A MEDICAL REVIEW OF SOVIET RUSSIA.

II.—HOSPITALS AND HEALTH CONDITIONS.

BY

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In a previous paper* it was stated that the present economic conditions in Russia, due more or less to the external and internal wars in that country, were the chief causes of the epidemics of disease there. It is now my purpose to describe in more detail those conditions that gave rise to such widespread disease, and to discuss the role of the hospitals in this period.

At the expense of repetition we must make some mention of recent events in Russia in order to understand the present morbid conditions. Even the extreme optimists cannot deny the effect of war and famine in producing disease. Whatever predictions may be made for the future of Russia, we must admit that the present health of its people is worse than formerly, and that the late conditions there cast a fearful shadow over the future health of Russia, in spite of all that the Soviet Department of Public Health and relief organizations have done.

The disorder of war and revolution in an already disordered country like Russia was sufficient in itself to produce wholesale disease, but when three years of extensive famine were added to these factors it is small wonder that there should have resulted epidemics of a magnitude unrivalled in modern history.

GENERAL HEALTH CONDITIONS.

Although 80 per cent. of the Russians have probably always been undernourished to the same degree as or even worse than the poor of other countries, as they existed chiefly on black bread, and though the food shortage had become progressively worse since 1916, there was not starvation until the drought and famine years.† The year 1920 was probably the worst; then millions were starving and nearly all the population was seriously undernourished. Dogs, cats, horses, camels, and even rats were eaten in 1920, 1921, and the winter of 1922. In some places cannibalism existed then; quite frequently dogs and men could be seen in the streets of Leningrad fighting over the carcass of a horse. On many occasions I have seen people eating roots, wild berries, the bark and leaves of trees, and "bread" made of dirt, grass, and dung. As late as July, 1922, I saw personally two cases of cannibalism, and in September of that year, in a village of South-eastern Russia, in twenty out of twenty-five huts I inspected at random there was one or more persons actually dying of starvation, too weak to get up. The year 1923 was much better in regard to food.

Several other factors accelerated the spread of disease—namely, the lack of clothing,‡ dirt, overcrowding, and the refugee movement.

Most people in Russia have had no new clothing for seven or eight years, and have had to sell part of what they had for food. Owing to the lack of soap and hot water, bathing as a cleansing process was nearly altogether discontinued even by people who were normally neat. Most of the public baths had to be closed for lack of fuel and repairs, so that in 1919 they operated only one-seventh as many days as formerly, and (according to Dr. Shamoff) "bathing was never popular in Russia."

Overcrowding is still a serious problem. The destruction of houses by civil war or for fuel, and the lack of plumbing

for many years, makes the housing situation acute. Very few houses have been erected since 1916. It is common to see a whole family living in one or two rooms. Even to-day in a city like Leningrad, where there has been little fighting and consequent destruction, and where the population is less than one-half of the pre-war census, it is extremely difficult to find rooms; many of the houses are crumbling, and nearly all are out of repair.

Refugees from Famine Districts.

A most pathetic picture was that of the Russian refugees. From 1919 through 1922 millions of them were wandering over Russia searching for food. Railroad stations and other accessible buildings were filled with these wretched creatures carrying an indescribable accumulation of rags and filth. One-tenth of Russia had turned gipsy. These forlorn wanderers went hopelessly from town to town in a vain attempt to find food, carrying their worldly goods in a bundle of rags, and often leading their ghastly children by the hand till they dropped dead from exhaustion. They almost swamped the trains, overcrowding the coaches, and riding wherever they could find a hold on the outside—all over the locomotive, between and on top of the carriages, and even swinging on beneath them—going they knew not where to escape the famine. They covered the country, and wherever they stopped they lived and died like locusts. I have seen the waiting-rooms of stations so cluttered with them that one could not force a passage through. There they lived, slept, had babies, and often died of typhus or starvation. Their mortality was very high. On a transport train from Saratov to Uralsk (450 miles) in April, 1922, forty out of ninety died *en route*.§ They were infested with lice and were veritable hotbeds of disease; they spread typhus, malaria, small-pox, and cholera from one end of Russia to the other. In 1923 the Soviet Government was faced with the immense task of returning these refugees to their homes.

