strain on the Association. Thus, the need for a dues increase is obvious, and I would suggest that its attainment could be greatly expedited through the assistance of the American College of Dentists. In each state, the College has leaders who could lay the groundwork by communicating to their colleagues the need for professional and financial support of a realistic approach to the national dental health problem. Moreover, these leaders could encourage their constituent societies to take the initiative in promoting the increase.

In conclusion, I will state that in developing this paper, I sought counsel from many people in the profession. In every instance, the advice was the same, "the time is long overdue; we may be too late!" Not one suggested an alternative approach or adherence to the "status quo."

As a general practitioner for 33 years, much of what I have presented today is against my own political and professional philosophy. However, I am *convinced* that the profession cannot stand on dead center. We must move or be moved. The direction is up to us.

References

1. Christensen, Hal M. What is happening in Washington? A paper read at the Las Vegas Convocation of the American College of Dentists, Nov. 7, 1965. (Published in this present issue of the JOURNAL, Jan. 1966.)

2. American Dental Association. Transactions 1949, p. 264.

3. American Dental Association. Transactions 1950, p. 225; Transactions 1953, p. 278.

4. Public Law 89-97: Medicare and the Social Security Amendments of 1965. Editorial. J.A.D.A. 71:934, Oct. 1965.

5. Council on Dental Health, American Dental Association. Survey of dental services provided children from low income families by health and welfare agencies. 1965.

6. American Dental Association. Transactions 1954, p. 278.

7. Spivak, J.: Medicare's Impact? Wall Street Journal, pp. 1, 10, July 30, 1965.

8. American Dental Association. Transactions 1949, p. 264.

9. American Dental Association. Transactions 1954, p. 279.

10. American Dental Association. Transactions 1960, p. 207.

11. Gullett, Donald W. Social trends in dentistry. J. Mich. D. A. 43:168-173, June, 1961.

12. American College of Dentists. Recommendations: Committee on Social Characteristics. J. Am. Col. Den. 32:264, July, 1965.

Additional Sources of Information

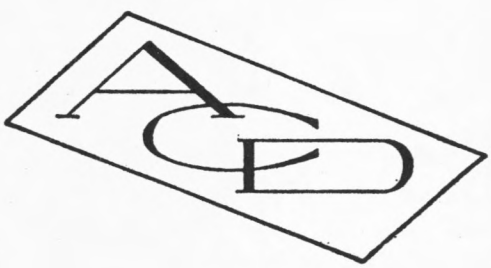
American Dental Association. Transactions 1964-1965.

Special supplementary issue of J.A.D.A. April, 1949.

A dental health program for the American people. J. Am. Col. Den. 28:243-296, Dec., 1961.

Commission on the Survey of Dentistry in the United States. The survey of dentistry: the final report. American Council on Education, 1961.

Proceedings of a Workshop on Enhancing the Image of Dentistry. J. Am. Col. Den. 32:132-270, July, 1965.



Correspondence and Comment

DENTURE SERVICE FOR THE AGED.

To the Editor:

It is unfortunate that Dr. John Oppie McCall has not been faced with providing "denture service for the aged." If he had, he would not be suggesting that denture service for the aged be provided by a special type of auxiliary [J.A.C.D., 32:342, Oct. 1965]. He states ". . . private dental practice would not be affected appreciably." Apparently he is more concerned about the welfare of dentists than about the care of the aging people. He seems to be unaware of the fact that aged edentulous patients present conditions that are much more difficult to treat than are found in younger edentulous patients. The poor physical condition, the increased tissue friability, the reduced pain threshold, the increased nervousness, the reduced ability to adapt to new situations, the poor coordination, the poor nutrition, the resistance to change, the deteriorated basal seats for dentures, the slow recovery from trauma, and many other factors contribute to making denture service for aged patients the most difficult problem faced by dentists. It is unthinkable that an adequate denture service for aged persons could be provided by auxiliaries.

CARL O. BOUCHER, D.D.S.
Columbus, Ohio

REPLY BY DR. McCALL.

