

in the factories, and, as I have already mentioned, Albert Thomas, minister of munitions, has established in all the munition factories such an organization for the protection of women and children.

In order to furnish an efficient personnel for the foregoing noted organizations, there has been founded in Paris, under the auspices of the Ligue contre la mortalité infantile, a central school of puericulture. Lectures in puericulture have, however, been given for several years at the Foundation Pierre Budin, Hôpital des Enfants assistés, and in a special department of the Faculty of Paris under Dr. Marfan. I have myself, since 1906, given a course in puericulture in our nurses' training school of the city of Paris, and many others are given in the universities of the provinces.

At the moment, during 1917, when we found ourselves in particular difficulties along these lines in our reorganization of the fight against infant mortality, the American Red Cross arrived in France with its special department, the children's bureau (under the direction of Dr. William Palmer Lucas), to offer its aid. This offer was accepted by the whole of France with the deepest appreciation. That which has so appealed to us from the theoretical standpoint is your development of the visiting nurses, whose efficiency has been so clearly demonstrated in the United States. Of this I am particularly impressed, since I had the opportunity of seeing the visiting nurse organizations of New York, Philadelphia, Cleveland, etc.

After having responded to the most urgent appeals for aid incident to the war, as for example, at Toul, Nesle and Evian, the American Red Cross undertook, at Lyons, a work of a more general nature, in organizing an exposition of puericulture or, as is said here, an "infant welfare exhibit." This has had a most astonishing success. The American Red Cross has been able to group under its standard all of the best elements of the city, including religious, civil and political parties. As has been done by the French people against the Germans, it has made a "Union sacrée" in this great question of the protection of our children.

At the same time, there was inaugurated a course for visiting nurses, for which the number of applicants was soon greater than could be accommodated.

Soon the American Red Cross will transport this exhibit to other large cities of France (Marseilles, Bordeaux, etc.), where there already exist certain children's organizations and where the local committees have cordially offered their cooperation.

The director of public hygiene, M. Brisac, in the Ministry of Interior, is entirely disposed to second these efforts, and as he informed me just before I left on this mission to America, he would himself institute an investigation by his administration, in order to establish not only the list of existant organizations, but also the districts where the need is the most urgent. He assured me that the French government would cooperate with the American Red Cross in the perfection of its organization in the various departments, cities and communities.

We hope that soon, thanks to your aid, first the great cities, then each little village will have its *consultations de nourrissons* with their visiting nurses, so that all French mothers may have the aid and counsel which will permit them to save the generations of the France of the future.

By entering this war, you yourselves have demonstrated that you do not wish that the home of liberty and of the declaration of human rights should be

overwhelmed by the waves of barbaric hordes. Instead, it is your evident desire, for which we wish to express our heartfelt gratitude, that after so much sacrifice, France may be reconstructed and its new generations, working with yours, continue their mission for humanity, in defending the right, the justice and the liberty of the world.

THE CHILDREN'S YEAR CAMPAIGN *

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The Children's Year campaign in this country is, I believe, part of a great international movement for the protection of children in war time that is stirring all of the warring countries.

In part, this movement is the logical outcome of the years of effort and thought for children that lie between 1900 and the opening of the great war. In these years a realization had grown that of all the people in a country the children are the most important. And so there are many now who feel that in war time it is the children whose interests must be especially protected from the deprivations, dangers and difficulties brought about by the war. One of the ideals in this war for ideals is the determination that children shall not suffer too much for this war, and that the future for which our armies are fighting must bring better conditions for children than did the past.

This movement, however, has had another stimulus, especially in the foreign countries hardest pressed by the war. Every foreign warring country is losing lives for its future in two ways: by losses on the battlefield, and by the losses represented by the inevitable and enormous decline in its birth rate. And every country is realizing that there is just one way to make up at all for these losses, and that is by lowering the death rates for babies and children. The vast and preventable wastage of life represented by the infant mortality rate of a country is really the only point at which a great economy of life is possible, an economy at all in proportion to the loss of life from war.

