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PROBLEMS OF HEALTH AFFECTING ECONOMIC MOBILIZATION

27 October 1955

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INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

Honorable Frank Brown Berry, Assistant Secretary of Defense (Health and Medical), was born in Dorchester, Massachusetts, May 13, 1892. He is a graduate of Harvard University (A. B. and M. D.). Since 1924, he has practiced surgery in New York City and has been on the staff and acted as consultant to numerous hospitals. He is Director of the First Surgical and Chest Surgical Division of Bellevue Hospital and Professor of Clinical Surgery at Columbia University (on leave). Dr. Berry served in World War I in the Medical Corps. In World War II, he returned to active duty and served with the Ninth Evacuation Hospital, the Seventh Army, and in Berlin. He has the Legion of Merit, Commendation Ribbon and Croix de Guerre as well as six campaign stars. Dr. Berry retired from the active reserve in 1952 with the rank of Brigadier General. He was appointed to his present position in January 1954. This is his first lecture at the Industrial College.

PROBLEMS OF HEALTH AFFECTING ECONOMIC MOBILIZATION

27 October 1955

GENERAL HOLLIS: After the earlier period this morning, I feel I have a good deal of temerity to get up here without a visual aid, even to introduce the speaker. I also find it a little difficult because I know now that some of the students are sitting there looking down in a lofty and smug fashion, knowing this is behind them for the rest of the year, whereas I will have to do it again.

Our speaker this morning is the Honorable Frank B. Berry, the Assistant Secretary of Defense for Health and Medical Affairs. I am sure that you have read his biography and know of his long military record and his attainments in that field. He is particularly well qualified to talk to us this morning, and it is a great honor to have him with us. Dr. Berry.

DR. BERRY: General Hollis and Gentlemen: I don't know whether I even dare to come up here this morning after hearing the awesome presentations, and also to follow a very good friend of mine, Dr. Ginzberg, who talked to you yesterday. Of course, what I say is more or less along the same lines. There is no answer to it.

I am reminded of one of my old teachers 40 years ago when I took a course in sociology. He said he was going to discuss the question: What is progress? and we discussed it for the full course. And in May of the following year he asked us the same question and we have all been wondering about it ever since.

Now I have been asked to talk about the problems of health affecting economic mobilization, and we promptly run smack into two opposing philosophies: the humanitarian and the "survival of the fittest." One frequently hears the criticism that doctors are responsible for keeping alive many individuals who add to our chronic hospital population, to our welfare burden and to the problem of care and insurance for the aged. This is the humanitarian philosophy that has motivated western civilization over the years, and we see evidences of it all about us today in our emphasis on rehabilitation and the appeals for funds to combat heart disease, cancer, diabetes, multiple sclerosis, cerebral palsy, poliomyelitis, etc. Yet I think we all agree with the indisputable, though rather bald statement, which was made to me by

a patient, a Catholic nun, who had been ill, yet had carried on a useful life for many years with tuberculosis, "Don't you know, doctor, that man is born to die?" That set me back for a few minutes, but when you think it over, it is more or less so. There is not a man that I know and that you know who hasn't fulfilled that destiny. We may not like to think that the ultimate purpose of life is death, yet it is inevitable.

Let us turn now to the philosophy of "survival of the fittest." Today genetics presents an increasingly rewarding field of study, especially as we explore the possible influence of heavy or repeated radiation on heredity. Some of you may have noticed in yesterday's paper, for example, that the Japanese in our own group in Hiroshima have brought up and publicized another death that they think was due to the bombs ten years ago.

The philosophy of the eugenecists and the sociologists considers what is best for the race as a whole. But, although they seek to bring this concept into the realm of an exact science, I doubt if this will ever be possible. Who are the fittest, and who are we to say only they shall be kept alive? What should be our standards of biological perfection? Clarence Morgenthau wrote some years ago:

> "A reconsideration of the problem of social action must start with a recognition of the fundamental distinction which exists between social problems and those with which the natural sciences deal. The latter are either solvable at a particular moment of history or they are not. When they are solved, they are solved once and for all. Social problems . . . are of a different type.
>
> "The problem of world peace, for instance, in counter distinction to the problem of the air-cooled engine, is not closer to solution today than it was when it first presented itself to the human mind. More books have been written and more intellectual energy has been spent on the problem of international peace during the last 100 years than in all previous history."1/

True science may be defined as "a series of interconnected concepts and conceptual schemes arising from experiment and observation

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1/ Morgenthau, C. J., Scientific Men Vs. Power Politics, University of Chicago Press, 1946.

ıitful of further experiments and observations."2/ Sociology social sciences will rarely, if ever, fulfill these criteria.

The social sciences deal primarily with man as he is although more recent development in studies of behavior, dynamic psychol-y, comparative psychology and human engineering approaches the determination of what man should be. In our humanitarian philosophy it is these in reference to the total medical needs of the Nation that concern us. It is with great temerity, therefore, that I even attempt to discuss such a problem.

Many articles have been written and numerous conferences held on the health needs of the Nation, one of the most notable being the President's Commission on the Health Needs of the Nation in 1951. It seems to me that the best approach we can make is through the presentation and study of a series of charts of pertinent statistics. I am sure they will leave you confused. Everybody else has been confused by them. As you look at them, you will note that all bear a certain relationship and are integral parts of the combined problem of health and economic mobilization.

First, there are three charts having to do with our population since 1900. When considered together these are rather startling.

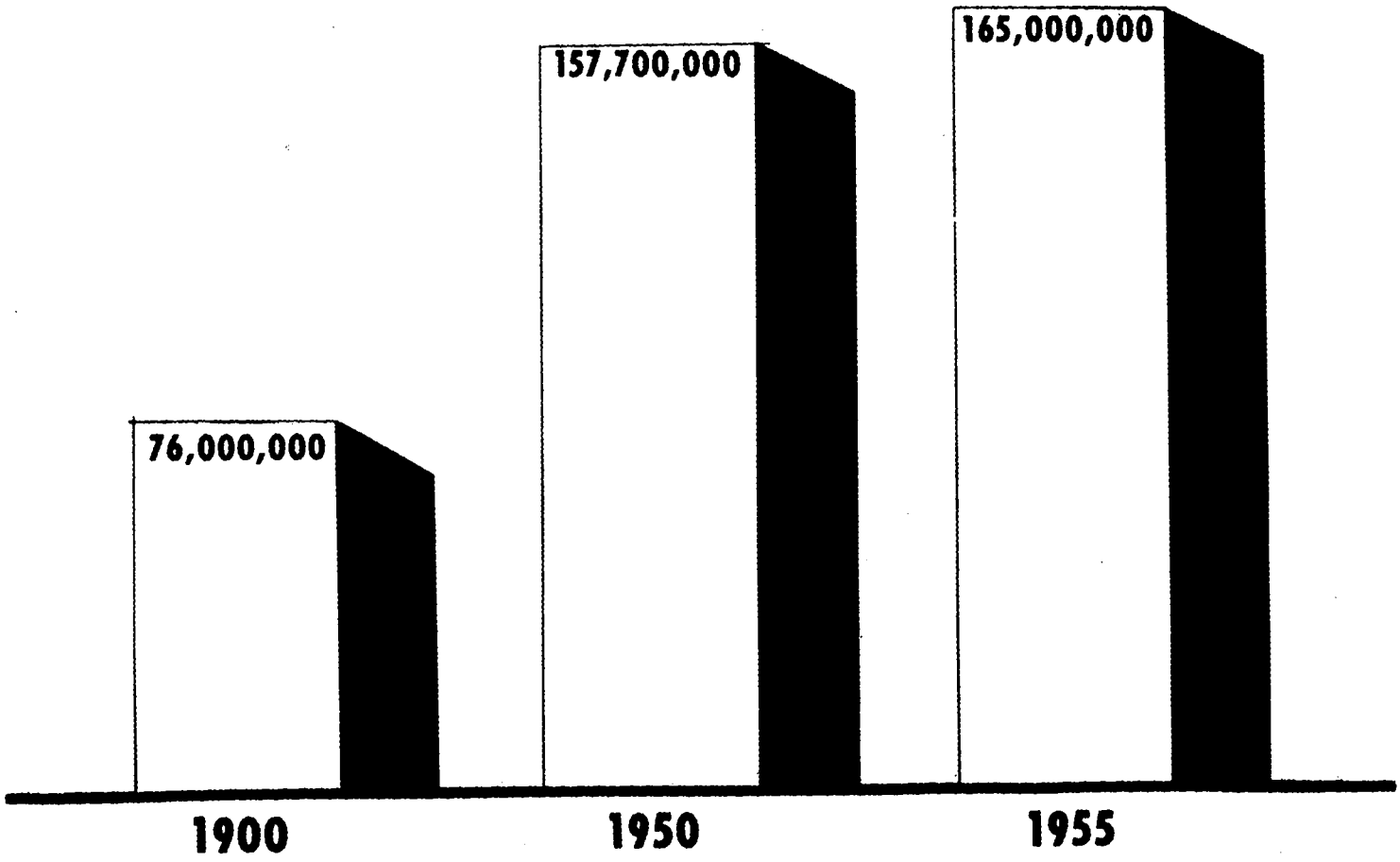
Chart 1, following page, shows that in the past 55 years our total population has more than doubled, but hidden in this figure are several components, including: (1) our negro population has almost doubled in this period (see chart 2, page 5); and (2) well over 20 million of this increase has been due to immigration (see chart 3, page 6). No nation has ever faced and surmounted such population problems within such a short period of time, particularly when we remember that during nine years of this era we were at war. From the educational standpoint alone, this has propounded a tremendous problem. This was well summarized a year ago in an address by President Griswold of Yale at Exeter Academy:

> "At any one time in this country between the years 1900 and 1950, there are (and this would have held true for any month in any year you might have taken the measurement) between 10 and 13 million foreign-born with between 15 and 25 million children giving a total of between 25 and 38 million foreign-born citizens and their children."3/

2/ Conant, J. B., Modern Science and Modern Man, Columbia University Press, 1952.

3/ Griswold, A. W., The Practical Value of a Liberal Education, Supplement to the Phillips Exeter Bulletin, Vol. 50, June 1954.

