Pupils with physical disabilities / a report of the Advisory Council on Education in Scotland.

SCOTTISH EDUCATION DEPARTMENT

PUPILS WITH PHYSICAL DISABILITIES

A Report of the Advisory Council on Education in Scotland

Presented by the Secretary of State for Scotland to Parliament by Command of His Majesty

EDINBURGH
HER MAJESTY'S STATIONERY OFFICE
Reprinted 1958

Cmd. 8211

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PREFATORY NOTE

The following Report on Pupils with Physical Disabilities, submitted to the Secretary of State by the Advisory Council on Education in Scotland, is published in order that it may be available to all who are interested. The recommendations in the Report have still to be considered by the Secretary of State, and in the meantime he should not be regarded as in any way committed to accepting them.

J. Maclay Thomson

26th December, 1950.

PREVIOUS REPORTS

The following Reports of the Advisory Council on Education in Scotland, as reconstituted on 1st January, 1947, have also been published:

PUPILS WHO ARE DEFECTIVE IN HEARING
PUPILS WHO ARE DEFECTIVE IN VISION
VISUAL AND AURAL AIDS

CONTENTS

REPORT

TO THE RIGHT HON. HECTOR MCNEIL, M.P.,
Secretary of State for Scotland.

SIR,

INTRODUCTION

1. On 9th January, 1947, the Secretary of State remitted to the Advisory Council—"To review the provision made in Scotland for the primary and secondary education of pupils who suffer from disability of mind or body or from maladjustment due to social handicaps, and to make recommendations." In view of the large field which this remit covers, we decided that the report should be divided into separate and self-contained parts and that each part should be submitted to the Secretary of State as it is ready. We have already submitted two parts—one dealing with pupils who are defective in hearing, and the other with pupils who are defective in vision—and they have been published by the Secretary of State. This part is concerned with pupils with physical disabilities excluding those who are defective in hearing, vision or speech. Pupils with speech defects will be the subject of a separate part.

2. In the Appendix will be found a list of the bodies and individuals who assisted the Council. We desire to place on record our appreciation of the valuable help we received from these sources and also from the personal contacts which we made in the course of our visits to the schools and institutions named in the Appendix. On these visits we were received with every courtesy and were granted the fullest facilities.

CHAPTER 1

EDUCATIONAL ENTITLEMENT

1. Physically Disabled Children

3. In Scotland to-day there are many children of school age who are never to be found seated at the desks or running in the playgrounds of ordinary schools. Some of them are confined for months, and even for years, in hospitals and sanatoria. Some are bound at home by long illness. Some are so crippled that they cannot attend school unless special provision is made for their physical incapacities. These children suffer from many ailments; in their ranks are to be found children with cardiac diseases, cerebral palsy, deformities, and to those must be added the undernourished, the debilitated, the tubercular and the epileptic. To the general public such children are largely unknown, and to many concerned with healthy children they exist only in hearsay. They need

skilled care and education, and what can be done for them may be summed up in parable. A small child, lame from birth, had both legs amputated above the knee and was fitted with artificial limbs. On the occasion of our visit to her school she was proud to show her skill, for she had learned to stand alone and to walk unaided.

4. Many physically disabled children are receiving special educational treatment adapted to their needs, but some have inadequate care and some are almost entirely neglected. It is the purpose of this report to propose ways of improving the provision of education for physically disabled pupils in Scotland.

2. Concern for the Physically Disabled

5. Physically handicapped children and adults are no longer regarded as objects of occasional charity or as freaks to be dismissed after a moment's look and an idle comment. Society has accepted an obligation for their welfare. New knowledge has increased prevention, and advances in medical science have enabled the trained practitioner to diagnose accurately and treat skilfully many diseases that cripple children. A considerable proportion of those who a few generations ago were regarded as incurable can now be restored to a life of normal or near-normal activity by dexterous therapy. Modern psychology has contributed to a better understanding of minds within crippled bodies and has shown that sensory and motor handicaps may in some instances be wrongly construed as evidence of mental subnormality. Because they may look forward to a life of emancipation from physical distress or disability, their need for educational care has become apparent. Developments in medical and psychological knowledge have been accompanied by a quickening of the public conscience that has prompted a new attitude to those who are physically disabled. It is sometimes said that it is a sound investment to spend money on teaching the handicapped child to fend for himself and, wholly or in part, to earn a living, but even if the economic argument failed we could not refrain from giving the disabled child the opportunity to develop mind and body through education and treatment.

3. Priorities in Education

6. Those who are interested in any group of handicapped children tend to emphasise their needs and to recommend costly measures to meet them, often without considering the effects of their proposals on children who do not belong to any special group. We are conscious of the need for a sense of proportion in making recommendations for the treatment and education of disabled children, as there must always be educational opportunities for the able. Indeed the care of the disabled would soon become ineffective if there were not an adequate number of men and women skilled enough to sustain the economy of a society through their labours and if the professions did not recruit and train sufficient numbers of capable students. The education of the normal must not be neglected if the education of the disabled is to succeed, and in our proposals for the education of disabled pupils we suggest no impossible standards for their ascertainment, treatment and education, but content ourselves with indicating moderate plans that can and should be put into operation.

4. Concomitants of Physical Disability

7. Many children with physical disabilities of such degree that they cannot attend ordinary classes in ordinary schools require an education that is specially planned to meet their needs. It is wrong to assume that these children need only be sent to institutions where medical care can be ensured and where they can be exposed to as much traditional education as their physical condition will

allow. Physical disability is seldom an isolated component in the life of any person. The child who is physically disabled has the basic needs and impulses of human nature, but he has also problems of his own to solve and an individual style of life to create. His disablement may be capable of being brought under an exact medical category, but as an individual he has his own environment to meet and his own pattern of response to construct. It follows that education of physically disabled pupils must take account of factors other than the nature and extent of physical handicap.

8. Some problems arise from the social situation of physically disabled children. In certain instances the child may be over-protected by parents and others in the family, and he may translate their care into a subservience to his own whims, or he may accept their ministrations and make no effort to fend for himself. In other instances parents may do their best to disown him and make him the ward of an institution. This may readily be the fate of the child whose parents feel that family pride is insulted by his illness. In many instances the extremes of over-protection and complete rejection are avoided, but the making of a stable social environment requires affection, understanding, patience and wisdom, and these qualities are not always possessed or exercised by parents. It follows, therefore, that the physically handicapped child is always in some danger of becoming socially handicapped.

9. Children with physical disabilities have psychological problems that are not unconnected with the special nature of their social environment. Most of these children know that they are different from their fellows. Their disability may be to some extent a disfigurement; they may not be able to take part in the recreations of other children; they may require to attend a special school or institution; it may be apparent that many forms of employment are closed to them. Many of them find difficulty in developing easy social adjustments, and some may fail to establish a well integrated personality. Their education to be successful requires that parents and teachers have a sympathetic insight into their needs. It will succeed in a school or institution where self-pity has no place and where a stimulating level of expectation in achievement is upheld. Such an education sometimes requires a school where the disabled child meets with his peers and is spared comparison with those who are physically fit.

10. The physically disabled child is not simply a normal child who happens to be unfit. He shares with other children many common needs and interests, but he has needs and interests that are his own. If he is to overcome his social and psychological difficulties and, to the limits of his capacity, take his place in society, he must have special educational treatment.

5. Some Principles of School Organisation

11. While we agree that special arrangements must be made for physically disabled children if they are to enter fully into their educational entitlement, we do not consider that all such children should attend special schools. We readily assent to the general principle that handicapped children should attend ordinary schools provided that they are able to profit from the education offered, and provided also that they do not seriously retard or disturb other children by their presence. When these conditions are fully met, the ordinary school has many advantages over the special school as an institution for the education of the handicapped.

12. We are of opinion that children should not be removed from home to residential institutions unless they themselves will clearly profit from the transfer, or unless their retention in a day school would be prejudicial to other pupils. It is agreed that some homes are unsuitable for the care of physically disabled children, but we consider that the security and affection associated

with ordinary home life should not readily be sacrificed in favour of residential treatment. It is part of the child's educational entitlement that wherever possible he should have the sense of " belonging " that home life confers. It should be recognised, however, that some children profit from a period of residential treatment before commencing attendance at a special day school. Their transfer should take place as soon as residential treatment has attained its end.

13. It is part of the child's entitlement that he should escape at times from the influence of formal education, and residential institutions should not be so conducted that children are always in the company of teachers, or teachers in the company of children. In recent years many Education Authorities have wisely made arrangements for the education of children who for long periods are confined in hospitals and sanatoria. Problems have sometimes arisen because in such institutions medical care and education have been in conflict. It ought to be, and commonly is, recognised that medical care must often take precedence over educational treatment. In institutions where children are receiving medical treatment for a short period or convalescing for a few weeks it is often wise to refrain from efforts at formal education. We consider it desirable that adequate provision should be made for the education of physically disabled children, but we desire to emphasise that in the name of education it is sometimes appropriate not to press the claims of formal schooling.

6. Content of Education

14. The content of education for physically disabled pupils should not be the same as that for other children. We have already shown that, in addition to the crippling effects from which these children suffer, many of them have difficulties arising from their social situation and their related emotional needs. These difficulties make it impossible for them to find satisfaction in educational experiences designed for children who are in good health. It is true that many activities of ordinary schools can be enjoyed by disabled children, and it is desirable that those should be increased in order that the gap between the fit and the unfit be diminished. What differences might remain between the two groups in the content of education? The question cannot be fully answered in general terms, for much depends on the nature and severity of the handicap, the type of institution to which the child is sent, the age of onset of the crippling condition, the duration of special medical treatment, and the ability and interests of the individual. We consider that many, though not all, disabled children require some assistance in preparing for work in later life. The arguments against vocational education for ordinary children do not apply to disabled children. The child who is physically and mentally fit discovers on reaching the age when compulsory schooling ends that many opportunities for vocational training present themselves and that many agencies, including apprenticeship, are available to give him this training. Physically disabled children are at a disadvantage in seeking employment or competitive entry to training in many industries. The range of possible employment is limited, and they compete on unequal terms with their healthy contemporaries. They must be given some vocational training during the period of compulsory schooling if only to allow them a less unequal start in the competition for employment. There are, however, many other reasons to be advanced in favour of vocational training; one of the most important concerns the child's attitude to his own future. Many physically disabled adolescents approach the end of their schooling with confidence because they know that as a result of training they can make a contribution to self-maintenance. Without some skill to set to market they would face the age of employment with misgiving. It may be cheaper for society to train the physically handicapped in some useful occupation than to maintain them throughout life, but even if this argument were denied, sufficient reason for some vocational training would still be found in the fact

that confidence is given to them in their early years by knowing that they will be able to find a place for their skill and labour in the work of society.

15. In making these observations on vocational training we are not forgetful that some physically handicapped pupils will be able to follow secondary courses leading to the professions and to other highly skilled forms of employment. We do not desire to divert children thus gifted from pursuing these studies, nor is it our intention that vocational training should so dominate the curriculum that earning a living becomes the primary end of education for any disabled child or adolescent. It is our desire that the full needs and interests of these children should be met, and we contend that in so doing attention must be given to providing them with a hope of employment through acquiring some skill that will be useful in earning a living.

7. Effective Education

16. Education for the physically disabled should not be undertaken as a mere palliative of misfortune, and these children depend more on the education of the school than do children who are physically fit. They often have to spend a considerable part of their early life in hospitals or in residential schools, and must find there and nowhere else the opportunities for mental and spiritual growth. Even the pupils who attend day schools for the physically handicapped are often incapable of the free movement that enables physically fit children to pass beyond the orbit of home and school into the wider world of experience. The task that is set in teaching the physically disabled is great; it is not shared by the agencies of informal education that are available to other children. When it is remembered that the disabled present special problems on account of their physical incapacity and of the social and psychological concomitants of disablement, it will readily appear that their education is an urgent, difficult and important problem. Every school for physically handicapped pupils should have a high sense of responsibility based on the knowledge that its failure means denial of effective education. It follows that all who are responsible for these schools should provide adequate staffing, accommodation, equipment and material in order that it may be possible for these children to enter fully into their educational entitlement.

8. Provision of Education

17. In the light of the foregoing considerations we recommend that *appropriate forms of education be adequately provided for all physically disabled children in special schools, hospitals, sanatoria, convalescent homes and where necessary in their own homes, and that due heed be paid to their physical welfare, their mental hygiene and their vocational preparation as well as to their general education.*

CHAPTER 2

TYPES AND INCIDENCE OF PHYSICAL DISABILITIES

1. Categories

18. Physical disabilities may be classified in many different ways; they can be brought under anatomical categories, or they can be described in terms of causation, or grouped by age of onset, or duration or degree of severity. Each of these systems of classification has its own use and value. Our purpose will best be served if broad categories are adopted, and if they are chosen with reference to educational needs as well as to physical condition. The categories that follow are not in themselves adequate guides to the differentiation of

schools that may be provided in large centres of population. In certain circumstances some of the categories may best be served by a wide variety of schools; in other circumstances it may be wise to group even some of the children from the different categories within the same school. We recommend that *the following three categories be adopted:—children of lowered vitality: physically handicapped children: children who are epileptic.* We explain these terms in the following paragraphs.

2. Children of Lowered Vitality

19. These children are sometimes described as delicate children. We recommend that *this category include children who are anaemic or debilitated or undernourished, children with bronchial catarrh, convalescent children, and other children requiring recuperative treatment.* We have in mind the group of children who have no permanent physical disability that would prevent their attendance at ordinary schools, but who have suffered an impairment of health and are in need of good food, fresh air and the benefits of a steady and wholesome environment. Some of these children might recuperate after two, three, or four weeks in a convalescent or holiday home. A considerable number require treatment in a residential school over a period that might vary from six months to two years. We have in mind also the less seriously debilitated children who may not require a period of recuperation in a home for residential children but who might regain their health while in attendance at ordinary schools if care were given to their diet and arrangements made in suitable cases for a mid-day rest.