This has been realized, and in every one of the warring countries, efforts are being made to cut down infant mortality rates and to increase greatly the work for the protection of mothers and babies that had been proved successful before the war. That work includes measures to insure the care of the baby by a healthy mother in her own home, and includes, further, the work of public health nurses or other trained workers, and of centers for maternal and infant welfare. The increase in this work in foreign countries has had to be carried out in the face of great difficulties—the same difficulties we are facing now in this country. The greatest of these has been the shortage of physicians and nurses; the second has been the diversion of popular interest from infant welfare work to other work which has a more dramatic appeal or a more apparent connection with winning the war.

THE WORK ACCOMPLISHED ABROAD

But in spite of these difficulties in the foreign countries, this movement for the protection of mothers and babies has been successful. Infant mortality rates in

* Read before the Section on Diseases of Children at the Sixty-Ninth Annual Session of the American Medical Association, Chicago, June, 1918.

several of the countries have declined; in many countries more is now being done to care for women and children than ever before.

Reliable figures of infant death rates and birth rates are difficult to secure since the war began. Sir Bernard Mallet,¹ Registrar-General of England and Wales, has gathered together all the material available from official sources. He compares the fall in the number of births in England and Wales, Scotland, Ireland, Germany and Hungary. While the decrease in the number of births has been marked in all of the countries, it has been far less in the United Kingdom than in Germany and Hungary. In England and Wales, Scotland and Ireland in the succeeding quarters and years of the war, the percentage of decrease has varied from about 5 to about 30 per cent., but reached a point over 17 per cent. only in 1917. In Germany (in cities of over 15,000 inhabitants) and in Hungary, on the other hand, the percentage of decrease has been from 23 to 53 per cent., beginning the last quarter of 1914. The maximum point, 53 per cent., shows what an immense loss this represents.

Sir Bernard Mallet then compares the infant mortality rates of England and Wales, Scotland, Ireland and Germany for the years of the war ending in 1916, and shows that in general the rates in these countries have been lower than before the war. He says:

We have thus the extraordinary phenomenon all but common to these countries that the rate of infant mortality during these years has been lower than at any previous period of like duration. In the three parts of the United Kingdom the rate for 1916 is the lowest recorded, while that for Germany was equaled in 1913 and beaten only in 1912.

Since this article was published, preliminary figures for 1917 for England and Wales have been published and show a rise of 6 points in the infant mortality rate. Newspaper accounts tell us that official figures for Berlin have shown an increase in the infant mortality rates in the last months of 1916 and the first six months of 1917. It is still too early to comment on the meaning of this rise.

It is, indeed, a very striking and remarkable achievement that the countries of the United Kingdom—England and Wales, Scotland and Ireland—should in the second full year of the war attain the lowest infant death rates on record. This result is not due to happy chance. Never before has so much been done for mothers and babies. It is evident from the reports that this work is considered of paramount importance; that while economy must be urged in other directions, none is tolerated in the development of this work. The government in England and Wales gives grants of money through the Local Government Board to local authorities and voluntary agencies carrying on child welfare work. The budget allowance for this grant was £140,000 in 1917-1918, and was increased to £230,000 for 1918-1919.

The number of health visitors—trained women giving instruction to mothers in their own homes on the care of themselves and their babies—was increased from 600 in March, 1914, to 1,445 in February, 1917; that is, it has been more than doubled. The number of centers was increased to 842 in February, 1917, and to more than 1,119 before the end of the year.

Of course, great difficulty has been met in developing the work because of the shortage of nurses. The

great importance ascribed to the work has, however, evidently helped to meet this difficulty. It is said:

The value of this national work is so fully realized that the War Office, in spite of the need of nurses for military service, is not prepared to accept those who are acting as midwives and health visitors.²

Last year, England held a national baby week, similar to that carried on in this country in 1916 and 1917. It is said that the popular interest aroused by this campaign helped a great deal in increasing the number of health visitors and infant welfare centers, and in bringing home to the whole country the importance of saving mothers and babies as a war measure.

