XI.

THE CRIPPLED CHILD
At Home and Abroad

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Chapter

CHAPTER I

Introduction

INTRODUCTION

More and more it becomes obvious that not in any one group resides the wisdom as regards the problems of the United States. Out of many backgrounds and many specialized types of knowledge comes the wisdom which can solve or at least lay the basis of solution for some of our great problems. One of our problems in this, as well as in every other Nation, is how to make it possible for the children who are the future generation to partake of the best that the Nation is able to give while they are children, while they are in the formative stage, while their health is being built up. This Conference has brought in people of many backgrounds, people with many points of view, people with a great variety of expert knowledge.

CHAPTER II

Terminology

TERMINOLOGY

The origin of the word "orthopaedia" dates from its use as the title of a treatise published in I74I by Nickolas Andre, Professor of Medicine at the University of Paris. He synthesized the term from the Greek roots orthos (straight), and pais (child), to express his belief in the theory that the idiopathis deformities of adolescence and adult life originate in childhood. To Andre, the symmetrical development of the skeleton was entirely a matter of muscle balance, and any aberration in this symmetry in the absence of trauma or destructive disease was traceable to postural improprieties permitted during the formative years of life. He was not the first to express this belief. Ludwig, Andre's, contemporary was of the same opinion, maintaining specifically that the habit of tilting the body in the "fatigue position," so common among growing children, was the etiological factor, which, in extreme cases, led to permanent structural deformity. Andre wrote exhaustively on curvature of the spine. He divised a system of treatment based upon his hypothesis in which the greatest attention was paid to postural training. T reatment was of two kinds, preventative and curative. For the first he advised careful consideration of the sitting habits of children, feeling that the positions assumed after spending long periods on chairs, especially during study hours, was an important contributory factor to vertebral imbalance. He suggested to this end that seats be constructed of a resistant material such as cork rather than of the usual impressionable straw in vogue at the time, so as to give a firm base for the erect spine. Proper posture during study periods was of utmost importance, and in the later editions of his book there were illustrations showing what proper posture meant. Attention was paid to such details as the height of the table from which the child ate in relation to the chair upon which it sat during meal-time. The top was not to be so high that the child could crouch over it, or so low that he would bend over it at the waist. Regular diversified exercise was considered a necessary part of every child's upbringing.

Definition

The White House Conference gives the following definition for a Crippled Child.

"The crippled child, in the orthopedic sense, is a child that has a defect which causes a deformity or an interference with the normal functioning of the bones, muscles, or joints. His condition may be congenital, or it may be due to disease or accident. It may be aggravated by disease, by neglect, or by ignorance.

State of Oregon, terminology-

And in the State of Oregon we have yet another definition. This is not one that is defined by the state but is used in its program or state plan.

CHAPTER III

Extent of the Problem of the Crippled

HISTORY

The history of bone surgery bears an honorable antiquity extending far back into pre-historic times. Literally thousands of skeletons have been unearthed from the caves and burial grounds of the Dawn Man of Europe, Asia and Northern Africa, and among these specimens many show evidence of bone pathology representing in its variety most of the ossious lesions to which mankind is still susceptible. Ostiomyelitis, hypertrophic and destructive arthritis, periostitis, osteitis, bone tumors, and especially fractures were not uncommon. It is during these as yet unnumbered millenia that the fundamental discoveries and inventions were made which set him above the beasts and on the road to modern civilization. Somewhere during the course of neolithic development the first definite evidence of skeletal surgery appears.

At a still later period, decorated pottery appeared and a study of these objects forms a valuable key to man's further progress in civilization. Many of the larger vases or urns carry illustrations of types of people found in the community. Mural decoration became increasingly popular when the nature of the dwelling permitted it. Among all these specimens of primitive art, wherever mankind has left pictures of man, the hunchback and dwarf appear, and in some cases, these were drawn with a fair degree of fidderentiation. For example, in early Egyptian murals, the figures of achondroplastic dwarfs were so well proportioned in their ration of limb to body, that they can be distinguished without great difficulty from other forms of dwarfism.

From the viewpoint of orthopedic surgery the most significant manifestation of this intellectual rejuvenation took place in Italy. This is during the 15th and 16th Centuries of the Renaissance. The 17th Century was one of the great centuries of Western Civilization, great not only because of its own cultural attainments, but also because it marked the general acceptance by the educated classes of those new philosophies and new scientific principles which had been striving for recognition during the preceding four hundred years. It also signalized the birth of social science in its modern aspect, particularly as it applied to medical problems. In 1601, England established its famous Poor Relief Act, the first statute enacted by a European government specifically mentioning the crippled, and providing to some extent for his care. The enactment of this law marked the beginning of a change in the attitude of civic government toward the incapacitiated, and recognized its economic responsibility toward these unfortunate members of the community. Coming as it did so early in the century augured well for the future progress of orthopaedic surgery. Society in general wqs becoming infinitely more considerate of its deformed and maimed, and except among the lower classes , these unfortunates were no longer the subject of derision. Velasquez painted sympathetic portraits of dwarfs, and anyone who has more than glanced at Riveras' famous picture of the boy with the club foot must have sensed commiseration the artist had for his model. The child bears in his face the same sad happiness which to-day is all too frequently evident on the ward of any othropaedic institution. Painting such pictures, became, in a way, a fashion at this time, as was either a contributory cause, or a partial effect of the changing social consciousness. In 1650 Francis Glisson published a monograph on rickets. This was the original text on rickets and was considered a classic for several generations. It is still readable as a model of medical authorship. It was known in England early in the 17th century, and was mentioned by name as a cause of death in Bill of Mortality from the Countess Dorset and Somerset in 1634. The medical term rachitis is derived from the Greek roots Raxis, "spine", and Itis, "inflammation", thereby denoting the preponderance of spinal deformity in the cases of that period. The term "Rickets", was a form of an old Saxon word, "Rick", meaning hump, or elevation, or derived from a Dorsetshire word, "ricket", to breathe laboriously; or possible from a Norman word, "riquets", applied generally to deformed persons.

Glisson believed that the deformities of rickets were due to an unequal or asymmetric growth of bone, although he noted the crooked limbs and the enlarged heads, deformities of the spine, in his experience, occurred so frequently, that he suggested the term "spinal disease" as a synonym. Calcium-phosphorus ratios were unknown to him, for more than two centuries were yet to pass before the metabolic eitology of rickets was to be discovered and specific preventative measures made possible. Glisson treated his cases from a purely orthopedic aspect. He was concerned solely with correction of deformity. To this end he used braces, shoes, and splints, to straighten bowlegs and knock-knees, and in all cases advocated prolonged and adequate exercise and massage of the entire body to overcome the excessive muscular weakness. In several of the later editions of his book there are excellent illustrations of the many severe deformities he was called upon to treat. In most modern tests, rickets, as a cause of scoliosis, represents but a small percentage of the cases recorded, although many authors have felt that it is of more eitological signifiance than is ordinarily apparent.

It is very possible, however, that the obvious decrease in the severer types of rickets is due to the very marked improvement in enviornmental conditions among the lower classes. The 18th century witnessed two events of supreme importance to this history; one, the appearance of the first book in which orthopaedic surgery was considered as a specialized field of practice and two, the creation of the first clinic designed exclusively for the treatment of the maimed and the deformed.

Of greatest consequence to orthopaedics, were the great Alexandrian anatomists who during the 3rd century B.C., made of their science a most important department of the great medical center which flourished at that time. Certain of the books, such as those "On fractures", on the Ariculatios, and "The Surgery" should be read by every orthopaedic surgeon as the ground-work of his art from which almost all of the principles, if not the methods, how in use have been tried. This statement is not a mere blood veneration of the classics. The Hippocratic Corups contains material forgotten by the world for centuries to be rediscovered in some instances only in comparatively recent times. With very few exceptions methods of treatment attained a suprisingly high level, recognition of significant symptoms was remarkably acute, and even prognosis was easily comparable to modern teaching. A carefully prescribed method of traction was used for the reduction of fractures of the long bones. Bandages, splints, and fracture throughs were described and their several uses indicated. The nature of the bandage, and its method of application were such that it afforded satisfactory support to the fractured limb in a fashion similar to modern plasters. During this time the theory of motion and rest was very prominent. That "exercise strengthens and inactivity wastes" is the simple fundamental statement of all of our scientific knowledge of the physiology of the atrophy of disuse. Pressure sores were deemed the result of incompetent practice, and several paragraphs were devoted to instruction of their prevention. They recognized the relationship of prolonged recumbency to bed-sores at the region of sacrum and suggested that frequent changes of the patient's position was necessary to avoid them.

Club foot was recognized commonly as a congenital deformity, but in some instances was thought to have occurred during early infancy. Several varieties were recognized. All were considered to be dislocations at the ankle joint. Very detailed instruction was given for its cure. Treatment was said to be most effective when applied at the earliest possible time. The treatment was very much like ours today. Over correction was essential and later specially devised shoes were advised. Along with these active procedures, the value of proper diet and a general hygienic regimen was constantly stressed in orthopaedic as in other cases. The care of the bowels was always considered an important adjunct to treatment. The advantages of a good climate was highly valued, especially for the chronic rheumatoid and infectious diseases. Fevers when present in acute stages were treated with antipyretics of various kinds, mostly from the herbals of the ancient pharmacopoeia. Haemostases was accomplished by compression bandages whenever necessary. In conclusion, it can be said that Kippocratic orthopaedics contained within itself practically all the elements of modern technic, other than the operative. Its principals were for the most part sound, and not far removed from conceptions of Soranus of Ephesus, in the first century who described but did not name rickets, which was apparently all too prevalent among Roman children. The filthy and dark slums in which the lower classes lived in the overcrowded metropolis, coupled with the difficulty of procuring fresh foods, and general poverty during repeated intervals of devasting wars provided the same environment as does the larger modern city. This also led easily to the detietic and hygienic inadequacies producing this disease. In 210 A.D. there was included a rather far fetched superstitious theory of the origin of congenital deformities, and some passages on the methods, indications and value of massage. It is interesting to note that the ancient Sanskrit word for cripple is said to have been definable as the "evil on incarnate". As will become evident later, society's attitude toward the cripple and deformed has always been either the most powerful incentive or the greatest barrier to the development of orthopaedic surgery. In India the very word for cripple defines the attitude of the community. Under such circumstances we do not expect much in the nature or orthopaedic therapy, except possibly as it affected reconstruction of the injured warrior. After the 7th century surgery became even more degraded than medicine. This was not due to any restraint imposed by authority of the Catholic Church , as has so often been maintained but was mostly due to the predominence of Arabian influence on all of the sciences during these centuries. The religious antipathy of the Arabians toward manual approach to the human body was based upon the precepts of the Koran. Although they derived their medical knowledge almost entirely from Greek sources, they so neglected the surgical aspect that it became necessary in later times to pierce through to the original Graeco-Roman manuscripts to re-learn what remained of the subject. It was not until European medicine emancipated itself from the influence during the 11th and

12th centuries that surgery was again able to record progress. However, there was still another factor which operated especially against the development of orthopedics surgery during these centuries, a factor seldom recognized in this connection, but yet one that was all too potent. This was the utter lack of sence of moral responsibility on the part of society for those unfortunate individuals who sufferred from visible deformities of the body. The concept of the "Scourge of God" acted as a powerful anodyne of public conscience. This attidtude did not take the harmless form of idle indifference; that would, at least, have left the sufferers at peace with themselves. To some, deformity represented a mark of devine discipline, the expiation of sins either of the individual or his forbears, and was treated accordingly without pity. To others, these victims were considered deservedly the subjects for derision. The religious significance of deformity was exemplified by picturing the devils and imps of the medieval hierarchy of Satan as possessing deformed feet and crooked back; derision led to the fashion which according to Wason eventually became so widespread among the many minor principalities then in existence, as to cause the deliberate maining of children for the price they would bring.

I have just presented the development of orthopaedics over a period of many years, and now something about the rise of institutions and hospitals in the old and new world.

The development of institutions devoted entirely or primarily to the care of crippled children has been one of the most powerful factors in the progress of modern orthopaedic surgery. Those to be considered in this chapter must be differentiated from the "homes in which the deformed and lame have been nurtured and safeguarded from the earliest days of the church. In these places, the cripple was accepted as an unfortunate incurable for whom the good graces of a merciful House of God were a haven of kindness from a cruel world. These "homes" were usually attached to a convent or monastary whose patron Saint had a significant interest in such children, and offerred them Faith and the Love of God for solace. It is absurd to doubt all the many cases in which relief, improvement, or even cure followed Holy administrations. There were also a few establishments, such as the Royal Bavarian School and Home, founded and endowed by the decree and good will of beneficient despots, in which the secular arm of government tried to assist or supplant the cleric. However, these "homes," in spite of an occasional visit by a local kindly disposed physicians, were in no sense hospitals.

The origin of the orthopaedic hospitals dates back only to the end of the 18th century, and its general development in the 19th. There were causes for the appearance of such institutions at that time, and these causes did not entirely emanate from the profession. To quote Watson, whose book, "Civilization and the Cripple," published under the auspices of the International society for Crippled Children, should be in the library of every orthopaedic surgeon; "The cripple as a social problem did not force itself upon public notice until the nineteenth century, but it took birth, so far as modern civilization is concerned, a hundred years earlier. The intellectual preceeded the industrial revolution. The age of sensibility as it was labeled with a certain amount of veracity, certainly produced in the Victorian age loud and admirable reverberations"---"It was not until the eighteenth century that people ceased to think according to religion, and to examine life and the world in terms of human experience and reason. Humanitarianism suddenly awoke once more in the voices of Voltaire, Rousseau, Blake and Goldsmith. From these so widely devergent aspects the idea of humanity shook the citadels of European conversations." As a result of this intellectual revolution, the cripple came into community consciousness as a public charge. The attention of the surgical profession was therefore focused more strongly on the problem of cure, prevention, or relief.

It was soon recognized that the larger general charity hospitals were not equipped to properly care for these cases. Their chronicity for the most part made them undesirable in the public ward; the mechanical work, which their treatment often involved, necessitated facilities for which these institutions were not equipped. Finally, in 1780, Jean Andre Venel, constructed a small hospital at Orbe, in the Canton de Vaud, in Switzerland, which was designed exclusively for the care of orthopaedic cases. It was not elaborately planned, but contained within its walls all the accoutrements of a modern institution of its kind. There were wards and individual rooms, space for exercise, sun porches, and of utmost importance, it possessed its own bake shop and mechanics. Under the direction of Venel, all types of aparatus were made; special beds, braces, and splints. And so, for the first time, orthopaedic surgery was practiced under its own power.

In 1812 Heine founded another such an institution in his native city of Wurzburg. Five years later, in England, 1817, the Orthopaedic Hospital of Birmingham was founded. In 1818 Leithof opened a similar institution at Lubeck. Between 1821 and 1826 Orthopaedic Hospitals were founded in Bar-le-duc France by Humbert, in Berlin by Blorner and Hammers, and in Paris by Pravavz and Ceirin. Delech in 1828, opened a novel orthopaedic sanatarium in the environs of Monpellier, a pastoral play ground where his patients indulged in outdoor games and exercises. From this time on, orthopaedic hospitals sprang up throughout Europe. In 1857, Barellai, also of

Florence, conceived the plan of supplementing the urban hospital work, by establishing a sanatarium for certain of the children, especially those suffering from tuberculous disease of the bones and joints. He chose several sites at the sea-side and in the mountains, and due to his efforts, there was in a short while a number of such places in Italy, where the children were kept for prolonged periods of time. At these country homes, the younger patients received the same care as they do in similar institutions today. Open air sleeping accommodations, sunshine, good food, and nursing supervision, formed the basis of treatment.

Of course, country sanitaria, as already described, existed from time immemorial. Egypt, Greece, Rome and the Orient, always boasted of their mountain or seashore retreats, and all through the middle ages, certain monasteries were famous as health resorts. But Barellai had organized his plan exclusively for the care of orthopaedic cases, children who, in many instances, had to be carried to and from their beds or dormitories, who had tuberculous sinuses which require special care, and for whom, in brief, adequate orthopaedic attention was necessary during their stay at the sanitarium. To continue in the Italian development, shortly after this, the now famous Rizzolli Institute of Bologna was founded by Francesco Rizzolli, and placed under the directorship of Panzeri. It was at this institute that Dofivilla worked, and at present it is under the direction of his able successor, Vittorio Putti.