20. We recommend that *convalescent or holiday homes and residential schools be made available for children of lowered vitality and that for those less seriously debilitated who are attending ordinary schools special care be given to diet and, where necessary, arrangements be made for a mid-day rest.*

3. Physically Handicapped Children

21. This term is conveniently wide. We would indeed have preferred to use it in place of the term *physically disabled children* which we have applied to children in all three of our categories, but we felt that it would avoid confusion if we restricted its use to the category which we now describe. We recommend that *this category include children with heart or chronic lung disease, children with severe deformities including those who have been disabled by tuberculosis of bones and joints or by infantile paralysis, children with cerebral palsy and other children who by reason of protracted or permanent physical disability are unable to attend ordinary classes in ordinary schools.* The disabilities included in this category are varied in cause, manifestation and treatment, and for adequate care children in this category require varied medical and educational provision. In some institutions the primary concern must be the physical welfare of the child, and instruction becomes of secondary or even of no importance. In other institutions medical services may have little to offer and may occupy only a small space of time. Some types within the category might profit from differentiated educational treatment; others can be grouped together for schooling. We recommend that *under medical supervision adequate provision be made for the education of physically handicapped children whether they be in residential schools, special day schools, hospitals, sanatoria or in their own homes.*

4. Epileptic Children

22. We recommend that *this category be confined to children with severe or frequent epileptic seizures.* It should be recognised that children with occasional seizures that are not severe in character may sometimes be educated in ordinary schools. Those with severe and frequent seizures should be placed in special

classes or in a special school for epileptic children, while a few whose condition is between the two extremes might be placed in schools for physically handicapped children. These children, and especially those who are heavily afflicted, require expert medical care in order to profit fully from recently developed methods of treatment. Some may require to spend their lives in a colony for the epileptic. All require guidance in the choice of a vocation and many need vocational training. We recommend that

(1) *provision be made for the medical care of all epileptic children;*

(2) *for those who may not remain in ordinary schools because of harm to themselves or others, education be provided in schools for the physically handicapped and, in most cases, in a residential school or schools for epileptic children;*

(3) *all receive vocational guidance and that provision be made for vocational training.*

5. Diabetic Children

23. We have given careful consideration to the need for placing diabetic children in a special category and have reached the conclusion that they need not be regarded as a separate group. We recommend that *diabetic children be treated either as ordinary children with special dietetic needs or, in appropriate cases, as children of lowered vitality. Most children who are diagnosed as diabetic should attend a residential school for a period and, where conditions are favourable, should return to home and day school.*

6. Estimates of Incidence

24. The evidence we received shows that there is a considerable amount of conflict in estimates of the number of physically disabled children. If we accept the estimate of one witness we should find it necessary to provide special educational treatment in a certain category for 30,000 Scottish children, while if we adopt the opinion of another witness we need provide for only 8,000 in the same category. Variations in estimates occur for many reasons. It may well be that incidence is not uniform throughout the country; some disabilities may be more common in urban than in rural areas; geographical regions may have different frequencies of occurrence. It is also true that criteria are not always uniform and that variations may occur in applying agreed criteria, and it is possible that disabilities are more frequently reported when facilities for treatment are available than when facilities are inadequate or totally lacking. A source of error may arise from the fact that disabled children are to be found in a great variety of places, including their own homes, and that those who count them may vary in their opportunities for making a census.

25. Because of the absence of accurate measures of incidence we are forced to make estimates that can be little more than rough approximations. Conscious of the importance of providing special educational treatment for all who are truly in need of help, but realising that our proposals involve important questions of staffing, building and supplies, we recommend that *the following general estimates of the incidence of physical disabilities per* 1,000 *of school population be accepted for Scotland as a whole:—*

Children of lowered vitality, 2·0

Physically handicapped children, 5·0 *to* 9·0

Epileptic children, 0·3.

It is our considered opinion, therefore, that between 2·5 and 2·9 per cent. of children of school age are in need of special treatment because of bodily ailments. Assuming a school roll of approximately 790,000, the numbers of

children in Scotland in the various categories would be estimated as follows:—

Children of lowered vitality ..	15,800
Physically handicapped children ..	3,950—7,110
Epileptic children	237
	19,987—23,147

There is evidence to show that children of lowered vitality are to be found much more frequently in crowded industrial areas than elsewhere in the country.

7. Existing Provision and Estimated Incidence

26. The following table shows the educational provision made by each Education Authority for physically disabled pupils in the year ended 31st July, 1948:—

Authority	Number educated within area	Number educated outwith area	Total
Aberdeen	54	—	54
Dundee	213	1	214
Edinburgh	308	65	373
Glasgow	1,829	303	2,132
Aberdeen (County)	—	5	5
Angus	—	5	5
Argyll	2	5	7
Ayr	61	7	68
Banff	2	1	3
Berwick	—	—	—
Bute	2	1	3
Caithness	—	—	—
Clackmannan	2	3	5
Dumfries	—	4	4
Dunbarton	27	2	29
East Lothian	13	39	52
Fife	15	17	32
Inverness	13	4	17
Kincardine	14	6	20
Kirkcudbright	—	2	2
Lanark	472	40	512
Midlothian	6	7	13
Moray and Nairn	—	—	—
Orkney	3	2	5
Peebles	—	—	—
Perth and Kinross	8	5	13
Renfrew	246	33	279
Ross and Cromarty	—	3	3
Roxburgh	1	—	1
Selkirk	17	1	18
Stirling	54	13	67
Sutherland	—	4	4
West Lothian	5	2	7
Wigtown	—	—	—
Zetland	1	—	1
Totals ...	3,368	580	3,948

We recommend that *energetic measures be taken to meet the situation revealed in the fact that although approximately* 20,000 *Scottish children suffering from physical disabilities are in need of special educational treatment, provision is made for less than* 4,000 *of these children.*

8. Changes in Incidence

27. Changes in incidence occur from many causes. Improved social services and medical techniques cause reduction in specific disabilities, and in some instances may virtually eradicate certain crippling conditions. This cause has doubtless operated in the reduction in incidence of rickets and tuberculosis of bone and joints. Fluctuations occur in certain ailments from year to year; an example of this type of change is to be found in infantile paralysis. Finer diagnosis based on new skills may show that a type of illness has important variants which require an increased range of medical and educational treatment; this change is exemplified in the growing recognition that cerebral-palsied children contain a very considerable proportion of intelligent children whose ability has hitherto been masked by their physical handicaps. A further cause of variation may be found in improved midwifery and ante-natal services: risks of birth injury are reduced by these improvements. In assessing the benefits that arise from better medical services it should be remembered that these services may at the cost of physical disability save some lives which without new skills would have been lost. With these considerations in mind we recommend that *periodic reviews of incidence should be made throughout the country in order that educational services may be planned for emerging needs.*

CHAPTER 3

ASCERTAINMENT

1. Need for Early Ascertainment

28. It is unnecessary to emphasise the need for the early ascertainment of physical disability. Many children can be successfully treated in the earliest years who would present serious problems in later childhood or adolescence.

2. Early Ascertainment in Schools

29. Within the regular school system physical disability could be ascertained at earliest on enrolment in the nursery school. As this type of school does not exist at present in such numbers as to be able to absorb any large proportion of the children of the appropriate age, complete ascertainment cannot be attained in the nursery school years. But this is no reason why the benefits of school medical examination should be denied to children who attend such schools. We recommend that *medical examinations on enrolment, or as soon as possible thereafter, be instituted in nursery schools and classes.*

30. The medical examination at the commencement of compulsory schooling affords the best opportunity at present of ascertaining those pupils who are physically disabled. If ascertainment is to be thorough, this examination must have the purpose not only of guiding the few disabled children for whom accommodation exists into special educational treatment, but also of bringing to the notice of health and education authorities the full range of needs that cannot be met because of inadequate provision. In each case the report should show in detail the diagnosis made by the school medical officer, and an endeavour should be made to avoid wide categories that fail to make adequate differentiation in the nature of the handicaps. The diagnosis should be accompanied by a recommendation as to the type of treatment required, even and perhaps especially if it is not available, together with a proposal for treatment within the existing provision. We recommend that *reports of school medical officers on disabled children show the diagnosis, the treatment that might be given if adequate facilities are available, and the best treatment available within the existing provision.*

3. Compulsory Notification

31. It is impossible to estimate the number of disabled children who do not attend nursery schools and public schools and therefore fail to find a place in the records of Education Authorities. Some of these children are in hospitals, sanatoria and other institutions, many of which have no provision of education. On discharge they may enter ordinary schools or remain at home. Some disabled children are withheld from schools by their parents, and may lack efficient medical care and treatment. If the parents can show that they are attending to the education of their children, they cannot be compelled to send them to school. The policy to be pursued in improving the medical and educational treatment of these children raises important questions concerning the rights of parents. It is true that some parents retain disabled children at home because their own affection for them prompts them to shield them from difficulties. Such parents devote their lives to their children in a mood and spirit that is admirable, although their actions may not be in the best interests of the child. Other parents withhold disabled children from public care for less reputable reasons. To some disablement is a family disgrace to be concealed as much as possible. Ignorance of the potentialities of their children may lead others to regard education as impracticable. An important cause of retention at home is to be found in the lack of satisfactory and readily available special educational treatment for disabled children, but some parents would refrain from using special educational services even if they were accessible. What then is to be done for the disabled children of parents who from good or indifferent motives fail to take advantage of facilities for medical and educational care? Parental rights in this country are respected in law, custom and tradition. The incursion of the state into the home would be met with antagonism, even for such a beneficent purpose as the physical and mental welfare of children. But it is not possible in contemporary society to allow children to suffer neglect, even when it is well motivated and when it is protected by the sanctity of the home. Children are the unenfranchised citizens of to-morrow, and their elders have social as well as parental duties towards them. It would be against public opinion, and possibly against public interest, to compel parents to send their children to hospitals or schools for the physically disabled, but it would surely be reasonable to require that the appropriate health and education authorities should be informed of the presence of a disabled child. An opportunity would then be given to the authorities to acquaint the parents with the services that were available. If such a proposal were adopted, some parents might still withhold their children from medical and educational care, but their numbers would diminish as facilities for treatment improved. Compulsive attractions might make compulsory powers unnecessary.

32. Notification would require to be made by a qualified medical practitioner. The word of the parent could not be taken as proof of accurate diagnosis of disability. School attendance officers and welfare workers should be instructed to advise parents of physically handicapped children to secure medical advice concerning the fitness of the children for education.

33. In considering the age of notification of physical disability some might be tempted to require that age seven or eight should be preferred to age five on the grounds that delicate children might be allowed a few years to reach an adequate degree of physical stability before coming under rules of notification. This would be mistaken kindness, because it is often important that treatment of disability should begin early in life. The age of notification should be not later than the end of the sixth year.

34. It would not be necessary to notify every form of disablement. Temporary illnesses that might place children in the category of children of lowered vitality need not be notified; it would be sufficient if notification were made in respect of physically handicapped and epileptic children.

35. Our principal concern is with the education of disabled children, and we therefore desire that notification should be made to Education Authorities. It would obviously be important that health authorities should also be notified.

36. We recommend that *an effective service of information be provided by Education Authorities to encourage parents to report children suffering from physical handicaps or epilepsy to the appropriate health and education authorities.* We recommend further that *the authorities responsible for the care of children in hospitals, sanatoria and similar institutions report to Education Authorities the presence of any child who was or was likely to be lacking educational care by the end of the sixth year of the child's life.*

4. Later Ascertainment

37. All the work of ascertainment is not accomplished by ensuring that children who are physically disabled are known to the authorities not later than the end of their sixth year. Disablement strikes through accident or infection at all ages; the child of school age may be forced by neglect into the category of lowered vitality. It would be wrong to leave to later school medical examinations alone the task of detecting those who for whatever cause become disabled after six years of age. It is important that hospitals, sanatoria and other medical institutions should report to Education Authorities all children undergoing prolonged treatment who are capable of profiting from education, and it is also important that medical practitioners should be able to recommend to Education Authorities the provision of education for homebound children who are capable of being instructed. The work of discovering a large proportion of children who become disabled after six years of age must rest on teachers, many of whom fortunately are interested deeply in the general welfare of the children under their care. The school has become more than a place of instruction, and the changes towards a broader conception of education have been generally welcomed by teachers. It is necessary in the course of training to continue and perhaps even to increase the emphasis on health education and by corollary to create a new concern for those who are physically handicapped. We recommend that

(1) *disabled children of school age in hospitals, sanatoria and other medical institutions for a period of at least a month and who are capable of education be reported to Education Authorities;*

(2) *medical practitioners similarly report in order that instruction be made available to homebound children;*

(3) *teachers be encouraged to report to school medical officers children who become disabled;* and

(4) *school medical officers at examinations throughout childhood and adolescence present to the Authorities reports similar to those that we have recommended as appropriate to the examination at the commencement of school life.*

5. Records of Ascertainment and Treatment

38. It is necessary during the period when facilities for the care and treatment of disabled children continue to be inadequate that local and central authorities should be kept fully informed of ascertainment and provision, because deficiencies in provision may remain if the facts are not collected and made widely known. The need for records will not cease when care and educational treatment are available to all. Efficient planning for the future with all its anticipation of emerging need requires full and accurate information. We recommend that *each Education Authority maintain a register of physically disabled children showing the category in which each child has been placed, the school or institution in which the child is receiving instruction, and in all cases where no educational service is being given, a note explaining the reason.*

6. Consultation in Ascertainment and Guidance

39. The main responsibility for reporting a child as physically disabled and in need of special educational treatment must rest on the school medical officer. In some cases he needs no advice in order to help him to reach his decision. It should, however, be possible for him to obtain advice from medical specialists who have skill in diagnosing and treating certain physical conditions. It would, for example, be necessary to call for the opinion of an experienced neurologist in assessing the degree and nature of epilepsy in a number of cases: the assistance of a heart specialist would be desired on other occasions. Arrangements already exist for this type of professional consultation, and we therefore make no recommendation on this subject.

40. Ascertainment cannot be separated from guidance. The decision to register a child as physically disabled implies a recommendation that he should have some form of special educational treatment. At this point school medical officers require the help of teachers and educational psychologists. Where, for example, a proposal is made that a child be transferred from the ordinary school to a special school, the question may arise whether his educational progress might be retarded seriously by the change and whether he is meeting the stress of ordinary school life without difficulty. The teachers or headmasters of the schools involved have valuable information to give, and arrangements should be made for its evaluation if ascertainment is to be followed by wise guidance. In many instances the evidence of an educational psychologist will be of value and should be taken into account. Thus in making the difficult decision whether a child with cerebral palsy should be sent to a school for physically handicapped children of normal or less than normal intelligence or to a school for cerebral palsied children of high intelligence, assuming that such schools were available and accessible, it would be of the highest importance to know the results of such tests of intelligence as could be applied to the child. In other instances, studies of school achievement and personality traits would afford information that would be of use in ascertainment and guidance.

41. Consultation could best be secured by making ascertainment and guidance of disabled children a function of the child guidance service. By this arrangement the school medical officer, who would be primarily responsible for decisions, could readily obtain the desired assistance from teacher and educational psychologist. In some instances tests, examinations and consultation might all be undertaken at a child guidance centre: in other instances, especially in rural areas, these would require to be done by visits to the school. In all cases it would be necessary to plan for the fullest co-operation of the parents in order to obtain information that would be useful in diagnosis and to secure interest in treatment. We recommend that *while the main responsibility for advising the Education Authority on ascertainment must rest with the school medical officer, arrangements be made for securing the advice of teachers and educational psychologists in ascertainment and guidance, that ascertainment and guidance be undertaken through the child guidance service of the Education Authority and that efforts be made in all cases to secure the fullest co-operation of parents.*

7. Standards of Ascertainment

42. In the literature of disability many forms of classification of the various crippling conditions and diseases are described. Many of the classifications are useful when they are interpreted by the experienced medical practitioner or the school medical officer, but they provide no infallible touchstone for the ascertainment of physical disability. It is indeed idle to hope for exact measures of disability that might provide uniform standards of ascertainment. Perhaps the most striking example of how difficult it is to apply simple measures in the ascertainment of handicaps occurs in the study of children who are hard of

hearing. Audiometry can provide an exact index of hearing ability, but many factors in addition to acuity of hearing must be considered before ascertainment and guidance can occur. The child's ability to speak, the age of onset of deafness, his intelligence, the use of speech or sign language in his own home, the nature and cause of deafness, his general health, his visual acuity for lip-reading are only some of many factors that must be considered in addition to his degree of hearing. Disabled children present similar complexities. In the last resort reliance must be placed on the judgment of the medical officer and his advisers, and they can be relied on to bring their skill and their experience to bear justly on the problems of ascertainment and guidance. If confirmation be sought for this trust it may be found in part at least in the fact that in countries such as the United States, the Union of South Africa and Britain where standards of living are comparable, reports on estimated total incidence of physical disability do not differ widely. Variations do occur in the incidence of particular illnesses. It may be noted that estimates of incidence made by the Ministry of Education in England do not differ widely from the estimates made by our experienced witnesses in Scotland. There is some evidence to show that in areas in England where facilities are reasonably satisfactory, variations in incidence are not great between districts comparable in amenities and general standards of living. We consider that if more places were available for the education and treatment of the physically disabled the wide variations in the figures of ascertainment would be diminished.

