

U. S. DEPARTMENT OF LABOR
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CHILDREN'S BUREAU
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INFANT-WELFARE WORK IN EUROPE

AN ACCOUNT OF RECENT EXPERIENCES
IN GREAT BRITAIN, AUSTRIA, BELGIUM,
FRANCE, GERMANY, AND ITALY

By

NETTIE McGILL



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CHILDREN'S BUREAU

INFANT WELFARE WORK IN EUROPE

AN ACCOUNT OF RECENT EXPERIENCES
IN GREAT BRITAIN, SWITZERLAND,
FRANCE, DENMARK, AND ITALY

METTY WELLS

AMERICAN CHILD WELFARE ASSOCIATION
CHICAGO, ILL., 1917



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LETTER OF TRANSMITTAL.

UNITED STATES DEPARTMENT OF LABOR,
CHILDREN'S BUREAU,
Washington, February 16, 1920.

SIR: I transmit herewith a report on infant-welfare work in certain European countries, with special emphasis on the work done during the course of the war.

The material for this report is such as was available October 1, 1919. It is based on official records, parliamentary debates, newspaper reports, current literature, and such other material as could be secured by correspondence or was obtainable in American libraries. A considerable body of material which would otherwise have been at hand did not, owing to war conditions, reach this country, if at all, in time to be used in the report. This is true especially of vital statistics, for in countries closest to the theater of war the work of statistical bureaus was to some extent disorganized and customary publications were in certain cases suspended. Hence the report, based as it necessarily is on unofficial accounts, can in no sense be regarded as complete, particularly in the case of Austria, Germany, and Italy. Information was complete and satisfactory only for Great Britain.

Fragmentary as the report undoubtedly is, it nevertheless serves to show the importance which in recent years has been attached to the protection of maternity and infancy and to indicate certain general tendencies in infant-welfare work, differentiating between what is merely local in application and what has proved universally acceptable and successful.

The research work for the report was under the general direction of Miss Anna Rochester, at that time director of the Publication Division of the Children's Bureau. The English reading was done by Mrs. Frances Hawes and by Miss Nettie McGill; the reading for the Austrian, Belgian, French, German, and Italian sections was done by Miss Anna Kalet, who also read the manuscript and suggested interpretations of the original material. The report was written by Miss McGill.

Respectfully submitted,

JULIA C. LATHROP,
Chief.

HON. W. B. WILSON,
Secretary of Labor.

INFANT-WELFARE WORK IN EUROPE.

INTRODUCTION.

"Excessive mortality in infancy implies excessive mortality in later life," says the well-known English authority on infant mortality, Sir Arthur Newsholme,¹ and he adds: "There can be no reasonable doubt that in the countries having a high infant death rate there is—apart from migration—more sickness and a lower state of health in youth and in adult life than in countries in which the toll of infant mortality is less."² The environment which, because of bad housing, bad sanitation, domestic or municipal, a low degree of social progress in general, reacts unfavorably on infant life, is the environment responsible for a low state of health and vitality in all classes of the population. Moreover, those children who because of superior resistance do live to maturity are often seriously impaired in health. The infants who are injured by the unfavorable environment into which they are born number two or three times as many as those who die. The survivors of infant mortality, it has been declared, bear in their bodies the marks of its causes and conditions. Weak in body or mind, or both, they become the fathers and mothers of the next generation, and social regeneration is indefinitely delayed. Thus infant mortality figures have come to be called "the most sensitive index we possess of social welfare and of sanitary administration."³ For the last 15 years or so there has been in the more highly civilized countries a growing recognition of this fact, and a growing anxiety on the part of statesmen and leaders in social reform to lower the infant mortality rates.

But to the popular mind it is only within very recent years, and partly as a result of the war, that the significance of infant mortality has come home. The war brought to every belligerent country not only an unparalleled destruction of life on the battle field but an alarmingly lowered birth rate, which seemed to menace national existence itself. As the nations saw their young men cut down

¹ Local Government Board, Thirty-ninth Annual Report, 1909-10, Supplement to the report of the medical officer containing a report on Infant and Child Mortality. Cd. 5263, p. 35.

² Local Government Board, Forty-second Annual Report, 1912-13, Supplement in continuation of the report of the medical officer of the board for 1912-13, containing a second report on Infant and Child Mortality. Cd. 6909, p. 47.

³ Local Government Board, Thirty-ninth Annual Report, 1909-10, Supplement to the report of the board's medical officer, containing a report on Infant and Child Mortality. Cd. 5663, p. 74.

without issue, a new and pressing necessity for saving infant life was revealed to them.

The object of modern infant-welfare work, to which the war lent a particular stimulus, is the preventive care of all children. Up to the end of the nineteenth century such work had dealt chiefly with sick or dependent children, or with those who because of the employment of the mother were virtually deprived of a home. Thus infant-welfare work had concerned itself with the establishment and maintenance of hospitals, asylums, and day nurseries. But with the growth of preventive medicine emphasis in infant-welfare work shifted somewhat from remedial measures for sick and dependent children to measures to secure for all children the best home care, largely through teaching mothers the proper way to rear their babies in order to keep them healthy.

In the words of Sir Arthur Newsholme, the object of this work is "to insure that each parent has within reach accurate counsel as to the hygiene of childhood, and as to the general and domestic conditions necessary for insuring its maintenance. From the standpoint of medicine this implies such advice as will conduce to the prevention of minor ailments, to their prompt discovery, and to that early treatment which is essential for the prevention of more serious disease."⁴

One of the most successful means of maintaining this supervision over normal babies has been found to be the infant-welfare center, or infant consultation. First established in France, the infant-welfare center has spread to every civilized country. It has tended to replace the earlier milk station, where pure milk was given or sold to the mothers of young babies, but where in general no regular medical supervision was exercised over the babies who received the milk. The infant-welfare center, on the other hand, gives each baby a physical examination, weighs and measures him periodically, keeps an accurate record of his development, and gives the mother expert advice concerning his food, clothing, and daily care. While these are the fundamental activities of all centers, a number have instituted in addition infant-welfare exhibits, courses in infant care for mothers or young girls, instruction in sewing and cooking, and home visiting among the babies attending the center.

More and more, too, as the emphasis on the preventive side of infant conservation has increased, the centers have endeavored to keep watch over the health of the baby's mother, until, in very recent years, widespread attention has been given to prenatal care. The importance of periodical physical examinations of pregnant women has been everywhere recognized by opening the center to the expect-

⁴ Local Government Board, Forty-second Annual Report, 1912-13, Supplement in continuation of the report of the medical officer, containing a second report on Infant and Child Mortality. Cd. 6909, p. 90.

tant mother. Certain days have been set apart for pregnant women for consultations; in some cases, special centers have been opened for their use. Home visiting where it is well established, as in England, has been extended to include visiting expectant mothers. The establishment of preconfinement homes and rest houses, as well as an extension of hospital service to pregnant women, has taken place in several countries. This aspect of prematernity service was well developed in a few French cities before the war. In England by 1918 public grants for infant welfare became available for the provision of rest homes for mothers awaiting confinement. In Germany and Austria provision in this respect is not so general as in England and is almost entirely in the hands of voluntary agencies. Mothers' canteens, providing free dinners for all expectant mothers, have been established in France and Belgium under Government subsidy. Not only is the expectant mother given nourishing meals at these canteens, but she is also placed under medical supervision and is given helpful hygienic advice. In Great Britain the feeding of mothers has been undertaken at a number of welfare centers, which during the war became eligible for government grants.

The importance of good obstetrical, as well as prenatal, care has been increasingly recognized. Within the last few years the standard of midwifery practice has been raised by law in several countries. The period of training for English midwives was doubled in 1916, and more adequate compensation was guaranteed the midwife through the extension of Government grants to cover midwives' fees where necessary. In 1918 a new midwives' bill providing among other things for more efficient supervision of midwives was passed in England. Both Ireland and Scotland during the war passed bills providing for the training and supervision of midwives. Municipal midwives have increased in Great Britain to a considerable extent. In France the second-class midwife of inferior education was abolished in 1916; henceforth only those who have completed at least a portion of the high-school course are eligible for training. Prussia has pending a midwives' bill which provides for continuation courses and periodical examinations for midwives already in practice. Berlin, in 1915, passed similar regulations to insure better midwifery. In several countries there has been an effort to enlist the cooperation of the midwife in infant-welfare work. In England she is urged to bring her prospective patient to the maternity center and to be present at the physical examinations. In many places in Germany and Austria midwives receive a fee, usually from local public health bodies, for every mother whom they persuade to breast feed her baby. In Italy similar attempts have been made to use the midwife in the work of infant conservation.

Lying-in accommodations, except in large cities, are universally regarded as unsatisfactory. There has been a constant demand for the public provision of obstetrical care. In England late in the war grants became available for hospital accommodation not only, as before, for complicated cases of childbirth but also for normal delivery. These grants also included payments toward the establishment and maintenance of rest homes for women after confinement. Such convalescent homes have for some time been common in France. In Germany, as well as England, domestic assistance has been extended to women after confinement, in the former country generally through the work of the sick-benefit societies, in the latter through both public funds and private organizations. In England in 1918 home nursing in confinement was aided by the grants for infant-welfare work.

All infant-welfare work emphasizes the importance of maternal nursing. In France, Germany, and Austria nursing premiums are given from both public and private funds to mothers who breast feed their infants. In Belgium and Italy assistance in kind is given out by the centers to nursing mothers. The experiences of both France and Germany showed that the number of women unable to nurse their babies, for a few months at any rate, is very small indeed.

Lunch rooms for nursing mothers have been extensively developed in the world-wide campaign for breast feeding. Italian child specialists consider it the most successful of all methods of inducing mothers to nurse their babies and to bring them regularly to a welfare center. Such canteens have proved very successful also in France and Belgium. Providing nourishing meals for nursing mothers has now become a regular part of English infant-welfare work, where it is regarded as a benefit not only to those women otherwise unable to obtain sufficient food but also to numerous mothers who, after preparing a meal for the family, have no appetite for it themselves. Mothers in England in many cases pay a nominal sum for the meal.

Welfare centers furnishing milk to these mothers who can not breast feed their infants tend to replace milk stations providing modified milk for weaned children; or, the milk stations themselves tend to become consultation centers through the regular attendance of a physician and trained workers who supervise the children receiving milk. In either case modified milk is not distributed until every assurance has been given that the mother is unable to feed her child in the natural way. In England, in contrast to the continental custom, there has been comparatively little distribution of milk since the early years of infant-welfare work in that country, before the consultation center was well established.

A marked increase in centers has taken place in many countries. The increased work in Austria and in Germany during the war generally took the form of opening new centers. In Belgium there were 10 times as many centers in 1918 as there had been in 1914. English welfare centers probably doubled in number during the same period.

Expert and regular medical direction is now considered an essential of every center, in spite of the shortage of doctors caused by the war. A higher standard of training for workers also is generally being demanded. In France training schools have been opened in the largest cities. In Prussia and Saxony infant-welfare workers must have a diploma from a State training school. In Austria, in 1915, the imperial institute for the protection of infancy was established chiefly for the training of infants' nurses and child-welfare workers. The English health visitor must be two of three things—sanitary inspector, qualified midwife, trained nurse. Even volunteer workers are encouraged to prepare themselves through training for their work, and a number of centers offer courses for the training of both professional and volunteer workers.

Home visiting is now regarded in a few countries as a part of the regular work of a center. The greatest development of home visiting has been in Great Britain, where it has followed the requirement by law of early notification of births (notification-of-births act, 1907, and notification-of-births extension act, 1915). France is giving increased attention to this phase of infant-welfare work. In Austria and Germany wherever it is systematically practiced it is frequently an outgrowth of the visiting of illegitimate children, who are under public supervision.

The general education of the mother in hygiene and infant care is in some countries a function of the welfare center. This is especially the case in England, where the welfare center, or "school for mothers," as it is generally called, holds regular classes in sewing, cooking, and infant hygiene, and was, until recently, aided by grants from the board of education. In Germany and Austria, on the other hand, instruction in baby care is usually given by public-health officers or bodies in a series of lectures for mothers and young girls. In France a few courses for mothers and young girls have been opened, usually by private societies or individuals. In Italy instruction in the care of babies is given in some normal schools, schools of midwifery, and domestic-science schools, and by infant-welfare agencies.

That the medical supervision and care at the center should not cease with the passing of infancy is becoming universally recognized. Almost every country has made efforts to secure continuity of child-welfare work not only by beginning with the child before birth but

also by continuing care throughout the preschool age, or until a child is placed under medical supervision in school. In England special stress has been put upon this neglected period, and health visiting has been extended to include systematic oversight of the "toddler." The development of the English nursery school is a further indication of the interest in that country in the welfare of the child between infancy and school age. In Germany centers were opened especially for the child of from 1 to 5. In France consultation centers received the older child, and some mothers' canteens fed the "ex-baby," as well as the expectant or nursing mother. In Belgium special canteens were opened for children over 3, the consultation centers and milk stations caring for babies up to that age. In Austria regret was expressed that funds did not in general permit the extension of welfare work to children of preschool age.⁵

The mother and child in rural districts present a problem in every country, despite many and increasing efforts to meet it. In England, the grants of the local government board for supplementing the earnings of midwives have had the effect of providing more adequate midwifery service for some parts of the country previously suffering from a lack of trained midwives. In England, too, a few rural centers have been opened since the war began and the grants became available. Lying-in accommodations for rural areas are still a pressing need in that country as in all others. The education of the country mother in the care and management of her baby has been attempted in France and in Germany by the extension of the work of a city center to the surrounding rural region. In Germany the visiting of babies up to 9 months has been carried on in some remote districts by midwives who assisted at the births, the midwives in most cases receiving a fee from public funds for the service. The German vaccination doctor, also, exercises some supervision over babies outside urban confines and gives medical and hygienic advice to the mother, who is required to bring her infant for vaccination. In France, in the last few years, motor trucks equipped as infant-welfare centers have visited the smaller towns and villages. Italy, through school-teachers trained at the infant-hygiene schools, carries on infant-welfare propaganda in small towns and villages and remote districts in the mountains. Austria has a number of traveling centers. The distribution of pamphlets and leaflets on infant care is general and traveling exhibits have proved their value both on the Continent and in the British Isles.

The child of the working mother also furnishes a special problem, particularly acute since the beginning of the war. Day nurseries have increased in every country, with the exception of Belgium,

⁵ However, according to a report for 1919 of the Children's Bureau of Lower Austria welfare work in that part of the country has been since early in the war gradually extended to children beyond the age of infancy.

where industry has been at a standstill. Factory nurseries and nursing rooms have also been established, especially in France. In France a law passed in August, 1917, obliges certain employers of women to permit nursing mothers time off during the working day to nurse their infants and may oblige them to maintain nursing rooms on the premises. Government regulation and supervision of day nurseries have come about in England as a result of public grants to nurseries. A higher standard in staff, premises, and equipment is everywhere apparent, with a tendency to incorporate the day nursery into municipal and national schemes of child welfare. Protests are still raised, on the other hand, against even the best of day nurseries, and there are many who argue with Prof. Adolphe Pinard, of the University of Paris, that not only is the day nursery dangerous but that the cost also is at least as great as would be involved in subsidizing mothers, in the absence of adequate family income, in order to keep them at home to nurse their infants.

Practically every important European country has made some provision for financial assistance to mothers, either at confinement or during the nursing period, or both. This provision has usually followed a law requiring at confinement a period of rest from industrial employment. In England, the national insurance act (1911) granting maternity benefit to insured women and wives of insured men was extended during the war to include a greater number of women, since all men in service were obliged to be insured. In France the amount of maternity benefit was raised after 1914 and more women were included. In Germany a system of imperial maternity grants was inaugurated in December, 1914, and covered many classes of women not covered by the prewar insurance code. Austria in 1917 amended its insurance law to make the provision of maternity benefit more generous. Italy, during the war, raised the amount of maternity benefit. The universal experience with regard to maternity benefits and nursing premiums is that in general they fail to provide the maximum of care for the mother and her baby unless they are accompanied by such expert advice and help as the home visitor and the infant-welfare center can furnish.

The nationalization of child-welfare work is taking place in the chief countries of Europe. Many governments have indicated their awakened sense of responsibility toward maternity and infancy by aiding with public funds those organizations that have already done successful work for mothers and babies, and, where necessary, by undertaking work on a national scale. The most striking development of State work has been in England. There, in July, 1914, Parliament voted to make grants of 50 per cent of approved expenditure on infant-welfare work done by either voluntary agencies or public authorities. These grants were administered through the

local government board and to a lesser extent through the board of education. Year by year the scope of these grants has been enlarged until practically every aspect of infant and maternity welfare is covered, and the grants were in 1918 at least ten times as great as they were in 1914. In France, subsidies up to 20 per cent of approved outlay have for a number of years been given to infant-welfare organizations by the National Government, and laws of June and July, 1913, on maternity benefits and nursing premiums, and an extension of these laws during the war, have greatly increased State appropriations for maternity and infancy. The German Empire and the federated States regularly appropriated considerable sums for the purpose of combating infant mortality. The imperial maternity grants represented the most important national act of recent years for furthering the protection of infants in Germany. In Austria two new ministries were formed in 1918, both of which dealt with some aspect of child welfare. Subsidies from the State became available in 1918 also for places with an unusually high infant mortality, and a program of infant welfare was put forth by the ministry of the interior. In Belgium the National Commission for Food Relief granted during the war 50 per cent of approved expenditure on consultation centers, milk stations, mothers' canteens, and other infant-welfare measures; and a bill to provide a national children's bureau to do similar work was passed in 1919 by the Belgian Chamber of Representatives. Italy also has before its Chamber of Deputies a bill proposing radical measures in favor of infancy and providing for State subsidies and for national regulation of the work.

The universal tendency is expressed in the words of an Austrian writer: "Before all, coordination of all efforts in this sphere [child welfare] and complete child-welfare work by the Government are the ultimate aims of modern child-welfare work." *

* Das Österreichische Sanitätswesen, Nos. 9-12, March, 1916, p. 369.

GREAT BRITAIN.

INTRODUCTION.

The social reasons for protecting babies have been repeatedly emphasized in Great Britain. Again and again in official reports British medical officers have shown that in a particular community a high infant mortality goes hand in hand with ill health and a high general death rate. "A high infant mortality," says Sir Arthur Newsholme, at that time medical officer of the Local Government Board of England and Wales, "implies a high prevalence of the conditions which determine national inferiority"; and also "Right up to adult life the districts suffering from a heavy child mortality have higher death rates than the districts where infant mortality is low."¹ According to Sir George Newman, one-time chief medical officer of the board of education,² "the conditions which kill * * * children, maim and disable many of the survivors, and these swell the numbers of those who die in early childhood, or survive with greater or less degree of defect or disability."

The declining birth rate, too, has for years caused comment and uneasiness. In the opening years of the war this decline became more marked than ever and attracted wide attention. "The need for increased effort to save child life is shown," asserted Sir Arthur Newsholme, "by the markedly lower natural increase in population in 1915 than in 1914."³ The birth rate in England and Wales for 1915, the first complete year of war, was 22 per 1,000 of the population,⁴ in Scotland, 23.86,⁵ and in Ireland, 22,⁶ each figure the lowest ever recorded in the respective countries.

Table I shows how much greater the fall was than for any other single year since 1905.

TABLE I.—*Number of live births per 1,000 of the population.*^a

Country.	1905	1906	1907	1908	1909	1910	1911	1912	1913	1914	1915
England and Wales.....	27.3	27.2	26.5	26.7	25.8	25.1	24.3	23.9	24.1	23.8	22.0
Scotland.....	28.61	28.56	27.70	28.07	27.32	26.18	25.65	25.90	25.49	26.11	23.86
Ireland.....	23.4	23.5	23.2	23.3	23.4	23.3	23.2	23.0	22.8	22.6	22.8

^a Compiled from Seventy-eighth Annual Report, Registrar General, England and Wales, 1915, Cd. 8484, Table 3, p. 5. Sixty-first Annual Report, Registrar General, Scotland, 1915, Cd. 8339, Table 2, p. LXVII. Fifty-first Annual Report Registrar General, Ireland, 1914, Cd. 7991, p. V. Fifty-fourth Annual Report Registrar General, Ireland, 1917, Cd. 9123, p. V.

¹ Local Government Board, Thirty-ninth Annual Report, 1909-10, Supplement to the Report of the Board's Medical Officer containing a report by the medical officer on Infant and Child Mortality. Cd. 5263, pp. 74-75.

² Annual Report Chief Medical Officer, Board of Education, 1914. Cd. 8055, p. 26.

³ Local Government Board, Forty-fifth Annual Report, 1915-16, Supplement containing the Report of the Medical Officer. Cd. 8423, p. IV.

⁴ Seventy-eighth Annual Report of the Registrar General of Births, Deaths, and Marriages in England and Wales, 1915. Cd. 8484, p. XIV.

⁵ Sixty-first Annual Report of the Registrar General for Scotland, 1915. Cd. 8339, p. LXVII.

⁶ Fifty-fourth Annual Report of the Registrar General for Ireland, 1917. Cd. 9123, p. V.

Early in the war the infant mortality rate apparently rose. Sir John Byers, professor of midwifery and of diseases of women and children of the Queen's University of Belfast, declared that "while 9 men belonging to British forces are dying in the war, 12 babies under 1 year are, in the same time, perishing in the United Kingdom, while losses during the antenatal period are responsible for a similar reduction in population."⁷

INFANT-WELFARE WORK BEFORE THE WAR.

LEGISLATIVE GROUNDWORK.

Although the war brought to England a sharpened realization of the national importance of maternity and infant care, there existed when the war began a firm and broad foundation for the more comprehensive infant-welfare work that was to follow. The growth of sanitation and the improvement in general public-health measures had provided the basis for a reduction in child mortality. Legislation to control the milk supply, to prevent the spread of infectious diseases, and to regulate housing had had an important bearing on the life and health of young children. Moreover, legislation directed specifically toward maternity and infant welfare embraced about half a dozen acts.

The factory and workshop act (1901) forbade the employment of a woman within four weeks after the birth of her child.

Those women who, in accordance with this act, were refused employment received no financial indemnification until after the passage of the national insurance acts of 1911 and 1913. By their provisions the wife of every insured man is entitled to a maternity benefit of 30 shillings. If she herself is insured, she is entitled to an additional 30 shillings. If an employed woman, she must abstain from remunerative work for four weeks after confinement in order to draw the second sum. A number of married women, unless insured themselves, receive no maternity benefit, owing to the fact that certain classes of men, in spite of small earnings, are not eligible for insurance. These classes include small employers, many Government and municipal workers, and men working on their own account—such, for example, as hucksters or peddlers.

The mother's right to better care in confinement was recognized by the midwives' act (1902). Before 1902 a woman without any special qualifications might practice midwifery at will. No midwives had been licensed, registered, or supervised. By the midwives' act of 1902, the central midwives' board was created, whose duty it was to prescribe the character of training for midwives, certify training schools, give examinations leading to certification, and make rules

⁷ The British Medical Journal, Oct. 27, 1917.

for and supervise midwifery practice. Training was both practical and theoretical and lasted three months. A midwife might receive it in a hospital, in a poor-law infirmary, or through associations recognized as suitable by the central midwives' board; or she might train in actual practice under the supervision of an approved practicing midwife and receive her theoretical instruction from lecturers approved by the board. In any case, before taking the examination given by the board and receiving her certificate, she was required to have undertaken at least 20 cases, with the nursing involved, and to have received instruction in the management of labor, the care of the child at and after birth, and the recognition of complications. The midwives' act of 1902 required the midwife to summon a physician in any complication or emergency. Thus the act provided for the prohibition of practice for gain of unqualified women, for the training of midwives, for the regulation of their practice, and for skilled care in complicated cases of childbirth.

The notification-of-births act (1907) was a further step in maternity and infant care. For a number of years, in a few cities, the visiting of infants by sanitary inspectors or other municipal officers had been undertaken. Several towns, realizing the importance of reaching the mother as soon as possible after the birth of her child, had adopted also a system of birth notification.⁸ In Salford, for instance, voluntary notification was made by midwives. In Huddersfield, notification of births within 36 hours had been made compulsory in 1906. The notification-of-births act (1907) requiring the notification of every birth within 36 hours—in addition to the registration which might be made within six weeks—enabled all authorities to send the assistance of a health visitor to give hygienic advice and aid to the mother at the earliest possible moment. "This act is a most important one," said Dr. E. W. Hope, medical officer of health for Liverpool, "for it provides for much more than the compulsory notification of the birth. Under it the powers of the public-health acts may be exercised in following up the information received and in promoting the care of mothers and young children." The adoption of the act was, however, optional with local authorities, and many communities either failed to adopt it at all or were very slow in doing so. By March 31, 1914, action had been taken in districts which comprised 65 per cent of the total population of England and Wales.⁹ It was not until the war was well under way that the notification-of-births extension act of 1915 made notification compulsory everywhere.

Infant-welfare measures undertaken as a result of the earlier act were furthered by the Local Government Board of Great Britain and

⁸ Report on the Physical Welfare of Mothers and Children, Carnegie United Kingdom Trust. Vol I, p. 88.

⁹ Local Government Board Forty-fourth Annual Report, 1914-15, Pt. III. Cd. 819, p. 27.

Wales. The local government board had for some years interested itself particularly in infant mortality, as the special reports on the subject by its medical officer bear witness. It was just on the eve of war (July 31, 1914) that Parliament voted to grant financial aid to such local schemes for maternity and infant-welfare work as were approved by the local government board. Such grants were to amount to not more than 50 per cent of the total approved expenditure, and were to be made to voluntary agencies as well as to public authorities. The act empowering the grant is practically, as well as actually, prewar legislation, not only because it resulted from prewar interest, but because it was to cover expenditure beginning March 31, 1914.

Of the prewar laws mentioned above, all except the midwives' act applied to Scotland, and all except the factory and workshop act and the midwives' act applied to Ireland. It was not until after the war began that midwives' acts were passed for those countries. The notification-of-births extension act of 1915 applied to both Scotland and Ireland.

VOLUNTARY WORK.

With the exception of home visiting, a large part of the direct work for mothers and babies was carried on before the war by voluntary agencies.

Between 1900 and 1905, inspired by the success of the *gouttes de lait* in France, a number of larger cities of the British Isles established milk depots, the purpose of which was to provide suitable milk for infants whose mothers were unable to feed them at the breast. They offered little if any opportunity for instruction to the mothers whose children received modified milk.

Somewhat more akin to the modern infant-welfare center was a milk depot set up in 1904 by the social workers' association in Finsbury, the object of which was not only to supply milk for young children, but also, like the French *consultation des nourrissons*, to advise mothers where necessary in the care of their babies. Following application for milk, babies were brought to the depot to be examined by a physician and weighed. A record was kept of each child's physical history and progress. In order to obtain the supply of milk, the infant had to be presented periodically for examination and weighing. Each child was visited by an agent of the center, and in this way it was possible to take to the mother advice and instruction about her own child's needs. Milk depots, however, never became popular in England.

Welfare centers, infant consultations, babies' welcomes, or schools for mothers, as they are variously called, the chief object of which is to encourage breast feeding, gradually replaced milk stations and were established in many places where no milk depot had ever existed.

The St. Pancras School for Mothers in London, founded in 1907 entirely through private funds and initiative, is a typical example of the centers. In time it came to include the following activities: Infant consultations; dinners for nursing mothers; classes in sewing, cooking, and hygiene; a provident maternity club (to encourage thrift in the expectant mother); prenatal consultations; home visiting; fathers' evening conferences.

In 1907 the Government recognized the educational work of the St. Pancras School and a number of other schools for mothers in England and Wales by grants in aid given through the board of education. These grants, given under the regulations for technical schools, presupposed regular attendance and classes of a specified size and duration, so that it was not easy for schools for mothers to comply with the requirements. In 1913 the number of schools receiving aid was about 150.¹⁰ About that time it was stated that "the board fully appreciate the difficulty of obtaining a regular and punctual attendance and realize that the total amount of grants which can at present be earned will often be small. At the same time they hope that as many schools as possible will avail themselves of the limited official recognition which can now be given."¹¹ After the war began public grants for such work were materially increased. The Women's Cooperative Guild, an organization composed of the wives of working men, was active in pressing the necessity of maternity and infant care upon Government authorities in England and Wales.

In Scotland, local school boards in some cities assisted schools for mothers.

Previous to the war, day nurseries also were established and maintained by voluntary agencies. Some of them had been in existence for as long as 30 years. They varied widely in every particular; but in 1906 an effort was made through the foundation of the National Society of Day Nurseries to standardize them. Those nurseries affiliated with the national society were obliged to maintain certain standards in premises, staff, and equipment; and to those certified a grant of 2 guineas a year was made by the society. Further assistance also was extended to such nurseries as were in special need. A similar association aided day nurseries in Scotland. These day nurseries or crèches were fairly numerous before 1914, but they were not invariably situated where they could be of the most use. "They [day nurseries] have been dependent on local energy and good will," said Dr. Janet M. Campbell, of the board of education, "and their number and distribution have been determined by that rather than the actual requirements of the country as a whole. All existing

¹⁰ Annual Report, Chief Medical Officer, Board of Education, 1913. Cd. 7730, p. 31.

¹¹ Annual Report, Chief Medical Officer, Board of Education, 1912. Cd. 7184, p. 336.

nurseries are probably needed, but there are many places which have no nursery, where one would be of the greatest value."¹²

Their establishment depended not so much on the absolute need for them as on the generosity and initiative of local volunteers.

INFANT-WELFARE WORK DURING THE WAR.

PROMOTION OF GRANT-AIDED SCHEMES.

Such was the situation before the war. Just at a time when it was inevitable through conditions incident to war that work of volunteer societies should suffer, the Government had come forward, as it happened, with a measure that provided a powerful and effective instrument for creating new activities, both public and private, and encouraging such as already existed. On July 30, 1914, the Local Government Board of England and Wales, anticipating the Parliamentary grant, put forth a memorandum prepared by its medical officer, Sir Arthur Newsholme, on maternity and child welfare, in which was described the following complete scheme¹³ for such work:

1. Arrangements for the local supervision of midwives.
2. Arrangements for—

Antenatal	{	<ol style="list-style-type: none"> (1) An antenatal clinic for expectant mothers. (2) The home visiting of expectant mothers. (3) A maternity hospital or beds at a hospital in which complicated cases of pregnancy can receive treatment.
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3. Arrangements for—

Natal	{	<ol style="list-style-type: none"> (1) Such assistance as may be needed to insure the mother's having skilled and prompt attendance during confinement at home. (2) The confinement of sick women, including women having contracted pelvis or suffering from any other condition involving danger to the mother or infant, at a hospital.
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4. Arrangements for—

Postnatal	{	<ol style="list-style-type: none"> (1) The treatment in a hospital of complications arising after parturition, whether in the mother or in the infant. (2) The provision of systematic advice and treatment for infants at a baby clinic or infant dispensary.¹⁴ (3) The continuance of these clinics and dispensaries, so as to be available for children up to the age when they are entered on a school register. (4) The systematic home visitation of infants and of children not on a school register as above defined.
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While it was stated that local conditions must determine the extent and character of the program, this outline was suggested as a standard, and the wisdom of taking only such measures as could later

¹² Report on the Physical Education of Mothers and Children, Vol. II, p. 115, Carnegie United Kingdom Trust.

¹³ Local Government Board, Forty-third Annual Report, 1913-14. Supplement containing the Report of the Medical Officer. Cd. 7612, p. XXII.

¹⁴ "Baby clinic" is here identical, it would seem, with "infant-welfare center."

be incorporated into a more comprehensive scheme was pointed out. The letter accompanying the memorandum emphasized the importance of home visiting as well as the maintenance of infant-welfare centers. It urged the desirability of continuing the work for young children up to school age, pointing out that owing to the centering of interest on the infant the older child had generally been neglected in the past. It recommended especially the establishment of maternity centers for the expectant mother and the provision of proper obstetrical care.

To encourage the adoption of schemes by local authorities, the Local Government Board of England and Wales was at that time prepared to pay grants in aid of approved local expenditure, whether by local authorities or voluntary organizations, for the salaries of health visitors or other officers engaged in child-welfare work, and for clinics, dispensaries, or other institutions providing medical and surgical advice and treatment to mothers, and children up to the age of 5 years.

From time to time during the war the scope of the work covered by the local government board grants was greatly extended, especially with respect to prenatal care and the care of children between 1 and 5. In 1916 grants became available for the expenses as well as salaries of health visitors and nurses; for salaries and expenses of inspectors of midwives; for the provision of a midwife to necessitous women or in regions where there was no midwife practicing; the provision of a doctor in confinement where the woman was unable to pay; the maintenance of a center; hospital treatment provided or contracted for by a local authority in complicated cases of confinement, or in complications arising from parturition either in mother or child, and treatment of infants in hospitals.¹⁵ By 1918 the grants were extended to cover food for expectant and nursing mothers; "home-helps"; maintenance of older children away from home during the lying-in period; maternity homes accommodating expectant mothers; hospital accommodation of children between 1 and 5; convalescent homes for mothers after confinement, and for children after illnesses; home nursing of mother or child during illnesses, especially where hospital accommodation is unavailable; and crèches. An item of the new regulations that permitted still further elasticity was the promise of grants in aid of experimental work.¹⁶

In 1916, the Local Government Boards for Scotland and for Ireland issued regulations for maternity and child welfare schemes similar to those suggested by the Local Government Board of England and

¹⁵ Local Government Board, Maternity and Child Welfare, collection of circulars and memoranda, 1914-16, p. 8.

¹⁶ Local Government Board, Forty-seventh Annual Report, 1917-18, Supplement containing the Report of the Medical Officer. Cd. 9169, p. XLI.

Wales, and promised grants in aid up to 50 per cent of approved expenditure. In 1917 the scope of grants was increased in Scotland as in England.¹⁷

In general up to 1918 grants in Scotland and Ireland were legally available for a greater variety of infant and maternity welfare work than in England and Wales. The right of any local authority to take the direct special measures indicated above for the protection of infancy rested upon powers conferred by the notification-of-births extension act, which was passed in 1915. The notification of births within 36 hours was made compulsory throughout the British Isles, and local authorities were empowered to follow up notification by measures to promote the welfare of mothers and young children. Under the act the local authorities of Scotland and Ireland were permitted to "make such arrangements as they think fit (and as may be sanctioned by the local government board of each country) for attending to the health of expectant and nursing mothers, and of children under 5 years of age,"¹⁸ whereas the local authorities of England and Wales were allowed only such powers for the promotion of infant and maternal welfare as a "sanitary authority has under the public health acts of 1875 to 1907, or the public health, London, act, 1891."¹⁹ According to the local government board in 1917, the work in England was "hampered by the fact that the powers of local authorities in England and Wales are more limited than the powers of local authorities in Scotland and Ireland."²⁰ The maternity and child welfare act passed on August 1, 1918, was in effect an amendment to the notification-of-births extension act, 1915, removing the restrictions thus placed on the local authorities of England and Wales, and bestowing powers of far-reaching character.

The president of the Local Government Board of England and Wales, on August 9, 1918, issued a circular letter to bring to the notice of the local authorities the provisions of the new act.²¹ In this letter much importance was attached to the proper provision of suitable midwives and their supervision. "The board consider that an inspector of midwives should, if possible, be a qualified medical woman."²² They strongly advocated an increase in the number of centers, until there should be one for every health visitor's district. They made a special point of hospital treatment for children up to 5. Initiative still rests with the local authority, who may take any or all of these steps but is not compelled to do so, or with voluntary committees who may take up the work and receive grants from the board.

¹⁷ Scotland Local Government Board: Twenty-third Annual Report, 1917, Cd. 9020, pp. VIII-X.

¹⁸ Chitty's Annual Statutes, 1915, p. 843.

¹⁹ *Ibid.*, p. 842.

²⁰ Local Government Board, Forty-sixth Annual Report, 1916-17, Pt. III: Cd. 8697, p. 39.

²¹ Local Government Board, Maternity and Child Welfare, Circular 4, Aug. 9, 1918.

²² *Ibid.*, p. 4.

From the very beginning of the Government grants, the work was taken up with considerable enthusiasm by the local authorities. Very few failed to initiate some sort of scheme. A small minority, from motives of economy, proposed to postpone consideration of the question until after the war, but the local government board insisted that of all war-time economies, economy of babies was one of the most fundamental. The board spoke of the work as "second only to that arising out of war conditions," and as a "measure of war urgency," and warned the country that "although we have enjoined on local authorities the necessity of the strictest economy in public expenditure, we have urged increased activity in work which has for its object the preservation of infant life and health. We are glad to say that the great majority of local authorities have realized the value of continuing and extending their efforts for child welfare at the present time."²³ Even the more inert communities were encouraged to adopt a plan of baby saving. These plans involved one or more of the features suggested by the board and ranged from the appointment of a part-time health visitor to the establishment of a complete system of home visiting backed by an elaborately equipped center, directed by skilled obstetricians and experts in child welfare. By the end of March, 1916, "nearly half the County councils and almost all County Boroughs had prepared schemes, and most of them," stated the Local Government Board of England and Wales, "are in actual operation."²⁴

By the end of 1917 Scotland had adopted schemes for districts with 22 per cent of the population of that country, while plans covering 49 per cent more of the population were under consideration.²⁵ In Ireland, 26 urban and 2 rural districts had undertaken schemes embodying many of the recommendations of its local government board.²⁶

HEALTH VISITING.

The Local Government Board of England and Wales urged every County council to adopt a comprehensive scheme of health visiting for the whole County, as in that way the rural districts in the County would be covered, while its Boroughs or towns with larger demands for infant-welfare work could adopt separate plans of their own, including separate health visitors. In cases where health visiting had already been initiated by the local sanitary authority, as it was in many districts following the notification-of-births act, 1907, it was recommended that this work should as a rule be merged into that of the general County scheme, when a scheme was prepared,

²³ Local Government Board, Forty-fourth Annual Report, 1914-15, Pt. III, Cd. 8197, p. 28.

²⁴ Local Government Board, Forty-fifth Annual Report, Supplement containing the Report of the Medical Officer, 1915-16, Cd. 8423, p. XXXV.

²⁵ Local Government Board of Scotland, Twenty-third Annual Report, 1917, Cd. 9020, pp. VIII-IX.

²⁶ British Medical Journal, Mar. 23, 1918, p. 354.

in order to avoid duplication of effort. As a result of the stimulus thus applied by Government funds, the Local Government Board of England and Wales could report in March, 1917, that "All the 29 metropolitan Boroughs except Camberwell, all the 82 County Boroughs except Gateshead, 51 of the 61 County councils outside London, and 360 County districts have some provision for health visiting."²⁷ Only 1 important County district remained in which no health visiting had been provided for.

The passage of the notification-of-births extension act, 1915, was of great assistance in carrying out the programs for health visiting. Whereas in March, 1914, only 600 health visitors were employed by local authorities in England and Wales, by the end of 1915 their number had increased to 812, and by the end of February, 1917, to 1,024.²⁸ This was an average of 1 health visitor to every 800 registered births;²⁹ so that, though the number fell short of the minimum standard set by the Local Government Board of England and Wales of 1 for each 500 births, the progress toward this goal was encouraging. In 1918, in view of increased work with expectant mothers and with children between 1 and 5, the board raised the standard, suggesting 400 as the largest number of births that could conveniently be taken care of by one health visitor.³⁰ By 1917 there were in England and Wales 2,555 health visitors, and in 1918, 3,038.^a

Only such health visitors as are approved by the local government board as competent may be paid from Government funds. While she need not be a trained nurse, a certified midwife, and a certified sanitary inspector, the health visitor should have training in at least two of these branches, and some knowledge of all. While her principal function is to give advice to the mother in the home, in some districts she acts as an inspector of midwives, and in all cases is expected to aid the local sanitary inspector by reporting on the sanitary conditions of the homes into which she goes. There are training institutes for health visitors throughout the country, and special advanced courses for them are provided in many of the large centers. The board repeatedly urged the payment of a salary sufficient to attract trained women to the service and stressed the importance of a pleasing personality in the success of the health visitor. No other department of infant-welfare work was more emphasized by the authorities than that of health visiting.³¹

^a Local Government Board, Forty-eighth Annual Report, Supplement containing the Report of the Medical Department, 1918-19, cmd. 462; p. 115

²⁷ Local Government Board: *Maternity and Child Welfare*, 1917, pp. III-IV.

²⁸ *Ibid.*, pp. VIII-IX.

²⁹ Local Government Board, Forty-fifth Annual Report, 1915-16, Supplement containing the Report of the Medical Officer, Cd. 8423, p. XXXIV.

³⁰ Local Government Board, *Maternity and Child Welfare*, Circular 4, Aug. 9, 1918, p. 6.

³¹ Local Government Board, Forty-fourth Annual Report, 1914-15. Supplement containing the Report of the Medical Officer. Cd. 8153. pp. 1-3.

With regard to visits, the board recommended³² that the first be paid within two or three days of the notification of birth, so that the health visitor could consult with the midwife. It suggested eight visits a year as the standard average for each child. Health visiting should, the board urged, continue up to school age, and should be extended to include visits to expectant mothers wherever possible. This extension took place in some districts, especially through the efforts of the centers. The board recommended in 1918, after four years' experience in regulating grant-aided work, that when health visiting was engaged in by volunteer workers, as it was to some extent, their activities should always be under the supervision of trained and paid officers.³³

GROWTH OF WELFARE CENTERS.

