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Better Health for the Nation

I deeply appreciate the opportunity to be with you tonight, for the Industrial Management Club is indeed a positive force for good in our community - a key leadership group composed of citizens who can accept responsibility, who can appreciate and intelligently support action programs of solid worth and accomplishment, and who are banded together to work "Toward Improving Human Relations in Industry."

My appreciation of this opportunity to talk to you about "Better Health for the Nation" is greatly enhanced, too, by the presence here tonight of your ladies. Of course, I was told in advance that it was "Ladies Night," and that fact played no small part in my quick acceptance of your kind invitation.

The focus of much of my activity, during the 20 years I have represented Rhode Island in the Congress of the United States, has been the health of the people of our State and our Nation. For the past 14 years as chairman of the subcommittee which has responsibility for, among other things, the appropriations of the U.S. Public Health Service, I have been privileged to play a key role in legislative actions, which have provided the funds for public health measures, medical and biological research, hospital construction, construction and equipment of research facilities, and the training of research scientists.



For the past 15 years, and more especially during the latter half of that period, this nation's great potential for the discovery and application of new knowledge has been rapidly brought toward full realization. We have built up a great and effective medical research attack, largely through the National Institutes of Health of the U.S. Public Health Service. I am proud that I have had the opportunity to help bring about the dramatic development of our national program for health and medical research. Our national investment in medical research is paying off with dividends in better health and in lengthened, useful lives. In addition, it has brought us unquestioned world-wide leadership in that most complex and important of all the sciences -- medical biology.

Those here tonight who are past 50 years of age already have lived beyond the average life span predicted for them at the time they were born. In 1900 that average life expectancy at birth was just 47 years. Today it is close to 70 years.

When most of us were children, typhoid, smallpox, diphtheria, whooping cough, and various other infectious diseases, took heavy toll among the young. Today the situation with respect to these once fearful afflictions is much better. Some of these diseases have been virtually eliminated. The damaging effects of many of the others can be reduced or prevented.



The progress of medical science in bringing many of the infectious diseases under control has helped bring about a startling increase in longevity for the average person. Because more people are living longer we are seeing the emergence of new problems of health and welfare. The more pressing health problems now are the chronic diseases which, for the most part, afflict people in the upper age brackets. In other words, more people are living long enough to become candidates for diseases such as arthritis, cancer, or heart disease.

Today, then, we have a growing public health problem associated with our aging population. Pointing up the situation is the fact that in 1900, just 60 years ago, only four percent of the U.S. population was 65 years of age or older. Today that percentage is 15 percent.

Now let's apply these figures to Rhode Island. In 1900 the population of our State was 428,556. The 1960 census tells us that the state now contains 841,852 people. Thus we find that in 1900 there were in Rhode Island about 17,000 people who were 65 years of age or older, while in 1960, or approximately today, there are more than 126,000.

Rhode Island's population has not quite doubled during the past 60 years, but the number of persons in the state who are 65 or older has increased more than 700 percent.



A moment ago I mentioned that the average life expectancy of the newborn infant today is 70 years. Bringing this figure a little more closely home to us here in this room, let me point out another example... If you are 40 years of age at this time you can expect, on the average (and that's the way the life insurance companies figure it) to live another 34 years, or until you are 74. If you are 60, the chances are that you will live another 17 1/2 years, or until you are 77. These are only averages, of course. Any given person may well exceed or fail to reach that average, but generally, that type of figure gives you some idea of what can be expected. A further footnote: men will live a few years less than the average, but the women, whom we all know to be weak and defenseless, will tend to live a few years more than the average.

I don't want to overwhelm you with statistics, but they do tell some important stories, and I know that in your work you have come to know and appreciate that. I'd like to give you a few more figures which point up the problem areas before I tell you about some of the advances which have been made and some plans for the future.

The U.S. National Health Survey, conducted by the Public Health Service has, for the past few years, been obtaining data on the nation's health through interviews with thousands of people all over the country. In one of its recent reports, "Selected Health Characteristics by Area," the National Health Survey points up some data which you may find interesting. For example, they found that New England had a higher proportion of persons over 65 years of age than any other area.



Among 8 large cities for which similar statistics are available, Boston stands at the top of the list with the highest proportion of persons over 65, while San Francisco is at the bottom, with the lowest percentage.

I am glad to report the survey found that although in New England we have a large number of older folks, they are apparently healthier, on the average, than the younger ones in other areas. For example, our people are less likely to take to their beds with illness or other disability. For days of bed disability per person per year, the national average was 6.8 days. The New England average was the lowest in the country -- 5.3. I think none of us ought to be surprised by this, although it is good to know. The fact that although we have the largest percentage of older folks, together with the lowest number of days of bed disability per person speaks well not only of the good medical care we are getting, but of the sturdy constitutions we New Englanders have.