In 1863, there was organized in New York City, the Society for the Relief of the Ruptured and Crippled. This society was brought into existence to found a hospital in which might be carried on the type of work indicated by its name. The reason for the combination of the ruptured and the crippled was that at the time the therapy in both conditions resolved itself into the construction of proper appliances. The hospital was divided into two parts, and the head of the Orthopaedic division was placed by James Kight, whose name is still common parlance in connection with the spinal brace which he designed. His successor was Virgil Gibney, one of the great leaders who helped to create the New York School of Orthopaedists. Gibney was an enthusiastic teacher. His influence helped in a large measure to induce his contemporaries and followers to adopt the newer operative methods which were at that time emanating from Europe. He, in turn, was succeeded by Royal Whitman, the author of the most comprehensive text book on orthopaedic surgery in the English language. The Hospital for the Ruptured and Crippled is important as the first public institution of its kind in the United States, although Sayre in 1861 had already organized an active orthopaedic dispensary at Bellevue Hospital in New York and

Buckminster Brown in 1861 had opened a small private hospital for orthopaedic surgery in Boston. Brown is said to have been the first American surgeon to devote himself entirely to orthopaedics. Three years after the opening of the Hospital for Ruptured and Crippled, Charles Fayette Taylor, whose method of practice differred in some ways from that of Knight, became director of the New York Orthopaedic Hospital and Dispensary, the second such institution in the United States. Taylor was contemporary with Sayre and Gibney, and, although a great rivalry existed, he joined with them in advocating the most progressive type of operative improvements. It is an interesting commentary on the relationship between orthopaedics and war, that the first hospitals devoted exclusively to this branch of surgery was founded during the years in whch the States were at civil war.

During the 20th century, hospitals for the treatment of orthopaedic cases continued to multiply. Not only in the cities were such hospitals organized, but mountain and seaside homes and hospitals increased with rapid strides. In 1900, New York State, recognizing the social and economic problems involved in the relationship existing between the commonwealth and its cripples, built a state hospital for these cases.

STATISTICS

The magnitude of the problem of the disabled in modern society is vest discernible through a consideration of the statistics concerning such persons. Those at our disposal are by no means complete, but they suffice, at least, to show that the number of disabled persons is far greater than is ordinarily supposed.

Most countries of the world have a census of the blind, the deaf and the dumb, and the aged. For the crippled, however, comprehensive statistics are available only for Germany, Holland, Norway and Esthonia. In the United States a number of cities and states have made surveys of their crippled inhabitants, but the data are by no means complete. It is practically impossible to find information relative to the number of chronically ill. In countries having industrial compensation laws there are generally some data available concerning the number of persons disabled in industry each year. There are also some estimates concerning the numbers of war disabled. It is difficult to obtain from these statistics a complete and comprehensive picture of the actual numbers of the disabled persons, and any estimate based thereon is apt to run far short of the true numbers. Such figures serve, however, to show that the problem of the disabled in modern society is indeed a large one.

The first official census of crippled persons to be taken was a survey of crippled children, which was carried out in

Germany in 1905 under the direction of Biesalski, with the help and patronage of the German government. In the United States, Massachusetts was the first state to make a census of crippled inhabitants. In 1905 the census enumerators of that state were asked to list "the lame, maimed, and deformed." The term "maimed" was to include the loss of one eye or other defects.

Following closely upon the Massachusetts survey was one which was made in the city of Birmingham, England, in 1910.

Since that time there have been several city and state surveys made in various parts of this country. In 1915 Cleveland took a census of its crippled inhabitants. This was a house-to-house survey, combined with a survey and check-up of institutions, schools, etc. It seems to be the most accurate survey of its kind which has been made in the United States. The house-to-house survey was carried out between October, 1915, and October, 1916, and covered 150,000 families, comprising a complete study of the city. In 1919 New York City followed Cleveland in a survey of its crippled inhabitants. It was conducted by carrying out a house-to-house survey in six different districts, then estimating the population of those districts and determining the ratio of crippled inhabitants to each thousand inhabitants. In 1923 Toronto made a survey which was, however, more in the nature of an estimate. In 1924 a survey of all its crippled children was carried out by New York State. On the assumption that all crippled children of school age would be registered in some school, and that those of pre-school age would be known to children in school, this survey was carried out exclusively through the schools of the state, public, parochial, and private. In 1924 Chicago made a similar survey. It was in part a survey of all institutions, and in part a house-to-house canvass of certain typical areas, including thirty-three square blocks in all. The only other published report of a survey of this sort in the United States is that of New Jersey, which was carried out in 1927. This survey is more or less comparable to that made in New York State, for it was a census of crippled children known to schools, and to social and medical agencies.

Aside from those surveys, the White House Conference on Child Health has recently published material which was obtained from various sources: unpublished additional information from New Jersey, the results of a survey in one county in Michigan, four counties in Pennsylvania, and two counties in Missouri. In 1924 the International Society for Cripples made an institutional survey which took into consideration 6,507 children in 33 institutions in 7 different states.

All of these surveys are alike in that they cannot be considered complete. The Cleveland survey is apparently the most complete. Those based upon school returns only are bound to be incomplete, for a relatively large proportion of crippled children are not in attendance at school.

The Cleveland survey, for instance, found that 32.0 percent of its crippled children of school age were not enrolled in any school. The New York City survey found that 21.0 percent of the cripples discovered in its house-to-house survey were not in attendance at school.

Until recently 2.5 per thousand children was considered the standard ratio. The White House Conference study attempted to test the feasibility of applying this standard ratio to the country as a whole, as well as to individual states and communities. Inquiries were sent to various sources, bringing in additional information from New Jersey, Michigan, Pennsylvania and Missouri.

According to estimates based upon the so-called standard ratio and the 1920 census, there were 289,919 crippled children in the United States at that time. The White House Conference Sub-Committee found that, using the same ratio based upon the 1930 census, the estimated number was 304,541, an increase of 14,622. If the 3.72 ratio were applied there would be 453,157 crippled children in the United States. If the standard of 3.5 per thousand adult inhabitants be accepted there would be 426,358 crippled adults in the United States on the basis of the 1930 census.

These estimates cannot be looked upon as absolutely correct, but they provide a fairly accurate figure of the number of crippled persons in the United States at present. The surveys differ considerably in the ratios which were found.

Such variations are partially due to the types of disability which predominate in different parts of the country, and partially to the methods of making the surveys. However, there are variations from one community to the other, even where the same methods of study have been used.

Since the World War several European nations have conducted surveys of crippled children in connection with their regular censuses. Germany made such surveys in 1924, and in 1930 Holland, Norway, and Esthonia also conducted cripple surveys in connection with their censuses. All census figures of this sort, however, are liable to a large degree of error because the cripple himself, or his relatives, fill out the questionnaire. In such cases there is always a tendency to try to conceal the plight of the handicapped person. The latest German census is probably the most complete, as it has several surveys behind it to furnish experience. The survey in Holland proved to be very inaccurate. A check-up after the census revealed that only about one-sixth of the crippled inhabitants of Holland had been enumerated. The Norwegian census is probably more nearly complete. It includes all cripples under sixty-five years of age, but only the most seriously crippled children were included. The Esthonian study is not very accurate. It was carried out by the Department of Welfare, with the aid of government physicians and health officers. Better results were obtained in the urban than in the rural areas, as the parents were supposed to bring their crippled children to the physicians or other health offices to register them and have them examined. On account of severe weather, however, many in the rural regions were prevented from doing so. The whole survey was carried out in the month of March, 1922.

The census of crippled children which was taken in Germany in 1905 under the direction of Biesalski found that there were 75,183 crippled children in Germany, not including Bayern, Baden or Hessen. The 1925 census enumerated not only the crippled, but the disabled. It was found that there were 114.3 disabled persons to every 10,000 inhabitants, and 68.4 cripples to each 10,000 inhabitants -- 100.9 men and 37.9 women. The difference in the number of disabled men and women was due for the most part to war injuries; one-fifth of all disabled were the result of war injuries, while one-third of all cripples were the result of the War. The 1930 census in Germany found approximately the same results as the 1925.

In 1920 there were 9,000 deformed persons under sixty-five years of age, or 3.6 to every 1,000 inhabitants, according to the Norwegian census.

In Holland the census of 1920 found 44,822 deformed persons, of whom 6,359 were children under fifteen years of age. A check-up, however, showed that there were at least six times as many crippled persons in the country as indicated by the 1920 census.

In Esthonia in 1922 it was found that there were 1,242 crippled children, which would be about 1.04 for each 1,000 inhabitants.

For England an estimate of 100,000 cripples has been made.

These figures may serve to give an idea of the number of cripples in foreign countries.

The extent of our problem can now be ascertained because of the recent state plans under the direction of the Federal Government. The figures, however, are not available, but many estimates given have far exceeded the number expected.

The increase in the percentage of cases of disability caused by infantile paralysis is doubtless due to the fact that the number of correct diagnoses of this disease has increased greatly during the period represented (1911-27). The decrease in the percentage of tuberculosis cases is probably due to the fact that crippling from this disease has been decreased through improvement of the milk supply. At the time of the Birmingham survey the "dread plague" was considered the primary crippling source. The discrepancy in the figures may also be partially accounted for by the number of sanatoria and convalescent homes in which tuberculosis cases are cared for, resulting in a decrease in the number of cases which would be reported in several of the surveys. Cleveland did not include rachitic cases, while the tuberculosis and poliomyelitis cases are proportionately higher. Wright suggested that the Birmingham survey was not conducted in such a way as to locate a good many of the rachitic cases. These would be located more readily through a house-to-house survey than by a survey carried on by the aid of schools and other institutions.

The New Jersey census found that over one-third of all of the crippled children had become crippled through infantile paralysis; one-fourth were congenital cripples, and only a few were tuberculous. Traumatic cases were few in number.

These statistics cannot give an absolutely accurate picture, however, as many tuberculous children are found in special institutions, which were not included in this survey.

The New York City survey found that among 197 school children with potential deformities the causes were as follows: 37.0 percent from faulty shoes; 29.0 percent from faulty socks, and 27.0 percent from faulty carriage.

These figures show that deformity and the resulting handicap may be purely the result of such supposedly unimportant environmental factors.

On the whole, infantile paralysis seems to be the predominant cause of crippling in childhood. Surgical tuberculosis is next in frequency, and congenital deformities seem to be third, with rachitis fourth, and trauma fifth. It may suffice here to mention the fact that an estimate, based upon the most reliable figures available, would place the number of disabled people in the United States alone at about 2,000,000, exclusive of the war-disabled, the chronically ill, blind, deaf and dumb.

CHAPTER IV

The Needs of the Crippled Child

WHITE HOUSE CONFERENCES

The White House Conference was first called in 1909 and gave impetus to the White House Conference movement to establish the United States Children's Bureau; the conference of 1919 adopted child-welfare standards and stimulated efforts for health protection, child labor regulation, and protection of handicapped children; and the 1930 conference adopted the Children's Charter and laid the foundations for new developments.

The crippled occupy the attention of more volunteer and professional agencies than any other type of child service.

The suggested program expressed by the conference was a complete social and educational program for crippled children, they should be treated, in so far as it is possible, as normal children. Potential causes of crippling should be discovered in order to remove as many handicaps as possible. Orthopedic surgery must be followed by adequate after-cares, including plans for education and placement.

The waste intailed by orthopedic surgery without adequate after-care has been one of the tragedies in the story of crippled children. The problems of the later adolescent and early adult years are more acute and less adequately provided for than those of any other age group.

Infantile paralysis, tuberculosis, rickets, and cerebral palsy lead the list of diseases that make orthopedic care and special education necessary. We know that much of the damage done by these diseases can be largely, if not wholly, prevented.

A complete state program for care of crippled children may be so outlined:

That every state have laws and machinery so that all crippled children must be reported to some responsible department- city, county, or state.

T hat specialized medical and surgical care be made available; that this care include the special therapies and appliances and that the quality of all services be safeguarded.

That a proper distribution of beds for acute, convalescent, and custodial cases be secured and that adequate follow-up service and parental cooperation be planned.

That every crippled child, wherever he may be, receive education at public expense and that this education include vocational guidanc, training, and placement, of a type that will secure and safeguard remunerative employment.

That wherever necessary, public funds be provided to assist in securing the above services.

Last and very important, that the general public be kept interested through the human touch which enlightens and enlivens everybody to the importance of the rights of crippled children and the economy of fitting them in to the normal life of their communities.

A constant evaluation of the end-results of years of work is needed in order that we may know what successes may be copied, what failures may be provided, and what may be estimated as the approximate cost of a well-rounded program of adequate care for a crippled child.

While it is recognized that local conditions must control the amount and type of service rendered to any crippled child, it is both economic and humanitarian to see that states are encouraged to give every crippled child a fair chance. There need be few crippled adults if we stress "prevention" and "early, adequate care" of the potential and the actual crippled child.

I think the program outlined at the 1930 conference has been very well carried out. At the 1940 conference held in January, more steps were taken to see the child as a whole- family, immediate enviornment and a larger enviornment. In order to accomplish this end- meeting the needs of all children- the conference recommended action in certain fields long under cultivation; economic resources of families in need, housing, education, leisure- time services, library facilities, protection against child labor, vocational preparation and employment opportunities for youth, health services and medical care, help for children under special disadvantages, and the children in families of minority groups, as well as those of migrant agricultural families.

These problems are to be studied and in the next 10 years more and more developments will have taken place to change and improve what has gone before.

LEGISLATION

The first legislation enacted for the care of cripples was state legislation for the establishment of state-owned and maintained institutions. Between I897 and I906 four of these state-owned and maintained institutions were established. The Minnesota law, which was passed in I897, provided that the State University was to care for all cripples within a radius of ten miles of the university, without charge. In I899 the first state institutions were provided for in Nebraska. Subsequent investigation and circumstances in these states led, in I9I9 and I92I, to a new type of legislation for crippled children. In I9I0 the second state institution was established in Minnesota. In I9I3 a similar law was passed in Michigan, and in less than two years, another by Iowa, thes laws providing that the crippled should be cared for only by the state universities, through their medical schools and hospitals.

T he law which went into effect in Ohio in I92I provided for a decentralized plan of caring for cripples. It emphasized family care of such persons rather than institutional care and sought to fix upon the counties and the state the costs and the responsibility for the quality of treatment. It is undoubtedly the best law which has thus far been passed in the United States. It provides for care, education, rehabilitation and placement, centralizes the efforts of various groups working in the interest of the cripple, and utilizes private enterprises and interests to the utmost. The parents or guardians of a crippled child may make application for care and education to the children's court. The judge then makes inquiry to find out to what extent the parents are able to meet the costs, and reports to the welfare department. Thereafter the child is taken to the institution. The State Welfare Department pays the costs, which are then charged to the county of which the child is a resident. The county in turn may demand partial or full payment of costs from the parents, according to their ability to pay.

Indiana now has a similar law, as have New York, Oklahoma, California, Oregon, Kansas, and Missouri.

States which make provision for the care of crippled children are as follows: Massachusetts, education and care; Michigan, education and care; Minnesota, education and care; Montana, surgical treatment and care; Nebraska, surgical treatment and care; New Jersey, surgical treatment and care; New York, surgical treatment and care; North Carolina, surgical treatment and care; North Dakota, surgical treatment and care; Ohio, surgical treatment, care and education; Oregon, surgical treatment and care; Pennsylvania, surgical treatment, care and education; Texas, surgical treatment and care; Vermont, surgical treatment and care; West Virginia, surgical treatment; and Wisconsin, surgical treatment, care and education.

In 1935 Grants to States for Maternal and Child Welfare were made by an Act of Congress.

Sec 5II--For the purpose of enabling each state to extend and improve (especially in rural areas and in areas suffering from severe economic distress) as far as practicable under the conditions in such state, services for locating crippled children and for providing medical, surgical, corrective and other services and care, and facilities for diagnosis hospitalization, and aftercare for children who are crippled or who are suffering from conditions which lead to crippling there is hereby authorized to be appropriated for each fiscal year beginning with the physical year ending June 30, 1936 the sum of $2,850,000. The sums made available under this section shall be used for making payments to States which have submitted, and had approved by the Chief of the Children's Bureau State plans for such services.

$20,000 to each state and remainder according to need of the states as determined by number of crippled children in need of services and cost of furnishing such services.

State requirements:

I. Financial participation by states

2. Provide for administration of plan by a State agency.

3. Provide for methods of administration as are necessary for efficient operation of plan.

4. Keep reports and send them to Sec. of Labor.

5. Provide for carrying out purposes specified in Sec. 5II.

6. Provide for cooperation with medical, health, nursing, and welfare groups and organizations and with any agency in such state charged with administering state Laws providing for vocational rehabilitation of physically handicapped children.

