

ADDRESS OF THE HONORABLE JOHN E. FOGARTY, M. C., SECOND DISTRICT, RHODE ISLAND AT THE ANNUAL CONVENTION OF THE ASSOCIATION OF MILITARY SURGEONS OF THE U. S. AT THE MAYFLOWER HOTEL, WASHINGTON, D. C. ON NOVEMBER 1, 1960.

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AGING AND MEDICAL PROGRESS THROUGH RESEARCH

It is particularly gratifying to me that this association of distinguished military medical men should call upon me to speak on the general subject of aging and research. I am well aware that the problem of aging is not one of primary concern to the military services. Your medical research programs are quite properly oriented toward other problems, such as preventive medicine, psychophysiology, surgery and shock, and the protection of the fighting man from the hazards of a wartime environment. It is your concentration on research in these areas that has made today's fighting man the healthiest in our history, and has enabled the military medical services to achieve such a splendid record in your assigned mission, "to conserve the fighting strength."

Yet, just as you, in the course of your researches, have made contributions to civilian health and medicine which have benefited all mankind, so investigators in aging research may produce results that could have far-reaching implications for us all.

I note that your organization also includes members of the staffs of the Veterans Administration and the U. S. Public Health Service. Both of these organizations are deeply concerned with problems of aging and are focusing major research efforts on these problems.

Others of you are reserve officers and National Guardsmen and you, too, are concerned with problems of aging.

It has been a rewarding experience for me over the years to be in a position to be able to support and to expedite a considerable amount of legislation which has helped to improve the health, welfare, income, and housing of our older citizens. But we have never done enough; we have never attacked the problem as strongly as we must; and so, a couple of years ago I

introduced a bill calling for a White House Conference on Aging in an attempt to put the spotlight on this increasingly difficult national problem. The Act was passed by Congress and signed into law in September 1958, and provided for the convening of the Conference in January 1961.

The White House Conference on Aging

I must confess that I am proud to have played a leading role in the passage of this bill calling for a White House Conference on Aging. The Conference, as I am sure you know, takes place here in Washington in January. I think the Conference may be one of the most significant in the history of this nation--socially, economically and medically.

I would like to re-state here some of the purposes of the Conference, with you bearing in mind that the policy of the Congress is that the Federal Government will work jointly with the states and their citizens to promote a better life for our older people, the emphasis always to be on the right and obligation to free choice and self-help in planning their own futures.

Here is a declaration of purpose as stated in the Act:

- (1) assuring middle-aged and older persons equal opportunity with others to engage in gainful employment which they are capable of performing, thereby gaining for our economy the benefits of their skills, experience, and productive capacities; and
- (2) enabling retired persons to enjoy incomes sufficient for health and for participation in family and community life as self-respecting citizens; and
- (3) providing housing suited to the needs of older persons and at prices they can afford to pay; and
- (4) assisting middle-aged and older persons to make the preparation, develop skills and interests, and find social contacts which will make the

gift of added years of life a period of reward and satisfaction and avoid unnecessary social costs of premature deterioration and disability; and

(5) stepping up research designed to relieve old age of its burdens of sickness, mental breakdown, and social ostracism.

Why More Research in Aging?

Why do we need more research in problems of aging? It is commonly said that the average life expectancy at birth has increased from 50 years in 1900 to 70 years today--a gain of 20 years. As you know better than I, this spectacular advance of the first half of this century has come about through the conquest of most of the communicable diseases and from a great decrease in infant mortality. Of course, this audience is also well aware that this increase in the number of people living to an older age has not been paralleled by a comparable increase in total life expectancy. Between 1900 and today only about two years have been added to the lives of those reaching 60 or 70 years of age. This means essentially three things: (1) at this time there seems little prospect of increasing total life expectancy--we are not going to be able to live forever-- and (2) medical research is shifting its emphasis into investigations of the chronic, metabolic and degenerative diseases, and cancer.

Medical Problems of the Aged More Pressing

It also means something else. It means a wholly new challenge confronts us: how shall we deal with a staggering increase in the number of our older citizens? Sixty years ago the number of people over age 65 was less than 4 million; in 1950, the number was 12 million; and it is estimated that by 1970 -- just a short decade away -- the number of people over 65 will probably exceed 18 million. I repeat: this is a challenge -- a challenge to our culture and to our consciences.

