

**Address by Shri K.R. Narayanan Vice President of India at the Annual Meeting of the NATIONAL
ACADEMY OF MEDICAL SCIENCES at Bombay, March 19, 1994**

It is a great pleasure for me to address the Annual Meeting of this prestigious National Academy of Medical Sciences(India). This is a unique institution consisting of the elite of the biomedical profession in the country and engaged in the pursuit of knowledge and academic excellence. At the same time it is not an isolated ivory tower but an institution with social relevance as its objective and deeply concerned with the planning as well as the methods of implementation of our national health policies and programmes.

The Academy has in the past played an important advisory and inspirational role in regard to our medical education and health programmes and I believe, it has an even more significant role in the future when human welfare and human development is moving to the centre-stage of our attention. Today you have recognized outstanding contributions in various branches of biomedical sciences by admitting new Members and Fellows of the Academy. May I extend my hearty congratulations to them and wish them every success in the career of dedicated and creative work that awaits them.

India is at once a most exciting and somewhat depressing place for the medical profession. The statistics of diseases and ill-health in our country is too staggering to be recounted. The availability of medical facilities and doctors and nurses is awfully inadequate overwhelmed as we are with massive growth of population and slow rate of economic development. Notwithstanding these harsh facts we can be moderately excited by what we have achieved.

Without going into details I should like to highlight the growth in the average expectation of life of an Indian since independence, an indicator which sums up broadly the impact of the totality of development on an individual. Between 1951 and 1981 it increased from 33 years to 53 years. Robert McNamara, when he was President of the World Bank described this rate of increase in life expectancy in India within such a short period as unprecedented in history. Today the average expectancy of life of an Indian is as you know 60 years. In some of the States of India it is higher with Kerala having achieved the very advanced rate of 70 years for men and 72 years for women. There is no magic by which such results can be brought about except as the ultimate outcome of all-round progress—economic, social, educational, medical, environmental, cultural and attitudinal. I have emphasized this point to show that there is every reason for us to be excited and optimistic about the possibility of attaining the objective of health for all within a reasonable period. Indeed I believe that the rate of our progress could be much more substantial and rapid than it has been hitherto if only we could harness all our resources in a more purposeful and planned manner encouraging initiative and greater freedom, eliminating unnecessary and bureaucratic hurdles, and providing incentives, rewards and recognition to our bright young medical and social scientists.

I should like to place primary emphasis on the need for scientific education and research for fighting disease and safeguarding the health of our people. The spectacular discoveries and inventions taking place in the world today in biological sciences and surgical technology are not too sophisticated or irrelevant for the requirements of a poor and developing country like India. In the midst of poverty we have increasing incidence of what are often considered as diseases of affluence like cancer, diabetes, cardiovascular diseases, AIDS etc. In addition some of the old diseases like malaria are coming back requiring new knowledge and techniques to deal with such tenacious common viruses. There is today a compelling necessity for more investment in scientific education and scientific research in the field of health sciences. In this metropolis of enlightened capitalism I should like to say that a heavy responsibility rests in regard to this on the shoulders of our vibrant private enterprise.

While what we have to achieve in the future is enormous, we should not minimize the magnitude of our attainments hitherto. A significant technological boom has taken place in India in the health care field during the last one decade. Though limited to an affluent and relatively small sector of our

society we have managed to telescope into a decade what has taken developed countries half a century. Latest developments in medical advances have been brought to our country whether it is in cardio-thoracic surgery, treatment of cancer, restorative orthopaedics, neuro and micro-surgery, and genetic engineering. I am told that in cardio-thoracic surgery success rate in Indian hospitals is 99% which is equal to that of the best hospitals in the West. The high-tech infrastructural facilities available in many of our medical institutions, the technical skills of our surgeons and physicians, our cultural ethos which provides the human touch to medicare, and above all, the cost of medicine which is less than 10% of what is in the best medical centres in the West have attracted the attention of the rest of the world, and large numbers of patients from abroad are already coming to our hospitals for treatment, particularly from developing countries. This is a fact which needs to be widely projected abroad as well as in our own country.