Amount to be paid quarterly. To be one half of amount expended under state plan. Estimates according to state plan. If states amount is less than ½ of total sum, the Sec. of Labor looks into the situation and finds out where sources difference is to dervied.

State Plan:

I. In effect in all political subdivision of state and if administered by them be mandatory.

2. Provide for financial participation by state.

3. State agency to administer or supervise plan.

4. Blind--provided that any person denied aid may demand a hearing.

5. Provide for methods of administration.

6. Make reports.

7. No aid if he is receiving old age assistance.

Will not fulfill the following;

Any residence requirement which excludes any resident of the state who has resided therin five years during the nine years immediately preceeding the application for aid and has resided therein continuously for one year immediately preceeding the application.

Duty to provide educational opportunities for:

Duty of every school board within the state of Oregon to provide educational opportunities for the various physically handicapped children in the school district between the ages of 6 and 20 who have not alteady acquired the usual branches of education of the Ist 8 grades of public schools taught in the state. Optionally can provide for education from 9-I2 grades if they have reached this capacity.

Physically handicapped children defined:

Any person between ages of 6 and 20 inclusive who in opinion of county supt. or city supt. has intellectual capacity and mental health to profit by intruction but cannot because of physical imparement take advantage of ordinary educational facilities and the incapacity must have been continuous over a period of 2 mo.

Enrollment in Schools:

Any person responsible for handicapped children must report to the school clerk the name, addresses and ages of both they and the handicapped children. It shall be optional if they have passed the Ist 8 grades. School clerk must report these to county supt.

Budget Allowance:

Board of directors of school district must sit aside money in budget for education of those children. This sum is not to be less than the total per capita cost nor more than twice had they been enrolled in the public schools the preceeding year. The Board must determine the number of handicapped children for this purpose.

This money shall be expended to increase the general education or to promote civil and vocational effectiveness. If this money is not set aside the county supt. shall make this up and sum up and give it to the county court who will levy a tax on all taxable proerty for the education of these children.

T eachers Employment--Qualification:

The district school board shall employ a sufficient number of competent and qualified teachers to instruct these children and they must hold certificate to teach in Oregon. The state supt. of public instruction may issue a one year certificate without examination to teach manual or vocation subjects. The district school board may optionally employ hourly teachers who will teach in the home or in a special school and in that event will pay for transportation to and from school if they teach manual and vocational courses.

The district school board will make rules regarding instruction and courses of children as will secure reasonable amount of instruction for amount of money available.

State supt. will provide for observation, inspection and supervision of work of instructing children and will cooperate with the district school boards. County supt. will inforce this regulation. If the school district refuses to do this the county supt. shall retain from such a district the money due them. T he county and city supt. shall determine in all cases what children are entitled to benefits of this act and shall have authority to require a physical or mental examination and if an adverse decision of supt's. and parents or guardian the state supt. shall settle the matter.

If the parents or guardian fail to comply with this act they shall be deemed guilty of misdemeanor and be fined not less than $10 or more than $100 and not less than 5 days or more than 50 days in jail or both depending upon the court.

In 1937 the law in Oregon was greatly improved. An act to enable the state of Oregon to extend and improve services for locating crippled children and providing medical, surgical, correction, and other services to children if utilities for hospitalization and after care of children who are crippled or suffering from conditions leading to crippling. State Relief Comm. to administer this act. They will disburse all funds made available. To cooperate with medical, health, nursing and welfare groups and organizations and any agencies charged with administering state laws providing for vocational rehabilitation of physically handicapped children.

And in 1939 we find still further changes. State public Welfare Comm. hereby is designated as the agency of the state to administer a program of services for children who are crippled or who are suffering from conditions which lead to crippling, and to supervise the administration of these services included in the program which are not administered directly by it.

The State Public Welfare Comm. is authorized:

I. To make all necessary rules and regulations for administering services to crippled children under this act.

2. To accept and disburse any and all federal funds made available to the STate of Oregon for services for crippled children.

3. To make such reports in such form and containing such information as may from time to time be required by the federal government and comply with such provisions as may from time to time be foun necessary, to insure correctness and verification of such reports.

4. To cooperate with medical, health, nursing and welfare groups and organizations and with and agencies in the state charged with physically handicapped children.

Dean of Me. School shall serve without additional compensation as medical director of the crippled children program under this act, and shall have power to:

Establish qualifications of medical, nursing and other personnel employed in connection with services to crippled children.

Establish standards of medical practice, hospitalization, nursing and other services and diagnostic clinics.

County Public Welfare Departments are hereby authorized and empowered in their discretion to accept custody of children and to provide care support and protection services for children handicapped by physical or mental disabilities.

SOCIAL AGENCIES

In 1908 in Elyria, Ohio, Edgar Allen organized the International Society for Crippled Children. He interested available organizations throughout the world to work for this cause.

As early as 1889 a group of Cleveland girls had organized the Sunbeam Circle, which eleven years later had established the first kindergarten for crippled children at Alta House.

In 1900 was organized in New York City, the Association for the Aid of Crippled Children.

In 1914, a New Haven group had organized the Crippled Children's Aid Society.

Thirteen years ago, one man assumed the task of calling the attention of his fellow citizens to the responsibility they were shirking. Mr. Douglas Crawford McMurtrie, at that time Cirector of the Red Cross Institute for Crippled and Disabled Men in New York City, was certainly the pioneer in the movement to awaken the American public to the problem that was facing it. In the great metropolis, the Association for the Aid of Crippled Children co-operated with the Board of Education in transporting children to and from school, and maintained eight nurses, who endeavored to improve home conditions. A limited number of convalescent homes and orthopedic hospitals was caring for a few of the handicapped, but existing agencies were isolated exceptions.

For a period of five years, Mr. McMurtrie published a prodigious amount of literature urging education and better facilities. He aroused sufficient interest so that in 1912, the Russell Sage Foundation employed Miss Edith Reeves to make a personal survey of thirty-seven existing institutions. Two years later she published the first comprehensive study of the subject ever written, the Care and Education of Crippled Children in the United States.

The infantile paralysis epidemic of 1916 lent a new impetus to the creation of organizations for the aid of cripples, and appropriation of time and money for this purpose by national fraternal and social organizations. During the years 1917-1919, all efforts turned to war work, and the post-war rehabilitation of crippled soldiers. But the great International organization was soon to take up its task.

In 1924 six types of social agencies assume the task of aiding their unfortunate little neighbors. There is first the International Society, a group of state and provincial societies which aim to increase non-professional interest in the problem. The central office forms a clearing house for the exchange of information; and a guiding factor to direct the efforts of the state societies toward sponsoring efficient and expedient legislation and operating machinery. A second group is composed of the international social and fraternal societies whose member clubs are making themselves socially valuable by doing individual case work to aid local handicapped children or co-operating with existing agencies to locate the cases. Other such organizations have national programs for this type of work.

A third type of social agency is the national philanthropic organization, which finds the problem of the crippled child a necessary part of its charitable program. A fourth group is the official state of national government agencies, whose duty is to promote education throughout their territory, or increase general welfare. A fifth group, the local philanthropic organizations, undertakes to solve the problem in a particular community. In addition to all of these, there are the local groups which select the problem of the crippled child as the object of their energies for a limited period, or to dispose of certain charitably endowed funds.

The state societies of the International Society for Crippled Children are founded on the principle that there are three fundamental divisions of the work for crippled children, "the lacking of any one of which, as we see it, makes impossible the sum total. They are these:

"I. The Professional, which has to do with the hospitals, convalescent homes, orthopedists, the medical profession, the nurse, the Social Service worker and the schools.

"2. The Financial, whereby the price of the cure must be available, which, we believe, should be the duty of the state through legislation, either direct from the state treasury or from charging the cost back to the county from which the child comes. Ninety per cent of the children lack the price of cure.

"3. T he Human. After the first two have been provided, there must be some organization, and we are thoroughly convinced that it should be a state organization which has a definite purpose and which has the interest of the crippled child at heart, adding the human touch in connection with the professional and financial, being an originating and policing agency, and seeing to it that the machinery set up should week by week, month by month, and year by year, function."

Aiming to form the third of these elements, there are at the present time ten state societies, the Illinois, Ohio, Michigan, New York, Ontario, Pennsylvania, Kentucky, Tennessee, Virginia, and West Virginia organizations. Others are in the process of construction. Each of these groups has a president, one or more vice presidents, a secretary-treasure, or separate officers for these positions, and in several states, "field" or executive secretaries who devote all of their time to surveying the field of action, inciting new enthusiasm, and ascertaining that the work is progressing.

Among international social organizations whose member clubs are doing local case work or co-operating with existing agencies, are Kiwanis Clubs, the Benevolent Protective Order of Elks, the Exchange Clubs, the King's Daughters, and the Lions Clubs. The Kiwanis Clubs, whose membership includes over 83,000 leading business and professional men in over I,IOO cities of the United States and Canada, have adopted an official program to aid under-privileged children.

At the Eighth Annual Convention of Kiwanis Clubs, held in Denver, Colorado, July I6-I9, I924, one hundred and forty-five culbs were reported interested in physically defective, or crippled, children. This work ranges from isolated case-work to the endowment of orthopedic wards, as was sone at the Memorial Hospital, in Johnstown, Pa., or supporting a central orthopedic hospital, as sixty per cent of the Kiwanis Clubs in Indiana are reported to be doing.

Elks' work, although by no means confined to New Jersey, is outstandingly extensive and effective in that State. The New Jersey States Elks' Association appointed a Crippled Kiddies' Committee, which in turn recommended that the Exalted Ruler of every Lodge in the State appoint a similar group. Surveys were made in the various localities, and contacts were established with the various functional state departments. A medical advisory board supervised the clinical work, the State Department of Labor made available their entire medical and rehabilitation staff, equipment, facilities, and established clinics; the Department of Health offered the co-operation of

Child Hygiene nurses for follow-up work; and educational facilities were provided by the Department of Education, under the state laws of Committees, under the state laws of I92I. In June, 1924, fifty New Jersey Elks' Crippled Kiddies Committees, aided by the Department of Health, were holding clinics, providing braces, casts, and other necessities, operating convalescent homes, sending children to hospitals for care and treatment, conducting outings, and doing similar valuable work.

Masons are another group of international scope aiding crippled children. The Nobles of the Imperial Shrine each pay an annual contribution of $2.00, which is being devoted to the erection of children's orthopedic hospitals throughout the United States. A Board of Trustees is now operating five institutions: the Shreveport, La.; Twin Cities (Minneapolis- St. Paul, Minnesota); San Francisco, California; Portland, Oregon; and St Louis, Missouri, Shriners' Hospitals. In addition, there is the Mobile Unit, which holds clinics in the various Hawaiian Islands and sends the children to Honolulu hospitals, or gives them home treatment. Hospitals are under construction at Springfield, Mass., and Montreal, Canada. Sites have been chosen in Chicago, Illinois, and Philadelphia, Pennsylvania.

On May I, 1924, in addition to 243 chikdren which had been treated and dismissed by the Mobile Unit, 700 children had been received as patients in the various hospitals and 500 had been dismissed, restored to normal condition or greatly improved.

In addition to the institutions operated by the central committee, the Nobles of the Hella Temple, Dallas, Texas, maintain an orthopedic hospital for children, the Korsair Temple, at Louisville, Kentucky, plans to open a convalescent home, the Al Chymia Temple in Memphis, Tennessee, has erected an addition to the Children's Hospital School, operated by the King's Daughters Circle; and the Scottish Rite Masons of Atlanta, Georgia, operate the Scottish Rite Hospital for Crippled Children. This was the first Masonic institution for crippled children in existence, opened in 1915, a new building having been erected two years later. The Masonic hospitals, all of which have waiting lists, are open to patients of any creed or race, and have become a very important factor in the treatment of crippled children throughout the country.

National organizations whose programs include aiding crippled children to various degrees, are the Russell Sage Foundation, the Rockefeller Foundation, the American Red Cross, local chapters of which are frequently doing active clinical work, the Salvation Army, the American Child Health Association, the American Orthopedic Association, the American Medical Association, the American Hospital Association, the National Education Association, the National Welfare Association, the Department of Health, Washington, D. C., the National Tuberculosis Association, the Boy Scouts of America, and the Rockefeller Institute of New York City.

The actual operative machinery which supports the care, cure, and education of crippledchildren is, in most states, in the hands of State Departments. The authority for their work will be studied in greater detail in the next chapter, but some account of ther function is necessary in a discussion of social agencies.

In Ohio, the work of State Departments is probably better developed and wider in scope than anywhere else in this country. When a Rotary Club or other agency wishes to hold a clinic. a public health nurse is generally furnished by the State Department of Health to proceed with follow-up work, and sometimes to assist at the clinic. One of the interested parties submits the child to the judiciary in the person of a judge of the Juvenile Court, who in turn may commit the child into the temporary custody of the State Department of Welfare. If the latter accepts the child, arrangements are made for care and treatment, the cost of which is paid from a rotating fund, and charged back to the county from which the child was received. As soon as the child is in the convalescent stage, the State Department of Education provides instruction, either at the bedside or at home.

In other states, these departments function in this movement to varying degrees. State Boards of Control are frequently responsible for special institutions for crippled children. The judiciary is almost invariably responsible for commitment. Some states, less active in work to aid crippled children, merely make appropriations to Departments of Health, or Public Welfare, a portion of which is to be devoted to the care of indigent handicapped children of all types.

The Federal and State Rehabilitation Bureaus undertake the problem of placing cripples in suitable vocations at the end of their academic training. In Ohio, the Civilian Rehabilitation Service frequently receives direct co-operation from the teachers in the schools for crippled children, who ascertain to which vocation the pupils seem best fitted and make a report to the Director of the Service. The child is then frequently placed immediately upon graduation.

Local interested agencies vary in activity from providing complete clinical, educational, transportation, and convalescent facilities as does the Association for the Aid of Crippled Children, in New York City, to finding vocational opportunities. The Association in New York City, an organization with over three hundred members and many more contributors, on January I, I924, had 3,024 cases under observation. A special bus, owned by the Society, brings the children to schools, hospitals, or clinics. Sixteen home nurses, employed by the Association, during the year I923 made 44,509 home, hospital, and dispensary visits. A number of children are sent annually to the summer convalescent home at Tarrytown, New York.

The Association for Crippled and Disabled, in Cleveland, Ohio, which in I9I8 merged with the Sunbeam Association, conducts an Orthopedic Center, at which is located a branch of the Civilian Rehabilitation Service, The Sunbeam Shop, a salesroom for products made by the clients of the organization, the Sunbeam Training School and Workroom, a Home Industies Departmen, a Physiotherapy Department, a brace shop, and the headquarters of the following committees: The Committee on the Welfare of Cripples in Institutions, the Social Service Department, the Committee on Co-operation with the Public Schools, the Cleveland Chapter of the American Physiotherapy Association, and the Orthopedic Council, which furnishes professional advice whenever needed.

An example of a local organization giving limited attention to the problem of the crippled child, is that of the Philadelphia North American. During the unusually hot summer of I90I, this paper opened a cottage on the beach at Atlantic City, New Jersey, for those children who ordinarily participated in its outings in Farimont Park, but who were too weak to make the trip. A member of the editorial staff, feeling a keen sympathy for these little ones, held a party on his porch and charged for ice cream and lemonade. The proceeds were donated to the Outing Fund. The event was given some publicity, and soon "porch parties" became a city-wide fad. By the end of the summer, enough money had been received to open the North American Sanitarium in Ventnor, a suburb of Atlantic City. This institution eventually became an all-year-round "surgical" tuberculosis sanatorium for children, in which form it exists today.

An example of a temporarily interested organization is the James Whicomb Riley Memorial Association. Wishing to commemorate the name of their great poet, the people of Indiana organized this corporation, which, in addition to receiving state aid, is raising funds by subscription to build a $2,000,000 children's hospital adjacent to the Robert W. Long Hospital, in Indianapolis. This institution will have a large orthopedic service.

Temporary organizations have at times been created to conduct surveys of cripples. Three of these surveys, the first held in Birmingham, England, in 1911; the second in Cleveland, Ohio, in 1916; and the third in New York City in 1919, have received international recognition. A fourth was undertaken by the Child Welfare Council of Toronto, Canada, in 1923. In addition to many lesser surveys, conducted more or less comprehensively by interested groups in smaller cities, an extensive movement, is now in progress in Chicago.