In another category New England shows up as a safe place to live. This relates to injuries. The survey data on all injuries that were medically attended or which resulted in one or more days of restricted activity, reveals that New England has the lowest rate of injury in the nation -- 243.7 per thousand population. The national average is 273.1.



From my vantage point in the Congress as chairman of the committee handling the appropriations for health and welfare activities of the Federal Government, I have been working to secure the passage of legislation in the interest of our Nation's health and have been privileged to have had a role in shaping our national program for health and medical research. New health frontiers have been reached in every year for more than a decade. More lives have been saved, more research scientists have been trained, more facilities for medical research have been built, more new and significant medical discoveries have been made, and more progress registered in medical care than in any previous period anywhere in the world.

We have proved that medical research pays off. Now we must begin to consolidate our gains. At the same time we must take advantage of our momentum and go on to much greater achievements.

So that we may gain some perspective on the expanding Federal role in health and medical research and training, with perhaps some sense of its movement and direction, I would like to trace for you very briefly some of the patterns that have been developing during my years of participation in Federal health legislation.

At the close of World War II this country took stock of the contribution science had made to winning that conflict. Not only had scientists helped produce new and better weapons, but they had made great advances in disease prevention, medical care and surgery. Because of this thousands of lives among civilians as well as service men were saved and many millions of man-days of productive work were gained for the war effort.



The question at war's end was: should we try to capitalize on the gains made and continue, in peace-time, to give substantial Federal support to medical research?

To most people, whether scientists or laymen, the course seemed clear -- if the Nation's medical scientists could produce so well under the stress of war, surely they could lead us to better health in peace.

And so the die was cast -- the Congress began to increase funds for stimulating and supporting medical research in universities and medical schools, in hospital laboratories, and in other non-governmental research centers. Appropriations also were steadily increased for the Government's own research operation in Bethesda, Maryland, the National Institutes of Health. Together, these form the research program in which I have been very deeply interested for the past 15 years.

The appropriations to NIH, for its own operations at Bethesda and for research grants and training awards to non-Federal scientists amounted to less than \$3.5 million in Fiscal Year 1946. For 1961, our current fiscal year, the appropriation stands at \$590 million. While this may sound like a great deal of money, it is only a small percentage of the national investment in research of all kinds. On the other hand, it is taxpayers' money, and it must be spent wisely. I and my Committee have made it our business to see that this is the case and have made certain that the research programs have been carefully planned and administered. Again, I believe the results prove that we have achieved this particular goal.



Now, let me detail some of the specific elements of this great national research effort.

First, in research project grants: In 1945, this appropriation totaled \$85,000; this year, the comparable figure stands at more than \$250 million -- supporting over 11,000 research projects in virtually every non-profit research center in the country. Let me assure you now that prior to each year's increase, the Congress received convincing evidence of (1) the accomplishments and potentialities of existing research projects, and (2) the existence of promising ideas for new and needed research projects.

At the same time, it was necessary for those of us dealing with this program to keep well-informed on two more elements of medical research, namely, the existence of trained manpower to do the research and of adequately equipped facilities in which to carry out the research. To keep these three all-important elements of medical research in relative balance has been no easy task.

The level of support for research training, including fellowships, began to make solid advances in 1947. In that year the appropriation for fellowships and training grants totaled \$428,000 compared to \$57,000 in 1945. But as each year passed and as it became more and more evident that scientific manpower was the most important single factor limiting further progress in the life sciences, the program was expanded until today the annual investment in tomorrow's health scientist stands at about \$120 million.



The third element of the Public Health Service's pattern for research support -- research facilities -- received only emergency attention during 1949 and 1950 for heart and cancer research facilities, totalling some \$22 million. More recently, again responding to an evident need for nation-wide expansion of health research facilities and equipment, the Congress passed legislation authorizing \$30 million to be made available each year for construction and equipment of research facilities in all of the health fields. Now finishing its fifth year, almost \$150 million has been awarded to 321 non-profit institutions in virtually every state in the union. Through matching funds, <sup>this</sup> initial investment will result in the construction of facilities having a value of more than a billion dollars.

So much for the expansion of Federal support for medical research. It is a fair assumption, I think, that it has played an important part in the progress that has taken place in the last decade.

Some of the major accomplishments to which this program contributed are known to most people. For example: synthetic hormones and related agents for the treatment of rheumatic diseases.... the widespread availability of better forms of penicillin and other antibiotics.... improved ability to protect children from rheumatic fever and resultant heart damage.... new tests for the detection of cancer.... successful transplantation of some of the vital organs.... newly developed techniques for heart surgery.... a dozen new or improved vaccines.... new or improved drugs and techniques for treating a host of diseases, including tuberculosis, malaria, mental illness, diabetes, leukemia, high blood pressure, and many others. The list is a long and proud one, and I cannot attempt to recite more of it at this time.



Naturally, in my position, I hear a great deal of discussion about new and better drugs and vaccines, new treatments, and even the claim that 50 percent of today's prescriptions could not have been written 10 years ago simply because the compounds incorporated in them did not exist. That may be so, and probably is, but the real test of progress against disease lies in statistics which show that progress in broad terms.