In this context I have come across a proposal for forming a Health Care Promotion Council along the lines of the Export Promotion Councils for various agricultural and industrial products that we have established. This could be formed in collaboration between the public and private sector with the advanced medicare centres in the country pooling their resources for the purpose. We have the advantage of highly skilled human resource in the form of doctors, nurses and other hospital professionals. Medical entrepreneurship is another phenomenon that has newly come up in the country. All these in the liberalized context of our changing economic scenario provide opportunities for building up in India medicare facilities of a high order that will attract sizeable number of patients from foreign countries, bringing coveted foreign exchange, encouraging touristic and hotel development in the country, improving the image of the country as an advanced centre for specialized medicare and giving incentives for such facilities being updated and extended on a larger scale.

While I recommend a rather elitistic scheme like this I am painfully aware of the inadequacies of our medicare system for the people of India as a whole. I am aware that the doctor-population ratio is 1:3700 and the ratio for nurses is 1:4670, much lower than in a more populous country like China. At the same time there is the paradox of unemployed doctors on our employment registers, the difficulty of getting them serve in the rural areas, and, of course, a considerable brain-drain of medical personnel to the developed countries of the world. There is something lopsided about our medical system and our medical education. Education in India is generally a process of alienating the educated from the people and their grass-roots. This is perhaps more so with regard to medical education. I know that one of the important tasks in which this Academy is particularly involved is continuing medical education and in orienting medical education to the needs of the community. Unless this is built into the educational system and pursued in the form of continuing education, alienation from the masses will only grow with consequent migration of doctors to the cities and to countries abroad. Our youth who choose medicine as career are by and large actuated by idealism and a sense of service. If we refashion our educational system appropriately they can be involved from the beginning in the service of the people and in the on-going drama of socio-economic development of the nation. Thus we need a break-through not only in science and technology but also in education, motivation, organization and management. A closer alliance is needed between natural and social sciences for meaningful medical education and medical practice. These are today ideas that are well-known and accepted by the medical profession. Committees and Commissions have studied the question in depth and made elaborate recommendations for restructuring India's system of medical education and health care making them more scientific as well as community-based. The problem seems to be that of integrating all these to the system as a whole and putting them into practice.

Rudolf Virchow, one of the great authorities on medicine once remarked that "*Medicine is a social science*". This aspect of medicine needs to be emphasized today. While technological solutions to healthcare are to be unrelentingly pursued, the social, psychological, cultural and spiritual aspects of the question need to be given greater and more comprehensive attention. The definition of health by WHO has now adopted such a holistic as well as realistic approach to human health. In this

context I was pleasantly surprised to come across the definition of health that was spelt out in India's First Five Year Plan document. It said : *"Health is a positive state of well being in which harmonious development of physical and mental capacities of the individual leads to the enjoyment of a rich and full life. It is not a negative state of mere absence of disease. Health further implies complete adjustment of the individual to his total environment, physical and social."* This is, of course, a statement in modern language of what our sages of medicine had expounded long centuries ago.

It is now well-recognized that social, environmental conditions are at the root of many diseases. Microbes and viruses are born from the environment and life-style of people and they flourish in conditions of poverty, malnutrition, insanitation and unwholesome and unnatural living styles. A great British medical authority said : *"The most important medical advance of the nineteenth century was the discovery that infectious diseases were largely attributable to environmental conditions and could often be prevented by control of influences which led to them; the most important advance in the 20th century is the recognition that the same is true of many non-communicable diseases"*. The experience of the 21st Century will perhaps be more strikingly the same. We know that the incidence of tuberculosis declined in Europe in the 19th Century due to the rise of living and nutritional standards after the Industrial Revolution. Cholera was brought under control through hygienic measures before the discovery of its causal organism. Vaccination which led to the control of small pox was the result of empirical techniques developed prior to the knowledge of immunology. It is quite possible that if the new scourge of AIDS is controlled it may be prior to the discovery of new vaccines and a consequence of changes in environmental conditions, life-styles and preventive measures brought about by a humanity totally scared and whipped into a state of social consciousness.