Except for a census of the maimed and crippled, completed in Massachusetts in 1905, the Birmingham survey was, the first investigation of this type ever conducted. The Massachusetts census merely attempted tp ascertain the number of handicapped, whereas the British investigation arrived at some definite conclusions regarding causative disease, availability of facilities, and ratio of cripples to population. It was conducted by a special Sub-committee of Inquiry, working under the central Birmingham Education Committee, and was a model for the work conducted in Cleveland, five years later.

The Welfare Federation of Cleveland appointed a special Committee on Cripples, in 1915, to survey conditions in that city. The work was assisted financially by the Sunbeam Association, which also co-operated with active service. A house-to-house canvass, and visits to 150,000 families located 4,186 physically handicapped persons, of which 49% had been disabled in childhood.

On April 4, 1919, as a result of the efforts of the New York Committee on After-Care of Infantile Paralysis Cases, representatives of forty-one organizations, associations, and hospitals, appointed a Special Committee on Survey of Cripples, which undertook to survey six typical districts of the city. It was found that full information could be acquired only by questioning domestic servants and janitors, in addition to the families in each home. Relatives were hesitant about disclosing the fact that one of their number was handicapped physically. This fact probably explains shy so many local and less carefully conducted surveys show only a comparatively small number of cripples per thousand population.

Canvassers in this survey were instructed to make as little use of the word "cripple" as possible. They were to state the purpose of their visit in other terms, make sure that the family visited understood that they were giving no financial assistance, promise that all information was to be confidential, credit no information from children, avoid using chidren as interpreters if possible, make note if persons interviewed were of extremely low grade mentally, become familiar with charitable organizations in the district, in order to be able to consult these for further information, and fill out cards.

Because the effort to aid the 350,000 physically handicapped children of this continent is a comparatively new field of philathropy and needs intensified activity, because cripples of any age are particularly difficult to locate, due to the traditional disgrace attached to this condition, because any worhy field of philanthropic endeavor is essentially the responsibility of neighbors, and because such service is highly valuable to the happiness of those who serve, the wide-spread participation of social agencies in the movement to aid crippled children is necessary and highly valuable to those who are aided and those who participate.

Inter-dependence of units is characteristic of all society. Under normal conditions, it exists unnoticed and without special impetus. Under abnormal conditions, conditions, such as are correlated with the problem of the physically handicapped, the resuting isolation of individuals breaks otherwise normal social relationships. Thus, as we study the problem of the crippled child and solution, we become more and more convinced that the keynote of all efforts in this field should be co-ordination between the various active agencies, and between their component units.

The necessity for such guided and enlightened unity is preeminently discernible in this work because the needs of crippledchildren are so varied as to place demands on many diversified fields of social activity. There is a great army of pediatricians, orthopedists, and general physicians to whom the crippled child is but one of a great mass of individuals requiring physical and constitutional remedy. There are the doctors of preventive medicine and also the associated group of social hygienists, who are interested in improving public health by preventive measures. The physically handicapped form a distinct educational problem. Similarly, those who aim to relive destitution are constantly confronted with the necessity of aiding these cases. To those who provide vocational guidance and to those who operate industries, cripples have always been a problem.

The great danger in these activities is that the ultimate solution will become a mirage to each crippled individual. Those who would aim to provide remedy without co-operating with educators to make available school facilities, place the child in the position of the prospector who has discovered gold, but has no means of transporting it to metropolitan markets. Those who would educate without co-operating with others who would relieve hunger, are equally culpable. Educational facilities which do not co-operate with the agencies which render vocational assistance are quite ineffective.

The greatest degree of unity in this movement has been achieved within individual institutions. We find the orthopedic hospital, the special class, the social service department, the out-patient department, and the general advisory medical staff combined in the modern hospital school or orthopedic center. Here the local board of educatin furnishes teachers; the nurses' association provides social service workers; the local Rotary, Kiwanis, or Elks' Club discovers cases and achieves personal contact with the patients; and the convalescent, operative, and medical facilities are in co-ordinated service to the child.

No such unity has as yet been achieved between national or local social agencies. The International Society for Crippled Children has made more progress in that direction than has any other agency in this field; and still it is far from a central binding agency for all institutions and organizations. The Bureau of Information of this society was organized for the purpose of making possible those national contacts, and the Public Relations' Committee is at present endeavoring to complete them. Some organization (similar to the National Tuberculosis Association for those who are endeavoring to solve the tuberculosis problem) eventually must act as a central medium for the exchange of information and a stimulus to co-ordinated activity. It might very well be an existing group, such as the International Society, which may be supported and maintained by all interested individuals and organizations in the United States and Canada.

Hastings H. Hart, Director of the Department of Child-Helping of the Russell Sage Foundation, addressed the 1923 convention of the International Society as follows: "I want to say a word about co-operation. This is a tremendous movement. It is going to take a lot of money and interest. It ought to enlist the co-operation and good will of the entire community. I think that you can afford to put in a whole lot of effort to enlist the mutual co-operation of all the different agencies of people in your community.

"Take this hospital proposition. If the Masonic organization is going to build hospitals for crippled children, and the Kiwanians and Rotarians are going to carry on clinic work, unless you are working together you are just as sure to get into an injurious competition as to go ahead. You have seen the jealousy that arises when two hospitals or two organizations have undertaken the same kind of philanthropic work. This can all be prevented by a spirit of conciliation before it be too late to accomplish that thing.

"Now gentlemen, I congratulate you in this job, but you can't make a bigger mistake than to make this an organization of bachelors. If the women are not with you, you are going to let slip by you a whole lot. I have worked along these lines about fifty years. I find the co-operation of men and women in work for little children very essential, and you can't afford to go it alone. You wouldn't think of establishing a hospital and putting in it none but men nurses. You can't do it. The same holds true with regard to the organization. I am sure you are going to want the women."

Since the presentation of the speech quoted above, an agreement has been reached between the Shrine Hospital Committee and the International Society whereby several of the members of the former organization are representatives on the Advisory Board of the latter. Many Rotary Clubs have arranged for the co-operation of wives in the crippled children activities. Most of the present work of this organization is directed toward more complete national co-ordination.

Intra-state, the co-ordination has been achieved to varying degrees of completion. The Illinois Society for Crippled Children, in a recently published program, planned to enlist the co-operation of all interested organizations, namely, the Illinois Department of Health, the Russell Sage Foundation, the Rockefeller Institute, the American Institute of Orthopedic Surgeons, the American Hospital Association, the National Education Association, the National Welfare Association, the American Red Cross, the American Legion, (for assistance in securing beneficial legislation), the Knights of Columbus (for the same purpose), and the Shrine. Representatives of the Shrine, the State Department of Health, and the Illinois Society met in Chicago in 1923 and planned the following program:

I. The State Department of Health will concentrate on prevention.

2. The Shrine will concentrate on providing hospital beds for the "operative" and convalescent patients.

3. The Illinois Society will turn its attention to the ambulatory patients.

4. All three will co-operate in securing expedient legislation.

In contrast may be cited a conference of orthopedic surgeons held in Harrisburg, Pennsylvania, March 24, 1924, under the auspices of the State Department of Welfare. An excellent group of suggestions was proposed, but no means was provided for putting them into operation. Accordingly, a second conference was held in the Senate Caucus Room, two months later. The meeting discussed the application of the Ohio plan in Pennsylvania, the function of the various professions and active social groups in completing this movement, the need of hospital beds in that state, and the necessity of avoiding pauperization. The group appointed a committee to meet monthly and formulate a program to be adopted by another conference to be called in December, 1924. The co-ordinated activities of Pennsylvania are now rapidly reaching efficiency and bringing that state to a place of leadership in the movement to aid crippled children.

When the first burst of Rotary enthusiasm brought Ohio into crippled child activities, co-ordination was sadly lacking. Clinics were held without public health nurse assistance or direction, and children were committed in wholesale lots to hospitals which were not ready to care for them. Family physicians were deprived of one pay case after another by free clinicians who examined children, diagnosed cases, and sent them to free remedial facilities regardless of whether they were able to pay or not. Had this in-co-ordinated activity continued, something similar to state medicine would have superseded private practice in Ohio, and all impetus for medical and surgical development would have disappeared.

Through the efforts of the Ohio Society for Crippled Children and the State Department of Health this disorganized and dangerous practice was first checked and finally corrected, until, at present, Ohio state departments and local social groups are working in harmony and handling the problem effectively. The co-operation of clinical facilities with family physicians cannot be too strongly urged. In the first place, the family doctor is in the best position to aid in arriving at a correct diagnosis of the case. In the second place, inasmuch as the medical profession as a troup has rendered, without charge, unlimited social service in caring for destitute cases everywhere, it is only fair that indiscriminate free facilities should not deprive physicians of patients who can pay for their services. No physician should object to a second and assisting diagnosis of either free or pay patients. From the very beginning, however, the family physician should be consulted, and given the opportunity of caring for all of those patients who can remunerate him for his services. A third reason for such co-operation is the desirability of making free services available for as many indigent patients as possible, and not depriving them of these opportunities by using funds for less needy persons.

CHAPTER V

Discovery and Diagnosis

Discovery of the crippled child has been enhanced by the passage of legislation requiring the registration of congenital cripples. This has stimulated a procedure in large general hospitals according to which orthopedic specialists examine newborn babies for major or minor defects that might easily be overlooked by the obstetrician or the general practitioner. Such conditions as torticollis, congenital hip dislocation or mild cases of clubfeet are sometimes difficult to detect. The State Director of Public Health in Ohio, by an administrative order, requires the Bureau of Natal Statistics to obtain birth reports of children with congenital defects. The law requires special blanks to be filled out in detail. Only Wisconsin and New Jersey require registration of congenital cripples at birth. Michigan requires the enumeration of all its cripples. New York State demands that the State Advisory Commission for handicapped persons keep a register of all crippled children between birth and the age of eighteen years. Ohio requires that the school enumeration must list separately all crippled children. Illinois requires that the truant officers, or other school officials in each school district, shall report and enroll every crippled child. In Missouri the local board of education must ascertain annually the number of crippled children in each school district. In Oregon every parent, guardian or other person having control of a crippled child between the ages of six and eighteen years, who has not yet completed the first eight grades of the public school, shall enroll such child for instruction with the clerk of the district school where such child is resident. It is further the duty of the district school clerk to enumerate at the time of the annual census the age, residence and post-office address of each crippled child and to make a report to the county superintendent.

In Kentucky a law was passed in 1924 providing a commission for the care and treatment of crippled children, combined with a survey.

In Pennsylvania it is the duty of the secretary of the school board, teachers and attendance officers in each school district to report annually to the medical inspector of the school district and to the district or county superintendent of schools every child between the age of eight and sixteen, who, because of apparent exceptional physical condition, is not being properly educated and trained. The medical inspector is then required to examine such child and make a report to the proper school officer as to whether the child is a fit subject for specific education and training.

In Wyoming it is the duty of the state board of education to investigate and ascertain what children, residents of the state, proposed for education and training, may be suitable for care among those with arrested physical developments or other physical defects resulting from infantile paralysis or other causes.

Other legal regulations affecting the care of the crippled are concerned with the establishment of diagnostic centers and clinics for examination and consultation. The clearest law covering this activity has been enacted in California, where the State Department of Health is charged with the responsibility of equipping local centers for the examination of crippled children and for the making of such examination in the homes wherever necessary. In Michigan, according to the law of 1927, the list of crippled children is to be sent by the state superintendent of public schools to the secretary of the commission for the care of crippled children. In Pennsylvania the State Department of Public Welfare, and in Colorado the State Department of Education, control the diagnosis and care of crippled children.

CRIPPLED CHILDREN'S PROGRAM

The national program has already been discussed in the topic legislation. However, how Oregon lives up to this plan is very different.

Federal funds from the act are matched on a fifty-fifty basis by the state. The official state agency is the State Public Welfare Commission so designated by law.

Oregon Plan:

Administrative Plan. The administration of Crippled Children's Benefits are conducted by means of a Crippled Children's Division of the State Public Welfare Commission of Oregon. The Medical Director is responsible for the operation of the Crippled Children's Division. His full-time Assistant Medical Director is responsible to him for the actual operation of the program, all of which is subject to the approval of the State Public Welfare Commission acting through its administrative staff. A supervising orthopedic nurse and a medical social work supervisor will coordinate her activities in accordance with the policies developed by the Medical Social Worker of the Medical Program of the State Public Welfare Commission. Two additional orthopedic nurses will assist in organizing and directing the county public health nursing phase of the program. A social case worker under the supervision of the Children's Department of the Multnomah County Public Welfare Commission will act as a foster home finder and supervisor at the treatment center. A secretary, senior stenographer and stenographer in the central office will assist in the preparation of records, reports, correspondence, and other duties as may be necessary. A full-time auditor and clerk are employed for accounting, auditing and disbursing services.

(1) Duties of Personnel

(a) Medical Director. The dean of the Medical School has been designated by law as Medical Director of the program and is to have the responsibility of the operation of the division including the appointment of personnel, establishment of policies and direction of administration, all to be subject to approval of the State Public Welfare Commission, acting through its administrative staff.

(b) Assistant to the Medical Director. The Secretary of the Medical School shall act instead of the Medical Director, as he may direct within the scope of the authority of the Medical Director.

(c) Assistant Medical Director. A full-time orthopedic surgeon is employed as Assistant Medical Director. He is responsible for the operation of the program under the direction of the Medical Director. His responsibilities include:

1. The administration of the central office personnel and their activities.

2. Authentication of all disbursements necessary for operation of Crippled Children's activities.

3. Liaison officer between professional medical groups, public health agencies and the public at large relative to the activities of the Cripplied Children's Division of the State Public Welfare Commission.

4. The promotion of sound general policies in agencies outside of the State Public Welfare Commission relative to care of Crippled Children.

5. Preparation of such reports and such forms containing such information as from time to time may be required by the Federal Government, and complying with such provision as may from time to time be found necessary to insure correctness and verification of such reports.

(d) Orthopedic Supervisory Nurse

1. To assist the Director and the Assistant Medical Director in establishing service for crippled children in Oregon in the following operations:

(1) Organizing the nursing staff of the Crippled Children's Division.

(2) Establishing supervisory nursing districts.

(3) Organizing diagnositc clinics.

(4) Working out with the Division of Public Health Nursing, in the State Department of Health, a cooperative plan for the extension of orthopedic nursing to the counties of the State.

(5) Assist in maintaining a State Registry for Crippled Children.

(6) Providing after care nursing service.

(7) Working out a cooperative plan in counties for the correlation of nursing and social service activities.

2. To supervise orthopedic activities of the Crippled Children's Program by means of:

(1) District supervision of the County Public Health Nurses.

(2) Participation in regional conferences of Public Health Nurses.

(3) Arranging preliminary details for diagnostic clinic.

(4) Training County Public Health Nurses in record and report making, essential in the Oregon Crippled Children's Program.

3. To participate in the development of community programs for Crippled Children.

(e) Orthopedic Nurses. Orthopedic nurses are to have supervisory jurisdiction by districts and are to carry out direct service in those counties where public health nurses are not available.

(f) Supervising Medical Social Worker. The supervising Medical Social Worker is to assist in organizing a county Crippled Children's Service through the existing County Public Welfare staff. A closely supervised social service for crippled children can be maintained through the existing county service. Social service supervision will not be carried out by districts but by direct contact through county staffs. It will be her duty to:

1. Interpret medical findings to the family, or to the local social worker, or to the Public Health Nurse when it is found expedient on cooperative cases for her to do so.

2. Develop the medical social work program of the Crippled Children's Division to conform with the policies of the medical social plan of the Medical Program of the State Public Welfare Commission.

3. Assist in the development of medical social work in counties and hospitals participating in the Crippled Children's Program.

4. Supervise all medical social work activities of the Crippled Children's Division and participate in the educational program for local social workers and public health nurses.

5. Render direct service where adequate social work service cannot be secured through county units.

(g) Case Worker for Foster Home Placement. A case worker is employed, on full-time basis from the staff of the Multnomah County Public Welfare Commission, to organize Foster-Home Placement Service in the Multnomah County for patients from all counties of the state requiring foster-home convalescent care.

(2) Selection of Personnel.

(a) Qualifications for personnel of the orthopedic surgeons operating within the program are as follows: Only surgeons who are certified by the American Board of Orthopedic Surgery are eligible to operate within the program.

(b) Qualifications of the medical social worker will be those standards recommended by the American Association of Medical Social Workers to the Crippled Children's Division, Children's Bureau, U.S. Department of labor.