The death rate rose from the Russian normal of 25 to 85; nearly every morning dead bodies were seen along the street and piled high in heaps to be carted away. It was during this period that men were forced back upon the primitive forces of nature, and it was said then that "civilized life in Russia is literally crumbling to pieces" (Dr. L. Haden Guest).

Epidemics.

Under these conditions the great epidemics which had begun during the war, and had always been endemic in Russia, reached their maximum. It was impossible to keep accurate figures, but conservative estimates by Russians put the morbidity from typhus alone at 20 to 30 million, with a mortality of 3 million (Professor L. A. Tarrasevitch). About one-third as many suffered from recurrent fever. In 1921 there were recorded officially 205,553 cases of cholera, 308,548 of typhoid, and 83,016 of small-pox. Authorities put the total number of deaths from epidemics since 1916 at 8 to 10 million.

Through the combined efforts of the Soviet Government, the native medical profession, and the various foreign relief agencies these epidemics have been brought under control, but tuberculosis, and especially syphilis and malaria, are widespread now. Some diseases have decreased—for instance, diabetes mellitus and some metabolic diseases like gout and cholelithiasis; alcoholism and its sequelae have become rare under State prohibition. Those who have not succumbed to the famine and who have escaped the contagious diseases have had so many demands upon their strength, and have been in the midst of so much poverty and misery, that even if they have avoided physical disease their nerves have often been shattered.

To sum up the situation, we can say that, judged by Western standards, about one-half of the population of Russia would to-day require hospital treatment. This estimate is borne out by a medical examination concluded in March, 1924, of 1,833 students from twenty-nine different colleges in Kiev—students eating in the student relief kitchens of the World's Christian Student Federation. The

* Medical Education in Soviet Russia, BRITISH MEDICAL JOURNAL, June 14th, 1924 (p. 1055).

† Famines have been frequent in Russia, and in the eighteenth century a famine similar to the recent one occurred, when pies made of human meat were said to have been sold on the market and other acts of cannibalism were described. Periodic droughts in the grain-producing regions, and the lack of adequate agricultural methods and of methods of harvesting, storing, and distributing foodstuffs, have been the chief factors in causing the famines. The famine just past came at a time when the world war and the revolution had left Russia prostrate. As late as 1907 there was a limited famine in Russia.

‡ There is still a great shortage of clothing—for example, "the day after the parade for the funeral of Lenin, twelve students presented themselves at the student dispensary of the European Relief alone for frozen ears and feet from a lack of proper clothing."

§ Reported by one of my associates, Mr. P. S. Clapp, who went with this train.

examination included 127 women. Of the total number, 15 per cent. were in good health, 40 per cent. were tuberculous, 22 per cent. had some form of cardiac disease, and 23 per cent. had other diseases. (Report received personally from Mr. Conrad Hoffmann, Executive Secretary, European Student Relief.)

This, briefly, has been the health of the Russian people. What aid were they able to receive from the medical profession and from the hospitals?

The Medical Round.

The medical profession suffered not only from those conditions which affected the general population, but from conditions peculiar to itself. The circumstances of professional work were extremely distressing. Many had been mobilized (under Communism) and sent to new places, to work in other specialties than those to which they were accustomed. Men of renown were to be seen frequently in some small out-of-the-way town, occupying a position of minor importance as dispensary physician. Their responsibilities were enormously increased. Themselves without warm clothing and in a state of chronic starvation, they had to care for ten patients where before they had one. They were thrown into more intimate contact with contagious diseases without the usual methods of disinfecting (soap, hot water, chemicals), and one-fifth of the medical profession succumbed to typhus alone. But both Communist and non-Communist doctors responded nobly to the calls made upon them.

The following is a description of the life of a physician during the worst period of the epidemics, as given by Dr. Grekoff, chief surgeon of the Obookoff Hospital, Leningrad:

"From the early morning he is on foot, awaiting his turn in various jobs for hours, or running about the town in search of people with provisions, fuel, or lamp oil to sell. On returning home he has to put in order his lodging, often the street; to saw, to split, to carry wood (if there is any); then to bring water from the first floor or the yard (if the pipes have burst); to peel potatoes, scale herring, grind the grain, to boil soup or gruel, to wash cups and plates; to look for a needle and thread, to mend and wash the linen, often in icy water, to procure a lamp and some petroleum for it; then to go to the meeting of the House Committee, etc.; in the intervals of these important affairs he has to go to his office if he is of service, and if a physician to visit the hospital; to visit several patients, always going on foot. He may then consecrate his other time in preparing his lecture and scientific work (wrapped in overcoat and gloves), then go to bed muffling himself in the rags and clothes in his possession, perhaps to be aroused for two or more hours during the night by patients waiting at the gate. One could presume that I am caricaturing, but that is almost an exact reproduction of a winter day's routine (in 1920)."