We must find new and better ways to handle the community, family and personal burdens imposed by ill health on older people, to enable this considerable portion of the population to lead fuller, active lives, unblighted by economic and disease problems. We must learn as rapidly as possible a great deal more about the disease of these older people, about the people themselves, and about their main causes of death: cardiovascular disease and cancer. We must learn all these things quickly, for in the meantime we are gaining every year some 350,000 persons in the age group 65 and over.

Sociological Aspects of Aging

Unfortunately, these aging individuals require more and more community services, because their economic status is such that it is frequently impossible for them to provide for their own needs, and because a great many of their needs can only be met by bringing the resources of the community to support them in some special way. These sociological aspects of aging have many facets.

I am thinking of rehabilitation during and after illness. I am thinking of community nursing, of prepared hot meals delivered to their rooms, and of other such services designed to tide them over in times of crisis. I am thinking, too, of hospital-based or other organized home care programs, and of high-quality nursing home services.

All these community service problems are made vastly more difficult by the change in this country from a largely agrarian population (about 40 percent urban in 1900) to a highly urbanized population (64 percent urban in 1950.) Urbanization inevitably resulted in a more complex social structure most advantageous to the young.

Apartment house living and small-house suburbia have robbed the older people of their traditional roles in our society. The elder members of a

rural community are always wanted, and are useful members of that society. They enjoy prestige as in their right, speaking as they do from long experience. But no longer is their experience thought to be so valuable, and, too frequently, they find that what is sometimes called "the Golden Years" are tarnished by the realization that society no longer has a role for them to play -- that they are useless to it, and, consequently, to themselves. Yet this urban world holds more than 64 percent of our citizens over 65, though it is not geared to satisfy even their minimal needs.

Here, as in the biological and medical fields, much needs to be done in research into this problem, before we get any helpful answers.

A Healthier Life Through Research

Medical research is not merely interested in prolonging life. It seeks no Fountain of Youth. It is concerned with increasing and maintaining the functioning efficiency of mind and body into advanced years. It wants to make possible for the older person a happy life as a member of society. It wants to understand the cause and the course of diseases which reduce a person's power to think, feel and respond.

This was what we had in mind when we drafted the White House Conference on Aging Act, especially the fifth provision of the bill. Let me repeat that provision, to refresh your memory:

"stepping up research designed to relieve old age of its burdens of sickness, mental breakdown, and social ostracism."

As old age creeps up on all of us before we know it, so the problems of the aged overtook our society almost overnight, and caught us completely unprepared. Systematic research in the problem of aging is an almost incredibly recent development, in these United States, and I would like to recount it briefly for you here.

Systematic Research in Aging

The chief Federal program supporting aging research, which we in Congress have worked to strengthen to meet our increasing needs, is found in the Public Health Service's National Institutes of Health. NIH first established a Laboratory for the study of gerontology at the Baltimore City Hospitals in 1940 -- just 20 years ago. In 1948 the Laboratory became the Gerontology Branch of the new National Heart Institute, the city of Baltimore continuing to provide space and clinical beds for the Laboratory.

In 1955, the NIH presented the problem of aging to the National Advisory Health Council, which is made up of non-Federal experts from the fields of medicine, biology and public affairs, with ex-officio members from the Department of Defense, Veterans Administration and the Army Surgeon General's Office. As a result, NIH established a Center for Aging Research late in 1956, for the purpose of planning, coordinating and fostering additional aging research. This Center stimulates and assists gerontology projects in universities, medical centers and medical research institutions in this country, and to a lesser extent, abroad. The Center works closely with other groups, and agencies in research in aging, and has provided invaluable assistance to the White House Conference on Aging called for in my White House Conference Act I mentioned a while ago.

The NIH has pioneered in research in aging, but it is interesting to note that the great bulk of its research is being carried out through grant projects (now some 600 in number) to the Nation's universities, medical schools and other private scientific institutions.

It is also interesting to note in passing that among these many research projects are four comprehensive, multi-disciplinary studies in aging at four separate medical research institutions -- Duke University, the Albert Einstein

College of Medicine, Western Reserve, and the University of Miami School of Medicine. In these programs the grant funds are managed by special committees made up of representatives of different disciplines and departments, and the resulting cross-fertilization of research endeavors helps the product of research to be greater than the sum of its parts.