(c) Nurses in the program must be registered public health nurses, who have had post-graduate training in orthopedic nursing.

(d) Physical therapy technician must be registered with the American Registry of Physical Therapy Technicians.

(e) Special Medical Consultations will be provided by physicians who are recognized as well qualified in their specialty.

The standards accepted by the program were developed by the Medical Directory, so that they would harmonize as closely as possible with the previously established standards of the Children's Bureau, and the recognized geographical and economic situations in the State of Oregon. The Medical Advisory Committee have been consulted by the Medical Director in regard to the standards for personnel. A Civil Service System is not to be followed in the selection of personnel. The selection of personnel will follow the merit system of the State Public Welfare Commission.

Activities.

(1) Official State Agency.

(a) Locating crippled children. Crippled children are located through several sources which include the State

Survey of Handicapped Children made by the Oregon State Board of Health; reports of school teachers to the County Superintendent; lists from the Shriners Hospital for Crippled Children, Portland, Oregon; lists from the Doernbecher Memorial Hospital, Portland, Oregon and private physicians. Preschool clinics are also asked to refer their cases of crippled children.

(b) State Register of Crippled Children.

Children classified as having a crippled condition or a condition which may lead to crippling, will form the basis of a continuing study. The names will be received from many sources, as follows; Lay groups, social workers, physicians, county nurses, teacher and others.

After these cases have been given a definite diagnosis by a private staff physician, indicating an orthopedic condition, the patient's name will be listed on the State Register. Additions to the State Register will be made from the survey list as cases are known and diagnosed, providing a record of the number of Crippled Children in Oregon. All will be known to the Crippled Children's Division, but many will not be under the direct supervision for medical care. Names will be removed from the Register for the following reasons: (1) death, (2) removal from the state, (3) relief of condition, (4) attainment of the age of twenty-one.

The diagnostic service for emergency cases will be given with the approval ~~of~~ a member of the Crippled Children's staff in the private offices of the panel physicians.

Types of personnel available for clinic service are as follows:

Orthopedic surgeon and/or Assistant Medical Director

Pediatrician

Supervising orthopedic nurse and orthopedic nurses from the Crippled Children's Division.

Physiotherapist

Local Public Health Nurses

Medical Social Worker

Local volunteer service to help take care of children, serve lunch, etc.

Clinics will be held in buildings where x-ray facilities are available if possible.

(c) Provision for diagnosis and treatment services other than at hospitals or clinics.

Cases needing emergency treatment or diagnosis for whom the itinerant diagnostic clinics are not available are to be examined by orthopedic surgeons on the panel in their private offices in Portland.

(d) Requirements and procedures with regard to acceptance for care.

Any crippled child whose disability is included under the types of crippling conditions eligible for care who is under twenty-one years of age of apparent normal mentality, who is a resident of the State of Oregon, and whose medical need places his family in economic distress, and who has been referred by a physician, is eligible for acceptance in the Crippled Children's Division.

(e) Hospitalization. Four hospitals in Portland will be used in the state plan.

Hospital admission procedures. Whenever medical care for an eligible crippled child is indicated by a physician who is accepted on the panel of the Crippled Children's Division, the Assistant Medical Director will review the physician's findings and recommendations and if he finds them in order, he will give written authorization to a hospital where the crippled child's physician would send his private patients.

(f) Foster Home Care. Foster home care is available at the treatment center when so indicated.

(g) Aftercare services.

Medical care supervision locally rests with the Medical Director and/or Assistant Medical Director in guiding the family physician, county doctor, and occasionally the county health officer.

Public Health Nursing service will be available through the County Public Health Nurses. This health supervision work in the homes of Crippled Children will be conducted by guidance from orthopedic nurses of the Crippled Children's Division.

Physical therapy--through physical education teachers in secondary schools and public health nurses under supervision of the Physiotherapist of the Crippled Children's Division.

General social service by the County Public Welfare staff will be available with guidance from the State Crippled Children's Staff through the Department of Social Work and Medical Social Worker of the Crippled Children's Division.

Child Guidance Clinic Extension Program of the University of Oregon Medical School - "Purpose of the Child Guidance Program - The purpose of this program is to effect the educational and emotional readjustment of those children handicapped by an inability to learn through the usual teaching methods adopted in the public school system and needing adjustment other than in the schoolroom. There are individuals who, because of physical handicaps, need special encouragement and direction in order to become adjusted in the community or to their own associates". The administrative committee consists of the Associate Dean of the University of Oregon Medical School, the Secretary of the Medical School, three psychiatrists and a supervisor of psychiatric social work.

Education - The State law provides for home teachers for crippled children through the eighth grade.

(h) Transportation of crippled children.

The responsibility for the arrangements of patient and escort transportation to and from district clinics and treatment center will belong to the local agencies. The cost of transportation to and from Portland for corrective care will be paid from the funds of this budget in those instances where the local unit or volunteer agencies are unable to meet the cost.

Authorization will be made by requisition in individual cases and payment on voucher of the business office of the official agency. Travel will be accomplished by train or bus and is to include living expenses enroute at the regular state allowances. Escort service will be required whenever necessary for those cases coming to and from Portland, the charity rate (half-price rail-road fare) used on special authorization by the State Public Welfare Commission, will be used insofar as possible. There is no State owned transportation system. Transportation in private cars of State or County staff is not approved.

(2) Activities of local political subdivisions. The County Public Welfare Commission is the responsible agency in each county of the State of Oregon for the Crippled Children's Division. It will be the duty of the County Public Welfare Commissions to foster cooperative relationship with Public Health Units, the organized medical profession, and local organizations interested in the crippled child's welfare. The County Public Welfare Commission will assist in locating crippled children, providing field clinic facilities for children acceptable for care, determination of their recommendation of financial eligibility for assistance through public monies, and developing a generalized social service program for the Crippled Children's Program, concerning especially the aftercare of the patients.

(3) Activities of other State agencies related to the Crippled Children's Program.

The Public Health Nursing Services under the supervision of the Oregon State Board of Health, Division of Public Health Nursing are available on request of the Crippled Children's Division. Nurses from the county health unit direct the health supervision of all crippled children's homes in their respective counties. County health nurses participate in all Crippled Children's Division field clinics. The county health nurses visit crippled children's homes as they find necessary, and also upon request of the Crippled Children's Division.

The Crippled Children's Division will participate in the staff education program for the county public health nurses. The Crippled Children's Division has been alloted four meetings each at twelve centers, with approximately eighty to one-hundred hours devoted to orthopedic survey courses, and orthopedic nursing instructions. The program will be conducted from September, 1939 through June, 1940.

Vocational guidance and vocational rehabilitation services provided by the State of Oregon are available on selective referral by the Crippled Children's Division. The Vocational Rehabilitation Service in the State of Oregon is operated by two people, one of whom attends every Crippled Children's Division field clinic.

The State law provides for home teachers for crippled children through the eighth grade. The crippled children in foster boarding homes and hospitals used by the Crippled Children's Division do not have education facilities except at the Doernbecher Memorial Hospital for Children. At the present time the Adult Education Department of the Works Progress Administration is developing a project for education in the hospital and foster boarding home facilities at the treatment center, except Vocational Rehabilitation where it is preferred that the individual be over sixteen years of age and his high school education completed.

(4) Activities of private agencies.

The Shriners Hospital for Crippled Children in Portland will treat all children under fourteen years of age who meet their eligibility standards except when their waiting list would interfere with treatment to the best interests to the child. If such conditions were evident the child would be accepted for care by the Crippled Children's Division, if found to meet the eligibility standards. All burn contractures and cases of plastic work on the face are being referred from the Shriners Hospital to the Crippled Children's Division for consideration. All children whose treatment would extend over the Shriners upper age limit are referred to the Crippled Children's Division for consideration.

All crippled children whose general or special care cannot be provided by the Shriners Hospital are referred to the Crippled Children's Division for consideration.

Medical summaries of all crippled children in Oregon who have received or are receiving care at the Shriners

Hospital are provided the Crippled Children's Division for their records, and especially for use in the Crippled Children's Division field clinics. Copies of medical summaries of patients of the Crippled Children's Division who have been known to the Shriners Hospital will be sent to that agency.

Reports to the Secretary of Labor. The State Public Welfare Commission will make such reports in such form and containing such information as the Secretary of Labor may from time to time find necessary to assure the correctness and verification of such form and containing such information as the Secretary of Labor may from time to time find necessary to assure the correctness and verification of such reports.

The Oregon State Medical Society has approved the Crippled Children's Program and have instructed their component societies to provide a Committee on the Medical Care of Crippled Children's Division.

The Oregon State Board of Health is cooperating with the Crippled Children's Division by joint staff conferences, referral of Crippled Children from birth and contagion reporting, central supervision of county health units regarding Crippled Children's Services.

California Plan:

With the allocation of grants-in-aid to the states, the California State Department of Public Health was enabled during this biennium to develop a more extensive and well defined program for the care of crippled children. Public opinion, interest, and a program already inaugurated provided the background for a broader scope of activities. The basic foundation had been prepared some years before when the State Legislature passed the Crippled Children's Act of 1927. From that date the department carried on a program for crippled children which, through necessity, was limited in finances and personnel but was as adequate as conditions permitted. The increased funds, made available through the U. S. Children's Bureau, gave opportunity for organizing the unit now known as Crippled Children Services enlarging the entire program, thus increasing the benefits offered to crippled children.

California's program, as conceived, is essentially for application in rural areas.

As it now operates, the present program of aid for crippled children is carried out in two ways: First, direct services, such as diagnostic clinics, hospitalization, and after care of crippled children administered directly by the Crippled Children Services; and second, indirect services, which are established where local county programs for crippled children can be supervised and expanded through the use of additional funds.

These services are offered crippled children under the provisions of the Crippled Children's Act of 1927 which defines a crippled child as a "physically handicapped child" and limits the application of the Act to those under 18 years of age. However, the U. S. Children's Bureau extends the age limit to 21 years but limits the use of funds to those children defined as a "crippled child." In this report the term crippled will apply to physically handicapped individuals under 21 years of age.

In those counties which give services to crippled children within the county jurisdiction, and which have received approval for their standards of care, the Director of the State Department of Public Health appointed a special agent who is responsible, in a liaison capacity, for the administration of the service. He transmits all necessary records and is responsible for the setting up of county funds for matching purposes.

Some local services also appoint a Professional Advisory Committee. This committee must approve the medical reports and recommendations for care of crippled children before such reports are submitted to the Director of the State Department of Public Health for his approval. Where no local Professional Advisory Committee functions, the local services make use of the State Professional Advisory Committee.

At this time, the personnel working in local programs and under supervision of the Crippled Children Services includes: Public health nurses, 43; nurses in hospitals, 6; welfare agents, 2; county physicians, 2; social workers, 4; probation offiers, 1; and physiotherapy technicians, 1.

In those counties not administered directly by the Crippled Children Services its representatives visit and inspect facilities for locating and caring for crippled children in order to maintain uniform standards of care throughout the state. These visits and inspections are made at intervals of approximately three months.

Besides the local units with which the Crippled Children Services work in an advisory capacity, there are other departments with which the services are developed cooperatively. These include: Child Welfare Services; State Department of Social Welfare; Bureau of Vocational Rehabilitation, State Department of Education; service clubs; and women's organizations.

Also the Crippled Children Services, in the absence of an adequate local staff, will make arrangements to provide facilities for the care of physically handicapped children whenever possible.

In May, 1936, a qualified medical social worker was appointed under Civil Service to be in charge of the Crippled Children Services, under the supervision of the Director of the State Department of Public Health. The present chief of the services took over the duties in June of that year and at that time, a public health nurse and a stenographer were also assigned. From then until the appointment of a second medical social worker in April, 1937, plans for coordinating the services and formulating a complete program for the care of crippled children were thoroughly studied before final adoption. The mechanics for the functioning of the program were evolved and the necessary contacts were made with all public and private agencies interested in the work.

Among the many accomplishments of this formulative period were the completion of plans for a state register for crippled children, diagnostic clinics, and the selection of hospitalization centers. Fee schedules for hospitalization charges, specialists' charges for professional services, as well as charges for convalescent care, foster home care, appliances, and other services were also worked out. The outlining of acceptable fee schedules was accomplished with the assistance of the members of the Professional Advisory Committee, and by conferences with other private physicians, and with individuals in charge of hospitals and convalescent homes.

In short, during this two year period, the groundwork for the program was laid by the chief of the services with the guidance and under the supervision of the Director of the State Department of Public Health, with the assistance of the professional and lay advisory committees, public and private agencies interested and involved in furthering the crippled children's program in the state.

Under the present plan, the Crippled Children Services is responsible for the following activities:

1. The registration and filing of all known cases of crippled children under the age of 21.

2. The examination of crippled children admitted to diagnostic clinics held in counties throughout the state.

3. The segregation, through public and private agents, of those children whose parents are unable to provide proper care either in whole or in part; those who may receive care through local agencies; and those who require hospitalization and surgical care under the provisions of this program.

4. Supervision of all cases requiring corrective measures.

5. Medical, nursing, physical therapy, after-care and supervision to be given to all cases requiring corrective measures.

6. Supervision of all local programs for the care of crippled children.

7. Formulation and supervision of an educational program for patents, professional and lay groups, health officers, and other official agents.

9. Strengthening existing organizations for the care of crippled children throughout the state and inaugurating for use, wherever possible, new organizations or facilities when these meet the required standards.

One of the many activities of the Crippled Children Services is the organization and holding of diagnostic clinics. These are an important phase of the work as they tend to arouse public interest in the care and prevention of deformities, and to bring about the coordination of all individuals and agencies interested in the problem of the crippled child. They bring expert diagnostic service to crippled children in rural areas who otherwise might never be aware of the possibilities of physical restoration. According to the plan, the clinics are held in various counties throughout the state where a sufficient number of crippled children warrants the organization of such clinics. Usually, the locations are in communities far removed from hospitalization centers and are held at intervals of six months if there are enough cases under treatment or supervision to warrant holding subsequent clinics.

Before a clinic is held, a medical social worker, or a public health nurse attached to the Crippled Children Services, goes into the county to arrange for its organization and to stimulate the interest of the community in the service. This preliminary field work usually consists of contacting members of the county board of supervisors, the county health officers, the school superintendent, public health and school nurses, and other individuals and groups interested or able to assist in finding crippled children entitled to care under the provisions of the program. Private physicians are visited also and the latter are invited to bring their private patients to the clinic for consultation with the specialists, if such private cases fit the classifications set up by the Crippled Children's Act and the U. S. Children's Bureau provisions.

The personnel for the clinics includes an orthopedic specialist, a public health nurse, a medical social worker, and a stenographer. The clinician may be assisted by a plastic surgeon, an ophthalmologist, an orthodontist, a pediatrician, or some other specialist, depending upon the known types of cases to be examined. Lay assistance is always available through the work of interested volunteers who materially assist in conducting a diagnostic clinic.

Attendance at the clinics averaged 43 patients. Additional clinicians are appointed if the known or estimated number of patients to be admitted is more than one clinician can adequately examine. Also, time must be allowed during the hours of the clinic to permit parents the opportunity of discussing with them the recommendations made by the specialists.

Much interest has been shown by private physicians in these diagnostic clinics. They have brought some of their patients for diagnoses and often were so keenly interested in the work of the clinicians they remained to observe and discuss with them treatment recommended. In this manner expert and up to date techniques are made available to private physicians in the more rural communities by the clinical services of the specialists.

After a clinic has been held, follow-up work is then begun by the medical social worker in conjunction with health and welfare agencies and responsible persons in the community. This work consists chiefly in arranging for the care recommended by orthopedic or other specialists. Included in the arrangements are: provision for treatment, hospitalization, surgery, or supervision; provision for braces or other appliances; and arrangement for appointments and transportation facilities to and from medical centers. When patients are returned to the community it is necessary for the field workers to arrange, in many cases, for their home treatment and often their return to the hospital for further treatment.

Records of the medical findings and recommendations made when the diagnostic clinics are held as well as subsequent reports of medical care, progress of the patients, and recommendations are made in duplicate and are forwarded to the county health officers and to the public health or school nurses concerned with the care of the crippled child. This helps to coordinate the work of the Crippled Children Services with that carried on in the counties, and makes adequate records available to all concerned.

Films were shown throughout the state at meetings of service and women's clubs, and at the request of any public or private group interested in the program for the care of crippled children.

Much has been accomplished in fostering and furthering the Crippled Children Services program throughout the state through formal and informal talks given by the chief and the workers in the field. These talks have been given before county medical societies, service clubs, Parent Teacher Association units, and women's organizations, as well as to other interested groups. A radio talk has also been given.