Let us now review the hospital situation in Russia in pre-war times, in the period of the epidemics, and in the present. General conditions were always extremely insanitary in Russia, and the old Government gave little encouragement to the advancement of public health. There were normally about 10,000 hospitals and 270,000 beds, under the charge of 17,000 doctors and 35,000 assistants. These were not enough to cope with the diseases even under normal Russian conditions.

HOSPITALS.

There was as wide a variation in the hospitals of Russia as there was in the classes of society. In Leningrad, and to a lesser extent in Moscow, Kiev, and Odessa, there were some excellent hospitals. The Pasteur Hospital for Children (400 beds), the Orthopaedic Hospital (150 beds), and the Leningrad Obstetrical Hospital (200 beds) are hardly surpassed anywhere either in type of construction or equipment. But in towns where there were no medical schools the hospitals were antiquated and insufficient in beds, equipment, and personnel. They were frequently one-story log buildings without any plumbing or sewage. Felchers (persons not qualified to practise as doctors, but with some practical experience in dispensing drugs and caring for the sick) often had charge of the ambulatories (dispensaries), and were frequently the only medical men in villages of two to five thousand. But though there was a scarcity of doctors, the average Russian physician I met was better educated and better informed on medical and scientific subjects than the average American doctor.

The equipment of the hospitals was good in the larger

cities and rather poor in the smaller towns. The methods used were principally those of the German hospitals, and the medicines and apparatus were, like most manufactured goods in Russia, of German origin. These hospitals, which were barely able to care for the normal needs of Russia, were faced after 1919 with overwhelming epidemics at a time when general conditions were in *extremis*, their staffs sadly incapacitated, and their equipment depleted. In these circumstances they became morgues rather than hospitals.

During the period of epidemics, which coincided with the period of "nationalization" of buildings, the Soviet Government gave additional space for hospitals in some of the best buildings that it had taken over. There was also during this period a concentration of the population into groups—for example, children's homes, industrial workers' homes, etc.—and most of these had several rooms which were converted into provisional hospitals. In this way the number of beds for the sick was greatly increased, but as there was no equipment and very little medicine for these places they had none of the essential attributes of a hospital, and served mainly to separate the sickest from the least sick. In the real hospitals (and also outside the hospitals) there was a shortage of beds. Many of the iron ones were too old to use, and most of the wooden ones had been broken up for fuel. Mattresses and linen had been worn out. I have frequently seen two adults or four or five children in a single hospital bed. From 1920 to 1922, owing to the shortage of fuel and want of repairs, over a hundred hospitals in Leningrad alone were closed.

During these years there was only one-fifth of the normal amount of fuel in Russia. The patients suffered from the cold, and the frost caused the water pipes to burst and the walls to crumble. This was the condition in nearly all of the hospitals. Many of the hospitals are even now unable to use their plumbing systems, hot water being carried by hand in the operating rooms in some of the best hospitals in Russia. The great crevices and rents in the hospital walls bear grim testimony to the cold they have endured.

Owing partly to the lack of fuel and partly to the Russian aversion to fresh air, all the windows of Russia, hospitals included, have in recent years been nailed and tightly sealed from October to June, and as the Russian house is built with double walls, windows, and doors, it is almost airtight except for the icy blasts that leak in when one enters and leaves the building. This lack of fresh air gives the hospitals as well as other Russian buildings a characteristic and indescribable stench which wellnigh floors one when entering for the first time.

Dieting.

The food situation in the hospitals was but a little better than it was outside. During the period of Communism all patients were furnished free with what the State could afford (from 1/4 lb. to 1 lb. of black bread, thin gruel or dried fish soup, perhaps some potatoes). The calories were about one-third of the daily need, and the quality was far from fit even for the healthy. (I remember being nauseated by tasting one large spoonful of this soup.) After the "N.E.P."* the patients brought their own rations, if they had any, to the hospital. The shortage of food made it possible to do only emergency operations; very few patients were strong enough to be good risks for even simple operations, and then there was no proper post-operative nourishment.