At Duke, research is oriented toward the psychiatric, physiologic and social sciences; at the Albert Einstein College of Medicine, it focuses heavily on metabolic changes as a result of age. At Western Reserve, principal attention is given to chronic disease and rehabilitation; and at the University of Miami the program is entirely basic in its approach to the problem of aging, combining such studies as anatomy, physiology, biochemistry, microbiology and related sciences.

Three Broad Areas of Research

The sheer scope of the research program in aging is to me, a layman, both fascinating and overpowering. Three broad areas are embraced by this research:

- (1) the behavioral and social sciences, to bring more work to bear on the mental health problems of older people;
- (2) the clinical sciences, to help overcome the diseases that so often descend on the aged; and
- (3) the biological sciences, to answer very basic questions relating to the exact nature of the biological processes of aging and their relationship to disease.

Let me illustrate these three areas with an example of each:

In the behavioral and social sciences, there has been in recent years a clear demonstration that the application of intensive rehabilitation will greatly reduce the disability resulting from common infirmities. We do not

yet have an idea of the number of older people who can be benefited by rehabilitation techniques, or of the kind and amount of rehabilitation needed, but initial results are encouraging.

In the clinical sciences, it has been learned that high blood pressure may be necessary to normal brain activity in some older persons, and not necessarily always an evil concomitant of aging. The higher blood pressure may be helpful in maintaining normal intellectual functions by overcoming the resistance to blood flow that regularly builds up in the tissues with age and with arteriosclerosis.

In the biological sciences, an investigator working in the biochemistry of aging has found that the "juvenile" hormone of insects exists in the human tissue. This hormone controls the development of insects by governing the timing of growth from cocoon into maturity. If this hormone is injected into certain insects it generally keeps them in the juvenile state -- thus lengthening the life span by slowing down the onset of maturity. It may be that the survival of this hormone in man is nothing more than a biological curiosity, but if it should turn out that it has some control over the rate of aging in man as it does in insects, then this would be a tremendously important discovery indeed.

Aging Research of Military Interest

Some of the work that is underway in aging research should be of particular interest to you, as it may cast some light on certain research fields in which the military medical effort is concentrated. Internal medicine, with metabolism and nutrition, is one such area. Aging research has at least two interesting developments in this area:

(1) a few years ago most physicians were content to attribute atherosclerosis to the aging process. Now it is a metabolic disorder, not necessarily related to aging but to hereditary determinants and to a host of

other influences, and,

(2) one of the most hopeful contributions of gerontology has been the determination that aging is not necessarily associated with disease and deterioration. Old people who receive adequate protein, calcium and Vitamin D still form new tissues and replace calcium in their bones.

Another important area of military medical research interest is in the investigation of the effects of ionizing radiation. For some of you here today it must have been intriguing to note that it has been found in aging research that exposure to ionizing radiation may increase, rather than decrease, the life span of the fruit fly, contrary to what might have been anticipated from somatic mutation theories of aging.

But I do not want to over-stress research results in aging which are of special interest to the military medical researcher. I do not need to caution this audience that none of these results offers any immediate, spectacular solution to the aging process. No one knows how much more research may be needed before we can hope to see a clinical application of anything so far learned in this newly opened research area. But I think it is clear to all of us that the future is as limitless as man's imagination.

The magnitude of research in aging is no less impressive than its rate of growth. The number of research and training grants administered by the NIH as of January 1958 was 274, at a total cost of about \$4,500,000. A year later, the total number of grants had increased to 404, and the cost had increased to \$7,600,000. As of today, total grants have increased to more than 600, and the number is increasing monthly, and the total amount in aging research this year will be about \$15 million.

I believe that this burgeoning grant activity represents an increased awareness on the part of the scientific world of the problems of aging. And

I hope and believe that this increased interest on the part of medical and biologic scientists is part of the groundswell of public interest which has followed the passage of my White House Conference bill in 1958.

Public Response to the White House Conference Act

I believe that the call for a White House Conference on Aging is stirring up the action we need. Since its passage, people all over the country have come to see that there is a problem national in proportions and all-embracing in its implications; and they have been moved to do something about it.

Local, state and national committees have worked hard, in preparation for the Conference to be held here in January. The Secretary of Health, Education and Welfare, who was assigned the responsibility for organizing and conducting the Conference, was swamped with offers of help and with requests for information as to how groups could start mobilizing their own resources.