Home visiting, closely related as it is to the notification-of-births act, was generally undertaken by the Government. The work of the center, however, with its multiform activities, devolved during the early days of the war almost wholly upon voluntary bodies. The Government's call to action in defense of infant life found many well-established and organized centers needing only the funds that the Government was prepared to give to extend their labors most effectively. The lack of funds was widely felt by volunteer child-welfare organizations almost from the beginning of the war; also, at that time, many volunteer workers were withdrawn, so that there was no prospect for an expansion in private as in official work for child welfare. However, a provision of the notification-of-births extension act, 1915, permitting the formation of committees to include persons who were not members of the authority furthered effective cooperation between private and public agencies. The efforts of the municipal or county health visitor, moreover, brought recruits to the centers, and the centers, through the variety of their contacts with the mothers and babies, were enabled to offer valuable guidance to the official health visitor. In a large proportion of voluntary centers, the official health visitor in cooperation with voluntary workers "ran" the center when no doctor was available. It was recommended that, wherever practicable, the health visitor's district should be served by one center.

In spite of a decrease in voluntary work, voluntary centers continued somewhat in the majority, noticeably in London, even as late as 1917. While the municipal authorities of the metropolitan Boroughs supported only 19 centers, voluntary societies supported 125, either wholly or aided only in part by Government grants. The difference as regards County Boroughs and County districts, though

³² Local Government Board. Forty-fourth Annual Report, 1914-15. Cd. 8153. p. 3.

³³ Local Government Board. Maternity and Child Labor. Circular 4, Aug. 9, 1918, p. 8.

much less marked, was in favor of the public-welfare center, there being 377 centers in the hands of local authorities and 321 under volunteer agencies. At the beginning of 1917 there were about 850 centers in England and Wales.³⁴ By July, 1918, the number had reached 1,278. One of the aims in the increase in centers was to bring the center within easy reach of the mothers, in order to encourage them to attend regularly and often.³⁵ Of the 1,278 centers, 700 were municipal and 578 voluntary,³⁵ an indication of the outstripping of independent voluntary enterprise during the war by the work of local authorities.

The lack of doctors militated somewhat against the opening of new centers and the development of prenatal work. Sir Arthur Newsholme, quoting Prof. Budin, the eminent founder of infant consultations in France, had said that "An infant consultation is worth precisely as much as the presiding physician."³⁶ But early in the war the local government board found it necessary to point out that a center receiving occasional visits from a doctor was better than no center at all. A trained nurse could supervise the weighing of babies and give advice on subjects of hygiene. Warning was given, however, that even under war conditions a center should arrange that each child at some time should come under medical review, and that mothers in attendance should be examined. The board approved centers with doctors in attendance only once a month instead of at each session of the center, the usual procedure in normal times.

Although exact figures for Ireland and Scotland are lacking, welfare centers were fairly numerous in Dublin and Belfast, and in the four largest Scottish cities. In Belfast, for instance, there were six centers in 1916. In Edinburgh as early as 1915 weekly clinics for expectant mothers were instituted in connection with the Edinburgh Royal Maternity Hospital. Under the new scheme these clinics were to be held twice a week in a new building near the hospital, which opened in May, 1917. The attendance at Edinburgh centers almost doubled in 1916 as compared with 1915.³⁷

In Glasgow a children's clinic was opened in connection with a hospital in October, 1917. Together with a nurses' training home it formed a unit in the Glasgow child-welfare scheme. Prenatal care was given in the training home, while children up to 5 were looked after in the new clinic.

Over all this work the local government boards of the several countries exercised constant supervision.³⁸ Medical inspectors from the

³⁴ Local Government Board. *Maternity and Child Welfare, 1917*, p. X.

³⁵ Local Government Board. *Forty-seventh Annual Report, 1917-18*. Supplement containing the Report of the Medical Officer. Cd. 9169. p. XXXVI.

³⁶ Local Government Board. *Forty-fourth Annual Report, 1914-15*. Supplement containing the Report of the Medical Officer. Cd. 8153. p. 14.

³⁷ Report on the Physical Welfare of Mothers and Children, Vol. III, p. 560. Carnegie United Kingdom Trust.

³⁸ Local Government Board. *Forty-fifth Annual Report, 1915-16*, Pt. III. Cd. 8332 p. 14.

English board, for example, paid frequent visits to local authorities and voluntary agencies. They assisted in the forming of new schemes and gave advice as to the extension of work already existing. Local bodies met frequently in conference for these purposes with members of the medical staff of the local government board in its own offices, or in the locality concerned. With applications for grants, descriptions of the work undertaken had to be presented, along with a detailed expense account, certified by the officer of the local authority in charge of the accounts. A voluntary agency might apply either directly or through the local sanitary authority,³⁹ except in Scotland, where the grant was paid to the local authority, who distributed it to approved agencies.⁴⁰

In 1916 the Local Government Board of England and Wales issued a detailed memorandum on standards of work, staff, and equipment to be maintained at a center.

The work of centers varies widely in details, but the essential purpose of every center is to provide continuous medical supervision for mothers and children. Each mother or child is examined regularly by the physician in attendance, the health visitor being present, if possible, in order to advise and help the mother later in carrying out the doctor's directions. The chief advantage of this frequent examination is the early discovery of illness and physical defects.

This preventive work is especially valuable in connection with pregnant women. In the larger cities, usually in close cooperation with maternity hospitals, a very well-defined system of prenatal care was developed, which endeavored to interest for their mutual benefit the midwives of the district. In order to extend the benefits of the work to as large a number as possible, there was some agitation for the notification of pregnancy, but this has been considered, on the whole, impracticable, and the prenatal or maternity center relies for its clientele upon the opportunities of the home visitor to learn of pregnancy, and upon the cooperation of local midwives and doctors and of the charities which supply midwifery assistance. Thorough physical examinations of pregnant women are given at the maternity center from time to time, with the result that many conditions which might, if neglected, result fatally are discovered in time to be easily remedied. Through these examinations, too, the doctor and midwife learn whether or not to expect a difficult confinement and are prepared for complications if any arise. The preventive work is of paramount importance in this connection, since 40 per cent of the total number of infant deaths in England and Wales occur within a

³⁹ Supplement containing the Report of the Medical Officer. Local Government Board, Forty-third Annual Report, 1913-14. Cd. 7612, p. XXI.

⁴⁰ Report on the Physical Welfare of Mothers and Children, Vol. III, p. 550, Carnegie United Kingdom Trust.

month after birth⁴¹ and are traceable to the mother's health before the birth of the child or to imperfect midwifery. The early detection of dental caries, for instance, one of the most frequent troubles in pregnancy, was found to be so important in safeguarding the health of expectant mothers and their offspring that the Government in 1917 agreed to defray half the cost of approved dental clinics,⁴² and by 1918 a large extension in this work had taken place.⁴³ Encouragement of breast feeding and preparing the expectant mother for this function constitute one of the most essential parts of the work of supervision. To encourage and assist maternal nursing, many centers provide dinners, free or at cost, for expectant mothers. In addition to these fundamental activities, the main features of the more highly developed centers follow very closely those described in the account of the St. Pancras School for Mothers, which was founded before the war.⁴⁴ They provide not only medical supervision and advice, but also various specifically educational opportunities.

In rural communities the physical and financial obstacles to the establishment of a center were difficult to overcome. The great need was, however, recognized, and increasing efforts were made to extend to rural areas the medical and educational benefits of the welfare center. In a number of small places centers were started after the war began; in some cases municipal, in others under private direction. Town halls, school and church rooms were used as premises for centers in sparsely populated districts. The local medical officer of health in many cases acted also as the medical officer of the center. Every center receiving grants had a nurse in charge specially trained in infant care, who weighed the babies and gave advice in hygiene. These centers were open usually only once in two weeks, as the number of mothers was small and the expense of daily meetings prohibitive. In East Sussex there were, in 1916, nine schools for mothers. By the end of 1916 the County Councils of Hertfordshire, Monmouthshire, and Denbighshire had instituted a system of centers throughout their Counties. Every effort was made to organize such centers under the County health authorities, the County nursing association, or some other responsible body, in order to control the general management and at the same time to give freedom to each center to make such arrangements as suited its particular needs and conditions.

LYING-IN ACCOMMODATIONS AND NURSING.

The complete scheme for maternity and child-welfare work as promulgated by the local government board included hospital accom-

⁴¹ Local Government Board, *Maternity and Child Welfare, Collection of Circulars and Memoranda, 1914-16*, p. 17.

⁴² Local Government Board, *Maternity and Child Welfare, 1917*, p. XI.

⁴³ Local Government Board, *Forty-seventh Annual Report, 1917-18, Supplement Medical Officer*. Cd. 9169, p. XXXIX.

⁴⁴ See p. 19.

modation for complicated cases of pregnancy, for unusual confinements, and for children needing special care. Most centers are affiliated with some local hospital for the receipt of such patients. Many centers maintain maternity beds or wards in hospitals. A few, as in Bradford, instituted a small hospital of their own for infants or mothers, or both, usually making over and refitting some neighboring house for the purpose. However, the lack of sufficient lying-in accommodations continued to be felt during the whole period of the war. "One of the most urgent requirements of the present time," wrote the medical officer of the Local Government Board of England and Wales, in 1918, "is hospital accommodation."⁴⁵ Outside the urban districts there were few, if any, hospitals with maternity wards within easy reach of the women. Many towns, such as Nottingham, Stoke-on-Trent, Swansea, had no lying-in accommodations except poor-law infirmaries.⁴⁶ Even in London, where the hospitals were sufficient for the number of cases, they were said to be badly distributed.⁴⁷

In 1916 the Local Government Board of England and Wales stated that grants would be available for the support, by local authorities, of hospital beds for complicated cases of parturition; and in 1917 the board gave grants to 11 local authorities for this provision, £628 of which went to Bradford, £504 to Birmingham, £294 to Leeds, £243 to St. Helens, and £142 to Sheffield.⁴⁸ But this covered only a part of the field, for what lying-in facilities there were, were generally available only for abnormal cases. Normal cases, however unsatisfactory the home conditions might be, had no resort except to the poor-law infirmaries.

By 1918 the Local Government Board of England and Wales had decided to extend its grants to include the provision of hospital treatment for normal obstetrical cases. Because of the pressing need for accommodation of this character, local authorities were advised to contract for beds in hospitals rather than wait for new hospitals to be built. Following the announcement of the new grant, municipal action was taken in 15 or 20 towns. Beds for ailing infants and children, either with or without their mothers, were also provided to some extent in both London and the provinces, usually in connection with welfare centers. In announcing grants for this purpose the board advised that hospitals maintained by centers be on a small scale (not more than eight cots); that a full-time nurse should be in charge day and night; that the nursing staff should be

⁴⁵ Local Government Board, Forty-seventh Annual Report, 1917-18, Supplement containing the Report of the Medical Officer. Cd. 9169, p. XXXVIII.

⁴⁶ Report on the Physical Welfare of Mothers and Children, Vol. II, p. 52. Carnegie United Kingdom Trust.

⁴⁷ Local Government Board, Forty-sixth Annual Report, 1916-17, Supplement containing the Report of the Medical Officer. Cd. 8767, p. XXXVII.

⁴⁸ *Ibid.*, Cd. 8767, p. XXXVI.

different from the regular nursing staff of the center; that the prompt attention of a doctor be available; and that acute illnesses and infectious diseases be excluded.⁴⁹

It was found that mothers in some cases were unable to work and had no place to go while awaiting confinement. Others, discharged the first possible moment from hospitals, went back to heavy duties much too soon for either their own or their babies' welfare. Experts, therefore, urged the necessity in any scheme of State-aided welfare work for mothers and children of the provision not only of lying-in hospitals but also of prematernity homes and maternity rest houses. A number of the larger cities made such provision in their schemes for maternity and child welfare. A rest home opened in Liverpool in July, 1916, was said to be so successful that in six months it received 106 pregnant and nursing mothers.⁵⁰

Not only do the domestic circumstances of many mothers call for the establishment of prematernity homes and maternity rest houses but also in many cases these aids have to be supplemented by some sort of domestic assistance. In 1918 came the decision of the board to extend the scope of its work to include the provision of "home helps" during the lying-in period.⁵¹ The board also was prepared to encourage by grants expenditure for the maintenance of older children away from home during this period, in order to insure the mother a measure of rest and freedom from care.

A number of the centers organized a system of "home helps" and provided training for them at the center. The central committee on women's employment had already (1915) arranged for the training of young women as "household helps," and a grant in aid had been made for the purpose.⁵² Mothers paid what they could afford toward the wage of the helper. A graduated scale of payment based on the family rent was common.

MIDWIFERY SERVICE.

The midwife plays an important rôle in Eng' h obstetrics. Before the war she was the only attendant in approximately 50 per cent of all births.⁵³ During the war this proportion increased, and by 1918 almost three-quarters of the births in England and Wales were in charge of midwives.⁵⁴ By March 31, 1916, 30,543⁵⁵ midwives

⁴⁹ Local Government Board, Forty-seventh Annual Report, 1917-18, Supplement containing the Report of the Medical Officer, Cd. 9169, p. XL.

⁵⁰ Report on the Physical Welfare of Mothers and Children, Vol. I, p. 16, Carnegie United Kingdom Trust.

⁵¹ Local Government Board, Forty-seventh Annual Report, 1917-18, Supplement containing the Report of the Medical Officer, Cd. 9169, p. XLI.

⁵² Local Government Board, Forty-fourth Annual Report, 1914-15, Appendix. Cd. 8195, p. 66.

⁵³ Local Government Board, Maternity and Child Welfare, 1917, p. XIII.

⁵⁴ Local Government Board, Forty-seventh Annual Report, 1917-18, Supplement medical officer. Cd. 9169, p. XXV.

⁵⁵ Local Government Board, Maternity and Child Welfare, 1917, p. XII.

trained in hospitals and universities offering courses approved by the central midwives' board were certified in accordance with the law of 1902; but as less than one-fifth of this number gave notice of their intention to practice and these were, moreover, very unevenly distributed over the country, there existed a serious shortage, felt most acutely in rural districts, especially in Wales. In many rural areas there was no midwife at all. As it had been impracticable at the time of the passing of the law to exclude altogether all midwives whose training was derived solely from actual experience, a number of so-called "bona fide" midwives, often very ignorant women, remained in practice, and the average level of intelligence and training remained correspondingly low. This condition was accentuated by the fact that many trained midwives did not practice but preferred, because of the greater remuneration, to go into institutions to teach or supervise. The midwife's income, small and uncertain, presented serious obstacles to the obtaining of suitable women for the work. This was particularly true of sparsely settled areas, where the births were too few to occupy the full time of the midwife, who had to depend on some other income or else desert the region for a more populous one.

In 1916 the local government board offered grants in respect to the provision of a midwife in areas inadequately supplied. Bradford, a pioneer in many of the measures of infant conservation, was among the first to appoint municipal midwives. At the same time in necessitous cases a grant was allowed of half the fee paid to the doctor who must be called in in case of emergency, a responsibility that previously had had to be met by the individual midwife, by midwives' associations, or by poor-law authorities. The period of required training was raised in June, 1916 to six months, except in the case of a trained nurse, who need have only four months in addition to her previous training. This is generally recognized as too little, a year being the minimum advocated.

There has been a tendency in schools for mothers to provide lectures on subjects of interest and profit to midwives. In Liverpool and Bradford and at the North Islington School for Mothers in London, for example, such postgraduate courses were given, and they were occasionally held by hospitals and trained nurses' and midwives' associations. The London County council also has provided several courses, including bedside as well as classroom lectures. Attempts were made here and there to keep the midwife in touch with her profession through a supply of Government reports, medical books, and journals dealing with midwifery. This work was sometimes undertaken by the inspector of midwives.

Midwifery service in rural districts is said to have been greatly improved by the grants in aid given by the local government board.

In some scattered areas a "cottage midwife" is employed, who lives during the lying-in period in the house of her patient, doing household work as well as looking after the mother and child. These women are chosen from among the people whom they are to attend, and their training is frequently paid for by the local authority. A few County education committees also have offered scholarships in midwifery training. In some rural districts the midwife combines the function of health visitor or district nurse with her more specialized calling, and so is enabled to earn an income sufficient to keep her in the neighborhood. County nursing associations and local organizations have been active in providing nursing midwives for rural areas.⁵⁶

In Scotland in 1915 and in Ireland in 1918, midwives' acts were adopted similar to those in force in England, embodying in addition certain recommendations of the committee reporting in 1909 on the working of the midwives' act. In 1918 a new midwives' bill for England came up for consideration in Parliament and in November became a law. The law brought the midwives' act of 1902 in line with the new laws relating to midwives that were operative in Ireland and Scotland, so that legislation on the subject became uniform throughout the kingdom. In order to secure more effective supervision, it repealed the power of county councils to delegate to district councils its powers in respect to midwives. It authorized local authorities to contribute toward the training of midwives through grants. It sought to protect the midwife's income by empowering local authorities to compensate the midwife when, through no fault of her own, she is suspended from practice, and by requiring them to pay the doctor's fee from Government funds when, in complying with the original act, the midwife calls in a doctor.

The midwife situation was rendered more acute throughout the war by the shortage of doctors and nurses, which resulted in an increase in the number of confinements intrusted to midwives. The shortage became such that in spite of the urgent need for nurses in the military service the war office refused to accept any that were already acting as health visitors or midwives.

BABY WEEKS AND EXHIBITIONS.

In July, 1917, a national baby week was held in England, conducted under the direction of the National Baby Week Council, a voluntary body of which the prime minister was president, and the president of the Local Government Board of England and Wales, chairman. The object of the campaign was, in the words of the

⁵⁶ Local Government Board, Forty-fourth Annual Report, 1914-15, Supplement continuation of the report of the medical officer, containing a report on Maternal Mortality in connection with Childbearing. Cd. 8085, pp. 95-97.

secretary of the council, "to arrest the attention of the man in the street to the facts in connection with infant mortality, and to create an atmosphere of civic responsibility in relation to the safeguarding of the greatest asset the nation possesses, namely, its babies."⁵⁷

A second national baby week was held in the summer of 1918, the object this time being to reach welfare workers, and to show them more specifically just how the babies could be saved. Medical authorities of national repute were able to state that if all the known measures, social, sanitary, and medical, bearing on child welfare were to be applied in every area, half the wastage of infant life might be avoided, thus saving approximately 1,000 babies each week.

Similar educational work was carried out by the National Society for the Prevention of Infant Mortality, through courses and exhibits in London addressed to workers in the centers. Many workers were prepared in this way to take examinations offered to infant-welfare workers by the Royal Sanitary Institute.⁵⁸

The National Society for the Prevention of Infant Mortality organized exhibits, also, in various parts of the country outside London.

In Scotland the educational work was extended by a maternity and child-welfare traveling exhibition. Shortly after the passage of the notification of births extension act, 1915, the Scottish Union of Women Workers undertook to bring home to the local authorities the provisions and possibilities of the act, and to create a popular demand for infant-welfare work. After a few experiments, the traveling exhibition was instituted. The first exhibit was held in Keith on August 7, 1916, and within a year it had visited 39 places. It continued to fill engagements and was in great demand. The exhibits, which were lent free to any local committee undertaking the cost of transportation, included some statistical charts and diagrams, but the majority dealt with practical demonstrations of the feeding, clothing, and bathing of children, as well as with simple instructions in home economics and home nursing. One of the most valuable results of the exhibit was its benefit to the outlying villages and rural districts. "I consider," said Dr. Mackenzie, medical member of the Local Government Board of Scotland, "that such an exhibition should be maintained in Scotland until the outlying parts of the country have been fully explored."⁵⁹

TEACHING OF MOTHERCRAFT.

The strictly educational as well as the medical aspects of the centers increased rather than diminished with the war, especially

⁵⁷ Pritchard, Eric, "Impressions of National Baby Week," in *The Child*, August, 1918, p. 517.

⁵⁸ *The Medical Officer*, Mar. 17, 1917, p. 96.

⁵⁹ Report on the Physical Welfare of Mothers and Children, Vol. III, p. 219. Carnegie United Kingdom Trust.

with the encouragement extended to them through the board of education grants. Practically every center has more or less systematic instruction in sewing, in the hygiene of mother and child, and in the practical care of the infant. Many have cooking classes. In many schools for mothers these classes are opened to young women and growing girls, so that potential mothers may be trained in the ways of baby saving.

The teaching of mothercraft to girls between 12 and 14 in the elementary schools increased between 1914 and 1918. A number of city schools carried on successful work. In several London schools and in schools of the larger provincial cities arrangements were made for the girls to visit local day nurseries and to help with the work there, under the supervision of the nursery staff. Whether the regular teacher with her training in pedagogy and her knowledge of children, or the nurse or doctor with more specialized knowledge of infant care but without the teacher's special qualifications, is the more suitable instructor has never been definitely decided. It has been suggested that courses in infant care should be taught to young women in normal schools as a part of the regular course of teachers' training. The problem of teaching mothercraft to older girls, say from 14 to 18 years, was a more difficult one. The medical officers of health recommended the placing of the subject in the curriculum of the secondary school, but as a majority of the girls most in need of proper teaching do not reach the secondary school and evening continuation schools are not practicable for this use the problem remained unsolved, in spite of increased efforts to deal with it.

TRAINING OF VOLUNTEER WORKERS.

The problem of training welfare workers themselves was variously met. In 1914, the National Society for the Prevention of Infant Mortality, realizing the need of more systematic training for volunteer workers in order to turn their enthusiasm, hard work, and good will into the maximum of benefit to the community, organized in London courses for volunteer workers. Lectures by specialists and demonstrations under trained workers formed the courses, which were so eagerly received that they have been extended to embrace work for the advanced welfare worker as well as for the beginner. Various centers also offered instruction and opportunities for obtaining practical experience. The St. Pancras School for Mothers has an especially well developed system of instruction for workers, both voluntary and professional. It started this work in 1915.

An increased effort was made during the war, in spite of many handicaps, to raise the standard of work among volunteers. The Local Government Board of England and Wales, while it points out many ways in which the unpaid worker may give valuable service,

constantly emphasizes the necessity for professional supervision of these workers.

PROVISIONS FOR NUTRITION.

Much of the work thus far considered outside of public health measures had for its object, more or less directly, the education of the mother. Sir George Newman has said that "The principal operating influence [in infant mortality] is the ignorance of the mother, and the remedy is the education of the mother."⁶⁰

At least equally authoritative, however, is the opinion of Sir Arthur Newsholme that not ignorance alone, but poverty and ignorance, each aggravating the effects of the other, are responsible for the large number of preventable infant deaths. "There is no reason to assume," asserts Sir Arthur Newsholme, "that the one mother is more ignorant than the other. But the ignorance of the working class mother is dangerous because it is associated with relative social helplessness. To remedy this, what is needed is that the environment of the infants of the poor should be leveled up toward that of the infants of the well-to-do, and that medical advice and nursing assistance should be made available for the poor as promptly as it is for persons of higher social status."

With the war special economic problems had to be faced, more especially by those whose struggle for existence is at the best of times severe. With the outbreak of the war, milk became scarce and dear. It was early recognized that what was a luxury for others was a necessity for the infant population, and it became clear that expectant and nursing mothers and children under 5 should have priority of supply. A milk supply priority scheme⁶¹ advocated by the Government was put into force by a number of local authorities, but many mothers, because of the high price, could not afford to buy the milk to which they were entitled under this scheme. It was argued that free or cheap milk should be distributed as a public health measure. On February 8, 1918, a milk (mothers and children) order⁶² directed local authorities in England and Wales to arrange for priority of the milk supply to mothers and young children, to supply free or cheap milk, and to make the price fit the means of those holding priority certificates. These certificates were given out to nursing and expectant mothers and to children under 5 at the order of the health officer or the physician in charge of a welfare center. The local government board under the regulations regarding grants for maternal and child welfare defrayed half the cost.

⁶⁰ Annual Report Medical Officer, Board of Education, 1914, Cd. 8055, p. 28.

⁶¹ Board of Agriculture and Fisheries, Second Interim Report of Committee on Production and Distribution of Milk. Cd. 8886, pp. 5-6.

⁶² Manual of Emergency Legislation Food Control, revised to Apr. 30, 1918, pp. 364-365.

In the early part of the war the question of free or cheap dinners for the expectant or nursing mother arose. A provision of this sort was felt to be necessary in many cases to enable mothers to breast feed their babies. In a circular letter,⁶³ dated November 2, 1914, sent out to local committees on the prevention and relief of distress, the Local Government Board of England and Wales directed that suitable arrangements be made for the relief of distress arising from the war to expectant or nursing mothers. The importance of proper nourishment for women in this condition was stressed, and the local committees were advised to furnish free meals, to be paid for out of the national war relief fund. The local government board made no provision for the feeding of mothers through its grants for maternity and child-welfare work until 1918.

Many of the voluntary centers had carried on work in this direction since their beginning, and in response to appeals from the war relief committees they increased their efforts. The mothers' and babies' welcomes of Nottingham, for example, furnished 14,000 meals to mothers during the month of September, 1914.⁶⁴ Where possible the mother paid a nominal sum for the meal, but in many cases it was given free. During 1916 six welfare centers in London served to mothers 44,958 meals, of which 31,623 were paid for by the mothers.⁶⁵ In some places the "ex-baby" also was allowed a hot meal. Between November, 1913, and March, 1915, 5,771 dinners were served to mothers, and about 1,400 to children between 1 and 5, at the North Lambeth babies' care in Kennington.⁶⁶ In the Manchester schools for mothers, the number of dinners supplied fell from 11,998 in 1914 to 7,712 in 1915.⁶⁵ In fact, it was said that, in general, when separation allowances for enlisted men were increased the applications for meals fell off.

FINANCIAL PROVISIONS.

Separation allowances.

With regard to separation allowances, England required every man in the army with dependents to make an allotment from his pay amounting, in the case of a private, to 3s. 6d. a week. This sum formed part of the separation allowance, the balance being supplied by the Government. The allowance for a wife was fixed, October 1, 1914, at 12s. 6d. a week and remained the same throughout the war. The rate for one child which, on October 1, 1914, was 2s. 6d., was raised on March 1, 1915, to 5s., on January 15, 1917, to 7s., on October 1, 1918, to 9s. 6d., and on November 1, 1918, to

⁶³ Local Government Board. Forty-fourth Annual Report, 1914-15, Appendix. Cd. 8195, p. 65.

⁶⁴ Journal of the Royal Sanitary Institute, June, 1915, p. 233.

⁶⁵ Report on the Physical Welfare of Mothers and Children, Vol. II, p. 102, Carnegie United Kingdom Trust.

⁶⁶ Ibid., p. 103.

10s. 6d. Although an allowance was made for every child in a family, the amount was slightly less for each subsequent child than for the first. A wife and four children, for instance, would draw on the dates given above, 22s., 25s., 31s., 35s. 6d., and 40s. 6d., respectively.⁶⁷

In the navy a man was not compelled to make an allotment, though the payment of the separation allowance to the wife was conditional upon his doing so. Separation allowances were paid to children without regard to the allotment made by the man.

Maternity benefits.

Before the war maternity benefits had been provided under the national insurance acts of 1911 and 1913. When the war began every man who enlisted in the army or navy was required to be insured. In this way, the wife of every soldier or sailor became eligible for the maternity benefit. Under the act, maternity benefits were paid in 1914 throughout the kingdom to the amount of £1,259,339 to insured husbands and £210,913 to women who were themselves insured.⁶⁸ Parliament recognized the importance of the work by securing its continuance through a grant of £500,000 when the insurance fund, in 1914, was facing a deficit.⁶⁹ The next year the amounts of maternity benefits decreased to £1,136,395 to men and £182,503 to women, and in 1916 to £1,089,138 and £171,130, respectively.⁶⁸

The act does not cover all women who may be in need of financial assistance at the critical period of childbirth. To provide more adequate provision in confinement, the Women's Cooperative Guild in a memorandum on national care of maternity, in May, 1917, suggested a Government allowance of 10s. a week for two weeks before and four weeks following confinement, for all women below the tax income limit of £160.⁷⁰ The opinion was often expressed that an allowance to mothers would be preferable to forcing them into the labor market.

PROTECTION OF MOTHERS IN INDUSTRY.

The number of women engaged in outside work increased during the war by almost 1,500,000; in industry alone the increase was about 750,000.

In July, 1914, 2,176,000 women were engaged in industrial occupations; and by April, 1918, 537,000 more had entered industry, chiefly in the chemical and metal trades. This does not include Government establishments—arsenals, dockyards, and national shell filling and projectile factories—in which before the war 2,000 women

⁶⁷ War Pensions Gazette, December, 1918, p. 252.

⁶⁸ Report on the Administration of National Health Insurance, 1914-1917. Cd. 8890, p. 238.

⁶⁹ *Ibid.*, p. 80.

⁷⁰ Memorandum of Women's Cooperative Guild, May, 1917.

had been employed, but which by April, 1918, had absorbed 197,000 more in answer to the repeated call of the Government for more and more munition workers.⁷¹

The figures give no indication of the number of expectant mothers or those with young children thus entering into industrial life, but the number was thought to be considerable, especially among the wives of soldiers and sailors.

No legislation was enacted for the special protection of pregnant women and nursing mothers in industry. While the factory act of 1901 forbade the employment of a woman in a factory within four weeks after childbirth, it was not always easy to prove that an employer who hired the mother of a young child was cognizant of her recent confinement. Night work and overtime work were very common, especially in the early part of the war, and the committee on the health of munitions workers found it necessary to make this suggestion regarding the employment of mothers:⁷²

Clearly, everything it is possible to do should be done to reconcile the mother's conflict of interest between her duties to her home and children and her work on munitions. Wherever other labor is available, the employment of mothers with infants is to be deprecated, as is also that of the mother of any young family, for it must be remembered that the mother's work is certainly not ended with her factory day. Her children make many claims upon her time and energy, more especially, of course, at the period of the midday meal and bedtime. In some factories the majority of the women employed at night are married, and many of them express a preference for their work because it leaves them free for domestic duties during the day. In thus undertaking double duties, their zeal may easily outrun their strength, and factory and home equally may suffer. Where married women are indispensable, every effort should be made to give them the preferential treatment common in normal times in some factory districts. It is the experience of managers that concessions, such as half an hour's grace on leaving and arriving, or occasional "time off" is not injurious to output, as the lost time is made good by increased activity, and under the system of eight-hour shifts it might arrange, without industrial dislocation of any kind, that married women are employed only in that shift which would cause the least dislocation in their home. For organization of this kind the welfare supervisor would be invaluable.

The actual effect of factory employment on pregnant women continued to be debated during the war. The long standing often involved and the lifting of heavy weights, as shell cases, combined with the tendency on the part of many women to hide pregnancy for fear of dismissal, caused some gynecological experts to condemn it without reserve. Others found it, if properly directed, not incompatible with a normal confinement and the bearing of healthy children. A physician at one of the national shell factories, after an observation of 101 cases, over a period of nine months, came to the con-

⁷¹ Report of the Board of Trade on the Increased Employment of Women during the war in the United Kingdom up to April, 1918, p. 12.

⁷² Ministry of Munitions. Health of Munition Workers Committee. Employment of Women, Memorandum 4, 1916, pp. 9-10.

clusion that the pregnant woman might stay at her work with "benefit to herself and to the State," providing she were put on tasks commensurate with her strength.⁷³

Along this line of adjustment arrangements were made, it is said, in at least one of the national factories for the expectant mother to give up her ordinary work four months before her confinement, and to be put on light shell-filling work. Two months before that time she was detailed to needle work, and dinners were provided for her in the middle of the day.

Whatever the effect of industrial employment on the mother-to-be, little doubt was expressed as to its undesirability from the point of view of the young child deprived of breast feeding owing to its mother's daily toil in the factory. In 1918 the medical officer of the local government board observed that "the evil effects of the industrial occupation of the mothers of young children are becoming increasingly appreciated."⁷⁴

ESTABLISHMENT OF DAY NURSERIES AND NURSERY SCHOOLS.

A great increase in day nurseries or crèches was brought about by the employment of married women in large numbers. In 1914, the Board of Education of England and Wales recognized the work of the nursery through its grants, thus providing a useful check on the character of the accommodation. By 1918, 137 day nurseries in England and Wales were being assisted by grants in aid from the board, and experimental day nurseries were receiving governmental encouragement.⁷⁵ From the adoption of the notification-of-births extension act in 1915, day nurseries in Scotland were aided by local government board grants. From time to time the Board of Education of England and Wales published regulations for the guidance of nurseries receiving grants. In 1918 a revision⁷⁶ of earlier regulations changed the grant from 4d. per child per attendance to 50 per cent of approved expenditure, thereby affording assistance in the outlay of capital on nursery premises and equipment. In his report for 1917, Sir George Newman, the chief medical officer of the board, expressed the hope that "these increased grants will result in increased efficiency. They [the board] have not been satisfied with the way in which many nurseries have been maintained hitherto, though, in view of the increased cost of maintenance and the small grants available, they have refrained from urging improvements likely to

⁷³ The Medical Officer, Sept. 14, 1918, p. 92.

⁷⁴ Local Government Board. Forty-seventh Annual Report, 1917-18, Supplement containing the Report of the Medical Officer. Cd. 9169, p. XXXVI.

⁷⁵ Annual Report, Chief Medical Officer, Board of Education, 1917. Cd. 9206, p. 10.

⁷⁶ Board of Education Memorandum. Regulations under Which Grants are Payable to Day Nurseries. Cd. 9129, April 1, 1918.

prove costly." ⁷⁷ The following extracts ⁷⁸ from Sir George Newman's report illustrate the standards demanded. He says:

It may be well if I recapitulate some of the conditions which the board regard as essential to ordinary efficiency.

Staff: A visiting medical officer, who should receive a suitable salary, should be attached to all nurseries. The matron in charge of a nursery should possess, in addition to more general qualifications, either a crèche training, or adequate previous experience of crèche management. In appointing a matron, it is important to consider whether she will be responsible mainly for infants, or for children over 2. The matron should be provided with at least one responsible assistant nurse who has had a crèche training. Further trained staff should be appointed as required. It will usually be found that one crèche trained nurse is needed for every 10 children under 2 years of age, a crèche trained nurse and probationer for 20 children; a crèche trained nurse and two probationers for 30 children.

Premises: Every nursery should be conducted as far as possible on open-air lines. Nurseries which have no yard or garden should make every effort to arrange that children shall be taken out daily. In the case of new nurseries, a yard or playground should be regarded as essential, and open-air outdoor shelters should be provided when practicable.

The number of children to be admitted to one-room nurseries should depend, not only on the floor space of the nursery, but also upon the adequacy of arrangements for bathing and dressing children, laundry work, etc. A separate room should be provided for infants and toddlers whenever practicable, and always in the case of new nurseries. A receiving room for bathing children and suitable sanitary accommodation should always be provided. More adequate arrangements will be required in new nurseries than has been allowed in certain nurseries of old standing. An isolation room should also be provided.

Daily routine: As a general rule, all children under 2 years should be bathed daily and dressed in nursery clothes. Children over 2 should be bathed daily whenever necessary, and in any case two or three times a week. A diet sheet should be kept showing (I) infant feeding, (II) meals for older children. In addition a daily record should be kept of the dinner actually provided. * * *

Records: All infants under 1 year old should be weighed weekly and the records suitably recorded. Older children should be weighed from time to time, and records of their progress should be kept. ⁷⁸

In later regulations (Apr. 1, 1918), the board stated that "day nurseries are for children under 3 years of age, for whom care can not be provided in their homes because the mother is at work or absent for other similar cause. Children over 3 may be admitted. Children should attend ordinarily not less than nine hours a day, and not less than five days a week." In estimating grants the board considered not only provisions as to staff, premises, and equipment, but also "method adopted for confining the benefits of the institution to infants and children of mothers at work, or where they can not be cared for at home, the character and accuracy of the records kept, the coordination of the work with similar institutions in the district providing for infant welfare, and with the local education authority on one hand and sanitary authority on the other."

⁷⁷ Annual Report for 1917, Chief Medical Officer of the Board of Education. Cd. 9206, p. 11.

⁷⁸ Annual Report for 1917, Chief Medical Officer of the Board of Education. Cd. 9206, pp. 11-12.

The special need of day nurseries for the children of war workers was early recognized. The first nursery intended solely for the children of munitions workers was organized in July, 1915, at Handsworth, under the direction of some Birmingham social workers. It accommodated about 40 children. It soon became apparent that in order to be of real use to munitions workers it must be open both day and night, involving a heavy increase in expense. The mothers paid what they could, and the grants of the board of education were available. But these sources of income did not suffice. The ministry of munitions was approached, but the assistance sought was not extended until a number of such nurseries had been established and had joined in the appeal. The ministry then agreed to pay 75 per cent of the approved initial cost of these schemes, and 7d. daily for each child actually cared for, the payment to be made for the work of the preceding year, on the recommendation of the board of education, which conducted the necessary investigation.⁷⁹ Stimulated by such encouragement about 15 of these nurseries were opened within a few months in munitions centers such as Woolwich and Coventry, with prospects for the establishment of additional ones as need arose.⁸⁰

A few day nurseries were opened in agricultural districts also, for women who, because of the war, were working on the land. Day nurseries of this kind were opened, for instance, in Hertfordshire, Kent, and Lincolnshire. They were in many cases out-of-door nurseries, the indoor equipment being very simple.

Grants to day nurseries by the board of education were £4,960 in 1914-15, £6,395 in 1915-16, £8,077 in 1916-17, and £10,716 in 1917-18.⁸¹

Nursery or infant schools, much discussed in England since the war began, reflect the growing interest in the child of from 1 to 5 years. That this important period of childhood was largely neglected was intimated by the circular letter sent out by the Local Government Board of England and Wales on the eve of the outbreak of war; and evidence of the neglect is seen in the numerous reports of the board of education commenting on the extent of defects among children admitted to the public schools. "The need," said Sir Arthur Newsholme, "for bridging over the interval between infancy and school life is shown by the fact that 'entrants' into infant schools are found to display disease in a proportion of their total number and to an extent which shows how great is the amount of undetected and neglected disease among children between infancy and school age."⁸² Throughout the period of the war a growing

⁷⁹ Annual Report, Chief Medical Officer, Board of Education, 1916. Cd. 8746, p. 20.

⁸⁰ Report on the Physical Welfare of Mothers and Children, Vol. II, p. 124. Carnegie United Kingdom Trust.

⁸¹ Board of Education, Annual Report for 1916, Cd. 8746, p. 17; and for 1917, Cd. 9206, p. 10.

⁸² Local Government Board, Forty-second Annual Report, 1912-13, Supplement in Continuation of the Report of the Medical Officer containing a second Report on Infantile and Child Mortality. Cd. 6909, p. 92.

tendency to follow the child up to the doors of the school is discernible. The closing of the London schools to children under 5 and the general tendency everywhere during the war to exclude the younger children from schools gave impetus to this discussion. No action was taken to encourage nursery schools, however, and no grant was available except under aids to experimental day nurseries.

The infant or nursery school is in reality an extension of the day nursery to meet more fully the needs of toddlers, and it is in connection with nurseries that the schools have sometimes been opened. No attempt is made to follow the usual school routine. The children sleep, eat, and play as in the ordinary day nursery, but educative play, self-help, and simple work, usually along Montessori lines, tend to place the emphasis rather upon training than upon care only, as in the case of the ordinary crèche.

The new education act (England), 1918, provides for the establishment of these schools at the option of local authorities. The board of education has issued regulations for nursery schools, emphasizing especially adequate arrangements for rest, meals, recreation, and medical inspection of the children.⁸³ The board will pay grants to approved schools up to 50 per cent of the expenditure.

GOVERNMENT APPROPRIATIONS.

The efforts of the Board of Education of England and Wales have been second only to those of the local government boards in promoting schemes for maternal and child welfare, encouraging, however, the educational rather than the hygienic or medical aspect. In 1914 the board of education issued a memorandum stating the regulations for grants in aid of schools for mothers, pointing out the main lines which instruction in these schools should follow. This plan superseded that by which schools for mothers had received grants from the board of education in accordance with its regulations for technical schools, and it permitted more types of schools for mothers to come within the scope of the grants. The local government board had likewise promised grants to infant consultations, schools for mothers, welfare centers, under whatever name they might go, provided the character of the work in behalf of mothers and babies was approved. This procedure resulted in an unsatisfactory overlapping, so that on May 31, 1915, the two bodies issued a joint circular in which they defined the scope of work of each. The local government board planned to grant aid to centers provided by local sanitary authorities, or by the county council acting through its public-health committee, or to voluntary infant consultations directly connected with the sanitary authorities and not already aided by the board of education, as schools for mothers. The board of education, on the other hand,

⁸³ The Times, London Educational Supplement, Jan. 23, 1919, p. 41.

was prepared to give grants to schools for mothers if the institutions made provisions for collective systematic teaching, to infant consultations which were provided only for women attending the school for mothers thus aided, and to health visiting only for children registered at such schools, if local sanitary authorities had made no other arrangement for it. Whether an institution received grants from the board of education or the local government board depended on its predominant character.

The sums granted by both the boards show a rapid increase covering the years of the war.