In 1923 the calories were increased to about 1,800 and meat was added, and the quality, although far from adequate, is much better, and suffices for many cases. In 1922 and until August, 1923, the American Relief Administration was issuing rations of rice, cocoa, white bread, and sugar, totalling about 1,000 calories, to roughly one-fourth of the hospital beds in Russia—for example, in Moscow and Leningrad, each 10,000 hospital rations; in Saratov, a city of 250,000, 17,000 rations. These meals were frequently all that the patients got; sometimes they were supplemented by another meal by the Soviet Government.

Equipment.

The equipment of the hospitals has been steadily declining since 1914. The blockade of Russian ports made the shipment of all medical supplies impossible except

* New Economic Policy, instituted 1921.

through relief agencies, and later economic conditions prevented their import. They have thus received nothing new for ten years, except that little that was brought in by relief organizations and a very little more that the Soviet Government was able to add. Even that part of the apparatus that has not been worn out has usually become useless because of the lack of some little part that cannot be replaced—for example, x-ray machines are generally out of use because the tubes have been exhausted and there are no plates.

Nearly all important medicines are lacking—in particular salvarsan, quinine, opium, anaesthetics, and disinfectants. Moss was used in place of cotton-wool for pads; the shortage of gauze prevented all but the most urgent operations; rubber gloves were never used even in major operations. Most surgical instruments have been literally worn out; clamps, scissors, and scalpels were always in a disreputable condition. In many hospitals it was impossible to do a bloody operation like a hysterectomy because there were not enough good haemostatic clamps; for the same reason two operations could not be performed at the same time, even when the staff was sufficiently large. Lack of catgut was almost universal; ordinary string was often used. In one of the hospitals in Vologda one of the chief doctors I knew gave the strings of his violin—his sole form of recreation—for an operation requiring catgut. One clinical thermometer had often to suffice for 200 patients; a hospital of the Volga region that I recall had no thermometers for its 205 patients except one which a patient had brought in with him.

Dr. Grekoff, one of the chief surgeons of Leningrad, says of the hospitals of that city, which were by far the best in Russia:

"A physician who had worked here in 1913, visiting the same place in 1917 or even in 1915 would hardly have recognized it, so changed were the surroundings and the patients. The corridors were dirty, the floors falling in, the ceilings and walls damp, black, and mouldy; the air saturated so with the exhalations of patients and the odours of purulent wounds and gangrene of the lungs that he would soon be short of breath. The patients were extremely emaciated or oedematous and very pale or yellow, and in throes of agony; amid them nurses and physicians stalked like ghosts, having lost their faith in surgical therapy, noting everywhere that their former powerful ally, *vis medicatrix naturae*, had ceased to assist them. He would also have noticed that some forms of disease generally rare had become frequent, and that on the contrary many common diseases had almost disappeared, and that the course of ordinary diseases had become so changed that a surgeon of the old school would have to learn anew and to change radically the routine treatment and indications for operations."

Owing to the impoverishment of the hospitals patients were frequently better off in private dwellings. In some institutions beds were without any cover or mattresses, and the patient had to sleep on boards, and in a few instances I have seen totally naked patients. For lack of soap and hot water, patients could not be bathed. They came in infected with lice and remained so during their stay in the hospital; they often slept in their own clothes without ever undressing.

Condition of Patients.

The resistance of the patients was greatly lowered. Those who did not succumb at once showed all kinds of complications—such as severe local infections from slight scratches, suppurations, extensive necroses, gangrenes, and particularly peptic ulcers from the irritant quality of the food. Amputations for gangrene increased in the Obookoff Hospital (1,500 beds) from 2½ per cent. of all operations in 1913 to 5 per cent. in 1918 and 12 per cent. in 1919. Hernias were present in 0.5 per cent. of the patients in 1913, 1 per cent. in 1918, and in 1919 in 2 per cent., the increase being due to emaciation and weakness of the muscles. The mortality of surgical diseases increased from 3.8 per cent. in 1913 to 7.9 per cent. in 1917, 11.1 per cent. in 1918, and 13 per cent. in 1919 (Maniloff).