43. There are two methods that might be employed to promote common standards of ascertainment without imposing clearly defined criteria. The first method is to compare the results of ascertainment in areas that are similar in their general standards of housing, employment and social amenities. It could be assumed that if ascertainment varied greatly between two such areas there was need for an investigation to discover the reasons. The second method is to promote conferences and refresher courses for all who are engaged in the work of ascertainment and guidance in order that standards may be based on shared thought. Such conferences would be important, not only because of their value in adjusting criteria but also because they would afford opportunity of discussing new methods of treatment and changes in incidence as they arose. Some conferences might with advantage be confined to school medical officers, but others might be conducted for school medical officers, educational administrators, educational psychologists and representative teachers. In some instances conferences might be held on a local basis; in other instances they should be conducted nationally.

44. We recommend that *to promote common standards of ascertainment and guidance careful studies of incidence of disability be made in comparable social and economic areas, that conferences and refresher courses for school medical officers be held locally and nationally, and that conferences of all concerned in ascertainment and guidance be held from time to time by Education Authorities and by the Scottish Education Department, the Department of Health or some organisation approved for this purpose.*

CHAPTER 4

NEEDS OF CHILDREN OF LOWERED VITALITY

1. Differing Needs in Town and Country

45. In making the estimate that the incidence of children of lowered vitality in Scotland was approximately 20 per 1,000 of the school population we had in mind the opinion of witnesses that the incidence was much higher

in the town than in the country. The treatment of such children presents difficulties for urban authorities that do not occur in rural areas. In the large centres of population it is often difficult to give children the treatment required for remedying lowered vitality. Even the provision of a rest period in the town presents problems that are not raised in the country. It may also be noted that the rural schools are smaller than the town schools, and teachers have an opportunity of knowing the individual child and his home that is not so readily given to his urban colleagues.

2. A Need for New Habits

46. Many although not all of the children in this category suffer from the absence of hygienic habits. Their diet may have been unbalanced, cleanliness and bodily habits may have been neglected, rest may have been inadequate, clothing may have been ill-suited to their needs, living conditions may have been overcrowded. Where any of these conditions have been present more is required than a brief period when wants are relieved and needs met. Many of these children may have to return to their former conditions and catch no further glimpse of a better way of living. It is important therefore during the period of treatment that the need for establishing better habits should be recognised. This can best be accomplished by careful attention to the routines and hygienic standards of the school or institution in which treatment is given. An attempt should be made to help the children to understand, as far as their age and ability permit, the reasons for the health habits they are being taught to acquire during the period of treatment.

3. Physical Needs

47. Some of the children of lowered vitality, notably the anaemic and the debilitated, are in need of medical services. Those who have come from hospitals may require to be under continued medical care. For these children provision must be made for efficient medical services, and this can best be secured through visits from a school medical officer and through the services of a trained nurse. It may also be necessary to have a physiotherapist capable of undertaking rehabilitation exercises adapted to individual requirements.

48. Many children of lowered vitality may not require medical services, but all need conditions of living that will promote physical welfare. It is important that diet should be planned to meet their needs and that they become accustomed to nourishing foods. The ventilation of rooms must be efficient, and the children should be encouraged to spend time in the open air. The need for adequate rest must be recognised, and arrangements made for mid-day relaxation when required. We recommend that *good food, fresh air and rest be available for all children of lowered vitality and that the services of a school medical officer, assisted where necessary by a trained nurse and a physiotherapist, be provided for all in need of medical treatment.*

4. Social and Psychological Needs

49. We have already discussed in general (paragraphs 7 to 10) the social and psychological situation of children with physical disabilities. Children of lowered vitality have special needs of their own, and these have to be met in addition to the needs that belong to all disabled children. Physically handicapped children have to learn to adjust themselves to a lasting if not permanent impairment of bodily powers and abilities: children of lowered vitality have to break habits formed in sickness and to make habits appropriate to a healthy life. They have in many instances become accustomed to a lack of stamina and to the consequent isolation from their healthy contemporaries. They have

come to believe that activities are often beyond their powers, and many of them are timorous in their approach to experience. For such children, valuable lessons are to be learned from living for a time with others who are similarly handicapped. The social situation is then free from the disabling comparisons that have to be faced in the company of ordinary children, and they see the bolder spirits making the most of their powers in spite of disabilities. If the adults are wise, the children will live in an atmosphere of stimulating expectation of achievement rather than of excusing and crippling pity, and they should be tempted to new adventures and to find happiness in new accomplishments. It is an important part of their educational treatment to teach them to use their new-found powers and, particularly, to use powers that will enable them on returning to the company of ordinary children to share as fully as possible in their work and play. We recommend that *in planning the treatment of children of lowered vitality care be given to their social and psychological needs and, especially, to the need for using their regained strength in sharing as fully as possible in the activities of ordinary children.*

5. Educational Needs

50. Some pupils of lowered vitality will be able to remain in ordinary classes provided that special arrangements are made for food and rest and that ventilation and heating are satisfactory. They should be able to profit from educational experiences shared with other pupils, with such modifications as can be made by a skilful teacher interested in the general welfare of children.

51. Pupils who cannot remain in ordinary classes may for the present purpose be divided into those who should undergo special treatment for a period of two or three weeks and those who require a period of from six months to two years, or more in exceptional cases, in order to regain their health. The children undergoing the shorter period of treatment should in general receive no formal instruction. They should engage in the informal education that comes from a change to a new environment, in much the same way as healthy children profit in mind as well as in body from a holiday with interested parents at the seaside or in the country. Some of them may require thereafter a period of special educational care in adjustment classes in school in order that they may take their place with their contemporaries. Children who are in need of special educational treatment for the longer period should with the approval of the school medical officer follow courses of instruction designed to meet their needs. As far as possible this instruction should use the techniques of adjustment classes. Most of the children in this group will be under average in school achievement, and their school attendance record will probably show many absences. For these reasons, and because of their lowered vitality, they will sometimes have failed to master necessary processes or skills in formal learning. The teacher will require to diagnose their educational disabilities individually and provide remedial instruction. It should not be forgotten that these children, perhaps more than other children, need group experiences, and it should be an important part of their education to join with others in music, drama, games, group projects and other activities of a co-operative character.

52. It is recognised that it will not always be easy to strike a balance between the physical and mental needs of these children. The teacher must remember that the main objective is a return to physical fitness; the physician must remember that the child has to prepare for his future and that lively educational experiences have therapeutic value.

53. We recommend that *special treatment include attention to the varied educational needs of children of lowered vitality, and that the content and methods of education be determined by the length of treatment, the degree of educational disability and the therapeutic value of educational experience.*

CHAPTER 5

NEEDS OF PHYSICALLY HANDICAPPED CHILDREN

1. Needs in Town and Country

54. Several witnesses expressed the opinion that no great difference in incidence of physically handicapped children existed between town and country. We accept their judgment. The needs of the country child who is physically handicapped are less easily met than those of the town child. In the large centres of population access to hospitals and clinics is comparatively simple, and it is therefore possible to meet the needs of physically handicapped pupils by day schools. The pupil whose home and school are in the country must in many instances attend a residential school or institution if adequate care is to be given to his disability. The task of the rural authorities in caring for physically handicapped children is administratively more difficult than the task of the urban authorities. If educational opportunity is to be equalised and if access to health services is to be uniform, the rural authorities must overcome the obstacles in the way of providing fully for the special educational treatment of physically handicapped children. We recommend that *in planning services for the physically handicapped treatment be equally available for town children and country children.*

2. A Wide Range of Needs

55. We have already discussed (paragraphs 7 to 10 and 14 and 15) some general needs of physically handicapped children. To complete the account it would be necessary to examine in detail the wide range of needs associated with specific groups of handicapped children. Some of these needs will be considered in relation to the plans that we propose later in this Report for the special educational treatment of the physically handicapped. At this stage we indicate briefly some of the variants that account for the wide range in the needs of these children in general.

56. The category of physically handicapped includes children suffering from different ailments: some of these ailments are progressive, others are static; some cause severe crippling, others have milder effects; some result in children being immobilised, others allow much freedom in movement; some require constant therapeutic measures, others need slighter medical treatment; some restrict education, others permit normal schooling. It will be apparent from these considerations that the nature and severity of physical handicap determines in large measure the needs of the child and his opportunities for having his needs met.

57. Age of onset influences the nature of needs. The problems of the child with a congenital deformity are not identical with those of a child who is physically handicapped by disease or illness in late childhood or adolescence. Physical trauma in children of school age are often accompanied by psychological trauma. The problem of adjustment is generally more difficult in those who acquire a handicap than in those who are born disabled.

58. Needs are conditioned by the place of treatment. Children at home require different content and methods of education from children in hospital, and they in turn cannot always be educated by the methods that are appropriate to a school for the physically handicapped. The routines of hospital and school are different, and they impose conditions that affect fundamentally the nature and character of education.

59. One of the most decisive influences in shaping education is the prognosis of the handicapping condition. Some physically handicapped children can look forward to sharing fully in the life of the community, and they can choose their vocation from a wide range of employments and participate in all the sedentary and some of the active interests pursued by ordinary

people in leisure. Intellectually many of them are competent to undertake advanced studies, and in some instances to find a place in certain of the professions. Unfortunately there are many physically disabled children whose anticipations must be more limited and for whom the world of experience is shrunk to a narrow space. By direct training some of them may reach the independence they desire through employment; some of them may require a sheltered occupation where they can contribute in part to their maintenance through their industry; some must depend wholly on the community for their care. To meet these varied needs, the educational provision must be varied. All should have the opportunity of a general education that will help them to enter as fully as possible into the intellectual and aesthetic heritage of their society, and those who have the talent to prepare for the profession of their choice should be encouraged provided that their handicap will not prevent them following their profession when the preparation is over. No vocational training should be imposed in schools on those who can in later life obtain employment as freely as ordinary children, but those who need vocational training should not be denied the opportunity they desire to fit themselves for a share in the economic life of the community.

60. We recommend that *the education of physically handicapped children be richly varied to meet the wide range of their physical, mental and occupational needs.*

CHAPTER 6

NEEDS OF EPILEPTIC CHILDREN

1. A Need of Understanding

61. In considering the needs of epileptic children it is well to recall that only severe cases of epilepsy are, according to our recommendation (paragraph 22), to be classified as physically disabled children. It has been estimated that as many as one per cent. of the population may show at some time in their lives symptoms that might be described as epileptic in character. It is far from our intention that children with momentary reactions which would not be recognised by the layman should be regarded as physically disabled. When these have been excluded there still remain not only the children who require special educational treatment, estimated at 0·3 per 1,000 of the school population, but an unknown number with mild or occasional seizures who can continue in ordinary schools with profit to themselves and without harm to others. It is not possible to define exactly the borderline between those who should have special educational treatment and those who should remain in ordinary classes in ordinary schools. Under favourable conditions children whose seizures occur not more frequently than about once per term should remain in ordinary schools, provided that the seizures are not severe.

62. The inevitable difficulties associated with epilepsy are complicated by lack of understanding of the epileptic. The fear that prompted our ancestors to treat the epileptic as endowed with demonic or divine powers, or the dread that caused them to exterminate these unfortunate people, still exists in different guise in the public mind. Those who are unaccustomed to epilepsy observe a seizure with discomfort if not with loathing, though it requires no great imaginative effort to replace this first reaction by a sympathy for the victim. He also has his terrors. Many epileptics have admirable qualities of mind and heart, and these should not be forgotten because of the affliction that has come upon them. It is true that some epileptics are ill-adjusted to their fellows, but perhaps that fault can at times be traced as much to them as to the victims.

63. It does not follow that understanding should lead to the conclusion that all epileptics should remain in ordinary schools. There are cases in which

seizures are too frequent and too severe to permit this course. It has also to be conceded that ordinary children are disturbed by these seizures, because it is very disturbing for the normal child to find one of his class mates falling violently to the floor, making strong spasmic movements, emitting strange noises and sometimes losing sphincter control. The quiet-minded and efficient teacher may help to lessen the disturbance in the mind of ordinary children, but cannot hope to prevent the source of fear or reduce it to unimportance. The argument for the exclusion of certain epileptics from ordinary schools does not rest solely on the reactions of those children who witness the seizure. There are grounds for believing that some epileptics are aware of the reactions which they create, and willingly find their place in an environment shared with others similarly afflicted. Those who care for them are accustomed to seizures, show no alarm when they occur and are able to see beyond them to the whole personality of the sufferer.

64. It would help towards the needed understanding if certain fallacies concerning epilepsy could be eradicated from the mind of the general public, many of whom erroneously believe that epileptics form a small and clearly limited group who are divided by a gulf from ordinary people. The fact that there are grades of epilepsy and that symptoms occur frequently in the general population is not widely known. A more serious fallacy is the belief that epilepsy leads inevitably to insanity or to a gross deterioration in intelligence. Even the common knowledge that some epileptics have been men and women of distinction has not made this fallacy untenable. It is true that some epileptics deteriorate mentally, but many do not do so. Fallacious beliefs concerning the temperament and personality of epileptics have also tended to lower them in public esteem.

65. The lack of understanding affects those afflicted with epilepsy in many ways. It has prompted occasionally a strong feeling against the retention of any epileptics in ordinary schools; sometimes it has prevented employers from giving them gainful occupations even when safety regulations did not prevent their employment; it has restricted their social life and has contributed to maladjustment. To remedy these evils a new understanding is required on the part of many people, and it may well be that it could be promoted by an active group or association designed to promote the welfare of epileptics and to secure the sympathy of the general public. It is not within our power to alter the popular mind and attitude, but we recommend that *teachers in training be made acquainted with the needs and interests of epileptic children and that the education of the epileptic be planned to meet the situation caused by the lack of sympathetic understanding in the public mind.*

2. Social and Psychological Needs

66. Children suffering from such a degree of epilepsy as to warrant institutional treatment contain a larger proportion of the mentally retarded than is to be found among an unselected group of children. In assessing this fact it should be remembered that epileptic children who are mentally retarded or who are emotionally unstable are more likely to be sent to institutions than those who are more nearly normal in mind and behaviour. It is not uncommon to find in schools and institutions for epileptics that 20 per cent. are normal in the sense that their intelligence quotients are over 90. It must be assumed that educational needs of epileptic children can be fully met only by providing for a group ranging from the normal to the seriously retarded. Various investigations have been made of the relationship between intelligence and the severity and frequency of seizures. The results usually deny association.

67. The literature of the subject contains many discussions and some experimental studies of epileptic personality. It is commonly said that epileptics show marked personality disorders, that they are self-centred, ungrateful, given to outbursts of bad temper, resentful of efforts to help them and prone to

moodiness. In recent years clinical studies have been made of epileptic children and adults by experienced psychologists and social workers and with the use of such psychological tests as are available. These studies tend to deny the existence of an epileptic type of personality, but they show that difficulties of adjustment do exist in approximately ten per cent. of cases. It is not possible to separate personality traits due to the epileptic condition from traits developed in response to the social situation of the sufferer. In many instances the epileptic facing rejection by his immediate society may readily develop traits that can be called selfish and anti-social, but these may not be the inevitable concomitants of epilepsy. Whatever be the truth concerning the relationship between epilepsy and disorders of personality, the conclusion in practice must be that the epileptic needs a stable and sympathetic environment to help him in adjusting himself to society.

