

The Fight Against Epidemics in the USSR in Peace and War

In the USSR, over 70 years of fighting infectious diseases, significant progress has been made in fighting a number of infections. This is especially true for those infectious diseases whose prevention measures are well developed, and the medical service, together with ministries and departments, can influence the epidemic process.

Before the October revolution and during the civil war, epidemics of many infectious diseases (typhus, recurrent typhoid, cholera, malaria, etc.) raged on the territory of Russia, claiming millions of human lives. A quarter of the population died from infectious diseases. Pre-revolutionary Russia occupied one of the first places in the world for total mortality — 291 per 1000 population. The average life expectancy was 32 years.

During the formation of the Soviet government, the epidemiological situation worsened due to the economic blockade, famine, devastation, civil war and intervention. From the very beginning, the fight against epidemics became a national and state affair. Already on the first day of Soviet power, the Petrograd military revolutionary Committee organized a medical and sanitary Department headed by a Bolshevik doctor, M. I. Barsukov. This Department was charged with reorganizing the entire health care business in the country. To manage the fight against epidemics and to eliminate the unsanitary state in the People's Commissariat of Health of the RSFSR, a sanitary and epidemiological Department (section) was created with an epidemiological sub-Department, which became the central body for conducting anti-epidemic and preventive measures. Similar sub-departments were organized locally and immediately involved in the fight against epidemics. The sanitary and epidemiological Department was headed by a major hygienist, A. N. Sysin.

In this Department, commissions for fighting epidemics were organized as Advisory bodies: the Central Commission for the fight against epidemic diseases, the Vaccine-serum Commission, the Commission for the study of typhus and the "Spanish" flu. The Central Commission was established on July 23, 1918. its duties included the development of anti-epidemic measures to combat cholera, plague, typhus, etc., it also worked on the development of draft regulations, rules and measures to combat epidemics. From 1919 to 1921 the party and the government adopted 18 decrees to combat infectious diseases.

Very important documents on the organization of the fight against epidemics were discussed with the participation of V. I. Lenin. They were specific and were taken promptly. "In just half an hour, the government adopted a Law that later became the beginning of our anti-epidemic struggle," N. A. Semashko wrote.

In 1919 mass vaccination against smallpox was organized, after the adoption of a decree signed by V. I. Lenin, which led to the elimination of this disease by the 1930s. By 1930, cholera was eliminated. In the USSR, the incidence of plague was not registered, despite the fact that in some regions there are natural foci of this disease among rodents. Clear organization and implementation of preventive measures prevented the incidence of plague.

The incidence of malaria was recorded as sporadic cases only in some territories. In 1932, the last centres of Guinea worm were eliminated in Central Asia. The incidence of diphtheria was sporadic. Diphtheria diseases in adults were prevented by vaccination for epidemic indications among individual populations. The incidence of tularemia was reduced to isolated cases due to the use of a vaccine developed by N. A. Gaisky and B. Ya. Elbert, and other measures.

Back in the 1950s, polio was a fairly common disease. In 1955-1956, the mortality rate from this infection reached 3.5-11% in some places. About 20% of patients had severe complications, and 1.5- 4.7% remained disabled. After the introduction of mass immunization against this infection with a live vaccine developed by Soviet scientists M. P. Chumakov, A. A. Smorodintsev et al., the incidence of polio was observed just in isolated cases.

The incidence of whooping cough in children after the introduction of mass vaccination has decreased tenfold. The incidence of measles was also sharply reduced due to the vaccination of children from 15 to 18 months of age in accordance with the calendar of preventive vaccinations approved by the Ministry of Health of the USSR.

The incidence of tetanus, rabies, and anthrax was recorded in isolated cases. Planned preventive work and timely (and in some regions mass) vaccination against tetanus have led to positive results.

The incidence of intestinal infections has been significantly reduced. As a result of extensive public health measures, the incidence of typhoid fever in most of the territories of the USSR ceased completely.

In general, during the years of Soviet power, the death rate from infectious diseases has significantly decreased: from scarlet fever-more than 1300 times, from diphtheria and whooping cough-more than 300 times, from typhoid-almost 100 times; the death rate from other infectious diseases has also decreased. As a result, the health and lives of millions of Soviet citizens have been preserved.

The successful implementation of many decrees and resolutions of the party and government was prevented by the second world war, when all the forces of the country were given to the fight against the enemy.

The standard of living of the population fell sharply. Migration of the population has increased many times. Thousands of factories were evacuated. The military situation created prerequisites for the spread of infectious diseases. However, by the beginning of the Great Patriotic War, the Red Army's Military Sanitary Department took into account all the positive and negative aspects of anti-epidemic and preventive measures in previous wars and made the necessary organizational and scientific and historical conclusions.