Perhaps the most important measures of all—those economic measures whose aim is to enable a mother to remain in her own home and care for her baby herself instead of going into industry—I shall not touch on here; nor can I speak of the work that is being carried out to give special preference in the milk and food supplies to mothers, babies and children.

I have sketched this work in England and Wales because it is illustrative of the work that has been going on in many other foreign countries since war was declared.

THE CAMPAIGN IN THIS COUNTRY

The work abroad has been an inspiration for the Children's Year Campaign in this country, which has been planned and is being carried out by the United States Children's Bureau cooperating with the Child Welfare Department of the Woman's Committee of the Council of National Defense. In this campaign the Child Welfare Committee and Committee on Nursing of the General Medical Board of the Council, as well as state and city departments of health, and physicians and nurses all over the country, are cooperating.

This campaign began April 6, the anniversary of the declaration of war, and is to last throughout the second year of the war.

In this country, because of our incomplete vital statistics, we do not know for the whole country the birth rate and infant mortality rate. But we estimate that every year in this country 300,000 children under 5 years of age die. It is safe to say, all agree, that one half of these deaths are preventable. The published aim of the Children's Year Campaign is to save the lives of 100,000 children under 5 during this year, the second of the war.

This aim—the public protection of mothers and young children—is only part of the program of the campaign, which is fivefold. The other four aims are: to maintain the standard of home care and the income on which proper care of children depends; to see that the restrictions on child labor and the requirements of school attendance laws are not broken down under war time pressure; to insure to every child opportunities for the outdoor life and recreation which are essential to health, and to provide for children in need of special care—the dependent, the neglected, the delinquent, the subnormal—the care that they require. I shall have space here to tell only of the first part of the program—the protection of maternity and infancy.

The aim of this part of the campaign is to save 100,000 lives this year. How can it be done? We

1. Mallet, Bernard: *Vital Statistics as Affected by the War*, Jour. Roy. Statistical Soc., 1918, 81, 1.

2. Hughes, A.: *War and the Public Health Nurse*, Pub. Health Nurse Quart. 1918, 10, 210.

have thought that to accomplish it two things are necessary:

First, to enlist the interest and gain the help so far as possible of every one in the country; of fathers and mothers, of physicians and nurses, of health officers—of every one; to develop the general conviction, here as it has been developed abroad, that the protection of children is a war measure.

Second, the development of permanent work for children, especially divisions of child hygiene in state and local departments of health; of centers for infant and maternal welfare, and of the work of public health nurses.

In a democratic country, progress must depend on popular understanding and support. And so in this campaign the Children's Bureau has enlisted the help of the many millions of women represented by the Woman's Committee of the Council of National Defense. In almost every county in this country a committee has now been formed; and under most state and county committees a child welfare committee has been established. These committees have been asked to take up the work of the Children's Year. The Children's Bureau and the Child Welfare Department of the Woman's Committee have asked all local committees to seek the advice of state and local departments of health and of local medical associations in making their plans. To every state, on the basis of its population, has been assigned its quota of children's lives to be saved, and in at least one of the states (Ohio) the state quota has been divided up between the counties and cities. We have heard of one small community whose quota of lives to save was seven, and which intends to save them.

You will wish to know in what ways we are trying to accomplish our two aims—to arouse popular interest and to stimulate the development of permanent work.