In 1914-15 the Local Government Board of England and Wales gave a grant amounting to £11,000.⁸⁴ In 1915-16, £42,000 was divided by the Local Government Board between local authorities and voluntary agencies engaged in infant and maternity welfare work, £33,500 going to the former and £8,500 to the latter.⁸⁵ The grant of the Local Government Board in 1916-17 was £69,000,⁸⁵ an increase over the preceding year of more than 60 per cent. The next year £122,000 was distributed,⁸⁴ while £230,000 was the sum asked for in the budget of 1918-19 and granted.⁸⁶

Such schools for mothers in England and Wales as were not eligible for grants from the local government board received from the board of education grants amounting to £5,869, £8,938, £10,945, and £13,393 in the years ended March 31, 1915, 1916, 1917, and 1918.

The number of institutions receiving this aid in 1917-18 was 286, as compared with 157 in 1914-15⁸⁷ and 27 in the two school years between 1912 and 1914.⁸⁸ Table II shows the amounts granted by each of the boards, and the relative extension in the infant and maternity welfare work of each:

TABLE II.—Amount of grants in each financial year to local authorities and voluntary agencies.^a

Year.	Local government board for maternity and child-welfare schemes.	Board of education in aid of schools for mothers and day nurseries.
1914-15.....	£11,000	£10,830
1915-16.....	42,000	15,334
1916-17.....	68,000	19,023
1917-18.....	122,000	24,110
1918-19.....	^b 230,000	^c 28,500

^a Local Government Board. Annual Report for 1916-17, Pt. III, p. 39; and 1917-18, Pt. III, p. 20.

^b Estimates for Civil Services for the year ending Mar. 31, 1920, Class II, p. 90.

^c Estimates for Civil Services for the year ending Mar. 31, 1920, Class IV, p. 11.

⁸⁴ Local Government Board. Forty-seventh Annual Report, 1917-18, Pt. I. Cd. 9157, p. 20.

⁸⁵ Local Government Board. Forty-sixth Annual Report, 1916-17, Pt. III. Cd. 8697, p. 39.

⁸⁶ Estimate for Civil Service for the Year Ending Mar. 31, 1919, Class II, p. 73, and for Year Ending Mar. 31, 1920, Class II, p. 90.

⁸⁷ Annual Report, Chief Medical Officer, Board of Education, 1916, Cd. 8746, p. 17; and 1917, Cd. 9206, p. 10.

⁸⁸ Annual Report, Chief Medical Officer, Board of Education, 1912. Cd. 7184, p. 331.

Fear of possible duplication of effort by these two bodies or of a lack of efficiency due to divided responsibility was expressed, and there arose a demand for a special department which would take over all the public work for infant and maternity welfare. Such a department is provided in the new ministry of health, organized by the law of June 3, 1919.

Both Scotland and Ireland through grants in aid given by their local government boards increased their expenditure on work for mothers and infants. The sum in Scotland rose from something less than £340 in 1916⁸⁹ to a grant in 1918-19 of £20,000,⁹⁰ while Ireland in 1917 received £5,000 and in 1918 £6,000.⁹¹

GRANTS FROM PRIVATE SOURCES.

The National Baby Week Council announced in 1918 that it would make grants to voluntary institutions up to 50 per cent of their approved expenditure on new infant-welfare centers and day nurseries and would also make small grants toward the initial equipment of municipal undertakings. In carrying out this plan, the council almost immediately distributed grants, we are told, amounting in London to £5,099, and in Greater London and the provinces to £5,015.⁹²

Late in the war the National League for Health, Maternity, and Child Welfare received from the American Red Cross £15,000 for infant-welfare work in the British Isles. The money was to be expended chiefly in equipping and maintaining maternity and lying-in homes for poor women in munitions districts, and in opening prenatal clinics throughout England, Ireland, Scotland, and Wales.⁹³ These institutions were made eligible for grants from the local government board.

INFANT AND MATERNAL MORTALITY RATES.

The infant mortality rate in England and Wales—that is to say, the number of deaths under 1 year of age in every 1,000 infants born alive in the same year—was for the 10-year period 1891 to 1900, 153; for the 10-year period 1901 to 1910, the time of growing activity for infant and maternity welfare, this figure dropped to 128; while for the 5-year period 1911-1915, 110 is recorded.⁹⁴ The infant mortality rate in Ireland also declined, but to a lesser degree than that of England and Wales, the periods just referred to having a rate of 104, 96,

⁸⁹ Local Government Board of Scotland, Twenty-second Annual Report, 1916. Cd. 8517, p. XXXIII.

⁹⁰ Estimate for Civil Service for the year ending Mar. 31, 1920, Class II, p. 138.

⁹¹ Estimate for Civil Service for the year ending Mar. 31, 1919, Class II, p. 128; and for the year ending Mar. 31, 1920, Class II, p. 155.

⁹² The Medical Officer, Nov. 23, 1918, p. 179.

⁹³ Daily News and Leader, Nov. 29, 1918.

⁹⁴ Local Government Board. Report on Maternity and Child Welfare, 1917, p. XV.

and 91, respectively.⁹⁵ In Scotland a fall from 127.9 to 116.2 to 112.8 is indicated for the three periods.⁹⁶

Table III shows the general decline in infant mortality since 1900, under what may be termed in general prewar conditions, although two war years are included in the last 5-year period.

TABLE III.—*Number of deaths under 1 year per 1,000 live births.*

Period.	England and Wales. ¹	Scotland. ²	Ireland. ³
1891-1900.....	153	127.9	104
1901-1910.....	128	116.2	96
1911-1915.....	110	112.8	91

¹ Local Government Board. Maternity and Child Welfare, 1917, p. XV.

² Annual reports of the registrar general for Scotland, thirty-seventh to sixty-first (1891-1915), calculated from number of births and of infant deaths in the separate years.

³ Report on the Physical Welfare of Mothers and Children, Vol. IV, p. 5. Carnegie United Kingdom Trust.

The infant mortality rate for the year 1914 was lower in England and Wales and in Ireland than the rate for 1913; in Scotland it was one point higher than it had been for the year just preceding the war. In all three countries there was a rise in 1915, the greatest increase being in Scotland. In 1916 the rates fell to the lowest figures ever recorded in the respective countries. While there was an increase for 1917, the rate for each of the three countries was only two points higher in each instance than the rate for 1912, the lowest recorded in the respective countries before the war. In 1918 there was a rise in the rate for England and Wales of only one point, in spite of the influenza epidemic. In Scotland and Ireland the rate declined. Table IV gives the rates for the years of the war, with the 1912 and 1913 rates for comparison.

TABLE IV.—*Number of deaths under 1 year per 1,000 live births.*¹

Year.	England and Wales.	Scotland.	Ireland.
1912.....	95	105	86
1913.....	108	110	97
1914.....	105	111	82
1915.....	110	126	97
1916.....	91	97	83
1917.....	96	107	88
1918.....	97	100	86

¹ Eighty-first Annual Report Registrar General England and Wales, 1918, Cmd. 608, pp. CLXII-CLXIII.

NOTE.—This table gives the rates when stated by the usual method per 1,000 births during the same year. Because of the great decline in births during the war, this method overstates the mortality of infants during the war. "Normally," says the registrar general of England and Wales in the annual report for 1917, "the births registered in each year maintain a fairly constant ratio to the infant lives at risk, and so can be used in place of the latter in measuring infant mortality; but this is not the case when a great decline in births occurs." This source of error is corrected for England and Wales in his report for 1917 by stating the infant mortality rates "per 1,000 of the population aged 0-1." When this is done the rates for 1912-1917 for England and Wales become, respectively, 104, 117, 113, 111, 98, 94. This indicates that there has been a steady decline in infant mortality during the war. See Eightieth Annual Report Registrar General England and Wales, 1917, Cmd. 40, pp. XXIX-XXXI.

⁹⁵ Report on the Physical Welfare of Mothers and Children, Vol. IV, p. 5. Carnegie United Kingdom Trust.

⁹⁶ Annual reports of the registrar general for Scotland, thirty-seventh to the sixty-first (1891-1915), calculated from number of births and of infant deaths in the separate years.

The phenomenal drop in 1916, while it has been attributed in part to the greater prosperity of the working classes, is due, no doubt, in large measure to the increased activity in infant and maternity welfare work. A cool, wet summer was also favorable to health. Analysis of the low rate for 1916 shows that while the rate for diarrhea and enteritis was lower than during either of the two years preceding, it was not the lowest rate yet recorded for these diseases. On the other hand, the mortality rate from all other diseases was lower for 1916 than for any previous year.

"The greater part of the decrease," said the registrar general, Sir Bernard Mallet, "is accounted for under other headings less subject to climatic influences [than diarrhea], and therefore gives the greater promise of permanence. * * * The improvement upon the rate for 1912, the lowest hitherto recorded, is increased by exclusion of diarrhea from the comparison. In other words, the low rate of 1912 owed more to the accidental circumstance that the season was unfavorable to diarrhea than did the still lower rate of 1916."⁹⁷

The fall in causes other than diarrhea is limited to the present century.⁹⁸ Table V shows for England and Wales the gradual decline since 1910 in the infant mortality rate from certain main causes of death and indicates the variations in the rate for diarrheal diseases.

TABLE V.—Number of deaths under 1 year per 1,000 live births.¹

Cause of death.	1910	1911	1912	1913	1914	1915	1916	1917	1918
Common infectious diseases.....	7.22	7.69	7.79	5.71	6.97	9.00	5.21	5.74	7.95
Tuberculous diseases.....	3.91	3.81	2.81	3.02	2.86	2.88	2.39	2.75	1.94
Diarrhea and enteritis.....	² 12.64	36.20	7.72	19.32	17.40	15.14	10.58	10.30	9.54
Developmental and wasting diseases..	³ 40.50	41.37	37.78	39.26	37.77	37.27	35.61	36.55	35.52
Miscellaneous diseases.....	41.17	40.99	38.75	41.10	39.62	45.43	37.42	41.14	42.21

¹ Eighty-first Annual Report of the Registrar General of Births, Deaths, and Marriages in England and Wales (1918), [cmd. 608], p. CL (for all years).

² Diarrheal diseases.

³ Wasting diseases.

The infant mortality rate in England and Wales is generally lower in rural districts than in the large centers of population. The more favorable position of the rural communities was maintained during the war, as shown in Table VI.

TABLE VI.—Number of deaths under 1 year per 1,000 live births.¹

Locality.	1913	1914	1915	1916 ¹	1917 ¹	1918
London.....	106	104	112	89	104	108
County boroughs.....	124	121	122	106	107	109
Other urban boroughs.....	105	99	107	86	92	92
Rural districts.....	88	85	90	76	82	80

¹ Seventy-ninth Annual Report Registrar General England and Wales, 1916, Cd. 8869, p. XXV; Eightieth Annual Report, 1917, Cd. 40, p. XXXIV; and Eighty-first Annual Report, 1918.

⁹⁷ Seventy-ninth Annual Report Registrar General Births, Deaths, and Marriages in England and Wales, 1916, Cd. 8869, p. XXIV.

⁹⁸ *Idem*.

The maternal mortality rates from puerperal fever declined steadily in all four countries between 1881 and 1914, with the exception of the Welsh and the Scotch rates for the first two years of the new century. The first complete year of war showed a rise in each country. This was followed in England by a decline during 1916 and 1917, and by only a slight rise in 1918, so that the rate for each of these war years was smaller than any attained before the war. After 1915 the Welsh rates again decreased each year, until in 1918 the lowest rate from puerperal fever ever attained in the United Kingdom was reached in that country. This was the more remarkable in that the Welsh rate had been the highest in the Kingdom until after 1910 and was then surpassed only by the Irish. In Scotland a higher mortality rate from puerperal fever was shown during the first three years of the war than had prevailed during the three years immediately preceding it. In 1918, however, the Scotch rate, like the Welsh, showed a striking decrease and became the second lowest ever recorded in the Kingdom. The Irish rate did not decrease until 1917, and then, although the rate was the lowest ever reached in Ireland, it was the highest recorded for the United Kingdom in that year. As deaths from puerperal fever are almost entirely preventable by the observance of modern measures of asepsis, the lowered death rate from this cause is no doubt due in part to efforts in Great Britain to secure trained attendance at delivery, more especially efforts directed toward the training and supervision of midwives.

The maternal death rate from all other causes connected with pregnancy and childbirth, on the other hand, though somewhat variable, has shown a tendency to rise, except in Ireland, where in 1918, after a steady decline, it reached its lowest for that country.

Tables VII and VIII give the death rates in each of the countries from puerperal fever and from all other puerperal causes. The rates for Wales are given separately, as they are in general considerably higher than the English rates.

TABLE VII.—*Death rates per 1,000 births from puerperal fever.*

Period.	England.	Wales, including Monmouth.	Scotland.	Ireland.
1881-1890 ¹	2.56	3.11	2.42	2.83
1891-1900.....	2.22	2.99	2.01	2.62
1901-1902 ²	2.10	3.24	2.29	2.22
1903-1910.....	1.62	2.05	1.93	2.04
1911-1914.....	1.39	1.67	³ 1.44	2.01
1915 ⁴	1.44	1.83	1.94	⁶ 2.12
1916.....	1.35	1.71	1.68	⁶ 2.32
1917.....	1.27	1.69	1.69	⁶ 1.93
1918.....	1.29	1.12	1.15	⁶ 1.83

¹ Great Britain, Forty-fourth Annual Report Local Government Board, 1914-15. Supplement containing a report on maternal mortality in connection with childbearing, Cd. 8085, p. 40.

² The statistics for the two years 1901-2 are given separately from the rest of the period 1901-1910. The midwives act was passed July 31, 1902. Its terms applied only to England and Wales.

³ These statistics are for the years 1911-1913.

⁴ Furnished by the courtesy of the registrars general of England, Wales, and Scotland, respectively.

⁵ Deaths from puerperal septic diseases. Fifty-fourth Annual Report Registrar General for Ireland, 1917, Cd. 9123, p. XXV.

⁶ Furnished by the courtesy of the registrar general of Ireland.

TABLE VIII.—*Death rates per 1,000 births from other accidents and diseases of pregnancy and childbirth.*

Period.	England.	Wales, including Monmouth.	Scotland.	Ireland.
1881-1890 ¹	2.08	2.99	3.03	4.24
1891-1900.....	2.74	3.95	2.71	3.98
1901-1902 ²	2.33	3.65	2.66	3.99
1903-1910.....	2.13	3.21	3.37	3.41
1911-1914.....	2.47	3.91	³ 4.26	3.19
1915 ⁴	2.61	3.84	4.18	⁵ 3.27
1916 ⁴	2.68	3.52	4.01	⁵ 3.19
1917 ⁴	2.48	3.74	4.20	⁵ 3.00
1918 ⁴	2.42	3.50	5.83	⁵ 2.97

¹ Great Britain, Forty-fourth Annual Report Local Government Board, 1914-15. Supplement containing a report on maternal mortality in connection with childbearing, Cd. 8085, p. 40.

² The statistics for the two years 1901-2 are given separately from the rest of the period 1901-1910. The midwives act was passed July 31, 1902. Its terms applied only to England and Wales.

³ These statistics are for the years 1911-1913.

⁴ Furnished by the courtesy of the registrars general of England, Wales, and Scotland, respectively.

⁵ Deaths from accidents of pregnancy or childbirth. Fifty-fourth Annual Report of Registrar General for Ireland, 1917, Cd. 9123, p. XXV.

⁶ Furnished by the courtesy of the registrar general of Ireland.

SUMMARY.

A striking decrease in the infant mortality rate for England and Wales, Scotland, and Ireland took place during the first 10 years of the twentieth century, as compared with the preceding decade. The following five-year period shows a further decline. During the first complete year of war (1915), the infant death rate rose; but 1916 saw the lowest rates ever reached in the three countries, and though in 1917 there was a rise throughout the Kingdom the rates for that year were lower for each country than they were in 1913 and, except in Ireland, lower than in 1914. In 1918, the rate was lower for Scotland and for Ireland than in 1917, but somewhat higher for England and Wales.

In England and Wales the rise in 1917 is said to be only a statistical and not an actual one, due to the fact that the usual method of stating the infant death rate per 1,000 live births within the same year somewhat overstates the actual rate when the number of births is unusually small, as it was during the war. When the rate is stated per 1,000 of the population under 1 year, there is a decline for each year of the war.

Maternal death rates from puerperal fever declined in general after 1890 and continued to decline during the war, when each country showed its lowest mortality rate from that cause. Death rates from all other puerperal causes, however, have shown a tendency to rise except in Ireland.

Infant-welfare work in Great Britain has a firm basis in legislation. Provision for a confinement rest for industrially employed women was made in 1901 (except in Ireland); a system of maternity insurance was inaugurated in 1911; the practice of midwifery (in England)

was regulated by the Government after 1902; and early notification of births was made compulsory—in some districts—in 1907, in all parts of Great Britain in 1915. As a result of the notification-of-births acts, home visiting was undertaken on a large scale by local authorities. With the exception of home visiting, the greater part of the direct work for infants before the war was initiated and controlled by voluntary agencies.

From the beginning of the war a great expansion took place in all infant-welfare work, owing to financial assistance given by the Government, to the effect of education of public opinion, and to the development of public conscience awakened by war. Grants of local government boards and extensive increased grants by the board of education in England and Wales became available just before the war and proved a great incentive to the adoption of infant-welfare measures by local authorities. The notification-of-births extension act of 1915 facilitated the carrying out of these measures and extended the work to Scotland and Ireland. In August, 1918, all restrictions on the powers of local sanitary authorities to promote infant-welfare work were removed by the passage of the maternity and child-welfare act.

County councils and sanitary authorities in nearly every area in England and Wales, and a large number in Scotland and Ireland, adopted plans for infant- and maternal-welfare work, including some or all of the features recommended in the complete scheme published by the Local Government Board of England and Wales in 1914. This scheme covered prenatal and obstetrical care, hospital and lying-in accommodation, and the supervision of infants from birth up to 5 years of age. Systematic instruction of mothers in the hygiene of pregnancy and infancy, and of growing girls in the care of infants, and the training of young children in day nurseries or in nursery schools were encouraged by the grants of the board of education in England and Wales, and by the local government boards and local educational boards of Ireland and Scotland. The scope of grants was considerably widened in the case of the local government boards of all three countries. Coordination of all types of child-welfare work was systematically encouraged. Close supervision and regulation of all grant-aided work tended toward the maintenance of good standards. The work of many volunteer societies was crippled by the war, so that a greater and greater share of the work fell upon official agencies. Cooperation was secured between public and private bodies by the regulations of the grants, which resulted, it was stated, in effective use being made of the experience of voluntary agencies. The employment of voluntary unpaid workers, except when under

the direction of trained and paid workers, was discouraged, although under proper supervision their work was considered valuable.

Infant-welfare centers, both public and private, increased in England and Wales from 842 in 1916 to 1,365 in 1918. Both Scotland and Ireland also show an increase in the number of centers. The increase in centers under municipal direction was especially marked. Some rural centers were opened, usually under the supervision of the district medical officer of health. Although the absence of doctors on military duty is said to have interfered with the work, there has been a growing tendency to regard the regular attendance of a doctor as indispensable to the proper conduct of any center, and to encourage the employment of infant specialists for the purpose wherever possible. Maternity centers for prenatal care were opened in many places. A large number of centers made arrangements for examining and advising pregnant women and furnished milk and other suitable nourishment for expectant mothers. Practically all centers extended their care to children above the age of infancy.

Health visitors, carrying advice and help to mothers in their own homes, probably doubled in number in England and Wales during the war. They were appointed either by local authorities following the adoption of the notification-of-births act or by private societies. The health visitor in some instances served also as district or school nurse, or as tuberculosis nurse, giving only part of her time to infant-welfare work. The standard set by the English local government board of one full-time health visitor to every 500 births was raised on the recommendation of the board in 1918 to 1 for every 400 births, owing chiefly to the extension of health visiting to the expectant mother and the child between 1 and 5 years of age. Health visitors also acted in some districts as supervisors of midwives, but in 1918 the Local Government Board of England and Wales recommended that preferably only qualified women doctors should undertake those duties.

Improvement in the midwifery service was secured during the war by a number of measures. The period of training for midwives was lengthened from three to six months. Local government boards offered grants in aid of the provision of a midwife for communities insufficiently supplied, resulting, it is thought, in an improvement of midwifery service in sparsely settled places.

A new midwives' act for England (1918) provided more efficient supervision of midwives and sought to secure a greater number of practicing trained midwives. This act also made it the duty of local authorities to pay the fees of doctors called in by midwives to assist in obstetric emergencies. Scotland, in 1915, and Ireland, in 1918, had already passed similar bills for raising the standard of midwifery.

Lying-in accommodations, especially in rural areas, were insufficient for the need. Grants given at first by the local government boards in aid of lying-in provision for complicated obstetrical cases were later extended, in all three countries, to normal confinement cases. Some cities had already made special arrangements for parturient women, often in connection with the work of a welfare center; others were encouraged by the grants to undertake similar work. A number of centers maintained small hospitals. Lying-in provision, nevertheless, was considered far from satisfactory even in 1918.

Assistance during confinement was extended in many cases by furnishing domestic help and by maintaining older children away from home during the mother's lying-in. Prematernity homes and rest homes for convalescent mothers with their infants were established in some places. Local government board grants became available late in the war for all these projects.

Owing to the compulsory insurance of all enlisted men, comparatively few women were without maternity benefit during the war.

While more and more provision was made for raising the standard of the child's home care, outside care in day nurseries also increased, owing to the growth in industrial employment of women occasioned by the war. The Board of Education of England and Wales, through its grants to day nurseries, was able to insist on small numbers, fresh air, and absolute cleanliness. The board of education supervised day nurseries for munition workers, which were aided by the grants of the ministry of munitions. In Ireland and Scotland grants to nurseries were made by the local government boards, which exercised over them a supervision similar to that of the board of education in England and Wales. By the education act (England), 1918, nursery schools for children between 3 and 5 were recommended for establishment where there was need, and grants in aid were offered for this purpose.

AUSTRIA.

INTRODUCTION.

In 1912 Austria ranked ninth among 10 European countries according to infant mortality rate.¹ During the first decade of the twentieth century almost 200,000 infants died annually.² A nation-wide inquiry sometime between 1910 and 1913 revealed the fact that the most frequent causes of infant mortality in the country were stomach and intestinal diseases of artificially fed infants among the poor and that these causes were, therefore, largely removable.³ One of the foremost leaders in infant welfare in Austria, Dr. Leopold Moll, in discussing the facts brought to light by the inquiry, asserted that artificial feeding, which had been found so disastrous, was resorted to because of poverty and consequent undernourishment of the mother; increasing employment of women outside the home; departure of fathers for distant Provinces to seek employment, in which cases the mothers were frequently left to do heavy farm work themselves; and industrial home work, because its low earnings, long hours, and lack of outdoor exercise rendered the mother physically unfit to breast feed her infant.⁴ Social measures, therefore, as well as the specifically hygienic and educational measures commonly regarded as an integral part of modern infant-welfare work, are seen to be necessary to lower the infant-mortality rate.

Such work with its emphasis on the preventive care of children had been undertaken early in the twentieth century in some of the larger Austrian cities. There, because of the infant-welfare work, it was stated, and because of better sanitation, a lower infant mortality had resulted than in the rural districts,⁵ although even this rate was high. In 1913, the last year unaffected by the war, the rate for 101 large cities was 160 per 1,000 live births,⁶ whereas the rate for the whole country was 189.9.⁷

Offsetting to some extent, though only numerically, the high infant mortality rate was the high birth rate, which prevailed in all except one or two Provinces. Table IX gives the birth rates by Provinces for 10 years preceding the first complete year of war (1915)

¹ Statistisches Jahrbuch für das Deutsche Reich, 1915, pp. 20*, 21*, 40.

² Österreichisches Statistisches Handbuch, vol. 32, 1913, p. 36.

³ Das Österreichische Sanitätswesen, No. 33, 1913, p. 4.

⁴ Ibid., pp. 5-6.

⁵ Ibid., pp. 31-35.

⁶ Statistisches Jahrbuch für das Deutsche Reich, 1915, p. 20*.

⁷ Wiener Klinische Wochenschrift, Aug. 22, 1913, p. 950.

and for 1915. The figures show how comparatively slight had been the decline until affected by war conditions.

TABLE IX.—*Number of live births per 1,000 of the population.*¹

Provinces.	1905 ²	1906 ²	1907 ³	1908 ⁴	1909 ⁵	1910 ⁶	1911 ⁷	1912 ⁸	1913 ⁸	1914 ⁹	1915 ⁹
Lower Austria.....	28.1	28.0	27.0	26.6	25.2	24.4	22.66	22.18	20.71	20.4	16.2
Upper Austria.....	30.3	30.3	29.2	29.8	29.5	28.3	27.66	28.22	26.96	27.4	21.0
Salzburg.....	30.9	30.8	30.4	32.8	30.2	29.9	28.69	29.03	27.06	27.8	21.4
Styria.....	28.8	29.3	28.8	29.9	29.7	29.4	27.71	28.44	27.02	27.9	22.1
Corinthia.....	31.8	32.8	32.4	32.8	32.9	31.5	30.49	31.25	30.00	29.9	24.0
Carniola.....	34.5	34.5	32.6	34.9	35.0	33.9	31.73	32.67	31.63	31.3	24.0
Tyrol.....	30.2	31.0	30.9	31.1	32.2	31.6	30.62	31.24	30.92	31.1	18.8
Vorarlberg.....	28.2	27.8	28.2	30.4	28.3	28.6	27.63	27.34	26.65	26.5	18.6
Bohemia.....	30.0	31.3	30.2	31.8	29.6	28.5	27.59	26.34	25.88	25.3	18.5
Moravia.....	33.2	34.0	33.2	34.8	32.9	31.8	30.55	30.19	29.04	29.1	21.5
Silesia.....	36.6	36.9	35.7	39.1	35.4	34.7	33.66	32.50	31.63	32.0	23.4

¹ The birth rate is given for these Provinces because it is only for them the figures are available after 1913. No figures for the whole country are available after 1913.

² Statistisches Handbuch, 1908, pp. 35, 36.

³ Statistisches Handbuch, 1909, p. 39.

⁴ Österreichische Statistik, vol. 88, Pt. III, pp. X-XIII.

⁵ Statistisches Handbuch, 1910, p. 31.

⁶ Österreichische Statistik, vol. 92, part 1, pp. XIX-XXI.

⁷ Österreichische Statistik, Neue Folge, vol. 8, part 1, p. 6.

⁸ Statistisches Handbuch, 1914, p. 52.

⁹ Zeitschrift für Kinderschutz und Jugendfürsorge, August-September, 1918, p. 209. These figures are said to be from official sources.

The loss to the nation in potential lives, coupled with heavy losses on the battle field, was sufficiently striking during the war to give added impetus to work which had been planned or already begun in the years just preceding the war and to cause new work to be undertaken in behalf of infants.

INFANT-WELFARE WORK BEFORE THE WAR.

LEGISLATION.

The national importance of combating infant mortality had already been recognized by several Government measures for the protection of maternity and infancy. A law of March 8, 1885, prohibited factory employment of women during four weeks following confinement. No public financial aid was available for women during this period of enforced unemployment. Three years later, however (Mar. 30, 1888), compulsory sickness insurance, including a maternity benefit, was instituted. Maternity benefit to the amount of sick benefit was to be paid for four weeks following normal childbirth, and up to 20 weeks in case of complications.

The State regulated the training and practice of midwives. Midwives were trained free of charge in the clinics of the medical departments of the universities. In each institution there were professors whose special duty was the instruction of midwives. Candidates for the course had to pass an examination in elementary-school subjects. They were required to live near the clinic in order

to attend cases there. In addition to the practical experience thus secured, midwives received theoretical instruction. The training lasted five months. The midwife was then examined both by her teacher and by a Government commission. She was obliged to register with the police and health officials in the district where she expected to practice, and her work was supervised by a Government physician. She was allowed to conduct normal cases alone, but for abnormality or in any emergency she was required to summon a doctor.

PRIVATE AND MUNICIPAL WORK.

That the urban infant mortality rate was lower than the rate for rural districts was due somewhat, no doubt, to the more advanced sanitation and more thorough public-health measures enjoyed by the cities. Direct work, moreover, for the welfare of infants had been undertaken usually only in large towns and during the decade preceding the war.

Several private organizations, such as the Säuglingschutz (society for the protection of infants) and the Säuglingsfürsorge (infant-welfare society) in Vienna, carried on work for mothers and babies. This work consisted chiefly in establishing infant-welfare centers. The first infant-welfare center was opened in Vienna about 1904,⁸ and gradually centers were opened in the capitals of most of the Austrian Provinces. The work of the center followed closely that of the French consultation des nourrissons. Infants were regularly weighed and a record kept of their progress. Each mother was given advice as to the feeding and general care of her baby, and if she nursed it herself she received from most centers during the nursing period a nursing premium consisting of a few pennies a day. Doctors were in attendance at the centers. Some of the centers dispensed milk for infants who could not be breast fed.

Day nurseries for children under three whose mothers went out to work were established to some extent by private societies. Nursing rooms, where breast-fed infants could be cared for during the working day, and to which mothers might retire to nurse their babies, were maintained in a number of Government factories, and in a few privately owned establishments.⁹

Several years before the war began the municipal authorities of Mährisch in Ostran made infant-welfare work a part of their activities for the protection of children, and it was not long before their example was followed by a number of other cities, including Vienna.⁸ In some cases this work was begun in the interests of infants born out

⁸ Zeitschrift für Kinderschutz und Jugendfürsorge, June, 1913, p. 145.

⁹ Keller, A., und Klumker, Chris. J.: Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten, p. 607.

of wedlock, among whom the mortality rate is invariably much higher than for the legitimate born, and was later extended to include all children. Nursing premiums given out of municipal funds were not uncommon. In Bohemia, for instance, local authorities gave money premiums to midwives who persuaded mothers to breast feed their babies.¹⁰

In an endeavor to form a center for the existing welfare organizations and to assist them by mutual exchange of experiences and information, and by suggestions, the Zentralstelle für Kinderschutz und Jugendfürsorge (the national society for the protection of children and young people) was organized in 1907.¹¹ Its activities extended throughout the Empire. Besides publishing a paper in the interests of infant welfare it used its experience in this work to draft bills for the legislature or proposals for administrative authorities.

Following the Emperor's jubilee in 1908, a fund for the protection of mothers and infants was raised by private subscription, with the object of establishing an institute which should have general supervision over the founding of infant consultation centers and the education of mothers in the care of babies. The fund was especially concerned with the extension of instruction in breast feeding, as according to Austrian public-health physicians, one of the main causes of the high infant mortality was the "total ignorance on the part of mothers of the simplest rules of child care and of the importance of breast feeding."¹² The institute was designed to be a "school which would carry the principles of infant care to the widest groups of the population. Thus by sending out trained infant nurses and welfare workers, the institute will take its teaching to distant localities and will gain for the maternity and infant-welfare work new ground and new adherents."¹³ Plans for the institute were submitted by infant specialists. The one finally adopted embodied the training of midwives and of nurses especially for infant work, post-graduate courses in children's diseases and child hygiene, for physicians, the instruction of mothers in the care and feeding of children at a model consultation center connected with the institute, and provision for dependent infants. A subsidy was given by the minister of the interior to assist in building. The institute was not opened until after the war began. Its organization bureau, however, prepared immediately a pamphlet on child care which it distributed free of charge. It also conducted an inquiry into the causes of infant mortality in Austria.

¹⁰ *Zeitschrift für Kinderschutz und Jugendfürsorge*, July, 1916, p. 200.

¹¹ *Ibid.*, January-February, 1914, p. 4.

¹² *Ibid.*, April, 1914, p. 93.

¹³ *Das Österreichische Sanitätswesen*, No. 1-4, Jan. 27, 1916, pp. 100-102.

INFANT-WELFARE WORK DURING THE WAR.

GROWTH OF INFANT-WELFARE CENTERS.

After the outbreak of the war, according to Dr. Leopold Moll, a great many new agencies for the preservation of the child's life were established and existing ones extended.¹⁴ Child-welfare work in general consisted chiefly in the establishment of infant-welfare centers. Committees formed in almost every district for the care of mothers and infants were composed of representatives of both private and public work. Originally established for the protection of the child born out of wedlock, many committees of this sort after the war began appointed a subcommittee charged especially with welfare work for legitimate infants. These committees assisted women in confinement (one of them in Bohemia began its work by opening a lying-in home in Prague),¹⁵ but their chief work was organizing welfare centers within their districts. Although a few centers speak of a falling off in attendance, and several had to be closed, usually because the consulting physician was called to the colors, the tendency was toward a steady increase in the number of children coming under the supervision of consultation centers. In Reichenberger, in northern Bohemia, for instance, a center which during 1914 gave advice to 907 mothers in 1915 records the attendance of 1,838 and in 1916 of 1,978 mothers.¹⁶ Some centers, because of war conditions, extended their care to the child of preschool age, while others regretted that because of lack of funds they were unable to do so. Infant-welfare centers seem invariably to have had a physician in charge, assisted by volunteer infant-welfare workers, most of whom were untrained. Trained and salaried welfare workers were more and more in demand.

Private societies generally opened and maintained the center with help from local funds. The war sponsorship society (Kriegspatenschaft), founded shortly after the beginning of the war to help the families of soldiers financially and through education of the mother, developed into the largest organization in Austria for maternity and infant-welfare work.¹⁷ It received contributions from philanthropic persons and a subsidy from the war-relief office of the minister of the interior. This subsidy amounted in 1916 to 75,000 kr.¹⁸ Its object was to keep mother and child together wherever possible, and with this object financial assistance was extended to mothers, largely in the form of nursing premiums. All mothers thus aided were obliged

¹⁴ *Zeitschrift für Kinderschutz und Jugendfürsorge*, August-September, 1918, p. 209.

¹⁵ *Ibid.*, January, 1918, pp. 14-15.

¹⁶ *Ibid.*, April, 1917, p. 99.

¹⁷ *Ibid.*, October, 1918, p. 245.

¹⁸ *Ibid.*, March, 1917, pp. 70-71.

to bring their children for medical supervision to the centers maintained by the society, and the children were visited in their homes by welfare workers. Seventeen centers were opened in Vienna and 67 in other places throughout the Empire.¹⁷ In Vienna the centers were opened in the children's hospitals, which supplied doctors and nurses for the work. Gradually the work was extended to rural districts. This work was done by individual welfare workers, who visited the infants in their homes, rather than through the establishment of centers. Before the end of the war more than 29,000 children were under the care of the centers belonging to the society, and upward of 8,000 mothers received nursing premiums.¹⁷ Of the children 10 months old aided by the society almost 94 per cent were at one time breast fed, and a striking decrease in infant mortality was noted.¹⁹ Of 4,282 children under the supervision of the society before October, 1916, only 3 per cent died, whereas of 4,200 infants born of the same mothers before the organization of the society 19 per cent had died.²⁰ Efforts were made to get in touch with the expectant mothers as well as with mothers of young babies, and in 1918 almost 90 per cent of all pregnant women in Vienna were in the care of the society.²¹ The society was said to be intending to continue its activity after the war and for this purpose put aside each year a part of its income as a reserve fund.¹⁸

Other private organizations carried on work of a similar nature. Branches of the Zentralstelle für Kinderschutz und Jugendfürsorge (national society for the protection of children and young people) were opened in several Provinces after the war began. They established numerous infant consultation centers in many cities and towns, in some places where none had been in existence before, as in Neu-Sandez,²² Liesing, Ingersdorf, and Lieberhorten.²³ In 1918 the society had 30 welfare centers in Bohemia alone.²² "In various places," said Dr. Moll, "mothers' consultations have been established even in localities deprived until now of any protection for the child."¹⁴

In addition to the customary baby weighings, the giving of nursing premiums, and the distribution of milk, the activity of these centers comprised in some cases courses for mothers—to which young girls also were admitted—and the organization of traveling exhibits on infant care. Many centers extended their care to children of preschool age. Some of the branches maintained a traveling

¹⁴ Zeitschrift für Kinderschutz und Jugendfürsorge, August-September, 1918, p. 209

¹⁷ Ibid., October, 1918, p. 215.

¹⁸ Ibid., March, 1917, pp. 70-71.

¹⁹ Ibid., February, 1916, p. 45.

²⁰ Das Österreichische Sanitätswesen, No. 9-12, Mar. 23, 1916, p. 296.

²¹ Zeitschrift für Kinderschutz und Jugendfürsorge, February, 1919, p. 37.

²² Ibid., October, 1918, p. 258.

²³ Ibid., July, 1918, p. 185.

infant-welfare worker. This was first undertaken in Moravia, in December, 1916.²³ Funds for the work were obtained partly from private sources, partly from municipal funds.

The society for the protection of infants and the infant-welfare society, in operation in Vienna a number of years before the war, increased their activities. The latter acted as adviser to the new infant-welfare agencies that were organized after the war, and cooperated with them in a variety of ways. According to an arrangement between the infant-welfare society and the municipal children's bureau, mothers who were given a three months' nursing premium at the welfare stations maintained by the bureau were at the end of that time transferred to the three welfare stations directed by the society, where their nursing premiums were continued.²⁴ A nursing benefit operated by the infant-welfare society derived its resources from membership dues paid by the women themselves,²⁵ an arrangement said to be unique among Austrian infant-welfare societies. The society also organized the infant-welfare work for the refugees from Galicia and Bukovina. In 1916 the society cared for over 1,700 children, including children of preschool age as well as infants.²⁶ It is said that 8 per cent of the children born in Vienna in the early years of the war were under the supervision of this society.²⁵ The daily attendance at its centers, which before the war had been 300, increased to more than 3,000 during the later years of the war.²⁸

Other voluntary societies were active in establishing infant-welfare centers. The society of Catholic women of Lower Austria (Katholische Frauenorganisation für Niederösterreich), for instance, opened four centers in Vienna after the war began.²⁹ Centers were also established in several cities by the municipal children's bureaus.

The offices of public guardians, too, both municipal and provincial, before the war usually charged only with the supervision of children born out of wedlock, enlarged the scope of their work in many cases to include welfare measures for all children. Shortly after the outbreak of the war the office of public guardians in Vienna decided to assist the mothers of all newly born babies in making their applications for the military allowances due their children.³⁰

They used this occasion for visiting the mother and advising her with regard to the care of her baby. In January, 1915, the city council empowered the public guardians to grant maternity and

²³ Zeitschrift für Kinderschutz und Jugendfürsorge, January, 1917, p. 13.

²⁴ Ibid., July, 1918, pp. 181-183.

²⁵ Ibid., December, 1917, p. 311.

²⁶ Ibid., July, 1918, p. 182.

²⁸ Arbeiter Zeitung, January 12, 1919, p. 7a.

²⁹ Zeitschrift für Kinderschutz und Jugendfürsorge, July, 1918, p. 187.

³⁰ Ibid., October, 1915, p. 234.

nursing aid and in February made an appropriation of 8,000 kr. a month for this purpose.³¹ Maternity aid was extended by the public guardians to the last weeks of pregnancy in some cases. The guardians also reached an agreement with the larger sick-fund societies whereby they had control through their welfare centers over nursing mothers who applied to the societies for the Government nursing premiums.³² In the Province of Lower Austria an office of public guardians was established in 1916, and opened 50 consultation centers, not only in cities, but also in the rural districts of the Provinces.³³ In some cases these were traveling centers. In 1918 it was expecting to open 30 additional infant-welfare stations.³³

In rural districts, contrary, it was said, to expectation, the attendance was very good.³⁴ In order to bring the existence of the center to the mothers' attention the public guardians, to whom all births in a district were reported, sent to the mother a printed invitation to visit the center. The midwives of the district were also urged to impress upon mothers the importance of visiting centers. Local officials and the public guardianship office furnished practically all the funds necessary for carrying on these centers. "It was recognized," it was said, "that the establishment in rural districts of accessible mothers' consultation centers under the direction of physicians is one of the most necessary requirements of practical child-welfare work."³⁴ Many infant-welfare workers urged during the war the formation of a public guardianship system for each of the Provinces of Austria.

TRAINING OF WORKERS.

The first courses for infant-welfare workers in Austria were established after the war began at the imperial institute for the protection of mothers and children (Reichanstalt für Mütter und Säuglingsfürsorge). Although plans for this institute were under way before 1914 it was not organized for work until November, 1915.³⁵ One of its principal functions was the training of infant-welfare workers, either volunteer or professional. Students from all Provinces were admitted. They were expected to serve as a connecting link between the institute and different parts of the Empire. The training at the institute lasted a year; both theoretical and practical instruction was given, and students were taught to deal with both sick and well infants. Another course of three months' duration was given twice a year to trained nurses who wish to take up infant-welfare work.³⁶ In the

³¹ *Zeitschrift für Kinderschutz und Jugendfürsorge*, April, 1915, pp. 103-104.

³² *Ibid.*, September, 1917, pp. 204-206.

³³ *Ibid.*, April, 1918, p. 95.

³⁴ *Ibid.*, April, 1917, p. 89.

³⁵ *Ibid.*, February, 1917, p. 39.

³⁶ *Ibid.*, August-September, 1918, pp. 208-214, and October, 1918, pp. 249-254.

third year of its existence 30 students were trained at the institute. The demand for trained workers, on the other hand, was very great. By order of the ministry of the interior, August 7, 1916, courses were established also at nurses' training schools in Vienna, Triest, and Prague to prepare trained nurses for welfare work in all branches of public health, including infant-welfare work. The courses lasted six months.³⁷ The training of infant-welfare workers formed a part of the public guardianship system of Lower Austria. This training was given at the central children's asylum of the Province.³⁸ The need of systematic instruction in infant care at the schools of mid-wifery was stressed during the war.