68. Some epileptics will be found to have failed to make the desired adjustment and may be so unstable emotionally that they cannot share the life of an ordinary school for epileptics. It may be necessary to provide for them a special school where disorders of personality can be treated and where others will not suffer as the result of their maladjustment. Special provision of this kind would not be warranted in Scotland because the numbers of epileptics, stable and unstable, are small. We recommend that *educational treatment for epileptic children be designed to meet the needs of the normal and the sub-normal in intelligence, and that the Secretary of State and the Minister of Education examine the needs of epileptic children who are emotionally unstable with a view to the establishment of a school open to such children from Scotland and from England.*

3. Physical Needs

69. It has been maintained that if seizures could be eliminated, many epileptics would be able to live normal lives and take their place fully in the community. Medical science has not reached the stage of preventing all seizures, but great progress has been made in controlling their frequency. The two great developments that have made improvements possible are the devising of diagnostic techniques and the use of drugs. The electro-encephalo-graph with its measures and records of electrical impulses in the brain has refined diagnosis and given the physician a new method of estimating the degree of disturbance during seizures, and in consequence it has been possible to evaluate with considerable accuracy the efficacy of different forms of treatment. It is claimed that the use of drugs has eliminated about 75 per cent. of seizures in 75 per cent. of cases.

70. The treatment of epilepsy by modern methods requires a high degree of specialised medical skill and a wide experience of epileptic children and adults. Much of it depends for success on a careful adjustment of dosage to the condition, and treatment can be carried out with assurance of success only when the patient is under prolonged expert medical supervision. The danger line between the optimum and the toxic dose is finely drawn for some of the drugs, and cannot be discerned without a high degree of skill. It is abundantly clear that for the maximum control of seizures expert medical treatment is essential, for which residence in an institution is necessary in many cases.

71. We recommend that *plans for the special educational treatment of epileptic children make full provision for effective medical treatment.*

4. Educational Needs

72. It has already been recommended that education should have as one of its objectives the adjustment of the epileptic to his social environment, and it need hardly be said that education should be concerned with helping the epileptic to share in the knowledge, skill and appreciation that constitute our

common social inheritance. But beyond this need for general education which is shared by ordinary children there are special needs that are peculiar to epileptic children. One important need arises from the fact that epileptic children profit greatly from being busily occupied in interesting pursuits. It has been said that some of the misbehaviour attributed to epileptic children is due to the dull environment in which they live. The nature of their affliction sets limits on their activities. For example they may be forbidden to climb trees, or scale ladders or swim, and to these prohibitions there may be added the lack of a sense of adventure that comes from a monotonous and dull life. In such circumstances it is not surprising that some measure of misbehaviour and even of violence occurs. Absence of absorbing occupation appears to be related to frequency of seizures. It is commonly agreed by those who work and live with epileptics that seizures occur more frequently in times of idleness than in times of absorbed employment. It follows that special attention must be paid to leisure interests of epileptics. A further consequence is that staffing must be generous enough to allow guidance in leisure and the supply of materials sufficient to permit active and creative interests. This type of educational provision is no mere frill, but is an essential part of successful therapy.

73. The range of occupations open to epileptics is limited, because they cannot or should not find employment where they might do injury to themselves or to others. For example, the control of machinery and rapidly moving vehicles cannot be left to their care. They may be employed in certain forms of factory work; they may become labourers; clerical employment is within their power; dressmaking and domestic work may be open to them; they may find work in agriculture. The list is capable of extension, but it must also be modified according to the exact nature of employment. Agriculture appears at first sight an industry that might be well suited to their needs, but when it is remembered that many farms are mechanised, doubts begin to arise. Because epileptics are not fitted for a wide range of occupations, and because some degree of antagonism has to be overcome in finding them an actual engagement even within a possible occupation, some attention must be given to vocational training. If they have skill, their epilepsy may not prevent employment; if they lack skill, others who are free from the disability will have preference. The range of vocational training will require to be adjusted to their ability. Some may be capable only of simple routines; some will require to fit into the occupations pursued in the protected industry of a colony; some should be prepared for a wide range of possible employments.

74. We recommend that *education for epileptic children make provision for their general education, the use of their leisure in attractive occupations and for vocational training adapted to their abilities and prospective employment.*

CHAPTER 7

EDUCATION OF CHILDREN OF LOWERED VITALITY.

1. Types of Institution

75. Four types of school or institution are required for the education of children of lowered vitality. The first institution is the ordinary school. It has already been suggested (paragraph 45) that, especially in rural areas, some of these children may be able to remain in ordinary schools provided that they receive special care. This proposal has been brought more completely within the bounds of practicability in recent years because of the school meals service and because of the growing interest on the part of teachers in the physical and mental hygiene of children considered individually. The second institution is the convalescent or holiday home. In these institutions children are often under

medical treatment, and nothing should be done in the way of formal education that might cause anxiety or strain. The children should not follow courses of instruction similar to those in school or be under school discipline, but they will be happier to have outdoor and indoor games under good leadership than to be left to their own devices, and they will enjoy such pleasurable activities as rambles in the neighbourhood, music and simple crafts. The third institution, the special day school, often described as the open-air school, is well known and has a long history in this country. The fourth institution is the residential school designed for pupils who cannot receive adequate treatment in special day schools.

76. It is not possible to indicate the exact proportions of children who should be accommodated in these different institutions. The majority should ultimately have places in special day or residential schools. If we cannot attain at present to an ideal provision for children of lowered vitality we may have to content ourselves for a period with such an extension of services as is practicable, and it would appear that having regard to problems of building it might be simpler to extend services in ordinary schools than to erect new residential schools. It is important to do what we can; it is likewise important to try to do what we ought. It would be unfortunate if by grasping the practicable we lost for a long time what is desirable. The efficient provision of education for these children requires all four institutions, and the most important are the special day school and the residential school.

77. We recommend that *the education of children of lowered vitality take place in day schools with special provision for diet, fresh air and rest, convalescent and holiday homes, special day schools and residential schools.*

2. The Ordinary School

78. It is the practice in the United States and elsewhere to attach to ordinary schools a class or classes for handicapped children. In proposing that children of lowered vitality might remain in ordinary schools we do not desire to form a special class for them. Many of these children need special care for only a brief period, and ought not to be removed from the main stream of ordinary classes during the time when they are undergoing treatment. The method of attaching a class of handicapped children to an ordinary school sometimes results in the creation of an all-age class, and this presents considerable difficulty and would be wholly inappropriate to the type of child we have in mind. If a child of lowered vitality requires a long period of treatment and cannot, with attention to diet, fresh air and rest, be retained in ordinary classes in ordinary schools he should attend a special day or residential school. We recommend that *children of lowered vitality who are retained in ordinary schools do not form a class by themselves but remain with the class best suited to their age, ability and aptitude, or attend adjustment classes, or be placed for most subjects in an ordinary class but be directed to other classes for subjects in which their attainments are abnormal.*

3. Convalescent or Holiday Homes

79. There is room for experiment in conducting convalescent or holiday homes, and it would be unwise to make proposals that might by narrow and exact terms set unnecessary limits to their organisation and work. In general, we favour the establishment of homes for not more than 40 children. In a larger institution dealing with children varied in health, age, ability and temperament and residing for varying periods it might be tempting to solve the problems of ordering the life of the community by a rigidity of control unsuited to the primary purpose of these institutions. The aim should be the establishment of a friendly atmosphere and spirit, and this we believe can best be attained in small groups. Whatever the size of the total enrolment the size of each unit

should be approximately 15 and should not exceed 20. A unit should be under one home mother and should have a common life, but should share also in the large life of the community with its maximum of 40 children. A teacher should be in charge of the recreational activities, and should have the assistance of visiting teachers of music and physical education. It might be possible to dispense with the services of a second teacher when the total roll was between 25 and 30, but if this policy is adopted, the teacher must have a play leader or other helper able to assist in some of the activities.

80. While many of the activities might go on out of doors, ample provision should be made for indoor activities. A large play-room suitably equipped should be available for each group of 20, and this room might also serve during part of the day as a class-room. Accommodation should be provided for medical examination and for physio-therapy and other forms of treatment.

81. The homes should always have a healthy and stimulating location. They are readily recognised as a necessity for children from the cities, but it should not be forgotten that in villages and in small towns many children are to be found who might benefit from the help they can give. The school population of certain areas does not warrant the establishment of a home, and co-operation with neighbouring Authorities may be the solution.

82. We recommend that

(1) *convalescent or holiday homes be restricted generally to* 40 *pupils;*

(2) *they be organised in home units of approximately* 15 *and not exceeding* 20 *children;*

(3) *a teacher be in charge of recreative activities assisted by visiting teachers of physical education, art, domestic science and music;*

(4) *when the whole group exceeds* 25 *the teacher have the help of a play leader or of a helper able to assist in some of the activities;*

(5) *ample playrooms, classrooms and medical rooms be provided and equipped;*

(6) *the location be healthy and stimulating;* and

(7) *areas with relatively small school populations combine to establish and maintain a convalescent or holiday home.*

4. Special Day Schools

83. These schools are proposed for children who require a longer period of treatment than can be given in convalescent or holiday homes and for a shorter period than is normally required by children who are physically handicapped. The period may vary between six months and two years, or more in exceptional cases. The children who should attend these schools are varied in their needs. Some are too delicate to follow courses of instruction similar to those in ordinary schools, and they may require a considerable amount of time to be devoted to medical treatment; others may be recovering their health quickly but have temperamental or educational difficulties that require carefully planned instruction.

84. It is desirable that while the site should be ample the school and the classes should be small. We are of opinion that the enrolment should not be less than 100 and not more than 200. A smaller school makes adequate classification difficult, and a larger school tends to become impersonal and to lose responsiveness to the needs of a varied group of children. The need for limiting the size of school becomes apparent when it is remembered that the children may enrol at irregular times and remain for periods of varying length; in such circumstances children can only be known and their needs met in a group that is not too large to prevent friendly interest. For similar reasons we propose that the maximum size of class should be 20. In making this suggestion we are aware that the smaller schools would in consequence of these proposals be based not on one class for every year of age, but on one class for every two years of age, assuming that children are admitted at age five and leave at age

fifteen. The teacher who has to deal with a changing population of children varied in needs and abilities, with double the age range found in classes in a large primary school, will require a high degree of professional skill to meet such a situation.

85. These schools should not be described as open-air schools. Two reasons may be offered. When the first schools were designed for delicate children, primary schools were still being built to plans that made inadequate provision of light and air. The difference in design between ordinary schools and special schools is not now so great as to warrant the description of one type as an open-air school. A further reason is to be found in changes in the conception of open-air schools. The early schools appeared to be based on the theory that if they were cold enough the children would be active. While ample fresh air is provided in these schools to-day, they tend to conform to standards of temperature used in ordinary schools. The children who attend these schools continue to lead a large part of their lives in the open air or in well-ventilated rooms, but these schools have other distinguishing features of importance which are concealed by the use of a name that tells only part of their character.

86. Special day schools for children of lowered vitality are required in many industrial areas. In the larger cities and towns the school should be easily accessible by public transport, for it need not be assumed that all children attending such schools need special transport from home to school. In areas of lesser population density it may be necessary to provide special transport, but care should be taken in making plans in these areas that children do not require to make long and possibly exhausting journeys between home and school. It is obviously important that the schools should be on carefully chosen sites where fresh air and the maximum of sunlight may be obtained.

87. We recommend that

(1) *special day schools enrol pupils for periods between six months and two years or more;*

(2) *they have a total roll of between* 100 *and* 200 *children;*

(3) *the maximum size of class be* 20 *pupils;*

(4) *the schools be easily accessible by public transport or by special transport that does not involve exhausting journeys;* and

(5) *they have ample sites and be situated to obtain fresh air and the maximum of sunlight.*

88. Certain problems common to special day schools and to residential schools for children of lowered vitality are discussed in paragraphs 93 to 110 and further recommendations are made.

5. Residential Schools

89. Many children of lowered vitality requiring a long period of care cannot be treated adequately in special day schools. Children from sparsely populated areas cannot receive the treatment they require save through residential schools. Some children need more continuous medical treatment during a long period of recuperation than can be given at home. Some children come from homes where for different reasons it may not be possible to provide the physical or psychological conditions that are necessary for their restoration. In making these observations we desire to emphasise our belief that no child should attend a residential institution if adequate care can be given in his home and day school.

90. In considering the number of pupils who should attend residential schools many factors have to be weighed. The school should have sufficient pupils to permit reasonable classification by age, but it should not be so large that it loses the sense of community. A place of residence for children should have a sense of homeliness, and this can best be achieved in a relatively small institution. But the realities of finance have to be remembered as well as the need for classification, and it may not be easy to face these facts in a small

school. With these considerations in mind we are of opinion that a residential school for children between five and fifteen years of age should have an enrolment not exceeding 100 pupils. This is the smallest number that permits adequate classification for this range of age. It would be possible, however, to have a smaller school if the age range were limited. Thus if the residential school contained 40 pupils it might cover an age range of five years. The general principle should be that the school ought not to exceed 100 pupils when the pupils range from five to fifteen years, and that smaller schools might be established provided that they did not require an average age range per class of as much as three years. The maximum size of class should be 20 pupils, and they should be enrolled for periods ranging from six months to two years or more in exceptional cases.

91. Residential schools should be located in the country. In choosing a site or in proposing to adapt an existing building it is important to select a healthy location, but it should not be so remote as to make day visits difficult for medical officers and specialist teachers or to create problems of professional or domestic staffing.

92. We recommend that

(1) *residential schools have a roll not exceeding* 100 *pupils if their ages range from five to fifteen years;*

(2) *in smaller schools the average age range per class be less than three years;*

(3) *the maximum size of class be* 20 *pupils;*

(4) *the school be in a healthy and accessible location in the country;* and

(5) *pupils be enrolled for a period of between six months and two years, or more in exceptional cases.*

6. Day and Residential Schools: Accommodation

93. In planning schools for children of lowered vitality it is important that careful thought be given to their physical welfare. Dining halls should be attractive, dormitories and rooms for the mid-day rest should be airy, playrooms should be ample, classrooms should permit free movement, a gymnasium should be available, rooms should be provided for physical examination and for physio-therapy and other forms of treatment. It would be a serious mistake in policy to plan accommodation with the needs of ordinary children in mind. Children of lowered vitality have special needs, and they cannot be met unless plans are drawn with these needs clearly in mind. Accommodation in residential schools must be devised with the happiness of the whole community in mind. We have suggested that the needs of the children be met; it is also necessary to provide suitable quarters and amenities for the professional staff and for the domestic staff. We recommend that *in planning new day and residential schools or in adapting existing buildings careful thought be given to the physical needs of the children and to their educational and recreational interests, and that due attention be paid to the comfort of the professional and domestic staffs, especially in residential schools.*

7. Day and Residential Schools: Grounds

94. The outdoor activities of children of lowered vitality play an important part in their recuperation. Their needs are not fully met by providing a hard playground or a playing field for team games. It is desirable that they should have facilities for team games, but provision should also be made for the less organised enterprises of free play. Building a makeshift shelter, bird-watching, tracking, playing on the see-saw or the swing, performing acrobatics on the climbing frame, digging in a patch of garden are among the occupations that may tempt a child to exercise his returning vigour. Playgrounds or playing fields that are carefully planned are of use for many purposes, but they do not meet all the needs of children. There is much to be said for a purposeful

wilderness in the grounds of a school for children who need to be tempted to venture and adventure. We recommend that *the grounds of day and residential schools be adapted to the playing of team games and to less organised pastimes that would appeal to children returning to health and so tempt them to use recovered powers.*

8. Day and Residential Schools: Staffing

95. In addition to class teachers the school should have the services of visiting specialist teachers in such subjects as physical education, music, art, crafts and domestic subjects. Visiting teachers should be of service not only in giving their advice to teachers and in sharing the instruction of the children, but also in bringing into the school a sense of the world outside. It is desirable that each school should have a nurse as a regular member of the staff to supervise the health of the children and to carry out the instructions of the visiting medical officers, and if the visiting teacher of physical education is not trained in physio-therapy, arrangements should be made for the services of a physio-therapist when required.