THE WEIGHING AND MEASURING TEST

The weighing and measuring test for children under school age is the plan which has been adopted to fix public opinion on the subject of the health of children, and to show the need for better provision for keeping children well—the need of more public health nurses and of more centers for infant and maternal welfare. I may explain the weighing and measuring test briefly as a test in which as many as possible of the children under 6 of a community are weighed and measured, and these measurements compared with a table of average heights and weights at different ages. It is advised that where possible a full physical examination of each child by a physician shall be included. The attention of parents is called to children whose weight falls markedly below the average for their height. The Children's Bureau has furnished a card for recording the height and weight of each child. Half this card is detached and given to the parents to serve as a permanent record; half is returned to the Children's Bureau. The cards where measurements have been made by physicians are to be tabulated. It is hoped that two or three hundred thousand cards will be available for tabulation; this will give data never before obtainable for a table of average heights and weights of children under school age.

The reports of the campaign in many communities are now coming in to the Woman's Committee and the Children's Bureau. They indicate a widespread interest and enthusiasm. Many of the committees are

reporting especially the interest shown in the test by the local physicians, and the way in which physicians are cooperating in carrying out the test in spite of the fact that their work is so much increased because of war conditions. The part taken in the campaign by state and local departments of health is a marked feature of the reports.

The weighing and measuring test has not yet sunk sufficiently into the past to let us judge what its end-results for good will be. But as a means of fixing popular attention, as a great publicity and educational campaign, I think most communities agree that it has been a success. The demand for cards for the test has gone far beyond our expectations; 5,000,000 cards have been printed and distributed. A campaign in which 5,000,000 families and many thousands of communities have taken part is one which is talked of and thought about. To most of these families we hope the idea has been brought home that the United States government considers that the special care of children in war time is a patriotic duty.

From New Orleans it is reported that a house-to-house canvass showed that there were about 40,000 children under school age. Of these, 32,730 have been weighed and measured. From Boston it is reported that about 35,000 children have been included in the test.

The test has been criticized because of its crudity. It is said that the height and weight alone are only an extremely rough index of the child's health and nutrition. This is true. It would be far better if every child could have been given a complete physical examination by a physician. But this would have been an impossibility on account of the shortage of physicians.

It is, however, true that the height and weight do give a rough indication of the child's physical condition. Many children who are very markedly underweight for their age and height are being found; there is the evidence of a children's clinic in a large city that the number of cases of rickets and malnutrition had doubled during the last month because of the children brought in by their parents who had discovered their condition through the weighing and measuring test.

THE FINAL AIM

To point out to their parents and to the community the children needing special care is one of the aims of the weighing and measuring test. But the thing which we hope, above all else, to accomplish is the development of permanent work for maternal and infant welfare. After the test, each community—as has been the case in Boston—will, we hope, have seen the need for more centers and more public health nurses, and will feel that the establishment of this work is a war measure. There is evidence that this is happening—that this work is having a great stimulus. We hope by the end of the year that the number of divisions of child hygiene, of infant welfare centers and of public health nurses will be doubled.

Of course, here the campaign comes up squarely against the difficulty that is affecting infant welfare work abroad and that is affecting all public health work in this country. This difficulty is the great shortage of physicians and nurses. The question of the shortage of physicians I shall not take up at all; perhaps it will be spoken of in the discussion. The shortage of those skilled in pediatrics is one of the

gravest problems at present in infant welfare work. This shortage makes an increase in the number of public health nurses for preventive infant welfare work all the more an urgent necessity.

The National Organization for Public Health Nursing and the Committee on Nursing of the Council of National Defense are working in close cooperation with the Children's Year Campaign. The first named organization was appealed to by a conference of state child welfare chairmen to devise means of increasing the supply of nurses, and it has approved a plan for cooperating with states in which funds have been raised to employ a state supervisor of nurses either by the state department of health or by the state child welfare committee. The organization will help states to find suitable candidates for these positions, and through a traveling secretary will aid the state supervisor in developing emergency plans for training graduate nurses to do public health and infant welfare work. Already the child welfare committee of one state—Connecticut—has raised funds for this purpose; and others are making plans to do so.

In many of the states and in many cities much work for children as a war measure was being planned or carried on before the opening of the Children's Year Campaign. I wish there were space to tell of the splendid work that has been done. We hope that the general interest aroused by the campaign has aided the work already begun in those states and cities.