POPULATION GROWTH IN THE UNITED STATES



NEGRO POPULATION IN THE UNITED STATES

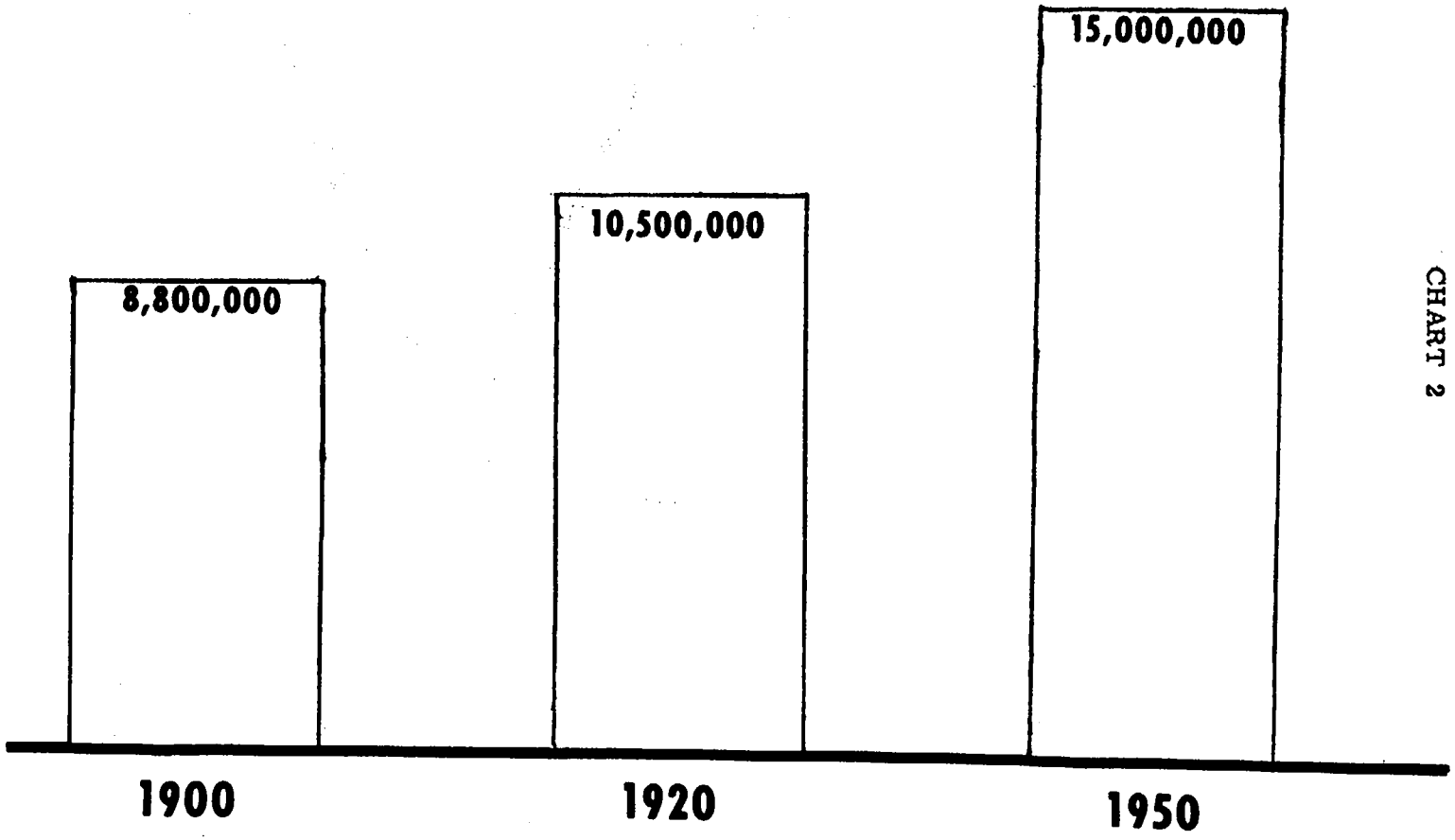


CHART 2

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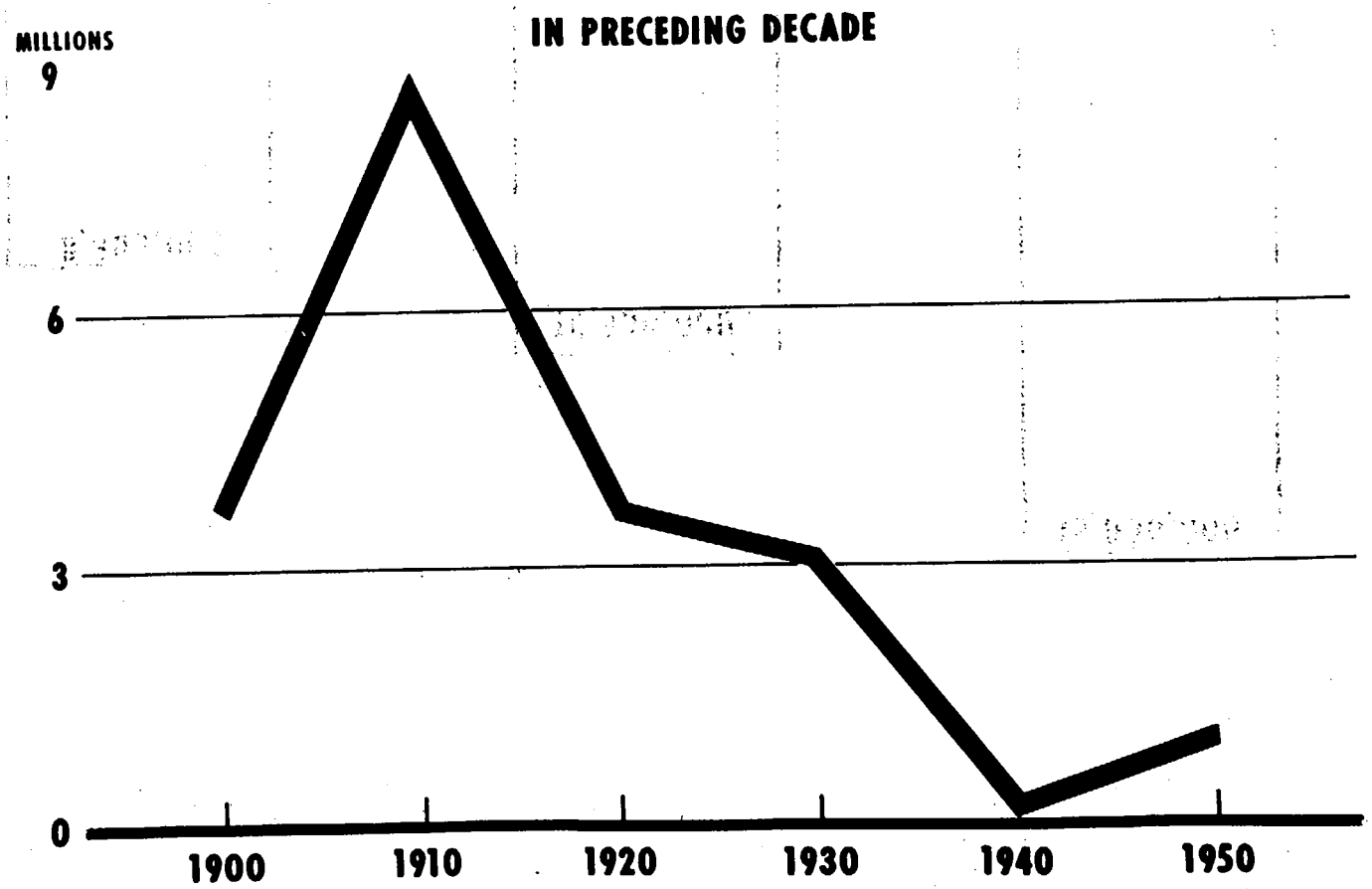
CHART 3

IMMIGRATION TO THE UNITED STATES



And at the same time, we were bringing into our educational system our negro citizens, who, even as late as 1920, had only recently begun to come into their own in opportunities in education.

Now let us examine the major causes of death from disease and trauma, and you will see a radical change which is affecting our whole problem.

Charts 4 and 5, pages 8 and 9.--These charts are self-explanatory, but I want you to notice the difference in the major causes of death between the years 1900 and 1950 and how far ahead are the causes of death from old age, cardio-vascular disease, cancer, and senility. Here is another chart of the same type which shows that in 1900 most of our citizens were dying of acute infections, really during childhood and young adult life--diphtheria, measles, whooping cough, typhoid fever, influenza and pneumonia, and tuberculosis. This chart shows how the present causes of death differ from those of 50 years ago. Our whole pattern has changed.

Chart 6, page 10.--If you put the first and third columns together you will see that accidents are the fourth cause of death today. We are really in the machine age. Of the total 9,600,000 accidental injuries in 1953, those occurring in the home lead with 4,350,000. Industry, public work, and nonmotor vehicle groups each account for 2 million, and motor vehicle accidents for 1,250,000 injuries in 1953. The total has increased slightly during 1954. About one percent of these resulted in death, but of the fatalities the automobile accounted for 13 percent.

To translate this into dollars and cents, the economic loss resulting from all injuries has been estimated at 9.5 billion dollars, or about 25.5 million dollars for each day, with the medical cost alone of about 700 million dollars. To bring this down to more readily understandable figures, one of every 17 persons in the United States suffered a disabling injury in 1953. 4/

Chart 7, page 11.--What about our own armed services, where we think things are perhaps better controlled? In World War II in the Army, disease accounted for 286 million days lost; battle injuries for only 72 million; and nonbattle injuries were almost 60 million. Of the disease total, psychiatric conditions were responsible for nearly 43 million, and the common respiratory diseases were next with about 26 million days lost. 5/

4/ Kennedy, R. H., Our Fashionable Killer, Bulletin of the American College of Surgeons, Vol. 40:73-81, March-April 1955.

5/ Anon: Unpublished Tables Prepared by the Office of the Surgeon General, Department of the Army.