96. In residential schools it is important that adequate staff should be employed to promote the leisure activities of the children. The work of teaching children who are not in good health and who in most instances have had their educational routines disturbed is exacting, and it is desirable that teachers should not be heavily burdened with the duty of supervising the recreation of the children especially in the evening. A considerable amount of time will be spent by many teachers beyond the hours of class instruction in preparing apparatus and devising exercises for the individual methods that must be employed in the education of these children.

97. We recommend that

(1) *in residential schools staffing be generous enough to prevent over-burdening teachers with duties of supervision;*

(2) *in day and residential schools visiting teachers of special subjects be employed;*

(3) *the staff of both types of school include a trained nurse;* and

(4) *the services of a physio-therapist be available.*

9. Day and Residential Schools: Child Guidance

98. Some of the children who attend day and residential schools will come from homes where they have suffered neglect, and some will have become accustomed to rely on others as the result of the care given to them in sickness. In this group it is to be expected, therefore, that problems of behaviour and personality will occur that require child guidance services. Some of the children will be retarded in education, and some may have specific learning disabilities : these children also require to be studied by the techniques of child guidance. We recommend that *child guidance services be made readily available to all children of lowered vitality who are in need of them.*

10. Day and Residential Schools: Curricula and Methods

99. In our discussion of the needs of children of lowered vitality (paragraphs 45 to 53) we have already indicated some principles that should govern curricula and methods of teaching. In planning the content and method of instruction it is important to remember that the children differ in standards of health, in educational attainments, in interests, in temperament, and in ambition. Their educational experiences should be adjusted to their physical condition, and devised to give them opportunities to share in common activities without neglecting their individual abilities and disabilities. These aims are not incompatible. An earnest endeavour on the part of a teacher to force children to reach a common level of educational achievement is more likely to create physical strains than an attempt to meet individual needs would be. The

curriculum should not be thought of solely in terms of school subjects. We have already indicated that many of the children have to discard old habits and acquire new habits that will set them on the road to a healthy life. This broad conception of education must always be fundamental in planning the education of children of lowered vitality.

100. For the younger children, as far as traditional school subjects are concerned, the main need is to overcome disabilities and to master essential processes. Reading techniques should be tested and, where necessary, a remedial programme established. In arithmetic it is desirable to survey the fundamental processes and common rules in order to discover if any of these have not been mastered. A skilful teacher who has the necessary books and equipment can make the mastery of techniques in reading and arithmetic a fascinating experience. If the remedial exercises are carefully adjusted to the child's ability and previous knowledge their mastery can give him a sense of confidence that can help him towards a new self-respect and self-reliance. Help of the same nature, based on diagnosis of ability and graded exercise, can also be given in such subjects as spelling and handwriting.

101. It would be a mistake to devote the period of recuperation wholly to the mastery of " tool " subjects. The child's need for social adjustment can be met, at least in part, through such shared activities as music and drama. He may find relief of psychological tensions in crafts. For this purpose he should have a variety of tools and materials, and, although he should be given training in their use, he should be encouraged to express himself through imaginative and creative endeavours. Nature study should help him to understand the world out of doors and to see in the woods and lanes new sources of interest and opportunities for adventure. Such children have much to learn and much happiness to find in the care of pets, and they should be encouraged to take a responsible part in this absorbing occupation.

102. In considering the general discipline of the day or residential school it should be remembered that children, and especially children with personality problems, do not find the security they need in an unregulated life. A sense of order based on familiar routines is essential if they are to be free from the strain of making perpetual choices and of encountering the unknown at every corner. It is equally true that their needs will not be met in a community that banishes surprises and is ruled without affection. The school that blends routine with surprises, security with adventure and affection, has created the conditions that are needed by children of lowered vitality.

103. We recommend that

(1) *in planning curricula and methods children of lowered vitality have opportunities of learning habits of healthy living;*

(2) *the children be studied individually in order that their educational disabilities be assessed and remedied;*

(3) *they have experience of group activities;*

(4) *creative work be encouraged;*

(5) *they learn to take an interest in life out of doors and in the care of pets;* and

(6) *the general conduct of the school be designed to give them security, affection and adventure.*

11. Day and Residential Schools: Secondary Education

104. Many children of lowered vitality are to be found in primary schools; but the proportion in secondary schools is probably less. The effects of a series of infectious diseases or of neglect are likely to be made manifest before children reach the age of twelve. It cannot be taken for granted, however, that pupils in the secondary stage will not appear in the category under discussion. The

debilitating effects of disease or neglect are to be found throughout the early adolescent years; post-operational care may be required at any time of life. The planning of special educational treatment for pupils of secondary school age presents many difficulties, as they have a wide range of ability and a great variety in educational experience. If as we are informed they exist in smaller proportions than the group in primary schools, the diminution in numbers aggravates the problem of classification.

105. The main difficulty arises in planning the education of children who are undergoing a full course of traditional secondary education. An efficient secondary course of this type depends for its success on having a highly trained staff of specialist teachers. In order that sufficient options in courses may be given, the staff must be fairly large, and that implies a school of greater size than could easily be filled with children of lowered vitality. It might be possible to establish a restricted school of this type by drawing on a wide " catchment area " of pupils, but even if this were possible it is doubtful if it is desirable. Children whose secondary courses have been so seriously interrupted by illness that they require a long period of recuperation should not during convalescence be subjected to the pressure that commonly exists in the traditional or academic courses of secondary education. They will almost without exception require to resume their studies at the stage where interruption caused by illness occurred. In the great majority of cases the problem may therefore be reduced to one of maintaining or revising what has previously been learned and affording opportunities of continuing general education. The highly intelligent child of secondary school age, especially among the older pupils, should have opportunities of private reading and study while attending a day or residential school, provided that his work involves no fatigue of a serious nature.

106. Plans should be devised in the main for children between twelve and fifteen years of age who are not following full academic courses. The period of recuperation, it will be recalled, varies from six months to two years or more, and the problem should therefore not be conceived as the provision of a complete course of secondary education. Some children of lowered vitality between the ages of twelve and fifteen will be so seriously retarded that they will require the assessment and remedial treatment of educational disabilities at the primary level. The opportunity should be taken to meet these needs during the period of their enrolment in a day or residential school. For those who have maintained standards of achievement appropriate to their age, the curriculum should include some at least of the work that is commonly done in the early stages of the secondary school. It may not be possible to provide in a day or residential school all the wide variety of courses that a large school can offer, but the common core of subjects, English, history, geography, elementary mathematics, and science, might be offered. Courses in domestic science and in crafts should be included and provision made for physical exercises. It is important that no undue pressure should be placed on children who are convalescing, but much useful work can be done without strain, especially if an attempt is made to adjust standards of attainment to individual capacity and interest. In this connection the closest possible contact should be maintained with the secondary school from which the pupil has come. Teachers should endeavour to make use of the rural setting of residential schools and help children to appreciate the work and life of the countryside.

107. We recommend that *in planning secondary education for pupils of lowered vitality in day or residential schools the curriculum be not based on the assumption that they will be able to maintain the standards reached in the academic or traditional courses followed by children in normal health, but be devised to ensure the mastery of primary school attainments and to continue the studies common to secondary courses*, and we further recommend that *intelligent children desiring to progress in their studies be given opportunities for private reading and tutorial guidance*.

12. Day and Residential Schools: Roman Catholic Children

108. Provision should be made for day and residential schools for Roman Catholic children. Provided that the area from which children are drawn is of suitable size, it should be possible in the more populous parts of the country to gather together adequate numbers of Roman Catholic children to warrant the establishment of a school. It is likewise true that in the rural areas where the only possible provision for all or any children is in residential schools a school should be available for Roman Catholic children. Some difficulty must arise outside the main population belt in towns which are large enough to have a day school provided that all the children of lowered vitality in the town are gathered in the same institution. This situation will not be common. In such circumstances one school should be established and special provision made for religious education. We recommend that *where justified by numbers day and residential schools be available for Roman Catholic children, but that in areas where only one day special school is necessary it be attended by all the children in the area and special arrangements made for religious education.*

13. The Return to Normal Education

109. The temptation to prolong the period of special education beyond the stage of recuperation should be resisted. The child who receives the benefits of diet, fresh air and a midday rest within the ordinary school may begin to look upon himself as a very special person who is to be excused from much mental and physical work. It is important for his own welfare that he should be treated like others as soon as he has reached the stage in recovery when he can dispense with special treatment. Children who are sent to convalescent or holiday homes, or to day or special schools, should also be returned to ordinary schools for their own sakes as soon as health permits. The argument of benefit to the individual in being returned to normal education when fit is supported by the argument that others will be waiting to fill his place. The arguments may be sound, but we know that in practice they are often resisted. Teachers and others become attached to the children in their care, and there is a natural unwillingness to see them go, even when it is realised that others are in need. We have no specific solution to offer to this problem. The suggestion that a period of treatment should be fixed in advance and precisely kept is not practicable, nor would it be advisable to establish medical and psychological examinations at the end of each term for all children in day or residential schools. The best that can be done is to ensure that teachers, medical officers, psychologists and administrators should be reminded or remind themselves from time to time that prolongation of treatment beyond the period of recuperation may be harmful to the child under care and to the child whose treatment is postponed or denied.

110. Some of the children on returning from homes or schools may not be able to resume their work with children of their own age because of educational retardation caused by absence and illness. These children would benefit from a period in adjustment classes before returning to the class appropriate to their age and ability. We recommend that *children of lowered vitality be returned to normal education as soon as they can dispense with special treatment and that where necessary they have a period in an adjustment class before entering a class appropriate to their age and ability.*

CHAPTER 8

EDUCATION OF PHYSICALLY HANDICAPPED CHILDREN

1. Age and Aptitude

111. The literature of the subject contains many estimates of the age and ability of physically handicapped children. Surveys in the Union of South

Africa and the United States of America suggest that as many as 80 per cent. of children with physical handicaps are afflicted before reaching six years of age, and that approximately ten per cent. of children are handicapped by an inherited deformity or through birth injury; this cause does not in itself explain the preponderance of early-life crippling. The most frequent cause of handicap is to be found in infections, notably infantile paralysis and tuberculosis of the bone; these conditions frequently occur in the early years of life. The education of physically handicapped children must be planned on the assumption that the majority will be crippled on entering school and will remain handicapped in varying degrees throughout life, but plans must also provide for the occurrence of physical handicap, especially through accidents, at any age of school life.

112. Studies of intelligence commonly conclude that physically handicapped children are widely distributed in intelligence and that the average intelligence quotient is to be found between 80 and 90. The group as a whole contains a small number of highly intelligent children. Children suffering from certain congenital disorders or birth injury tend to have lower intelligence quotients than those who are disabled by the crippling infections.

113. We recommend that *in planning the education of physically handicapped children it be assumed that the majority suffer disablement from early years, that a few are disabled during school life and that the group contains children who are widely distributed in intelligence.*

2. Diagnostic Classification

114. One of the largest records of handicapping conditions has been made in the United States.* The Children's Bureau recorded the incidence of various types of crippling illness reported between 1935 and 1944 from all the States and Territories under the 1935 Social Security Act. They have been summarised as follows:—

	Number of cases	*Percentage of cases*
Poliomyelitis	62,373	18·3
Osteomyelitis	15,834	4·6
Tuberculosis of bones and joints	8,500	2·5
Cerebral palsy	33,380	9·9
Other birth paralysis	7,559	2·2
Cleft palate or harelip	14,899	4·4
Clubfoot	28,111	8·2
Congenital dislocation of hip	6,795	2·0
Spina bifida	4,644	1·4
Other congenital defect	26,414	7·7
Burn	7,521	2·2
Other injury	20,972	6·2
Rickets	13,684	4·0
Arthritis	6,601	1·9
Osteochondritis	4,327	1·2
Epiphysiolysis	2,525	·7
Scoliosis	10,419	3·1
Torticollis	3,981	1·2
Flatfoot	16,816	4·9
Muscular atrophy or dystrophy	3,367	1·0
Rheumatic fever or heart disease	5,499	1·6
All other definite diagnoses	28,647	8·4
Provisional diagnoses	8,154	2·4
Total	341,022	100·0

*Crippled Children in School. Bulletin 1948, No. 5. Federal Security Agency. Office of Education. U.S.A.

Most of the medical terms used in this paragraph are familiar to all who are interested in the education and care of disabled children. The following brief notes may help to give the lay reader an acquaintance with some of the less familiar types of disability. *Spina bifida* is a defect in the formation of the spine leaving a gap through which the spinal cord and its membranes may protrude. It is usually found in the lumbar region and may cause paralysis of the legs. *Osteochondritis* is a disease caused by a degenerative process in the opiphyses or growing parts of the bones in children, producing softening of the affected bones with resulting deformity. *Epiphysiolysis* is the separation of an epiphysis or growing part of a long bone from the shaft. The result is similar to fracture and if untreated there may be arrest of growth with consequent deformity of the limb. *Scoliosis* is a deformity caused by lateral curvature of the spine. *Torticollis* is a deformity characterised by bending of the head towards the shoulder on the affected side accompanied by twisting of the neck.

115. It should not be assumed that the Scottish incidence of each type will be identical with that reported in this survey, but the children with whom we are concerned suffer from the disabilities shown in this diagnostic classification.

3. Types of Institution

116. All physically handicapped children who are physically and mentally able to profit from education should receive educational care. In stating this general principle we have the happiness and health of the child clearly in mind. For most children, education is no longer an experience to be shunned, nor is the teacher a dull pedagogue pressing on children his unwanted wares. Children are interested or are capable of being interested in the world about them, and their deepest needs are left unsatisfied if their persistent urge to learn and grow is neglected. Experiences of knowing and creating have a therapeutic value that is of service to those who are disabled.

117. In making a claim for the educational care of all physically handicapped children we desire to assert that, while the child is undergoing treatment for his physical handicap, treatment must have precedence over education. The relief of pain and the restoration of physical health are the most urgent of all the services that can be given to children. But there comes a time in the course of treatment when the teacher can help the physician by occupying the mind and hands of his patient. For many children, fortunately, there also comes a time when with a measure of health and strength they turn with interest to the world about them and look ahead to a useful and happy life; at that point education becomes a necessity and an undeniable right.