Newspaper publicity for the diagnostic clinics was obtained by sending out advance release notices for the dates of the clinics, purposes of the clinics, and types of crippling conditions eligible for examination. Releases were given immediately after the clinic reporting the number and types of crippled child, notices and reports were sent to the public health or school nurse, or the secretary of the interested organization. In general, by means of an informal campaign, education for the program was carried on by the staff in all the counties participating in the work.

Washington Plan:

The Division for Children is one of six divisions constituting the State Department of Social Security as created by the 1937 legislature. The Supervisor of the Division is appointed by the Director of the Department and is responsible to him for the general administration and direction of the Division.

It is the function of the Division for Children to make available necessary services for dependent, neglected and handicapped children in Washington, in order to assure a minimum standard of care for children in their own homes and for those who have been placed outside their own homes. The Division realizes its responsibility as a statewide planning agency and to carry out this responsibility, attempts to know the needs of children in the state.

The central state staff consists of the supervisor who has general charge of the whole Children's Program, an associate supervisor who is responsible for Child Welfare Services and case-work supervision; in addition there are field consultants and assistant supervisors who have responsibility for the Aid to Dependent Children, Child Welfare Services and Crippled Children's Programs, and inspection and approval of child caring agencies and institutions; a children's worker who assists in directing the boarding home program, and a consultant psychologist.

The five main services of the division are:

1. Aid to Dependent Children in their own homes
2. Certification of foster homes
3. Certification of private child caring agencies and institutions
4. Services to crippled children
5. Child Welfare Services

Through the Crippled Children's Program, services are provided for any child under 21 years of age who is of normal mentality, who is crippled, and whose parents are not financially able to assume full responsibility for his treatment. Service includes diagnostic clinic examinations for any child under 21, orthopedic treatment as indicated for children from 14 to 21, and referral to a private hospital unit for children under 14 for whom orthopedic care is indicated.

Through this program, orthopedic shoes, braces and artificial appliances are purchased for any crippled child whose need cannot be met through family or local finances. Physically handicapped children are referred to the State Vocational Rehabilitation Division, of the State Department of Education, for vocational training. From January, 1936 to May, 1938, there have been 34 diagnostic clinics held and 1549 children examined. 419 children had completed or are receiving treatment under the Crippled Children's Program. Six have been treated and received vocational training and are now in private employment. This program is under the general direction of an assistant supervisor. There is a medical social worker in each of the four cities referred to as "Hospital Centers," in which the children are hospitalized.

The State receives 50-50 matching from the Federal Government for funds expended in this program.

The children's workers in the county welfare departments cooperate with the public health nurses in locating crippled children and arranging for their attendance at clinic where they are examined by orthopedic surgeons and recommendations for orthopedic treatment are made. When children are accepted for care by the orthopedic committee, cases are again referred to children's workers to make a study of the family, including the economic situation, and to make necessary arrangements for hospitalization. During the time that children are in the hospital centers, the medical social workers keep in touch with workers in the counties as to the children's needs and plans for discharge, and arrange for their care in convalescent foster homes when this is indicated.

RESTORATION

Orthopedic nursing is primarily surgical nursing but with three distinctions: many patients require a long time for correction or restoration, mechanical apparatus is used far more extensively, fresh air and sunshine are of utmost importance to the orthopedic patient.

Orthopedics is a specialized branch of surgery, and we should also realized that orthopedic nursing is a specialized branch of nursing.

Special characteristics, study, and training are required on the part of the orthopedic nurse.

Observation, exactness, humanity, firmness as to kind of condition of appliances used, gentleness, persistence, manual skill, intuition, and patience.

The care of an orthopedic patient should be considered from three aspects:

1. Whole life--restoring him to his normal place in his community as a self-supporting citizen.

2. Partial life--a permanently crippled, handicapped individual, able, perhaps to support himself partially but always dependent to a greater or lesser degree.

3. No life--failure or inability to maintain any life at all.

A nurse is with orthopedic patients constantly and can do a great deal to educate the families of such patients to the longdrawn out care necessary for recovery.

The field for orthopedic nurses is an ever-growing one. The public health orthopedic nurse is the interpreter of hospital and clinic procedures in the homes of patients. She helps complete and continue the work of the surgeon, the hospital and the dispensary in the prevention and correction of deformities. She aids in reeducation of patients by means of prescribed exercises, massages, and physical therapy, always of course, following the orders given by the physician in charge of the patient. She aids in the maintenance and efficacy of splints, frames, and other appliances necessary in the patient's treatment.

In this state by agreement with the State Board of Health, the county public health nurse will provide public health nursing service in their respective districts to the crippled children.

The functions of a county public health nurse pertaining to Crippled Children are:

1. Assist in compiling a county register of crippled children.

2. Plan for early observation and reporting of congenital malformation and birth injuries.

3. Assists in prevention of crippling conditions through programs of Maternal and Child Health.

4. Give instructions in nursing care of the acute stages of crippling conditions and to instruct the laity under the physicians' orders how to prevent deformity.

5. Supervise the after-care of patients in their homes when the problem is primarily demanding public health nursing care and cooperate with all agencies in the after-care of all crippled children.

6. Assist in the organization of diagnostic clinics under direction of the orthopedic nurses of the Crippled Children's Division.

7. Participate in diagnostic clinics with reference to securing of local assistance, places and equipment, applications, assisting doctors, recording and interpreting recommendations and planning care of patients as they apply to nursing.

CHAPTER VI

One Type of Orthopedic Condition

Poliomyelitis

POLIOMYELITIS

In this paper I will treat poliomyelitis as a special problem in the orthopeic and crippled children programs.

In the state of Oregon for 1938 we find 6 deaths from poliomyelitis and 15 cases reported. However, from reports there were 3 deaths not reported as cases.

There has been a high incidence of poliomyelitis since 1907 when it first became a serious problem in America. In that year a great epidemic occured in New York followed by a widespread incidence in the United States and Canada. In 1916 in New York which was recognized as one of the greatest epidemics in the United States there were about 27,000 cases recognized, 80% of whom were under 15 years of age. At this time many of the social agencies now in existence were started to aid crippled children not only from poliomyelitis, but other crippling conditions as well.

Of 3 2 orthopedic hospitals in the United States reporting various types of crippling conditions poliomyelitis was by far the highest in cases seen. This is true of statistics given from other hospitals and state boards of health.

Poliomyelitis is due to an infectious agent and is considered contagious although the exact mode of invasion is still undetermined. It is known that the virus is filterable and that the respiratory tract is the most likely port of entry of the infection into the body, whereby it is carried to the spinal cord by means of the blood stream and lymphatics. Although the first intimation of it may be a fall, this is not its cause, but rather effect of weakness resulting from the disease. Immediately or perhaps a few hours after a fall, the child may become more or less helpless in its limbs, may vomit or have severe diarrhea while the head may draw backward or the neck muscles may be rigid and a very high fever may prevail.

Many cases of moderate or slight paraylysis occur without any of these symptoms being noticed. In cases of marked deformities, it is not uncommon that parents fail to recall any attack of fever or other illness. An occasional "upset stomach" or "loose bowels" is so common to childhood that it is readily forgotten and its significance not understood.

This disease is most frequent between the ages of eighteen months and three years. While it may occur in children from twelve to twenty years of age and even in adults, it is usually less severe in these older subjects. It is more frequently contracted during the summer months and often occurs in epidemic form, many cases appearing in a community at the same time.

The paralysis is due to toxemia, congestion and swelling in the substance of the spinal cord producing damage to the motor nerves of the anterior horn through pressure, constriction, anemia, and degeneration of the nerve cells. The nerve tissue of the spinal cord is compressed and either partially or wholly destroyed, so that the motor nerves to the limbs no longer receive vital messages through portions of the spinal cord. When the degree of destruction is uneven throughout the cord, the muscle paralysis is affected proportionately, and when the cord tissue has been destroyed completely, there will be no regeneration.

Where the destruction of nerve cells is not too great and the cord tissues have not been too severely compressed by hemorrhage and swelling, improvement will take place gradually. When only certain muscles are affected, gradual improvement will take place in legs that were at first completely paralyzed. In such cases undue credit may be claimed for effecting a cure, for the improvement might have taken place naturally without outside assistance.

Paralysis of the legs is more common than that of the arms. Except at the hips, the muscles on the front of the legs are more often affected than those at the back. Infantile paralysis is of the flaccid type, the part being limp, weak, and helpless. It is distinctly different from the spastic type of paralysis, wherein the muscles draw up tightly as an effort is made to use them, and remain contracted despite all attempts to relax or control them.

The treatment and nursing care:

The acute phase may be regarded as beginning of the onset and lasting until the tenderness of the affected limbs has practically disappeared. In the early stages the bowels should be thoroughly opened at once. Alkaline and antiseptic sprays to the nose and throat are useful. The handkerchiefs should be sterilized. Water should be taken freely. Hot packs will help elimination and relieve the pain in the limbs. An ice cap should be kept to the head. No specific medication has as yet been proved successful. There are certain medical measures which are useful and should be employed as early as possible. Serum treatment and spinal fluid or blood transfusion from one recently afflicted with the disease may be tried if the diagnosis is made early enough. The most important step in early treatment is complete rest and support of the affected limbs. This may be accomplished very well with pillows or sand bags for the first few days. As soon as the general condition will permit, however, usually after a week or ten days, more permanent splinting should be arranged. Plaster casts are most convenient and efficient for the first six weeks. The patient usually feels perfectly well after the first few days, but the disease process in the spinal cord does not clear up for six or seven weeks and activity during this period is harmful to the delicate spinal cord tissue, which is undergoing repair from the inflammation and hemorrhage that have occurred. Massage, scientifically applied to the affected muscled, will aid in preventing wasting of their substance, but the paralyzed muscles should remain completely relaxed and not be moved or stretched actively or passively except under strict supervision of some one trained in the art of muscle training. Under water muscle training has become a popular form of treatment. Braces must be worn until full growth of the child is attained, unless the muscles return to good function or corrective surgical procedures are successful. Deformity will occur if bracing is omitted.

The convalescent phase-- the child is more active and trying to use the affected member, tenderness has gone but the power to execute certain movements is impaired or lost. But there is a continual gain and under all conditions of treatment or neglect, improvement occurs for a while. When the tenderness has disappeared it becomes no longer necessary to keep the patient in bed or so quiet as while the acute process was going on, but greater freedom is desirable from every point of view, and sitting up constitutes the first stage of progress. This should be done with the aid of pillows. The second state of progress is walking. As soon as this is possible, ambulatory activity should be encouraged as that exercise is good for the muscles, Careful watch must be kept for signs of fatigue. The sense of equilibrium is often greatly impaired by the prolonged recumbency and when the patient thus severely affected is placed on his feet his is quite unable to keep any balance either with or without crutches. The sense of balance must be reckoned with by itself as independent of the paralysis and is perhaps one of the first needs of the case beginning on ambulatory treatment.

At this stage there are two primary requirements: the prevention of permanent deformity and the restoration of all possible muscular power to affected muscles. The prevention of deformity is too little insisted on, and it is probable that the occurrence of serious fixed deformity is, except in paralysis of the spine and hip, nearly always unnecessary. The presence of a fixed deformity is an obstacle to any treatment either by apparatus, muscle training or operation to improve function.

The chronic phase--this is the stage of stationary paralysis and the time when fixed deformities become evident and when the operative question arise. The mechanical needs of the paralyzed limb from a therapeutic point of view are much the same as they were before and the patient with a paralyzed quadriceps muscle will still need a brace, and the advisability of massage and muscle training still exists although holding out less favorable prospects than in the previous phase. Moreover the question of fat igue at this stage is also of importance and many a patient is keeping his muscles far below their possible power by unrestricted walking while in others the muscles are definitely losing power from overuse. Surgery, therefore, has become a very important asset to the cripple. It is unfortunate that so many people have a false notion and fear of surgery. Orthopedic operations are seldom dangerous to life and are often so simple that not even a scar can be seen. Operative procedures should not be undertaken in less than three years after the onset of the disease. Correction can be accomplished even in adult life.

Nursing Duties

Acute Stage (first to third week)

Prevention

Avoid foods, such as overripe fruit, that cause the child to have diarrhea.

Prevent overheating or exposure to cold.

Isolate a child with the disease, or see that his room is screened.

Wear mask and gloves when caring for a child with the disease.

Keep room free from flies. Avoid pets.

Keep other children away from a child who has disease, for at least three weeks.

Burn excretions. Boil clothes, bed linen, and utensils.

Care of Patient

As soon as the child is known to have fever or diarrhea, keep him in bed.

Increase elimination by giving much water.

If constipated, use oil enema or, if necessary, one of soapsuds.

Milk, soup, and liquid foods for diet.

For fever, as high as 103 to 104 degrees F., bathe with tepid water.

Have smooth, soft mattresses, but firm springs for the bed, Keep linen dry.

Support paralyzed limbs with rolled blankets or pillows.

Keep feet supported to right angle with leg.

Keep child on his face or side most of the time. Do not move limbs or roll or carry child to lessen pain. It might increase damage to spinal cord.

Warm bath, 98 to 100 degrees, with gentle stroking of limbs will relieve pain. Jars filled with warm water may be kept near the limbs to equalize circulation. Do not draw triangular form of diaper up between legs.

Fold in rectangle and pin around buttocks and legs.

Prevent noise. Prohibit visiting and talking in room.

Child is usually better handled by nurse than by mother.

Subacute State (third to sixth week)

At no time should paralyzed muscles lie unsupported.

If not splinted, keep them relaxed by pillows or bandages.

If plaster or other splints are applied, do not allow them to become soiled by excretions. Urine soaked splints will cause sore.

Cooked fruit and vegetables may be added to diet.

Warm bath, 98 to 100 degrees daily. If splints are removable, child may lie in water and lightly exercise the muscles which are returning to life. Do not tire out a weak muscle. Do not let the limb hang unsupported. It may be stroked and massaged while in the water. Electricity is not so important as proper splinting and graduated exercise for weak muscles. When electricity and massage are used, it should be done under the direction of an orthopedic surgeion.

Chronic Stage (six weeks and beyond)

Braces may be applied to limbs, so that child can walk.

Do not rely on a catalogue or a brace maker's opinion as to the type of braces to wear. Consult th orthopedic surgeon who knows what muscles need protection.

Night braces should be worn. The paralyzed muscles must never be allowed to stretch.

Do not exercise a weak muscle to the point of fatigue.

Keep braces oiled. Do not let the joints get out of line.

Muscle training is very important. Each muscle should be analyzed as to its strength and exercised accordingly.

Good muscles can sometimes be trained to do the work of those paralyzed. The physiotherapist or orthopedic surgeon will have to direct such work.

Operation should not be performed before the third year.

Keep patient and parents interested in the treatment and cooperative.

The problem of rehabilitation for the crippled is a very important one. The personality adjustment as well as occupation the patient is of great importance. The handicapped patient should always be treated as much as possible to his abnormality. Children must have the opportunity for education. A physically handicapped child is a special educational problem. Except in cases of gross brain defect, there is a developing mind as well as developing body to be considered. One of the first tasks of vocational guidance is the analysis of vocations, the various forms of which are known as vocational, occupational and job analysis. The application of vocational guidance principles are implied in any program of guiding crippled children toward occupations consistent with their mental and physical capacities and with social and economic attitudes. Only through adequate surveys can the extent of the social problem of crippled children be made known. Such surveys serve not only to discover the child early and this facilitate physical restoration and reducation of the disability but they also stimulate public and private agencies can participate. In planning the ultimate economic independence of the crippled child, we are concerned with lessening his physical handicap through surgical and medical care and furnishing him with a proper elementary education. Our further task to study the crippled child and to try to discover his abilities, tastes, ambitions and aptitudes, and to give him free vocational training, looking to his eventual employment at some task in keeping with his ability.

CHAPTER VII

Personality of the Crippled Child

SOCIAL ATTITUDE

The social attitudes that have complicated the problems of the handicapped, that have made self-expression and adjustment more difficult than they would otherwise have been are essentially two: Psychosocial Prejudice and Economic Prejudice.

Psychosocial prejudice is expressed as an aversion toward the crippled, deformed and disabled. This aversion may be traced back to primitive attitudes toward the disabled. As a result of these attitudes, the disabled person finds himself limited in his opportunities for self-expression and in his ability to adapt and adjust himself to his environment. In addition to his actual physical limitation he bears the further burden of social restrictions which make the task of maintaining himself difficult, if not impossible.