MAJOR CAUSES OF DEATH

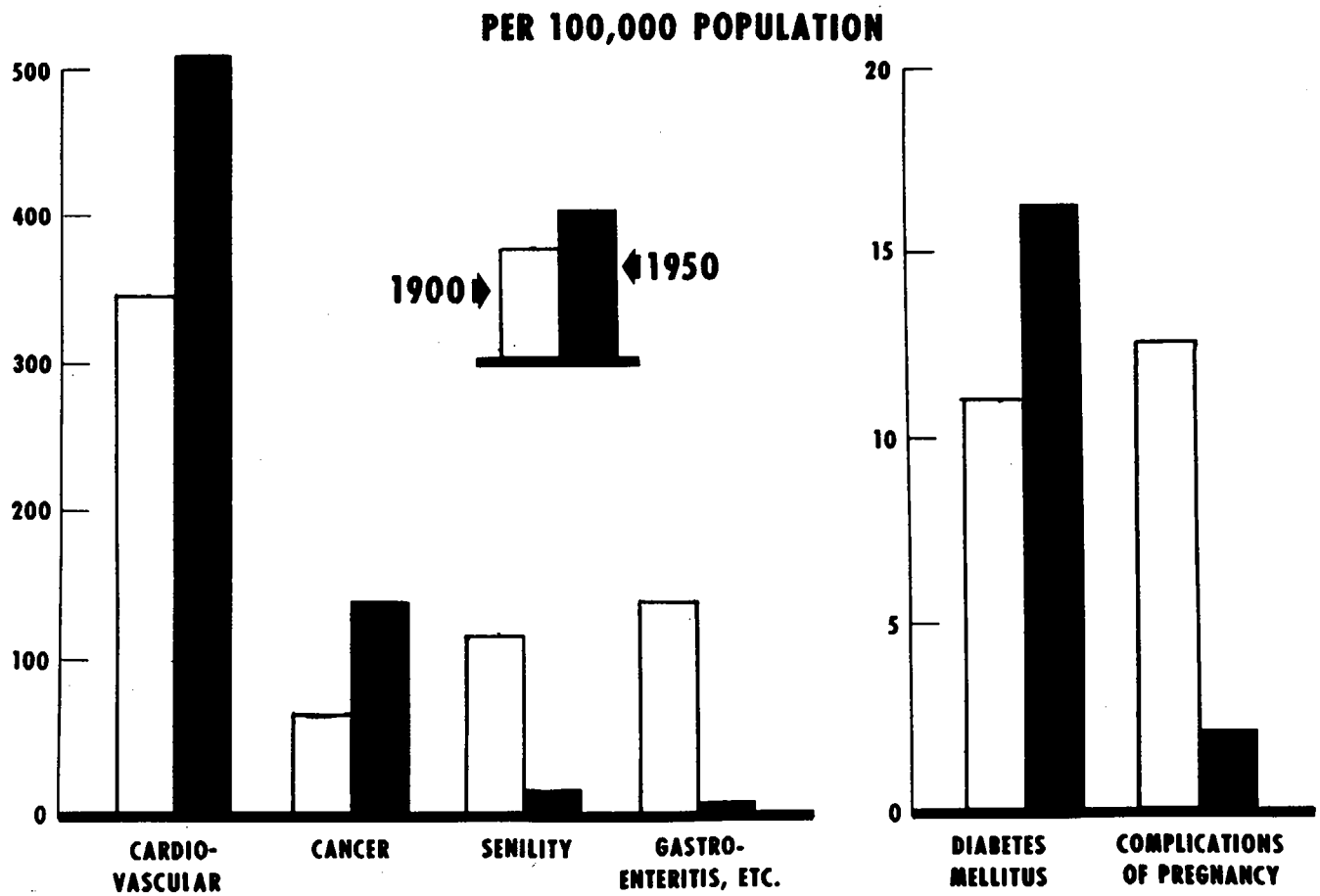


CHART 4

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MAJOR CAUSES OF DEATH

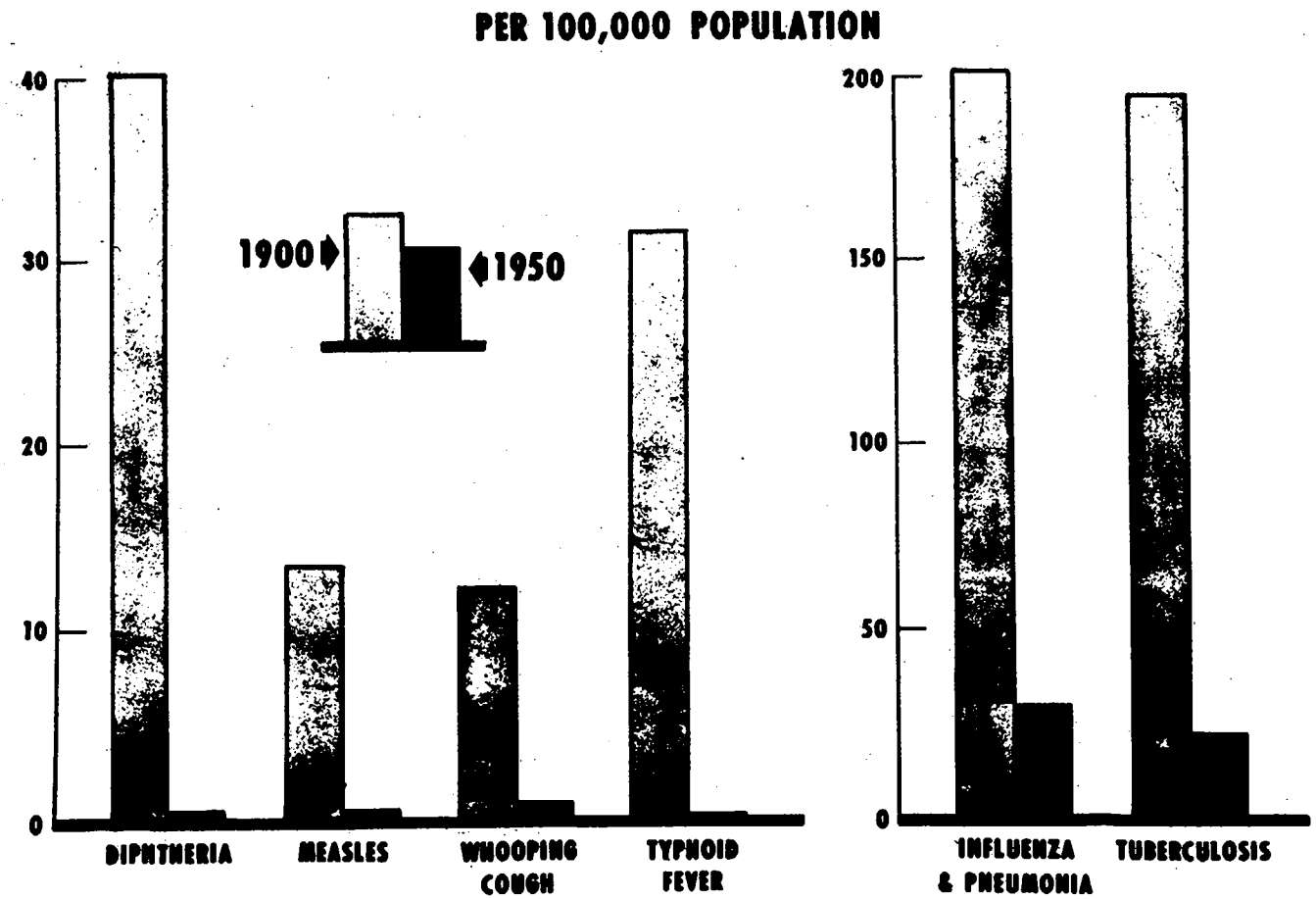

CHART 5

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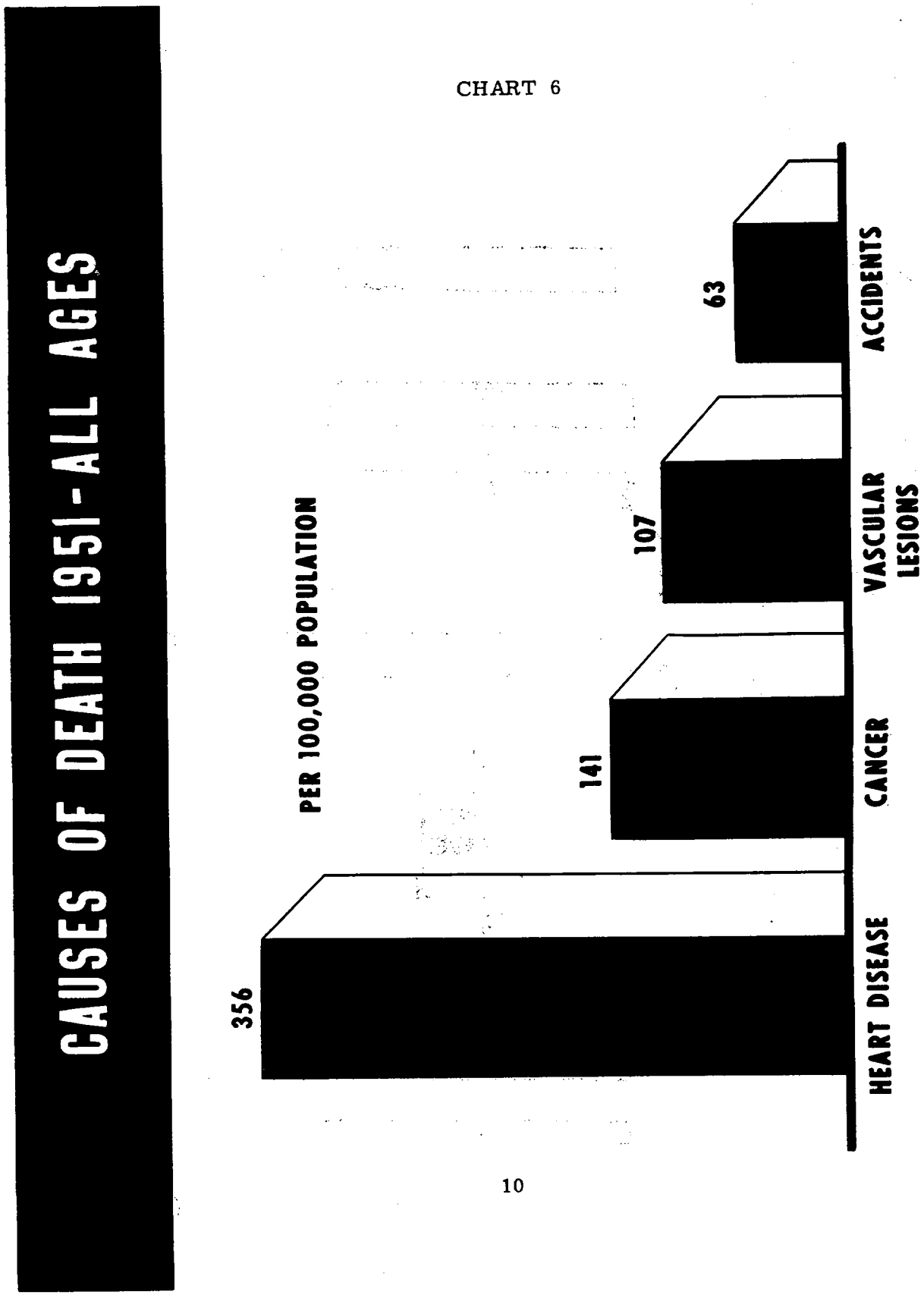
CHART 6


CAUSES OF DEATH 1951-ALL AGES
PER 100,000 POPULATION
356
141
107
63
HEART DISEASE
CANCER
VASCULAR LESIONS
ACCIDENTS

DISABLING ILLNESS IN THE UNITED STATES

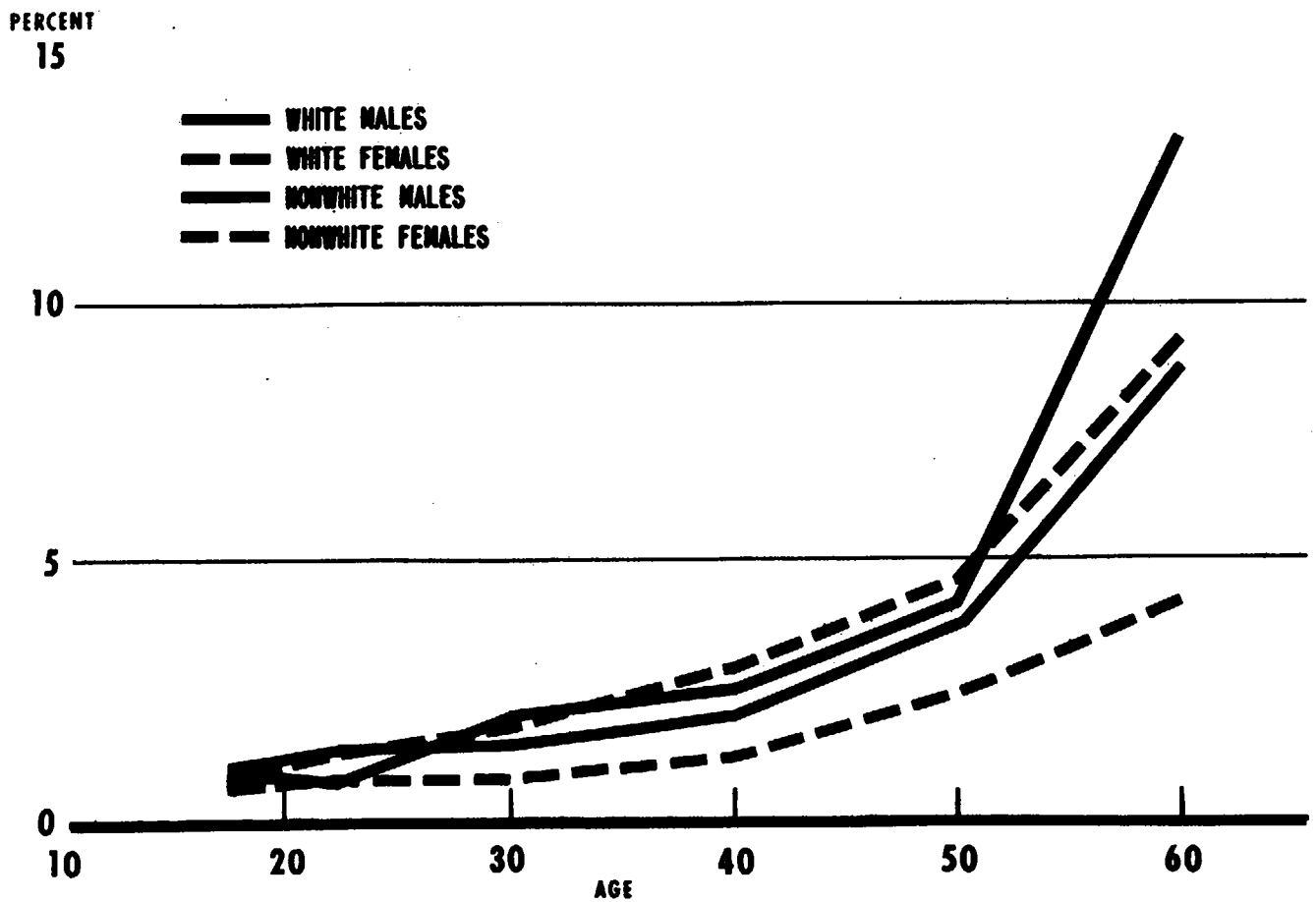


CHART 7

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In 1953, the Armed Forces Epidemiological Board was established under the Department of Defense, superseding the old Army Epidemiological Board of 1949. Under this Board, there are 16 panels, each of which is concerned with a special problem in preventive medicine, and among these is a panel on the prevention of accidental trauma. Recently, this panel submitted a report of methods available for added safety factors in automobiles, and which, if incorporated and utilized as intended, should diminish the number of fatalities and serious injuries from automobile accidents.

As we turn now to the illness side of the picture, we find that mental illness stands pre-eminent as the Nation's number one health problem. To quote from the Hoover Commission Task Force on Federal Medical Services of August 1955:

> "More than half of the Nation's hospital beds are devoted to care of the mentally ill and this year alone some 250,000 patients will have their first admission to mental hospitals. A number of these individuals will be young, many of them of superior intelligence, and some destined for chronic illness and a prolonged hospital stay. At our present rate of illness, one out of every 12 children born will spend some time in a mental hospital. Mental patients constitute the largest group of Federal and state patients and modest estimates place the cost of mental disease to the taxpayer at about one billion dollars per year. The number of patients in these institutions is increasing steadily at the rate of approximately 10,000 per year, and when we speak of the number of patients receiving care in mental hospitals, it is well over 700,000 persons; this is only one measure of the incidence of mental disease and emotional disturbance in the United States. This figure does not include the number of people suffering from mental disorders who are kept at home or who are in sanatoria, nursing homes and general hospitals, and thus not included in the psychiatric hospital statistics.
>
> "Our most serious bottleneck in the provisions of proper care of the mentally ill is the lack of trained personnel, physicians, nurses and other auxiliary workers. Although this situation has improved somewhat in recent years, shortages of trained personnel continue not only to hamper efforts to improve general conditions, but also to restrict efforts to discover new methods of treatment and even to prevent the wide application of new therapeutic procedures. More research is needed and yet we have too few

professionally qualified people in this branch of research. As the population and life span increase, the problem will grow and as the problem grows, costs will become greater, hence it is obvious that some answer must be found."6/

In World War II approximately 12 percent of the men between the ages of 18 and 37 were rejected by Selective Service because of mental and personality disorders, and between 40 and 45 percent of the medical discharges from the Army were for psychiatric disabilities alone. In spite of the enormity of the problem, however, appreciable strides have already been made through basic and clinical research. Paresis and organic diseases of the brain due to syphilis cease to be the sizeable problem that they were a decade ago. Formerly 10 percent of all individuals who acquired syphilis became victims of paresis, but due to new therapeutic measures, this figure has dropped to less than three percent.

Schizophrenia, a common type of mental disease, formerly had a recovery rate of only 15 to 20 percent, but is now 40 to 60 percent; and so with other of the mental diseases under the influence of new drugs and new forms of therapy. Pellagra, following the work of Goldberger and Sebrell in 1927 and the recognition of the vital importance of certain vitamins in the diet, is now readily preventable. In addition to these purely clinical measures, the communities themselves have become increasingly aware of the problem and have established mental health clinics, not only for therapeutic but also as preventive measures.

The respiratory diseases, which account for the second highest number of days lost due to illness in the service, still present a problem, and though not serious from the standpoint of morbidity and mortality, are extremely important as to days lost and can seriously impair the effectiveness of any group in a given time. Although we have made some progress in the prevention by the use of influenza vaccines, the common cold still presents the major problem, both in prevention and treatment.

We boast in our country that we have done a great deal in health measures. Only last spring a small group and I visited the Near East and we were horrified to find in Pakistan that the rejection rate for service in the Army remained at 55 to 60 percent. Incidentally, I had

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6/ Braceland, F. J., et al: The Greatest Single Health Problem, Hoover Commission Task Force Report on Federal Medical Services, Appendix J, 1955.

somewhat of a comeuppance the other day when I read that our total rejection rate for the past five years by Selective Service is 33 percent, of which 13.5 percent is for mental and 15.5 percent for purely medical reasons. The balance was made up of combined medical and mental or for administrative reasons. This should give us something to worry about.

Now there are two components in that figure. Consider the individual Selective Service Boards; those are the pressures and the great need of men at a given time and at other times not so great, which Dr. Ginzberg has mentioned. Nevertheless, unless we do something to explain that figure, I can readily imagine an investigation in Congress or a "to-do" in the newspapers about it.

In World War II, of those rejected, 16 percent were for dental deficiencies. Here we run into a basic difference between dentistry and medicine. For the most part, the dental problems are not acute and the only time when many of our citizenry go to the dentist is when they have a toothache or other emergency dental problems. On the other hand, the majority of people frequently consult their physicians at the onset of the slightest symptoms and many go for periodic examinations. Also, in industry the habit of an annual examination has been encouraged along with pre-employment physical examinations, case finding and X-ray studies. The advantage of these types of examinations is obvious, not only in the early recognition of disease but also in assuring greater efficiency of people and in the prevention of legal complications. These complications arise very frequently and industry is left holding the bag unless they have proof of the patient's condition when he entered employment.

How destructive the effects of disease can be is only too well known to the military--malaria, the dysenteries, typhoid fever, and the acute infections have decimated both aggressors and defenders in the past and have vitally affected the success or failure of military campaigns. Our own experience with typhoid fever in the Spanish War may be recalled, and the influenza epidemic of World War I, with its mortality and morbidity in our own forces as well as those of our allies, and the enemy to a lesser extent, is still fresh in the minds of many of us who had to do with it intimately.

I put on this chart merely to show you the disabling illness of over three months duration in our population. It is self-explanatory. As you see here, it says when a person gets to be 40 years old he becomes

increasingly vulnerable to a disabling illness of three months. After 50, the curve rises very sharply, and many of you who try to get insurance when you are over 40 realize how difficult it is, and over 50 it is very difficult. Even in World War II, one disease, malaria, seriously jeopardized the mission of the entire South Pacific Command, and I quote:

> "Fighting efficiency of our most fine and splendidly equipped and trained divisions was destroyed or seriously damaged before the known preventive measures were actually brought into full play by higher echelon command support. To pinpoint the need for organization at high levels, there were 130 malaria control units in the Army working in the ZI and none in the South Pacific when this problem reached critical proportions." Again with scrub typhus in the South Pacific, ". . . two disasters alone cost the Sixth Army an estimated loss of 150,000 man days."7/

Similar savings of manpower can be made in civilian life. An outstanding example is the President's Program on Rehabilitation of the Physically Handicapped which was passed rather overwhelmingly by our preceding Congress. A considerable production reserve exists in this group, and even though this program temporarily requires more trained personnel than are now readily at hand, the return of this handicapped group to a productive or even self-care capacity is well worth the effort expended.

Charts 8 and 9, pages 16 and 17.--Let us turn now to some other charts to see what is happening to our population. These two charts, in comparison with the earlier charts on the causes of death, have to do with longevity. Our production population is this little group that you see here, not such a small group, but you see what a large group it is supporting. Here is our average life expectancy.