Already in the first months of the war, under the leadership of E. I. Smirnov, now an academician of the Academy of Medical Sciences of the USSR, a unified doctrine on sanitary and anti-epidemic protection of troops was developed. The draft resolution of the State Defence Committee "on measures to prevent epidemic diseases in the country and the Red Army" was

approved on February 2, 1942 with important additions. Anti-epidemic protection of the population was provided mainly. Implementation of the relevant measures was entrusted not only to the People's Commissariat of health of the USSR, but also to the Executive Committees of local Councils, commissariats of Railways, sea and river fleet, etc. the Decree provided for the creation of local emergency authorized anti-epidemic commissions consisting of the chairmen of local Councils, representatives of the Red Army and party bodies. Sanitary control points were established at roads and railway stations. There were isolation checkpoints and bath and Laundry disinfection plants. In the Red Army, sanitary and epidemiological detachments, washing and disinfection companies, infectious mobile hospitals were organized, and garrison bath and Laundry disinfection detachments were created. Sanitary and epidemiological laboratories were deployed at the front. The number of these divisions increased from year to year. By the end of the war, there were 154 mobile infectious diseases hospitals alone. To identify infectious patients, household rounds were carried out both in units and among the population.

These facts favoured the fact that for the first time in the history of wars, the troops of the active army did not contribute to the spread of infections. Of course, there were sporadic cases of infectious diseases among military contingents during the war, or individual outbreaks of this or that infection, but the incidence did not rise to the level of epidemics. Thus, from November 1941 to March 1942, there were outbreaks of tularemia on the southern front, but as soon as the main routes of infection transmission in military conditions were established, targeted measures were immediately applied. There were also outbreaks of typhus, more often when the liberation of the territories occupied by the enemy, the fascists used special measures to spread this infection among the population.

The forms of organization of epidemiological services to the population at different stages of infection control were determined by the living conditions for a specific historical period, the level of incidence of infectious diseases, the achievements of science and practice, as well as the material and technical security of medical institutions.

In 1918, L. V. Gromashevsky organized the Odessa disinfection station, which was the basis of the Soviet system of anti-epidemic services for the urban population. In the same year, the Leningrad city disinfection station was established, which has now become a major sanitary and preventive institution and conducts a set of necessary measures on the territory of the city. Decree of the Council of People's Commissars (SNK) of the RSFSR of September 15, 1922 the tasks of the Republic's sanitary authorities were defined, including the sanitary protection of water, air, soil, housing and food. The decree of the SNK of the RSFSR of February 19, 1927 "on sanitary bodies of the Republic" approved the standards of sanitary bodies for servicing the population of the RSFSR. In the resolution of the SNK of the RSFSR of October 8, 1927, a special place in the work of sanitary authorities was given to the prevention of infectious diseases and the organization of anti-epidemic measures.

In the 20s, a network of anti-plague organizations was established that reliably ensured the epidemiological well-being of the country against this infection. The research of E. N. Pavlovsky, N. A. Taisky, I. S. Tinker, V. N. Fedorov, Yu. M. Rall, B. K. Fenyuk, M. P. Pokrovsky, I. I. Chernenko and other scientists contributed to the development of measures to combat the plague.

Since 1924, antimalarial institutions have been established. Interested agencies, professional organizations and the general public were involved in the fight against malaria. Under the leadership of E. I. Marcinovsky, L. M. Isaev, P. G. Sergiev, V. N. Beklemishev and other scientists, research work on issues related to the prevention of malaria was later of great importance in the organization of the fight against this group of infectious diseases. In recent decades, the development of measures to combat malaria at the level of its sporadic incidence was carried out by A. Ya. Lysenko and others.

At the initiative of K. I. Scriabin in the 20-30s, specialized helminthological institutions began to be created: first, departments in the Research Institute in the centre, and then in the Union republics and regions. In 1924, the Uzbek Institute of Tropical Medicine was organized in Bukhara, the founder and head of which was Prof. L. M. Isaev. K. I. Skryabin formulated the main principles of the fight against helminthiasis.

The first sanitary station was established in Gomel in 1922 by K. Kononovich, and by 1937 there were 775 such institutions operating in the country. Since 1933, a network of anti-tularemia stations was developed, and in 1935-anti-brucellosis stations. In 1955, all specialized institutions were merged with regional (regional) sanitary and epidemiological stations (SES).