The earliest organized social interest shown for the disables was in the 18th century. Even then progress was very slow, for the defectives were merely cast upon the pity and the mercy of their fellow men. The goal was to confine them--to get them off the streets. Monasteries were thrown open and converted into asylums. The assumption of the place of a father on a large scale to the unfortunate and defective was at least a distinct change in attitude, a mark of more solicitous attention. All the provisions made during the 18th century, however, merely offered asylum to the disabled, and made no provision for their proper care or education.

In the 19th century attention was called to child welfare through the poor laws and the factory laws. Public interest in the disabled was thus increased. But even then, at first, they were still regarded primarily as objects of pity. Cripples were gathered together in homes and work houses for incurables, or hidden in their own homes, while occasionally they were aided and cared for by some philanthropic worker. The significant change in attitude toward them has come in the last 75 years.

Social and private efforts for the care of cripples made rapid progress with the growth of medical science. A distict advance in attitude and treatment resulted. The rise of the science of orthopedics provided the first step toward the adequate management of the problem. The power to improve the defective physically, the insistence upon change and remodeling rather than the former submission to the inevitable or the pious acceptance of an unfortunate condition, characterize all subsequent endearo. With the development of actual experience in orthopaedics, more efficient means were found to change the social attitude, as well as to ameliorate the physical deformities of the cripple. However, the repugnance and distaste with which the cripple has been regarded throughout history still prevails. Although modern society has become humane to the extent of feeling called upon to provide care and even education for all of its disabled members, it has not yet progressed so far as to overcome entirely a reaction of repulsion to all departures from the normal of human kind. This attitude of the general public toward any one disabled naturally reacts upon that person himself, and is the cause of one of the most difficult problems with which the worker in this field has to deal. The social aversion to the cripple must be overcome and the disabled person must be brought out of his timidity and retreat. The disabled man must not only be cared for and educated so that he may be able to fill an independent place in the social and economic life of society, but the attitude of the general public of children, parents, workers, and employers must be changed, so that the afflicted person will be accepted by them as a natural unit of the common society to which all belong.

The transactions of the White House Conference on Child Health and Protection illustrate how difficult is this problem of educating the general public--especially employers. There is no doubt that there is a growing recognition of the need of offering employment opportunities to the disabled, but the general public is still a problem which must be solved. Of what use are physical rehabilitation, education, and training, if the cripple is to meet with prejudice and exclusion on every side?

Prejudice is fundamentally an economic one. It must be entirely false in an objective sense. The capacity for work which is frequently evaluated in industrial accident cases is a concept that has no uniform interpretation.

Children who are handicapped in any way fall into these groups, depending upon the kind of parents they happen to have. This does not mean a difference in the amount of money that the parents have and can spend on the child; it means the difference in the way the child is brought up and how he looks at his ailment and the world. The crippled child may be spoiled, or he may be neglected, or he may be treated sensibly and correctly.

The first thing the parent of a crippled child must do is learn exactly what he or she has to face. Stock should be taken of the situation. The sensible parent will not try to make the child's condition either better or worse than it really is. A sensible parent will try to realize fully the responsibility and will decide that the difficulty must be faced with courage and strength.

The first and worst difficulty is self-pity. Many parents pity themselves and show it in passing this pity on to their child. If the parent pities the child, the child will begin to pity himself and that is the most destructive thing to his morale and to his capacity for well being. He will soon become spoiled, irritable, exacting, wanting everything his own way, and doing nothing to help himself. Parents who pity themselves are the biggest stumbling block in the way of education of these children. Once the habit is acquired, it is hard to break, and they become a nuisance to themselves and to everyone else. They suffer unknown agonies which they needlessly inflict on themselves.

The second class of parents feel outraged that such a thing as a handicapped child has been wished on them through no fault of their own. They are liable to worry a bit, and then they shut the child out of their lives and emotions, as far as possible, and neglect him. They do not seem to feel any sense of responsibility, and they act as though the community should see that the child is cared for and educated. It is hard to deal with this class of parents. They either will not or cannot assume any responsibility and will rarely extend any cooperation, which after all is most needed when the child reaches the school age.

There is a third class of parents with good, hard, common sense. They are quick to realize that they have a problem on their hands, and they set about to learn how they can best solve it. They acquaint themselves with the type of handicap with which they have to deal. They get the best available technical and professional advice. They do the best they can to bring up the child in a sensible manner and do not waste time and energy in bemoaning their fate or that of the child.

The parents of a handicapped child must make up their minds to accept uncomplainingly the burden. It is essential for parents to learn that pity and worry are destructive. Pity and worry are habits which grow quickly and if indulged in they become fixed and unbreakable.

The child ought to be taught that he is to behave as other children do as far as is compatible with his physical possibilities. He should be made to feel and realize that he is not somebody set apart, but a person who has to live in the world like anyone else. He must make proper adjustment for his physical handicaps, of course, but these adjustments should serve as a stimulus rather than a handicap. It is important to teach the handicapped child to make decisions for himself. Even a normal child, when not allowed to make decisions for himself, will grow up to have a difficult time. This is much more evident in the physically handicapped child. The curse of idleness is just as detrimental to the handicapped child as it is to a normal individual. The physically handicapped are apt to acquire habbits of idleness because they cannot participate in all the activities of the other children. Consequently, programs of play and occupation which are compatable with the handicaps must be introduced into the lives of all such cases.

The following is a case study made while working with the Wasco County Health Department. I thought it might be of interest in showing the relationships of the various official and non-official agencies of Oregon.

Brock family

Father Perry, age 45

Mother Gertrude, age 32

Children Alene June, 14, the patient

Alice Jean, 14 the twin sister

Ernest G., 13.

Address, 615 E. 9th St., The Dalles, Oregon

Sources of Information

Handicapped Children's Survey record

Family case record in local Health Department

Case folder from crippled children's file

Family case record in Wasco County Public Welfare Commission

School records of two other children

Interviews with:

- Mother
- Miss Simpson, Consultant from crippled children's division
- Dr. Abele, Director of crippled children's division
- Mr. Sandoz, public welfare administrator
- Miss Spinning, public health nurse

I have selected Alene Brock for my case study. Alene is 15 years old and a twin having been born in Portland at the Albertina Kerry Nursery in 192 .

I chose Alene because of her many relationships with the various agencies in the county and state.

Alene was first known to the health department in May 1939.

Dr. Vogt and Dr. Griffith, private physicians, called the health officer, Dr. Erickson, asking him to see a patient of theirs. The health officer saw Alene and tentatively diagnosed her as having poliomyelitis. Her breathing was becoming rapidly impaired and immediate arrangements were made through the County Welfare Commission with the Crippled Children's Division in Portland for her to be taken by ambulance to Doernbecher Hospital for care in the mechanical respirator. Alene's father, Perry Brock, was working in Portland at this time, and the mother and two other children were home in quarantine.

Alene's condition did not improve and as soon as the quarantine period was up the mother and two children went to Portland to be near Alene. Her father was working off and on in Portland at this time, and the mother had been employed in The Dalles.

After about a month some improvement was noted in Alene's condition, and Mr. Brock and the two children wanted to come back to The Dalles. At this time Mr. Brock could not receive any help from Wasco County and the Welfare Commission moved Mr. Brock and the two children to Baker, Oregon.

They had formerly lived in Baker, and it was thought that some assistance could be given. Mrs. Brock remained in Portland during this time to be with her daughter.

About July 15, 1938, Doernbecher Hospital felt that Alene could be moved home, and Miss Feary of the Social Service Department at the University of Oregon Out-Patient Clinic, contacted Dr. G. G. Van Der Vlugt, county physician of Wasco County. Dr. Van Der Vlugt stated that the county couldn't assume responsibility for Alene's care, as they were residents of Baker County. Contact was then made with the Wasco County Public Welfare Commission and Baker County Public Welfare Commission. Arrangement for transportation to Baker was to be provided by the mother, and some expenses paid for her care. The father at this time was receiving help from the Baker Welfare Commission.

On July 22, 1939, the day set for Alene's removal from the hospital, her condition became worse and all arrangements were cancelled.

Later the father had trouble receiving help for his family and he sold their household furnishings and moved back to The Dalles.

About a month later Alene was improving so much that the Crippled Children's Division transferred her to a private hospital with general care. The parents both obtained work in The Dalles and were becoming very well adjusted.

Later in the fall Mrs. Brock contacted Miss Simpson in Portland, asking her if she could bring Alene home, as she was so lonesome. Miss Simpson told her that someone would come to her home and see about arrangements for home care. She also said that she must have her own private physician and advisory nursing care could be given from the county puclic health nurses. "However, no bedside nursing care," reported Miss Simpson.

Miss Simpson soon came down and with the local welfare administrator went to her home. Mrs. Brock explained that she had a family physician and that he would take care of Alene. Arrangements were made with her for a proper bed and some supplies would be sent from Portland. These consisted of a mattress, catheter, basin for catheter, and a bed pan. Mrs. Brock stated that Mr. Brock was now the janitor in a local hotel, and she was employed as a cook in a local cafe. Together they had an income of $90 a month.

Alene during this time was quite comfortable with no change noted in her condition. Her diagnosis had been changed to transvers myelities with prognosis guarded. Her condition then and nearly the same now is as follows: Paralyzed from upper abdomen to the toes.

She has several decubitus ulcers on the buttocks, which need constant attention. The dressings are supplied by a local service club and made up by the mother, who gives the nursing care. A very small amount of medication is given, those being vitamins, sedation, and urinary antiseptics. She has a retention catheter and each day is irrigated with Boric acid solution.

Nursing care mostly consists of giving nursing care to the decubitus ulcers and making the patient as comfortable as possible.

On December 20, 1939, Alene was brought home by ambulance from Portland. The cost of the ambulance was borne by Mrs. Brock, with advisory nursing care given by the public health nurses. The mother undertook the task of caring for Alene. The Crippled Children's Division had discharged her and only supervision as to nursing care is to be given until Alene reaches the age of 21.

Every week a nurse visits the home usually in the morning, as Mrs. Brock is employed in the afternoon. At this time suggestions are made concerning nursing care. Comfort with proper nursing care are the only things that can be done.

Since Alene's return home a larger catheter has been needed and with the doctors recommendation, a catheter has been ordered through the Health Department with Mrs. Brock paying for it. This is done because of the reduced price made through the health office.

Mrs. Brock has been doing a very excellent job of nursing care and the health nurses and Mrs. Brock have reached a very splendid working relationship.

The Crippled Children's Division has no further discretion in connection with the case, and so all care rests with the family, their private physician and public health department.

The entire family cooperate in caring for Alene. Her brother who attends a local junior high school keeps her in a good humor with his school tales. Alice, Alene's twin sister, who is in the junior high school, also helps entertain her sister.

Mrs. Brock is very intelligent and has an established routine for caring for Alene. A minimum of effort on her part with the most comfort for Alene are her goals.

Mr. Brock has recaptured much of his sense of security in caring for his family. His job and family all together have helped in adjusting each and every member.

The following agencies were interested in this case:

Wasco County Health Department

Doctor: diagnosing
quarantine
arrangement for transportation to treatment center through the Welfare Commission to the Crippled Children's Department

Nursing staff: nursing care in the home
supervision by the state orthopedic nurse

Wasco County Public Welfare Commission:

- arrangements for transportation
- clearing house of information from the Crippled Children's Division to the health department, from the state welfare commission to the local welfare commission
- financial participation for the family and patient care

Crippled Children's Division:

- certification of transportation through welfare commission
- hospitalization in Portland
- medical and nursing facilities in hospital
- supervisory care through local health department

This case has proved very interesting from the various relationships, the splendid courage of the family, and the interesting case itself.

When Alene was first in the hospital there was a great deal of publicity both locally and in other parts of the state. The Iron Lung is rather novel in its use and marvelous mechanism, consequently Alene's picture appeared quite frequently in the papers. In May her sister brought to Portland her eighth grade graduation diploma which made Alene and her family very happy.

She has quite a collection of stuffed dogs and other animals. She reads a great deal and looks through her scrapbook that she has containing newspaper articles about her experiences.

MENTAL ATTITUDES

In any study which deals with variations in human behavior and their management it is essential to define average "normal" behaving. Without such a baseline the deviations in personalities appear too often as isolated and unrelated to everyday human activity. As a matter of fact it is this failure to keep well in mind the facts of the average "man-function" that leads to such false concepts as that of the "criminal type," using the term to mean a distinct variety of personality. Fullest understanding of the impaired can only come with knowledge of the intact. However, the description of the average man-function is most difficult because of the numerous, and as yet, unknown factors, the complexity of the organism, and the rapidity of change in the characteristics brought about by the never-ending adjusting process.

A most important and yet most difficult task is to determine the quantity and quality of equipment with which the child began life. Certain potentialities, characteristics, and instinctual patterns are certainly inherited, but in individual cases it is impossible to do more than made gross estimates of the nature of these. Studies on the inheritance of factors in humans which might bring about mental illness or antisocial deviations point to the fact that "hereditarial flaws" must be considered in the evaluation of the problem. Most workers in this field are of the opinion that there is no such entity as a "born-criminal" in the strict sense; that is, there is no factor in the germ plasm that would predestine asocial or antisocial behavior, as eye color for example is determined.

Dr. Eugen Kahn, of Yale, believes that at birth the child may be arbitrarily divided into four spheres; i.e., physique (body build and type), temperament, drive or impulse life, and intelligence. This constitutes a matrix or core of the individual. Using a different approach, Plant has found five traits present from birth on, these being: alertness, complexity, pliability, temperament and cadence (rate of maturation, rate of obtaining goals). Thus we may have a man of powerful physique, warm resonant temperament, strong drive and average intelligence who is lacking in alertness, simple, rigid, and with good cadence. Such a description is an attempt to picture him in terms of his basic makeup.

With birth, the paradise the child has experienced in his life within the mother abruptly ends, and from that point on his basic nature begins to be shaped by his every-day exposures to his surroundings which are as variable as the fundamental personal qualities and quantities are. At the outset the child begins to experience his environment in terms of his basic traits striving for pleasurable things and avoiding unpleasant ones. All animals gravitate toward and seek pleasurable objects and experiences and avoid painful ones. If pain is constantly associated with that which is pleasurable there ensues a strong tendency to no longer seek his specific object. All children desire love, praise, attention and social approval and to obtain these will forego many immediate gratifying acts; also the withdrawal of these things brings the greatest type of distress. The child soon learns to deny himself immediate gratification in order to obtain the more stable, long-term gratification from society (parents, teachers, friends, etc.). Thus, from the first year on, the Pain-Pleasure principle plays a great role in molding the personality.

Observation of any child during the first two years reveals him to be selfish, self-centered, omnipotent, relatively uninhibited, animalistic and criminal. He knows only the rule of satisfying self, no matter to what trouble others are put. To him the object of the greatest interst and importance is himself, and so this period which usually lasts through the first five years has been called the narcissistic stage of development (after Narcissus of Greek Myth).

This nascent personality soon finds that upon seizing a tabood object that he no longer has love, attention and social approval. After a recurrence of such experiences there develops in him a habit pattern which enables him to reject tabooed objects and acts, and thus he denies the animal, selfish and criminal (anti-social) desire for the more satisfying reward of love from others (social). The formation of this self-denial structure in the child's personality which deters him from demanding immediate gratification of his desires at the expense of others begins even in the first year of life. It is bound with a sense of guilt, the child becoming aware of the taboo of certain activities. This acquired and most important structure has been called the "conscience," or "social censor," its presence making group adjustments possible, its absense implying an asocial or antisocial state.

The cessation of temper tantrum (rage) behavior in children is an example of this learning process. Beginning during the first year when the child strives for his goal and something interposes he flies into a rage. Such behavior should bring "punishment" or deprivation (withdrawal of goal object and of love). During the first five years he gradually learns that rage is uneconomical; i.e., it does not get him to his goal and this leads gradually to a substitution of anger for rage, the former being a construction mood state which fires one to persist, persevere, and sustain tension until the goal is reached. Since anger in the sense of showing determination is also socially acceptable, a pattern of striving--interposed object--anger--goal--supplants the rage-goal pattern. If such a pattern is set the individual has made great steps in preparation for meeting life problems. It should be mentioned in passing that in some children temper tantrums (rage) disappear about the fifth year only to continue in the disguised form of the pout or sulk sometimes lasting into adulthood. Such reactions indicate that the individual never learns the most economical attack pattern. Also, when denial habits have not been worked into the personality there often ensure in adolescence and adult life, shiftlessness, boredom, restlessness, poor work habits, lack of respect for athority, and a tendency to obtain needs by some devious, socially unconstructive or destructive route.