Today we have over four times as many persons over 65 years of age in the United States than there were in 1900. By our provisions for old age insurance, the 14.3 millions in this large group are all entitled to some form of state or Federal support. During the decade

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7/ Babione, R. W. Implementation of Potentialities in the Field of Preventive Medicine, Memorandum from Armed Forces Epidemiological Board to the Assistant Secretary of Defense (Health and Medical), 9 Sept 1955

AGE DISTRIBUTION IN POPULATION — 1953

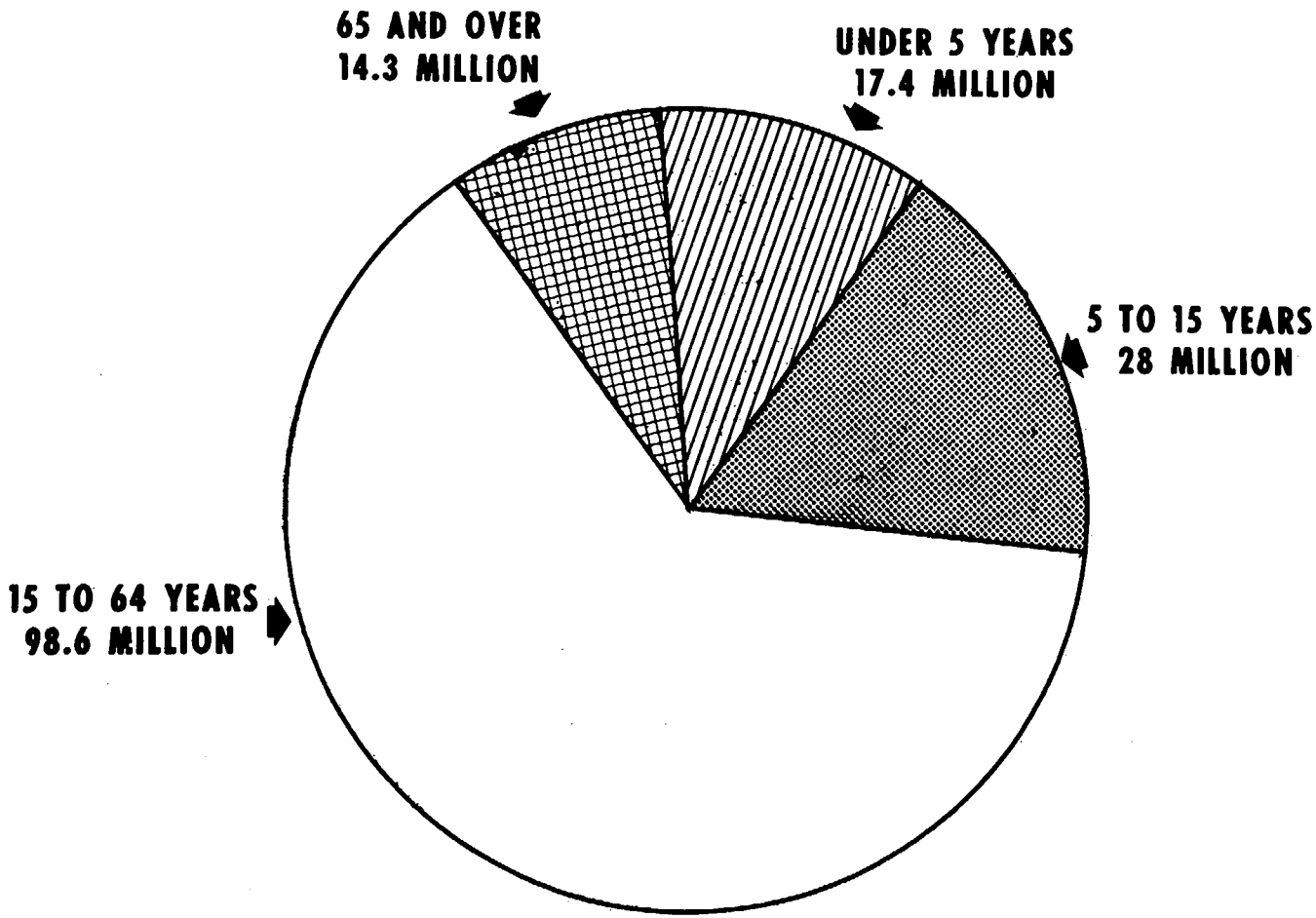

CHART 8

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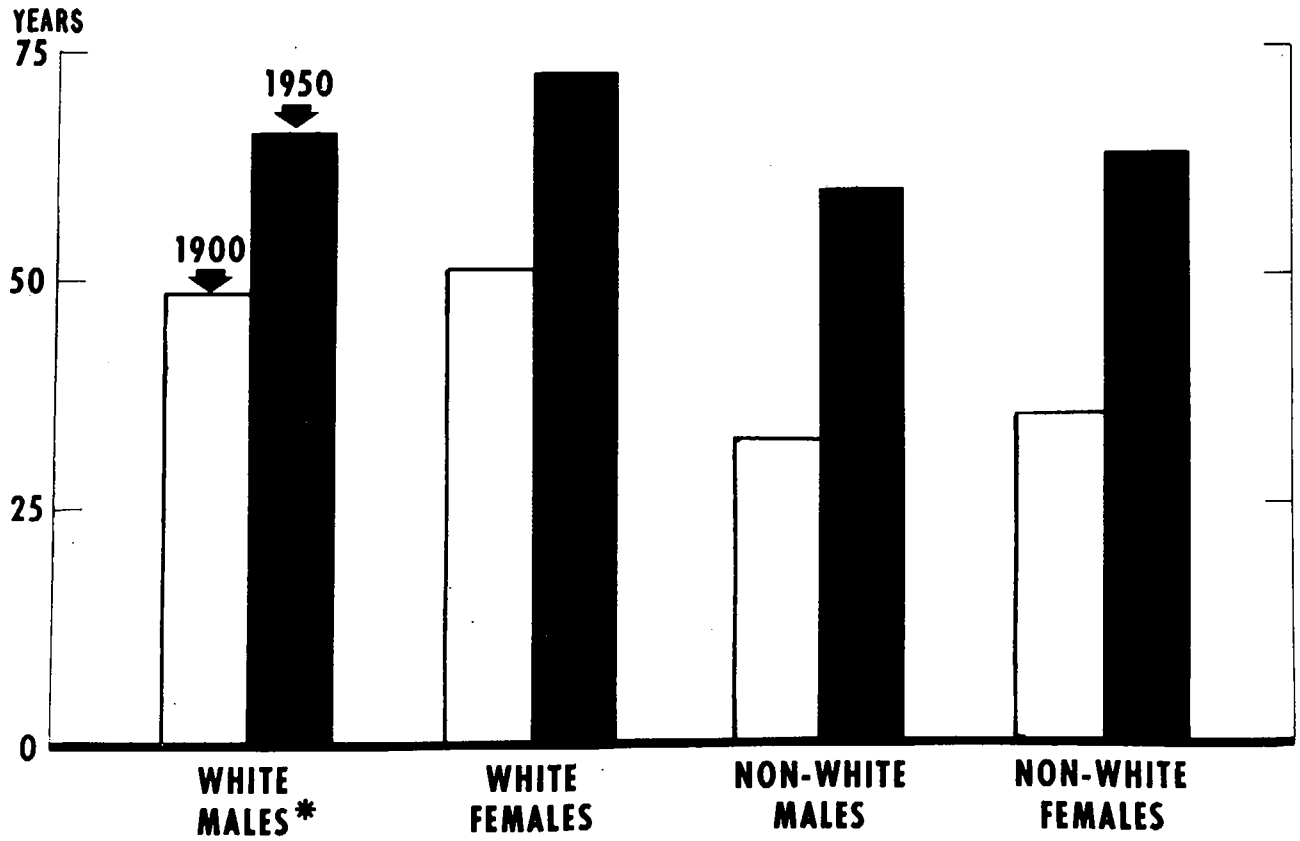
AVERAGE LIFE EXPECTANCY



* AVERAGE WHITE MALE NOW HAS LIFE EXPECTANCY OF OVER 67 YEARS

NOTE: THERE ARE FOUR TIMES AS MANY PERSONS OVER 65 YEARS OF AGE IN THE U. S. THAN THERE WERE IN 1900.

CHART 9

00345

1940 to 1950, for example, this group increased by 37 percent, while those under 65 increased only 13 percent. It is predicted that by 1970 there will be 21 million of the over-65 group, an increase from 9 to 12 percent. At the present rate, we are adding about 400,000 annually to this age group, yet 65 is the compulsory retirement age in most industry. At present, about 500,000 of these older people are living in nursing homes, hospitals, and as public charges.

Again, at present, due to the decreased birthrate in the 1930 decade, fewer males reach the age of 18 years each month than in the mid 1940's, as shown in chart 10, page 19, when the figure was about 100,000. In 1952, this dropped to 90,000. By 1956, however, there should be about 97,000, and after that there will be a steady rise. This means that during the period from 1950 to 1957 or 1958, our group of young productive adults will be at an abnormally low figure, whereas the groups under 15 and over 65 will be temporarily inflated. These figures combined with our rapid development in industry, such as electronics, television, automobiles, airplanes, etc., plus the demands since the war for new building and research, readily explain a temporary shortage of manpower and why the fields of private enterprise compete so avidly for this relatively small pool of young manpower. With the predicted increase in the over-65 group, unless better methods are instituted than now exist for their useful employment, we shall be paying 12 billion dollars per year in retirement allowances without getting anything in return.

And yet at the moment you have all been reading in the papers that Walter Reuther and Mr. Burns maintain that automation requires that we must have more time off, that there must be shorter work hours. That reminds me of the technocrats of about 20 years ago that some of you may remember, with the same fierce yell raised and the same howls. It reminds one of the industrial revolution when riots occurred in Britain in the early years of the 19th Century, and there was a very serious situation. I am mindful of the resistance to any new development, and yet as new development comes, tremendous advances arise in industry and there is a new industry to take up the slack.

Charts 11 and 12, pages 20 and 21.--Marriage rates enter into our consideration, too. They are fairly constant except for the period of the depression in the early 1930's, when there was a marked decrease in the rate, and again immediately after the war when there was an even more pronounced increase. There was less effect upon the birthrate than might have been expected, but the birthrate more or less

00917

CHART 10

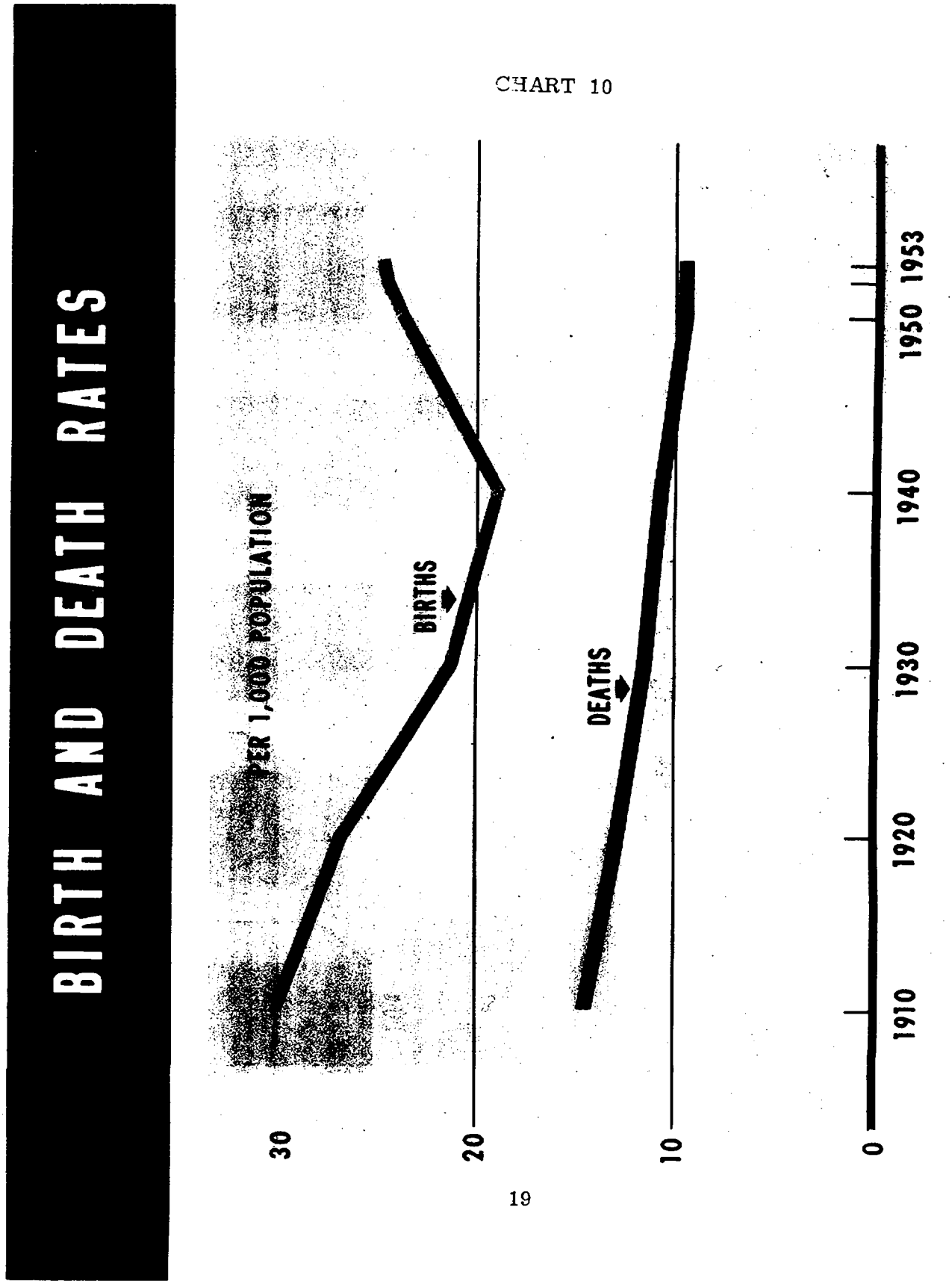
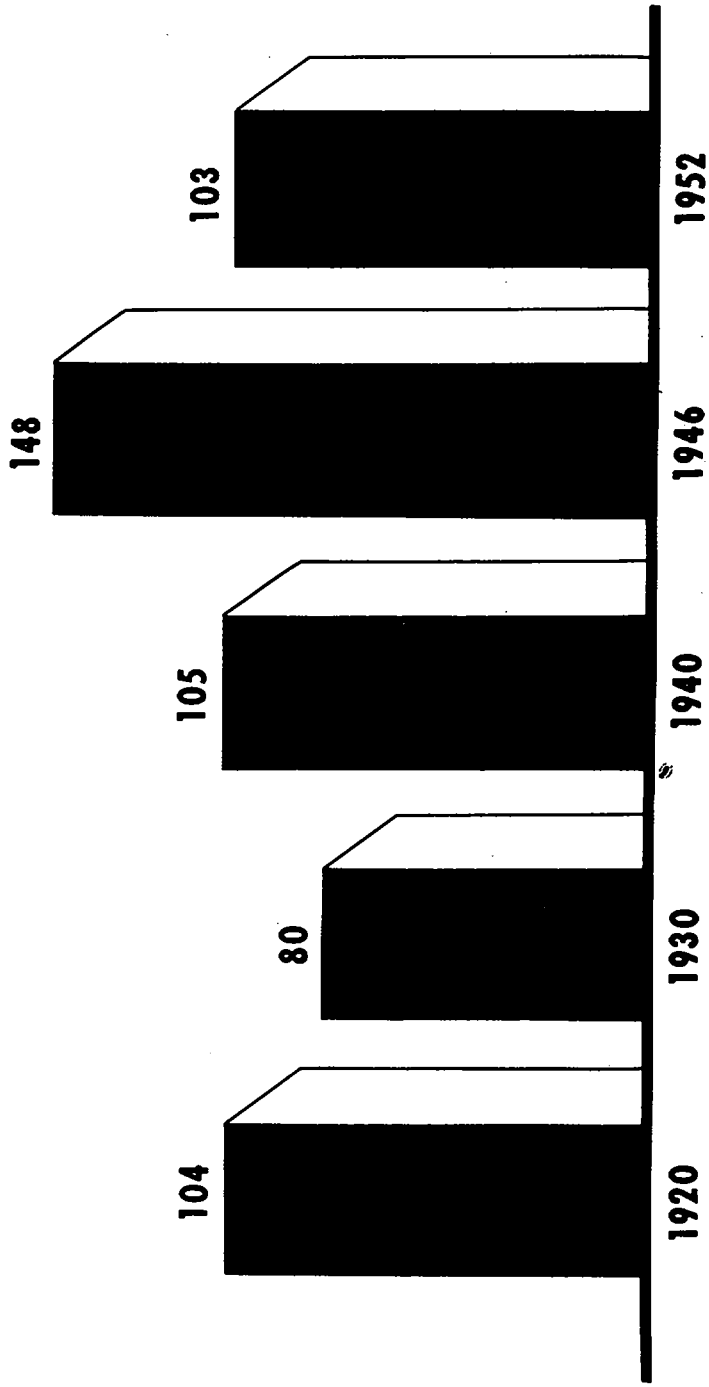