Professor Waldman has the following to say about the lowering of resistance and the death rate of the patients:

"In 1918 the death rate in the Obookoff Hospital in 1,692 cases of 'famine disease' was 31.3 per cent.; in 1919 the rate rose to 43.1 per cent., and in 1920 to 50 per cent. In 68.5 per cent. of these deaths occurred during the first two days, as about one-half of them were dying when brought in. Prolonged underfeeding had lowered the power of resistance, and though the people did their

daily tasks, and their organism seemed to keep its equilibrium, there was an absence of reserve. The organism suddenly refused to function on the slightest tension. Most of the patients who died from hunger were brought to the hospital from the street. In such cases autopsy showed *inanitio maxima* and nothing more. This case is characteristic: G., aged 42, came home late one night at 1 o'clock, and could not get into his flat, for no one answered his bell. At 5 in the morning he was found on the staircase in an unconscious state, and died immediately after he was brought into the hospital. This occurrence, so insignificant in itself, was sufficient to kill a man who did not consider himself ill. Another case: P. went to the country and brought back 30 lb. of potatoes, and on arriving home drank a glass of tea, fell down unconscious, and was dead half an hour later, though he had not been previously sick."

Those conditions which have been described for the famine years have not yet entirely disappeared. In 1923 the food was so insufficient that cases of scurvy frequently developed in the hospitals. There was then no food suitable for the pre-operative and post-operative care of patients, which lack was most severely felt in the treatment of gastric ulcers, one of the most frequent of the new diseases. The lack of ventilation and heating makes the air cold and damp, and forces the patient and staff to wrap themselves in all the warm things they possess, which does not contribute to the cleanliness of the wards.

"The irregularity of the laundry and the disinfecting chamber due to the lack of fuel are the reasons why the hospitals could not get rid of lice; they were often found on the clean linen just as it was brought from the laundry."

In June, 1923, Dr. Shamoff of the Military Medical Academy wrote:

"The custom of bathing the patients has fallen into disuse in most of the hospitals. Even before the operation the patients have no bath because of the scarcity of hot water and the dread of their catching cold. At some periods there was not enough soap and hot water to wash even the field of operation, and then the patients got hot water for their tea only once in twenty-four hours. The conditions of the hospitals are especially hard in the winters and they have continued to be so through the winter of 1922-23."

Operations.

Of the operating room Dr. Shamoff says:

"In most of the hospitals the operating room had not been repaired since the beginning of the European war. At the time of the fuel crisis nearly all heating was discontinued in them as well as in the other parts of the hospitals. The immense windows, even though double, were covered with ice stalactites, which, when thawing, overflowed the operating room; the wet putty and the stucco of the walls cracked and fell off by bits. During the winter of 1918-19, when the population had not yet adapted itself to the struggle with the cold, the temperature in the operating room often went to 8° or 6° below zero (Réaumur), and under such conditions only the most urgent operations could be risked. The operator's fingers, numbed by the cold, could not bend with sufficient agility, and operations on this account were performed with great risk. Beginning with the winter of 1920 small iron stoves with long pipes running all around the walls were placed in the operating rooms as well as in most of the other houses in Russia, to take the place of the larger Russian furnaces which required a great deal of wood. Owing to the lack of fuel and linen, surgeons were forced to minimize the protection of the operative field, and had to use one gown for several operations, or a sterilized sheet instead of a gown."

"The stock of surgical instruments, which had not been renewed since 1914, got so overworn that many could no longer be used. One often had to work for many months in the operating room with one curved needle and one pair of forceps. There was also a lack of gloves, silk sutures, and surgical dressings. The hands of the surgeons were all covered with crevices and cracks, due to the chopping of wood and the preparing of food they had to do at home; and nearly all of them suffered with chronic chilblains, from having washed their hands in icy water. Silk sutures were replaced by common thread, and even this was difficult to get. In order to economize surgical dressings they were washed over and over again, but this could not be done systematically owing to the irregularity of the laundries. We were often forced to wash the dressings in a very primitive way in the operating room and hang them up there for the night to dry."

In spite of all these things the surgical work did not stop; on the other hand, the conditions forced an increase in the number of operations. For instance, the impossibility of curing gastric ulcers by diet, and the necessity of patients having to return to their work soon, made operation the only method of relieving them. In orthopaedic cases the lack of the means of elementary hygiene, the impossibility of plaster-of-Paris, of corsets, and other orthopaedic appliances made operation the only choice. I saw any number of Albee fixations of the vertebral column, as this was the only way of getting these patients on their feet again in a short time so that they could continue their

struggle for life. In regard to the election of an operation, Dr. Grekoff says:

"We always risk seeing the patient die on the table. If he recovers from the operation, the wound may not heal at all, or its healing is very precarious; in any case it requires an endless amount of time."