The recommendation that the duration of midwives' training be extended from four to nine months and that the last three months be devoted to infant care was made by Prof. Epstein, a well-known Austrian pediatrician and public-health physician.³⁹ While this was not done, on January 29, 1918, a two-months' course was instituted by order of the ministry of the interior to train midwives in infant-welfare work.⁴⁰

The importance of maternity and infant-welfare work, we are told, prompted the ministry of the interior to organize also continuation courses for physicians, the first of which was opened in Vienna on March 4, 1918, and lasted three weeks.⁴¹ Physicians in the service of the Government were required to attend and were given their expenses. Those not in Government service who came from outside Vienna were paid 500 kr. to cover their expenses.⁴¹

EXHIBITS AND COURSES FOR MOTHERS.

In December, 1915, an infant-welfare exhibit was given in Vienna among a number of war-relief exhibits organized by the minister of the interior.⁴² Early in 1916 it was sent as a traveling exhibit through the Provinces of German-speaking Austria. Many cities, large and small, applied for it. It was held for a week or so in each place, and three lectures were given daily by a woman lecturer who accompanied the exhibit. As a result, it is stated, eight cities decided to establish welfare centers and to appoint infant-welfare workers.⁴³ In spite of war-time difficulties, four of these plans had been put into operation by September, 1918.⁴³

For the further instruction of mothers, pamphlets on child care were published by several agencies. The organization committee of

³⁷ Das Österreichische Sanitätswesen, 1916, Nos. 31-35, pp. 1266-1274.

³⁸ Zeitschrift für Kinderschutz und Jugendfürsorge, November, 1917, p. 273.

³⁹ Ibid., July, 1916, p. 200.

⁴⁰ Ibid., June, 1918, p. 147.

⁴¹ Ibid., May, 1918, p. 136.

⁴² Das Österreichische Sanitätswesen, No. 1-4, Jan. 27, 1916, p. 102.

⁴³ Zeitschrift für Kinderschutz und Jugendfürsorge, August-September, 1918, pp. 223-224.

the Emperor's jubilee fund for the protection of mothers and children put out in 1915 two pamphlets containing instructions on the feeding of infants.⁴⁴ The minister of the interior also prepared and gave free of charge leaflets on the care of the baby and in 1918 was said to be planning a new uniform pamphlet of instruction.⁴⁵

Free lectures and courses for mothers increased in many cities. In the city of Neunkirchen, for instance, courses for mothers were given for the first time in March, 1917, under the direction of the public guardianship board of Lower Austria.⁴⁶ These courses were to be repeated in turn in all the districts of the Province. In some places, as in the case of Vienna, where brief courses in infant hygiene were organized shortly after the war began,⁴⁷ lectures were intended for mothers and volunteer welfare workers; in other cases they were open also to young girls. Sunday schools for mothers to teach infant care were established in several cities after the war began, following the example of Prague, where one had been organized in 1911⁴⁸ by a physician who believed that not only working mothers but also those of the middle class were greatly lacking in the most elementary knowledge needed for the bringing up of children.

PROVISIONS FOR NUTRITION.

During the war many cities took steps to increase the supply of milk or to conserve what was at hand for the children. Karlsbad, for example, maintained for a long time a herd of goats in order to relieve the difficult milk situation.⁴⁹ On September 11, 1916, the minister of the interior issued an order empowering local officials to take measures for "assuring the necessary amount of milk for the population with special regard to children, nursing mothers, and sick persons, especially in large centers."⁵⁰ This order was followed on the next day by a circular containing detailed regulations for the hygienic production and sale of children's or infants' milk.⁵¹ In some cities, as in Vienna, the office of public guardians distributed the milk cards to nursing mothers when they came to the welfare centers.⁵² Infant-welfare centers in many cases handled the milk supply for mothers and children.

Expectant and nursing mothers and children under 5 were allowed also a larger sugar ration than the rest of the population, according to an order of the food administration, effective December 1, 1917.⁵²

³⁰ *Zeitschrift für Kinderschutz und Jugendfürsorge*, October, 1915, p. 234.

⁴⁴ *Das Österreichische Sanitätswesen*, Supplement to Nos. 14-15, Apr. 8 and 15, 1915.

⁴⁵ *Zeitschrift für Kinderschutz und Jugendfürsorge*, June, 1916, p. 147.

⁴⁶ *Ibid.*, May, 1918, p. 135.

⁴⁷ *Ibid.*, June, 1915, p. 149.

⁴⁸ *Ibid.*, July, 1918, p. 189.

⁴⁹ *Ibid.*, March, 1918, p. 69.

⁵⁰ *Das Österreichische Sanitätswesen*, Nos. 36-43, September-October, 1916, p. 1527.

⁵¹ *Ibid.*, p. 1535.

⁵² *Ibid.*, December, 1917, p. 312.

Infant-welfare committees and private societies in a number of places provided cheap or free dinners and milk for nursing mothers and pregnant women. In Vienna also three diet kitchens furnishing cheap or free meals for children recommended by physicians were maintained partly by State funds.⁵³

GOVERNMENT MEASURES.

On April 23, 1918, the minister of the interior addressed a circular to the political authorities of all the Provinces.⁵⁴ This circular dealt exhaustively with the main points to be borne in mind in increasing welfare work for infants and young children, and with the extent to which State aid was available for this purpose. It emphasized the increased need of the work in these words:

The need for the preservation and increase of the energies of the people requires measures and arrangements for the preservation of the life and increase of the strength of infants and young children. For this purpose efforts should be made to take new measures with the cooperation of all interested factors; the organizations already existing must be urged to extend their activity. Protection of pregnant women and women in confinement is most closely connected with the practical welfare measures for the infant and the child below school age.

It stated that—

The willingness to feed the child at the breast should be promoted by oral propaganda and by writing. Energetic instruction along this line is before all the task of physicians and midwives; it is also advisable to enroll for this instruction clergymen, teachers, and other persons. Leaflets and pamphlets for mothers in combination with personal instruction are very useful. * * * Particularly in the rural districts the midwives under the supervision of the physician in public service are called upon to instruct the mothers, even in the pregnancy period, in the importance of breast feeding and in the need of sufficient care. * * * The establishment in each Province of a traveling exhibit for welfare work with mothers, infants, and young children * * * seems advisable.

It spoke at length of the establishment of welfare centers:

The number of arrangements of this kind existing in Austria is still entirely insufficient. These places are the centers of instruction and welfare work for all mothers. The main rules for the arrangement and maintenance of mothers' consultation centers will be issued in the near future. At present it can only be stated that Governmental assistance to the welfare stations is intended only for places with a high infant mortality, especially cities and centers of home industries. * * * In large cities a children's physician should be in charge, in smaller cities and in the country a physician in public service experienced in infant-welfare work, such as the district or municipal physician. * * * In cities and large industrial centers, special infant-welfare workers should devote themselves under the supervision of physicians to infant-welfare and mothers' consultation work. * * * The nature of the individual welfare stations will vary according to local circumstances. For the larger cities a distribution of the welfare stations according to districts can be recommended, in such a way that the consultation and supervision of the mothers can be carried out without special difficulties. The welfare stations can be established by municipal or

⁵³ Zeitschrift für Kinderschutz und Jugendfürsorge, March, 1918, p. 75.

⁵⁴ Ibid., June, 1918, pp. 146-150.

communal authorities, State public guardianship boards, State and district commissions for the protection of children, and welfare work with young people, societies, sick funds, and others. * * * A central coordination of the work of all welfare centers is urgently needed, especially as regards the individual applications, the nature of the service given, and the time of the end of such service. Cooperation with the existing organizations for welfare work with mothers, infants, and young children is to be promoted as much as possible. Subsidies should be given to these societies and their activity should be extended.

With regard to the aid extended by the State to infant-welfare work, the circular made the following statement:

The agencies maintaining the consultation or welfare centers should obtain the greater part of the necessary funds from the Government of the Province, municipal authorities, and private sources. Only in exceptional cases will assistance be granted by the State; its maximum amount will be 50 per cent of the total outlay. Applications for subsidies from the State should be sent through the political authorities of the district and the Province. Each application should specify—

- (1) The name of the agency maintaining the center; whenever possible, copies of annual reports, constitutions, regulations, or similar literature.
- (2) A description of the quarters and the arrangement of the welfare center.
- (3) Information about the head physician; references.
- (4) Similar data about the infant-welfare worker, with a detailed statement of her professional training. * * *
- (5) Statement about other employees of the welfare station, including volunteer workers.
- (6) Amount of the State subsidy applied for with a detailed statement of the cost of establishing and maintaining the station. Number of mothers coming to the center for advice and assistance; statement of assistance given by the Province, community, private organizations, and individuals. * * *

For the time being it was considered sufficient for the State merely to recommend the measures considered necessary, requesting the authorities to suggest those measures and to assist in carrying them out. "Legislative compulsion and the assurance of a definite subsidy are still missing," says one writer, "but we are much nearer to the goal because the State recognizes and expresses the principle that the protection of mother and child is decidedly its own duty."⁵⁵

In 1918 two new ministries were formed, a ministry of social welfare and a ministry of public health. Each included in its activities welfare work for infants. An advisory board on children was established in connection with the ministry of social welfare with the purpose of giving advice and suggestions on child-welfare matters, in order to bring about cooperation on the part of the Government with private child-welfare agencies and to assist the latter in their work. On June 17, 1918, the board held its first meeting.⁵⁶ It proposed a bill for the establishment of provincial and district children's bureaus for the local administration of child-welfare work, and supervision

⁵⁵ *Zeitschrift für Kinderschutz und Jugendfürsorge*, June, 1918, p. 146.

⁵⁶ *Ibid.*, July, 1918, pp. 194-195.

over public and private child-welfare agencies. Subsidies to infant-welfare work were given by both the ministry of social welfare and the ministry of public health. The sums were said to be very moderate.⁵⁷ The agencies interested in the social and legal side of welfare work with mothers, infants, and young children came under the authority of the ministry of social welfare.⁵⁷ The ministry of public health, on the other hand, made grants to agencies concerned merely with health matters relating to children below school age. These agencies included institutions for pregnant women, lying-in homes, homes for mothers, mothers' consultation centers, infant-welfare stations, and nurseries.⁵⁸

PUBLIC FINANCIAL AID.

Maternity insurance.

An extension of the protection of mothers and infants was brought about through the amendment to the sickness insurance law granting maternity benefit. The amendment (Jan. 4, 1917) states explicitly that the granting of maternity benefits is one of the objects of insurance. The woman entitled to maternity benefit received, according to this amendment, free medical treatment, including the attendance of an obstetrician and the care of a midwife; free medicines and therapeutical appliances; and a cash benefit which varied from 0.60 kr. to 5 kr. a day, according to the wages which the woman had been receiving and the amount of the premium that she had paid. Confinement benefit was in this amendment extended to cover six weeks after delivery instead of four. At the same time the industrial code was amended, prohibiting the industrial employment of women for six weeks after confinement.

In addition to the benefit, women who fed their infants at the breast were eligible to a nursing premium of half the sick benefit for a period not exceeding 12 weeks after delivery. Between April 9, 1917 (when the amendment providing nursing premiums went into effect), and the end of December, 1917, the general workers' sick fund of Vienna spent 45,059 kr. and the district sick fund of that city 28,612 kr. in nursing premiums.⁵⁹

The maternity benefit and the nursing premium were required from the sickness-insurance societies. They might, if they desired, introduce further benefits, such as a pregnancy benefit to the amount of sick benefit for not more than 4 weeks to women who on account of pregnancy were unable to continue their work; or the extension of nursing premiums up to 26 weeks; or the substitution of hospital or nursing treatment during the lying-in period in place of part of

⁵⁷ *Zeitschrift für Kinderschutz und Jugendfürsorge*, June, 1918, p. 167.

⁵⁸ *Wiener Medizinische Wochenschrift*, No. 33, 1918, p. 1466.

⁵⁹ *Österreichische Zeitschrift für öffentliche und private Versicherung*, 1918, vol. 8, No. 3, p. 293.

the cash benefit, this substitution to be made only with the consent of the women. Sickness societies were permitted also to extend their benefits to the uninsured dependents of insured men, and this was done in some cases, for example, by the district sick fund of Vienna.⁶⁰ Many sickness societies established welfare centers for their members.

As the law failed to include large groups of home workers, salaried employees, domestic servants, and small independent business people, a "considerable subsidy" was granted by the ministry of health to the organization of nursing funds for uninsured women, not only in Vienna but in the country districts as well.⁶¹ Each pregnant woman not subject to compulsory insurance may pay into the fund 50 kr. and receive in return a pregnancy benefit, a maternity benefit, an allowance toward the payment of the midwife's fee, and a nursing premium, everything together amounting to 150 kr. On the orders of a physician, instead of cash benefit, assistance in kind may be given, such as linen, articles necessary for the care of the infant, and food for the infant. Each member of the nursing fund is instructed during her pregnancy by a physician or a nurse in the rules of hygiene which a woman in her condition must know and is given the advice she needs to prepare herself to nurse the child. A number of cities granted nursing premiums out of municipal funds. In some cases where premiums for breast feeding had been given before the war the amount was increased. Vienna, for example, raised its premium from 4 to 24 kr. a month.⁶²

Separation allowances.

By imperial order of March 30, 1917, the prewar law on separation allowances was amended, increasing the allowance to the wife 25 per cent in Vienna, and 20, 15, and 10 per cent in other places, according to the locality. Children under 8 in families living in rented quarters received the same allowance as adults instead of only half, as previously; children in families not living in rented quarters, however, received one-half the adult allowance.⁶³ On July 27, 1917, a new separation law was issued, making void the order of March 30. The allowance was granted to all persons who had been supported by the work of a soldier, if their income were insufficient for support. The allowance was 2 kr. daily for each person in Vienna, and 1.80 kr. and 1.60 kr. in other localities.⁶⁴

⁶⁰ *Zeitschrift für Kinderschutz und Jugendfürsorge*, January, 1918, p. 19.

⁶¹ *Ibid.*, October, 1918, p. 246.

⁶² *Ibid.*, January, 1915, p. 15.

⁶³ *Ibid.*, May, 1917, pp. 139-140.

⁶⁴ *Soziale Rundschau*, Heft 6-8, 1917, pp. 220-222.

ESTABLISHMENT OF DAY NURSERIES AND CENTERS.

In 1915 women constituted over one-third of all persons employed in Austria, an increase of 5 per cent over the number of women working in 1914.⁶⁵ The increased employment of women resulted, as in other countries, in an increase in day nurseries. Early in the war a number of nurseries were opened in Vienna under the impression that women in large numbers would find employment. This, however, was not the case, for in Austria, as elsewhere, a period of unemployment followed the declaration of war. The nurseries so hastily established were said to be badly equipped, poorly run, and lacking in space and facilities, so that it was considered by welfare workers a fortunate thing when they closed for lack of attendance. As the war continued, a real demand for additional day nurseries arose. In 1916 a society for day nurseries for war orphans and soldiers' children began its work in Vienna. In 1917 the society had two centers, both of which received subsidies from the military authorities and fulfilled "in every respect all the requirements of such institutions." Each accommodated 200 children, about one-fifth being under school age. They were open daily from 6.30 a. m. until 7 p. m. Once a week the children were examined by a doctor. An annex for children whose mothers were working at night was also opened, providing for 32 children. By 1918 the society had increased its day nurseries so that in all over 600 children could be cared for.⁶⁶

The organization *Die Bereitschaft* (preparedness society) through its child-welfare committee, began opening nurseries in September, 1914, and in 1918 was maintaining seven nurseries. These nurseries were maintained by private contributions and by what the mothers were able to pay.⁶⁷ Another society, *Kinderfreunde* (friends of children), operating in the Province of Lower Austria, during 1917 cared for over 356,000 children in its day centers or nurseries for children above the age of infancy.⁶⁸

Only healthy children were admitted to the nurseries. The tendency present in the early months of the war to have only a volunteer physician in attendance at the nursery, if there were any physician at all, gradually gave way to the custom of having paid physicians regularly visit the nursery.

An effort was made by private societies to induce factory owners to install nurseries and nursing rooms on factory premises. A few factories did this. In Government tobacco factories nurseries were required by law.

⁶⁵ *Die Gewerkschaft*, May 29, 1917, pp. 125-126.

⁶⁶ *Zeitschrift für Kinderschutz und Jugendfürsorge*, July, 1918, p. 185.

⁶⁷ *Ibid.*, August-September, 1918, pp. 201-208.

⁶⁸ *Arbeiter Zeitung*, Apr. 7, 1918, p. 6b.

INFANT MORTALITY RATES.

Until the war was well under way the infant mortality rate in Austria, though still high, was declining.⁶⁹ Each period between 1891 and 1913 shows an appreciable decrease in most Provinces,⁷⁰ and in 1914, except in the case of Upper Austria, there was a still further decline. But in 1915 an increase is recorded in every Province except Vorarlberg. This increase over the 1914 rate ranges from 4 per cent in the case of Lower Austria to 40 per cent in the case of Carniola. In 1916 the rate declined in every Province, in 5 below the prewar rate. Table X gives the figures for 11 Provinces from 1891 to 1916.

TABLE X.—Number of deaths under 1 year per 1,000 live births.

Province.	1891-1895 ¹	1896-1900 ¹	1901-1905 ¹	1906-1910 ¹	1911-1913 ²	1914 ²	1915 ²	1916 ²
Lower Austria.....	250.7	222.7	204.8	191.7	176.7	163	169	144
Upper Austria.....	262.5	243.7	237.6	220.9	206.5	209	221	220
Salzburg.....	256.0	235.1	216.9	207.1	182.3	158	206	175
Styria.....	222.4	213.4	201.0	190.5	186.3	164	226	212
Corinthia.....	221.6	217.3	213.2	194.8	186.2	172	237	205
Carniola.....	194.8	187.3	168.8	177.7	170.8	149	208	188
Tyrol.....	219.3	208.1	199.4	192.2	186.4	170	236	209
Vorarlberg.....	193.4	192.9	173.8	154.8	150.7	146	140	137
Bohemia.....	265.1	243.4	229.9	205.2	192.5	180	221	192
Moravia.....	250.7	221.1	219.3	204.0	186.8	178	223	196
Silesia.....	239.3	227.1	216.9	210.1	196.4	170	220	193

¹ Das Österreichische Statistische Handbuch. Calculated from number of live births and infant deaths. 1892, pp. 24 and 26; 1893, pp. 27 and 29; 1894, pp. 17 and 19; 1895, pp. 17 and 19; 1897, pp. 14 and 20; 1898, pp. 14 and 20; 1899, pp. 14 and 20; 1900, pp. 16 and 22; 1901, pp. 12, 18, 30, and 36; 1903, pp. 42 and 48; 1905, pp. 22 and 28; 1906, pp. 16 and 20; 1907, pp. 20 and 26; 1908, pp. 22 and 24; 1909, pp. 22 and 28; 1910, pp. 15 and 16; 1911, pp. 19 and 22; 1912, pp. 19 and 28; 1913, pp. 39 and 48; 1915, pp. 47 and 54; and Das Österreichische Sanitätswesen, 1916, *Beihft, Säuglingsschutz und Jugendhygiene*, Heft VII, p. 9-14; Das Österreichische Statistik, Vol. 88, part 3, p. v.

² Zeitschrift für Kinderschutz und Jugendfürsorge, August-September, 1918, p. 209. The sources are said by the author, Dr. Leopold Moll, to be official.

Urban infant mortality rates are generally lower than those for Austria as a whole, as is indicated by Table XI, which gives rates for cities with a population of 100,000 or over. The fluctuations during the first two years of war are similar to those recorded for the Provinces. Even in 1915, when, with the exception of Cracow, there was a considerable increase over 1914 in the rate for each city, the rates did not rise far above the average prewar level except in Lemberg;

⁶⁹ The infant mortality rate for Austria as a whole is given for five-year periods between 1901 and 1910, and for the three-year period 1911-1913, for purposes of comparison with rates for other countries. No figures are available for the whole country after 1913.

Number of deaths under 1 year per 1,000 live births a.

	Rate.
1901-1905.....	215.9
1906-1910.....	201.5
1911-1913.....	192.9

a Österreichisches Statistisches Handbuch, 1912, pp. 15 and 26; 1913, pp. 39 and 48.

⁷⁰ The Provinces under discussion are those included in the table, since rates are available for no other entire Provinces after 1913.

and in Vienna, Triest, and Cracow the 1915 rate was lower than that in 1913.

TABLE XI.—*Number of deaths under 1 year per 1,000 live births.*¹

Cities of 100,000 population and over.	1901-1905	1906-1910	1911	1912	1913	1914	1915
Vienna.....	177.9	170.7	165.6	149.2	156.0	139.5	152.4
Graz.....	143.3	123.9	136.6	115.8	118.7	115.2	132.3
Triest.....	200.2	196.6	215.5	183.6	208.3	181.9	207.0
Frague.....	178.9	168.4	172.1	157.8	142.9	147.8	160.5
Brunn.....	160.7	123.3	80.9	131.9	113.3	107.5	142.0
Lemberg.....	296.2	160.1	128.5	136.6	128.4	197.2	305.5
Cracow.....	152.9	143.9	159.9	142.9	159.6	172.4	156.5

¹ Das Österreichische Sanitätswesen, Beiblatt (in each case) 1902, pp. 39 and 40; 1903, pp. 35 and 36; 1904, pp. 31 and 32; 1905, pp. 39 and 40; 1906, pp. 51 and 52; 1907, pp. 39 and 40; 1908, pp. 31 and 32; 1909, pp. 59 and 60; 1910, pp. 43 and 44; 1911, pp. 57 and 58; 1912, pp. 115 and 116; 1914, pp. 119, 120, 317 and 318; 1915, pp. 420 and 421; 1916, pp. 144 and 145.

SUMMARY.

The infant mortality rate in Austria, which had been falling for a number of years, increased during the first complete year of war. But in 1916, 11 Provincesⁿ showed a decrease as compared with 1915, while in 2 Provinces, Lower Austria and Vorarlberg, there was a drop in the rate even below the prewar figure. A similar tendency is seen during the war in urban rates. These rates in Austria are generally lower than rates for the whole country.

Legislation dating back to 1885 attempted to protect the mother at work in a factory by prohibiting her employment for four weeks following confinement. Compulsory sickness insurance instituted in 1888 made it possible for working mothers to receive maternity benefit. The training and practice of midwives were regulated by the State.

Private organizations in some cities aided by municipal funds carried on all infant-welfare work, such as consultations for well babies and the like. Their development dates from the early years of the present century. Private funds also undertook an inquiry some time between 1910 and 1913 into the causes of infant mortality in Austria, with the object of providing a basis for future work in a national institute of infant welfare. The opening of this institute was somewhat delayed by the war.

Unofficial work during the war was expressed chiefly through the war sponsorship society, which established centers, aided nursing and expectant mothers, and assisted women in confinement. Other private societies interested in the welfare of infants extended their work. Consultation centers, which had been comparatively few in number before the war, were established in great numbers by these societies. A few rural centers were opened, and the need for rural

ⁿ The only complete Provinces for which figures are available.

work was widely agitated. The imperial institute for the protection of mothers and infants, which in 1915 was finally opened, provided a training school for welfare workers. Trained workers were more and more in demand. Every effort was made through the centers, the welfare workers, written propaganda, and courses for mothers to teach mothers the importance of breast feeding their babies. In order to increase the number of breast-fed infants, nursing allowances were given to mothers, sometimes by private agencies, sometimes by the Government through its insurance system.

Special steps to provide pure milk for mothers and young children were taken during the war by both ministerial order and municipal action. Private and municipal agencies were active in furnishing nourishing meals for expectant and nursing mothers. Several municipal and provincial offices of public guardians, whose function was the supervision of children born out of wedlock, extended their work during the war to include the welfare of all infants. They established centers, gave financial assistance at confinement and in some cases during pregnancy, cooperated with the sick benefit societies in order to increase breast feeding, and arranged courses in child care for mothers.

Cooperation between public and private work was sought through representation of each on local committees. The ministries of social welfare and of public health, both created during the war, assisted also in bringing about this cooperation.

An increasing recognition during the war on the part of the Government of its responsibility toward the infant population and of the need for child conservation is manifest in Government measures.

The ministries of social welfare and of public health were each charged with some phase of infant-welfare work. In 1918 public funds became available in small amounts for infant mortality work, chiefly, however, for work in districts with an unusually high infant mortality. At the same time a ministerial circular sent out to all political authorities set forth in detail the lines along which development in infant-welfare work should be made.

Separation allowances were twice increased during the war. The sickness insurance law was also amended in 1917 to provide for a more generous maternity benefit and nursing premiums for all insured women. The Government subsidized a nursing fund for uninsured women. At the same time compulsory confinement rest was extended to six weeks.

An increase in the number of employed women caused the opening of numerous day nurseries and also of centers caring for children of preschool age during the mothers' absence at work. The nurseries and centers were private enterprises. Regular medical supervision of these institutions became more and more customary.

BELGIUM.

INTRODUCTION.

Belgium shared early in the modern infant-welfare movement. When the war came the country was familiar with the main types of infant-welfare work.

Table XIA shows that, like every other belligerent country, Belgium suffered an unprecedented fall in the birth rate during the first year of the war.

TABLE XIA.—*Number of live births per 1,000 of the population.*¹

Year.	Births.	Year.	Births.	Year.	Births.
1905.....	26.18	1909.....	23.68	1913 ²	21.6
1906.....	25.73	1910.....	23.72	1914 ²	16.1
1907.....	25.30	1911.....	22.94	1915 ²	
1908.....	24.89	1912.....	22.61		

¹ Annuaire Statistique de la Belgique, 1913, p. 126.

² Revue Internationale de la Croix Rouge, April 15, 1920, p. 399.

³ Not available.

A tremendous fall in the birth rate and rise in infant mortality were inevitable under the conditions prevailing during 1914-1918. It is not surprising, therefore, even with resources at a minimum, that every effort should have been made to continue the prewar work for conserving infant life. But the expansion, coordination, and adaptation of this earlier work during invasion and war form a remarkable chapter in the history of infant-welfare work.

In the words of Dr. Lucas, "It is generally evident that infant conditions are on the whole better than normal, that class having been the object of great solicitude since the beginning of the war."¹

INFANT-WELFARE WORK BEFORE THE WAR.

LEGISLATION AND GOVERNMENT AID.

Belgium was one of a number of European countries which had early enacted a law providing for a confinement rest for the factory mother. This law, passed December 13, 1889, prohibited the factory employment of any woman within four weeks after childbirth. There was no compulsory health insurance with provision for maternity benefit, so that the mother was without public financial assistance during this period, though compelled by law to desist from work.

¹ Journal American Medical Association, 1917, LXVIII, p. 32.

Women in confinement were protected by the State regulation of midwifery. Two royal decrees issued on December 30, 1884, brought schools of midwifery under Government supervision and prescribed the course for midwives. The decree provided that clinics for practical work must be attached to all schools. In order to be admitted to the school a woman must be between 18 and 30 years of age; she must present a certificate of good conduct, must be able to read and write the language in which instruction is given, and must know elementary arithmetic. The course lasts two years. Theoretical instruction includes anatomy, physiology, obstetrics, the theory of operations, hygiene, and medical ethics. Practical instruction consists of practice on a dummy and the management of labor and, in the second year, assistance at difficult cases of confinement. A royal decree of July 1, 1908, prescribed the program of the final examination of midwives. This is to consist of anatomy, physiology, obstetrics, hygiene (including infant hygiene), and medical ethics. On the same date a royal decree was issued regulating the practice of midwifery. It prescribes in detail the duties of the midwife toward the patient and the baby, and the rules of cleanliness; it enumerates the cases when a physician should be called. The midwife is, however, subject to no systematic supervision or inspection after she begins to practice.

In support of both private and municipal work for infants the State gave subsidies.⁴ This aid was extended to approved infant consultations and milk depots. Up to 1885 crèches for children under 2 had been subsidized by the State, but in that year public assistance was discontinued, though subsidies continued to be given to écoles gardiennes, or infant schools caring for children over 2 years old and up to school age.⁵

PRIVATE AND MUNICIPAL ACTIVITY.

"Private charity," says a Belgian report, "freed from the trammels which impede the normal development of every official organization, has shown itself more progressive [than official work], and a number of agencies have tried to organize preventive aid, especially for the protection of children."⁶

The first milk depots or gouttes de lait were established through private enterprise during the closing years of the nineteenth century. They were practically identical with the original goutte de lait in Paris. Infants who could not be breast fed were provided with milk and were regularly weighed and examined by a physician.

Side by side with the milk depot was the infant consultation center, which also had a French origin. Here the emphasis was entirely on

⁴ Keller, A., und Klumker, Chr. J.: Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten, p. 28.

⁵ Buisson, F. E.: Dictionnaire de Pédagogie et d'Instruction Primaire, part 1, vol. 2, p. 1875.

⁶ Projet de loi instituant l'Œuvre Nationale de l'Enfance, Chambre des Représentants, No. 64, p. 16.

breast feeding. Mothers were encouraged, usually by means of small gifts of food, clothing, or medicine, to nurse their babies.⁷ The babies were kept under constant supervision by the doctors in charge of the centers and were weighed every two weeks. Volunteer workers assisted the doctor at the consultations and gave hygienic advice and instruction to the mother. By 1914 there were 83 of these infant-welfare centers in the country, of which 18 were in Brussels and its suburbs, 6 in the rest of Brabant, 6 in the Province of Antwerp, 15 in the Province of Liege, 13 in East Flanders, 7 in West Flanders, 14 in Hainaut, 2 in Limburg, 1 in the Province of Namur, and 1 in Luxembourg. About 70 of these infant consultations were located in territory which was invaded during the war.⁸

While both welfare centers and milk depots were usually established and maintained by private agencies, a few were organized and directed by municipal, communal, or provincial authorities.⁸ All were entitled to the State subsidy if they were properly organized and conducted by a physician and were open to inspection. In some cases cities gave subsidies also to consultation centers and milk stations established by private funds.

Two canteens for mothers (*cantines maternelles*) were opened, one by an infant-welfare center in Brussels and one by the bureau of charities in Antwerp. These canteens gave one meal a day free of charge to any expectant mother from the fifth month of pregnancy and to any nursing mother as long as she continued to nurse her child.⁹

In October, 1903, the *Ligue Nationale pour la Protection de l'Enfance du Premier Age* (national league for the protection of infants) was organized through private initiative and financed by private resources. The purpose of the league was "to work for a more extensive application of infant hygiene, to centralize infant-welfare agencies in order to facilitate their common work, to collect all information relating to the protection of infants, and to search for and to test all welfare measures in order to be able to suggest them to the charitable organizations, public authorities, and other bodies intending to do anything for the protection of endangered children."¹⁰ Practically all infant-welfare work in existence affiliated itself with this association, and as a result of its activities a number of new infant-welfare centers and milk stations were established.

The league endeavored, through pamphlets, lectures, and courses, to educate the public in the importance of proper infant care. It

⁶ *Projet de loi instituant l'Œuvre Nationale de l'Enfance*, *Chambre des Représentants*, No. 64, p. 16.

⁷ Keller, A., und Klumker, Chr. J.: *Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten*, p. 27.

⁸ *Ibid.*, pp. 27-28.

⁹ *Projet de loi instituant l'Œuvre Nationale de l'Enfance*, *Chambre des Représentants*, No. 64, p. 25.

¹⁰ Keller, A., und Klumker, Chr. J.: *Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten*, pp. 26-27.

also distributed throughout Belgium leaflets for mothers on infant care and hygiene.

In 1910 day nurseries or crèches numbered about 50, of which Brussels with its suburbs had 17. The majority of these were privately owned. Liege¹¹ had 6 municipal nurseries, but no other city or Province maintained nurseries, although a number subsidized them.¹² Infant schools (écoles gardiennes) were set up in some communes for children between 3 and 6 years old. There the children are fed and cared for during the hours that their parents are away. They have a program consisting of Froebel games, singing, simple language lessons, manual work, and gymnastics. These schools are subsidized by the State.¹³

INFANT-WELFARE WORK DURING THE WAR.

ORGANIZATION UNDER THE NATIONAL COMMISSION FOR FOOD RELIEF.

Very soon after the outbreak of the war voluntary infant-welfare agencies discovered that, although the need was greater than ever, they could not continue their activities because of restricted resources. Many of them applied for assistance to the local committee of the national commission for food relief (Comité National de Secours et d'Alimentation), which had been organized in the opening days of the war and was functioning all over the country with the assistance of ministers of several neutral countries. As increased appeals for aid came in and the problem of infant nourishment became more pressing, the commission decided to establish a separate department for infant-welfare work and to centralize the infant-welfare work of the local committees. This department of the commission was founded February 20, 1915.¹⁴ In a circular addressed to all infant-welfare agencies it expressed its purpose of coming to the aid of administrative authorities and agencies assisting any children in need of help. It was the intention of the department on infant welfare when it was first organized to limit its activity to aiding organizations already in existence, but it soon became apparent that in order to reach all children new organizations would have to be created. In August, 1915, the department was authorized by the national commission to establish new infant consultations and milk stations (gouttes de lait), and in October of the same year to open canteens for sick babies and for nursing and expectant mothers.

A few months later (July 1, 1916) a special division was created to look after food for children, as distinct from aid to placed-out

¹¹ Keller, A., und Klumker, Chr. J.: Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten, pp. 38-39.

¹² Internationales Kongress für Säuglingsfürsorge, Berlin, 1911, pp. 677-678.

¹³ Buisson, F.: Dictionnaire de Pédagogie et d'Instruction Primaire, pt. 1, vol. 1, p. 778.

¹⁴ Projet de loi instituant l'Œuvre Nationale de l'Enfance, Chambre des Représentants, No. 64, p. 18.

and abandoned children and orphans. This division, the Commission de l'Alimentation de l'Enfance, began its work on July 1, 1916.¹⁵

A provincial committee was appointed for each Province, and a local committee for each commune. Each agency was regularly inspected by both the national commission and the provincial committee. The latter made half-yearly reports to the national commission. The commune and the Province each bore one-third of the expense of the work, the national commission paying the remaining third.¹⁶

Free aid was extended to any family with an income of less than 175 francs a month for the first person and 50 francs a month for each of the other members of the family. Part payment was exacted from all other families having less than 225 francs a month for the first person and 60 francs for each of the remaining members of the family. Nevertheless, provincial committees might, at their discretion, reduce this standard.

INFANT FEEDING.

No food for children under 3 was provided except in connection with an infant-consultation center.¹⁷ The consultations were conducted by a physician assisted by several voluntary workers. Each infant was weighed every two weeks; after the first year weighings were less frequent. A chart was kept of each child, showing how its progress compared with the normal, so that the doctor could keep a careful watch over the growth of the baby and regulate its care and diet accordingly. No subsidies were given to infant consultations where expert medical care was not furnished.

Mothers, too, were kept under careful supervision at the centers, and every effort was made to assist them and to induce them to breast feed their babies. Voluntary workers visited the homes of the infants to help the mother in carrying out the advice of the physician and to "overcome any prejudices" that the mothers might entertain. The visitors were required to report regularly to the doctor in charge of their center.

Although mothers were urged to nurse their infants whenever this was possible, artificially fed babies were enabled to secure milk prepared according to formulæ at the milk stations, or *gouttes de lait*.¹⁸ Milk for the *gouttes de lait* was purchased only from such farmers as accepted the supervision of the national commission. Farms and cows were inspected. The milk was delivered directly to the milk stations, where it was boiled and put into bottles. It was not possible to divide the milk into feedings because of the scarcity of glass bottles.

Up to 7 months infants were given only sterilized and sweetened milk. After that age a farinaceous food was allowed them. At 14

¹⁵ *Projet de loi instituant l'Œuvre Nationale de l'Enfance, Chambre des Représentants, No. 64, pp. 19-20.*

¹⁶ *Ibid.*, pp. 23-24.

¹⁷ *Ibid.*, p. 20.

¹⁸ *Ibid.*, pp. 21-22.

months cocoa and a small ration of bread were given, and from 2 to 3 years the child received a ration of soup and a larger bread ration in addition to the cocoa.

In 1918, 768 centers and milk stations were functioning, with 90,130 infants under their care.¹⁹

Children over 3 years old who were delicate or weak were given a meal each day, in addition to the ordinary ration given to poor Belgians, in canteens established especially for undernourished and anemic children.

THE MILK SUPPLY.

Everything possible was done by the committee to assure a supply of fresh milk for children. In large cities and in several industrial centers dairies were established, the cows being brought from Holland when it was impossible to secure a surplus from outlying farms. Fresh cow's milk was supplemented by condensed and dried milk, which was imported in enormous quantities.

THE FEEDING OF MOTHERS.

The national commission for food relief very early in its activity for infant welfare realized that the feeding of mothers presented a special problem which could not be satisfactorily met by merely increasing rations. For one reason, mothers were only too apt to divide the extra food among the members of their families instead of eating it themselves. To meet this difficulty, even before the war mothers who were unable to attend the mothers' canteens (cantine maternelles) had been given a specially prepared food, known as lactigène, the basis of which was a farinaceous food and milk.²⁰ During the war this custom was continued in cases where the mothers lived at too great a distance from the canteen to take advantage of its meals.

In all other instances, however, the canteen was found to offer the best solution of the problem of feeding expectant and nursing mothers. The canteens provided one nourishing meal a day to all mothers from the fifth month of pregnancy to the ninth month after confinement. As the mother is frequently in a weakened condition after a long period of nursing, the commission toward the end of the war decided that the mother might continue to receive the meal for a month after weaning.

Attached to every canteen was a doctor, to supervise the health of the mother and infant and to advise the mother concerning breast feeding. Mothers receiving the dinners generally attended a consultation center also.

These canteens rose in number from 2 to 473 and aided over 7,000 expectant mothers and almost 14,000 nursing mothers.²¹

¹⁹ *Projet de loi instituant l'Œuvre Nationale de l'Enfance*, Chambre des Représentants, No. 64, p. 24.

²⁰ *Ibid.*, p. 21.

²¹ *Ibid.*, p. 25.

CRÈCHES.

Because of the prevailing unemployment during the war there was no need for new day nurseries. Only one new nursery was established. This was at Dinant, where the number of children left without supervision when too young to be placed in an orphanage made it necessary to open a crèche to receive them. Nurseries already in existence, however, continued their work, receiving subsidies from the committees.

APPROPRIATIONS.

When the infant welfare department of the national commission for food relief was first established it received from the commission subsidies amounting to 50,000 francs a month. The number of children needing care increased, however, and at the same time the cost of necessities rose, so that in a little more than a year the sum increased successively to 100,000, 150,000, and 200,000 francs, and finally 4,000,000 francs a month.²⁴ This expenditure included school lunches, as well as infant consultations, gouttes de lait, mothers' canteens, canteens for sick children, and crèches. But over one-fourth of the school lunches were given to children between 3 and 6 attending infant schools (écoles gardiennes).

The cost of feeding children up to 3 years old was calculated to have been about 16,000,000 francs up to the fall of 1918. For mothers' canteens the sum of 1,885,140 francs was spent, and for canteens for delicate children over 3 years, 5,921,888 francs. The subsidy given by the national commission in aid of school lunches amounted to 35,374,836 francs for the duration of the war.²⁷ These sums represent one-third of the total expense, since the commune and the Province each bore a third of the expense.

CREATION OF NATIONAL CHILDREN'S BUREAU.

The work of the national commission for food relief emphasized the need and desirability of a permanent national organization charged with the protection of children. A bill providing for a national children's bureau was drafted in the last months of the war and introduced into the Belgian Chamber of Representatives in February, 1919, and was passed in September of the same year.²⁸ According to its provisions, the new bureau will work for the extension and application of scientific methods of child hygiene, whether in private families or institutions public or private. It will encourage and subsidize agencies doing child-welfare work, over which it will exercise an administrative and a medical control. The bureau will establish infant consultations, in those communes where there are none, and

²⁴ Projet de loi instituant l'Œuvre Nationale de l'Enfance, Chambre des Représentants, No. 64 pp. 18-20.

²⁷ Ibid., pp. 24-28.

²⁸ Moniteur Belge, Sept. 26, 1919.

where they already exist they must meet the approval of the bureau. Local committees on infant consultations will be formed, charged not only with the establishment and direction of infant consultations and with the local system of feeding young children, pregnant women, and nursing mothers, but also with the supervision of placed-out children. School lunches may also be provided, according to the bill, but this work will be under the control of another committee. The bureau will establish or approve colonies for delicate children.

The expenses of the entire scheme of child welfare will be borne one-half by the commune and one-half by the State.

INFANT MORTALITY RATES.

Table XII gives the infant mortality rates for Belgium in five-year periods beginning with 1891 and extending through 1910. The two-year period 1911-1912 is added. No rates are available for the whole of Belgium after 1912.

TABLE XII.—*Number of deaths under 1 year per 1,000 live births.*¹

Period.	Rate.	Period.	Rate.
1891-1895.....	164.0	1906-1910.....	141.0
1896-1900.....	157.9	1911-1912.....	143.2
1901-1905.....	147.7		

¹ Calculated from the number of live births and of infant deaths in *Annuaire Statistique de la Belgique* for 1892-1913.