The first few years of a child's life are the most important ones in deciding his adult personality. He is impressionable and plastic. Repeated harmful experiences, such as numerous periods of sickness, injudicious toilet training, insecure home life, or rejection by or absense of a parent will leave deep acars on the personality, which will disturb the knitting process of his personality growth. Integration or knitting of the complex human organism is a process beginning in the uterine stage of development which continues with relatively great speed to the age of 20 to 30. Bed-wetting is one tell-tale sign that integration has failed somewhat in that the subject has never gained control over one of his functions. Too, stage fright, temper outbursts, impulsive acts, and many minor criminal acts indicate this lack of smoothness in the knitting process.

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The relationship of child to parents is conceded to be of utmost importance in determining the type of development. The ideal situation is that in which mellow, mature love exists in moderate quantities between both parents and between each parent and the child. This affection should be constant, only being withdrawn when the child acts in an unconstructive or destructive manner. Thus, this phenomenon of affection can be a most potent weapon when used correctly by parents to lead the child into socially acceptable patterns of behavior. Over-dosage of affection, a possessive type of love, love vacillating with hate, and actual hostility to and rejection of the child are phenomena which bring about great anxieties leading to gross deviations. In developing, the child gradually incorporates into himself a part of each parent (both healthful and unhealthful parts). The thinking, attitudes, and actions are determined to a great extent by this close identification. When this incorporation is made impossible by absence of or rejection by a parent or lack of a satisfactory substitute parent, the social-conventional part of the child may be poorly organized thus making possible animalistic, criminal types of behavior (psychopathic personality). If a parent who is loved and incorporated by the child manifests antisocial tendencies himself, these are taken over by the child as well as the constructive traits. This personality upon committing crime would be thought of as a natural, normal criminal (not a "normal" individual committing crime), his "social conscience" being well formed but cut after the wrong pattern. All of the child's associates (sibling, relative, friends, teachers) even his physical environment becomes somewhat a part of him. In the words of Walt Whitman:

> "The father, strong, self-sufficient, manly mean,
> angered, unjust,
> The blow, the quick loud word, the tight bargain,
> the crafty lure,
> The family usages, the language, the company, the
> the furniture--the yearning and swelling heart..
> "The streets themselves, and the facades of houses,
> and goods in the windows....
> These became part of that child who went forth every
> day, and who now goes, and will always go forth
> every day."

May I repeat that it is through this acquired structure that the basic personal factors find expression. The more developed and organized these acquired patterns, the more disguised the selfish, animalistic traits become and vice versa. If the child is pampered and "done for" we are liable to find an adult who expects much for nothing; on the other hand if he is harshly treated he may retaliate with sadistic and aggressive behavior which later if turned outward onto society may make him a menace to others. The effect of the adult on the child's personality is well given by Dostoyevsky in the following passage: "Every day and every hour, every minute, walk around yourself, and see that your image is a seemly one. You pass by a little child, you pass by, spiteful, with ugly words, with wrathful heart; you may not have noticed the child, but he has seen you, and your image, unseemly and ignoble, may remain in his defenseless heart. You don't know it but you may have sown an evil seed in him and it may grow, and all because you were not careful before the child, because you did not foster in yourself a careful, actively benevolent love."

Due to the extreme adaptability of childhood and the patient, affectionate care of parents the child eventually arrives at a state of fair social adjustment. In many respects he behaves like a wild animal, is curious, follows no rules and does everything which is stimulating and pleasant. Unless his experiments are dangerous he is given relatively free rein at every opportunity so that he may learn by experience. Through parental example, contact with others his own age, he arrives at a stage where he accepts others as objects to be adjusted to, not to be possessed. So gradually he acquires a self-discipline and good habit patterns, and passes into the next phase of development (age 5 to puberty), which period is a relatively unperturbed one, the habits being well-fixed and practice on social adjustment along with much adult "let's pretend" activity being prevalent features.

The onset of puberty with its physiologic changes including sex awakening, the new thrill attached to all endeavors, the impatience, the increased curiosity, the restlessness, the self-consciousness so often poorly disguised as boisterousness and braggadocio, the absense of satiation, all constitute a dramatic shift from the previous latent, quiescent state. There is a great surge in desire for obtaining new experiences, and these should be made available. It is at this point that parents too often fail to adjust to the children, this fact leading two contemporary writers to state that "A man's worst enemies are his parents." They attempt to advise experience for them, but this is only resented by healthy children. They must pass through the fire!

If healthy patterns of behaving have been set prior to puberty there need be little parental interference. It is at this period that the individual becomes sexually active and experiences in rapid order self love (autosexuality), love of the same sex (homosexuality), and love of the opposite sex (heterosexuality). The direction and quality of his love interest will depend much on earlier experiences, the degree of development and type of his "conscience," his parental identifications, and his associations during adolescence. During this period there is a tendency to revert to the pattern of immediate gratification of desire, but if denial habits have been well grounded they win out. With the satiation that comes from experiencing at this period, there is a change of interest from the present to the future. Plans for a career are considered, socio-economic independence is thought of, and energies are directed toward establishing oneself by training for independent community life. Toward the end of adolescence (age 18 to 30) the full impact of real life is felt.

All activities and relationships change in quality as the adolescent begins to pass through the tests of the adult world experiences. Mistakes lead to profit if there is no interference. Emotional ties with parents change qualitatively, the parents being at last stripped of their potent emotional associations, and are experienced as more neutral objects by the emancipated offspring. This is a period of acid test which causes many of those poorly equipped by endowment and training to falter, develop feelings of insecurity, and react with many regressive types of behavior, such as day dreams, continuation of the restless adolescent mode, crime, and mental illness. Thus, the unloved young business woman first feels irritability, develops crying spells, sleeplessness; the college boy job hunter begins to seek satisfaction in day dreams at the expense of constructive activity, and the former High School student, in love and out of work, forges his first check.

Finally the individual reaches by degrees a state of maturity, that state of being which may be defined as that state of being when physical growth has ceased, and when he or she can perform as typical adults in a specific community. The concept of human maturity is very complicated. It pertains to a state of fullest development, not just in the physical sphere, but also in the emotional and intellectual. It implies dependability, trustworthiness, consistency, self-restraint, thoughtful behavior, and maintenance of certain tensions until one's goal is reached. It implies the ability to attack and solve problems in a way which will be most constructive to group and individual welfare. It implies self-realization and group realization (social consciousness) leading to harmonious working with one's fellow and with oneself (inner harmony.) One must not conceive that by maturity is meant a "turn the cheek" adjustment. No, the truly mature individual has license to use, with insight, primitive means in order to gain goals. He will always use rational means such as reasoning, arbitration, and compromise before resorting to flight or a fight. Another characteristic of maturity is that there is not only insight, but also foresight and hindsight, the latter being the capacity to use the past constructively. Obviously, one who lives entirely in the present is much like an infant. Let us then think of the mature individual as one who has learned to "balance expectation against reality, the capacity to fit into groups, the capacity to accept adversity and that which is beyond our control, the capacity to accept the perfections and imperfections in self and others, the capacity to accept limitations without being hindered from using what one has." (Adolf Meyer.)

During the adult years there is little chage is personality in that the past patterns have become set and remain relatively unmodified. There is a tendency for inertia to seize the person causing him to become rutted and to "settle down". Just a few who are endowed with a figurative Will of Prometheus never desist from the search for more challenging experiences. And, finally, comes old age with disintegration leading to a state of mixed adult habit patterns and childish modes of adaptation. Inertia is marked. Progression steps aside for regression. This decadence has been well portrayed in these lines by Shakespeare:

......"And his big manly voice,
Turning again toward childish treble, pipes
And whistles in his sound: Last scene of all,
That ends this strange eventful history,
Is second childishness, and mere oblivion;
Sans teeth, sans eyes, sans taste, sans everything."

CHAPTER VIII

Education and Rehabilitation

EDUCATION

It has become generally accepted that the state and community shall provide a type of education which will develop all children according to their needs. This ideal of equal educational opportunities for all has been inadequately interpreted when applied to the large group of children of every community who show a marked deviation from the average in physical, mental, social, or emotional traits. We will admit that the same opportunity does not necessarily mean an equal opportunity. An adequate educational program for the normal child may fail entirely to meet the needs of the exceptional group, and insofar as these needs are not met our program has failed.

Education of crippled children began in the United States when Massachusetts in 1904 passed a law that provided both physical and educational aid for the crippled children within the state. Minnesota, New York, and other states soon followed this example until at the present time about half of the states provide some means for the education of the crippled children.

A crippled child eligible to attend a special school or class for crippled children is one who, by reason of disease, accident, or congenital deformity, cannot attend the regular school with safety and profit during the period of his physical rehabilitation, simultaneous mental training and social adjustment.

a. A child for whom physicians and surgeons have recommended the daily care of nurses and physiotherapists.

b. A child who must have transportation service to reach school, specially adjusted furniture, or other facilities.

c. A child who needs special attention in vocational guidance, training, and placement.

e. A child who requires plastic surgery which must be followed by muscle training or speech training

The school may organize two types of instruction for the crippled children; they may send teachers to the home or hospital to teach individuals or they may plan special classes at school to care for them.

Where there is only one crippled child in the school, the teacher can carry on most of the program st up for special classes.

I. Special classes for crippled children.

a. Olga Lommen of the New York State Educational Department gives the following aims and objectives for these classes: (I)

(I) To provide the crippled child with an education opportunity that is rightfully his.

(2) To provide as normal an environment as possible in which the crippled child may have an opportunity to develop his mental and physi-

cal capacities to the fullest.

(3) To provide educational facilities and activities in keeping with the child's physical strength.

(4) To provide an opportunity for the crippled child to enjoy social contacts with other children in order that he may learn to make adjustments for adult living.

Wherever possible classes in school so organized as to administer to the needs of the crippled children are preferable to home instruction because of the social and psychological needs of each individual. Here facilities and equipment may be made available so as to care for the cripples in the most efficient manner.

The advantages of the special class over home teaching or ward teaching are enumerated in a report from Los Angeles: (I)

"The nearest approach to normal conditions is found in the special class. This is true because pupils may be grouped according to age and grade, the course of study may be more easily followed, and better opportunity for social contacts may be provided. Through such activities as orchestra, glee club, student body meetings, there is opportunity for the development of initiatve, self-confidence, and a responsibility on the part of the pupils."

b. Rooms and equipment for special classes.

A central location is desirable for these classes since children will need to be transported to and from school. The room should be on the ground floor to elimate stair climbing and should be fairly large to permit play space. Drinking fountains, coat and lunch rooms, lavatories, and toilet facilities need to be located near by. An extra room is desirable for rest and other activities; this room should be next to the classroom.

For equipment the following is recommended: movable desks that permit adjustments to height, wheel chairs, footstools for certain individuals, portable blackboards for those who cannot move about freely, and tables with rubber-covered casters so that books and other materials may be moved about the room.

c. Curriculum and Methods.

The regular course of study used for normal children on the same grade level is usually followed with these crippled children who are normal mentally. There must be, however, some adaptation to the individual needs since many of the children must have frequent periods of rest or treatment which will often take a considerable part of the day. It will be necessary, therefore, for the teacher to give the instruction and stress the work most needed by each child; some of the work may be eliminated or lightly stressed while emphasis is placed on reading, vocational work, appreciation subjects, etc.

There are usually several grades in the special room and it is important that the teacher use methods to develop initiative. Pupils should be allowed to progress at their own rate. The daily program, of course, will depend upon the number of pupils in the room, the grade level, the educational achievement of the pupils, and other factors. Much of the work will be individual, the teacher helping each child to work to the best of his ability.

Most crippled children have a very limited range of experience. One of the important duties of the special teacher is to enrich the curriculum and provide as many varied educational experiences as possible for this purpose. The appreciation subjects should receive as much stress as possible; an extensive reading program is essential.

In the health program the emphasis will be placed upon healthy living and wholesome attitudes. Mental hygiene is an important part of the program. The industrial program is a vital part of the curriculum and should aim to provide leisure time occupation, prevocational training, and a means for creative expression; all of which are essential for the crippled child.

d. Size of class.

The special class for crippled children should be small; from ten to fifteen children is the average number usually enrolled unless the teacher has one or two grades only, then the enrollment may be increased to twenty or more. Because of long periods of illness many of these children are retarded and need extra help almost entirely on an individual basis allowing pupils to progress at their own rate; this makes individual help a necessity and the teacher can give adequate individual help to just a few.

e. Other suggestions for classes of crippled children.

   a. Rest periods are necessary; time of period will depend upon the needs of each child. Rest room with cots should be provided.

   b. Transportation of children to and from school provided by school.

   c. Hot lunches needed since the children cannot go home at noon.

   d. Sufficient recreation; social situations important to develop feeling of belonging to group. Clubs and meetings satisfy a desire on part of children.

2. Home and Hospital Instruction

Upon the recommendation of the attending physician a special teacher may be sent to the hospital or the the home to teach crippled children. As has been stated previously, class instruction is to be preferred whenever possible but this type of work may often bridge the gap while the pupil is convalescing before he is able to enter the special class at school.

Hospital and home instruction is then provided for children who are unable to attend the special class but who are able to have instruction. It prevents the child from becoming hopelessly retarded in his school work and it improves his mental attitude by breaking the monotony and giving him something worthwhile to occupy his mind.

Many school systems provide no such home instruction for crippled children; the number of special teachers for this work is very limited but more are being added every year.

There is little uniformity as to length of time of instruction; Ohio provides five hours per week for five days during the school year; (I) New York provides fory-five minutes per day for five days during the school year; (2) many other systems provide less time.

The special teacher follows the wourse of study for the grade as far as possible; an adaptation must be made because of the limited time.

Because of their inability to compete physically with their fellow students, as well as to avoid the psychological effects of social prejudice, it seems desirable that special schools for the crippled be provided. It is only through such provision that their education can be carried out without becoming too much of a physical burden. The proper designing of the school, including such physical features as one-story buildings, special elevators, and adjustable seats, would be important. Physical examinations by competent physicians, and physiotherapy treatment, massage, muscle training, and corrective exercises are further desirable provisions. The schools curriculum might have to be modified to suite the needs of the children. Vocational training as a stimulus to ultimate economic self-sufficiency might well be initiated. There is, however, some difference of opinion as to the desirability of segregating cripples in special schools. But the prevention of fatigue by rest periods, as well as the supervision of prosthesis indicate that the special character of the care needed by the crippled child may have to be supplied in a school especially designed for him. Special facilities for transporting children to and from school are required if regularity of school attendance is to be maintained. Because of the severity of their disability many children cannot be transported, but require continued bed and rest treatment, thus precluding school instruction. In these cases home instruction in primary, as well as high school subjects , should be provided. Educational provision needs to be made for those who remain permanently in sustodial institutions.

REHABILITATION

Success in the vocational adjustment of young crippled persons depends on continuous observation and guidance beyond their adolescent period. Since many commissions are restricted by age limitations of the children in their care, a break frequently occurs which may prove disastrous to the adjustment of the crippled child. Close cooperation with the rehabilitation agencies tends toward control of this crucial period. Rehabilitation agencies may, by a liberal construction of the law, extend their services to crippled children under the age minimum. A study of 830 children who were rehabilitated during the years I920-24 demonstrates how effective rehabilitation work for handicapped children may be.

At the time these children were accepted for vocational rehabilitation, a large proportion of them had never held a job, even though many of them were already over eighteen years of age. After having completed their training, the majority of them were satisfactorily placed. The preceding table gives the results obtained.

Special provision for rehabilitation in Oregon. There was created in I92I, a fund to be known as the rehabilitation fund, which transferred from the industrial accident fund to the rehabilitation fund $I00,000.

The law provides that there shall be transferred to such fund monthly 2½% percent of the total monthly receipts of the industrial accident commission from all sources.

Whenever the unexpended balance of the rehabilitation fund is greater than $75,000, the commission shall temporarily either reduce the percentage of the total monthly receipts to such fund or suspend such transfer.

The commission is authorized to make such rules and regulations necessary for the vocational rehabilitation of men and women injured by accident arising out of and in the course of their employment while working under the protection of the workmen's compensation law. The commission is also authorized to expend as much of the rehabilitation fund as may be necessary to accomplish the vocational rehabilitation of men and women injured while under the protection ofthe workmen's compensation law.

State Relief Committee of Oregon
CRIPPLED CHILDREN'S DIVISION
507 Spalding Building
Portland, Oregon

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