During the years of Soviet power, the SES network has significantly expanded and strengthened. Currently, SES are the main institutions of the sanitary and epidemiological service, they lead and control the implementation of measures for preventive and ongoing sanitary supervision, preventive and anti-epidemic measures.

In connection with the ongoing restructuring, the forms and methods of SES operation are changing, and modern means of communication and computer technology are being introduced more widely. In some regions, there is a process of enlarging the SES, expanding the network of inter-district laboratories for environmental inspection, but many tasks in the SES have not yet been solved (equipment with technical means, transport, laboratory equipment, etc.).

When organizing measures to combat infectious diseases at all stages of the existence of the Soviet state, both the government and health authorities paid great attention to vaccinations against various infectious diseases, creating a material base for vaccination of children and adults.

In 1918, vaccine and serum commissions were established in Moscow, headed by L. A. Tarasevich, and in Petrograd-first headed by D. K. Zabolotny, then with N. F. Gamaleya. On the initiative of L. A. Tarasevich, a station was established in 1918, and in 1919 the Institute for the control of serums and vaccines was founded (now the State research Institute for standardization and control of medical biological preparations named after him). L. A. Tarasevich). In recent years, it was headed by a major scientist S. G. Dzagurov.

In 1931-1932, at the initiative of P. F. Zdrodovsky, children were immunized against diphtheria for the first time in the Soviet Union. In 1960, M. S. Zakharova was proposed for use in the

practice of the pertussis vaccine. Currently, scientists are working on creating effective vaccines against yet poorly managed infections, such as flu, acute respiratory diseases.

Under the leadership of Acad. AMN of the USSR R. V. Petrov is developing a promising direction for the creation of new vaccines. When they are administered in combination with weak antigens, the body develops a strong immune response with subsequent immunity to the pathogen. We have already managed to create experimental samples of vaccines against influenza viruses, mouse typhoid, and swine cholera.

In the search for measures to combat certain infectious diseases, in studying and clarifying the features of their epidemiology and prevention, the work of the Research Institute of epidemiological and sanitary profile was of great importance. Currently, there are dozens of research institutes in the country that are designed to solve topical issues of prevention and control of infectious diseases, to find new preventive drugs and control measures, to work out the most effective sanitary and anti-epidemic measures. Scientific research at the departments of Epidemiology, Microbiology and Parasitology of medical institutes and institutes of advanced medical training is of great importance.

The publication of textbooks has been a great help in training medical personnel in the fight against infectious diseases and their prevention. Textbooks and books written by Acad. AMN of the USSR by L. V. Gromashevsky, became the desktop manuals of every epidemiologist. Students and doctors were trained according to the textbooks of M. N. Solovyov, V. A. Bashenin, and N. K. Rosenberg. The textbook on epidemiology (edited by Prof. I. N. Elkin) has been reissued in a number of countries, and is used in many medical universities. Average medical workers are trained according to the textbook of epidemiology of I. S. Bezdenezhnykh. It was Soviet scientists who developed a coherent system of theory of epidemiology and prevention of a number of infections and stages of reducing their incidence. In this regard, the most significant works of L. V. Gromashevsky, V. A. Bashenin, I. I. Rogozin, I. I. Elkin, T. E. Boldyrev. Problems of epidemiology and prophylaxis of viral infections are being developed at the Institute of Virology Academy of medical Sciences, Institute of poliomyelitis and viral encephalitis AMS USSR, as well as in several other research institutes.

Average medical workers played a major role in carrying out preventive and anti-epidemic measures, reducing and eliminating infectious diseases. In urban areas, and especially in rural areas, they have to identify people who have been in contact with patients and monitor infection centres. They conduct conversations with the population about compliance with infection prevention measures, identify patients with fever or other symptoms of infection in the centre, organize disinfection, and so on. They take part in dispensary monitoring of persons who have been ill with typhoid fever, dysentery, viral hepatitis, worm infestations. The role of average medical workers is also great in conducting vaccinations, in monitoring the implementation of preventive and anti-epidemic measures in children's institutions, outpatient clinics, clinics, hospitals, retail and food enterprises.

The medical staff of district hospitals and paramedic-midwifery stations periodically monitors compliance with the rules and regulations for the maintenance of dairy farms, transportation and storage of food products, rules for slaughtering animals, and so on.

Sanitary paramedics in rural areas were the organizers of all measures to improve working conditions and everyday life of the population, carry out preventive and current sanitary supervision of the construction and operation of food and other facilities.

Medium-sized stations medical workers have made a great contribution to the fight against infectious diseases. The goal of their work was to further reduce the incidence of infectious diseases in the country.

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