An official Belgian publication makes the following statement:

According to the infant mortality statistics which we possess for certain localities, namely, Brussels, Antwerp, and the region of Charleroi, the infant mortality has been considerably decreased since the organization of the [infant-welfare] agencies.²³

Dr. William Palmer Lucas gives the following figures for infant mortality in certain parts of Belgium:

Rate per 1,000 live births.

Brussels:	
First trimester 1904-1908.....	124
First semester 1916.....	94
Namur:	
Period of 1911-1913.....	150
First semester 1916.....	84
Antwerp: Infant mortality decreased 8 per cent (no date given).	

In Mons, an industrial center, infant mortality, Dr. Lucas says, had increased, though there had been a decrease in deaths from diarrhea.

SUMMARY.

The infant-mortality rate of Belgium, while relatively high before the war, was decreasing. The Government regulated the practice of midwifery and forbade the employment of women for four weeks after

²³ *Projet de loi instituant l'Œuvre Nationale de l'Enfance, Chambre des Représentants, No. 64, p. 23.*

confinement. It also aided infant-welfare work by subsidies. Private enterprise had established milk stations, consultation centers, canteens for mothers, and day nurseries. In some cases these agencies were aided by municipal or provincial funds, and in a few instances municipalities or Provinces initiated such work themselves. Infant schools for the young children of working parents were opened under communal direction in a number of places and received assistance from the State.

Prompt action was taken to protect children under the new conditions brought about by the war. All child-welfare work was organized early in 1915 under a special department of the national committee for food relief, with provincial and local committees. Financial assistance up to one-third of approved expenditure was extended by the committee to all agencies, public or private, interested in the care of children. This included subsidies to infant consultations, *gouttes de lait*, mothers' canteens, children's canteens (feeding delicate children from 3 to 17 years old), *crèches*, colonies for anemic children, and school lunches. The remaining two-thirds of the expense was equally divided between the Provinces and the commune. No subsidy was granted unless the character of the work was approved by the committee. Medical supervision was a prerequisite in every case, and the necessity for such supervision was constantly stressed.

Under this stimulus the number of infant consultations and scientifically operated milk stations in the occupied territory increased from 70 to more than 700; and mothers' canteens reached a total of 473, as compared with 2 in prewar years.

Owing to the paralysis of industry and the consequent unemployment no extension of the *crèche* took place in Belgium.

As a result of the work of the committee, infant mortality is said to have decreased in Brussels, Antwerp, and Charleroi. A realization of the importance of child-welfare work on a national scale resulted from the work of the committee. A demand for permanent national protection of mothers and children crystallized in a bill for a national children's bureau, introduced in the chamber of representatives in February, 1919. The bill provided that half the expense of all approved child-welfare work be met by State funds. It enumerated specifically the types of work for which State aid would be eligible, covering practically the work done by the national committee during the war, and proposed the establishment of local committees as administrative bodies. In September, 1919, the bill was passed.

FRANCE.

INTRODUCTION.

In France economic urgency was early added to humanitarian and social reasons for conserving infant life. For many years there had existed a low and steadily declining birth rate. With the war the fall in the birth rate, like that in other countries, became more marked, as Table XIII shows:

TABLE XIII.—*Number of live births per 1,000 of the population.*¹

Year.	Rate.	Year.	Rate.	Year.	Rate.
1905.....	20.6	1909.....	19.5	1913.....	18.8
1906.....	20.5	1910.....	19.6	1914 ²	18.0
1907.....	19.7	1911.....	18.7	1915 ²	11.3
1908.....	20.2	1912.....	19.0		

¹ Statistique Générale de la France, Annuaire statistique, 1914-15, p. 168.

² Journal Officiel, Feb. 10, 1919, annexe, p. 105. Provisional figures for 77 Departments only, instead of 87.

Partly as a result of the diminishing population, France had been a pioneer in many infant-welfare measures and had originated types of work now almost universally adopted.

While the larger provincial cities and many smaller towns had taken steps through work for mothers and infants to lower the infant mortality rate, the greatest development of the work had been in Paris. Many of the available accounts of infant-welfare work in France deal principally or exclusively with work in Paris. This is especially true of the war years. In general the amount and character of work for mothers and infants outside Paris during these years are only to be inferred from occasional and isolated references, so that it is not possible to picture in any detail the situation throughout France.

INFANT-WELFARE WORK BEFORE THE WAR.

GOVERNMENT PROVISIONS.

Early legislation dealt with the dependent child and only incidentally touched upon the child in normal circumstances. The Roussel law (Dec. 23, 1874) was enacted for the supervision of children under 2 put out to nurse and of the places where the children were boarded, whether at the expense of the Government or of the parent. This practice was very common among French working women. No further legislative action in behalf of infancy took place until the

end of the nineteenth century. A ministerial decree of May 2, 1897, followed on December 20 of the same year by an order containing regulations,¹ provided supervision for day crèches and other places in which children under 3 were being cared for. Medical supervision was made obligatory.

Legal protection of the mother was initiated by a law (Nov. 27, 1909) guaranteeing to a woman the possibility of rest without loss of her employment for eight weeks before and after the birth of a child. The employer was obliged to hold open their places for women thus incapacitated. No provision was made, however, for reimbursing the woman for the financial loss occasioned by absence from work due to pregnancy and childbirth, or for expenses incident to this condition. A law intended to remedy harmful influences during pregnancy by permitting a pregnant woman to leave her work at any time without becoming liable to penalties for breach of contract and providing for a rest period for the mother after the birth of a child was passed on June 17, 1913. By its provisions each French mother deprived of support, if an employed woman, is assisted during the confinement rest of four weeks by a benefit of from 50 centimes to 1.50 francs a day according to the locality in which she lives. Upon application the woman's case is investigated by the mayor, and she receives her benefit through his office. He transmits a report to the prefect, who in turn reports to the ministry of the interior. A pamphlet of instructions in the care of the baby, compiled by the Academy of Medicine, is given to mothers when they begin to receive the benefit. A woman visitor (*dame visiteuse*), who receives from the mayor's office instructions as to her duties, carries this pamphlet to the mother and at the same time gives her such advice and help as her circumstances make desirable. According to a circular from the ministry of the interior to local officials, the law is good chiefly in so far as it brings hygienic knowledge to the mother.²

A nursing premium of 50 centimes daily was added to the maternity benefit by the law of July 30, 1913. The sale of nursing bottles with long tubes had been forbidden by law, April 6, 1910.

An endeavor to raise the birth rate by the encouragement of large families caused the passage of a law (July 14, 1913) whereby needy parents with more than three children, a father with more than two, or a mother with more than one child are assisted by a yearly allowance of from 60 to 90 francs for each extra child. The amount is to be determined for each community by the municipal council, subject to the approval of the general council of the Department and the ministry of the interior. A needy parent is described as one who lacks

¹ *Revue Philanthropique*, April, 1898, pp. 917-920.

² *Journal Officiel*, Dec. 24, 1913.

sufficient means to rear the child, but the term is admittedly impossible to define accurately and whether or not a parent is needy is to be determined by local officials and in certain cases by courts of law.

The Government has for many years regulated the practice of midwifery. There were midwives of two classes. There was no essential difference in their training. A candidate for the second class diploma, however, before admission to the course had to pass an examination only in certain elementary school subjects, whereas a candidate for the diploma of the first class had to have completed either a required elementary course or three years in a secondary school before entering upon her training. A midwife of the second class might practice only in the Department in which she was trained, the first-class midwife, on the other hand, might practice anywhere in France. Training was both theoretical and practical, and lasted two years. It consisted in the first year of the study of anatomy, physiology, and elementary pathology; in the second, of the theory and practice of midwifery. Training was given at the medical department of a university, in a preparatory medical school, or in a maternity hospital. In any case the final examination had to be given only by the medical department of a university. No midwife may practice without certification, and illegal practice is heavily fined. Midwives are under no systematic supervision. No pupils are admitted free to midwifery courses, though a few scholarships may be obtained, usually from municipal authorities. Some municipalities also provide midwives for needy women.

The State encouraged infant-welfare work by subsidizing both municipal and private agencies for maternity and child welfare. Subsidies were administered through the minister of the interior, to whom the prefects reported on the activities in their respective Departments, answering questions as to the financial condition and character of the work of each infant-welfare agency applying for State aid. Although not fixed by law, the amount of the subsidy was generally about 20 per cent of approved outlay.³ In a ministerial decree of June 21, 1909, it was stated that those societies would be especially eligible for help which made no religious discriminations, encouraged maternal nursing, and made a special effort to teach hygiene and baby care. Before the passage of the law of June 17, 1913, a large portion of the subsidy was given to societies extending pecuniary aid to mothers during the confinement rest. The total amount provided in the 1913 budget for infant and maternity welfare was 700,000 francs. Over 1,800 applications had been received.⁴

³ Journal Officiel, Aug. 27, 1914.

⁴ Revue des Établissements de Bienfaisance et d'Assistance, 1914, p. 65.

PRIVATE AND MUNICIPAL WORK.

The establishment and maintenance of institutions for the protection and care of infancy was generally left before the war to private individuals and voluntary societies. These societies were numerous but uncoordinated.

There were several voluntary agencies interested in the care of the mother. The earliest ones, like the Société de Charité Maternelle (mothers' relief society), founded in 1786, and the Association des Mères de Famille (organization of mothers of families), established in Paris in 1836, were concerned with the relief of poor mothers in money or kind. Relatively early, however, the object of many such societies came to be not only the relief but also the hygienic instruction of mothers and the best physical care of both mother and baby. Such an organization was the Société Protectrice de l'Enfance (society for the protection of children), 1865, whose chief work was the promotion of breast feeding. The beginnings of the modern emphasis on prenatal care are discernible in the work of the Parisian Société d'Allaitement Maternel (society for the promotion of breast feeding), 1876, which, aiming to encourage maternal nursing, gave assistance and advice to both expectant and nursing mothers. It sent visitors to the homes of the women before and after confinement and offered mothers the opportunity of monthly examinations by a physician during pregnancy. It also cared for women in preconfinement homes. Prof. Adolphe Pinard, of the University of Paris, is quoted as saying of the mothers aided in this way that "their babies come into the world in the best condition, above the average in weight and remarkably well developed."⁵

Women in confinement were assisted also by the mutualités maternelles (mothers' mutual aid societies), which came into existence 20 years or so before the war. Any woman might belong. For four weeks after childbirth or in exceptional cases for six weeks, she received a weekly sum of money, varying with the locality. In Paris it was 12 francs. These societies were supported by the dues of the participating members, the contributions of honorary members, and State subsidies.⁶ The mutual-aid societies operated in small places as well as in large cities. Dammarie-les-Lys, for example, with 1,600 inhabitants, was said to have a very successful one. The societies were permitted to administer the State maternity benefit in the communities where they worked, and their activities were encouraged by Government grants.

All maternity hospitals received sick pregnant women, and in practically every city there were homes for women during the latter weeks of pregnancy. In Paris there were 11 maternity hospitals directed

⁵ Mornet: *La Protection de la Maternité en France*, p. 89.

⁶ *Revue Philanthropique*, February, 1916, p. 115.

by the assistance publique (department of public relief), which is supported by voluntary contributions as well as by State and local subsidies. It was customary also in Paris for certain midwives approved by the maternity hospitals and paid by the city to receive for confinement a limited number of women, on an average of six by one midwife. Lying-in facilities were said in 1910 to be very bad in the Provinces, though some towns even among the smaller ones had good maternity hospitals, such as Nimes, Macon, Brive, Autun, Cognac, la Rochelle, and Montpellier.⁷

Homes for convalescent mothers had been maintained for many years in Paris and a few of the larger cities of France. In these homes (pouponnières) mothers were allowed to stay as long as they nursed their babies, usually without money payment. In many cases a mother was asked to nurse also the child of some other mother who was unable to breast feed her baby. Temporary homes for older children during the confinement of the mother were in some cases provided by philanthropic agencies; and domestic assistance during confinement was occasionally furnished by organizations such as the society for the promotion of breast feeding.

Cantines maternelles (mothers' canteens) for expectant and nursing mothers had been since 1905 a distinctive feature of the infant-welfare service in Paris. These were established by the Federation des Cantines Maternelles, a private society, and were later subsidized by the State. All women were received without charge and without question from the fifth month of pregnancy until 14 months after confinement. The only requirement in the case of a pregnant woman was the presentation of a certificate as to her condition from one of the infant-consultation centers, and in the case of a nursing mother proof that she fed her child at the breast. Two meals were given daily. The number of meals served in these canteens in Paris, in 1913, was 245,365.⁸

In 1913 a canteen was opened in Lyons by the municipal authorities. Several years earlier societies in Nice and in Remiremont had opened somewhat similar restaurants for mothers in connection with milk stations.

The last decade of the nineteenth century saw the rapid growth of the milk station (goutte de lait) and the consultation center (consultation des nourrissons). In 1890 Prof. Hergott established in Nancy an institution to which mothers delivered in the maternity hospital brought their babies one month after birth for examination. They were paid a small sum, if satisfactory progress was being made. It was in 1892, however, that the first real consultation center was installed by Dr. Pierre Budin, at the Charité maternity hospital in

⁷ Mornet: *La Protection de la Maternité en France*, pp. 115, 116.

⁸ *Bulletin de l'Académie de Médecine*, Dec. 17, 1918, p. 568.

Paris. Here children of mothers delivered in the hospital were admitted for regular medical supervision up to 2 years of age. After the death of Budin his friends and students established by subscription (May, 1909) the Pierre Budin foundation, the object of which was to open consultation centers and to help maintain them.⁹ The foundation was supported by the subscribed fund, by private contributions, and by Government subsidies.

Early in 1914, under the direction of the department of public relief for the Department of the Seine and receiving financial assistance from it, a consultation center was established in each one of the 11 maternity hospitals of the city. The center was open to all mothers of the district, instead of being restricted to the women delivered in the hospital with which the center was connected. Attendance, it is said, was general and not confined to the very poor.

The Ligue Contre la Mortalité Infantile (league for the prevention of infant mortality), founded in 1902, was very active in encouraging centers all over the country. Centers were maintained also by various private societies, such as the society for the promotion of breast feeding, in Paris, and the mutual-aid societies. As a result of the activity of these various organizations infant-consultation centers were widely distributed throughout France, in small towns as well as in large cities.

At the centers mothers were advised as to the care and feeding of their babies, who were regularly weighed and examined. The chief work of the center was to encourage maternal nursing, and in order to assist poor mothers to breast feed their infants a small nursing premium was usually given. Consultations for pregnant women were not uncommon. All the large centers in Paris maintained them. Lille since 1907 had had half a dozen. Wasquehal in the Department of Nord was said to have a particularly successful center for expectant mothers.¹⁰ Some centers gave courses to mothers in infant hygiene in addition to medical advice and supervision. The centers created by the department of public relief in Paris made a special point of such teaching and were known as instituts de puériculture (child-welfare institutes).

Physicians, in many cases infant specialists, directed the work of the consultation centers in every instance. The doctor was assisted by one or more volunteer workers. Volunteer workers also did home visiting in connection with some centers, though home visiting was not a universal custom.

Soon after the establishment of the first center the first milk depot was opened in Paris in connection with a dispensary by Dr. Variot, a well-known leader in infant-welfare measures. A year later (1894)

⁹ *Revue Philanthropique*, June, 1909, p. 283.

¹⁰ Mornet: *La Protection de la Maternité en France*, p. 76.

a goutte de lait (as the milk station was then for the first time called) was instituted by Dr. Dufour in Fecamp. At the goutte de lait milk was dispensed to those babies who could not be breast fed. Regular weighing and the keeping of records formed an important part of the work of the depots, and medical supervision of the infants was constant. In fact, a large number of milk stations were operated as part of a consultation center. In 10 years after the establishment of the first milk depot there were over 100 towns in France with gouttes de lait. The majority of them were philanthropic enterprises, aided by the municipality, but in many towns they were maintained entirely by city funds, as in Nantes and Elbeuf, which were among the first to support public milk stations. The gouttes de lait admitted all babies, some free, others paying according to their means. State aid was available for both the consultation center and the milk station.

The teaching of infant care to young girls had received some attention. In Bordeaux, for example, in 1897, the École des Mères (school for mothers) was established through private philanthropy. The school taught the elements of infant hygiene to girls between 11 and 13 and accommodated over 150 pupils. The movement to give similar courses to children in the grammar and high schools of southwestern France received impetus from the success of this school. In Paris during 1902-3 Dr. Pinard himself gave lectures to school girls on the care of the infant.¹¹ Some centers held classes in baby care for growing girls. This was especially true of centers established under the auspices of the Ligue Contre la Mortalité Infantile.

A large number of day nurseries or crèches were in existence. The first one, financed by private funds, had been opened in Paris in 1844. A small charge was made for each child. Three years later the Société des Crèches (day nursery society) was formed in order to standardize the crèches rapidly coming into existence. Municipal crèches were common. Private as well as municipal institutions had since 1862 been assisted by the State. By 1909 there were 67 crèches in Paris, 44 in the Department of the Seine, and 323 in other departments.¹² These figures probably include about 30 crèches which factory owners had installed in or near the factory for their women workers.¹³

Écoles maternelles (nursery schools) were a part of the public-school system. Communities with a sufficient number of children from 3 to 6 were obliged to maintain them, but attendance was not compulsory. The object of these schools was to give small children such care as they would receive in a good home nursery. Rest and play and short, simple lessons in language and sense training made up the school day. These schools were open all day until 6 or 7 o'clock in the evening. A midday meal was served.

¹¹ *Revue Philanthropique*, February, 1917, pp. 55-56.

¹² Mornet: *La Protection de la Maternité en France*, p. 270.

¹³ *Ibid.*, pp. 273-282.

INFANT-WELFARE WORK DURING THE WAR.

IN PARIS.

On August 4, 1914, Paul Strauss, president of the national league for the prevention of infant mortality, proposed the creation of a special organization for the protection of mothers and babies in Paris during the war. By September 1 of that year the Office Central d'Assistance Maternelle et Infantile (central office for the assistance of mothers and infants) was opened under the department of public relief. The oft-repeated purpose of the organization was, in the words of its president, Prof. Pinard:

During the entire war, and in every part of the military government of Paris, to assure to every needy woman who is pregnant or who has a baby less than 3 years old the social, medical, and legal protection to which she has a right in a civilized society. To see that no woman is forgotten and no child ignored.¹⁴

It is to Prof. Pinard's annual reviews of the work of the organization that we are mainly indebted for our knowledge of the work in Paris during the war years. The central office worked in cooperation with lying-in hospitals and with private maternity and infant-welfare societies already established in order, by unifying the work, to make it as efficient as possible. At least one society under this encouragement undertook entirely new lines of work. The Œuvre des Crèches Parisiennes, for example, concerned only with day nurseries before August, 1914, began after the war to establish preconfinement and lying-in homes. To these societies the central office referred mothers applying to the department of public relief for aid, when the resources of the 11 public maternities were exhausted. In support of these private organizations it gave 1.50 francs a day until January, 1916, and then 2 francs a day, for each woman cared for in the private maternity homes.¹⁵ Its contributions to private agencies functioning in that part of Paris under military government increased from 96,150 francs in 1914 to 153,969 francs in 1915.¹⁶ As a part of the department of public relief the central office drew its funds from the contributions of philanthropic persons, and from municipal, departmental, and State subsidies.

The care of expectant mothers was an important part of the work of the central office. "Prenatal care," said Prof. Pinard,¹⁷ "should begin the moment it is certain that a mother is pregnant." During the first year of the war (Aug. 1, 1914, to Aug. 1, 1915) the public maternity homes almost tripled the number of their beds for pregnant women.¹⁸ Such maternity homes as the Asile St. Madeleine and the

¹⁴ Bulletin de l'Académie de Médecine, Dec. 19, 1916, p. 540.

¹⁵ Revue Philanthropique, November, 1916, p. 532.

¹⁶ Ibid., p. 536.

¹⁷ Bulletin de l'Académie de Médecine, Oct. 5, 1915, p. 344.

¹⁸ Ibid. p. 345.

Asile Michelet increased their preconfinement work. The society for the promotion of breast feeding and the new organization of Paris nurseries alone cared for almost 3,500 pregnant women,¹⁹ both societies having established several homes for expectant mothers during the first months of the war. As a result of this type of activity, Pinard states that there was practically a complete disappearance of accidents during pregnancy.²⁰

Of the 37,085 births in Paris during the first year of the war, over 33,000 took place under the care of the central office, the greater part of them in institutions, though public aid was extended to a few confinements in private homes.²¹ In the second year of the war, 95.2 per cent of all births in the city were cared for by the department of public relief as compared with 78.5 per cent in the year preceding the war.²² By the fourth year the number had risen to 97.3 per cent.²³ Less than 100 women, in other words, were confined without public aid. The military government of Paris provided motors day and night to carry the women to and from the hospitals. Before the war ambulance service for the maternity hospitals had been severely criticized.²⁴

In the early months of the war the number of beds available for women convalescing from childbirth rose from 260 to 400.²⁵ Every effort was made in the convalescent homes to prepare and teach mothers to nurse their infants, and so successful was the work directed to this end that it is said not one woman was encountered who, having been recently confined, had no breast milk for her baby.²⁶ The effect of the nursing home, according to Dr. Lesage, general secretary of the central office, was to increase the number of nursing mothers, to decrease the number of abandoned babies, and to reduce almost to zero infant mortality among the babies cared for in the home.¹⁵

One of the first difficulties encountered by the central office was with regard to feeding. Breast feeding was encouraged at every consultation center in practically every case by means of nursing premiums in addition to instruction and medical advice. So great was the importance attached to it that if infants were unable to be breast fed they were in some cases given human milk from a special bottle. Some of the consultation centers employed incubators for prematurely born or delicate children, and if their own mothers

¹⁵ *Revue Philanthropique*, November, 1916, p. 532.

¹⁹ *Ibid.*, pp. 345, 346.

²⁰ *Ibid.*, Feb. 16, 1915, p. 234.

²¹ *Ibid.*, Oct. 5, 1915, p. 346.

²² *Ibid.*, Dec. 19, 1916, pp. 542, 543.

²³ *Ibid.*, Dec. 17, 1918, p. 565.

²⁴ Mornet: *La Protection de la Maternité en France*, p. 105.

²⁵ *Bulletin de l'Académie de Médecine*, Oct. 5, 1915, p. 349 and Feb. 16, 1915, p. 234.

²⁶ *Ibid.*, Feb. 16, 1915, p. 234.

could not nurse them they were fed by mothers having sufficient milk to feed an extra baby. Although breast feeding had been officially recommended by the Academy of Medicine and every effort was made to secure it wherever possible, a number of infants had to be artificially fed. Early in the war large quantities of condensed milk were stored in the department of public relief in case of future need. From August 2 to September 15, 1914, there was a serious shortage in the milk supply for Paris. This was met in part by the provision of milk for babies from a herd of cows provided by the city. About 12,000 liters from this herd were distributed daily, some of it either free or at cheap rates, much of it through infant-welfare societies and centers.²⁷ This distribution continued throughout the war. The *gouttes de lait* increased their work, and free meals for nursing and expectant mothers were liberally provided by the mothers' canteens. The rule whereby women were not received until the fifth month of pregnancy was abolished, and any woman from the beginning of pregnancy might obtain meals at the canteens. After the meal mothers were usually given advice as to the feeding of their babies and young children. These canteens gave 1,013,241 meals during the initial 12 months of the war. At least one of these canteens fed children between 2 and 6.²¹

A decrease in attendance, however, came in the following year, attributed by Pinard to the widespread employment of women, although even in 1917-18 (Aug. 1 to Aug. 1) almost three times as many dinners were given as in the year before the war.²⁸

Under the stimulus of the department of public relief there was a growth in the number of consultation centers. The number of mothers attending the centers also increased early in the war. For instance, in 1912 there were 1,380 mothers in attendance and 6,500 consultations at the child-welfare institute connected with the *Maternité* hospital. In 1915, despite the fewer number of infants born, the number of mothers in attendance had risen to 1,735, while the number of consultations had grown in much greater proportion, reaching in that year 11,050.²⁹ After 1915, however, a rapid and progressively growing decrease in the number of babies brought to the centers was noted. Of six centers in one district two were closed because of a lack of babies. It was said that in many places there were literally no babies to bring.

Suggestions for compulsory attendance at centers were put forward by physicians who contended that the country's interest in the infant was supreme, above even that of the parent, and that attendance

²¹ Bulletin de l'Académie de Médecine, Oct. 5, 1915, p. 346.

²⁷ Bulletin de l'Académie de Médecine, Dec. 19, 1916, p. 545.

²⁸ Bulletin de l'Académie de Médecine, Dec. 17, 1918, p. 568.

²⁹ Report on the Physical Welfare of Mothers and Children, Vol. II, p. 96. Carnegie United Kingdom Trust.

at centers, like attendance at public schools, should be obligatory. In some Departments, as in Yonne, where the consultation center was especially well organized, this had been done in the case of mothers of infants receiving public assistance. Mothers who do not attend, it was asserted, should be compelled to send to the authorities a monthly certificate of the condition of their babies.³⁰

Pinard believed that the results of the work of the central office were satisfactory enough to justify the establishment in Paris and elsewhere of a permanent organization to do similar work after the war.³¹

IN THE PROVINCES.

With the exception of invaded districts infant-welfare work continued in all the Departments of France where it was already under way, judging from the amount of the State subsidies allocated to the different Departments and the list of agencies receiving the money as compared with similar lists for prewar subsidies.³² In 1915 a sum was set aside for infant-welfare work in the invaded Provinces. This money was intrusted to the league for the prevention of infant mortality, to be held until the opportunity should come to distribute it; as parts of the occupied Provinces were regained, the reserve fund was used to reestablish maternity and infant centers.³⁴

The agencies most active in furthering measures for infant protection were the mothers' relief society, the mutual-aid societies, and the society for the protection of children. The first two societies received larger subsidies from the national treasury than before the war, because of their increased activities.³⁵

"Private beneficence," said Dr. R. Raimondi, director of the institut de puériculture of the University of Paris, "always supported by municipal, departmental, or State budgets has increased the number of refuges for expectant mothers and mothers with their infants."³⁶ Infant consultations increased not only in Paris, but also in other towns and in the country. "Bordeaux," continued Dr. Raimondi, "Havre, Marseille, Lyon, Tours, and Vienne (Isère) were especially active. In Lyon, in addition to the extended work of the consultation centers, three canteens for mothers were established by the city."³⁷

The mutual-aid societies and the society for the protection of children made a special effort to found consultation centers and gouttes de lait throughout the country. In the larger cities, including

³⁰ *Revue Philanthropique*, March, 1916, p. 131.

³¹ *Bulletin de l'Académie de Médecine*, Dec. 17, 1918, p. 561.

³² *Revue Philanthropique*, March, 1913, pp. 603-648; November, 1915, pp. 327-338; September, 1916, pp. 431-444, and October, 1917, pp. 512-518.

³³ *Revue Philanthropique*, June, 1915, p. 174.

³⁴ *Journal Officiel*, Sept. 3, 1915.

³⁵ *Maternity and Child Welfare*, September, 1918, p. 303.

³⁷ *Bulletin des Usines de Guerre*, Aug. 19, 1918, p. 133.

Paris, both maintained centers; in the smaller towns, one or the other. At the third congress of the mutual-aid societies (1918) the following resolutions with respect to consultation centers were adopted:³⁸

That supervision of pregnancy be introduced as soon as possible in all the mutual-aid societies and be considered as a fundamental function of these societies.

That this supervision be both medical (and in that case to be carried out as much as possible through pregnancy consultations arranged preferably under the direction of the society) and educational (this to be carried through home visiting of the pregnant members of the society) * * *

That a strict control over the bringing up of infants be organized in all the mutual-aid societies, this to be carried out as much as possible through infant consultations conducted under the direction of the society.

That a real and effective supervision be continued until the end of the second year of the child's life.

Much difficulty was introduced into the work by the mobilization of doctors. An infant consultation without a consulting physician was an anomaly in France, as it is more and more becoming everywhere, and centers in charge of trained nurses were unknown.

An attempt was made during the war to bring the benefits of the consultation center to infants in small communities. In the summer of 1914, for example, the general council (administrative body) of the Department of Hautes Alpes established traveling consultations in the Department, which were held once or twice a month during the summers of 1914 and 1915 in villages of four communes.³⁹ Efforts were also made by the large cities, particularly Paris and Lyon, to extend the work for mothers and infants to the surrounding country.

MIDWIFERY SERVICE.

In August, 1916, the second-class midwife of inferior education was abolished in order to secure a better type of candidate. A number of the less educated ones already certified, however, continued to practice as in England. In remote country districts, too, the matrone, or old "handy woman," was only too often resorted to as a friend in need. Pinard in 1918 commented on the necessity of ridding remote districts of the matrone and of providing such places with properly trained midwives.⁴⁰

BABY WEEKS AND EXHIBITS.

The urgency of reaching the rural districts and small towns was partly responsible for a campaign carried on by the league for the prevention of infant mortality and the Commission Permanente de Preservation Contre la Tuberculose en France (society for the prevention of tuberculosis in France), aided by the American Red Cross and

³⁸ Revue Philanthropique, July, 1918, pp. 311-312.

⁴⁰ *Ibid.*, June, 1918, p. 274.

³⁹ *Ibid.*, July, 1917, pp. 332-333.

the Rockefeller Foundation. On January 6, 1918, the traveling child hygiene exhibit was opened in Chartres, the first of its kind in France. Equipped with moving-picture apparatus, models, literature, and attractive posters and charts, the motor truck carrying the exhibit traveled through the countryside, teaching the hygiene of maternity and infancy, and covering in January and February the Department of the Eure et Loir. In its first 10 days it reached through lectures and demonstrations almost 5,000 persons.

Other exhibits did similar work in various parts of the country, sent on their way by the Red Cross in cooperation with the French Government as well as with the great social agencies at work in France for the protection of mothers and infants.

Dunkirk in April, 1915, held an infant-hygiene exhibit under municipal auspices. In April, 1918, a baby-saving show was held in Lyon. It ran for three weeks and reached thousands every day. The object of the exhibit was not only to create an enthusiastic public opinion in favor of infant protection but also to assist in training the home visitors who were to demonstrate the principles of infant hygiene in French homes.

TRAINING OF WORKERS.

Before the war French home visitors had been in practically all cases untrained volunteers. After the war began short intensive courses for women with hospital training, some of whom had been working as volunteers in military hospitals, were instituted in Paris, Lyon, Marseille, and Bordeaux for the purpose of training infant-welfare workers. The importance of a home visitor to supplement the work of each consultation center was more and more recognized.

The training of crèche assistants and other infant-welfare workers was given considerable attention. In 1917 l'École Centrale de Puericulture (central school of child care) was established in Paris under the auspices of the league for the prevention of infant mortality, and with the cooperation of a number of infant-welfare societies.

Similar courses were established in Rouen.⁴¹

TEACHING OF INFANT HYGIENE.

Although the emphasis in all French welfare work was largely medical, some interest in the teaching of child hygiene to mothers and young girls was manifested. The child-welfare institutes connected with the public maternity hospitals were obliged to abandon much of their theoretical instruction in infant hygiene on account of the shortage of physicians, but the practical aspect of the work was continued, including visits to day nurseries,⁴² where the pupils received instruction in baby care.

⁴¹ Bulletin des Usines de Guerre, Oct. 22, 1917, p. 208.

⁴² Revue Philanthropique, July, 1917, pp. 341-344.

At Bordeaux, under the auspices of the Bordeaux committee of the union of women of France, a school for instruction in the care of young children was established in November, 1917.⁴³ It gave both practical and theoretical work to women school-teachers and to students of high and normal schools as well as to younger public-school children. It was also offered to all girls and young women intending to take up any occupation in connection with the various organizations for child care. Some of the schools organized for training welfare workers admitted mothers and young girls to their lectures.

In 1917 the teaching of child care in continuation schools was proposed in a new education bill. It proposes that girls between 16 and 18 should be required to take courses in hygiene, elementary medicine, and care of children for at least 100 hours a year during the last two years of the continuation course.⁴⁴ This bill has not yet become a law.⁴⁵

FINANCIAL PROVISIONS FOR MOTHERS.

Maternity benefits and nursing premiums.

The system of maternity benefits and nursing premiums established by the laws of June 17 and July 30, 1913, continued in force during the war, and efforts were made to extend and increase them. In 1916 Dr. Strauss stated that "people have been, very properly, concerned since August 2, 1914, with strengthening activities for the protection of maternity, the sacred institutions for safeguarding nursing babies and little children. Our legislation protecting infancy and motherhood needs to be supplemented. Sometime ago the Government gave broad instructions for the liberal application of the law of June 17, 1913, on rest for mothers; the Chamber has voted special provisions for the wives of soldiers and refugees. It is to be hoped that the Senate will shortly confirm these humanitarian provisions, pending the time when an amended form of the law on assistance to mothers may assure to expectant mothers as to those recently confined the protection which is indispensable for all in the interests of the race and of the nation."⁴⁶

The desired amendment for pregnant women was not made, however, though on January 23, 1917, the confinement benefit was extended to include all women, whether employed or not, who were drawing separation allowances, and all refugees receiving special Government aid. On December 2, 1917, the law was amended a second time to provide maternity benefit for all women with insufficient resources.

⁴³ Gazette Hebdomadaire de Bordeaux, Oct. 14, 1917.

⁴⁴ Journal Officiel, Documents Parlementaires, Chambre, session ordinaire, 1917, p. 356 ff.

⁴⁵ According to information received since this report went to press, the bill was redrafted and reintroduced on Sept. 5, 1919. In the new bill the maximum age for girls is 16; no minimum hours or course of study are given in the bill, but both are to be decided by a special commission. (Journal Officiel, annexe, Dec. 22, 1919, p. 347.)

⁴⁶ Revue Philanthropique, October, 1916, p. 507.

Various bills pertaining to maternity and nursing benefits were introduced during the war to fight depopulation by better protection of mothers and babies. Financial assistance to pregnant women for each child less than 13 years of age was proposed.⁴⁷ A daily allowance from 2 to 5 francs, to be paid during the last four weeks of pregnancy, providing the woman refrain from remunerative employment, and a nursing premium of 100 francs a month for one year, was another measure suggested.⁴⁸ None of these bills had been passed at this writing.

The amounts given were generally considered insufficient to produce the results hoped for in the framing of the law, and agitation was strong throughout the whole period to increase them. Early in 1918 in the Department of the Seine the benefit was raised for the year only from 1.50 to 1.75 francs a day during the eight weeks of the confinement rest. The nursing premium was also increased by 1 franc, making the daily premium 1.50 francs. At the same time it was recommended that the maximum amount granted by the law be accepted by all the municipal councils of the Department as the rate to all women. It suggested also that the law be amended to permit the daily allowance to women in confinement to be increased to a maximum of 3 francs and the nursing premium to be raised to 1.50 francs a day.⁴⁹

In April, 1918, a decree issued by the Department of the Seine provided further nursing premiums for that Department.⁵⁰ Two hundred francs, to be paid in installments, were to be given to each mother receiving the legal maternity benefit, provided the infant was breast fed and showed evidence of good care.

In 1914, 65,305 French women received maternity benefits; in 1915, 66,136; while the number receiving nursing premiums had also increased from 44,143 to 50,466.⁵¹

The annual budget for the years of the war provided approximately 3,000,000 francs for nursing premiums and benefits during confinement.⁵²

Monetary aid was given in some communes to women leaving public maternity hospitals, if they had no other resources, the object being to induce the mother to keep the infant with her and nurse it instead of boarding it out and going to work. Money expended for this cause was recoverable in part from State funds. (See p. 83.)

The mutualités maternelles continued to grant confinement benefits and nursing premiums to their members and to supplement those received from the Government. A great extension of the work of

⁴⁷ Journal des Débats, Mar. 3, 1917.

⁴⁸ Journal Officiel, Documents Parlementaires, Chambre, 1917, Annexe No. 3910, p. 1593.

⁴⁹ Revue Philanthropique, March, 1913, pp. 140-141.

⁵⁰ Ibid., April, 1918, p. 187.

⁵¹ Ibid., February, 1917, p. 73.

⁵² Journal Officiel, July 18, 1914; Dec. 28, 1914; June 30, 1915; Sept. 29, 1915; July 1, 1916; Sept. 29, 1916; Dec. 31, 1916; Apr. 1, 1917; July 1, 1917; Sept. 30, 1917; June 30, 1918.

these societies was reported.⁵³ Private organizations, as before the war, provided nursing premiums for certain women, especially in connection with attendance at a consultation center. There was a particularly active society in Lyon, which aided factory workers who were expectant mothers and gave premiums for breast feeding.

A few employers also gave premiums to encourage breast feeding. A large metallurgical plant at Ivry,⁵³ for instance, near Paris, gave 50 francs to a working woman or the wife of an employee who had breast fed her child for four months, 100 francs for six months, and 250 francs if the nursing continued a year. At the Bon Marché department store in Paris, according to a plan instituted in April, 1917, the mother of each new-born baby was given 200 francs, and 120 francs a month for 10 months following the birth provided the mother breast fed the child. If she put the child out to nurse the sum was reduced to 20 francs a month.⁵⁴

Separation allowances.

In addition to maternity grants and nursing premiums there was special war legislation for the financial assistance of mothers. On August 5, 1914, the bill providing aid for families of enlisted men was passed. At first it covered all needy families of enlisted men, but on March 31, 1917, the act was extended to include "all needy French families residing in France whose bread-winner—not a soldier—is, without fault of his own, a victim of a circumstance of war suffered on French soil in a region occupied by the French Army." By decrees of August 4, 1917, and of November 15, 1918, the allowances were raised from the original 50 centimes a day for each child under 16 and 1.25 francs for the wife to 1.75 francs for the wife and 1.25 francs for each child, with special provision for more than two dependent children. The child's allowance started from the day of its birth, a bill to make an unborn child eligible to the allowance having failed to pass. Allowances were granted upon application after investigation, and though they were designed to prevent actual need rather than to provide a substitute for the usual income, officials were admonished to interpret the law in a "large spirit of humanity."

PROTECTION OF FACTORY WORKERS AND THEIR CHILDREN.

Increase in employment of women.

The need for financial assistance decreased somewhat with the flocking of women into industrial life after mobilization had set in.

The employment of women in factories was common even before the war. According to the census of 1911, more than 2,500,000

⁵³ Journal Officiel, Sept. 3, 1915.

⁵³ Bulletin des Usines de Guerre, Feb. 5, 1917, p. 324.

⁵⁴ Bulletin de l'Académie de Médecine, Dec. 17, 1918, p. 605.

women were engaged in industry, over 1,750,000 of whom were between 15 and 45 years of age.⁵⁵ That a law (June 17, 1913) had already been passed to protect mothers in factories by insuring them rest periods before and after confinement is an indication that there were not a few nursing and pregnant women employed in them before 1914. When the war began women in France, as in other countries, took up, in addition, much of the work laid down by men called into the service. The greatest increases in female labor are shown in the chemical, metal, and woodworking industries.⁵⁶

It is not possible to estimate the number of pregnant women and nursing mothers who did factory work during the war. In 1916 Dr. Bar, of the Tarnier Clinique in Paris, after an investigation covering several munition factories, stated⁵⁷ that the number of pregnant women averaged, he thought, about 1 in 140 or 120, certainly less than 1 in 100. In a Government munition factory near Paris over 13 per cent of all women under 40 were reported pregnant, but the number of pregnant women there was said to be relatively high.⁵⁸ Dr. Bar found that 2 or 3 per cent was the highest proportion of mothers of young infants in any factory investigated by him.⁵⁷

Discussion in the Academy of Medicine.

The attempt to maintain many hard-worn labor standards for women went down before the necessities of war. Night work which had been prohibited was again authorized and the working day in many cases lengthened. The speeding-up essential to the war program was felt in some quarters to be resulting disastrously for the future generations of the country. This body of opinion was crystallized in Dr. Pinard's report (read before the Academy of Medicine on Dec. 5, 1916) on the Protection of Infancy during the Second Year of the War in the Entrenched Camp at Paris. He presented figures showing that the per cent of premature infants was higher than the year before, that the weight of infants at birth was less than that of children born in the previous year, that the number of abandoned babies and of those put out to nurse had increased. It was his belief that the employment of mothers in factories was rendering the public work for mothers and babies of little or no avail. He urged the "absolute prohibition of work in factories for pregnant women, nursing mothers, or mothers delivered within six months,"⁵⁹ and ended his earnest appeal with the words, "It takes longer to produce babies than to make shells or cannon."

⁵⁵ Statistique Générale de la France, Resultats Statistiques du Recensement Général, effective Mar. 5, 1911. Vol. I, Pt. III, pp. 12 and 64.

⁵⁶ Bulletin du Ministère du Travail et de la Prévoyance Sociale, March-May, 1918, p. 113.

⁵⁷ Bulletin de l'Académie de Médecine Feb. 13, 1917, p. 200.

⁵⁸ Bulletin des Usines de Guerre. Apr. 15, 1918, p. 403.

⁵⁹ Bulletin de l'Académie de Médecine. Dec. 19, 1916, p. 568.