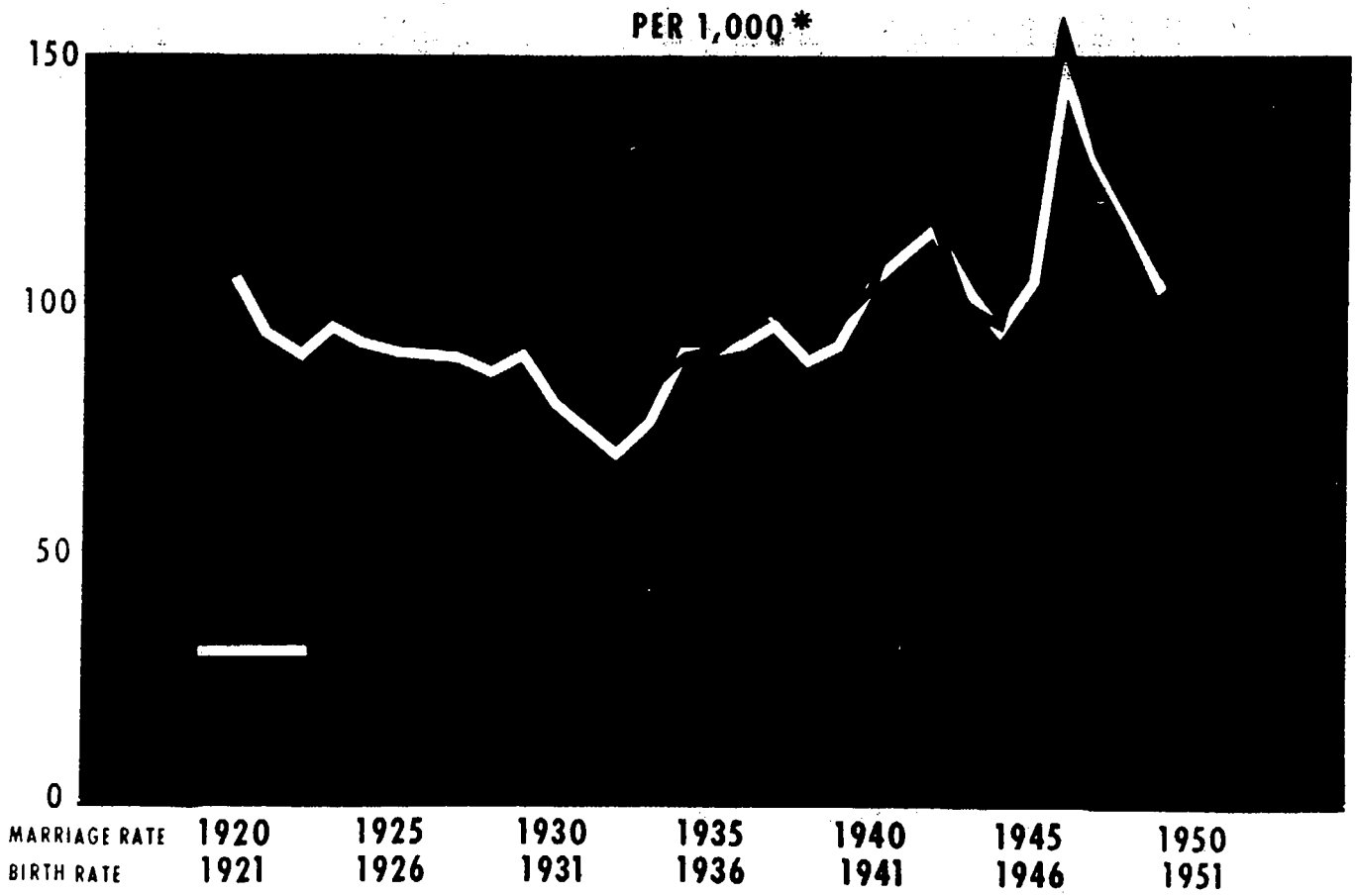
CHART 11

MARRIAGE RATE

PER 1,000 — AGE 17 TO 29



MARRIAGE AND FIRST-BIRTH RATES



* MARRIAGE RATE PER 1,000 WOMEN AGED 17-29 AND FIRST-BIRTH RATE PER 1,000 NATIVE WHITE WOMEN AGED 15-44

CHART 12

005419

follows the marriage rate--at least the announced birthrate. We are not taking into consideration the birthrate in some of our foreign countries in which we have a share, I believe.

Just to make matters still more confusing, however, a similar increase in the birth and decrease in the death rates occurred during the 60 years of the reign of George III, in England, from 1760-1820. Those were pretty old-fashioned days. They didn't have electric lights; they didn't have modern plumbing; they didn't have modern medicine. There were a lot of things they didn't have. During that period the population of Great Britain doubled. Although there were general improvements in living and this period contained the early years of the industrial revolution, the only significant purposeful medical development was the introduction of vaccination against smallpox by Dr. Edward Jenner at the very end of the 18th century. In our times I recall the open fights there were and there are still echoes of them in the choice of whether or not children should be vaccinated and there was great opposition to vaccination. So even that didn't come into effect immediately.

And for some unknown reason, other than slight general improvement in hygienic conditions--the plague, which had been so prevalent during the 14th to 15th centuries, had not reappeared since the last great epidemic of 1665. But, without any of the benefits which we now may claim for our increases in population, there in that tight little island the population more than doubled in 60 years.

Chart 13, page 23.--What is the status of medicine in our present civilization? This chart is inaccurate. We cannot get accurate figures. Dr. Rappleye, Dean of the College of Physicians and Surgeons, in his annual report just issued, showed the total number of physicians in the United States as 221,000. We must add to those another seven or eight thousand osteopathic physicians licensed to practice medicine in their various states. We must add an unknown number of foreign physicians who have arrived in recent years and have not yet registered with their state medical society. Nevertheless, that shows the approximately accurate number of physicians and the way they are divided. You see those who are in active practice; you see a large group continuing their training for three, to five, or seven years after completion of medical school as residents and you see the other groups.

In viewing this chart, one should consider that at present there is an added increment of newly licensed physicians over those dying of about 3,000 each year. In other words, we have deaths of 3,800 to

PHYSICIANS IN THE UNITED STATES

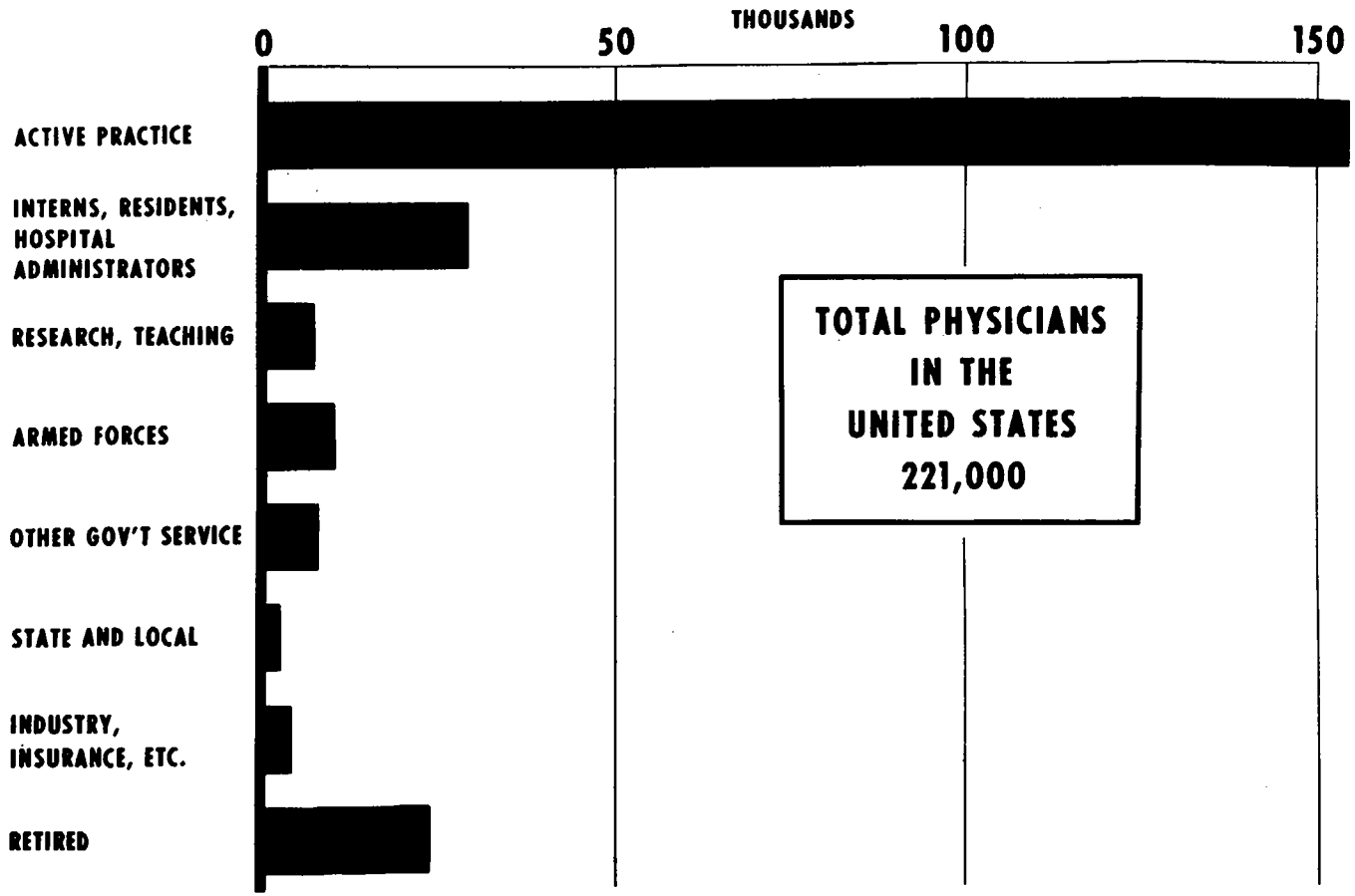


CHART 13

009421

4,000 a year, and we are now gaining about 700 new graduates each year. Also during the next few years six new full-time medical schools are in the process of establishment (chart 14, page 25). So by 1960 our total output of medical graduates should be about 7,700 each year. That is our present medical school situation and our output of doctors is increasing at an appreciably more rapid rate than is our population, but as now people do live to old age and we have larger birthrates, there are more demands made upon the doctor's attention.

Over the years there has been considerable discussion as to what are the civilian needs for physicians. I don't think there is any question that doctors are like other humans and they like to form and frame their lives nearer the fleshpots of industry and civilization, let us say.

Dr. Frank Dickinson, 8/ Economist for the American Medical Association, has considered the problem by medical service areas, analogous to the "trading areas" of the economists. In 1940 there was a population to physician ratio of 754 to 1; and in 1953 it was estimated to be 732 to 1, which agrees with the statement that physicians are increasing at a slightly greater rate than the population.