118. Physically handicapped children are to be found in hospitals and sanatoria, in day and residential schools for the physically handicapped, in special schools for the cerebral palsied or for children with heart disease, and under medical care at home. It is in these institutions that the educational care of the physically handicapped must be given. We recommend that

(1) *all physically handicapped children who are able to profit from education receive educational care;*

(2) *treatment of physical handicaps take precedence over education;* and

(3) *arrangements be made for the education of physically handicapped children in hospitals, sanatoria, day and residential schools, schools for cardiac children and for the cerebral palsied, and at home for those who are homebound.*

4. Children in Hospital: Provision of Education

119. The medical superintendent should determine when educational services may be given to a child in hospital. The Education Authority should have assurance, however, that the medical superintendent has made a deliberate judgment against permitting instruction when a child remains for a long period

without education in hospital. This can best be secured if the medical superintendent intimates to the Authority after a defined period that a child has remained in hospital without educational treatment. It is not proposed that the medical superintendent should show cause for withholding a child from education, but merely that he should attest the fact. The period might be defined as one month from entry and succeeding months thereafter. We do not consider that this provision would infringe in any way the rights of the medical superintendent or limit his responsibility for the treatment of the child. It gives the Education Authority an assurance that the child's educational needs are not being forgotten.

120. It is not proposed that educational services should be made available only to children who have been or are expected to be in hospital for more than a month. If a child is to be in hospital for a brief period, and the medical superintendent considers that it would be of value to have educational services, these should be provided if the Authority finds it possible to do so. The Authority cannot, however, be expected always to provide the services of a teacher for a limited period at short notice. Some period should therefore be fixed during which the Authority would be permitted and at the end of which they would be required to provide education. The Authority should provide services within fourteen days of notice being given by the medical superintendent that a child is able to profit from education.

121. It is not suggested that medical superintendents are averse to education or Education Authorities unwilling to meet obligations to children in hospital. The purpose of the proposed rules is to protect the needs of children and to define the obligations of those who care for them. We recommend that

(1) *the medical superintendent report to the Education Authority the name of any child in hospital who is fit for education;* and

(2) *the Authority endeavour to provide educational services as soon as possible after these have been requested and be required to provide educational services within fourteen days of notice being given by the medical superintendent that a child is fit to profit from education.*

5. Children in Hospital: Size of Group

122. In keeping with the general principle that education should be provided for all physically handicapped children who are able to profit thereby we do not propose to fix any minimum number that ought to be present in hospital before the services of a teacher should be made available. It would not be difficult to describe circumstances in which it would be highly desirable for a teacher to spend part of her time in assisting the education of one child in a small hospital. We make suggestions later in the Report for the education of homebound children (paragraphs 201 to 215), and we can see no reason for denying to the solitary child in hospital the services that we recommend for the solitary child at home. A teacher should be engaged fully in any hospital where 15 children are in need of education. Where larger groups of children are gathered together in one hospital the size of group per teacher should not exceed 20 children.

123. We recommend that *a teacher be employed full-time when* 15 *children are ready for educational services in a hospital or in neighbouring hospitals, that the maximum number per teacher be* 20 *children and that when fewer than* 15 *children are in need of education in a hospital the part-time services of a teacher be made available.*

6. Children in Hospital: Length of School Day

124. Regulations cannot be made to determine for children in hospital the length of time during which they can be under instruction. No hospital can be organised and conducted in such a way that treatment will be confined to one

part of the day and the rest left free for educational or other activities. Even if it were possible to have fixed hours of work for the teacher it would not follow that all the children would be all the time under educational guidance. Hospital children can seldom be marshalled into class-rooms and left under the full charge of a teacher for defined periods. In these circumstances it is idle to think of defining the length of the school day with the expectation that during the hours thus fixed all the children will receive instruction.

125. It is sometimes suggested that periods of instruction should be defined even if they have to be interrupted for medical treatment. In support of this idea it is argued that interruptions for medical treatment will be reduced to a minimum if certain hours are designated for education. Without such designation, it is said, the work of the teacher cannot be accomplished. The opinion is sometimes expressed that the hours of instruction should be fixed not in order to secure periods of uninterrupted work, but in order to prevent too much work being required of the teacher. The supporting argument here is that hospitals are often under-staffed and that teachers will be given ready encouragement to hold the interest and attention of children.

126. We have reached the conclusion that it is not possible to fix hours of instruction and that the best that can be done is for the Education Authority to determine the length of the teacher's day and to arrange with the medical superintendent the hours of actual instruction, proceeding on the assumption that all the children will not be under instruction all the time. In settling the length of the teacher's day, allowance should be made for time to make assignments of study for individual children and to prepare materials for crafts and similar activities.

127. We recommend that *the Education Authority determine the length of the teacher's working day and arrange with the medical superintendent teaching hours that best conform with the medical and educational needs of each child.*

7. Children in Hospital: The Teacher's Task and Working Conditions

128. Children of all ages are to be found in hospitals, and where their numbers are small one teacher may be required to deal with a wide age range. Her pupils vary in the length of time of instruction, not only because they will be in hospital for different periods, but also because they may be permitted to have educational treatment at different stages in residence. Some may be fit for educational activities on entering, some may be on the point of leaving before the medical superintendent finds it possible to permit education. The task of the teachers has to be adjusted to the child's attitude to learning, and this may vary from reluctance to anxiety.

129. The physical condition of the children sets limits to the work that the teacher can do. Children may have to wear orthopaedic appliances that restrict movement or they may have to rest in unusual positions. Some require to remain in bed during instruction; others may be allowed to sit together as a class. Children in hospital are in need of varying amounts of medical attention: some may be free for a few hours; others need frequent care. The teacher should see her task as one of overcoming these difficulties, recognising that they arise from the child's own needs. If they are felt to be merely irksome restrictions on the work of instruction, the teacher has failed to appreciate her essential task.

130. Because the difficulties of instruction in hospital are considerable, it is important that the conditions of work that are controllable should be as satisfactory as possible. Text-books and teaching material should be provided on a generous scale. Many of the children are capable of working by themselves, and since those who are in bed cannot be brought together into a class, individual methods must be used. Self-correcting books and apparatus can be obtained for several subjects, and material of this kind should be provided. Children in bed are capable of various forms of handwork, and here again it is

necessary to provide the teacher with adequate tools and material. It makes for efficiency and reduces work and waste of time if storage accommodation for books and material is ample and well planned.

131. Children in hospital benefit from books, broadcasting and visual aids. In many hospitals books are supplied by the public library service. An effective liaison between teacher and librarian could bring to the hospital ward books that are well suited to the children's leisure interests and educational needs. Older children can profit from school broadcasts even when they cannot have the preparatory lessons that ought to precede listening to them. Younger children can find delight in broadcasts designed for their age. In some hospitals, wards have their own internal broadcast system, and this can be used with gramophone records suited to the age and interests of the children. Visual aids such as the cinema projector, the epidiascope and illustrations of all kinds can be used effectively in the education of hospital children. Conditions in hospital are not always favourable to the use of the more mechanical visual aids, but much can be done by a skilful teacher who is accustomed to his apparatus. Education for children in hospital should be largely concerned with giving them experience that will turn their minds to the acting, moving world of men and things beyond the walls of the ward.

132. It is desirable that a room should be provided for educational purposes in every hospital where children are normally to be found. The room should be spacious enough to allow free movement and to permit the use of wheeled chairs for children who cannot walk. Work tables should be provided, and places should be available for a variety of crafts. The room should be equipped with maps and books of reference.

133. The task of the hospital teacher cannot be made simple merely by attending to conditions of work and devices of instruction. The work will always be beset with difficulties, but these should challenge and not daunt ingenuity and enthusiasm. The resourceful teacher will use flowers, museum specimens, music, colour, visual aids and other materials and devices to attract and keep interest, and will invent methods of teaching adapted to the needs of her children.

134. We recommend that *because of the inherent difficulties of teaching children in hospital, special attention be paid to the controllable conditions of work and due provision made of accommodation, books, materials and aids to teaching.*

8. Children in Hospital: Co-operation

135. In discussing the education of children in hospital we have found it necessary to consider the strains that may occur between medical and educational interests. The risk of these should not be minimised. The danger is likely to arise through conflict not of policies but of people, and it is in the human situation that action must be taken to lessen the chance of strains. There are circumstances where it is not true that to know all is to forgive all, but knowledge of the common ends that are being sought by medical and educational interests in the care of disabled children is an important means of diminishing strains. In the course of her training for the care of children it is desirable that the nurse should learn something of contemporary psychology of childhood. It is equally important that the teacher should appreciate to some degree the nature of the child's illness and the necessity for treatment. In a later section of this Report we consider the training of teachers of disabled children and make recommendations on the subject, but we may indicate here our belief that the teacher of disabled children should have some understanding of their physical condition and of the measures being taken to remedy disabilities. We have discussed the problem of co-operation between medical and educational interests in the course of our review of education for hospital children, and it is probable that it is in this setting that the gravest elements of the problem appear.

The need for co-operation always exists where medical and educational treatment are to be provided; and the proposals that we make for enlightening the nurse on educational issues and enlightening the teacher on medical matters are not confined to hospital schools, but are of wide application in all types of school and institution designed for the treatment of handicapped children.

136. Co-operation is required between parent and teacher. Many parents who are concerned for the future of their children are anxious to be assured that educational opportunities will not be neglected during a long illness. The anxiety can be turned to a co-operative interest if teacher and parent can confer. The way may be prepared for the parent to take an interest in the child's education at home during convalescence or in a day school for the physically handicapped. Parents on their part can often give insight into the child's hobbies and activities, and thus make it possible for the teacher to relate educational experiences to the child's personal interests. On visiting days the teacher has important functions to fulfil in promoting co-operation with parents, and the opportunity ought not to be neglected.

137. We recommend that

(1) *to secure co-operation in the treatment and education of physically handicapped children some instruction in child psychology be given to nurses in children's hospitals and some instruction in the common ailments of disabled children and their treatment be given to teachers in training;* and

(2) *opportunities be made for co-operation between teacher and parent in the education of disabled children.*

9. Children in Sanatoria

138. The recommendations made for children in hospital apply with modifications to children in sanatoria. Children with less severe and mildly active tuberculosis are often capable of attending sanatoria schools with only infrequent interruptions for treatment, and it is possible in suitable cases to make considerable progress with their education. School work is usually done out of doors or in rooms that are specially ventilated, and it is important that children should be encouraged to take an interest in open-air activities. Non-pulmonary tuberculosis accounts for a larger proportion of children in sanatoria and hospital wards for the tubercular than does pulmonary tuberculosis.

139. We recommend that *standards of staffing, arrangements concerning the length of school day, the general conditions of the work of the teacher and of co-operation between medical and educational authorities proposed in this Report for children in hospital apply also to children in sanatoria with such modifications as are required by the special treatment of tuberculosis.*

10. Schools for Physically Handicapped Children

140. Physically handicapped children in hospital differ in certain respects from those who attend schools. Children in hospital are undergoing active treatment to reduce or remedy disability or to recover from accidents or crippling illness. The physical condition of pupils in a school for the physically handicapped is generally static. Many of these children have undergone hospital treatment, and are sent to schools for the physically handicapped because they are not wholly fit for ordinary schools or because they require a degree of medical care that does not involve hospital treatment. Some of the children who attend schools for the physically handicapped suffer from crippling or other physical condition existing from birth or from an early age and incapable of remedy even by the special services of the hospital.

141. The problems connected with the school for the physically handicapped are different from those of children in hospital because the periods of treatment differ in length. This difference also exists, and is of critical importance, between the school for the physically handicapped and the school for children of lowered vitality. We have already recommended that, save in

exceptional circumstances, the period of treatment in a day or residential school for children of lowered vitality should not be longer than two years. Most of the physically handicapped children must remain in school for a much longer time. Indeed, many of them will receive the whole of their schooling in such an institution. We have given careful consideration to the problem of the relationship between the school for the physically handicapped and the school for children of lowered vitality and have reached the conclusion that the two should almost always be separate institutions. When an attempt is made to bring together two groups, one of which is transient and the other constant, the result is undue attention to those who are new. This is particularly true where the transient group is larger than the constant group, and it is established that children of lowered vitality are much more numerous than physically handicapped children. Where the types are mixed, the physically handicapped children tend to suffer.

142. The case for separate schools rests not on administrative convenience, but on different educational needs. Curricula and methods for children of lowered vitality are based on the assumption that these children will return to ordinary schools, whereas the basic assumption for physically handicapped children must be that they will remain in the special school. A further principle to be considered in determining a policy of combination or separation relates to vocational training. Children of lowered vitality can usually gain or regain a sufficient degree of health to enable them to compete on comparable terms with children from ordinary schools. Physically handicapped children usually have a persistent disability that sets limits to choice of occupation. If they have some vocational skill, they may be able to compete for employment with those who are not disabled. It must also be remembered that physically handicapped children must learn to adjust themselves to a life restricted by disability. This does not mean that education should be largely determined by the nature of the handicap, but while it is desirable to think more of capacity than of incapacity in devising education for disabled children, the disability cannot be ignored. The desired adjustment is more likely to be developed when the physically handicapped child has the society of his fellows than when he shares a community with those who are usually abler than himself and who can look forward to a life of full activity. A further argument for separating the physically handicapped and the children of lowered vitality relates to the type of accommodation and equipment required by the two groups. It has already been shown that children of lowered vitality should have a physical and social environment that will stimulate them to engage in the normal activities of childhood and youth. Physically handicapped children need an environment that is adjusted to disability and avoids the frustration and disappointment that come from the unmet challenge of stimulation to a normally active life.

143. The principle that we propose is that the two groups should normally be separated. In the cities it should be possible to have separate schools. Rural areas require to combine to provide residential schools for both groups, and it is our opinion that separate residential schools should be provided. No serious difficulty should be encountered in applying the principle, but it will be necessary to have a larger "catchment area" for physically handicapped children than for children of lowered vitality. The problem of combination or separation is a difficult one in certain towns, especially in those outside the thickly populated industrial belt. In certain circumstances separation might entail either a considerable amount of travelling or the use of residential schools. The schooling of these children may suffer to some extent by associating the two groups in such areas, but we consider that the alternative of long travelling or residence must be rejected.

144. Special care should be taken in those areas where the schools are combined to ensure that the interests of the physically handicapped children who will usually be in the minority are not sacrificed to those of children of

lowered vitality. The headmaster or headmistress of the school should make certain that the physically handicapped are following a progressive course of education and that they are not forced to endure frequent revisions or the fresh beginnings that are apt to accompany the arrival of new short-term entrants in a class. To safeguard the interests of physically handicapped pupils in a combined school a first assistant should be appointed to supervise the education of these children. We recommend that *having regard to the educational needs of physically handicapped children and to the long period of their treatment they do not attend the same school as children of lowered vitality, save where the separation of the groups might result in long journeys to school or in residential treatment.* We further recommend that *where it is necessary to combine the groups, attention be given to the special needs of physically handicapped children and a first assistant be appointed to supervise their education.*

11. Children in Schools: Day and Residential Schools

145. It is necessary to provide residential schools for physically handicapped children who live in small towns or in sparsely populated areas. The case for residential schools does not rest wholly on the impossibility of providing day schools in country districts. Some physically handicapped children cannot receive adequate treatment in day schools. Two groups of such children may be distinguished. The first group includes those who are so gravely handicapped that they cannot be exposed to the strain of travelling, and those who cannot be given the care that they require at home, because of the severity of their disability and the need for medical attention or because of the inability of the home to provide suitable living conditions for a disabled child. The second group consists of children who are normally able to attend day schools, but who, as the result of occasional illness, require a period of recuperation. The residential school can give to the day school child who is physically handicapped the same type of assistance as is given to children of lowered vitality in need of residential treatment. It will be apparent that a residential school must be related to a larger child population than is to be found within the areas of the smaller Authorities. It will also be apparent that even the compact areas cannot meet the needs of all physically handicapped children by day special schools.

