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## Probing the future

Will average life expectancy at birth ever reach 100 years? Will there be new viral epidemics caused by man's manipulation of his environment? Will there be blood tests without drawing blood? Will alcohol and drug abuse be biochemically treatable? These and many other possible developments in the field of public health has been discussed in Geneva at the first Health Futures, Results and Methods Consultation convened by the World Health Organization (WHO), held in July 1993.

The rapid political, economic and social changes of recent years affected national health services in practically all countries of the world, albeit for different reasons. In developed countries one of the most important health policy issues became the run-away costs of health care. There is a need for reform – but how to go about it? In the countries of Eastern Europe and former Soviet Union the issue is one of restructuring the whole system of public health services, including the introduction of a totally new concept of insurance-based public health care. For the majority of developing countries it is the double burden of tackling “traditional” tropical diseases, many of which are on the rise, along with the “new arrivals” – car-

diovascular diseases, cancer and AIDS.

### Future health care technology and the hospital

The number of people over the age of 65 will continue to rise during the 1990s and beyond the year 2000. Senior citizens over the age of 80 will constitute a much greater segment of population than they do today. The elderly fall victims to cardiovascular diseases, cancer, and various disabling conditions. An increase in the size of the dependent population will require a different type of health care response.

It is believed that in the hospitals of the future the number of hospital beds and average duration of stay will be considerably reduced. The trend towards fewer and more specialized hospitals is likely to continue. Diagnostic technology can be expected to rely heavily on telecommunications. Digital imaging will greatly facilitate movement of data. New biotechnological methods are expected to increase the quality and diversity of pharmaceutical products. Surgery, which is already undergoing dramatic changes, will increasingly be conducted with laser and ultra-

sound techniques. Operations on organ and tissue transplants will routinely involve living tissue with artificial components.

### Advances in pharmaceuticals

Changes in life-styles and breakthroughs in biomedical technology would dramatically lower the incidence of some of today's leading killer diseases. Advances in pharmaceuticals will affect millions of people suffering and dying from coronary heart disease, various cancers and arthritis. It is predicted that in 25 years' time new pharmaceutical products will account for 40% of the reduction in morbidity and mortality in cardiovascular diseases and 95% of the reduction in leukemia deaths.

### The biotechnology revolution and new vaccines

The emergence of genetic engineering brings closer the day when vaccines will be developed against diseases caused by single-celled or multicellular parasites, and even against non-infectious diseases such as cancer of the liver or multiple sclerosis, in addition to those caused by viruses and bacteria.

### **Future health resources**

To design a country's future health system, experts must rely on projections of the health manpower resources likely to be available in the years ahead. These projections are based on reliable current information and logical assumptions regarding future trends. Computer modelling techniques are being increasingly used for this purpose.

### **Future health status**

A great diversity in health status not only among nations but increasingly among different social groups within nations calls for country-specific approaches in studying health futures. In order to obtain realistic projections, computer modelling, simulation, and alternative scenarios techniques will be brought in to examine closely a number of key components: demographic changes, epidemiological transition, societal response to disease, and emerging threats.

### **Alternative health care systems**

The majority of national public health systems are in need of a thorough overhaul. The current debate in the United States of America which involves, as equal partners, the government, the public and the professionals, is just one example of a country looking for ways of slashing medical costs while at the same time providing greater coverage. A New Zealand model based on shifting the balance from hospital to community care provides an insight into the patterns of health services management of the future.

*World Health Organization,  
Geneva*