In the discussion that followed, Pinard had as his opponent Paul Strauss, as eminent in the field of obstetrics and pediatrics as Pinard himself, and at that time president of the executive committee of the central office. He believed that Pinard had drawn from the figures conclusions which were unwarrantable.⁶⁰ It was his opinion, based on careful reports made by physicians from the celebrated maternity hospitals and clinics of Paris, that the employment of women in munitions factories need not be prohibited altogether but should be regulated to protect the woman financially and physically during pregnancy and nursing. He believed with Dr. Bonnaire, of the *Maternité* hospital in Paris, that "to close the door of the factory to the pregnant woman, under pretext of preserving the child to be born, could not fail to have the opposite effect to the desired end. What risks would not pregnancy run on the day that it was decreed that it constitutes an obstacle to the daily bread?"⁶¹ Pinard, however, was firm in his conviction that "the factory is the murderer of the child," and on January 2, 1917, proposed to submit to the authorities the following suggestions:⁶²

1. In French factories work should be forbidden to all nursing mothers and to all women who are pregnant or who have been confined within six months.
2. Every woman in France, pregnant or nursing a baby of less than a year, should receive on her request an allowance of 5 francs daily.

A committee of 10 was appointed to look into the subject and to render a report on the issue whether employment in factories should be abolished or should be allowed under restrictions. The committee reported on January 30, 1917. Since the country could not afford to suffer any disorganization of production, and since, moreover, the cost of Pinard's plan estimated on a basis of 506,000 births among manual workers in 1909 would be half a billion francs, the committee proposed for the consideration of the academy a series of propositions of its own.⁶³

During the detailed discussion that followed several amendments were suggested. While Pinard's opponents acknowledged that his was the ideal plan for safeguarding the future generations of France, they were regretfully aware of its impracticability. Not only was the Government unable to bear the necessary expenditure, but also the exclusion of pregnant and nursing women from factories would, they felt, encourage voluntary sterility, abortion, or abandonment.⁶⁴ For these reasons the Pinard resolutions were rejected and the resolutions submitted by the special committee to ameliorate the evils of mothers' labor in industry were finally adopted (Mar. 13, 1917) in the following form:⁶⁵

⁶⁰ Bulletin de l'Académie de Médecine. Jan. 2, 1917, p. 27.

⁶¹ Ibid., p. 34.

⁶² Ibid., p. 40.

⁶³ Ibid., Jan. 30, 1917, pp. 120-122.

⁶⁴ Ibid., p. 127.

⁶⁵ Ibid., Mar. 13, 1917, pp. 367-368.

Considering that the extension of manual labor in factories and especially in war factories will constitute the grave danger of depopulation if the pregnant worker and the woman nursing her infant are not sufficiently and immediately protected, the academy resolves as follows:

1. They must be employed at tasks calling for only moderate effort in form and duration * * *. The half day, maximum six hours, should be given them * * *. Night work must be prohibited * * *. All influences endangering pregnancy or nursing must be removed from their work.

2. The optional rest of the June, 1913, law, must become obligatory for war factory workers.

3. Infant and female hygiene consultations, directed by a doctor, shall be offered to the workers. The doctor may show the necessity of a change of tasks, the moderation, or even the prohibition, of them, when he believes continuation will endanger the mother's health or the infant's life. To secure the benefit of special hygiene required by their sex, a supervising woman agent, serving as an intermediary between the male working force and the woman concerned, is indispensable. The woman factory welfare worker in English industry must have her equivalent in France.

4. To encourage breast feeding, measures shall be taken to permit it under rigorously hygienic conditions during work hours. Bonuses shall be given nursing mothers.

5. The pregnant or nursing woman obliged by her condition to change her employment, to reduce or stop work, shall receive an indemnity compensating for the reduction or stoppage of pay. The expenses resulting shall be assured by an insurance organization, under the responsibility of the State.

6. Besides the nursing rooms (chambres d'allaitement), the administration must promote the opening of nurseries for the children (garderies) wherever the necessity for them shall appear.

Pinard stated that the machinery proposed seemed so elaborate that probably the mother herself would receive but little benefit, and that he had never seen more than one factory nursing room which was properly carried on.⁶⁶

Voluntary action of employers.

Some of these measures had already been adopted by a number of employers. By instituting short hours, daytime shifts, and work adapted to pregnant or nursing women they were responding very well, it was said during the discussion in the academy, to the movement to safeguard women. Even before the war 50 large plants had nursing rooms,⁶⁷ and by 1917 many more had installed them. After the war began the association of metallurgical industries indorsed a plan which included premiums to large families, care of pregnant women and women in childbed, mothers' consultations, nurseries, a free meal to nursing mothers, and open-air schools for sickly children.⁶⁸ The iron manufacturers' society, consisting of 55 associations of the iron, steel, electric, and related industries, declared itself prepared to enforce maternal protection.⁶⁹ In a number of places, among them Lyon, Havre, Besançon, Chauffailles, Amiens, Neuilly, and Levallois-Perret, employers united to secure better protection of the preg-

⁶⁶ Bulletin de l'Académie de Médecine, Feb. 20, 1917, p. 233.

⁶⁷ Ibid., p. 242.

⁶⁸ Ibid., pp. 244-245.

⁶⁹ Ibid., p. 243.

nant and nursing women in their factories.⁷⁰ In some cases they established cooperative nurseries; in others, however, the employers were against common action in the matter, preferring to establish separate nurseries. Many employers cooperated with the agencies in Paris and elsewhere training women as factory welfare and nursery workers by promising to engage welfare workers and by offering their factories for the training of the candidates.⁷¹

A Government investigation⁷² early in 1917 showed a number of *garderies* and *chambres d'allaitement* in course of construction. The investigation covered 39 nurseries with about 600 children and 17 nursing rooms in which there were 76 babies. Only one nursery had no regular medical supervision. In all the children were either examined upon arrival or were admitted only on a medical certificate. The majority excluded children in a suspicious state of health, but 16 nurseries had isolation wards for such cases. Free or cheap milk sterilized or boiled was furnished for the artificially fed babies in practically all the nurseries. In most factories free soup and milk were given the nursing mother. A number gave nursing premiums, one a grant of 100 francs annually, another a daily premium of 50 centimes. Some employers allowed mothers to go home for half an hour in the morning and half an hour in the afternoon, making no deduction from the pay, though pieceworkers suffered a slight loss.

Governmental measures of protection.

In April, 1916, the committee on woman's work was established under the ministry of munitions and in conjunction with the league for the prevention of infant mortality carried on an active campaign for the protection of mothers and babies. On December 19, 1916, the committee made the following recommendations⁷³ with respect to mothers, based on a report from Dr. Bonnaire, head obstetrician at the *Maternité* hospital in Paris:

EXPECTANT MOTHERS.

1. Pregnancy gives right to a change of employment.
2. Overtime and night work should be prohibited.
3. Daywork and half time are advocated.
4. Prolonged work while standing should be forbidden.
5. The following kinds of labor should be forbidden:
 - (a) Work requiring physical exertion.
 - (b) Any attitude endangering pregnancy.
 - (c) Work which shakes the body.
6. The legal rest of four weeks before confinement should be enforced among the munitions workers.
7. No reduction of wages should be connected with change of work.
8. Periodical consultations should be held by a physician or midwife under the direction of a physician in all munitions factories.

⁷⁰ Bulletin du Ministère du Travail et de la Prévoyance Sociale, Nos. 8-9, August-September, 1917, p. 341-353; and Bulletin des Usines de Guerre, August, 1918, pp. 132-134.

⁷¹ Bulletin des Usines de Guerre, May 21, 1917, p. 26.

⁷² Bulletin du Ministère du Travail et de la Prévoyance Sociale, August-September, 1917, pp. 341-347.

⁷³ Bulletin des Usines de Guerre, Dec. 25, 1916, p. 279.

MOTHERS OF YOUNG BABIES.

1. All factories employing women and working for national defense should be obliged to install a nursing room for breast-fed babies. Mothers should have the right to leave their work for one-half hour morning and afternoon to nurse their babies. This should involve no loss to the mother.
2. Nursing mothers should work only by day and only in a sitting position.
3. In addition to a nursing room there should be in State industrial establishments, including the factories run by power, a nursery for bottle-fed babies and another for children in second, third, and fourth years. Careful watch should be kept each day over the health of the children, and for those suspected provision should be made for isolation.⁷⁴

In January, 1917,⁷⁵ the minister of munitions urged the controllers of labor to see that precautions recommended by the committee on woman's work in relation to hours, occupations, etc., of pregnant and nursing mothers be carried out.

During the spring of 1917 other governmental departments took similar steps. In April, 1917, the ministry of the interior extended financial assistance to factories maintaining nursing rooms or nurseries under suitable hygienic conditions.⁷⁶ Plans for the construction and administration of both had been published by the Government in the *Bulletin des Usines de Guerre*.⁷⁷ The ministry of labor received a set of resolutions drawn up by the national council of French women in which measures for the protection of expectant and nursing mothers and of young children were urged.⁷⁸ In addition to several recommendations practically identical with those of the committee on woman's work, they advised the extension of the period of rest to six weeks before and after confinement instead of four, the appointment of more women factory inspectors and welfare workers, and the adaptation of infant schools to children of 2 years of age.

On August 5, 1917, a law was passed requiring employers to allow nursing mothers one hour a day in 30-minute periods to breast feed their infants. Each establishment employing at least 100 women over 15 years of age may also be required to maintain a nursing room in the factory for the use of its women workers. Attempts to introduce legislation of this character had been made as early as 1906 but had been unsuccessful until the war accentuated the needs of mothers and the necessity of saving every infant life.

Soon after the passage of this law (Sept. 30, 1917) the minister of munitions addressed a circular to the managers of Government factories urging them to comply with the law as soon as possible.⁷⁹

⁷⁴ *Bulletin des Usines de Guerre*, Jan. 1, 1917, p. 287.

⁷⁵ *Revue Philanthropique*, January, 1917, pp. 36-39.

⁷⁶ *Le Temps*, Apr. 8, 1917.

⁷⁷ *Bulletin des Usines de Guerre*, Oct. 2, 1916, pp. 177, 178.

⁷⁸ *Revue Philanthropique*, June, 1917, pp. 273-284.

⁷⁹ *Bulletin des Usines de Guerre*, Mar. 18, 1918, p. 374.

Official investigations.

By a decree of October 28, 1917, the minister of munitions instituted a system of investigations to ascertain hygienic conditions among employees in the factories under its control and to find measures necessary for their welfare.⁸⁰

One of the earliest investigations⁸¹ into Government-controlled factories disclosed that "it is an undisputed fact that great efforts have been made in the Government establishments toward the protection of childhood." Of the 62 munitions works covered by the inquiry, 20 had instituted permanent nursing rooms, 14 temporary ones, 14 were in construction, 3 used a nursery in the neighborhood, 4 had no need for a nursery, 7 made no reply. The use made of the nurseries was reported to be limited. This was ascribed to the low birth rate, to transportation conditions, making it difficult for the mothers to bring their babies to the factories with them, and to the fact that the nursing room being somewhat of an innovation had not yet begun to be appreciated among the workers.

Several reports⁸² on medical service in Government munitions factories speak of the provision of special arrangements for gynecological service for the working women, and of consultations for expectant mothers. According to a report⁸³ on the protection of children in private industries, made in the spring of 1918, 36 nursing rooms and 5 nurseries had been established in Paris and its suburbs; in the district of the Loire 1 nursing room was in the course of construction; in Lyon and its vicinity there were 4 nursing rooms, 4 nurseries for infants, and 7 nurseries for children above the age of infancy; in the other parts of France investigated, 9 nursing rooms had been opened, 31 infant nurseries, and 4 nurseries for older children.

Pinard in his report for the central office for the fourth year of the war stated that in his opinion protection of mothers even in Government factories was a dead letter in spite of ministerial decrees and the law of August 5, 1917. He spoke of the high cost of the nursing rooms if properly run, 8 to 12 francs daily for each child, and commented on the few children in attendance. Even at the nursery established in December, 1917, in the central camouflage factory near Paris, with its elaborate equipment and trained workers, only a few children had been cared for. In the summer of 1918, however, Pinard admits, the attendance increased so that there were 21 infants present every day.⁸⁴

⁸⁰ Bulletin des Usines de Guerre, Dec. 17, 1917, pp. 271-272.

⁸¹ Ibid., Mar. 18, 1918, pp. 374-376 and Mar. 25, 1918, pp. 383-384.

⁸² Ibid., Mar. 4, 1918, p. 359; and Apr. 15, 1918, pp. 401-405.

⁸³ Ibid., June 17, 1918, p. 59.

⁸⁴ Bulletin de l'Académie de Médecine, Dec. 17, 1918, pp. 602-603.

Nevertheless, the woman physician directing the nursery felt that other measures in addition to factory crèches and nursing rooms were needed to protect the factory mother and her child. She suggested (1) that the law of August, 1917, be enforced against employers neglecting their duty; (2) that the law of June, 1913, be amended so that not only a nominal sum be given the woman but her whole salary be guaranteed; and (3) that a maternity insurance system be organized for working mothers.⁸⁵

GOVERNMENT APPROPRIATIONS.

In aid of maternal and infant-welfare work, besides the previously mentioned appropriations for maternity and nursing premiums, the State budget provided during each year of the war (1914-1918, inclusive) 650,000 francs,⁸⁶ except in 1917, when a supplementary appropriation of 500,000 francs was made for the purpose of establishing nurseries for the children of women munition workers.⁸⁷ Although the sum was 50,000 francs less than had been annually set aside during the years just preceding the war, the difference was explained by the fact that the law of June 17, 1913, had come into full operation, thus permitting smaller grants to private societies which gave maternity benefits.⁸⁸ In 1917 the State subsidy actually expended (exclusive of the supplementary appropriation) was 644,910 francs, distributed as follows: Five hundred and seventeen thousand one hundred and ninety francs to various organizations caring for mothers and infants, including mutual aid societies in so far as they provided medical care and supervision rather than merely assistance in money; 123,270 francs to day nurseries; and 4,450 francs to communes (about 30 in various Departments) which gave financial aid to poor women during the month that followed confinement in order that the mother might care for her baby herself.⁸⁹ Of the total amount Paris and the Department of the Seine received 273,910 francs,⁹⁰ which included the State grant to the central office for the assistance of mothers and infants in Paris. The amounts given to various organizations throughout the country doing maternity- and infant-welfare work were slightly larger each year of the war, through 1917, whereas the sums granted to nurseries and to communes giving financial aid to mothers decreased.⁹¹

⁸⁵ Bulletin de l'Académie de Médecine, Dec. 17, 1918, p. 602.

⁸⁶ Journal Officiel, Aug. 27, 1914; Sept. 3, 1915; July 27, 1916; Dec. 31, 1916; Sept. 24, 1917; June 30, 1918.

⁸⁷ France, Chambre des Députés, Commission du Budget. Rapport (sur le) budget ordinaire des services circons (pour) 1918 Ministère de l'Intérieur, p. 63.

⁸⁸ Journal Officiel, Aug. 27, 1914.

⁸⁹ Ibid., Sept. 24, 1917.

⁹⁰ Revue Philanthropique, October, 1917, pp. 513-515.

⁹¹ Journal Officiel, Aug. 27, 1914; Sept. 3, 1915; July 27, 1916; Sept. 24, 1917.

INFANT MORTALITY RATES.

The infant mortality rate, that is to say the number of infant deaths per 1,000 live births, was steadily decreasing in France before the war. For the whole of France each five-year period from 1891 through 1910 showed a decrease, and the three-year period 1911-1913 indicates a still further decline in the rate. The greatest drop in the infant mortality rate for any period during this time occurred in the opening years of the present century.

The five largest cities in France show a similar tendency. The decrease in the infant mortality rate for 1911-1913 over that for the period 1891-1895 ranged from about 15 per cent in the case of Bordeaux to almost 25 per cent for Lille.

Rural districts have in general a lower infant mortality rate than the urban population, exclusive of Paris and the Department of the Seine. Paris has the lowest rate in the country.

Table XIV gives the figures for France and the five largest French cities in five-year periods from 1891 to 1910, inclusive; and for the three-year period beginning with 1911 and including the last year of peace:

TABLE XIV.—*Number of deaths under 1 year per 1,000 live births.*

Period.	France. ¹	Paris. ²	Marseille. ²	Lyon. ²	Bordeaux. ²	Lille. ²
1891-1895 ¹	176.0	135.2	177.4	133.7	137.0	245.3
1895-1900 ¹	158.0	119.1	168.2	136.2	127.5	238.6
1901-1905 ¹	139.0	110.6	165.2	126.9	109.2	219.3
1906-1910 ¹	126.0	102.1	163.8	109.2	105.9	197.3
1911-1913 ²	124.6	106.8	137.6	105.1	116.2	186.4

¹ Statistique Internationale du Mouvement de la Population, Vol. I (through 1905), p. 464, Vol. II (through 1910), p. 124*.

² Direction de l'Assistance et de l'Hygiène Publique, Statistique Sanitaire des Villes (calculated from number of live births and infant deaths). 1891, pp. 38 and 66; 1892, pp. 72 and 79; 1893, pp. 72 and 81; 1894, pp. 72 and 81; 1895, pp. 74 and 83; 1896, pp. 80 and 89; 1897, pp. 80 and 89; 1898, pp. 80 and 89; 1899, pp. 80 and 89; 1900, pp. 80 and 89; 1901, pp. 80 and 89; 1902, pp. 80 and 89; 1903, pp. 80 and 89; 1904, pp. 82 and 90, 1905, pp. 82 and 91; 1906, pp. 78 and 94; 1907, pp. 86 and 95; 1908, pp. 86 and 100; 1909, pp. 86 and 100; 1910, pp. 86 and 95; 1911, pp. 102 and 112; 1912, pp. 102 and 104; 1913, pp. 102, 104, 138, and 140; 1914, pp. 102 and 104.

³ Calculated from the number of live births and infant deaths. *Annuaire statistique*, 1911, 1912, and 1913; p. 9 in each case.

The year 1914, five months of which were passed under war conditions, shows no great variation from prewar infant mortality rates, so far as figures available for comparison would indicate. In Marseille there was a slight decline in the rate for 1914 as compared with that for 1911-1913. In Paris, Bordeaux, and Lyon there was an increase of 2, 6, and 3 points respectively. Bordeaux, however, during the prewar period 1911-1913 had shown an increase of 12 points over the previous half decade.

The available rate for the whole of France does not include the 10 invaded Departments and so offers no real basis for comparison with rates before the war. For 77 Departments the rate for 1914 is only 109.2 per 1,000 live births. The north of France, it would seem, contributed largely to the high infant mortality rate of France during the prewar years.

The first complete year of war, 1915, marks for the uninvaded portion of the country (77 Departments), as well as for each of the large cities, a striking increase in infant mortality. For all the large cities the rates for that year are approximately as high as those for any period since 1890 and in some cases even higher. The rate for 77 Departments is 29 per cent higher than the 1914 rate for the same territory and higher even than the rate for the entire country (87 Departments) for any period after 1900.

In 1916 the rate for the country still intact (77 Departments) shows a considerable decrease. While it is not so low as the 1914 rate, it is lower than any prewar rate for the whole country (87 Departments). The rates for Paris, Marseille, and Lyon are lower than those for the preceding year but not so low, except for Paris, as the 1914 rates for those cities. Bordeaux has a rate almost 70 per cent higher than the one recorded in 1914. This increase is explained by one author as due to the drafting of physicians, resulting in the closing of many consultation centers; to the increased industrial employment of women; and to a shortage of fodder, affecting the milk supply.

In 1917, however, the rate for Bordeaux falls, though it is still much higher than for any period since 1890. The Paris rate falls to the lowest recorded during the war, and lower than the rate for any five-year period before the war. In each of the other large cities and in the 77 Departments as a whole there was an increase in infant mortality, except in Lille, where the rate for 1917 is only 161 as compared with 184 in 1913.⁹² In a speech before the Academy of Medicine on sanitary conditions in Lille during the German occupation, this decline in the infant mortality rate was explained by the fact that all newly born infants could be nursed by their mothers, since industrial work had completely stopped.⁹²

The rates for the war years are given in Table XV:

TABLE XV.—*Number of deaths under 1 year per 1,000 live births.*

Year.	France ^a (77 Depart- ments).	Paris, ^b	Marseille, ^a	Lyon, ^a	Bordeaux, ^a	Lille, ^c
1914.....	109	109.2	135.3	107.9	122.5	.....
1915.....	141	124.3	168.9	134.4	152.8	.....
1916.....	122	102.0	160.5	116.9	208.1	.....
1917.....	123	98.5	172.1	121.8	193.1	.....
1918.....	138	.....	.....	.....	.....	.....

^a Bulletin de la Statistique Générale de la France, October, 1919, p. 4.

^b Calculated from the number of live births and of infant deaths (preliminary figures) furnished to the Children's Bureau on request by the Statistique Générale de la France.

^c Unavailable except for 1917.

^d Bulletin de l'Académie de Médecine, Jan. 28, 1919, p. 12.

⁹² Bulletin de l'Académie de Médecine, Jan. 28, 1919, p. 121.

According to rates presented to the Academy of Medicine by Pinard and based on "the number of children remaining in Paris,"⁹³ infant mortality from certain main causes of death decreased in Paris during the war. The death rate from diarrhea and enteritis, which increased slightly during the first year (Aug. 1, 1914, to Aug. 1, 1915), fell in 1916-17 to more than 25 per cent less than the rate for the year immediately preceding the opening of the war. The infant mortality rate from congenital debility for August 1, 1914, to August 1, 1915, fell markedly from the rate of the preceding year; and while it rose slightly during each of the next three 12-month periods (Aug. 1 to Aug. 1) it remained only very slightly higher than the rate for 1913-14. The death rate from diseases of the respiratory organs among children less than a year old decreased during the first 12 months of the war and remained throughout lower than the pre-war rate for August 1, 1913, to August 1, 1914. The infant mortality rate from infectious diseases, owing it is said to an epidemic of measles, increased during the first and second years (Aug. 1 to Aug. 1); but in the third year the rate dropped below that of 1913-14. The number of infant deaths due to unknown diseases in proportion to the number of children left in the city increased steadily until the last year (Aug. 1, 1917, to Aug. 1, 1918), when there was a slight decrease. According to Pinard the total infant mortality rate (the number of infant deaths per 1,000 infants under 1 year remaining in Paris) decreased for each of the 12-month periods as follows:⁹⁴

Aug. 1, 1913, to Aug. 1, 1914.....	155.1
Aug. 1, 1914, to Aug. 1, 1915.....	152.0
Aug. 1, 1915, to Aug. 1, 1916.....	149.3
Aug. 1, 1916, to Aug. 1, 1917.....	144.1
Aug. 1, 1917, to Aug. 1, 1918.....	139.6

SUMMARY.

Except in Paris, the infant mortality rate, which had been declining, was in general considerably higher, especially in cities, during the war than it was during the years just preceding the outbreak of hostilities. In Paris the rates rose during the first two years of the war but declined in 1916 and 1917 below the prewar figures.

For some years before the outbreak of the war France had been active in infant-welfare work. As early as 1874 boarded-out children were put under State supervision; and, beginning with 1897, day nurseries have been regulated by the Government. By a law passed June 17, 1913, industrial workers were forbidden employment during the four weeks following confinement, and those who were French

⁹³ Bulletin de l'Académie de Médecine, Dec. 17, 1918, p. 582. The author does not state how "the number of children remaining in Paris" is determined, although he does exclude specifically "abandoned children" and children who had been placed out away from the city.

⁹⁴ Bulletin de l'Académie de Médecine, Dec. 17, 1918, p. 582.

and had no source of income except their work, received from the Government a small daily benefit. Somewhat later the maternity benefit was supplemented by a nursing premium. The training and practice of midwives were supervised by the State. The State also granted subsidies for approved infant-welfare work. Such work was initiated and directed by voluntary agencies. In 1894 the first consultation des nourrissons (infant-welfare center) in the world was established in Paris. During the next 10 years various other types of preventive work for infants were originated by French pediatricians and were extended throughout the country.

In the fight against infant mortality certain definite advances were made after 1914. France had begun relatively early to see the importance of maternity care in saving the baby. During the war, prenatal care was more and more emphasized. In Paris this work was systematically organized by the establishment of the Office Central de l'Assistance Maternelle et Infantile, under the assistance publique, for the purpose of coordinating public and private work. Private societies increased their hospital facilities for pregnant and parturient women. Never before, we are told, had pregnant women been so well taken care of.

The standard of midwifery service throughout France was raised in August, 1916, by the abolition of the course for midwives of the second class. In the future only the better-educated midwives will be permitted to practice.

Both in Paris and throughout the country generally the infant-consultation center and the milk station continued to function after the outbreak of war. While some centers were closed, new ones were in a number of instances opened, in spite of a shortage of doctors and the small number of births. These centers made every effort to keep up the instruction of mothers and the medical examination of pregnant women and infants. The mutual-aid societies were especially active after the war began in providing this type of medical and hygienic supervision for their members.

During the war special efforts were made to educate the public, especially mothers, in the importance of infant hygiene. This movement took the form of "baby weeks" and exhibits held in the larger cities, traveling exhibits with demonstrators and lecturers touring the smaller towns. In connection with the exhibits, lectures and courses were given in the larger cities and to infant-welfare workers, especially home visitors. Before the war French infant-welfare workers had been in general untrained. Home visitors were always voluntary workers. The war years witnessed a movement to secure the services of a trained home visitor for each infant-consultation center. In carrying out this program the society for the prevention of tuberculosis in France and the league for the prevention of infant mortality were assisted by the American Red Cross.

Much of the infant-welfare work had for its object the promotion of breast feeding. Nursing premiums and maternity benefits given in accordance with the laws of June 17 and July 30, 1913, were extended through amendments in 1917 to include all women with insufficient resources. In some places, as in Paris, the amounts were increased by municipal action and appropriation. In many instances they were supplemented by the maternity and nursing benefits of such societies as the mutualités maternelles. While the total appropriation from the State for infant-welfare work (including day nurseries and monetary aid to women leaving public maternity hospitals after confinement) remained about the same during the years of the war, the portion granted to private societies caring for the mother and infant increased each year.

Day nurseries received special attention in France during the war, owing to the increase in the employment of mothers with young children. New crèches were opened in industrial centers, in many cases through the concerted action of employers. The danger to breast feeding that widespread use of the crèche involves was attacked by the law of August 5, 1917, which provided that any employer of 100 women over 15 years of age may be required to provide on the premises a nursing room (chambre d'allaitement). Mothers, without loss of pay, were to be allowed to leave their work for half an hour twice daily to nurse their infants. A number of factories established, in addition to the nursing rooms, nurseries for artificially fed infants and for older children of women in their employ. These nursing rooms and nurseries were subject to governmental inspection. Their establishment was looked upon as a palliative measure rather than an ideal method of meeting the problem of the mother in industry.

GERMANY.

INTRODUCTION.

“To-day we know that high infant mortality is a national disaster,” said Prof. Dietrich,¹ one of the earliest leaders in child-welfare work in Germany; “on the one hand because numerous economic values are created without purpose and prematurely destroyed while those concerned are heavily burdened, and, on the other hand, because the causes of the high rate of infant mortality affect the powers of resistance of the other infants and weaken the strength of the nation in its next generation.” But until fairly recently, Germany, like most other nations, was relatively inactive, under the assumption that as long as the birth rate continued high she could afford to lose large numbers of her infants. The birth rate did continue high for some years after the general downward trend had set in in other European countries. After 1900, however, the decline was rapid and steady, as is shown in Table XVI.

TABLE XVI.—*Number of live births per 1,000 of the population.*¹

Period.	Rate.	Period.	Rate.	Period.	Rate.
1871-1881.....	39.1	1901-1910.....	32.9	1913.....	27.5
1881-1890.....	35.8	1911.....	28.6	1914.....	26.8
1891-1900.....	36.1	1912.....	28.3	1915.....	20.4

¹ Statistisches Jahrbuch für das Deutsche Reich 1916, p. 6.

² Concordia, June 1, 1919, pp. 89-92.

This decline was accelerated by the war, so that the decrease in 1915 and 1916 is 23 per cent and 40 per cent when the birth rates of those years are compared with that for 1913.²

INFANT-WELFARE WORK BEFORE THE WAR.

ORGANIZATION.

Up to the present century little organized work had been attempted and practically none on a national scale. But for about 10 years there has existed in Germany a most highly developed and complex machinery for combating infant mortality, and measures for the welfare of mothers and infants have been systematically organized and, as far as possible, centralized.

¹ Säuglingsfürsorge in Gross-Berlin. Compiled by the Kaiserin Auguste Victoria Haus, 1911, p. 6.

² Bulletin der Studiengesellschaft für Soziale Folgen des Krieges, No. 3, Die Bevölkerungsbewegung im Weltkrieg, 15 Mar. 1917.

The movement to protect the health of infants through caring for mothers and teaching mothers the proper care of their children began early in the twentieth century through the efforts of such leaders as Dietrich, Langstein, Heubner, and Schlossmann, who pointed out the dangers to the country in the great waste of infant life. Private charitable organizations and local police and health officials here and there took steps to reduce the infant mortality by establishing infant-welfare stations, "milk kitchens," and day nurseries, and by distributing information to mothers on the care of babies. Enthusiasm for the movement is said to have been stimulated by a letter from the Empress (Nov. 15, 1904) to the Vaterländischer Frauenverein (women's patriotic society), an influential private organization, in which the cooperation of all voluntary official bodies was urged in all measures pertaining to infant welfare. A few months later a ministerial decree (Kultus, Feb. 10, 1905) directed local authorities to unite with private societies in combating infant mortality.³ The formation of local associations for the protection of mothers and children followed, chiefly in the larger cities, in all parts of the Empire. The various societies of a province were organized into a provincial union, which in turn belonged to the State association. These were established in many of the German States in order to systematize the work within the State and to bring it in harmony with that throughout the Empire. They received grants from the State governments and from the provinces and were themselves welded together in a national league, the Deutsche Vereinigung für Säuglingsschutz (imperial association for the care of infants). This was organized in 1909 and has for its headquarters the Empress Augusta Victoria House or Institute at Charlottenburg. The purpose of this institution is, through scientific and practical investigation, to suggest to the public and the Government lines along which work for infant welfare may best proceed. In addition to its laboratories, clinics, and hospitals for mothers and children, and its infant-welfare center and milk station, it contains a training school for midwives and nurses and offers courses to mothers in the care of infants. The expenses of the imperial association were met by a subsidy from the German Empire of from 40,000 to 60,000 marks a year,⁴ by grants from the Federal States and from municipalities, as well as by gifts from private individuals.

The work of the local infant-welfare association was usually the joint concern of private philanthropic societies and public bodies. The former were in general responsible for the initiation of most of the measures for infant conservation, which the latter aided by grants. In many communities the infant-welfare association was

³Zeitschrift für Säuglingsschutz, May-June, 1915, p. 217.

⁴Säuglingsfürsorge in Gross-Berlin. Compiled by the Kaiserin Auguste Victoria Haus, 1911, p. 16.

represented by a committee consisting of members of private agencies and public officials. This type of cooperation was carried out also in the provincial and State associations.

The differences in political constitution and social conditions in the various parts of the Empire caused a lack of uniformity in much of the infant-welfare work. Even when the Imperial Government issued decrees the administration was left largely to local officials, and the degree of excellence with which they were carried out was determined in general by the progressiveness and the prosperity of the particular communities. As a result, it was usually only in the cities that great progress was made, not only in work specifically for infants, but also in those general sanitary and social measures which are indispensable in diminishing the infant death rate. Dirty and insanitary conditions in the country, combined with an ignorance of hygiene and of infant care, are thought by German writers to be in large part responsible for the high infant mortality rate in the rural districts, a rate invariably higher than that for the large towns. In Bavaria, since 1909, 50,000 marks had been granted annually from State funds for infant-welfare work in rural communities; and in 1910 there were 112 consultation centers functioning in rural districts.⁵ The high mortality among children born out of wedlock caused in a number of communities the institution of protective measures in their behalf, which in many instances were later extended to include all infants.

Money for infant-welfare work had been appropriated by cities, provinces, and Federal States in increasing amounts. No maternity and infant-welfare aid was regarded as poor relief.

TYPES OF WORK.

The chief activity of the local infant-welfare association was the establishment of welfare centers. Between 1905 and 1914, 782 centers were opened throughout the Empire.⁶ A number of these were municipal. As early as 1910 Berlin had 7 municipal centers.⁷ In charge of each center was a doctor, assisted by one or more trained infant-welfare workers. Baby weighing and the giving of advice to the mother on the care of her baby characterized the infant-welfare center in Germany as in other countries. Home visiting, except in the case of the child born out of wedlock, seems not to have been general. Cooperation with the midwife in some towns was gained by paying her a small fee for every mother whom she persuaded to come to the center. The encouragement of breast feeding was considered the most important work of the center, and many centers

⁵ *Zeitschrift für Kinderschutz und Jugendfürsorge*, June, 1914, p. 163.

⁶ *Zeitschrift für Säuglingsschutz*, May-June, 1915, p. 178.

⁷ *Säuglingsfürsorge in Gross-Berlin*. Compiled by the Kaiserin Auguste Victoria Haus, 1911, p. 37.

gave money as nursing premiums, while milk kitchens, providing pure milk for weaned children and infants unable to be breast fed, were also commonly run as part of these centers. In Germany a comparatively large proportion of infants were affected by the welfare work. For instance, in 1902, 38 per cent of all newly born infants in Berlin came under the care of consultation centers; in Charlottenburg, in 1908, 41 per cent; and in Frankfort on the Main, in 1911, 29 per cent.⁸

Many infant-welfare associations included in their general scheme of work the instruction of mothers by means of courses, leaflets, pamphlets, and exhibits. The welfare centers in larger cities gave lectures for mothers several times a year. In Berlin, for instance, at the Neumann (municipal) children's clinic, for some years courses in infant care were given periodically, without charge if the mothers were unable to pay the fee of 10 marks.⁹ Many districts gave leaflets on the nourishment and care of babies to newly married couples. A leaflet put out by the women's patriotic society was by decree of the imperial minister of the interior (Jan. 14, 1905)¹⁰ given out to all parents registering births. The Empress Augusta Victoria House also published such leaflets from time to time and gave them out upon request. In 1906 a very large and complete infant mortality exhibit was held in Berlin, and permanent museums for giving publicity to the proper care of infants were established some years before the war in Munich and at the Empress Augusta Victoria House in Charlottenburg. The Bavarian traveling exhibits instituted in 1911 by Prof. Hecker of Munich made a definite effort to train the mother in child care; lectures on infant hygiene were given and demonstrations with a large doll.

Protection of industrially employed mothers in the Empire extends back to 1878, when women were forbidden to engage in industrial work for three weeks after confinement. In 1883 the first German sickness-insurance law provided maternity benefits for this period amounting to one-half the woman's wages. In 1908 (Dec. 28) a rest period of eight weeks, at least six of which must follow confinement, was established by law. In 1911 the maternity benefits were made more generous. Employed women of certain specified classes had to be insured, and all insured women received a money benefit equal to half the woman's wage for eight weeks at confinement, at least six of which must be after the confinement. In addition to this payment the insurance societies might make other provision, such as medical care and nursing and nursing premiums, and might also extend the period of benefit or

⁸ Zeitschrift für Kinderschutz und Jugendfürsorge, June, 1914, p. 162.

⁹ Säuglingsfürsorge in Gross-Berlin. Compiled by the Kaiserin Auguste Victoria Haus, 1911, p. 41.

¹⁰ Zeitschrift für Säuglingsschutz, May-June, 1915, p. 217.

grant it to the wives of insured men. These additional aids were dependent upon larger premiums. From time to time since 1883 the number of insured women has been added to by the inclusion of various classes of workers.

The administration of the benefits was intrusted to the sickness-insurance societies, and in some cities, as in Berlin and Frankfort, the local sickness societies made grants to the centers in return for a supervision over maternity cases which had a claim on the societies.

Day nurseries or crèches for the young children of working mothers had been in existence for some years and were numerous. Usually they received children from 6 weeks of age up to 3 years. Crèche associations had been formed in many of the larger cities for the purpose of fixing standards and lending aid. Just before the war a number of these united to form the imperial crèche association, one of the objects of which was to interest the medical profession in the crèche movement. Nurseries were most often established and carried on by philanthropic societies. Some towns had nurseries supported entirely by the municipality. Grants from the city in aid of crèches established by private philanthropy were customary.

There were a few factory crèches in Germany before the war. It was also customary for working mothers to board out their children, and over boarded-out children supervision was generally maintained by local police and sanitary departments. There was no imperial law providing for such supervision, but in several States it was legally required.

For children over 3 years old and up to school age whose mothers were employed there were day centers and kindergartens. The former, and sometimes the latter, are open from early morning until evening and provide a midday meal. The day center gives care and endeavors to train the child in orderly habits. The kindergarten aims to develop the child through Froebel instruction. But no hard and fast line can be drawn between day centers and kindergartens, and in many places the latter took over some of the functions of the former. They were both conducted by private agencies.¹¹

INFANT-WELFARE WORK DURING THE WAR.

EARLY EXPERIENCE.

At the outbreak of the war the work for infants suffered a sudden collapse. Many institutions were taken over as military hospitals. Others were closed for lack of doctors and nurses. The Neumann

¹¹ Keller, A., und Klumker, Chr. J.: Säuglingsfürsorge und Kinderschutz in den Europäischen Staaten, pp. 296-299.

foundation in Berlin, with its free clinics and infant-welfare center, was obliged to close its doors. In Hesse one-fourth of the centers shut down.¹² Some of the centers remaining open had to cut down their staff, owing to the scarcity of both doctors and nurses, many of whom had been mobilized or had entered the Red Cross service. During August and September, 1914, attendance fell off even at the centers which were able to keep open, a circumstance attributed partly to the confusion and excitement of the early days of war.

On August 19, 1914, the Prussian minister of the interior issued a decree¹³ warning provincial authorities not to neglect the care of children, but to keep infants' homes, day nurseries, and all other activities for mothers and children in full operation during the war. At the same time the Empress addressed to the imperial association for the care of infants a letter in which she pointed out the need for increased activity for mothers and babies. Influenced partly by these communications, partly by a rise in infant mortality during the first two months of the war, and partly by the warning given by infant specialists all over the Empire, a rallying of the forces for infant welfare took place, and an extension of measures for mothers and babies followed. Many protests were voiced against the withdrawal of doctors and nurses. The military authorities released a number of workers in infant welfare, and by degrees the situation became more nearly normal, though a shortage continued to hamper the work throughout the years of the war. Most associations were able, however, to continue with the most fundamental of their activities, such as the work of the centers; but extensions of the work, including exhibits, traveling courses, and the like, had in many instances to be abandoned.

NEW ORGANIZATIONS AND APPROPRIATIONS.

With the revival of infant-welfare work new local and State associations were formed, and new activities were entered upon, even in places where few or none had existed before the war. Even before the war the tendency in Germany had been for the municipality to take over welfare work begun by private organizations, and with the war this tendency increased. In Strassburg, for example, the city undertook after the outbreak of the war to cover for the duration of the war all the expenses which the private maternity- and infant-welfare societies were unable to meet.¹⁴ The desirability of coordination and cooperation between private agencies and public bodies was continually stressed.

In order to stimulate the adoption of measures to protect infants in communities where little or nothing was done, a movement was

¹² *Zeitschrift für Säuglingsschutz*, May-June, 1915, p. 207.

¹³ *Ministerialblatt für Medizinische Angelegenheiten*, Sept. 2, 1914.

¹⁴ *Öffentliche Gesundheitspflege*, vol. 3, No. 10, October, 1913, p. 350.

begun in the spring of 1916 to form an imperial fund (*deutsche Spende*) for the protection of infants and young children throughout Germany. Donations made in each State to this fund were to be received by the State infant-welfare association for work in the State, or, if no association existed, the money was to be used in forming one.¹⁵

As late as March, 1917, a new infant-welfare association was established in the Grand Duchy of Mecklenburg-Schwerin.¹⁶ In May of the same year Wurtemberg created the *Landesausschuss für Säuglings und Kleinkinderschutz*, a national committee for the protection of infants and young children.¹⁷ This committee included representatives of the Wurtemberg ministry of the interior and of the medical profession. In Saxony, where a State infant-welfare association had existed since 1907, organized work for infants was made obligatory¹⁸ upon its districts, combinations of districts, and municipalities not belonging to any district. Each district was to have a committee consisting of representatives of infant-welfare work, both public and private, and a State committee was to be formed to serve as a central organ for all the work in Saxony. The funds were to be derived from a private foundation yielding 125,000 marks annually, to which the State was to add 187,000 marks.¹⁹ Prussia in the 1919 budget of the minister of the interior for the first time provided 500,000 marks for infant-welfare work.²⁰

Widespread criticism was directed against the lack of uniformity and coordination in infant-welfare work resulting from the variety of Federal and State laws and of local police and public-health regulations. It was thought that a Federal law establishing children's bureaus would prove a coordinating agency and would provide a framework of minimum requirements, the details and extent of which would be determined by the federated States.²¹ During 1918 a bill embodying this measure for Prussia was introduced into the Prussian House of Deputies, but late in the summer of 1918 it had not been passed.

In 1915 and again in 1916 the Empire appropriated 100,000 marks for the work of the Empress Augusta Victoria House, which before the war had never received more than 60,000 marks annually from the imperial treasury for its work of "combating infant mortality in the German Empire."²²

¹⁵ *Zeitschrift für Säuglingsschutz*, July, 1916, pp. 433-436.