In our sparsely settled areas, 2,020 physicians were serving 4,700,000 people, ratio of 2,320 persons per active physician; whereas in the densely populated areas 80,865 active physicians were serving 56 million inhabitants, or 690 persons per active physician. Now those medical schools were all located in our best areas, naturally where all specialties are available.

I don't know as we can ever persuade people, physicians any more than we can other people, to go out and live in the sparsely populated areas. Let us take Point Barrow, Alaska. I was there last month. Who wants to go in and live at Point Barrow, Alaska? Maybe somebody retiring for specific reasons. Yet there were two physicians there, one in the Alaskan native service hospital, a young man brought in by the physicians' draft, working for Public Health Service. Strangely enough, working for the Defense Early Warning line, under contract with Western Electric, was an older physician. Both were very happy. Both would have been miserable had only one been there. The man working for the DEW line was probably trying to get cooled off because

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8/ Dickinson, Frank G., Distribution of Physicians by Medical Service Areas, Published by American Medical Association, 1954, 162 pages.

CHART 6

FULL TIME MEDICAL SCHOOLS IN PROCESS OF BEING ESTABLISHED

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in his younger practice he had worked in the tropics for the United Fruit Company.

Again, in Nome, I saw the same thing. There a middle aged physician was working for the Methodists, and the Air Force has a young physician there. They were both happy because of the other. People like to combine opportunities and friends.

In addition to the medical personnel, one must also consider the allied professional and paramedical groups. Chart 15, page 27, shows the allied professional personnel. The lower line, the nurses, means that half the group are registered nurses, some consider themselves teachers; others do actual nursing; the unshaded area is the practical nurse. To these we would add the well trained corps men of the Navy and those who have had similar, though not as complete training because of lack of time, in the Army and Air Force.

Charts 16 and 17, pages 28 and 29.--Here are some of the paramedical groups. If you look at these groups, you will be a little bewildered. They all account for the increase in demand on personnel and why our manpower pool has so many heavy calls upon it. I counted the number of paramedical occupations for which there is an active campaign for technical people staged by one of the health organizations in New York City, and there are 38 paramedical groups all demanding personnel. Here are some more of them. See how they are all growing just in the last decade, all entering into our economic demands.

In 1950, the total of these paramedical groups was over 238,000, plus another 11,000 sanitarians, medical record librarians and public health educators, some 72,000 more than were available a decade earlier. Our greatest increases have occurred in the medical laboratory technicians, pharmacists, optometrists, psychiatric social workers and the psychologist groups. If you have looked at a college curriculum recently, you have seen the tremendous development in courses in psychology and whole departments of psychology. Two or three years ago, the Ford Foundation organized a study in the colleges with respect to behavioral sciences. I read about them in the report of President Pusey of Harvard a year ago and wondered what in the world those were.

This tremendous expansion of courses involving human behavior and psychology is a tremendous drain on all workers. I hope there are none of you here who are psychologists or sociologists. That is true just the same, and we are worried today about the lack of graduates in science in our schools and colleges.

ALLIED PROFESSIONAL PERSONNEL

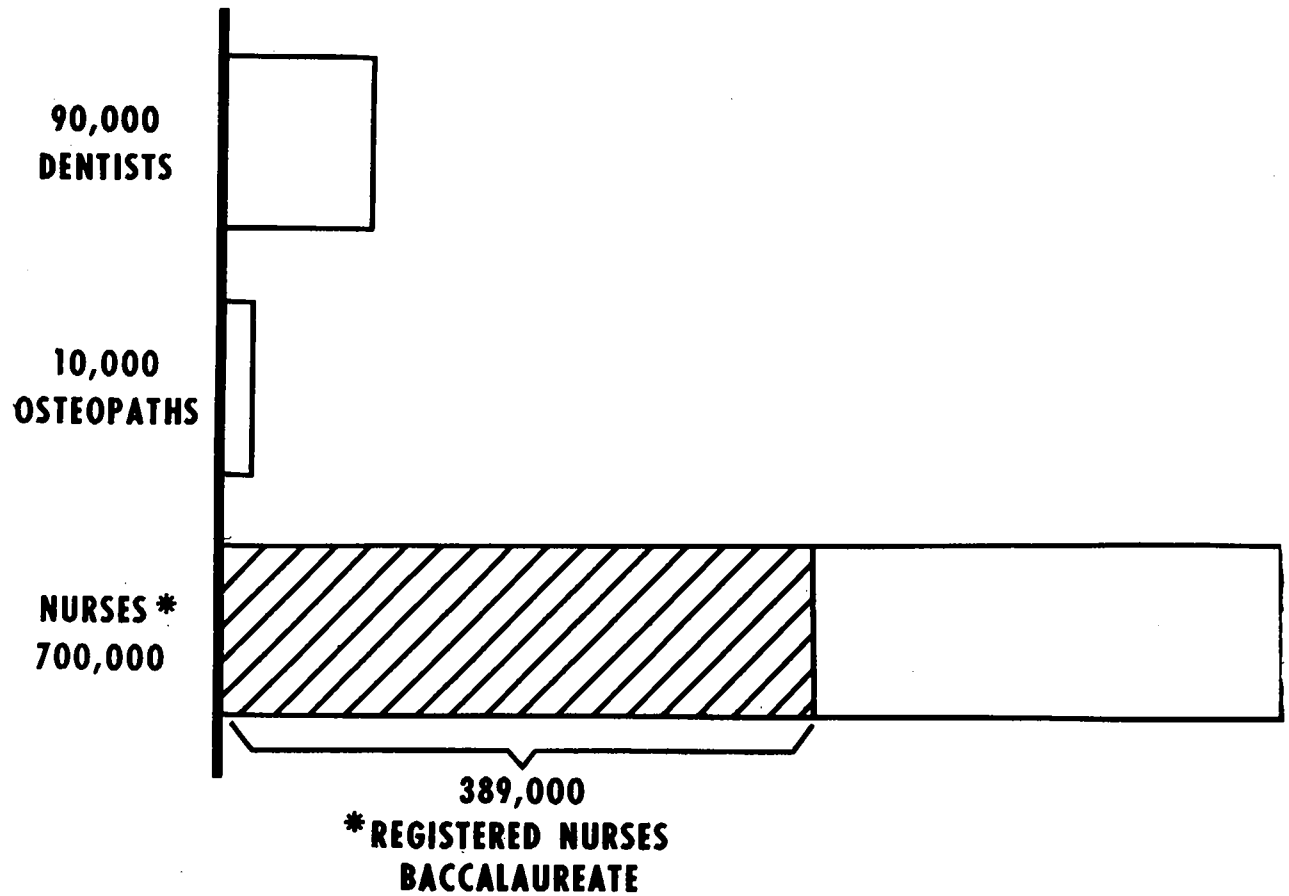

CHART 15

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PARAMEDICAL GROUPS

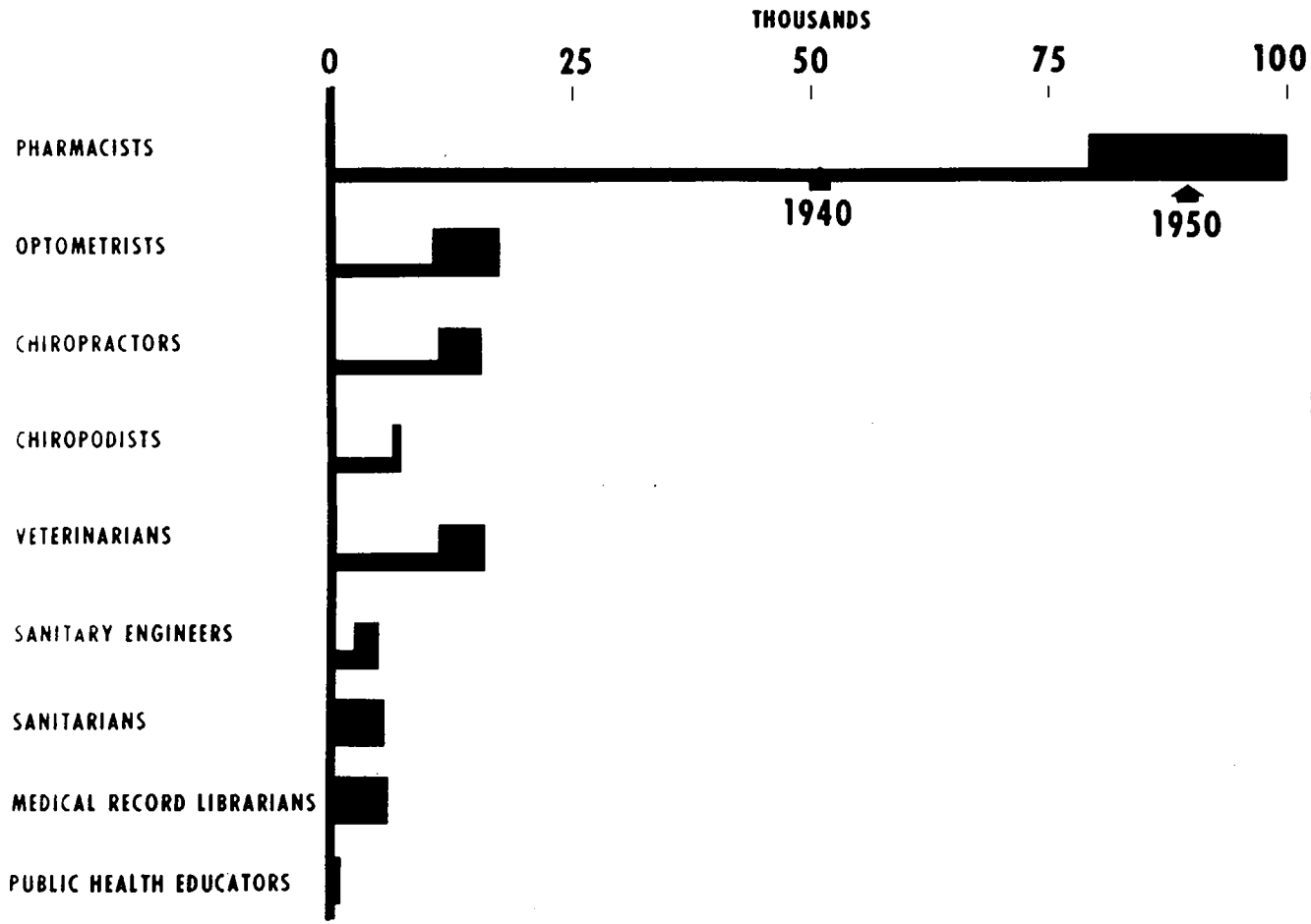

CHART 16

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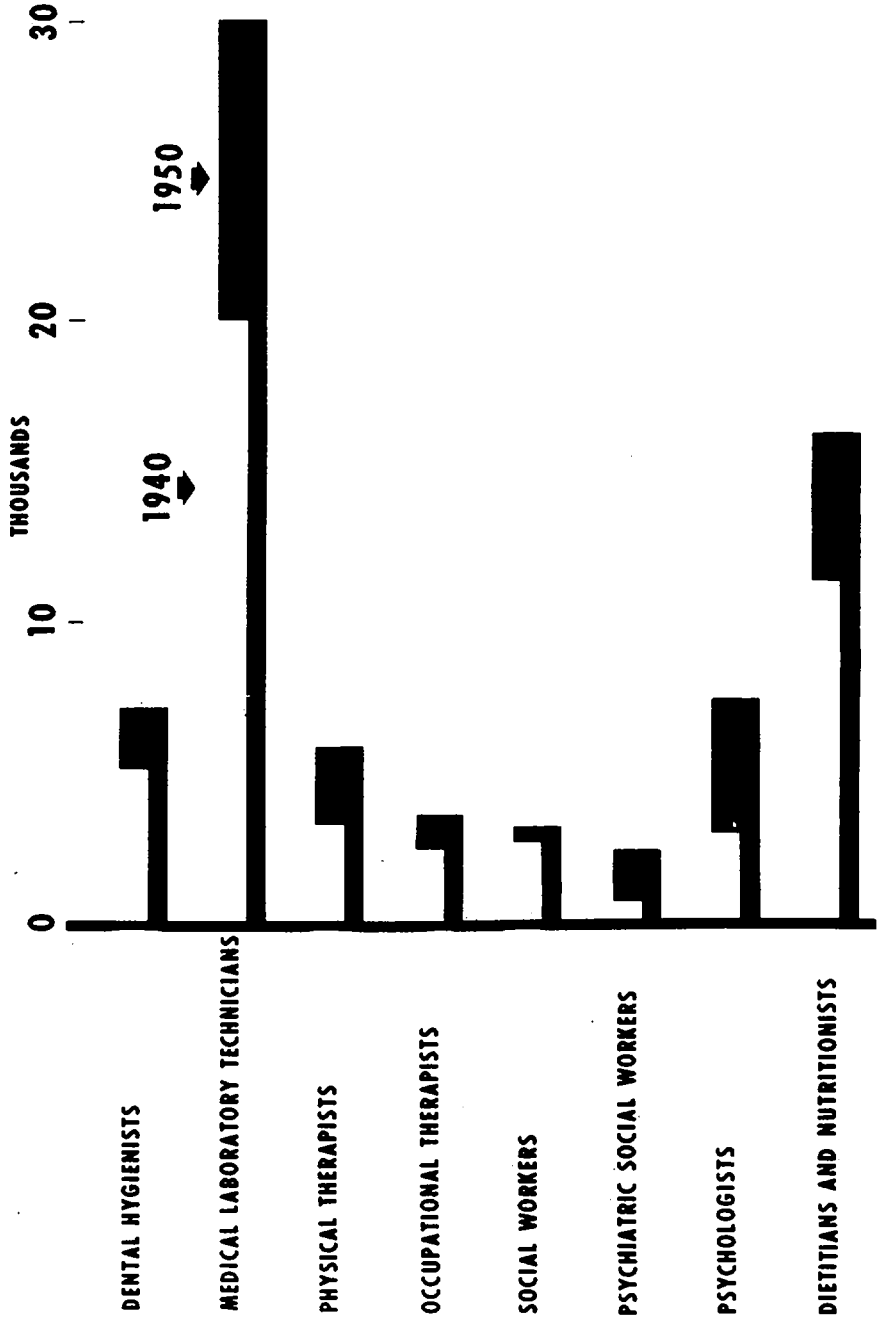
CHART 17


THOUSANDS
30
20
10
0
1940
1950
DENTAL HYGIENISTS
MEDICAL LABORATORY TECHNICIANS
PHYSICAL THERAPISTS
OCCUPATIONAL THERAPISTS
SOCIAL WORKERS
PSYCHIATRIC SOCIAL WORKERS
PSYCHOLOGISTS
DIETITIANS AND NUTRITIONISTS

In 1952, let us consider the medical bill in the United States. There has been a constant change in character and development in medical education and practice, particularly there are enormous expansions in research. Research is the word of the day. There is no question about that. You all think of it and hear of it everywhere. And it is extraordinarily important, and it must be fitted into the rest of our civilization.