146. It is our opinion that under suitable circumstances physically handicapped children should attend day special schools rather than residential schools. When the period of compulsory schooling is ended, the physically handicapped have to lead their life in the general community and it is desirable that they should as far as possible remain within that community during their formative years.

147. We recommend that *while children who are physically handicapped attend day special schools when circumstances permit, residential schools be provided for those who are unfit for travelling long distances, or who need treatment that cannot be provided at home, or who, while normally attending day special schools, require residential treatment to recuperate after illness.*

12. Children in Schools: Size of Class and School

148. Day schools for physically handicapped pupils should have classes not exceeding 20 pupils; the average number ought to be approximately 15. In order that classification may be adequate there should be at least five classes to cover the age range of five to fifteen years. The school should, therefore, not have more than 100 and ought in suitable circumstances of location and staffing to have approximately seventy-five pupils. Smaller schools could be established if the age range in the school is restricted, but the size and age range should be so adjusted that the average range should be less than three years per class and the size of class should not exceed 20 pupils. It is recognised that in congested areas where transport to school is available it would be possible to draw together sufficient children to form a school with more than

100 pupils, but we are of opinion that such a school is not likely to afford the friendly environment that physically handicapped children desire. In such an area it would be possible to have one school for older children, ranging in age approximately from 11 to 15, and a separate school for younger children. This arrangement might permit a degree of specialisation of instruction in the school for the older children and thus provide for their widely varying needs.

149. It is often easier to manage a wider range of age in classes in residential schools than in day-school classes. The teacher in the residential school knows the children intimately and can adjust instruction to individual capacity. We cannot accept, however, any lowering of standards in residential schools as compared with day schools for physically handicapped pupils. We have already indicated that children in residential schools often include in their number some who are severely disabled and who may require a special degree of educational care. It would be a mistake in policy to increase the size of class for a group of children who are likely to present the greater difficulties. We propose, therefore, that the size of school and class should be the same for day and residential pupils.

150. We recommend that *in day and residential schools for physically handicapped children the maximum size of class be* 20, *but the average ought to be approximately* 15, *that the school should not exceed* 100 *pupils, but ought from* 5 *to* 15 *years to have approximately* 75 *pupils, and that smaller schools be permitted, provided the total age range is diminished and the average age range of classes is less than three years.*

13. Children in Schools: Vocational Training

151. We have already advocated (paragraphs 14 and 15) a measure of vocational training for disabled children. It is highly desirable for the sake of physically handicapped pupils that during their schooling they should receive some help in preparing for entry into industry. In making proposals for the vocational training of these pupils we desire to reassert that an education unrelated to work, although apparently humane and liberal, defeats its own ends by leaving the physically handicapped at a disadvantage in seeking a place in the industrial order and by creating a sense of frustration in their minds at the threshold of adult life. We do not propose that their general education should be neglected but we are convinced that general education does not by itself meet all their needs.

152. It is not possible, nor would it be desirable, to make detailed proposals for the content of vocational training. The needs differ according to the abilities and interests of the pupils. Attention should be given to training that will lead to employment in their own home district, and for that purpose there should be a continual watch over developments in local industry and a never-ending search for work that they can do and for employers who will value their skill. In some areas, for example, it might suit the interests of the pupils and increase their chances of employment to train girls in needlecraft in order that they might find employment in dressmaking or millinery. In other areas, a demand might exist for pupils trained in commercial subjects. Some occupations such as telephone switchboard work might require a comparatively brief training to supplement a good general education; and this training could be done in the last few months of schooling. In certain localities, where, for example, dressmaking is in demand, it might be desirable to have specialist teachers and specialist work-rooms in the school and to devote a considerable time to training for this employment.

153. In making a plea for vocational training we do not advocate that highly intelligent pupils who might desire to continue their studies and endeavour to enter a profession for which they are suited should be compelled to desert their chosen course of study in order to be put to a narrow trade. But we do not desire to see all handicapped children enter upon courses that

might be appropriate for entrance to the professions when their future employment will be elsewhere. Academic education has a vocational value for those desiring a professional career; it may not meet the needs of handicapped children desiring to spend their life in non-professional employment.

154. We recommend that *vocational training suited to the abilities and interests of handicapped children and to the range of local employment be given in the later years of schooling.*

14. Children in Schools: Secondary Education

155. The proposals which we have made for vocational training would give a special quality to the education of physically handicapped pupils in secondary schools. It is of the essence of these proposals that the training should be adapted to the vocations of the district, and it is appropriate that the schools should have effective contacts with local employers. But a system of secondary education based solely on local employment could not do justice to children desiring full secondary courses for entrance to the professions or similar vocations. A secondary school offering courses in modern languages, the classical languages, science, mathematics, English, history and geography requires the services of a skilled staff and must be large enough to permit alternative courses. Provision of this kind cannot be made without a degree of centralisation. The needs of Scotland might well be met in one or two schools. A suitable plan to meet these needs would be to establish such a school in a city with a small permanent staff supplemented by visiting specialist teachers. The school would require to be residential, but day scholars from the city might also attend.

156. We recommend that *one or more schools be established to meet the needs of physically handicapped pupils in Scotland desiring to pursue traditional courses in secondary education, that such schools be residential but with some day pupils and located in a city, and that the staff consist of a small group of full-time teachers supplemented by visiting specialist teachers.*

15. Children in Schools: Accommodation and Equipment

157. Schools for the physically handicapped should not be built and equipped with the needs of ordinary pupils in mind. The school and all the class-rooms must be easily accessible, because many of the children walk with difficulty and some require wheel-chairs. Doors must be wider than usual: door handles should be convenient to the child in the wheel-chair. Lavatories should not be remote from class-rooms. Floor space should be more ample than that provided for children in primary schools. Arrangements will be required for a mid-day rest for some at least of the children. The hygienic standards of the school should be high. Residential schools should not be drab, nor should the rooms be uniform in decoration; the dormitories and recreation rooms should be different in colour from class-rooms, and an effort should be made to supply them with pictures or easily changed wall-decorations. It should be constantly remembered that many physically handicapped children remain throughout their entire school-life in a residential school. Deprived as they often are of a wide experience of the world out of doors, these children should find their place of work and living stimulating and varied. They should have the right to personal treasures and a suitable place for storing them. Their clothing should be varied, and some choice should be permitted in style and colour. Orderliness in residential schools is required, but too much orderliness costs too high a price in happiness and freedom of mind.

158. Rooms must be provided for vocational training for the older pupils, and these should be adequately equipped. Since many physically handicapped children are denied recreations involving much activity, they should be encouraged to use their hands in hobbies. They should have ready access to books and competent and imaginative guidance in their selection. Special

provision must be made for accommodation and equipment required by the medical staff. Examination rooms and rooms for physio-therapy should be well designed and equipped. Due attention should be paid to the quarters used by the professional and domestic staffs, especially in residential schools.

159. We recommend that *schools for the physically handicapped be specially planned or adapted to meet the needs of the children, that attention be given to the decoration of rooms, that scope for individuality in such matters as personal possessions and dress be given, that hobbies and leisure reading be encouraged, that rooms be provided for medical services and, in residential schools especially, that the rooms and furnishings in quarters for the professional and for the domestic staff be planned with care and with due attention to amenities.*

16. Children in Schools: Roman Catholic Children

160. The general principles for the education of children of lowered vitality which have already been recommended (paragraph 108) should apply equally to Roman Catholic children who are physically handicapped. Since physically handicapped children are less numerous than children of lowered vitality, it will not always be possible to institute a day school for these Roman Catholic children save by the method of extending the travelling range, which we cannot recommend. Circumstances may then arise where the choice must be made between taking the children from home and placing them in a residential school or having them in the special day school for the children of the district. Applying the principle that children should remain at home when the home and the day school can meet their needs, we have formed the opinion that in these circumstances the Roman Catholic children should attend the day school for physically handicapped children in the district and that special arrangements should be made for religious instruction. We agree that in some districts the numbers of children of lowered vitality warrant the establishment of a school for Roman Catholic children in this category. What provision should be made for Roman Catholic children in such a district who are physically handicapped? We believe that it would not be in the interests of the children to form a combined school, and would suggest that the physically handicapped Roman Catholic children should attend the school for children in the district, provided that special arrangements are made for religious education.

161. It may happen that by gathering together all children of lowered vitality and physically handicapped children irrespective of denomination sufficient numbers may be found in a district to warrant the establishment of a combined school. This arrangement is far from ideal, especially from the point of view of the physically handicapped, but it is preferable to residential treatment. In making this judgment it is assumed that the children are suitable for day-school education and do not require on medical or educational grounds to be in a residential school. In these circumstances Roman Catholic children who are physically handicapped or of lowered vitality should attend the combined schools for pupils in the district and suitable arrangements would be made for religious instruction.

162. We recommend that

(1) *when sufficient numbers of pupils are available, schools be instituted for Roman Catholic children, but that elsewhere Roman Catholic children attend the day school for physically handicapped pupils in the district rather than a residential school;*

(2) *Roman Catholic children do not attend a school for pupils of lowered vitality save where such a combined school is provided for all physically handicapped children in the district;* and

(3) *where Roman Catholic children join a school for physically handicapped pupils in the district, special arrangements be made for religious instruction.*

17. Children with Heart Disorders

163. Children with heart disorders belong to the category of physically handicapped children, but we discuss them separately because of their special needs. Rheumatic fever frequently results in some impairment of cardiac function. The illness is apt to occur in the early years of schooling, and, if adequate care is not taken of the child's health after the first attack, the illness is apt to recur. Some children suffer from congenital heart disorders; it is possible that some have hereditary predisposition to rheumatic fever. The amount of impairment to the heart resulting from heredity or rheumatic fever varies from a slight degree that requires little change in mode of life or education to serious damage that may restrict movement severely and endanger life. Because the impairment is varied in severity, educational treatment must also be varied. Some children are incapable of any serious educational endeavour, while others may undertake normal studies and many activities. The character of education depends not only on the degree of impairment, but also on the place of treatment. Children with heart disorders are to be found in general hospitals, in children's hospitals, in special convalescent homes, in schools for the physically handicapped and under medical treatment in their own homes. No system of education for the physically handicapped is complete that does not include special educational treatment of cardiac children in all of these different places.

164. In recent times recognition of the importance of rheumatic fever as a crippling disease has been growing. Many of the cardiac disorders occurring in middle life or later are now commonly ascribed to juvenile rheumatism, and treatment in childhood or adolescence is now regarded as a preventive action. Because of the tendency of rheumatic fever to recur, arrangements are sometimes made for clinical re-tests over a considerable period, and for this purpose centres and research units have been established for consultation and examination at various hospitals and clinics. We have already proposed (paragraph 36) that there should be notification of children who are disabled at age six. Having regard to the serious consequences that may result from rheumatic fever we are of opinion that this disease should be notifiable up to 15 years of age. The child should then be reported to the Education Authority as physically handicapped in order that, under medical supervision, provision may be made for his education.

165. We recommend that *from the educational point of view rheumatic fever be made a notifiable disease up to 15 years of age, that children suffering therefrom be reported to the Education Authority as physically handicapped in order that plans for their education under medical supervision may be made and that educational services be provided for all children with heart disorders in hospitals, special convalescent homes, schools for the physically handicapped and under medical supervision in their own homes.*

18. Children with Heart Disorders: in Hospitals and Convalescent Homes

166. In the early stages of treatment of rheumatic fever or cardiac disorder it is usually required that the patient should rest. No formal education should be undertaken at this critical stage, and recreational reading under the guidance of a hospital teacher could be done only where explicit permission is given by the medical superintendent, and then only for a brief period. When some measure of stability had been attained, the patient might be allowed recreative interests under the guidance of the teacher. Children with heart disorders often require a long time of convalescence, and it is during this period that educational services may be enlisted to support medical services. Convalescence may be spent in a children's hospital or in a home devised for children with heart disorders. It is important that risks of infection be reduced to a minimum and that speedy measures be taken if illness of any kind develops. The children must be encouraged to take life quietly in the early period of convalescence. For these reasons education must not seek priority over medical treatment, but

should be content with the important role of ministering to the child's recovery of health by giving him interests that will cause no physical or serious mental strain. Towards the end of convalescence a more formal educational regimen may be introduced.

167. The teacher can help the medical and nursing staff in building habits of work and movement that come within the prescribed limits of physical exertion for each child. New interests must be devised to compensate for old interests that are forbidden. In adjusting education to the returning strength of the child the teacher must rely on medical advice and be prepared not to press forward too eagerly towards educational attainments. Where educational activities are to be attempted in a convalescent home, accommodation and equipment should be designed to avoid strain. Children should not have heavy desks to move or long stairs to climb. Attention should be paid to rest; games should be carefully supervised, and no equipment should be provided that might tempt to over-exertion.

168. We recommend that *in hospitals and convalescent homes for children with heart disorders, education be related to physical ability and be designed to enlarge interests within the limits set by disability.*

19. Children with Heart Disorders: in Schools for the Physically Handicapped

169. Many children who are successfully treated for rheumatic fever are able to return to ordinary schools after convalescence. Some with more serious degrees of impairment profit from attending a school for the physically handicapped.

170. We recommend that *children with heart disorders who are fit for schooling but who ought not to be subjected to the strain of ordinary school life attend a school for the physically handicapped, that those who can travel without risk of further impairment attend day schools and others attend residential schools, that school medical officers advise teachers concerning the activities that these children individually might undertake and that teachers report immediately to school medical officers any signs of ill-health that they observe.*

20. Children with Heart Disorders: at Home

171. Children with heart disorders are sometimes nursed at home, especially in convalescence. Like children in hospital or in convalescent homes they require educational experiences that are adjusted to their abilities. In some respects their needs are greater than the needs of those in institutions who are in the company of other children to whom they can talk. Many children recovering from rheumatic fever find that the most trying part of their illness occurs when in spite of a partial return to health they are compelled to remain in bed, and this period is particularly difficult for children who are being nursed in their own homes. They should have the services of a visiting teacher under arrangements similar to those proposed for homebound children (paragraphs 201 to 215). The teacher must avoid imposing any mental or physical strain that might impede recovery and must accept fully the advice given by the medical attendant concerning the nature and amount of work prescribed.

172. We recommend that *children with heart disorders who are nursed at home have under medical supervision the help of a visiting teacher.*

21. Children with Cerebral Palsy

173. Children with cerebral palsy have certain distinctive needs that require special treatment. For this reason we discuss them as a special group within the category of the physically handicapped.

174. These children are often described as "spastic." The term has the merit of being short and it is incorporated in the title of the organisations in Britain mainly responsible for the care of the children, but it is of doubtful

validity since not all children generally included in the term are spastic in behaviour. It is not contended that cerebral palsy is an ideal term; it is open to the objection that it suggests the cerebrum as the seat of injury, and this is not in accordance with the facts in certain cases. The classification of cerebral-palsied children originally proposed by W. M. Phelps and widely used in Britain and the United States of America assumes six types of muscular reaction: these are tremor, flaccidity, rigidity, spasticity, athetosis and ataxia.* They are classified for other purposes in terms of the parts of the body that are involved.

175. Interest in children with cerebral palsy has grown rapidly in recent years in Britain and the United States of America. Research has been intensified and facilities for treatment have increased. Only a few decades ago it was assumed that children crippled by this disease would require to adjust themselves to the disability without hope of improvement or cure, and it was believed that treatment should consist largely in providing an environment that would ensure as much comfort as possible. The development of new techniques of physio-therapy applied with patience and skill has demonstrated that improvement is possible in a large number of cases and that in some it may be considerable. It has been found in recent years that children with cerebral palsy have sometimes been wrongly classified as mentally handicapped or ineducable. Motor, sensory and speech defects limited the behaviour and responses of these children to such a degree that they appeared even to the skilled observer to be lacking in normal intelligence. Relief from physical disability made it possible for the child's mental ability to be assessed and his erroneous classification corrected. Because of the better understanding of their physical and mental states, cerebral-palsied children, their parents and all who are concerned for them look forward with a new confidence to a time when many of their children may have their bodies and their minds freed from the crippling effects of this disease.