And let me pay special tribute to the many national groups who got behind the cause. For example, the National Committee on the Aging of the National Social Welfare Assembly named a liaison committee to work with the Department of Health, Education and Welfare, and the American Public Welfare Association named a similar committee. The National Tuberculosis Association urged its state and local affiliates to participate to the fullest possible extent in preparations for the Conference. The Joint Council to Improve the Health Care of the Aged has worked long and hard to make the Conference a success. The National Council of Churches sent circulars to all the local councils, and the 40 affiliated denominations were urged to offer their total resources in helping establish stronger state and local programs and to take part in the White House Conference planning.

And, of course, we had the unstinting cooperation of the Joint Council

to Improve the Health Care of the Aged, established by the American Medical Association, the American Hospital Association, the American Nursing Home Association, and the American Dental Association.

Every state, Puerto Rico, the Virgin Islands and the District of Columbia will be participating in the Conference. All the states and territories have held their own conferences, and from these conferences have come recommendations and factual reports. These recommendations have been collated and will be used as a basis for discussion at the White House Conference, as will 20 background papers prepared by the planning committee of the Conference.

Each state has a Governor's designee, working especially with the Conference; and there are nine regional representatives for aging in the United States from the Department of Health, Education and Welfare.

There will be 2,800 official Conference delegates, 1,747 of whom are from the states and territories and 660 of whom are from national voluntary organizations.

The mounting public interest in the subject of aging and in the Conference is reflected in the hundreds of community forums on aging which have been held in all the states. It is reflected in the hundreds of state, regional and local surveys made, and in the dozens of newsletters on aging now being published in the states. It is reflected in the actions of the national organizations -- religious, civic, fraternal, union, business and professional -- to inform the general public, through their millions of members, of the problems of aging and of the actions being taken to solve them.

Toward a Brighter Future

On April 9, 1961, a final report on the White House Conference must be made to the President. The report will delineate the findings and set forth the recommendations of the Conference.

It is hoped that as a result of the White House Conference on Aging each group and community represented will put the Conference recommendations into immediate action, that concrete efforts will be made all over the United States, and that the American People will be brought to realize the implications of aging, both for themselves and for others.

In short, the White House Conference is a four-day gathering which aims to do two things:

To identify and define all of the varied problems confronting the nation's older people, and

To recommend actions that will meet these problems -- actions that can be taken by the communities, states, the Federal Government, private organizations and by the older people themselves.

It should not be forgotten that this Conference cannot take direct, specific implementing action to meet specific problems of aging. Such action can only be taken by the communities, states, the Federal Government, private organizations, and by the older people themselves.

This makes it clear and imperative that the actions carried on by the communities, states and private organizations before and after the three-day Conference are the heart of the meeting. These decentralized activities taken together constitute a continuing national effort.

Thus, in a large sense, the White House Conference is a national program. It is a citizen's attack on the many fronts of a vital national problem. It will be necessary for every one of us to back the attack, if this nation is to gain the benefits that can come for a successful assault on the forces of disease and adversity that today so often conquer and torture our older citizens.

I am not unmindful of the fact that your organization is made up of regular members and sustaining members. Among the latter are many of the

distinguished companies engaged in a vast research effort to find major new therapeutic tools and instruments to conquer man's ills and prolong his life into more comfortable and happy old age. The development by the pharmaceutical industry of many outstanding drugs such as those used for treatment of mental illness, the newer diuretic agents, the oral antidiabetics and new synthetic penicillins added to the host of broad spectrum and special spectrum antibiotics among many others, attest the success of the industry here and abroad in making major contributions to man's health. In fact, these new drugs place us in a position to be healthier than we have ever been before, be we military or civilian, young or old.

Research and its accomplishments are the combined results of the team effort of Government and private citizens and of industry and non-industrial groups.

I have tried to give you background and details of the forthcoming White House Conference and its purpose and goals. I have tried today to sharpen your awareness of research in aging -- research which is vitally important to all of us and yet is necessarily excluded from your military medical research program. I have tried to give you some idea of the sweep and scope of this research -- to show how it is concerned with all the phenomena of life, from the cell and tissue to psychological and social conditions.

These studies are very basic, but they may -- if and when they come to the stage of application -- help make the future brighter for us, as we grow older. And surely these research results -- along with the results you achieve in your laboratories and those achieved in the laboratories of science everywhere -- these results are added day by day to the ever-growing treasure house of knowledge.