All these lines of endeavor in our country and abroad, this whole movement for the conservation of children in war time which we are discussing today, will grow as the years go on. Some day, when the war is over, this movement for the protection of children, like that for the control of venereal diseases, will, I think, be considered among the important lines of progress that have developed from the great war.

This article and those by Drs. L. R. DeBuys and Paul Armand-Delille are part of a symposium on "Child Welfare." The remaining papers, by Drs. J. P. Sedgwick and N. O. Pearce, and by Dr. W. P. Lucas, with the discussion, will appear next week.

Progress in Child Labor Legislation.—The *Child Labor Bulletin* for May has as a special feature the tentative draft of a bill to create a federal Department of Education, to provide for a Secretary of Education and to secure the appropriation of \$100,000,000 for federal aid to the states. Drafted by the National Education Association and the National Child Labor Committee in cooperation with educators throughout the country, the measure has for its aims the abolition of illiteracy, the improvement of rural schools, the Americanization of immigrants, and the promotion of physical education in the schools. The *Bulletin* also reviews the gains of child labor legislation during the past year, naming New York, Massachusetts, Wisconsin and Missouri as the banner states for progressive law-making. Within that period, Virginia and Mississippi have raised their educational standards, the former extending her law to apply to the whole state and the latter passing a local option educational bill applying to children between the ages of 7 and 16 years. In addition to the state survey made in Oklahoma by the National Child Labor Committee, three more state surveys are now under way in Michigan, North Carolina and Alabama, for the purpose of studying and reporting on all the conditions affecting child life. The *Bulletin* declares that these surveys have become a part of the campaign of education which accompanies the drafting of children's codes in the various states. The survey in Alabama is especially designed to furnish information for the legislature.

POTENCY OF ANTIMENINGOCOCCIC SERUM

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During the past year there has been much discussion of the therapeutic value of the antimeningococcic serum available in the American market, and of its potency as determined by laboratory tests. While the question of the potency of this agent is still under investigation and is far from being settled, it appears desirable to present this brief review of the situation as it exists at present.

Epidemics of cerebrospinal meningitis occurring in 1915 and 1916, in England and continental Europe, with the mobilization of troops, afforded an opportunity to extend the therapeutic use of antimeningococcic serum, and to analyze the results of treatment with better controls than is usual.

The conclusions reached as to the efficacy of the serum treatment were conflicting. Some workers had most unsatisfactory results, while others working with serum of similar origin were apparently enabled to reduce, to a conspicuous degree, the mortality of the disease.

The failures were in part attributed to the presence in the epidemic of strains of the infecting organisms that were resistant to the serum, or, in other words, that the different serologic responses of the meningococcus were to be considered in serum therapy.

It is pertinent, therefore, to present briefly a few facts in relation to the classification of the organisms isolated from the cerebrospinal fluids of persons suffering from epidemic meningitis.

GROUPS OF MENINGOCOCCI

The first definite separation in groups of the organisms under discussion was made by Dopter, who found that by serologic methods it was possible to differentiate two groups, the true meningococci and a group which he designated parameningococci.

It has been very generally accepted that this separation is valid, but certain workers consider this grouping not sufficiently specific. Further investigation along these lines has led to the recognition by one set of workers of the "irregular" group, which includes organisms that vary from the serologic types which form the basis of the two groups mentioned. Others, working with the cultures secured from cases of meningitis that occurred among troops in England, established four types designated I, II, III and IV, I and III corresponding in general to the regular meningococci and II and IV to the parameningococci.

The group classification of a particular organism is made either by means of agglutination or by means of agglutinin absorption, but the results of the two tests do not necessarily run parallel. The separation of cultures into groups probably is a matter of the greatest importance in connection with the testing of the therapeutic potency of the serum. It should be said that ordinarily there is some "cross immunity" shown