Chart 18, page 31.--For example, here is the total medical bill of the United States, which has increased in the span of two years by two billion dollars. As medicine has advanced and population has grown, our standard of living has become higher, and there are more demands on the medical profession and medical facilities.

Chart 19, page 32.--In 1952, 175,000 individuals were engaged in research in this country, only 15,000 of whom, as you see, were in basic research, and we were spending 3-1/2 billion dollars. From the medical standpoint, our bill today is well in the neighborhood of 200 million dollars annually, just in medicine alone. In 1940, the Federal Government contributed 25,000 dollars for medical research, whereas in 1954, its contribution was in the vicinity of 50 million dollars for medical research in our medical schools.

As I mentioned, we change our pattern to meet the growing demands, and as we do more research, the whole pattern expands still further. What we take for granted now, however, could change suddenly in the event of major catastrophe or destruction. In this country, we have become accustomed to discard from our thoughts, almost, the dangers of infectious diseases, impure milk, contaminated water, poor sanitation and hygiene, and concern ourselves with the problems of aging, cancer, and other chronic diseases.

But let a major disaster occur, which happened in New England and even though it is only a question of sewage and water supply, see what would happen. We would have to turn back and think in terms of the earlier 20th century. With the higher rate of infectious diseases, there wouldn't be so many old people living and infant mortality would go up again. All those things we take for granted today would disappear and we would get down to the survival of the fittest. Who are the fittest? None of us know if we ask ourselves honestly.

In order to protect our future and insure a constant healthy state in our economic mobilization, we must continue to stress potentialities

CHART 18

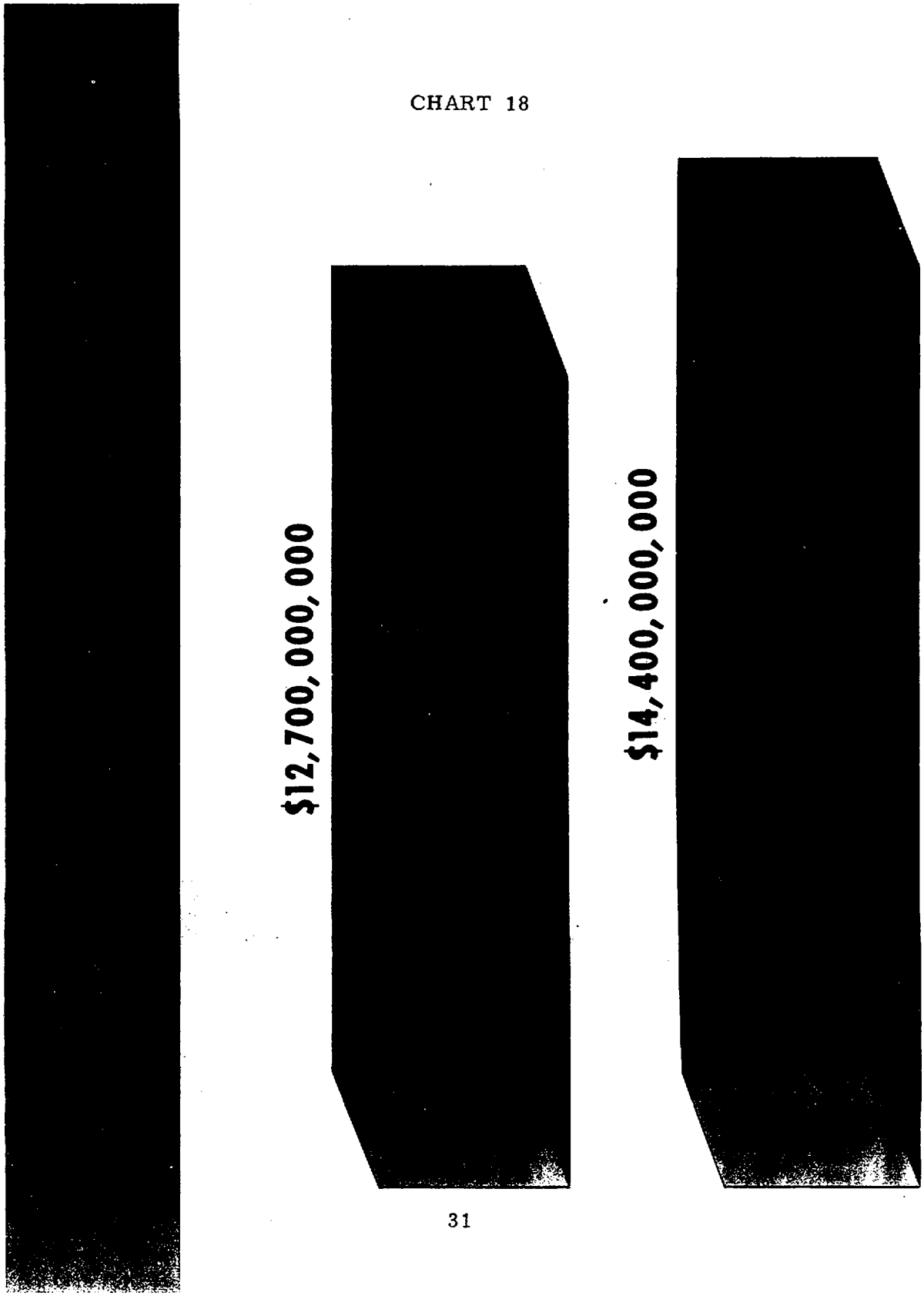
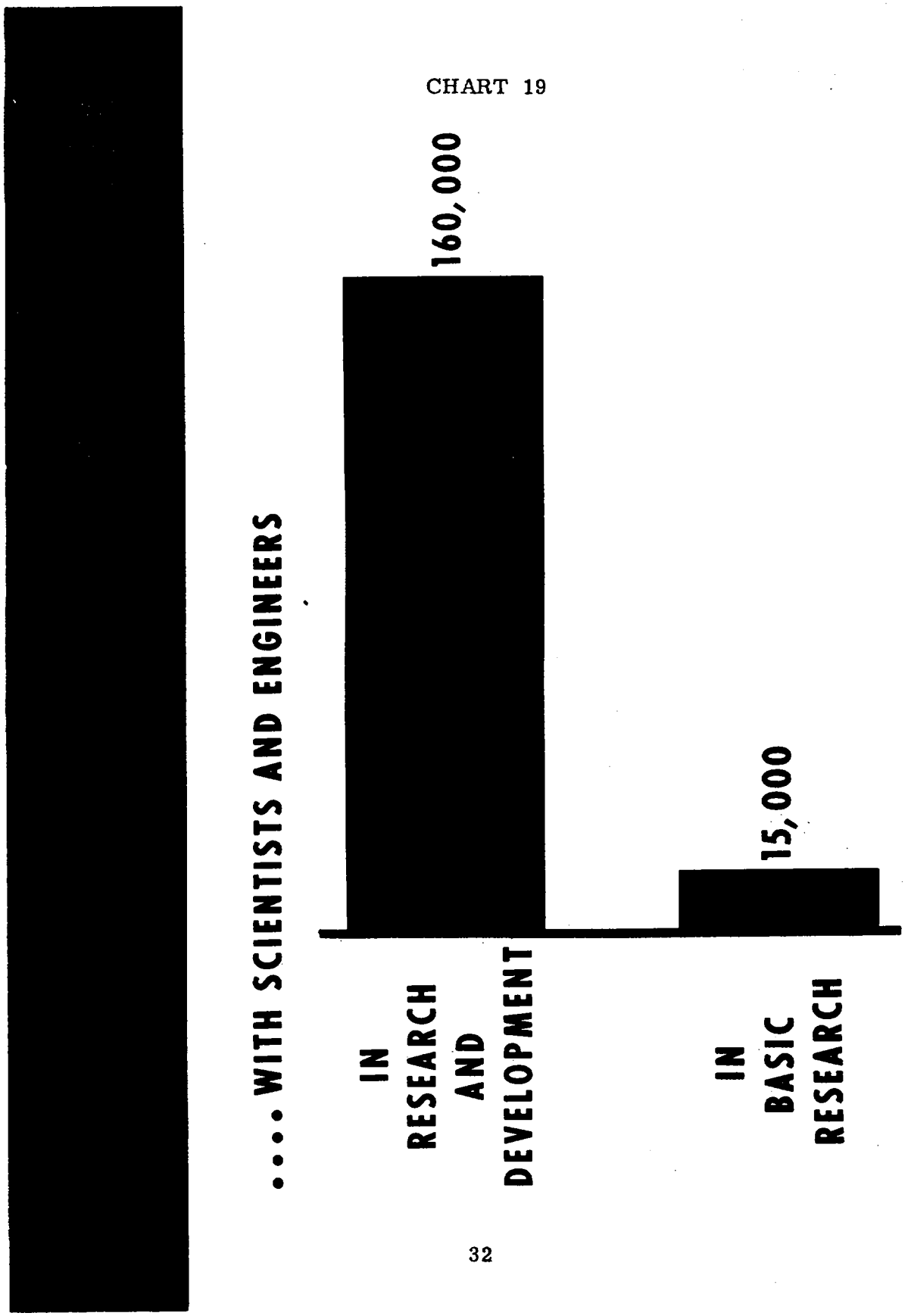


CHART 19


• • • • WITH SCIENTISTS AND ENGINEERS
IN RESEARCH AND DEVELOPMENT
160,000
IN BASIC RESEARCH
15,000

in the field of preventive medicine. That is clear for the following reasons:

"a. Technical advances and promising new approaches in the field of preventive medicine are developing at a rapid rate.

"b. Newer methods involve increased technical complexity with the requirements that a nucleus of highly qualified personnel must be available to advise on the disease problems of the operating forces in all parts of the world.

"c. The technical skills required are and will continue to be in short supply to such an extent that it will be impossible to staff all individual areas and commands and yet ineffective to staff only part of them."9/

What are some of the answers to these questions. I haven't any idea any more than you have because some of them are almost unanswerable at the present time. We do know that we have a growing population with a correspondingly numerically larger, but proportionately smaller productive segment. We know that there will be an increased number of births and the birthrate itself may increase somewhat. Who knows what will happen if the working men cut down their time from five days a week to four days a week? What will they do with all those spare hours? Well, that's a very practical question.

On the other hand, what is more important to us is our increasing longevity. I have told you what the nun said. Only last Saturday evening I talked with a young medical resident, now in research, who argued it is not necessary to accept that concept; perhaps, after all, we don't have to die. Whether that is an optimistic or pessimistic view, I don't know. Certainly we know that longevity is rising. I showed it as 68 years plus. Now it is reported in the vicinity of 70 years.

As we develop more effective methods of medical practice, industry is constantly projecting new problems to be solved and placing upon the medical profession increased responsibilities in preparing man to live with the demands of a modern civilization. As these

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9/ Babione, R. W. Implementation of Potentialities in the Field of Preventive Medicine, Memorandum from Armed Forces Epidemiological Board to the Assistant Secretary of Defense (Health and Medical), 9 Sept 1955.

questions are propounded, there will be further exploration and research and, in turn, still further calls on the manpower potential, with a further rise in the paramedical groups.

As the chronically ill and physically handicapped are restored through rehabilitation to active and productive lives and as the over-65 age group increases, ways and means must be found for active participation of these senior citizens in our economy.

I think those are the only certainties that we can draw as we look at all these zones, and I haven't any answer. So I have to come back to the same question that my professor of sociology asked me almost 45 years ago, "What is progress?"

Thank you.

QUESTION: I have a definite feeling and I am sure a great many other people do that we generate a lot of our mental disorder and psychiatric problems in the homes and later on in TV programs, and so forth.

DR. BERRY: I was just saying outside that mentality--well I see it on all levels. We all like to think all the world is a little queer "except me and thee, and sometimes I think thee is a little queer." But I think you have a concrete point about television. As our civilization increases and as we have more things on our minds, and are under greater pressures all the time to meet a problem, to meet a deadline, the chances of mental break, temporary or permanent, may be greater. Look at the ulcer problem, which I didn't mention, yet it is a good one, the rising incidence of ulcer of the stomach and the first portion of the duodenum not only in the Armed Forces but among civilians. It is now one of the most common operations in surgery.

QUESTION: It is my understanding that the medical examiners, who are at the induction stations, in arriving at decisions as to whether a certain character might be acceptable for military service, very often ask themselves this question: If I make a mistake in this character, how much is that going to cost the Government in terms of medical care and pensions? Obviously we are losing a lot of people who could do a good job in the armed services. What changes, if any are necessary in the pension system? What is your thinking in this area?

DR. BERRY: I asked that question the other day in our own group about this whole problem of physical standards. Again, we are under

pressure. There are two theories involved: One is that we should deal with quality; the next is, we should deal with quantity. We sort of neglect the quality in favor of the quantity.

What can we do about pensions? Change our mores, our habits, our moral fiber, and have our examiners backed up. When you come into that, you promptly run into the various committees that you know about and the local pressures. There we meet human frailty.

We are running a little program to try to provide the Armed Forces with trained doctors over the next few years. It involved the selection of 300 graduates from medical school only last year. It involves the selection of 500 this year for full residency training. I never knew that those small numbers had so many strongly vocal friends in the Congress as to whether they should be deferred and why they should be. That is reasonably understandable from the Congressman's standpoint. He gets all the home folks coming in to visit him and putting it in his lap. Isn't that basically our personal problem, the honesty to back up an honest examiner? I haven't an answer for that one.