I have already pointed out to you how the life-span of our people has been dramatically extended. What has brought this about? Perhaps the best single index of health progress is a comparison of over-all death rates. I am told that the decline in death rates since World War II from some of the major illnesses reveals in startling fashion how American lives have been saved by modern medicine.

The death rate from influenza, for example, has been reduced by 90 percent. The mortality caused by once great killers like acute rheumatic fever, tuberculosis, appendicitis, and diseases that cause maternal deaths, have been reduced by 70 percent.... deaths caused by syphilis are down over 60 percent.... pneumonia, more than 40 percent.... some kidney disorders, 60 percent.... infant deaths, 30 percent. Even the death rates from high blood pressure, one of the greatest medical problems in terms of the number afflicted, has seen some decline recently, although there is still much work to be done in following up highly promising research leads in this area.



The past generation saw the rise and development of the chemical approach to research in the life sciences -- the emergence of the new science of biochemistry which contributed immeasurably in pushing forward the frontiers of medical knowledge.

Now there is arising a new science -- physical biology -- which has the potential to clarify many problems which defy solution by other approaches. Physical biology, or biophysics, brings the tools and the techniques of the physicist to bear upon biological problems. Thus we find, today, complicated electronic machines being used in medical research laboratories -- such things as electron microscopes which can enlarge an object 100,000 times or more, and radioactive isotopes which make it possible to trace the effects of drugs in the body. There are spectrophotometers, nuclear resonators, mass spectrometers, and scores of other new instruments which enable scientists to see, examine, measure and evaluate phenomena man never knew or only suspected a few years ago.

I mention the emergence of physical biology only briefly to let you know that medical science is taking advantage of the contributions made by the physical scientists and engineers. You, in industry, are rapidly adopting physics and engineering and electronically controlled machines for many purposes. Thus, I am sure you can appreciate the great potentiality they have in medical science.

Looking toward the future, I would like to turn for a moment to some of my recent activities aimed at providing impetus to existing programs and at seeking new ways for improving the health of the nation.



We must face up to one unpleasant fact and do something about it -- soon, for the longer we delay in dealing with it, the worse it will become. I refer to the growing shortage of physicians, dentists and other health workers. This is not a new problem, but it has been growing more acute. For more than two years I sought repeatedly for support from the administration in dealing with this problem, but my pleas fell on deaf ears. Now, with the advent of a new administration alert to the needs of the nation on many new frontiers, I see new hope. Medical manpower needs require our prompt attention, for the training of physicians and dentists is a long-term project. I think we are going to get action this year. I believe that the Federal Government can and should aid in the solution of this problem.

The blunt truth is that over the past several years our medical schools have been losing ground in the competition for superior college students. At the same time our studies have shown that this country has a relative shortage of medical manpower now, and will have a critical shortage in a few years unless we take action.

There are many reasons why this situation has developed, among them: (1) a tremendous increase in population, (2) the diversion of many medically trained individuals into the greatly augmented programs of research, and (3) increasing demands for medical care arising from a rising standard of living, expansion of hospital and health insurance, and the increasing health-consciousness of our people.



Additionally, there are other factors, such as the great length and cost of medical training and the development of many other satisfying and intellectually stimulating scientific career opportunities with high prestige and adequate financial rewards.

The financial problems of medical students are severe. We know that over half of all medical school graduates in the 1959 class were in debt to some degree. Medical school tuition costs have continued to rise, and the average cost of 4 years in medical school was found to be approximately \$11,600 for those graduating in 1959. Scholarship support has been meager, and many promising college graduates who would have liked to study medicine have been discouraged.

That is the situation we face -- a present shortage of physicians and dentists and the prospect of a greater shortage ahead. Inevitably, this will lead to deterioration in medical care in the face of a great surge of new medical knowledge. What are we going to do about it?

Early this year, in January, I introduced a bill providing for a 10-year program of grants to schools and scholarships to students for education in the fields of medicine, dentistry, and for related purposes. Legislation along somewhat similar lines has been introduced by other members of Congress.

Now -- in conclusion, I would like to mention two other steps I have taken to help bring to the American people the full measure of health and productivity which they deserve and can have through science.



It has been a pleasure to be with you this evening. I deeply appreciate the opportunity to speak to you about "Better Health for the Nation," and I feel sure that you will agree with me that not only has medical research made great progress in recent years, but has even greater potential for significant gains in the future. I hope and believe this program merits continued support at every level of our society. I also hope you, and many others like you, support my contention that something must be done to insure that our nation has all the physicians, dentists and other health personnel that we need in the years ahead.

I wish for you all good health throughout the coming years, and I assure you that you have a much better chance for good health, thanks to medical research, than did your parents. My plea is that we of this generation owe the same degree of improved health to our children and grandchildren. Research and education point the way.