¹⁶ Great Britain, Local Government Board, Intelligence Department. *Infant Welfare in Germany during the War*, p. 13.

¹⁷ *Zeitschrift für Kinderschutz und Jugendfürsorge*, April, 1918, p. 107.

¹⁸ *Ibid.*, August-September, 1918, p. 834.

¹⁹ *Zeitschrift für das Armenwesen*, July-September, 1918, p. 146.

²⁰ *Zeitschrift für Kinderschutz und Jugendfürsorge*, August-September, 1918, p. 227.

²¹ *Soziale Praxis*, Sept. 26, 1918, col. 814.

²² *Reichshaushaltsetats für das Rechnungsjahr, 1914*, Pt. IV, p. 58; for 1915, Pt. IV, p. 44; for 1916, Pt. IV, p. 44.

THE WAR SPONSORSHIP MOVEMENT.

During the war a number of infants and young children were aided by well-to-do people in connection with the war sponsorship movement (Kriegspatenschaft). This was a plan introduced by the Red Cross in the early days of the war (October, 1914), in order to relieve those women who were not in receipt of any State allowance. A well-to-do person made himself responsible for the care of a mother and child and thereby became "war sponsor" to the child. The unique feature was the practice of keeping mother and child together. In a few cases both went to live with the sponsor; in others the sponsors merely pledged a sum of money to maintain mother and child while the child needed the care of the mother, especially during the period of nursing. The mothers of children thus cared for were obliged to attend the infant-welfare center in their district. Dr. Leo Langstein, director of the Empress Augusta Victoria House, believed²³ that allowances such as these to enable mothers to retain their children should be continued after the war.

INFANT-WELFARE CENTERS AND HOME VISITING.

During the first year of the war, the Empress Augusta Victoria House sent out a questionnaire on infant-welfare work to 375 communities with a population of more than 15,000 each and with 788 infant-welfare centers and 266 institutions caring for infants, expectant mothers, and mothers. Three hundred and four communities replied. In 268, activities had continued as before the war; in 30, activities had increased; and in only 6 had activities decreased. Welfare centers reporting a decrease in their work were usually private ones; the work of the public centers on the whole continued unimpaired or increased. Two hundred and twenty-five centers, both public and private, reported a higher attendance, and 20 new ones had been established.²⁴ Six centers were opened in Munich.²⁵ In some places, as in Posen for instance, centers were established for the first time.²⁶ Many of the centers were entirely municipal. In Berlin, by 1918, 9 centers were operated by the city; in Cologne, 13; in Leipzig, 6.²⁷ The budget of the Prussian ministry of the interior for 1919 makes specific provisions for the aid of welfare centers.²⁸ The bill of May 30, 1918, regulating welfare work in Saxony, provides for the establishment of centers in charge of physicians "receiving an adequate salary."²⁹

²³ *Zeitschrift für Säuglingsschutz*, February, 1915, p. 43.

²⁴ *Zeitschrift für Säuglingsschutz und Jugendfürsorge*, May-June, 1915, p. 209.

²⁵ *Blätter für Säuglingsfürsorge*, June, 1915, p. 254.

²⁶ *Öffentliche Gesundheitspflege*, vol. 3, No. 8, August, 1918, p. 260.

²⁷ Great Britain, Local Government Board, Intelligence Department, "Infant Welfare in Germany during the War," 1918, p. 13.

²⁸ *Zeitschrift für Kinderschutz und Jugendfürsorge*, August-September, 1918, p. 227.

²⁹ *Ibid.*, p. 234.

Some cities show an increase in the number of children receiving care at the centers. Neuköln, for example, is said to have cared for 66 per cent of all the children born alive in that city in 1916-17 as compared with 38.1 per cent in 1913-14.³⁰ Many places, however, speak of the decrease in attendance, and this was thought to be due, as in other countries, to the low birth rate. In general, workers found that in order to secure a regular attendance it was necessary to give premiums for breast feeding. The work in Hesse is said to have suffered greatly because of the unwillingness of the Hessian authorities to put this custom into practice.³¹

The work of the center was extended in a variety of ways. Many centers opened clinics for the examination of pregnant women, and a large number extended their care to the child of preschool age. In Berlin, it is said, nine new centers for children from 1 to 6 years old were functioning.³² In some cases, especially when the centers were under municipal control, they were charged with the distribution of ration cards for young children and for nursing and expectant mothers. The centers in Munich served as depots for supplies of food intended especially for children. The greater part of the milk for babies and mothers was given out or sold through the welfare stations. Even before the war milk kitchens were commonly a part of the welfare center; during the war almost no center was without one.

A decrease in attendance at milk stations, however, noted by the end of 1915, was thought by some to be due to the work of the centers in teaching the importance of breast feeding.³³ In this connection, the work of home visitors in carrying to the mothers advice and instruction as to breast feeding is said to have been invaluable.

An extension of home visiting seems to have taken place during the war, though some centers reported an interruption in the visiting due to the scarcity of workers. A number of towns, for example, Strassburg,³⁴ which before the war had made provision only for children born out of wedlock and orphans, extended the visiting to include all children and in some cases pregnant women. Munich in the fall of 1914 doubled the number of its visitors.³⁵ Supervision of boarded-out children was in some communities transferred from the police and public health authorities to the home visitors connected with a center. Trained public home visitors to work with private agencies were provided for in Saxony by the infant-welfare law (May 30, 1918). In many German towns trained workers visited infants born out of wedlock, in connection with the public guardianship system, whereas volunteers visited the other children.

³⁰ Vorwärts, Jan. 5, 1918.

³¹ Zeitschrift für Säuglingsschutz, May-June, 1915, p. 209.

³² Vorwärts, Aug. 2, 1917.

³³ Blätter für Säuglingsfürsorge, June, 1915, p. 282.

³⁴ Öffentliche Gesundheitspflege, vol. 3, No. 10, Oct. 19, 1918, p. 350.

³⁵ Blätter für Säuglingsfürsorge, June, 1915, p. 297.

TRAINING OF WORKERS.

The rapid extension of the work created a demand for workers difficult to meet. In practically all large cities, short courses in infant care were introduced, usually under municipal direction, for the training of both paid and volunteer workers. The instruction in most cases lasted only a few weeks; for example, in Frankfort on the Main in October, 1917, a 10-day course was given.³⁶

In Bavaria, at the request of the minister of the interior, infant asylums and other institutions gave brief courses in infant care to midwives, rural nurses, public-health visitors, and other persons qualified to enter infant-welfare work. Half the expense of board and tuition was defrayed by State funds.³⁷ The Prussian Government in the spring of 1917 instituted an examination for infant-welfare workers, following a year's course of training prescribed by the minister of the interior. Infant-welfare workers who previous to the publication of these regulations had satisfactorily completed five years of practical work were not required to take the examination.³⁸ The Empress Augusta Victoria House trained a few workers. In the year 1915-16 it accommodated 60 students. The number of applicants for training was 1,228.³⁹

PRENATAL CARE.

Prenatal care has not been well developed in Germany. In addition to the examinations and advice offered to expectant mothers attending centers, however, certain other types of prematernity welfare were engaged in here and there. Various women's societies, for example, cooperating in some cases, as in Magdeburg, with city authorities, provided hospital accommodation for sick pregnant women. Homes for pregnant women were opened in a few cities by private societies, such as the Deutscher Bund für Mutterschutz (German association for the protection of mothers), and in these homes the mother was trained in housekeeping, manual work, and the care of the infant. In rare cases, it was stated, such homes were subsidized by the municipality.⁴⁰ Private agencies also gave various forms of assistance, including the services of a midwife, to expectant mothers.⁴¹

In some places, as in Berlin, through the women's patriotic society, the expectant mother was given a money benefit during the last months of pregnancy. Throughout the war influential bodies, official and private, recommended or petitioned the extension of the

³⁶ Concordia, Aug. 15, 1917, p. 219.

³⁷ Das Österreichische Sanitätswesen, Feb. 25, 1915, pp. 239-241.

³⁸ Archiv für Frauenarbeit, September, 1917, pp. 160-164.

³⁹ Zeitschrift für Kinderschutz und Jugendfürsorge, July, 1917, p. 182.

⁴⁰ Die neue Generation, September, 1915, p. 316; Concordia, July 15, 1918, p. 166.

⁴¹ Zeitschrift für Säuglingsschutz, January, 1915, p. 23.

preconfinement rest period, with a corresponding extension of the pregnancy relief granted in accordance with the maternity insurance law.⁴²

MIDWIFERY PRACTICE.

Before the war the German industrial code provided that midwives might not practice without a certificate. Most of the other regulations concerning midwifery were made by the individual States.⁴³ Instruction was given in special schools connected with the universities or with lying-in homes. On November 6, 1917, the Federal council of Germany prescribed regulations for the training and practice of midwives throughout the Empire. According to these regulations, only women between 20 and 30 years old, after evidence of good character has been presented and an examination in elementary school subjects passed, should be admitted to the courses; the courses should last at least nine months (six months had been the average length of training before the war); instruction should include practical as well as theoretical work and should be completed by oral and written examinations; repetition tests should be held at least every two years, and continuation courses for those who fail twice in the repetition course should be provided; to all other midwives a continuation course should be given every 10 years; all midwives should be placed under the constant supervision of a public-health physician.⁴⁴

On April 18, 1919, a bill modeled on these standards was introduced into the Prussian House of Representatives. In addition to the regulations mentioned above it provided for the employment of midwives in sparsely populated districts, where midwives were scarce, by public authorities. Here, according to the bill, they were to be paid a salary.⁴⁵ This bill had not become a law by the autumn of 1918. There was some agitation also for the creation of salaried midwives throughout the country, partly because only in case a midwife were assured a salary would she be likely to favor the removal of a patient to a hospital, no matter how unsuitable for confinement home conditions might be.⁴⁶

Early in the war (June 17, 1915) Berlin instituted repetition tests and continuation courses for midwives.⁴⁷ Some cities supplied free midwifery service, especially for the wives of soldiers.

⁴² Sozialistische Monatshefte, Oct. 31, 1917, p. 1130; Die neue Generation, September, 1915, p. 316. Possibly as a result of these petitions a new law providing much more generous maternity benefits was enacted on Sept. 26, 1919.

⁴³ H. J. Meyer: Konversations-Lexikon, vol. 9, "Hebamme," p. 21.

⁴⁴ Archiv für Frauenarbeit, June-September, 1918, pp. 104-108.

⁴⁵ Deutsche Medizinische Wochenschrift, June 20, 1918, p. 693.

⁴⁶ Vorwärts, May 16, 1918.

⁴⁷ Das Österreichische Sanitätswesen, Aug. 5-12, 1915, p. 1041.

LYING-IN ACCOMMODATIONS.

Outside the great cities, lying-in accommodations were generally considered unsatisfactory. On May 18, 1915, the Prussian minister of the interior issued⁴⁸ to the provincial authorities a circular in which he stated that admission to the maternity ward of hospitals might not be refused because of alleged lack of room to a needy woman about to be confined, unless another place could be found by the institution and a physician or midwife in the institution declared after examination that labor was not imminent and that further travel would not harm the mother. The circular recommended the reservation in lying-in homes of several beds for needy women. Dr. Brennecke, a Magdeburg physician, who for many years had been working for reforms in midwifery practice, urged the establishment of numerous public lying-in homes, "purely in the interests of public health, so that even the poorest mothers and children could benefit by the blessings of antisepsis and the most advanced obstetrical science." These, he thought, might become the center of the maternity work of a district.⁴⁹

SPECIAL FOOD REGULATIONS.

As milk became more and more scarce, steps were taken by various municipalities to insure fair distribution of the supply. Some towns bought or hired cows, reserving the milk for infants and young children. Such action was taken in March, 1917, by Frankfort on the Main.⁴⁹ Municipal milk depots, with which dealers cooperated through the holding of shares, were started early in the war in some cities, among them Mannheim, Strassburg, and Cologne.⁵⁰ In some places grants were made to owners of dairy farms, providing they supplied the town with a certain quantity of milk. Almost all cities made some arrangements for supplying first the needs of mothers and little children.

A Federal order of November 11, 1915, required the larger towns and enabled the smaller ones to control the milk supply and to give preferential treatment to nursing and expectant mothers and young children. The imperial fat control office fixed (Oct. 3, 1916) the quantity to be allowed each class of persons and restricted the use of full cream milk to children, invalids, nursing mothers, and pregnant women during the last three months before confinement. On November 3, 1917, earlier regulations went out of force. The new Federal order of that date restricted the use of unskimmed milk by sick persons to

⁴⁸ Vorwärts, May 16, 1915.

⁴⁹ Das Österreichische Sanitätswesen, No. 24-28, June 17 to July 15, 1915, p. 883.

⁵⁰ Zeitschrift für Kinderschutz und Jugendfürsorge, April, 1918, p. 97.

⁵¹ Great Britain, Local Government Board, Intelligence Department. *Infant Welfare in Germany during the War*, pp. 35-36.

those who could present a certificate from a public-health official but continued to allow it as before to all children under 6, nursing mothers, and pregnant women.

Special regulations in favor of mothers and babies were made with regard to foodstuffs other than milk. Many towns took steps to secure additional rations for mothers and little children. Where necessary the ration of other persons was cut down to furnish the extra supply to mothers. Imperial action followed municipal measures. On October 4, 1916, an order of the imperial fat control office prescribed the minimum food allowance for artificially fed infants or for the nursing mother. On May 25, 1917, the war food board issued instructions to local authorities on the nourishment of expectant mothers, infants, and children. Again, on January 7, 1918, the war food board pointed out the significance of sufficient nutrition for these classes of the population and fixed minimum rations. But the ability of the municipal authorities to carry out the Government regulations was conditioned upon the amount of food which they could get, and this differed in different places.

EXTENSION OF WORK TO RURAL DISTRICTS.

Considerable attention was directed to the ways and means of reaching mothers and babies in the country, where it was considered to be a more difficult problem than in cities.

The State infant-welfare association in Bavaria, for instance, received from the State commission for the care of soldiers' families the sum of 20,000 marks to be spent on infant-welfare work among the dependents of soldiers, on the condition that the money be spent only in communities with a population of less than 50,000.⁵¹ In Wurttemberg, too, the State committee for the protection of infants and young children opened summer day nurseries and summer kindergartens in rural districts. It also appointed infant nurses for these districts and sent out trained lecturers to speak on infant care all through the country. The plan was financed partly by contributions from private sources, especially from large industrial and commercial companies, and partly by funds from the committee.⁵² The new Prussian midwives' bill (1918) proposes to guarantee midwifery service for scattered populations by its provision for the payment of rural midwives from State funds. The advocates of children's bureaus considered the reaching of rural districts one of the chief advantages of their scheme.

Local efforts were made to reach rural families. Late in the war, for example, a few cities endeavored to extend their work, especially the visiting of infants, to the surrounding country. Chemnitz was

⁵¹ *Blätter für Säuglingsfürsorge*, October, 1915, p. 16.

⁵² *Zeitschrift für Kinderschutz und Jugendfürsorge*, April, 1918, p. 107.

one of these towns. The little town of Benneckenstein, it is said, appointed after the beginning of the war three women welfare workers, provided free medical treatment and free milk for a large number of children, and organized a course of lectures on infant care by the public-health physician.⁵³ Doctors were instructed in some localities to give advice and leaflets on baby hygiene to mothers when they brought their infants for compulsory vaccination. In other places the midwife continued to visit the infants among her cases and to report on their progress to the district health authority, receiving a small fee for each case.

EDUCATION OF MOTHERS AND YOUNG GIRLS IN INFANT CARE.

"To train the mother and especially the mother in the country is the chief work of the infant-welfare movement," said a German writer in discussing instruction in infant care in girls' schools.⁵⁴ Such training through lectures, demonstrations, and courses continued throughout the war in the face of some difficulties. The welfare center seems in general not to have carried on the educational work characteristic of the school for mothers in Great Britain. This more formal type of instruction was generally left to local public-health bodies. In Leipzig, for instance, in 1915, the association for public hygiene organized a series of four-week courses in infant welfare⁵⁵ for mothers. In Stuttgart a school for mothers was opened in connection with a home for children, and practical work was combined with lectures.⁵⁶ Similar courses were given in a number of other towns.

The Empress Augusta Victoria House continued to publish its free pamphlets and leaflets. One issued in November, 1915, dealt exhaustively with the care of pregnant women and women after confinement.⁵⁷ Another, issued in 1918, described in detail the methods of care, not only of infants, but also of children up to the age of 6 years.⁵⁸ In the summer of 1918 the Empress Augusta Victoria House brought out an atlas of infant hygiene.⁵⁹ The atlas was an attempt to reproduce for the benefit of a more extended public the traveling exhibits which the Empress Augusta Victoria House had been giving in many parts of the country. The articles and pictures making up the exhibit were reproduced and 100 charts giving the most important points in the hygiene of the baby and the small child were included.

In both large and small cities attempts were made to place in the public-school curriculum more satisfactory instruction in child care.

⁵³ Vorwärts, Dec. 18, 1917.

⁵⁴ Blätter für Säuglingsfürsorge, November, 1915, p. 34.

⁵⁵ Zeitschrift für Säuglingsfürsorge, July, 1915, p. 271.

⁵⁶ Blätter für Säuglings- und Kleinkinderfürsorge, October, 1918, p. 26.

⁵⁷ Blätter für Säuglingsfürsorge November, 1915, p. 58.

⁵⁸ Zeitschrift für Kinderschutz und Jugendfürsorge, October, 1918, p. 254.

⁵⁹ Vorwärts, July 18, 1918.

Such courses were usually practical as well as theoretical and included visits to day nurseries and infants' homes. In some places the courses were given by the regular teachers of household subjects; in others, as in Berlin, the teachers were trained for the work in infant institutions.⁶⁰ In Kassel each girl upon graduation was given an "infant primer" embodying the principles learned in the compulsory course in infant hygiene.⁶¹ Dr. von Behr Pinnow strongly advocated courses in continuation schools to teach girls whatever is necessary for successful motherhood.⁶²

PUBLIC FINANCIAL ASSISTANCE.

Separation allowances.

The increased cost of living combined with widespread unemployment during the first months of the war made for serious economic distress. With a large proportion of fathers serving in the army, women were obliged to cope single-handed with the difficulty of supporting young children in the face of the soaring cost of the necessities of life.

Separation allowances made by the Government to the families of soldiers were very small. The law of August 4, 1914, granted to a soldier's wife 9 marks a month in the summer months and 12 marks a month during the winter. Each child received in accordance with this law 6 marks a month throughout the year.

As the war continued the amounts of the allowances were increased. By November, 1918 (order of Federal council, Sept. 28, 1918), they had reached 30 marks for the mother and 20 marks for each child per month, although local administrative agencies were requested to raise the amounts for their communities by local appropriation. These allowances, small though they were, were not given without question to the wife and children of every soldier. Necessity had to be proved, though instructions were given to interpret liberally this clause of the law. The receipt of maternity benefit by reason of membership in a sickness insurance society did not exclude the woman from sharing in the separation allowance.

In spite of increases in the allowances, however, and an extension of them, wherever possible, they remained inadequate for the need. Particular communities undertook to supplement the assistance thus extended to families of soldiers. As early as 1914, 67 communities of over 25,000 inhabitants provided relief out of their own funds,⁶³ thus increasing the Government allowance; others like Berlin-Schoneberg took special measures, usually in the form of bonuses to families with children.⁶⁴

⁶⁰ *Zeitschrift für Kinderforschung*, November-December, 1917, p. 91.

⁶¹ *Zeitschrift für Kinderschutz und Jugendfürsorge*, March, 1918, p. 70.

⁶² *Deutsche Medizinische Wochenschrift*, June 13, 1915, p. 683.

⁶³ *Zeitschrift für Säuglingsschutz*, May-June, 1915, p. 194.

⁶⁴ *Zeitschrift für Kinderschutz und Jugendfürsorge*, April, 1918, p. 107.

Imperial maternity benefits.

With the outbreak of the war it was feared that the funds of the sickness insurance societies would be so affected that it would be necessary to limit the scope of the payments. Accordingly, by an imperial emergency law (Aug. 4, 1914), the payments of the insurance societies in respect to confinement were limited to the compulsory maternity benefits provided by law, while all additional benefits introduced by the individual funds were ordered suspended during the war. Benefits and medical attendance during pregnancy, and all breast-feeding allowances, were thus cut off, and the women received only the money allowance at confinement. In a short time, however, it became apparent that the societies were not so hard hit as had been at first feared, so that they could be permitted to continue with at least a part of their work.

But the sickness societies generally covered only self-insured women, and as these formed only a very small proportion of the women in need of aid, it was soon perceived that the wives of soldiers at least, whether themselves insured or not, must be reached.

The imperial grants were instituted by a Federal order, December 3, 1914. In detail the grants covered—

- (1) A single grant of 25 marks to cover the expense of childbirth.
- (2) A pregnancy grant of 10 marks for midwife's or doctor's services, if such are necessitated by pregnancy complications.
- (3) A maternity grant of 1 mark a day, including Sundays and holidays, for 8 weeks, at least 6 of which must be after the confinement.
- (4) A nursing grant of 50 pfennigs daily for a maximum of 12 weeks, if the mother nurses the child herself.

Medical attendance and medicines might be substituted, if the woman were willing, for the money grants during pregnancy and at confinement.

The administration of the grants was intrusted to the local sickness insurance society to which the woman or her husband belonged. The women eligible for the benefits were the wives of insured soldiers, whether they themselves were insured or not. Other women insured in their own right were to receive from the funds of the sickness societies all the above benefits, except the eight weeks' maternity grant. A Federal order of June 6, 1917, raised the maternity grant from 1 mark to 1.50 marks a day. By an order of the imperial council November 22, 1917, the individual societies were for the first time allowed to grant maternity benefit in higher amounts than sick benefit.

Various extensions to the first order were made as the war went on (Jan. 28, 1915; Apr. 23, 1915; July 6, 1917). The grants finally covered, in addition to the original classes, the wives of seamen and agricultural workers and of all Government workers, or wives who

were themselves employed in Government work; soldiers' wives of small means whose husbands were not insured; all soldiers' wives receiving separation allowances; and the unmarried mothers of soldiers' children. The cost of grants when neither the husband nor the wife had been insured was defrayed entirely out of the imperial treasury; in the case of insured persons not soldiers or in the Government service the expense was borne by the sickness societies; in other cases the cost was divided between the two. About 2,000,000 marks a month was expended by the imperial treasury during the first 15 months of the administration of the orders.⁶⁵

The local sickness societies were charged with the administration of the grants. Some paid directly to the mother, others to the midwife in attendance. In most cases the presentation of a birth certificate was required before payment. Some sickness funds made pregnancy grants after the delivery.

Supervision over breast feeding, which was necessary to establish the fact of nursing when claim was made for the daily nursing grant, was in many instances felt to be inadequate. The mere word of the midwife or even of the mother was often accepted in place of proof. It was found, too, that as soon as the 12 weeks were over the majority of mothers immediately stopped nursing their babies. Experience showed that where no supervision was exercised over the mothers receiving the benefit the grants for breast feeding frequently failed in their object to provide better food and care for the mother. The expectations of those welfare workers who had believed that the imperial grants would practically abolish artificial feeding were not fulfilled.

Welfare centers, on the other hand, complained of a falling off in attendance, due in part, they believed, to the imperial grants. When they themselves had given aid in money or kind they had been able to exact attendance as a condition of receiving such aid. There was a general demand for the centers to take over the administration of the grants for breast feeding. The Imperial Government, while it was not prepared to make the payment of grants conditional upon attendance at a center, suggested⁶⁶ through the ministry of commerce that the welfare stations offer a premium of their own after the expiration of the three-month period, basing it upon attendance at the center throughout the whole time. It also suggested that the sickness societies should refer the mothers to the welfare stations for help and advice and should notify each station of the mothers in its district to whom nursing premiums were being paid.

This solution of the difficulty was finally settled upon in a number of places, and the center continued the Government nursing grants out of private or municipal funds and in some cases paid nursing

⁶⁵ Denkschrift über Wirtschaftliche Massnahmen aus Anlass des Krieges, No. 225, Mar. 12, 1916, p. 112.

⁶⁶ Zeitschrift für Säuglingsschutz, February, 1915, p. 67.

premiums and maternity benefits to mothers who were not eligible for any imperial grant. Cooperation between sickness societies and welfare centers seems to have been general, especially in towns where the infant-welfare work was already well organized and assisted by the municipality. In Berlin,⁶⁷ for example, when the nursing mother claimed her grant she was referred to the welfare station in her precinct and every week received from it the doctor's certificate that she was still nursing, upon presentation of which she received the nursing premium.

The sickness societies made efforts to cooperate with other branches of infant-welfare work. When they decided to introduce welfare measures for the children of insured persons, they thought it best, in order to avoid duplication, not to establish separate welfare centers nor to engage their own physicians and welfare workers, but to utilize the agencies already existing and refund to them money expended in the care of the children of insured mothers.⁶⁸ Insurance institutes^{68a} made agreements with maternity homes to receive mothers who preferred to go to them rather than to accept the cash benefit. They arranged for household helpers for the mother after confinement. They appropriated money for the training of welfare workers. In some places, as in Hamburg, they appointed visitors, generally midwives, to certify that the mother was breast feeding her child and to advise the mother at regular intervals.⁶⁹

It was found that, in general, where the imperial grants were made without the oversight of any infant-welfare agency, the number of breast-fed infants did not increase, and the death rate among soldiers' infants remained practically stationary. This happened in Danzig. When, however, an infant-welfare association was started there and had been working over a year in cooperation with the sickness societies, an increase of from 40 to 60 per cent was noted in the number of breast-fed infants, and the death rate among legitimate infants fell in, 1916, 50 points as compared with the rate for the preceding year.⁷⁰ Most workers agreed with the director of the general local sick fund of Berlin that "the custom of bringing the mother and child under proper supervision and of furnishing them the advice of the infant-welfare station had apparently contributed to the favorable results * * * not less than the fact of nursing."⁷¹

In general there was a striking increase in breast feeding among children registered at the centers. It was found that very few mothers, given suitable advice and care, were unable to nurse their infants. According to investigations conducted by sickness societies in many

⁶⁷ *Zeitschrift für Säuglingsschutz*, February, 1915, p. 82.

⁶⁸ *Zeitschrift für Kinderschutz und Jugendfürsorge*, February, 1918, pp. 38-39.

^{68a} Organizations providing old-age and invalidity insurance.

⁶⁹ *Zeitschrift für Kinderschutz und Jugendfürsorge*, July, 1918, pp. 192-193.

⁷⁰ Great Britain, Local Government Board, Intelligence Department. *Infant Welfare in Germany during the War*, 1918, p. 19.

⁷¹ *Vorwärts*, Jan. 1, 1918.

different parts of the Empire in 1915, 1916, and 1917, the proportion of women receiving maternity benefit who nursed their infants at least for a time was in some places from about 85 to 90 per cent; and somewhat over half of these continued to nurse beyond the three-month period covered by the imperial maternity grants.⁷² In five urban districts in Baden, for which figures for 1911 are compared with those for 1915, the increase in the number of nursing mothers was from 85.4 per cent to 91.9 per cent.⁷³ Even in districts where breast feeding had been practically abandoned, as in Bavaria, there was a noticeable return to it in 1915 and 1916. As late as June, 1918, the condition of infants' health was said by the imperial health office to be satisfactory, due, it was believed, to the greater frequency of breast feeding.⁷⁴ So strong was the testimony as to the excellent effect of the grants on breast feeding that there was a very general demand for their continuance after the war.

In many cases where breast feeding ceased as soon as the Government grants were no longer available, it was found that the mother had weaned her child in order to go to work, for the demand for woman's labor and the pressure of need grew greater as the war continued.

PROTECTION OF MOTHERS IN INDUSTRY.

Between July, 1914, and July, 1918, the numbers of compulsorily insured women in the 5,135 sickness insurance funds for which reports were available rose from 3,519,871 to 4,600,651.⁷⁵ These figures applied only to about three-fifths of the persons employed in Germany, in the first place because not all employed persons were included in the sick funds (though a majority of them were), and, secondly, because not all the sick funds had reported. The numbers are, however, indicative of the actual increase. The increase of women in industrial work alone was about three-quarters of a million.

By an emergency law passed on August 4, 1914, the chancellor was given power to set aside the factory laws and regulations in force for the well-being of women, young people, and children, and women were employed on long shifts and in overtime and night work "to an extent never known before."⁷⁶ On June 20, 1918, the *Soziale Praxis* gave figures, taken from the Prussian factory inspection report for 1917, showing the extent of the exceptions to the legal limitation of the working time of young persons and women. The figures show an extensive transgression of the labor-code regulations. In 1913, for instance, overtime work for women amounted to 2,142,000 hours, while in 1917 it reached 15,093,000 hours—more than seven times as many, although the number of industrial workers had not doubled.⁷⁶

⁷² *Vorwärts*, Dec. 25, 1917 (quoting a memorandum by Dr. A. Fischer pub. in *Sozialhygienische Mitteilungen für Baden*, October, 1917); *Vorwärts*, Jan. 1, 1918; *Soziale Praxis*, Nov. 21, 1918, col. 128.

⁷³ *Vorwärts*, Dec. 25, 1917.

⁷⁴ *Soziale Praxis*, June 20, 1918, col. 589.

⁷⁵ *Reichsarbeitsblatt*, January, 1919, p. 72.

⁷⁶ *Soziale Praxis*, June 20, 1918, col. 585.

Special Government measures were taken for the protection of women night workers, and in a circular of January 8, 1918, the chancellor made recommendations to the governments of the Federal States on the working time of women, advising consideration for women and girls in shifts and overtime work.⁷⁷ In that circular it was explicitly stated that "pregnant and nursing women must not be employed on night or overtime work. The rest period of eight weeks before and after confinement must be observed under all circumstances."

Welfare supervisors were recommended at first in all establishments where women were employed to advise the women workers in all matters pertaining to health, housing, and the care of children. Early in 1917 the appointment of a woman welfare worker was made obligatory by the war office. At the order of the military authorities two schools for women gave a course of several weeks' duration to women about to take up factory welfare work,⁷⁸ and this example was followed by the establishment of special courses in many cities. By November 1, 1917, 500 women welfare workers, of whom 325 were specially trained, were engaged by 525 establishments having half a million women workers.⁷⁹

Agitation to reinstate the old standards for women workers was widespread. Such bodies as the Reichstag committee on population, the Greater Berlin war committee, and the trade-unions urged protective measures for women workers. But the emergency law of August 4, 1914, was not repealed until after the war.

ESTABLISHMENT OF DAY NURSERIES AND NURSING ROOMS.

Soon after the outbreak of the war, a number of day nurseries, often, it was said, improperly equipped and in unsuitable places, had been opened, as a result of the prevailing opinion that women would enter industry in large numbers.⁸⁰ This was not found to be the case, however, early in the war, and many of the nurseries were soon closed.

Later, as the number of employed mothers increased and it became more difficult to obtain women to mind the children, day nurseries came rapidly into existence. Private child-welfare organizations and crèche associations were active in this work, but a good many nurseries were opened also by municipal authorities. Efforts were made especially in the case of municipal crèches to make them a part of the general plan of infant-welfare work. As the German nursery did not accept children over 3 or 4 years of age many day centers were opened for the older child of preschool age as well as for school children.

In 1915 the Deutscher Ausschuss für Kleinkinderfürsorge (imperial committee for the care of small children), a private society, was organized for the purpose of consolidating all activities for the

⁷⁷ Reichsarbeitsblatt, Mar. 25, 1918, p. 217.

⁷⁸ Concordia, Mar. 15, 1917, p. 84.

⁷⁹ Soziale Praxis, Aug. 29, 1918, col. 746.

⁸⁰ Zeitschrift für Säuglingsschutz, May-June, 1915, p. 212.

welfare of children from 1 to 5 years of age. This committee published several pamphlets, among which were "Educational Problems of the Kindergartens during the War," "Plans for War-time Day Nurseries," and "Care of the Health of Small Children during the War."⁸¹

Early in 1917 the society combined with the imperial association for the care of infants, the imperial nursery association (Deutscher Krippenverband), and the union of German day nurseries (Verband Deutscher Kinderhorte) to work out a plan for the carrying out of various measures for the care of young children. They submitted plans of work to the committee on woman's work, connected with the war office and formed in 1917, and agreed to supply the main office with the names of persons qualified to undertake the local organization of the work. When the war office established its committee on woman's work it pointed out that besides measures to increase the efficiency of the women action must also be taken for the welfare of the women's families. The committee, realizing that the efficiency and willingness to work of the women employed in the war industries depended on the care which their children received, made every effort to stimulate activity on behalf of children left without their mother's care.⁸²

The imperial committee for the care of small children also initiated an investigation into the extent and nature of the problem of caring for the children of working mothers. A partial investigation in Frankfort on the Main (December, 1916), covering two munition factories, the post office, the railroads, and the street car lines, disclosed the fact that large numbers of children were entirely neglected while their mothers were at work.⁸²

As the war continued committees were formed in a number of German cities to organize welfare work for these children.

The Greater Berlin war committee for the protection of uncared-for children, for instance, gave advice and financial aid to various child-welfare organizations interested in establishing nurseries, kindergartens, day centers, and infants' homes.⁸³ In one year (1917-18) they helped to establish 21 institutions of this kind and aided in extending 24 already in existence. For this purpose they spent 115,500 marks, the greater part of which came from city funds.⁸⁴ Dusseldorf, an industrial center, by the summer of 1918 had opened over 100 nurseries and centers for children.⁸⁵

In order to accommodate women who were working on night shifts many of the nurseries kept children both day and night.

⁸¹ Deutscher Reichsanzeiger, Aug. 23, 1917.

⁸² Concordia, Mar. 15, 1917, p. 85.

⁸³ Internationale Korrespondenz, Mar. 8, 1918.

⁸⁴ Vorwärts, Feb. 7, 1918.

⁸⁵ Öffentliche Gesundheitspflege, vol. 3, July, 1918, p. 230.

Some nurseries took care of more children than was considered advisable, 80 or 90 children in one nursery being not uncommon. Dr. Rott, in August, 1917, declared that 40 was the maximum number of children that should be received by one nursery. He stated also that not more than 5 or 6 infants, or 8 or 10 young children should be cared for by one person.⁸⁶

As an example of day-nursery standards actually in operation an order issued by the district president in Dusseldorf (Sept. 30, 1917) may be cited. According to this order permission for the opening of a day nursery or day center must be obtained from the police authorities. The plans of the quarters must be submitted, with a statement as to the purpose of the institution and an account of the person in charge and of the head physician. A bathroom and milk kitchen are required as part of the premises. A special observation room must be provided for newly admitted children in order to determine their state of health, and also a special room for children whose condition suddenly becomes such as not to permit their stay in the institution. Sick children must not be admitted and a child taken sick at the nursery must be removed to a hospital. Each nursery must have a physician, preferably a pediatricist, whose duties must be explained in a contract. He must examine each child applying for admission, and all children at least twice a week; he must also take the necessary measures in case of sickness. In each institution there must be for every 20 children one infant-welfare worker, holding a State diploma for infant-welfare work. Records of all the children must be kept. Nurseries must have no connection with the rooms occupied by the centers for older children.

A few nurseries in industrial cities, chiefly municipal ones, set aside a room to which the factory mother might come and breast feed her child. Many infant-welfare workers recommended the passage of a Government regulation to establish nursing rooms in factories and to compel the employer to permit nursing periods without loss of pay to the women. This was not done, however. The war office urged individual employers to take action of this kind, but comparatively few either established nurseries in their own factory or contributed toward the establishment and support of a neighborhood nursery.

The imperial war office appropriated money toward the salaries of superintendents of crèches opened for women in war industries.⁸⁷ It also permitted grants given to the States for expenditure on war relief to be spent, among other infant-welfare arrangements, on crèches if they were established as a necessity of war.⁸⁸ The various States themselves contributed toward the support of crèches estab-

⁸⁶ *Zeitschrift für Säuglings- und Kleinkinderschutz*, July-August, 1917, pp. 396 and 399.

⁸⁷ Great Britain, Local Government Board, Intelligence Department, *Infant Welfare in Germany during the War*, 1918, pp. 20-21.

⁸⁸ *Deutsches Reich, Massnahmen aus Anlass des Krieges*, No. 44, p. 32.

lished for women employed in State workshops. A part of State funds appropriated for infant-welfare work was available for nurseries. Municipal funds, private gifts, especially from insurance societies,⁸⁹ and the small charges which the mothers themselves paid also furnished financial support.

INFANT MORTALITY RATES.

For 20 years or so there has been a decline, slow but steady, in the infant mortality rate for the German Empire. In 1912, the lowest infant mortality rate ever recorded in Germany was achieved (147 per 1,000 live births). This rose again slightly in 1913 (151 per 1,000 live births.)⁹⁰ During the months immediately following the outbreak of the war there was an abnormal increase in infant mortality, which, it is generally believed, was due chiefly to the economic disturbances that marked the opening weeks of the war, especially the unemployment crisis. Mental stress of the mother is also mentioned as partly responsible for the great number of infant deaths. When the mother was well enough off to buy food for her child she was frequently too excited and restless during that period of uncertainty to give it the necessary attention. The 1914 rate was 13 points higher than the rate for the year immediately preceding the war; 1915 and 1916, however, brought a notable decrease in the infant mortality rate, which though it rose again in 1917 remained lower than for any prewar year.

Table XVII gives the rates in periods since 1892 for the German Empire as a whole, and for Prussia, Bavaria, Saxony, and Wurttemberg. The war years, so far as they are available, are given separately.

TABLE XVII.—*Number of deaths under 1 year per 1,000 live births.*^a

Period.	German Empire.	Prussia.	Bavaria.	Saxony.	Wurttemberg.
1891-1895.....	222.1	205.1	272.8	280.8	254.9
1896-1900.....	212.5	201.3	257.2	265.3	233.9
1901-1905.....	199.1	189.7	240.4	245.7	216.8
1906-1910.....	174.2	167.9	216.6	197.7	182.0
1911-1913.....	163.5	161.2	194.2	180.8	156.5
1914 ^b	164	164	193	171	145
1915 ^b	154	153	194	147	145
1916 ^b	136	134	175	200	134
1917 ^b	155	153	186	153	148
1918 ^b.....	.....	148	203	.....	.....

^a For 1891-1901, the statistics do not cover the whole German Empire; a few of the smaller States were omitted in the sources. The rates given were calculated from the number of live births and infant deaths given in the following sources: Statistik des Deutschen Reichs, vol. 256, pp. 40* and 43*; Statistisches Jahrbuch für das Deutsche Reich, 1913, p. 20; 1914, pp. 20 and 33; 1915, pp. 24, 26, and 40; 1916, p. 10. Medizinal-Statistische Mitteilungen aus dem Kaiserlichen Gesundheitsamte, vol. 2, 1895, p. 238; vol. 3, 1896, p. 182; vol. 4, 1897, p. 66*; vol. 5, 1898, pp. 2* and 64*; vol. 6, 1901, pp. 106* and 198*; vol. 7, 1903, p. 2*; vol. 8, 1904, pp. 2* and 68*. Sonderabdruck aus den Medizinal-Statistischen Mitteilungen aus dem Kaiserlichen Gesundheitsamte (no date given) pp. 2*, 64*, 106*, 198*.

^b Preliminary figures. Sonderbeilage zu den Veröffentlichungen des Reichsgesundheitsamtes, Feb. 11, 1920, p. 102.

⁸⁹ Vorwärts, Sept. 25, 1917.

⁹⁰ Statistisches Jahrbuch für das Deutsche Reich, 1916, p. 10.

Cities enjoyed in general a more favorable position with respect to infant mortality than did rural areas. The decrease in towns began after the inauguration of infant-welfare measures, and it has been attributed by German writers to that work. A comparison of the rates in Tables XVIII and XIX with those for the entire Empire will show the part played by cities in keeping down the infant mortality rate.

