

## THE ROLE OF THE NATIONAL INSTITUTE OF HYGIENE IN IMPROVING PUBLIC HEALTH IN HUNGARY

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In Hungary, there are considerable traditions concerning the public health and hygiene. In 1874, as the second in the world, the Hygiene Faculty of Medical University was established in Budapest. The first Professor of this Faculty was J. Fodor, whose work was known all over Europe and whom we regard as the founder of the Hungarian public health science.

Soon after taking over the faculty, J. Fodor recognized the need for an institute where the possibility of a theoretical and practical hygienic work could be done. His proposal could be realized only after 50 years.

In 1925, a law constitutional act was accepted for establishing the National Institute of Hygiene. The Hungarian Government with the generous donation of Rockefeller Foundation (250,000 US \$) made possible to establish the Institute.

According to this law, the main tasks of the Institute is to promote the practical application of the hygienic science, to ensure the defense against infectious diseases, the support and active participation in the basic and postgraduate education of hygienic experts.

The Institute started its work in July 1927 in 4 departments with 7 researchers. As the result of permanent development, 60 researchers worked in 7 departments in 1938.

The work from the beginning till the second World War can be summarized as follows:

- a nation-wide network of laboratories was established for the diagnosis of infectious diseases. The permanent intellectual-technical support was ensured by the Institute;

- a well-functioning epidemiological data-service was founded, which made possible to have up-to-date information about epidemics, consecutively enabling the defense work.

Since the early days, the Institute cast considerably weight on research, registration and control of typhoid fever. Based first of all on its own research, it

produced vaccines against the most important diseases, typhoid fever and diphtheria. This was reflected by the achievement: in 1937, an obligatory vaccination against diphtheria was introduced in Hungary. Furthermore, the Institute produced vaccines against exanthematic typhus and lyssa, too. From 1939 on, the official control of the vaccines was done also by the Institute, concerning parasitology, a high priority was given to the fight against malaria. As far as the hygienic activity of the Institute is concerned, the main task was to provide the small villages with good quality drinking water. The Institute not only surveyed the quality of the state and private-owned wells but it had some safe wells drilled.

Immediately after its establishment, the Institute introduced the permanent registering and controlling of the drugs used in the Country.

An obligatory examination system was in practice as early as 1893 but it was not connected to special courses. On the basis of domestic and international experiences the Institute elaborated a new system which included longer theoretical and practical training before the examination. From 1932 on, special courses for the doctors working in villages were organized by the Institute. They worked out a completely new system for the education of the district nurses, they built out the regional public health network, the tasks of which included school-hygiene, mother- and children care, and the fight against tuberculosis and venereal diseases.

During the second World War some of the buildings and equipments were badly damaged. The Institute resumed its work only at the end of 1945. The process lasted for three years. During this interval the reorganization of the national health system, and along with it that of the Institute, took place. In the following years some fields like mother- and children care, venereal diseases, etc., were taken over by newly established institutes. Similarly public health problems, concerning food and occupational health were handed over to other institutes.

In 1954 in every county and in the capital as well, twenty public health centers were established and this meant the fulfilment of the reorganization of the county network of the Institute.

The Institute took and has taken considerable part in the organization of the public health work of the network, ensured the professional and scientific guidance, the education and postgraduate education of the workers.

In the following years the activity of the Institute was mainly connected with scientific research work and gradually also advisory and consultative tasks were done.

According to the present regulations the Institute is the basic authority in the field of environment and population hygiene, hygienic toxicology, children and juvenile hygiene, hospital epidemiology, epidemiological and clinical microbiology, parasitology and in the field of disinfection and deratization. The Institute is, furthermore, a research institute dealing with the control of immune biological products and a center of the health organization of the Ministry of Health.

The Institute is consisting of 4 divisions (Environment and Population Hygiene, Hygienic-toxicology, Epidemiology and microbiology, Vaccine-control and 20 other departments. Apart from these, one research group (working mainly on basic research) and one human genetic laboratory belong to the Institute. At the end of 1983 the Institute had 735 employees, 170 of which were graduates.

From a professional and methodological point of view the main task of the Institute is to help the public health — epidemiological network of the Country with the introduction of new methods, with methodological information, by providing scientific-professional control and by ensuring the continuous exchange of information.

The scientific research work of the Institute is connected mainly with the tasks outlined above.

The main research projects are as follows:

- elimination of pollution in the lake Balaton and in its surroundings;
- examination of the health of population in connection with the combined environment-polluting effect of aluminium foundries and thermal plants;
- analysis of health hazards of chemicals often occurring as pollutants in the environment (pesticides, artificial fertilizer, plastic materials, household chemicals) in the population and in animal experiments;

- investigation of the properties and the epidemiological role of viral, bacterial and parasitic agents and of the relative laboratory diagnosis;

- genetic and molecular-biological examination of bacterial plasmids of epidemiological, ecological and clinical importance;

- improvement of control and application methods of vaccines used in Hungary;

- analysis of the role of genetic factors in the pathogenesis of some congenital malformations;

- interferon-synthesis as a non-specific reaction of cells and of the organism.

The educational and postgraduate training activity of the Institute is also very important. The basic center of the after-school instruction is the Postgraduate Medical School whose Department of Hygiene and Epidemiology is housed in the Institute. The present leader of the department is one of the deputy general directors of the Institute. The continuation courses and conferences are organized by the department, and the lectures are mainly held by the experts of the Institute.

Individual postgraduation courses are also being organized. Postgradual education of hygienic specialists lasts in Hungary for 4 years. Candidates must take part in courses and consultations simultaneously with their work, they have to work at departments of infectious diseases and in laboratories of hygiene. All medical doctors are obliged to attend continuation courses every 5 years. The Department of Hygiene and Epidemiology of the Postgraduate Medical School organizes in the Institute, every year, several meetings and courses for medical doctors employed in microbiology, epidemiology and hygiene.

The fact that the workers of the Institute attended educational courses in 1983 for more than 1800 hours and 112 persons had been individually educated in the Institute, shows the extent of teaching. Practical hygienic work is characterized by the number of the routine tests: we made 450,000 investigations in 1983. BCG vaccine and vaccines versus rabies and influenza are produced by the Institute.

International connections of the Institute are manifold: it collaborates with the COMECON and WHO, co-operates with other institutes in research based on mutual agreements and in consultations, etc. The Institute had 165 foreign guests in 1983.

This has been a brief summary of the work of the nearly 60 years old Institute illustrating its part in the development of Hungarian hygiene.