In some cases the patients apparently got over their operation but dropped dead without any forebodings on the slightest exertion when they got up out-of-bed; particularly frequent was this in emaciated patients. Dr. Grekoff says that patients with hunger oedema stood operations better than might be expected, but their wounds healed very slowly and they were prone to infection owing to the presence of the large amount of water in their tissues. Although amputations became much more frequent because they had to be done to save the patient's life, certain operations like those for hernia and appendicitis became less frequent.

Hospitals in Smaller Towns.

To give an idea of the hospitals in some of the smaller towns I shall describe them as I saw them a year ago on two of my inspection trips, one in the north and the other in the south-eastern part of Russia.

Uralsk, near the Caspian Sea, was in the centre of the famine region, and its population has been reduced from 60,000 in 1914 to 30,000 in 1923. Formerly it was an important milling town. When I saw it most of the houses had been destroyed by the fighting between the Whites and the Reds. Once a week a passenger train ran to Saratov on the Volga. During a visit of three days I saw three automobiles in the city. The drinking water was obtained from local wells. Sewage was emptied into underground cisterns and left there for one to four weeks before it was carted away in barrels. This system of disposing of refuse material was not new in Russia, and the only difference between the past and the present is that now there are fewer camels and horses to haul the sewage away as most of these beasts of burden have died or been eaten during the famine. As in most other places, there is a shortage of doctors; only twenty-two are registered in the city, and in the surrounding country there are practically none; in the fifteen villages through which I passed there was not one doctor. Sixty per cent. of the population was estimated to have malaria, and over half of the hospital beds were filled with these cases. During a thorough inspection of all the hospitals I saw only one microscope. Although there were no glass slides and no blood stains, the young intern in this hospital was perseveringly examining blood smears on pieces of glass he had saved from a broken window-pane.

The following account of a hospital in Alexandropol is typical of these institutions during the worst period:

"Some 300 children had been gathered into two buildings which had been dignified by the name of 'hospital.' These buildings were in fair condition, inasmuch as the windows, roof, and floors were complete, but it would be difficult to conceive more abject filth or revolting conditions than those that obtained in the wards. Each bed consisted of an iron frame partially covered by two planks. Some of the children were clothed in little undershirts and drawers; some of them were entirely nude. From one to four patients were in each bed. There was a bathroom in each building, but the doors were locked and the keys lost. Every window in both buildings was either locked or nailed. A filthy attendant in each ward part of the time slept in the corner while the children starved for the food she was stealing. There were tin bed-pans in some of the wards, but they were never used as it was easier for the children to soil the mattress, which was seldom changed. There was a small toilet in each building, but the floors were so frightfully soiled with excretory matter that the ambulatory children used the ground as their toilet, so that at first it was almost impossible to walk through the yard. The superintendent spent his time in fighting with the physician-in-chief, and in stealing for his personal use the food intended for the children. There was practically nothing in the way of medical supplies, and little was needed, since food and hygiene were the real medicines required. The children were dying at the rate of seven a day, chiefly of starvation." (Report by Dr. G. L. Richards, of the Near East Relief.)

Cherepovetz is the seat of government of a gubernia (state) bordering on Archangel, with a million population. The town itself has grown from 10,000 to 22,000 in the past few years, many refugees having come up since the famine, as it was outside the famine region; improvement of waterways along the head-waters of the Volga accounted also for part of the increase. There were at that time 1,200 regis-

tered as unemployed. Although the housing conditions were better than in the south of Russia, because there was no fighting and destruction around Cherepovetz, I saw several cases where five were living in a single room. Water from the river was run into three fountains, where it was sold by the bucket, but owing to its cost most of the inhabitants used local wells.