QUESTION: From the charts and in your speech you mentioned that mental illness was a number one health problem, that more than half the beds in our hospitals were filled with mental patients and you quoted staggering statistics. Yet I notice out of 221,000 physicians only 10,000 were in the psychiatric and paramedical fields. Isn't this disproportionate and isn't it a cause for less than complacency in the balance of the type of doctors we have to handle the most important illness?

DR. BERRY: How are you going to order men into something?

QUESTION: I am not thinking of ordering.

DR. BERRY: Well, they don't like to go into psychiatry, just like lawyers like to take up certain types of law. That's really the reason. Nevertheless, as I pointed out, the trained nurse doesn't necessarily make the best nurse in a psychiatric hospital. That is why I knew so much about Dr.Ginzberg in the province of paramedical utilization. It was brought out that the trained nurse is sometimes a handicap in a psychiatric hospital. You want an attendant who is interested in the psychiatric problem. I use "attendant" to mean a nurse who is interested in that problem, who is quick witted herself and adaptable. That group is growing. The professional group, though growing, is not growing as much. There is a very slow rate of growth in the professional

psychiatric group. The workers in psychology and mental health hygiene are growing, so there is a help there. Many of these have aided this over-65 group. No man is going to deny that as people grow older they suffer, many of them, mental changes, mental deterioration, which is a problem just for care and tactfulness.

So that is why this older group is growing out of hand. It hasn't been broken down, but the growth, I am sure, in the mental cases in the group over 65 is going up, while mental cases in the younger groups, where the conditions either of cure or of recession have changed, are not. So we are dealing with a group of older, deteriorating people.

QUESTION: I am a member of the American Psychological Association. I apologize for being a drain on manpower.

DR. BERRY: You see, we just need more.

QUESTION: My question has to do with the increasing amount of mental health which we have to take care of, not only from the point of view of increasing cases but from the point of view of the increasing recognition of cases that we didn't have in years gone by. As the syphilitic type of case has dropped out and these things have come into being there has been a question as to whether the psychiatric treatment by the trained medical doctor should require further graduate training in specialty rather than for an expansion in that particular type of training. In recognition of the increased problem and the medical school problem, so many people don't have the time or money to go the additional year or two to specialize, is there any change in that situation?

DR. BERRY: With the greater emphasis on normal psychology and the whole method of normal psychology, and the demands on medical schools so great, I don't know, but I think some of the psychology departments of the medical schools are more forward looking. I agree with you, there has been too much emphasis placed, particularly in those emotional aberrations which may be temporary, or the imbalances, so that often purely normal psychology to meet a different situation with no real mental disease may be neglected.

QUESTION: Would you care to comment on any work that is being done toward a national plan for the control and distribution of medical manpower in case of mobilization?

DR. BERRY: I wish I could comment more effectively than I am able to. The armed services and our offices are trying to go ahead.

Operation Alert last year showed a very serious gap in that whole problem. When Operation Alert was staged, three of us from my own office left Washington for Camp Richie. One of the Surgeons General was notified. and the other two Surgeons General and their offices were told to go and sit in their automobiles.

Now that is one of the problems that is so difficult to face. Until we told them that they were going to receive a lot of fake orders from us, they knew nothing, had had no instructions upon their functions in Operation Alert. We have been working with the Office of Defense Mobilization, with all the Federal Services, the Army, Navy and Air Force, Public Health and Veterans' and with Federal Civil Defense.

Now the emphasis has been placed on Civil Defense, as all of you are aware, in making these plans for the civilians. I am reading a paper next week at the American College of Surgeons, dealing with this whole problem of the handling and treatment of mass casualties, more or less from the organizational standpoint, and so far we are instructed to give the Federal Civil Defense the major role in handling the civilian casualties.

I don't think it will work. It never has in the past because doctors are so completely independent that a doctor from Emergency Hospital here won't take any orders in civilian disaster from one from Georgetown Hospital or from George Washington Hospital, and I think we are going to have to come back to the armed services being in control.

We have been given the "go ahead" sign from Dr. Flemming and in a more hesitant manner by Governor Peterson that we must work out some plan and have it in readiness. Something has been done. Not as much has been done as should have been done, due to the multiplicity of agencies, not knowing which one is going to take over, and there is a strong belief in the states themselves that there should be added to the National Guard a state militia of older and less qualified people. It has been impressive to me to see that in Great Britain their very strong civil defense organization has been placed as an integral part of the Department of Defense, which was announced three weeks ago in the newspapers.

QUESTION: I would like to ask a two-part question: (1) I am interested in the present procedure for drafting medical personnel into the armed services; and (2) Based on the theory that we have been exposed to for the Army as a whole to the effect that we should use less

compulsion and more honey treatment in getting the Army staffed, it would appear that probably the hard core of the whole problem is the medical staff of the Army because it is certainly a very unattractive profession for medical personnel. Do you have any ideas on how we could get more volunteer medical personnel? And by the same token more medical personnel interested in the Army rather than getting out of the Army to go into practice?

DR. BERRY: You should talk to Major McKenzie about that. He has been in the personnel department in the past four years. We are merely brokers in getting medical personnel.

Let us take the draft per se, leaving out the few volunteers and I might say that number has increased slightly. The Armed Forces needs doctors. They don't have enough to meet their needs.

Each service submits to us its needs. We review them and sometimes discover loopholes one way and sometimes in others, because we then have to present them to the National Health Advisory Committee, headed by Dr. Howard Rusk, and we do not like to be caught in error when we present it to that committee because naturally it brings the services into the wrong light. The committee then has the power to advise upon that number that will be required in January, let us say. They either approve it or they disapprove the request. If they disapprove it, we go back and haggle and work it over again.

If they approve it, we then send it to the Secretary for Manpower, saying we have approved it. Then he passes it on to Secretary Wilson who sends it to the President. The law requires a personal okay and acceptance by the President before those doctors can be brought into the service. So we are just the brokers.

Now a great many young men finishing medical and dental schools want their service immediately. They finish in June and would like to go on duty in the next couple of months after vacation. So this year and next, which is the first time this has happened, the National Health Resources Advisory Committee has authorized an overage to satisfy the desires of those men. Of course, that is the only natural thing to do. If a man wants to come in today, you can't say, "You can't come in because we are over just now."

As to attractiveness, since last June we have had a task force working on career incentives and it has met with more or less favorable

response on the part of the services. As you say, when the pastures are green over on this side of the fence, most people like to feed in the green pastures.

Let us think of some of the other professions. The young lawyer starting practice after three years in law school, starts in New York City in a large firm, or in San Francisco, it is the same, receives 3,800 dollars a year. That's after three years of law school. He then increases his salary at the rate of 600 dollars a year as long as they like him, up to a certain number of years, which I think varies with different firms. Then they either take him into the firm as a junior partner or take him into another pasture.

The average Ph.D. going into engineering or physics in General Electric, Dupont, or any of the big companies, will start at 5,400 dollars to 6,000 dollars. In the study I told you about of behavioral sciences at Harvard, they were rather astonished themselves to find that the average time for a Ph.D. is seven years, post baccalaureate. The reason for that is that many Ph. D.'s take time off to take advantage of teaching to pay for advanced study. So, at least with doctors, it takes about seven years. Therefore, they start at 5,500 dollars to 6,000 dollars a year, which is more or less the salary of a first lieutenant.

In order to help the doctor needs in the armed services and to attract more civilian doctors to do contract work, the Civil Service recently cooperated with the armed services by raising their pay scale so the young doctor now can decide to go into Civil Service for his first year, in which he will make from 7,200 dollars to 8,000 a year. So the minute you correct one thing, another one gets out of kilter.

The incentive group has taken cognizance of that and a program has been proposed which has met with favor in the Personnel Division, G-1. It was originally proposed by the Navy to take these doctors in at one grade higher to give them credit for the extra years of their doctorate. There were certain other inducements, such as a reenlistment bonus similar to an ordinary reenlistment bonus. This is an increase in pay for three, six, or nine years, with provisions for getting out of that contract. In that way, it is hoped that more doctors will enter, particularly that more will remain in the service.

The great difficulty comes, as you know better than we, when a man reaches field grade. It is about that time that his children become

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...ses increase. That's where most resigna-
...ders, lieutenant commanders, majors, and
...d more may stay in.

...eresting development has recently come to light. Four
...s graduates at West Point want to go to medical or dental
...imagine the same thing might happen at Annapolis. We have
...l and several other schools more ROTC people than the services
...handle while we need more doctors. These people are well motivated
from a military standpoint. The Armed Services Committee does look
on that with favor, but they think with certain restrictions something may
be done along those lines. So work is being done to try to make the mili-
tary field look comparatively green in comparison with private pastures
at the moment.

QUESTION: Would you care to say a word about the English ex-
periment in socialized medicine and what influence, if any, it happens
to have there?

DR. BERRY: Where does socialized medicine start? That is such
a loose phrase. For years, starting with the county and town, the
towns have had pest houses and quarantine for taking care of minor
epidemics of smallpox, diphtheria, county homes; then we had tuber-
culosis programs which everybody was in favor of. When I was a child
the tuberculosis hospitals were merely places where people with tuber-
culosis could go and die. Now the tuberculosis hospitals are folding
up because of the change in treatment. Our mental institutions are
largely state supported today. All that is socialized medicine. That
has been growing for a hundred years, I guess, little by little.

Now you see this figure for Government supported research in the
days after World War I, going back to Lloyd-George, or even back to
Bismark. The concept of insurance started in Germany, and although
it was put forward as a method of doing good, of course it had its
political motivation at the same time of gaining votes.

That spread to England, and some of you will remember the violent
campaign of 1911 when Mr. Asquith was Prime Minister, and the
epithets that were hurled back and forth then in socialized medicine.
That was to build up a liberal party.

Then after World War I, the funds for taxation had been so heavy
that there was a demand upon Government for further support of

hospitals and medical schools, and the Government rendered heavy support and really took very heavy first mortgages on a number of small hospitals. I think they were called county hospitals.

Then World War II came around with the bombings and civil defense and they decided everything should be nationalized. Naturally those were Government hospitals and they became the Government hospitals, and it was but a step after that for the Labor Party to put in as one of the plans complete medical care, which they did successfully as you know. They did it so successfully that they had to back away from some of it. Now they are charging for medicines, for hearing aids, for false teeth, for spectacles, and for arm and leg prostheses. One of the hardest things to deal with was an artificial leg because the minute a person received one, he would go out and pawn it or sell it and come back for another one. And the hearing aid is ready money. So those are some of the realities that Great Britain had to face little by little. It is not as completely all-encompassing as it was at first.

I understand, although from secondhand conversations, that they are happier with it than they were. It has been a matter of settling down and digesting.

We have gone at it in another way. But I read the report of Dr. Rappleye, who is the Dean of the College of Physicians in New York at the present time, that we have 103 or 104 million in this country with some type of medical insurance. Dr. Hawley, during the war, expressed it very simply when he said:

> "With the increased cost of hospitalization at about 20 dollars per patient per day, where we get into such realms as that, it is just like taking out fire insurance. When you lived in a rural neighborhood, if something happened, the neighbors would come in and help you, but when things became more complicated, you had to take out insurance. Neighbors don't come around to help you. Hence, the development of insurance has now gone one step further and developed a major medical insurance which you can take out for a very small price."

You can set major medical insurance for payment in months or years or in payment of dollars and cents, 5,000 dollars, 10,000 dollars, or both. That is the way we have gone at it. I wouldn't say that we have not been social minded because we have had a great expansion, of course little by little.

QUESTION: I would be interested in the Department of Defense philosophy behind an apparent decreasing of medical care for enlisted personnel at a time when we are really scratching around and spending money to increase enlistments, and I think dependent medical care is probably one area where we could gain some benefit.

DR. BERRY: Now you will have to define dependent and enlisted medical care. I directed only yesterday a check around my office to see how many complaints we have been receiving about care for military personnel.

QUESTION: May I qualify that, sir? I guess I meant to ask about dependent care.

DR. BERRY: All right. Now let me remind you that in 1939 we had Armed Forces of approximately 300,000. They were not in the public eye as they are today. Every move they made was not watched, criticized and applauded as it is today. There was no care provided for any family of enlisted personnel below the first three grades. There was an entirely different problem. Now we have suddenly found ourselves with forces of approximately three million, and there aren't enough volunteer doctors or otherwise to fill these requirements. And everybody gets married, and you see what happens to the birthrates after some of these marriages. It is just normal. That has propounded a tremendous load with a certain amount of just criticism. That is the reason for the dependent care bill.

The bulk of the load in the military hospitals is obstetrics. Obstetrics is 66 percent of the load. The hospitals doing that have more than they want. People go into West Point from Schenectady and upstate New York. That is not quite normal or natural. The West Point hospital would be just as happy if they didn't have to handle that group. They would like to handle the group at West Point and that's all.

We hope the Congress will bring out a "dependent care" bill so there can be free discussion and a proper bill worked out. Three bills have been received in Congress for almost three years now. We have had personal conversations with the Armed Services Committee. Last year they said they would bring them out for discussion, which they didn't do. They wanted it rewritten in May. If you start rewriting a bill in May, you can't get it introduced in Congress because it is too near the end. It has to be reintroduced. They promised they will bring it out this session.

This is an entirely new situation we are trying to meet. Bedwise, let us say 13 to 16 percent are occupied by dependents; out-patient-wise, about 40 percent is occupied by dependents; 66 percent of the total care is obstetrics and pediatrics. So there is a certain amount of opposition. Over 16,000 babies are being born each month in the hospitals of the Armed Forces and that is taking away the primary mission of those hospitals. It is not giving other people fair care. Even today, with our rapid ambulation treatment, you like to keep the mothers in the hospital for about five days. In some of the Armed Forces hospitals as well as some of the large city hospitals that has been cut to three days. That is not good care. Therefore, we would like to have legal arrangements for handling this situation.

COLONEL BARRETT: Our time has run out. Dr. Berry, on behalf of the college, I wish to thank you for a very interesting presentation.

(13 Jan 1956--250)K/ibc