To the Editor:

Dr. Boucher is correct in stating that I, as a periodontist, have not been faced with the problems confronting the dentist who undertakes the construction of dentures for an aged patient. As it happens, however, I am quite familiar with some of the difficulties he mentions through reading and consultation. Some of these are nearly insuperable even by the specialist in prosthodontics. But I recall a statement by one leader in that field to the effect that about 80 per cent of edentulous patients can be provided with dentures without too great difficulty. This means that the dental technician, with proper training given by a dental instructor and with competent dental supervision (as I have advocated: see references below) can provide satisfactory denture service to most of those seeking it. As against the fact that 20 per cent of edentulous patients may present exceptional difficulties, I cite the human needs of the very large number of edentulous persons in our population, and a dental manpower pool not able today to meet the dental needs of the dentulous portion of the public if *all* are to receive proper conservational care.

JOHN OPPIE McCALL, D.D.S.
Jericho, N. Y.

McCall, J. O. Dental practice and dental education in the future with consideration of social and health aspects. J.A.D.A. 31:24, Jan. 1944.

———. The survey of dentistry—one point of view. J.A.D.A. 64:77, May, 1962.

COMMENT ON THE "IMAGE WORKSHOP."

To the Editor:

Thank you for the copy of the Proceedings of the Workshop on Enhancing the Image of Dentistry, sponsored by the American College of Dentists, and published in the July 1965 issue of the JOURNAL. . . .

The strong role of the College in this matter is worthy of the highest praise. Too many dental organizations of an honorary or fraternal nature have yet to recognize that they are in a good position to help their members understand the social and economic factors which influence the practice and the image of dentistry. There is no question that [these organizations] bear a responsibility in improving the image of dentistry. I hope that the example set by the College will serve to encourage others to work along the same lines.

The fresh, crisp approach of Dean Alvin L. Morris expresses the most cogent view: that dentists must improve the image of themselves in their own minds through excellence in their daily work. The best therapy for any man is to be able to look upon his daily work with satisfaction. . . .

It goes without saying that the dentist who is not abreast of the times cannot help to improve our image. New ideas, new technics, new equipment—all reflect a doctor's enthusiasm for his work. Isn't this enthusiasm transmitted to the patient and the public in the things the doctor says and does? . . .

As Dr. Kohn points out, the social orientation of the dental students falls upon the dental school. His proposals for the social training of students are formidable, however. The shortage of teaching hours in dental school curriculums already has deans working overtime with schedules. Each year greater demands are made for the student's time. How Dr. Kohn's proposals can be integrated into the dental training program remains a problem of time.

One word about dentists assuming a full share of civic responsibility as a citizen in his community. Dentists whose time after office hours is spent with active civic endeavors often become too busy with matters of the community, while their interest in dentistry falls behind. They have little time for dental meetings, postgraduate courses, and other things dental. It takes a truly extraordinary man to be an excellent dentist consistently, as well as a good civic leader.

Obviously, the thinking emanating from the Workshop . . . represents some of the best dental thinking in the nation today, if one is to judge from the roster of participants. Therefore, it becomes most important that the results of the Workshop receive widespread publicity. . . . I suggest that the Proceedings be summarized and made widely available. . . . Societies should be encouraged to hold seminars to discuss the Workshop recommendations. The message of the Workshop must reach as many dentists as possible if it is to have any significant impact on dentists and the public they serve.

VICTOR J. NITTI, D.M.D.
Wood-Ridge, N. J.

COMMENT [*T.McB.*]: The Proceedings of the "Image Workshop," through the JOURNAL and reprints, were received by College members, Workshop participants, members of the ADA House of Delegates, dental libraries, dental editors, constituent and component dental society presidents and secretaries, other national dental organizations, and a number of allied health and philanthropic groups. Considerable comment has appeared in dental periodicals. A number of dental societies are holding seminars, study groups, and small workshops to study further the recommendations of the Workshop. Dr. Nitti, who is editor of the *Bulletin* of the Bergen County (N. J.) Dental Society, was not aware of this when he wrote the above letter.

Looks at Books

CARNAHAN'S THE DENTIST AND THE LAW. By William W. Howard, B.S., D.M.D. and Alex L. Parks, LL.B. 2nd Ed. 241 pp. St. Louis: C. V. Mosby Co. 1965. $7.75.