In the children's homes that I inspected the children had no shoes or stockings and their clothes consisted of a one-piece suit that had been improvised from old sacks. Nearly all of them had scabies, and sores all over their faces. The hospitals were kept exceedingly clean. In all six hospitals (500 beds) I saw only three blankets; in most cases there were also no sheets, and the patients had only some light cover or an old garment thrown over them, and, of course, the windows had to be kept closed. The surgical hospital had only fifteen haemostatic clamps, and these were almost too old to use. There were no stretchers, and I saw patients with fractures being carried in the arms. Except for one microscope, which had been borrowed from a nearby town, there was none in the city, and I was told that a routine urine analysis had never been done in the city. Tongue depressors had been whittled out of wood at the hospital; there was not a rubber glove anywhere. Convalescents could not walk because they had no proper clothes or slippers.

A special hospital for venereal cases had been in use for two years. The head of the public health department told me that, besides the epidemic diseases, 75 per cent. of the population had tuberculosis and probably 45 per cent. active syphilis; 6 per cent. of the population had appeared in the hospitals for treatment for that disease. I saw many cases where several members of the same family were infected, not by sexual means, but by ordinary contact, owing to the lack of soap and the usual means of keeping clean. The facilities for treating the syphilitics were reduced to almost nothing except symptomatic treatment, as there was very little mercury and no arsenicals.

The health department had just received from the central Soviet department in Moscow 100,000 doses of small-pox vaccine, but 50,000 more were needed.

Children's Homes and Hospitals.

Many children had been sent up to towns in the north of Russia from the famine regions in the south, and most of these had been returned; but a few had remained behind because they had no place to go. Some of these had wandered out of the children's homes that were provided for them and were to be seen on the streets as beggars or thieves. The chief doctor at one of the hospitals told me that many of them came into the dispensaries not really sick but exhausted from emaciation and malnutrition. Although famine had never been present in this district and there were no deaths from actual starvation, there had been a diminished supply of food, and part of this had to be used for refugees; the morbidity and mortality rates had both risen sharply.

Russia is a land of contrasts, and it was like coming into an oasis in the desert to enter some hospitals, which in order, discipline, and cleanliness would have excelled or rivalled any American hospital. Some of these were almost models in spite of the lack of equipment, and one could not but admire the ingenuity and pluck of those Russians who worked to make them so.

Efforts to Help.

This sketch of the Russian hospitals can convey at best but a hazy impression of what has really happened within their walls in the past decade; the conditions have beggared description. Probably no institutions in Soviet Russia have suffered more than they and at the same time had greater duties to perform. Although they have been able to receive not a tenth of their pre-war allocations, they have had more than ten times as much to do. Their equipment has been reduced to almost nothing—most of the necessary medicines have been lacking, and the personnel has been starving, sick, and trebly decimated by famine, epidemics, and war.

As an example of the amounts the hospitals have received, the records of the four largest in Leningrad may be taken;

they show that 75 to 100 per cent. of the most important medicines and surgical supplies received in 1922 were donations from the American Relief Administration. The British Mission, besides giving large amounts through the Red Cross, supported, under the direction of Sir Herbert Waterhouse and others, a hospital in Leningrad for three years, and the German Red Cross still has a hospital there, although its activities have been greatly reduced in the past year.

An enormous amount of relief work was done in Russia by the Swedish, German, French, and Dutch Red Cross Societies, the British Save the Children Fund, and the American Relief Administration. Both the British and the American organizations sent not only medicines but food and clothing into Russia.

Most of these relief expeditions have been withdrawn. The European Student Relief,* however, which is supported mainly by British and American funds (although other countries, notably New Zealand, Australia, Holland, and South Africa, have also provided considerable funds), is doing a limited relief of an excellent nature, principally in the universities, among both students and professors. Food and clothing are distributed to the most needy, and student dispensaries have been rendering a valuable service in most of the important universities of Russia. It is, however, becoming increasingly difficult to obtain relief funds for Russia, and the European Student Relief, which is doing the most extensive medical relief at present among the universities and intelligentsia, will probably have to withdraw for lack of funds, leaving no medical relief of any consequence in Russia.†

PRESENT AND FUTURE.

How do the hospitals differ to-day from the conditions just described? Briefly, they have more food and linen and they are more orderly and cleanly. Instead of epidemics they have the sequelae to contend with. They are just as badly off as or worse than they were in equipment and number of personnel.