TABLE XVIII.—*Number of deaths under 1 year per 1,000 live births.*¹

Period.	Berlin.	Hamburg.	Leipzig.	Munich.	Dresden.
1891-1895.....	242.5	226.0	240.9	303.3	212.9
1896-1900.....	218.2	181.9	253.7	280.5	204.2
1901-1905.....	202.0	173.4	227.7	236.5	190.7
1906-1910.....	164.6	150.4	173.3	190.4	148.9
1911-1913.....	150.9	133.3	172.6	124.7	132.5
1914.....	156.0	126.0	167.9	147.1	122.4
1915.....	140.7	111.1	132.1	144.7	107.9
1916.....	129.2	118.0	119.2	128.8	103.9
1917.....	157.4	114.9	151.3	141.6	131.2
1918.....	138.1	115.5	130.5	167.9	111.2

¹ Calculated from number of live births and infant deaths given in the following sources: Statistik des Deutschen Reiches, vol. 266, p. 50; Statistisches Jahrbuch für das Deutsche Reich, 1916, p. 10; Statistisches Jahrbuch Deutscher Städte, vol. 10, 1904, pp. 101-102; vol. 15, 1909, pp. 52-53; vol. 16, 1910, pp. 29-30; vol. 17, 1911, pp. 36-39; vol. 18, 1912, pp. 26-29; vol. 19, 1913, pp. 46-49; vol. 20, 1914, pp. 50 and 58; Veröffentlichungen des Kaiserlichen Gesundheitsamtes, vol. 16, pp. 156 and 176; vol. 17, pp. 300 and 494; vol. 18, p. 190; vol. 19, p. 198; vol. 20, pp. 161, 162, 356, 759, and 760; vol. 21, pp. 260 and 440; vol. 22, pp. 364, 440, and 883; vol. 23, pp. 396 and 460; vol. 24, pp. 432, 636, and 794; vol. 26, pp. 302 and 878; vol. 27, pp. 115 and 634; vol. 29, pp. 694 and 1200; vol. 30, pp. 692 and 1001; Statistisches Jahrbuch der Stadt Berlin, 1898, p. 85; 1903, pp. 43, 44, and 92; Hamburger Statistik, vol. 22, p. 73; Statistisches Jahrbuch der Stadt Dresden, 1909, p. 45; Vierteljahrshefte für Statistik des Deutschen Reiches, 1907, Part I, pp. 158 and 165; Statistisches Amt der Stadt München, Mitteilungen, vol. 23, pp. 4-5. Jahrbücher für Nationalökonomie und Statistik, October, 1916, pp. 548-554. Veröffentlichungen des Kaiserlichen Gesundheitsamtes, vol. 36, pp. 1087 ff.; vol. 37, pp. 823 ff.; vol. 38, pp. 747 ff. Öffentliche Gesundheitspflege, Heft. 9, 1919, p. 308. Calculated from number of live births and infant deaths. Veröffentlichungen des Kaiserlichen Gesundheitsamtes, 1914, pp. 754, 757, 1010; 1916, p. 332. Zeitschrift für Bevölkerungspolitik und Säuglingsfürsorge. Band 11, Heft. 1, June, 1919, p. 9.

TABLE XIX.—*Number of deaths under 1 year per 1,000 live births.*¹

Period.	Cities with a population of 15,000 and over.	Year.	Cities with a population of 15,000 and over.
1891-1895.....	231.9	1914.....	155
1896-1900.....	219.8	1915.....	144
1901-1905.....	202.3	1916.....	133
1906-1910.....	169.5	1917.....	143
1911-1913.....	157.3	1918.....	139

¹ Calculated from the number of live births and of infant deaths, Veröffentlichungen des Kaiserlichen Gesundheitsamtes, vol. 20, 1896, p. 354; vol. 25, 1901, p. 368; vol. 36, p. 1096; vol. 37, 1913, pp. 392 and 833; vol. 38, p. 757; and Soziale Praxis, June 20, 1918, col. 589. Sonderbeilage zu den Veröffentlichungen des Reichsgesundheitsamtes, Feb. 11, 1920, p. 102.

Table XX, which gives the rural and urban rates in Prussia, shows how the urban rates led until after 1905. Beginning with 1907 they are smaller each year than the rates for country districts.

TABLE XX.—Number of deaths under 1 year per 1,000 live births.¹

Year.	Prussia.		Year.	Prussia.	
	Urban communities.	Rural.		Urban communities.	Rural.
1903	197.15	192.21	1909	158.52	167.14
1904	192.94	179.44	1910	153.00	160.44
1905	199.15	197.39	1911	187.47	187.89
1906 ² .....	.....	.....	1912	141.62	148.79
1907	166.04	169.97	1913	144.69	153.86
1908	170.33	174.07	1914	160.12	166.95

¹ Prussia, Statistisches Landesamt, *Medizinal-Statistische Nachrichten*, vol. 1, 1909, pp. 324 and 330; vol. 3, 1911, p. 188; vol. 5, 1913-1914, p. 178; vol. 6, 1914-1915, p. 186; and vol. 7, 1915-1916, p. 165.

² Not available.

SUMMARY.

Infant mortality rates in Germany were high, with a slight advantage in favor of rural districts in Prussia, until after 1905, the year in which organized infant-welfare work began to operate chiefly in the larger cities. After that year city rates were generally lower than rural. The rate for the country as a whole was declining slowly before 1905, but during the five-year period 1906-1910 a striking decrease is recorded. During the war the infant-mortality rate, which rose at first, gradually settled down to the prewar level. In some places the rate fell even below that of peace times.

Infant-welfare work in Germany was carefully organized, as far as possible on a national scale, during the first decade of the present century, through the cooperation of local, political, and public-health authorities and private agencies. Money was appropriated for the work by imperial and State governments and by municipalities. In 1909 a national league, the imperial association for the care of infants, was formed, uniting all the State associations, or, where a State organization did not exist, uniting provincial societies. A national institute, the Empress Augusta Victoria House, was erected at Berlin for purposes of investigation, education, and training of workers. Owing to political and social differences existing in different parts of the Empire, the degree of progress made in carrying out plans for infant welfare varied widely. Urban communities were more advanced in this work, as in all other measures for the public health.

The most important activity was the opening of infant-welfare centers. Nearly 800 had been established before 1914. Milk kitchens were usually connected with the centers. Nursing premiums to encourage breast feeding were given at practically all centers. Education of the mother in baby care was carried on by means of lectures, pamphlets, and exhibits. There was little home visiting.

The mother at work was protected by a law (1878) forbidding her to work in factories during three weeks following confinement. The law was amended (1908) to extend the rest period to eight weeks. Maternity benefits, first provided by the insurance law of 1883, were made much more generous in 1911. Day nurseries were numerous and there were a few factory crèches. It was customary for mothers to board out their children, and boarded-out children were subject in most cases to supervision by local authorities. A few States had laws providing for such supervision.

Midwifery practice was regulated by the individual States. National legislation was confined to a few general measures, such as the prohibition of practice without a certificate.

Though the early months of the war witnessed a decrease in the work for mothers and infants, after the first excitement of war had abated the work was taken up with renewed vigor. This revival was due in part to the stimulus of the leaders in infant-welfare activity, who protested against the withdrawal of doctors and nurses from child-welfare work for war service and against the conversion of infants' homes and clinics into military hospitals. Their criticism received especial significance in the sudden and alarming rise in the death rate among babies during the first months of the war.

The great expansion in the work generally took the form of the establishment of new infant-welfare centers. Not only did the centers increase in number in almost every city and town, but their work also was greatly extended. Some centers were opened solely for the use of children above the age of infancy. A number of infant-welfare associations made a special point of looking after the child from 1 to 5, the food conditions rendering the needs of the older children especially prominent. In spite of efforts to increase the work for expectant mothers, and in spite of some progress in prenatal work, that phase of the struggle against infant mortality remained somewhat undeveloped. The most characteristic work of the German infant consultation centered around the matter of nutrition. Practically every center distributed milk, in many cases free of charge. In many cities the centers took over practically all the work connected with special government provisions for food for mothers and children. In some places no food could be bought for small children except through the welfare stations. The centers, almost without exception, paid nursing premiums to encourage breast feeding. Where this had been done before the war, as in many places, every effort was made, despite a shrinking in funds, to increase the allowances and to extend them over a longer period.

The imperial maternity grants for confinement and breast feeding, declared throughout Germany by such a leader as Dr. Rott, of the Empress Augusta Victoria House, as "undoubtedly the most important

social act of the war,"⁹¹ were generally found to be of doubtful value, unless they were administered in cooperation with the infant-welfare centers. The advice of trained welfare workers was found to be as indispensable to the success of breast feeding as the economic assistance made possible by the grants. Generally some agreement was entered into between the welfare centers and the sickness societies whereby a greater measure of success was obtained than was the case when the sickness societies worked alone.

Some sickness societies and insurance institutes undertook special work of their own among mothers and babies, probably as a result of the imperial maternity grants. They appointed visitors, generally midwives, to advise the mothers in their homes, and in some cases they furnished domestic assistance during the lying-in period. They also made arrangements with hospitals and maternity homes to receive cases in which they had an interest, and in which assistance in kind was substituted for a part of the money benefit or supplemented it.

In some places attempts were made to extend the work to rural districts. That a great deal remains to be done in that branch of the work is generally acknowledged.

There was considerable demand expressed during the war for the appointment of salaried midwives, especially for rural districts. In November, 1917, the Federal council of Germany issued improved standards for the regulation of midwifery practice. In 1918 a bill closely following these regulations and including the provision of midwives for less populous areas was introduced into the Prussian House of Deputies, but late in the fall of 1919 it had not been passed. Some of these regulations had already (1915) been put into force by the city of Berlin.

There was an increase in day nurseries owing to the influx of married women into factories. State funds were appropriated to some extent for the establishment and maintenance of day nurseries for the children of munitions workers, but neither State nor Imperial Government made the establishment of factory nurseries obligatory with employers. There was an endeavor on the part of welfare workers to connect the day nursery with the infant-welfare movement as a whole. Municipal crèches were common and were under the direction of local infant-welfare associations.

The tendency on the part of the municipality to take over all activities relating to mothers and children grew more pronounced with the war. A greater uniformity in the work throughout the Empire was sought through an agitation for children's bureaus, which should regulate all the child-welfare work of a district or community. Organized infant-welfare work in Saxony was assured by

⁹¹ *Zeitschrift für Säuglingsschutz*, May-June, 1915, p. 204.

the passage of a law in May, 1918. One or two of the Federal States either created new State infant-welfare associations or extended the functions of their prewar organizations.

More and more the State came to feel its responsibility in the matter of maternal and infant welfare, and to realize that the care of mothers and babies was too vital a matter to the nation to be left to haphazard or sporadic efforts of benevolent individuals or voluntary societies. "It is an urgent necessity," said Dr. Rott, "for State and community permanently to include the economic condition and care of mother and child in the group of the most important social-hygienic problems. Infant-welfare stations must not arise as the result of humanitarian impulse, nor must their maintenance depend more or less on the good will of a few individuals."⁹²

According to Prof. Langstein, director of the above institution, child-welfare work, which applied to from 10 to 15 per cent of the children of Germany, must be extended to include from 70 to 80 per cent of them. "Cities," he says, "have done altogether too little preventive work for children. During the war the situation became better, and the fire must not be allowed to burn out."⁹³

⁹² *Zeitschrift für Säuglingsschutz*, July, 1915, p. 216.

⁹³ *Vorwärts*, Nov. 27, 1917.

ITALY.

INTRODUCTION.

The problem of infant mortality is complicated in Italy by the custom of placing out children with wet nurses. Not only do the foundling asylums of the Kingdom maintain wet-nursing centers but, either for the sake of going out to work or in order to nurse for money another infant, many poor mothers also put their babies out to nurse, frequently in a wet-nursing center. According to Italian authorities, these centers represent "a constant and most serious menace to the health of the Italian people and to the lives of all the children."¹ The mortality rate among these babies was said to be about 80 per cent; and, as the custom of wet nursing is extensively developed, the infant mortality rate for the whole country is high.¹ In 1912 Italy occupied the seventh place among the principal countries of Europe, with a rate of 128 per 1,000 live births.²

While the birth rate, on the other hand, was also high, it was even before the war gradually declining, as in all other civilized countries.³ The first year in which the war could have affected the number of births (1916) shows a striking decrease in the birth rate, as Table XXI, which gives the birth rates for selected cities, indicates.

TABLE XXI.—Number of live births per 1,000 of the population.^b

City.	1914	1915	1916	1917	1918
Milan.....	20.8	18.3	13.9	12.1	11.4
Padua.....	31.0	31.5	24.6	23.1	15.8
Bologna.....	20.9	19.0	15.0	13.2	11.2
Florence.....	19.5	18.4	13.7	11.4	12.0
Rome.....	26.6	25.3	21.0	19.1	16.5
Naples.....	27.1	25.7	22.9	21.8	19.6

^b Report of the commission for tuberculosis, American Red Cross in Italy, Rome, 1919, p. 101.

¹ Rassegna della Previdenza Sociale, January, 1919, p. 55.

² Statistisches Jahrbuch für das Deutsche Reich, 1915, pp. 20*, 21*, 40.

³ The birth rate for Italy as a whole is not available after 1915. The following prewar rates are given for comparison with those of other countries:

Number of live births per 1,000 of the population.^a

1905.....	32.67	1911.....	31.52
1906.....	32.14	1912.....	32.38
1907.....	31.70	1913.....	31.69
1908.....	33.67	1914.....	31.07
1909.....	32.74	1915.....	30.5
1910.....	33.29	1916.....	24.07

^a Movimento della popolazione nell' anno 1914, p. XV, 1916, p. VI; Annuario Statistico Italiano, 1915, p. 34.

The question of population was rendered acute by the war. But other motives for conserving infant life have not been lacking in recent infant-welfare work in Italy. In the words of Prof. Guiseppa Tropeano, an Italian pediatrician:

In order to obtain a decrease in the general morbidity and mortality it is necessary to diminish infant morbidity and mortality; in order to prolong the average length of life * * * it is necessary to assure life to children; in order to improve the race it is necessary to bring up the children in good physical and mental health. All the achievements of experimental hygiene and public health are involved in this problem.⁴

INFANT-WELFARE WORK BEFORE THE WAR.

LEGISLATION.

Italian legislation for the protection of motherhood and infancy was confined with one exception to the industrial worker. On June 19, 1902, the employment of women in mines, factories, and workshops was prohibited during the month following confinement. Eight years later (July 17, 1910) a national maternity insurance system was instituted, the first of its kind to be established in the world. While in England, Germany, and other countries maternity insurance is provided as part of a system of compulsory sickness insurance, in Italy, because of the urgency of the problem, maternity insurance alone was introduced. All industrially employed women between 15 and 50 were compelled to be insured. The premium, which consisted of 1 or 2 lire per annum, according to the age of the woman, was paid one-half by the woman herself and one-half by her employer. Up to 1917 a benefit of 40 lire was paid at the time of confinement; of this 30 lire were given by the insurance fund and 10 lire by the State.

The Italian law (No. 242, June 19, 1902) also required factories employing 50 or more women to provide nursing rooms.

The State, by a decree of February 10, 1876, regulated the training of midwives. Each school of midwifery is conducted under the medical department of a university with which a maternity hospital is connected. Each applicant for the training must have completed the first three years of an elementary school and must be between the ages of 18 and 36. The course lasts two years and includes a year of theoretical and a year of practical instruction. The student must pass an examination at the end of each year. If she is successful she receives a diploma entitling her to practice anywhere in the Kingdom.⁵ Before entering upon her practice she must, according to the public-health law of December 22, 1888, register in the commune where she is to work, and must obtain permission from the

⁴ *Rassegna della Previdenza Sociale*, January, 1919, p. 61.

⁵ *Primo Trattato Completo di Diritto Amministrativo Italiano*, edited by V. E. Orlando, vol. 4, part 2, pp. 750-751.

public-health authorities of the Province. Although regulations have been issued (Feb. 23, 1890) prescribing in detail the duties of a midwife, and providing penalties for the neglect of these duties, there is apparently no systematic control of midwifery practice.

Communes are required by the law of 1888 to engage a midwife to give free aid to indigent women; if there is already a practicing midwife in residence, the commune may make arrangements with her for the care of poor patients.

MUNICIPAL AND PRIVATE WORK.

According to an Italian pediatrician, Prof. E. Modigliani, infant-welfare work along modern lines has been fragmentary and irregular and left solely to private initiative.⁶ It has been, he stated, comparatively recent and applied exclusively to cities, the rural districts of the country being entirely neglected, although they furnished the larger part of the infant population.

On the other hand, there were a number of private societies, some of which dated back 40 or 50 years, which gave cash assistance to poor mothers who could not breast feed their children, to enable them to place out the infants with wet nurses. Many municipalities also aided mothers to hire nursing. The foundling asylums widely distributed over the country (123 in number) were centers of wet nursing.¹ These asylums not only cared for motherless and abandoned children, but also took in to nurse the infants of working women; in some instances nursing mothers with their babies were admitted. In spite of the prevalence of placing out children, no national legislation had been enacted for their protection. The asylums were entirely in the hands of communal and provincial authorities, and the communes and Provinces bore the expense of their maintenance.⁷

Regulations had before the war been issued by some municipal authorities and prefects. In Rome,⁸ for instance, an ordinance of the prefect (1903) provided for the control and physical examination of all women intending to take care of infants coming from institutions, and for the monthly physical examination of both nurse and child by public-health officers; in 1905 a municipal ordinance required that all wet nurses in Rome, whether for private families or institutions, must first undergo a physical examination and obtain a certificate.

In 1898, the first Italian mutual maternity-aid society was formed in Turin; others followed in Milan, Naples,⁹ Rome, Brescia, Florence,

¹ *Rassegna della Previdenza Sociale*, January, 1919, p. 55.

⁶ *La Riforma Medica*, Aug. 3, 1918, p. 616.

⁷ L. Franchi: *Codici e Leggi Usuali d'Italia*, vol. 2, *Legge comunale e provinciale*, May 4, 1898, sec. 299.

⁸ *Gazzetta Medica Lombarda*, Dec. 10, 1917 p. 205.

⁹ *L'Attualita Medica*, vol. 4, 1915, p. 496.

and Bergamo. The societies are very similar in constitution. In Turin any mother, by contributing to the fund a small sum (from 35 to 65 centesimi a month) throughout her pregnancy, may obtain a confinement benefit of 1.50 lire a day for 30 days, or in case of complication for 45 days. The benefit is conditional upon the mother's ceasing work during its receipt. The societies are not self-supporting and are aided by private gifts. In addition to money benefits, some societies furnish medical supervision and instruction in personal hygiene during pregnancy.¹⁰

Modern infant-welfare work, which emphasizes the care of the well baby, its diet, clothing, and daily routine, and the supreme importance of intelligent mothering, did not succeed in replacing entirely the nursing subsidy, which Italian pediatricians were unanimous in considering old-fashioned and even harmful to nursing.¹¹ By 1915, however, both milk stations and infant consultations were well developed, and were functioning in large towns and cities. Milk stations were more numerous and widely distributed than the infant consultations. At the beginning of the war they were to be found in at least 15 cities,¹² mostly large cities, but the list also included Capua with a population of less than 15,000. Many milk stations, it would seem, merely dispensed milk, and made no attempt to supervise the development, weight, feeding, and general hygiene of the infant who received it.¹³ On the other hand, some milk stations, as in Naples, had found it advisable to supplement the distribution of milk by instruction to mothers in infant hygiene, and by a general medical supervision of the babies. Some infant consultations, or welfare centers, had come into existence in this way.¹⁴

Infant-welfare centers, resembling very closely the French consultation centers, were maintained in all the principal Italian cities, and in some of the smaller towns, such as Mantua and Parma.¹⁵ In 1915 Naples had 1 center,¹⁶ open 6 hours a day; Milan, the chief manufacturing city of Italy, had 6;¹⁷ Turin, 1, with several branches in remote workingmen's districts;¹⁸ Mantua, 3.¹⁹

Private organizations opened and supported the majority of the consultation centers. In some cases, the municipality or province aided those already established, or, more rarely, established public

¹⁰ Henri Scodnik: *L'Institution des Caisses pour la Maternité en Italie*, Congrès International des Accidents du Travail et des Assurances Sociales, Dusseldorf, 1902, pp. 667-680; and *L'Assurance Maternelle et les Caisses pour la Maternité*, Congrès International des Assurances Sociales, Rome, 1908, vol. 2, pp. 487-488. Also, Twenty-fourth Annual Report of U. S. Commissioner of Labor, 1909, *Workingmen's Insurance in Europe*, pp. 1850-1854.

¹¹ *Rivista di Clinica Pediatrica*, vol. 15, 1917, p. 571.

¹² *L'Attualità Medica*, vol. 4, 1915, p. 499, and *La Nipiologia*, vol. 2, 1916, p. 19.

¹³ *La Nipiologia*, vol. 2, 1916, p. 20.

¹⁴ *Ibid.*, pp. 20-21.

¹⁵ *L'Attualità Medica*, vol. 4, 1915, pp. 494-495, and *La Nipiologia*, vol. 2, 1916, p. 89.

¹⁶ *La Nipiologia*, vol. 1, 1915, p. 57.

¹⁷ *L'Attualità Medica*, vol. 4, 1915, p. 494.

¹⁸ *La Pediatría*, vol. 25, 1917, p. 643.

¹⁹ *La Nipiologia*, vol. 2, 1916, p. 89.

welfare centers. Thus in Turin, the center had been for several years under the "moral and economic protection" of the city, and the municipal office of vital statistics sent, at the birth of each child, a printed invitation to the mother to visit the center.¹⁸

In Rome the pediatrician charged by the public authorities with the supervision of placed-out children was obliged, as a part of his duties, to conduct infant consultations.²⁰

In Milan five out of six centers had been established by the public charities board.²¹ The institute of infant care of Naples was subsidized by the Province.²² A physician was invariably in charge of the welfare center. Some centers held consultations for pregnant women as well as for young babies. A number gave premiums in money or kind to stimulate attendance. A few gave courses for mothers or distributed leaflets on infant hygiene. None appear to have employed visitors to teach the mothers in their homes how to care for their babies, although some volunteer visiting was done, chiefly by infant-welfare students.

Several centers established lunch rooms for nursing mothers. A few restaurants of this kind, however, had been established in Rome many years before infant-welfare centers had come into existence. As early as 1879 a private charitable agency opened the first one; and several years later a second one was established.²³ In 1915 there were in Rome five lunch rooms, established by the public charities board of the city, each one of which accommodated about 100 mothers.²⁴ Between 1906 and 1915 lunch rooms for mothers were opened also in Mantua, Bologna, Verona, and Rimini. In Rome in 1915 a philanthropic woman established a consultation center for infants, in connection with which over 100 meals a day were given to nursing mothers;²⁵ and in the same year a mothers' lunch room with a capacity of 450 was added to the infant-welfare activities of Naples.¹⁶ In some places only one meal a day was served, in others two. Mothers were requested by some lunch rooms to bring their infants to be weighed, in order that the effect of the feeding on maternal nursing might be observed.

Although maternal nursing was encouraged among industrially employed mothers by the law requiring factories to maintain nursing rooms, as a matter of fact little attention was paid to the law. Nursing rooms in factories numbered, in 1915, only eight, five of which were in Government tobacco factories.²⁶

¹⁶ *La Nipiologia*, vol. 1, 1915, p. 57.

¹⁸ *La Pediatria*, vol. 25, 1917, p. 643.

²⁰ *L'Attualita Medica*, vol. 4, 1915, p. 501.

²¹ *Ibid.*, p. 494.

²² *La Nipiologia*, vol. 2, 1916, pp. 93-94.

²³ *Rivista de Clinica Pediatrica*, vol. 15, 1917, p. 578.

²⁴ *L'Attualita Medica*, vol. 4, 1915, p. 500.

²⁵ *Rivista di Clinica Pediatrica*, vol. 15, 1917, pp. 573-579.

²⁶ *L'Attualita Medica*, vol. 4, 1915, p. 491.

Day nurseries or nursery schools for children of preschool age were common, and were subsidized by the Government as educational institutions. They were opened during the working day and combined kindergarten instruction with care and feeding of the children.²⁷ Day nurseries of the regular type were comparatively rare in Italy. In 1915 there were said to be only 36 in the whole country. This does not include several which were opened in connection with institutions of child care, functioning in several cities.²⁸ A day nursery of this kind in Naples was opened in 1915 and accommodated 110 children between the ages of 2 weeks and 3 years.²⁸ Breast-fed infants and artificially-fed children were kept in separate rooms. A physician was in charge of this nursery, assisted by one nurse for each 5 breast-fed infants and for each 10 weaned children. In addition there were three women to do the kitchen and general housework, and one to take care of the bathing. The nursery regulations required each child to be examined by a physician before admission and excluded all but those in normal health. They also required the keeping of daily records concerning each child.

In addition to its nursery functions, this nursery was intended to serve as a school for the mother, who was required to be present from time to time at her child's physical examination and bath, and always at the lectures on infant care, which were given regularly by the institute.²⁹

Largely through the influence of Prof. Ernesto Cacace, a leading pediatrician, institutes of infant care, unifying the work of infant-welfare agencies, were established before the war in several Italian cities. He felt that only through cooperation and coordination of all branches of infant-welfare work could the maximum results be accomplished. The first institute was founded by him in Capua in 1905, a second in Naples in 1908 (organization completed in 1915), a third in Mantua in 1912.³⁰ The institute at Naples consisted of—

- (1) Agencies giving assistance, such as consultations for infants, milk stations, day nurseries, maternity homes.
- (2) Educational agencies, such as schools for infant hygiene and care, a school for mothers, traveling courses in infant hygiene, exhibits.
- (3) Thrift agencies, such as maternity funds and other forms of mutual maternity aid.
- (4) Scientific agencies, such as laboratories for the testing of milk and for the biologic and hygienic study of the infant.³¹

²⁶ *L'Attualita Medica*, vol. 4, 1915, p. 491.

²⁷ F. Buisson, *Dictionnaire de Pédagogie*, Pt. I, vol. 2, p. 1876.

²⁸ *La Nipiologia*, vol. 2, 1916, pp. 28 and 46.

²⁹ *La Nipiologia*, vol. 2, 1916, p. 46.

³⁰ *La Nipiologia*, vol. 1, 1915, pp. 21 and 50; vol. 2, 1916, p. 89.

³¹ *La Nipiologia*, vol. 3, 1917, pp. 167-168.

It is said that the institute at Naples had served as a model for the institutes of child care in Paris and for the Empress Augusta Victoria House in Berlin.³²

The schools of infant hygiene and care conducted as part of the institutes were attended by young women students. In many cases the students were teachers of little children. Some were volunteer workers who during and after their training assisted in the consultations and milk stations, or under the direction of the head of the institute conducted infant-welfare propaganda in small towns and villages.³³

Instruction in child care to growing girls was given in Rome at a school founded for that purpose in 1911. The school was located in a foundling asylum where there was also a consultation center; and the students received their practical training both in the asylum and in the homes of the mothers who attended the consultations.³⁴

INFANT-WELFARE WORK DURING THE WAR.

PROMOTION OF INFANT HYGIENE.

The war caused in Italy as in other countries a decrease in the outlay for charity, so that the normal development of consultation centers and other agencies for infant welfare maintained, with few exceptions, by private beneficence, was arrested.³⁵ Work for the protection of war orphans and for the children of men called to the colors occupied public attention to a marked degree. This work, as an Italian pediatrician pointed out, had nothing in common with the work of hygienic protection of infants.³⁶

Nevertheless there are indications even in the meager sources which are available that the hygienic protection of infants in normal circumstances continued to some extent. In Capua, for instance, the institute of infant welfare maintained in 1916 and 1917 a consultation for infants, traveling courses in child care, and a school of infant hygiene. In 1916 there were 84 students in attendance at the school, while in 1917 the number reached 95.³⁷ The commune of Padua in 1916 hired a midwife to assist the physician at the infant-welfare center, where the number of infants under observation rose from 1,289 in 1915 to 1,425 in 1916.³⁸ In Padua also during 1916-17 a course in child care was given at the People's University.³⁹ The war committee of medical propaganda of the Province of Lombardy issued leaf-

³² *La Nipologia*, vol. 3, 1917, p. 163.

³³ *La Nipologia*, vol. 1, 1915, p. 23.

³⁴ *Rivista di Clinica Pediatrica*, vol. 15, 1917, p. 391.

³⁵ *Ibid.*, p. 594.

³⁶ *La Reforma Medica*, Aug. 3, 1918, p. 615.

³⁷ *La Nipologia*, vol. 3, 1917, p. 142.

³⁸ *Ibid.*, pp. 105 and 108.

³⁹ *Ibid.*, p. 109.

lets to mothers on the care of children.⁴⁰ They were prepared by child specialists and emphasized especially the mother's duty to breast feed her baby. The foundling asylum of the Province of Milan began in 1917 to give nursing premiums of 30 lire a month to mothers to persuade them to nurse their babies in their own home in place of putting them out to nurse. As a result of this step, it is said, the number of mothers willing to breast feed their infants was in 1917 five times as great as formerly.⁴¹

A definite step in the regulation of wet-nursing throughout the country was taken in a viceregal decree of August 4, 1918. A wet nurse is required to obtain a certificate the conditions of which are prescribed by the minister of the interior, and no agency for hired nurses may be maintained unless authorized by the prefect of the Province. Each child before being placed out must be certified by a physician as free from syphilis, and all other measures prescribed by the minister of the interior for preventing the spread of disease must be observed.

In accordance with the decree regular supervision will be maintained by the authorities over wet-nursing agencies and wet nurses. The regulations also provide that—

Within the limits of the appropriations contained in the budget of the minister of the interior for the prevention of infectious diseases, special subsidies or premiums may be given by way of encouragement to child-welfare institutes, infant consultations, and similar agencies, which may be deemed worthy because of the favorable results achieved by them in the protection of the health of the children intrusted to them, especially as regards syphilis.

A sum of 100,000 lire was also to be provided annually by the minister of the interior to midwives in public service who showed by good results that they had cooperated in the enforcement of the special measures for the protection of children's health, particularly in regard to the prevention of syphilis among infants put out to nurse.

PROTECTION OF MOTHERS IN INDUSTRY.

Shortly after Italy's entrance into the war (May 24, 1915) the central commission on industrial mobilization started propaganda among employers in favor of substituting women for men.⁴² Whereas in May, 1915, there were a few thousand women in war industries, by the end of the year there were 23,000. By the end of 1916 this number had increased to 89,000, which in another year was almost doubled. In August, 1918, 198,000 Italian women were engaged in war industries.⁴³

⁴⁰ *Revue Philanthropique*, August, 1916, pp. 204-205.

⁴¹ *La Nipiologia*, vol. 4, 1918, p. 186.

⁴² *Le Donne d'Italia nelle Industrie di Guerra*, Supplement to the *Bollettino del Comitato di Centrale di Mobilitazione Industriale*, 1918, p. 3.

⁴³ *Ibid.*, pp. 48, 51.

During the summer of 1917 factory inspection and a system of hygienic and sanitary supervision began for the first time to function in Italian munition factories.⁴⁴ Medical supervision was extended, in the munition factories at least, to pregnant women. Factory physicians kept a careful watch over the health of the expectant mother, making urine tests monthly. Beginning with the sixth month they recommended that the mother be put on the day shift and on easier work, if possible in a sitting position. Some employers gave special premiums to pregnant women.⁴⁵

The munitions factories also provided nurseries for infants and for children of preschool age. These nurseries were under the supervision of a physician and in charge of experienced women.⁴⁶ In response to a demand on the part of medical men, a day nursery was opened at the Government tobacco factory in Bologna.⁴⁷ Although a prewar law required the establishment of factory nurseries wherever 50 or more women were employed, few such nurseries had actually been provided.

Maternity insurance continued to function during the war. On February 17, 1917, the State contribution to the funds was raised from 10 lire to 12 lire for each insured woman. A year later (Jan. 10, 1918) a second viceregal decree was issued providing an additional 10 lire for each maternity benefit, making the sum paid at confinement 50 lire. By a viceregal decree of March 27, 1919, to take effect on January 1, 1919, the benefit was raised to 60 lire, the increase to continue for a year after the conclusion of peace.

PROPOSED BILL FOR THE NATIONAL PROTECTION OF INFANTS.

In the early months of 1918 Dr. Tedeschi, an Italian pediatrician, was invited by the minister of public instruction to prepare a bill which should provide for a national system of protection for infants and young children. The bill when prepared provided for courses in pediatrics for physicians and for special schools where, in addition to infant pathology, students might be taught the moral, social, and economic value of the child. It also provided for the establishment of infant-welfare agencies to protect the health of mothers and babies.⁴⁸ The ninth congress of the Italian society of pediatrics which met in Rome (June 3 and 4, 1918) unanimously adopted the following resolution with respect to the proposed bill:

The Italian Society of Pediatrics * * * convinced that the most useful measure of social reconstruction made necessary by the war is one directed toward the decrease

⁴⁴ *Le Donne d'Italia nelle Industrie di Guerra*, Supplement to the *Bollettino del Comitato di Centrale di Mobilitazione Industriale*, 1918, p. 25.

⁴⁵ *La Vigilanza Igienico-Sanitaria negli Stabilimenti Ausiliari*, issued by the Ministero per le Armie Munizioni, 1918, p. 87.

⁴⁶ *Ibid.*, p. 88.

⁴⁷ *La Nipiologia*, vol. 2, 1916, p. 45.

⁴⁸ *La Riforma Medica*, August 3, 1918, pp. 615-616.

of infant mortality * * * and toward assuring to infants better conditions of growth; and convinced that this aim can not be achieved unless there is established in the country a suitable national agency for the protection of infants, and that such an agency can be really effective only if the State assumes the protection of infants, calls upon the Government to pass a law for the protection of infants, which, besides establishing the fundamental principle that the protection of children is the duty of the State, would prescribe the establishment of a national agency for the protection of infants * * * it asks the Government to revise the regulations concerning abandoned infants and foundling asylums; to permit the application to the protection of children of the new achievements of science and hygiene; it asks the Government to make provision for popular instruction in child care and hygiene; also to supervise infants nursed by other women for pay, and to modify and rearrange, according to modern methods, the measures dealing with children contained in previous State laws.⁴⁹

Early in October, 1918, similar proposals were made by the committee on public health of the royal commission for the study of measures necessary for the period of transition from war to peace.⁵⁰ This body, too, emphasized the supreme national interest and importance of the problem, and urged its solution as "the greatest duty of the State toward the people and toward itself."⁵¹

In the resolutions adopted by the committee it was stated that "public opinion has already been formed, and it is deeply convinced as to the urgent necessity of making provisions with the greatest generosity and energy, and it will now accept any reform which in other times it would have considered wild and impracticable."⁵¹ The committee, in defining the scope of the national work which it advocated, declared that not only sick children, but also those in perfect health, should be considered as in need of sanitary and health work, which should begin from the time of conception and extend not only through infancy, but also up to the beginning of school life. It reiterated the need of care during pregnancy in these words:

Mothers should be carefully protected by similar organizations from the beginning of their pregnancy and watched and assisted by women nurses and instructors.⁵²

The resolutions declared that the State should be made the organizer and promotor of the work and should encourage it by grants. It detailed specific reforms in the laws touching children and made suggestions for the administration of all the new State-directed child-welfare work. In closing, the committee urged that "these laws be drafted in a very explicit and detailed form, since they represent a great general plan for a clear and systematic development of all those agencies which are to assure a harmonious, strong, and praiseworthy structure of the new Italian life, and that they be approved by the Chamber of Deputies with the greatest possible speed."⁵³ These resolutions have been reported in all the political and medical papers and widely discussed.

⁴⁹ *La Nipiologia*, April-September, 1918, p. 117.

⁵⁰ *Rassegna della Previdenza Sociale*, January, 1919, pp. 54-63.

⁵¹ *Ibid.*, p. 56.

⁵² *Ibid.*, p. 57.

⁵³ *Ibid.*, p. 63.

INFANT MORTALITY RATES.

Each period given in Table XXII from 1891 up to the beginning of the war showed a decline in the infant mortality rate.

TABLE XXII.—*Number of deaths under 1 year per 1,000 live births.*¹

Period.	Rate.	Period.	Rate.
1891-1895.....	184.5	1911-1913.....	149.8
1896-1900.....	168.3	1914.....	130.3
1901-1905.....	167.4	1915.....	146.8
1906-1910.....	152.1	1916.....	166.3

¹ Movimento della popolazione nell' anno 1914, p. LXXII; and Annuario Statistico Italiano, 1916, p. 32.

The rates for the larger cities also decreased and were in general considerably lower than those for the country as a whole, as Table XXIII, which gives rates for Florence and Milan for corresponding periods, indicates.

TABLE XXIII.—*Number of deaths under 1 year per 1,000 live births.*

Period.	Milan. ¹	Florence. ²	Period.	Milan. ¹	Florence. ²
1891-1895.....	158.6	.....	1911-1913.....	123.1	120.8
1896-1900.....	147.3	.....	1914.....	106.6	.....
1901-1905.....	147.8	³ 152.6	1915.....	132.4	.....
1906-1910.....	128.2	151.0			

¹ Calculated from the number of live births and of infant deaths. Comune di Milano, Dati Statistico, 1912, vol. 29, pp. 93 and 167; and Comune di Milano Annuario Statistico, 1915, pp. 42 and 77.

² Calculated from the number of live births and of infant deaths. Comune di Firenze, Annuario Statistico, vol. 1, 1903, pp. 56 and 98; vol. 2, 1904, pp. 28 and 66; vol. 4, 1906, pp. 28 and 70; vol. 7, 1909, pp. 30 and 84; vol. 9, 1911, pp. 29 and 72; vol. 11, 1913, pp. 23, 82.

³ This rate is for 1903-1905. Figures for the entire period were not available.

With the beginning of the war the infant mortality rate began to rise. The rates for the group of cities, including Turin, Milan, Bologna, Ravenna, Florence, and Palermo, rose steadily during the war, as follows:⁴

1914.....	107.7	1916.....	143.6
1915.....	130.7	1917.....	171.2

With the exception of Rome, which until 1918 appeared but little affected, the rates for the individual cities show a similar tendency, as Table XXIV shows.

TABLE XXIV.—*Number of deaths under 1 year per 1,000 live births.*^a

City.	1914	1915	1916	1917	1918
Milan.....	107	132	^b 141.3	^b 152.8	^b 154.2
Padua.....	146	176	228	167	230
Bologna.....	92	121	136	134	195
Florence.....	120	131	186	188	232
Rome.....	124	122	131	122	144
Naples.....	154	155	169	186	230

^a Report of the Commission for Tuberculosis, American Red Cross in Italy. Rome, 1919, p. 103.

^b Città di Milano, Bollettino Municipale Mensile, Dec. 31, 1919, p. 486.

⁴ Great Britain Local Government Board. Minutes of discussion at an informal conference to consider generally the subject of pediatrics, 1919, p. 47.

In Perugia infant mortality increased from 115 per 1,000 live births in 1914 to 269 in 1918.⁵⁴ Great as these increases were, however, they were slight as compared with the rise in the rates for cities on the Adriatic coast. The following increases, which, however, were said to be exceptional, are recorded for Fano and Pesaro:⁵⁴

TABLE XXV.—*Number of deaths per 1,000 live births.*

City.	1914	1915	1916	1917	1918
Fano.....		172	258	424	575
Pesaro.....	161			371	637

SUMMARY.

Infant mortality rates in Italy were comparatively high before the war and from the first year of Italy's entrance into the war increased steadily in all cities for which figures are available, except Rome. The greatest increase seems to have been in cities along the Adriatic coast.

Prewar legislation in favor of mothers and young children consisted of a law on confinement rest, a provision for maternity insurance, a requirement that factories maintain nursing rooms, and laws regulating midwifery. The State gave no subsidies or grants for infant-welfare work, except to day nurseries. Such work was left solely in the hands of private agencies and local authorities. The chief form of assistance to mothers which antedated the twentieth century was in the form of money to enable the working mother to hire nursing for her infant. This aid was given by municipal authorities and by private societies. The practice of placing out children was common. Wet-nursing centers were numerous and, except in rare cases, were entirely unsupervised. A number of mutual maternity-aid societies had been formed, furnishing a benefit at confinement.

Infant consultations and milk stations were instituted during the first decade of the new century and operated in the larger cities and towns. A few were municipal undertakings, or received assistance from the city. The majority were established and maintained by private funds. Lunch rooms for the nursing mother had been opened in at least five cities, the earliest one dating back to 1879.

There were only about 36 day nurseries in Italy and, in spite of the law, very few factory nursing rooms.

Institutes of infant care uniting all the agencies at work for infants existed in several cities. They usually also gave courses in infant care to teachers and volunteer workers, arranged popular courses for mothers, and maintained in some cases exhibits in child hygiene.

⁵⁴ Great Britain Local Government Board. Minutes of discussion at an informal conference to consider generally the subject of pediatrics, 1919, p. 47.

Instruction in the care of children was given girls of school age in some places. In Rome, for instance, in 1911, a school was founded for this purpose.

The war, by decreasing private subscriptions to infant-welfare enterprises, caused in general an arrest in the development of the direct work for babies. There are evidences, however, that in some places the work continued in full force and even increased.

Several national measures were passed for the protection of maternity and infancy. With the increase in the number of women employed in factories a system of factory inspection and sanitary supervision was established in the munitions factories. In the Government munition factories special consideration was accorded pregnant women. Nurseries were provided in the factories for babies and children up to 6 years of age.

The maternity benefit from the national insurance fund was raised through State appropriation from 40 to 50 lire in January, 1918, and a year later was increased to 60 lire.

By a decree of August 4, 1918, wet nurses and wet-nursing centers were brought under Government supervision. Women hiring out as nurses were required to obtain a certificate. Midwives and infant-welfare agencies were promised subsidies from the Government if they achieved especially favorable results in protecting the health of infants in their care.

A growing realization of the national importance of infant protection came to Italy, as to every other country, during the war. Dissatisfaction with uncoordinated work and with the lack of Government recognition was frequently expressed. In 1918 Prof. Tedeschi, a leading pediatrician, was invited to prepare a bill for the national protection of infants. A bill proposing radical measures on a comprehensive scale for the conservation of infancy, and providing for Government assistance, was presented to the Chamber of Deputies in the early part of 1918, and its speedy passage was widely advocated

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¹ Since this report went to press the following list of sources has been prepared by the American Red Cross: "Annotated Subject Index and Order List of Books and Pamphlets Including the Local Government Board, Board of Education, and other Government Reports on Maternity and Child Welfare in England and Wales."

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