This book is encyclopedic in its coverage of the ethics and the law pertaining to the practice of dentistry. In addition to the treatment of contracts, consent, malpractice, evidence, damages, partnership and related subjects, its 16 chapters include a thorough exposition of the limitations imposed by law on the services rendered by dental auxiliary personnel, and a complete table of the permissible operations by dental hygienists in the 50 states. It also explains the federal statutes dealing with the Harrison Narcotic Act, the control of food and drugs, the anti-trust provisions, the Federal Denture (Traynor) Act, and the Gold Reserve Act of 1934. It gives a full explanation of the state statutes regarding radiation control, hygienists, medical practice acts, hospital acts, advertising, and reportable diseases and health conditions; and general information as to compliance with municipal ordinances and regulations.

A feature of the publication is an invaluable chapter on the trial of a dental liability cause of action. It presents a typical dental malpractice case emphasizing the burden of proof to be sustained, the problems of cause and effect, and the defenses available to the defendant. It also contains a listing of the Statute of Limitations of each state showing the time in which actions for ordinary malpractice and those for wrongful death must be initiated.

Chapter Eight, "Liability for Unauthorized Treatment," calls attention to the necessity for "informed consent," an extremely important understanding between the dentist and his patient before treatment is begun. It suggests forms to be used in obtaining permission to render dental service to minors and incompetents.

The "Points and Authorities" references at the end of the chapters are well chosen and brief, stating only the essence of the law involved. These authenticating citations add substantially to an understanding of the application of the laws and regulations recited in the body of the text.

This edition of "The Dentist and the Law" is a timely contribution to dental literature, one which provides an excellent and comprehensive guide for both the student and the practitioner.—*Neal A. Harper, D.D.S., LL.B., retired, Associate Professor of Dentistry, Ohio State University, Columbus, Ohio.*

ENDODONTICS. By John I. Ingle, D.D.S., M.S.D. 656 pp. Phila.: Lea & Febiger. 1965. $22.50.

The authors, there are 22 contributors, cover the entire field of endodontics in a simplified, thorough, and systematic manner. The purpose of this book is to acquaint the endodontist, dental student, and general practitioner with the basic principles that must be followed and the modifications that may be used in modern endodontic therapy. It will also serve as a reference text for those who practice in other specialized areas of dentistry.

Neither "Endodontics," nor any one book, can possibly cover all of the many facets and changes which are taking place in this specialty. This text contains 17 chapters which discuss and

illustrate in detail most of the aspects of practical endodontics. Some of the salient features of this multi-authored book include Indications and Contraindications for Endodontic Therapy; Endodontic Success and Failures; Roentgenography in Endodontics; Obliteration of the Radicular Space; Etiology of Pulp Inflammation, Necrosis or Dystrophy; Pulp and Periapical Pathology; Endodontic Surgery, as well as other chapters on various aspects of effective endodontic procedures. Considerable stress has been devoted to Differential Diagnosis of Oral and Perioral Pain, and to Protective Coronal Coverage of the Pulpless Tooth.

The text is well organized and reads easily. There are over 1,000 excellent illustrations; these are clear and demonstrate vividly the problems and procedures discussed. Some of the photomicrographs from the collections of Orban and Matsumiya have not been published previously.

The specialty has been covered well and inclusively by the author and his able contributors. The library of any dentist would be enhanced by the addition of this text.—*Paul Sherwood, D.D.S., Department of Endodontics, Western Reserve University, Cleveland, Ohio.*

LOCAL ANESTHESIA AND PAIN CONTROL IN DENTAL PRACTICE. By Leonard M. Monheim, D.D.S., M.S. 3rd Ed. 308 pp. St. Louis: C. V. Mosby Co. 1965. $9.50.

This book, into the third edition now, continues to be an outstanding contribution to the dental literature. It is the best available text for both dental student and practitioner. The chapter discussing the trigeminal nerve is the most comprehensive presentation of this subject that can be found in any one book. The material is outlined and indexed well, which makes it easily read.