But there has even been some reconstruction going on recently, not in new buildings or equipment, but in the plans and thought for the future. "Necessity is the mother of invention," and many new ways of doing things have been introduced into the hospitals which have made for a more efficient use of the material in hand. There has been a concentration of equipment and resources by closing many of the hospitals which were in the worst condition. Many new institutions are being started for the syphilitic and tuberculous; units have been organized for the study and eradication of malaria; summer resorts have been opened around the larger cities and in the Crimea for some of those in need of rest; societies for educating the peasant how to care for his body and prevent disease have been started by the Soviet Department of Public Health, and great strides have been made in the education of pregnant women and nursing mothers. These measures exist, not only in Moscow and the larger towns, but I have found them in the most out-of-the-way places at great distances from the medical centres. The medical profession has shown great fortitude and perseverance all over Russia in carrying on medical reforms even in the face of overwhelming disaster. I have seen the most neat and careful medical records kept by the public health authorities in small towns on pieces of wrapping paper, etc., and in the midst of the confusion and disorder of the great epidemics and famine I have been presented with the most elaborate and carefully worked out charts of disease and public health campaigns, made by doctors and their assistants who were ragged and undernourished, living on black bread, dried herring, and potatoes.

To illustrate the fact that regeneration is taking place along some lines, I shall mention the position of the medical journals. Publication of these was practically discontinued during the worst times—1918 and 1919. But now, although there is a great shortage of paper and printing machinery,

and printing is more expensive than formerly, there are more medical journals in Russia than before the Revolution, and many towns which never published a journal before are now printing their own—for example, Vologda (population 50,000) and Cherepovetz (population 22,000) each prints a medical journal.

Were we to judge by material conditions alone the outlook in Russia would be truly pessimistic. But when we see men who have lived through these conditions themselves continuing to work, devising new methods, and not losing faith, it is hard to believe that something good will not come of their efforts. The future of the hospitals, however, must depend in a large measure on the economic reconstruction of Russia.

PUBLIC HEALTH IN ITALY.

BY

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EVERY year, more especially since the war, very large numbers of English people visit with great interest the historical cities and the most romantic spots of Italy, attentively following the explanations of the guide, and bringing to mind, before the immortal monuments of ancient splendours, the history of the people who inhabited the Italian peninsula in bygone centuries. But if, generally speaking, ancient Italy is unusually well known to the English, owing to frequent visits and from historical literature, on the other hand it is not possible to say as much for their knowledge of modern Italy, whose aspirations towards social progress and whose remarkable initiative in hygienic matters remain practically unrecognized, even among our colleagues in the United Kingdom. As a rule they are more familiar with the names of the great Italian artists than with those of Italy's medical celebrities, and have a much more intimate acquaintance with the wonderful hygienic works of ancient Rome than with those of modern Italy, which, to say the least, are not altogether unworthy of notice.

As a matter of fact, these great works of the ancient Romans, which in so many Italian cities have left indelible traces, very often induce too severe a criticism of the hygienic conditions of modern Italy. For a number of visitors, many of whom are highly educated, the opinions and judgements of English travellers during the last century still hold good. The views expressed by these travellers, who were great admirers of the beauties of our country and of its aspirations towards independence, might well have been justified in a period in which, as Gladstone said, the foreign government directing Italian affairs was a denial of God.

Recent publications on the conditions of public health in Italy afford conclusive evidence that enormous progress has been made towards the perfecting of sanitary arrangements, both in the cities and in rural districts, through very strenuous work guided by the efforts of many eminent hygienists. That the average mortality in Italy is diminishing rapidly and progressively is demonstrated by the fact that, whilst in pre-war years it was about 21 per 1,000, in 1920 and the following years it has been:

In 1920	...	...	...	18.77 per 1,000
In 1921	...	...	...	17.43 "
In 1922	...	...	...	17.10 "
In 1923	...	...	...	16.48 "

If these figures are taken in conjunction with the continual increase in the birth rate in Italy, and the decreasing child mortality, it will be seen that the progress achieved has been very notable. They would appear in an even more favourable light were it possible to calculate exactly all the factors which exercise an unfavourable influence on the mortality statistics—that is, the emigration of young and healthy men and the immigration of foreigners who arrive in Italy in a very precarious state of health. The Italian population during a period of barely half a century has increased from 25 to 40 million. The number of marriages,

* Headquarters, 16 Boulevard Philosophes, Geneva, Switzerland. Executive Secretary, Conrad Hoffmann.

† At a recent meeting of the Executive Committee of the European Student Relief it was decided to obtain at least 100,000 dollars to continue its work during the collegiate year 1924-25.