I should like to make here a few remarks about indigenous systems of medicine in our country like Ayurveda, Siddha, Unani and Homeopathy though the last one originated in Europe. We are today more conscious of the importance of these old systems as social medicine for cure as well as for prevention. They are holistic systems which deal with human health in a physically, mentally and psychologically integrated manner. Though not developed along modern scientific technological lines they are loaded with empirical experience of millennia and teeming with hypothesis which can be tested and advanced by scientific methods. An ultra-modernist like Jawaharlal Nehru had admitted that these ancient systems have an honourable history and they have very effective remedies for many illnesses. He advocated scientific training for practitioners of our indigenous systems and the application of scientific method in testing and promoting them. In spite of the encouragement and recognition given by the Government to Ayurveda, siddha, Unani and Homeopathy these systems are looked down upon by practitioners of modern Western medicine. To my mind it is not in accordance with scientific method or scientific temper to turn a blind eye to empirical experience of centuries which has had a scientific basis as well as insight into the complete human system. Ayurveda has developed treatment and drugs for such complex diseases as cancer some of which have been analyzed and tested by Western scientists and medical experts, but shunned by our own scientific and medical community often as abracadabra. I should only like to say at this august National Academy of Medical Sciences that there is more in heaven and earth than has been dreamt of in your Allopathy. It must also be remembered that but for the access our people have to these alternative systems of Indian medicine, which are also very cheap, our health care scenario would have presented a depressing picture. According to statistics available for 1988-89 in the state of Kerala while 29.3 million people were treated by Allopathy, 16.68 million and 9.48 million people got treatment in Ayurveda and Homeopathy. Obviously some of them had recourse to all the three systems. One of the reasons for the better health care scenario in Kerala is the access the people have to indigenous systems of medicine. This, I think, is applicable in varying degrees to other parts of India also. What I should like to stress is the need for the representatives of Western medicine and modern science to take greater interest in our own systems of medicine and establish greater interaction between them and conduct interdisciplinary scientific research in these fields. Otherwise we might find that some of the empirical experiences and creative

hypothesis, particularly in Ayurveda and Siddha would be pilfered and plundered by the more inquisitive and enterprising Western scientists for their benefit and profit.

I have referred earlier to the experience of Kerala in health care. The drastic reduction in infant mortality, death rate, population growth rate and the remarkable rise in average life-expectancy in Kerala are the outcome of several factors, historical, educational, medical, and cultural. Apart from literacy, which is crucial, one factor stands out prominently, that is the easy access to health care facilities for the people as a whole. Though Kerala do not have hospitals, dispensaries, and primary health centres more than in the rest of India per capita, the distribution of the medicare facilities are more dispersed and equitable. On an average nearly 90% of child births in Kerala take place either in a medical institution or under the care of trained professionals resulting in low rate of infant mortality. Medical facilities in Kerala are almost equally divided between rural and urban areas. To these must be added immunization and other health programmes implemented widely and successfully in the State. What I want to stress is that equitable distribution of health care facilities combined with modern community and preventive medicine can make an impact on the health of our people. Of course in Kerala there is the paradox of a rise in morbidity among the people and also increase in such ailments as cancer, cardiovascular diseases, hypertension, diabetes, etc. This paradox has to be examined scientifically, but changing health perceptions and health consciousness is partly responsible for the phenomenon of morbidity and it has been explained by some as an inevitable stage in the process of health transition in a developing country. My purpose is mentioning the Kerala example is to stimulate thinking on the subject rather than ignoring it as an exotic and erratic phenomenon.

The challenges facing medical education and medicare in our country are enormous and exciting. The opportunities are also unlimited with our ancient heritage, modern development, advanced infrastructure in medicare and expanding educational facilities. The National Academy of Medical Sciences has the responsibility and the opportunity to be a think-tank as well as the initiator of practical programmes for facing the challenge. May I end by wishing the Academy every success in its noble efforts and by congratulating the new Members and Fellows of the Academy for the distinction conferred upon them today.