The third edition has little change from the previous edition in the basic discussion. However, the author has included new drugs and has added a discussion of cardiopulmonary resuscitation. The edition has accomplished its purpose—to bring new facts to the dental reader.—*William R. Wallace, D.D.S., M.S., Department of Anesthesia and Oral Surgery, Ohio State University, Columbus, Ohio.*

CORRIGENDUM

In the report of the Committee on Specialties and General Practice (JOURNAL, Oct. 1965, p. 358) it was stated that a postcard questionnaire had been sent to "forty-eight dental schools, the Eastman Dental Dispensary, the Walter G. Zoller Memorial Dental Clinic, and the Forsyth Dental Center." The Boston University School of Graduate Dentistry should have been included.

American College of Dentists

OFFICERS, 1965-1966

President

PERCY G. ANDERSON
Faculty of Dentistry
University of Toronto
124 Edward Street
Toronto 2, Canada

President-elect

CARL J. STARK
1238 Keith Bldg.
Cleveland, Ohio 44115

Vice-President

STANLEY A. LOVESTEDT
Mayo Clinic
Rochester, Minn. 55902

Treasurer

FRITZ A. PIERSON
1112 Federal Securities Bldg.
Lincoln, Neb. 68508

Historian

HENRY A. SWANSON
919 18th Street, N.W.
Washington, D. C. 20006

Secretary

OTTO W. BRANDHORST
4236 Lindell Blvd.
St. Louis, Mo. 63108

Editor and Asst. Secretary

THOMAS F. MCBRIDE
4236 Lindell Blvd.
St. Louis, Mo. 63108

Administrative Assistant

FERN CRAWFORD
4236 Lindell Blvd.
St. Louis, Mo. 63108

REGENTS

J. LORENZ JONES
405 N. Bedford Drive
Beverly Hills, Calif. 90210

PHILLIP EARLE WILLIAMS
1208 Medical Arts Bldg.
Dallas, Texas 75201

REAR ADMIRAL FRANK M. KYES, DC, USN
Assistant Chief of the
Bureau of Medicine & Surgery
(Dentistry) and Chief,
Dental Div. Navy Dept.
Washington, D. C. 20390

LON W. MORREY
Chicago Board of Health
54 West Hubbard
Chicago, Ill. 60610

BERTON E. ANDERSON
4552 51st Ave., N.E.
Seattle, Wash. 98105

ORMONDE J. MCCORMACK
499 South Warren St.
Syracuse, N. Y. 13202

FRANK P. BOWYER
608 Medical Arts Bldg.
Knoxville, Tenn. 37902

GEORGE S. EASTON
State University of Iowa
College of Dentistry
Iowa City, Ia. 52240

COMMITTEES: 1965-66

BYLAWS

Kyrle W. Preis, *Chairman,* 700 Cathedral St., Baltimore, Md. 1966
Harvey S. Huxtable, Mineral Point, Wis. 1967
Fritz A. Pierson, Jr., 1112 Federal Securities Bldg., Lincoln, Neb. 1968
Oliver W. Clough, Medical College of Virginia, School of Dentistry, Richmond, Va. 1969
Thomas H. Armstrong, 408 N. Cumberland, Lebanon, Tenn. 1970

CONDUCT

Gustav O. Kruger, Jr., *Chairman,* 3900 Reservoir Road, N.W., Washington, D. C. 1967
Miles R. Markley, 632 Republic Bldg., Denver, Colo. 1966
Earl D. Lowry, 79 East State St., Columbus, Ohio 1968
Daniel Jutton, 1902 Euclid Ave., Syracuse, N. Y. 1969
William E. Brown, Univ. of Michigan, School of Dentistry, Ann Arbor, Mich. 1970

EDUCATION AND RECRUITMENT

Louis G. Terkla, *Chairman,* 611 S. W. Campus Drive, Sam Jackson Park, Portland, Ore. 1968
Robert F. Vason, 541 N. Donnelly St., Mt. Dora, Fla. 1966
Robert E. Doerr, Univ. of Michigan, School of Dentistry, Ann Arbor, Mich. 1967
Wm. J. Updegrave, 417 W. School House Lane, Philadelphia, Pa. 1969
W. Ross Stromberg, Univ. of Kentucky, College of Dentistry, Lexington, Ky. 1970

Consultants

Wm. S. Brandhorst, 9827 Clayton Road, St. Louis, Mo.
Reginald H. Sullens, 211 E. Chicago Ave., Chicago, Ill.
Margaret E. Swanson, 410 South Can Dota Ave., Mt. Prospect, Ill.
Kenneth E. Wessels, 211 E. Chicago Ave., Chicago, Ill.

OPERATION BOOKSHELF

James P. Vernetti, *Chairman,* 543 Orange Ave., Coronado, Calif. 1967
Marvin E. Revzin, 16559 Wisconsin Ave., Detroit, Mich. 1966
José E. Medina, 34 Sunnyview Drive, Phoenix, Md. 1968
Jess Hayden, Jr., Dept. of Anatomy, Loma Linda Univ., Loma Linda, Calif. 1969
James M. McNerney, 5048 Jenkins Arcade, Pittsburgh, Pa. 1970

Consultants

Henry A. Swanson, 919 18th St. N.W., Washington, D. C.
Norman O. Harris, Univ. of Puerto Rico, School of Dentistry, San Juan, Puerto Rico
Walter J. Reuter, 1200 Patrick Road, Napa, Calif.

PROFESSIONAL RELATIONS

Cozier W. Gilman, *Chairman,* 219 W. 8th St., National City, Calif. 1968
Harold W. Krogh, 1835 Eye St. N.W., Washington, D. C. 1966

BRUCE B. SMITH, 1110 Cobb Bldg., Seattle, Wash. 1967
RICHARD L. SIMPSON, Medical College of Virginia, School of Dentistry, Richmond, Va. 1969
HUGH A. T. KEENAN, 56 East First St., Corning, N. Y. 1970

CONSULTANT

CHAUNCEY D. LEAKE, Univ. of California, School of Medicine, San Francisco, Calif.

RESEARCH

RALPH W. PHILLIPS, *Chairman,* 1121 W. Michigan St., Indianapolis, Ind. 1966
CARL A. OSTROM, 5107 Danbury Road, Bethesda, Md. 1967
WESLEY O. YOUNG, Univ. of Kentucky, College of Dent., Lexington, Ky. 1968
REIDAR F. SOGNNAES, Office of the Dean, Univ. of California Medical Center, School of Dentistry, Los Angeles, Calif. 1969
GORDON H. ROVELSTAD, Dental Research Facility, Bldg. 600, U. S. Naval Training Center, Great Lakes, Ill. 1970

CONSULTANTS

THOMAS J. HILL, 9019 Highland Drive, Brecksville, Ohio
SEYMOUR J. KRESHOVER, National Inst. of Dental Research, National Institutes of Health, Bethesda, Md.
SHOLOM PEARLMAN, 211 E. Chicago Ave., Chicago, Ill.

SUB-COMMITTEE ON INSTITUTE FOR ADVANCED EDUCATION IN DENTAL RESEARCH

WALLACE D. ARMSTRONG, Univ. of Minnesota, School of Medicine, Minneapolis, Minn.
JAMES A. ENGLISH, Univ. of New York at Buffalo, Capen Hall, Buffalo, N. Y.
SAMUEL PRUZANSKY, 64 Old Orchard, Skokie, Ill.
DAVID B. SCOTT, Western Reserve Univ., School of Dentistry, Cleveland, Ohio
THOMAS J. HILL, *Secretary,* 9019 Highland Drive, Brecksville, Ohio

SOCIAL CHARACTERISTICS

KENNETH A. EASLICK, *Chairman,* 3002 School of Public Health, Univ. of Michigan, Ann Arbor, Mich. 1968
JAMES M. DUNNING, 75 Mt. Auburn St., Cambridge, Mass. 1966
ROBERT THOBURN, 227 Orange Ave., Daytona Beach, Fla. 1967
WALTER J. PELTON, Univ. of Alabama, School of Dent., Birmingham, Ala. 1967
JAMES H. SIMMONS, 5225 West Freeway, Fort Worth, Texas 1970

CONSULTANT

PHILIP E. BLACKERBY, JR., W. K. Kellogg Foundation, Battle Creek, Mich.

WORLD RELATIONS

JOHN R. ABEL, *Chairman,* 10231 Santa Monica Blvd., Los Angeles, Calif. 1967
CARL L. SEBELIUS, 211 E. Chicago Ave., Chicago, Ill. 1966
GEORGE C. PAFFENBARGER, Boyds, Maryland 1968
LESTER W. BURKET, 4001 Spruce St., Philadelphia, Pa. 1969

FRED HENNY, Henry Ford Hospital, Detroit, Mich. 1970

CONSULTANTS

PHILIP E. BLACKERBY, JR., W. K. Kellogg Foundation, Battle Creek, Mich.
KNUT GARD, Incognito Gate 17, Oslo, Norway
DONALD W. GULLETT, 5 Colwick Drive, Willowdale, Ontario, Canada
HAROLD HILLENBRAND, 211 E. Chicago Ave., Chicago, Ill.
GERALD H. LEATHERMAN, 35 Devonshire Place, London, England
GERALD D. TIMMONS, 8656 East Vista Drive, Scottsdale, Ariz.

SPECIAL COMMITTEE ON SPECIALIZATION AND GENERAL PRACTICE

WILLARD C. FLEMING, *Chairman,* Univ. of California, Medical Center, School of Dentistry, San Francisco, Calif.
PHILIP E. BLACKERBY, JR., W. K. Kellogg Foundation, Battle Creek, Mich.
PAUL E. BOYLE, Western Reserve Univ., School of Dentistry, Cleveland, Ohio
JAMES R. CAMERON, 19th and Spruce Sts., Philadelphia, Pa.
WALTER E. DUNDON, 111 N. Wasbash Ave., Chicago, Ill.

NECROLOGY COMMITTEE (One Year Appointment)

CRAWFORD A. MCMURRAY, *Chairman,* Ennis, Texas
JOE M. PIKE, 503 Granite Exchange Bldg., St. Cloud, Minn.
L. W. BIMESTEFER, 1 Kinship Road, Baltimore, Md.

NOMINATING COMMITTEE (One Year Appointment)

OBED H. MOEN, *Chairman,* 6 Main St., Watertown, Wis.
WM. B. RYDER, 2000 Van Ness Ave., San Francisco, Calif.
KENNETH V. RANDOLPH, West Virginia Univ., School of Dentistry, Morgantown, W. Va.
LEO J. SCHOENY, 729 Maison Blanche, New Orleans, La.
DONALD A. CLOSSON, 425 East 63rd St., Kansas City, Mo.

Two new committees have been created by the Board of Regents—COMMITTEE ON COMMUNICATIONS and COMMITTEE ON DENTAL HEALTH SERVICE. Appointments and selection of consultants were not complete at time of publication of this issue. The personnel of these committees will appear in the April JOURNAL.

The Objectives of the American College of Dentists

The American College of Dentists, in order to promote the highest ideals in dental care, advance the standards and efficiency of dentistry, develop good human relations and understanding, and extend the benefits of dental health to the greatest number, declares and adopts the following principles and ideals as ways and means for the attainment of these goals:

(a) To urge the development and use of measures for the control and prevention of oral disorders;

(b) To urge broad preparation for such a career at all educational levels;

(c) To encourage graduate studies and continuing educational efforts by dentists;

(d) To encourage, stimulate, and promote research;

(e) To encourage qualified persons to consider a career in dentistry so that the public may be assured of the availability of dental health services now and in the future;

(f) To improve the public understanding and appreciation of oral health service and its importance to the optimum health of the patient through sound public dental health education;

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

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

(i) To urge upon the professional man the recognition of his responsibilities in the community as a citizen as well as a contributor in the field of health service;

(j) In order to give encouragement to individuals to further these objectives, and to recognize meritorious achievements and potentials for contributions in dental science, art, education, literature, human relations and other areas that contribute to the human welfare and the promotion of these objectives—by conferring Fellowship in the College on such persons properly selected to receive such honor.

This is from the Preamble to the Constitution and Bylaws of the American College of Dentists.


AMERICAN · COLLEGE · OF · DENTISTS
SCIENTIAE · DENTIUM · CURANDORUM · HUMANITATIS · CAUSA · DEDICATUM · PROGRESSIONI
FOUNDED 1920