176. The great majority of children with cerebral palsy, approximately ninety per cent., are disabled from birth. Among the post-natal causes affecting the minority there may be included certain head injuries, encephalitis, meningitis, and cerebral haemorrhages. Hereditary and congenital defects are related to cerebral palsy, but the most frequent causes appear to be those operating at birth, including notably birth injuries, asphyxia and cerebral hæmorrhage. A wide variation exists in the degree of disability. Some degree of muscular involvement always occurs, but additional injury may be done to hearing and vision or other sensory ability, to speech, intelligence and personality.

177. Estimates of total incidence and assessments of injury are being made on the basis of research in Britain and elsewhere. An important study has been made by W. M. Phelps,† who found a high degree of constancy in incidence in different localities in the United States of America. His conclusion is that in a general population of 100,000 seven cerebral-palsied children are born each year. Of these seven one dies before the end of the fifth year, thus leaving an increment of six per 100,000 of population for whom lasting provision has to be made. Assuming for the present that the main problem in Scotland relates to the age group of children from five to fifteen it might be expected on this basis that 60 children of school age would suffer from cerebral palsy for every 100,000 of population. This would yield a total of approximately 3,000

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*Flaccidity is the condition of muscles lacking in tone. Rigidity is a state of constant muscular stiffness. In spasticity the muscles react strongly to stimuli making controlled movement difficult. Athetosis is manifested by recurrent involuntary movements, frequently slow and writhing in form. Ataxia is shown in movements lacking in co-ordination and balance. These conditions are associated with injury or defect in different parts of the nervous system.

†The Farthest Corner: An Outline of Cerebral Palsy Problem. Prepared under the direction of Winthrop M. Phelps. The National Society for Crippled Children and Adults, Chicago.

cerebral-palsied children in Scotland within the age range of compulsory schooling. But the American rates of incidence cannot be applied uncritically to Scotland, because they include children who have mild defects from cerebral palsy and because the birth rates in the two countries are not identical. Thus in 1946 the birth rate in the United States of America was 23·3 per 1,000 of the population while in Scotland in that same year the birth rate was 20·3 per 1,000 of population. It may be conjectured that the figure derived from applying the American rate of incidence to Scotland is too high, and that plans for the education of cerebral-palsied children need not assume that provision should be made for even 2,500 Scottish children within the age range of five to fifteen years. It is important to notice the difference between incidence in the school population and incidence in the general or total population.

178. Evidence has been presented to us that in Glasgow in 1944-45 children with cerebral palsy known to the school medical officer represented a rate of 15 per 10,000 of the school population. This rate is higher than that recorded in the same year in any other of the four largest cities, the rates being Edinburgh, 5; Dundee, 12; Aberdeen, 14. It is difficult to obtain complete records of cerebral-palsied children in relation to the total number of children in an area. Some children are kept at home: others, including some of the most seriously affected, are sometimes located in institutions for mental defectives outside the areas. If it is assumed that the Glasgow rate applies to the country as a whole the cerebral-palsied children of school age in Scotland would number approximately 1,150. In view of the fact that Dr. Phelps found no significant difference between areas in the United States, or between city and country districts this assumption is probably justified. It should be noted that this rate is equivalent to a rate of 23·0 children in the age range of five to fifteen years per 100,000 of the general population. An investigation made in Wiltshire and summarised in the report of the Chief Medical Officer of the Ministry of Education for the years 1946 and 1947 shows that in that county the rate was 23·8 per 100,000 of the general population.

179. Bearing in mind the high costs of providing therapeutic and educational services, we are inclined to accept a conservative estimate of children with cerebral-palsy who are in need of special treatment and capable of profiting therefrom. In making our estimate of the provision needed we are influenced also by the fact that therapeutic and educational methods are still in their early stages of development and that as experience is gained some modifications may have to be made in medical and educational services. With these considerations in mind we recommend that *in planning for the education of cerebral-palsied children in Scotland it be assumed that their number is approximately* 1,000 *between the ages of five and fifteen and approximately* 1,350 *of all ages under fifteen years.*

22. Children with Cerebral Palsy: Intelligence

180. In recent years many studies have been made of the intelligence of children with cerebral palsy. The tests lack the degree of accuracy that may be expected when they are applied to normal children. Test responses made by children who are defective in speech or who lack motor controls or sensory acuity cannot be assessed without a considerable degree of unstandardised and personal evaluation on the part of the psychologist. In spite of the chance of error, tests of intelligence applied to large groups of these children produce general results that are surprisingly constant. Experimental evidence suggests that approximately 30 per cent. of children with cerebral palsy are defective in intelligence to such a degree that they must either be given special educational treatment as mentally handicapped children or be regarded as ineducable. Most of the investigations* show that approximately 12 per cent. of children with cerebral palsy are of high average or superior intelligence.

*A summary of investigations is contained in Children with Mental and Physical Handicaps, J. E. W. Wallin. Prentice-Hall, New York, 1949.

81. We recommend that *in planning the education of children with cerebral palsy it be assumed that approximately* 30 *per cent. are mentally handicapped to such a degree that they should not attend ordinary schools even if they are physically able to do so and that approximately* 12 *per cent. require education adjusted to over-average intelligence.*

23. Children with Cerebral Palsy: Education

182. Intelligent children with cerebral palsy may be found with almost all degrees of muscular involvement, and a few are physically fit to attend ordinary schools. Most of them, however, require therapeutic measures that depend upon skilled care and the use of medical equipment and appliances that can be found only in a hospital or in a school staffed and equipped for such children. The proportion of intelligent children among the cerebral-palsied cannot act as the deciding factor in estimating the numbers of these children who can profitably remain in ordinary classes in ordinary schools. Having regard to our conservative estimate of the total group in Scotland we are of opinion that approximately 10 per cent. of them could profit from ordinary schooling, but some of these would require speech therapy and, perhaps, some amount of physio-therapy. It might be assumed that approximately 20 per cent. would be ineducable and in need of institutional or efficient home care. The remaining 70 per cent. would require to attend schools for the physically handicapped, or schools for the mentally handicapped, or special schools for children with cerebral palsy. A more precise allocation of the 70 per cent. of children with cerebral palsy cannot be made because local factors, including the availability of a special school for these children, must be taken into account. All of these children may spend periods of time in hospital and should benefit from educational services there.

183. We recommend that *in making plans for the education of children with cerebral palsy it be assumed that approximately* 10 *per cent. could profitably remain in ordinary schools, provided that arrangements are made for speech therapy and physio-therapy when required, that approximately* 20 *per cent. are ineducable and are in need of institutional or efficient home care, and that* 70 *per cent. receive treatment and education in schools for the physically or mentally handicapped, or in special schools for children with cerebral palsy.*

24. Children with Cerebral Palsy: Treatment and Education

184. With some physically handicapped children it is possible to reach a point in treatment when they can be released from medical care and passed on to the school. Children suffering from cerebral palsy, save in the mildest cases, require a close and continuous association of medical and educational services. Especially in the early stages of treatment, progress depends largely on the co-operative efforts of a team of specialists. Before the child can make progress in reading, he must often have help from the speech therapist. Before he can learn to write and during the period of learning, he needs help from the physio-therapist. The teacher can learn from the physio-therapist which muscular movements to employ in writing or any other activity, and if the two work closely together they can make education therapeutic and therapy educative. The teacher can benefit from the work of the occupational therapist. Working together they may find that they can help the child to gain a new independence and self-respect if he masters the arts of buttoning clothes or lacing shoes or feeding himself without spilling food. If the specialists fail to co-operate they may confuse the child as he tries to master new muscular habits and thus delay his progress. The work must be under the guidance of a skilled paediatrician, and he should be responsible for securing the co-ordination of all who deal with the individual child.

185. An effective service requires the co-operation of teachers, speech therapists, physio-therapists, occupational therapists, nurses, orderlies capable

of moving the children carefully and an interested domestic staff. It follows that the child who is disabled by cerebral palsy will not receive the treatment that he needs by being placed in a school for the physically or mentally handicapped, unless provision is made for the services of the necessary group of specialists.

186. We recommend that *children with cerebral palsy, with the exception of the mildest cases, be under expert medical supervision and have the help of a team that includes teachers, speech therapists, physio-therapists, occupational therapists, nurses, orderlies and co-operative domestic staff.*

25. Children with Cerebral Palsy: Vocational Training

187. The range of occupations suited to the abilities of children with cerebral palsy must always be limited. For any individual the range will depend on the motor, sensory, speech and intellectual abilities that he possesses and on his personal qualities. Commerce and agriculture have in the past absorbed considerable numbers of these children; a few have found occupations in industry, and some have entered professions. Within these broad categories the choice of work depends on its exact nature and on the degree of understanding of the employer and fellow employees. Thus within the wide category of agriculture there are some forms of work, especially with machines, that would not be within the range of many of the cerebral-palsied, while there are others suited to their powers.

188. Most children with cerebral palsy require extended treatment for their physical disability in childhood and early adolescence; many of them need an environment that is free from mental or physical strain; some have speech or sensory disabilities. For these reasons their schooling cannot progress at the rate that their intellectual powers might warrant. In these circumstances no serious endeavour should be made to give explicit vocational training. Some of the work done as occupational therapy may serve as vocational preparation, but it should be chosen for its therapeutic rather than its vocational value.

189. While training for a selected vocation should have no place or a place of little importance in schools for children with cerebral palsy, the general policy in treatment and education will assist these children in preparing themselves for some form of employment. By learning to articulate clearly, or to control facial contortions, or to eat without offence, or to walk, or to write, or to make progress in learning, the child with cerebral palsy is enhancing his prospects of employment and preparing himself for a place in the economic order.

190. We recommend that *vocational training be not normally given in schools for children with cerebral palsy.*

26. Children with Cerebral Palsy: in Schools for Physically or Mentally Handicapped Children

191. Children with cerebral palsy may participate in the ordinary life and instruction of schools for physically or mentally handicapped children; but if treatment and education are to be adequate, provision must be made for the service of all specialists who are required. The children will in general be more frequently absent from the class-room than other children because of the extended treatment required for their disabilities.

192. In many cases it will not be possible to ascertain whether a child is mentally handicapped or if he is prevented from making intelligent responses by his motor or sensory or speech disabilities. With such cases, it is desirable to give the child his opportunity by placing him in the first instance in a school for physically handicapped children rather than in a school for the mentally handicapped.

193. Children who are not within easy travelling distance of an appropriate day school should attend a residential school. They should be joined by children whose needs cannot be met by home and day school treatment.

194. We recommend that *children with cerebral palsy who attend day or residential schools for physically or mentally handicapped children participate fully in the life and instruction of the schools, that adequate medical and educational services be provided, and that unless there is clear and reliable evidence of mental handicap children be placed in the first instance in a school for the physically handicapped.*

27. Children with Cerebral Palsy: in their own Schools

195. One of the results of the developing interest in cerebral palsy in Scotland and in England has been the establishment of schools equipped and staffed for the treatment and education of children with cerebral palsy. One such school was established in 1948 in Edinburgh by the Scottish Council for the Care of Spastics with the aid of the Scottish Branch of the British Red Cross Society. It is the intention of the Council to establish other centres in Scotland. The existing centre has a highly skilled staff of specialists, several of whom have the advantage of knowing methods of treatment that have developed in the United States of America. The Edinburgh centre is still in the experimental stage, but it has already established itself as an accepted institution for the care of children with cerebral palsy, and it carries the good wishes of all who know its work and worth. The school has at present 20 pupils. This number raises important questions of policy in selection. We consider that the treatment available in a special residential institution of this kind should be given to those who can profit most from its services. In practice this means that selection should be made not of those who have slight degrees of disability, but of those of all degrees of disability, but especially the more severe, who have average or over-average intelligence. At this stage in the study of children with cerebral palsy it is necessary to discover how much can be done to help them towards a full life and the experiments should be made in the first instance with those who offer most hope of success. At the commencement of such an experiment it is desirable to admit children over a fairly wide range of ages, but there is much to be said for the view that children of promise should be enrolled in the early years of childhood.

196. Until further evidence is available concerning the success of such a centre and the pressure on its accommodation, no final estimates can be made of the need for such centres in Scotland. We are convinced, however, that the needs of Scotland for residential treatment of children with cerebral palsy cannot for long be met in one centre. It may be found necessary to have some degree of specialisation in the schools in relation to mental retardation or visual or auditory disablements.

197. Secondary education should be provided for physically handicapped children in general, but we believe that the special group of intelligent children with cerebral palsy are unlikely to profit fully from secondary courses shared by others who have different types of handicap. They require extended physiotherapy, and they must be guarded against the tension that sometimes accompanies studies during adolescence. For these reasons and because their numbers are small we consider that this group of children should receive their treatment and secondary education in a residential centre. It is not suggested that they should be moved to such a centre at the commencement of secondary schooling, but that as soon as they are ascertained as being average or over-average in intelligence they should have the opportunity of attending a centre in which they would remain until the end of their school course.

198. We recommend that *the experimental work commenced at the Edinburgh centre for children with cerebral palsy receive encouragement and support, that additional centres, adjusted perhaps to special groups of these*

children, be established when the demand arises and staff is available, and that children with average or over-average intelligence have access to a special centre of treatment and of primary and secondary education where they may remain from ascertainment until the end of their school course.

28. Children with Cerebral Palsy: Young Children

199. Children with cerebral palsy have many obstacles to overcome in learning the simple activities achieved with ease by others. Walking has to be taught with deliberation and patience; the simple operation of putting out a hand to grasp an object often requires special training; speech may be incomprehensible unless careful tuition is given. Insight and experience are required on the part of the instructor if progress is to be made in these elementary skills and accomplishments, and it is not to be expected that even the intelligent and affectionate parent will be able to give the child the necessary guidance. If the child fails to master these habits efficiently, he will substitute less satisfactory modes of behaviour and action in early life, and these must be broken down before they can be replaced in later childhood. Neglect of early treatment can be redeemed only at the cost of much effort on the part of the child and of those who teach him. For these reasons provision should be made for early treatment and for advising parents how best to help their child to acquire efficient habits in early years. Some of the desired assistance can be given by hospitals. This service requires to be supplemented by having, wherever possible, nursery classes attached to schools for physically handicapped children and by securing that residential centres should be prepared to admit children with cerebral palsy from the earliest years.

200. We recommend that *children with cerebral palsy have access from their earliest years to treatment in a hospital or specially equipped school or in a nursery class in a school for the physically handicapped, and that these centres advise parents how to teach elemental movements and speech to their children.*

29. Home-bound Children

201. For more than thirty years a service of education for home-bound children has been in operation in Edinburgh. The scheme was initiated by the Edinburgh Cripple and Invalid Children's Aid Society. Since 1924, teachers have been employed by Edinburgh Education Authority in this important service, and at present the staff consists of six certificated teachers. Those who have participated in this work speak of its value with enthusiasm.

202. Home-bound children are unable to attend schools for the physically handicapped on account of their disability even when satisfactory transportation exists. They include a proportion of those suffering from various forms of paralysis, heart disorders, asthma, inactive tuberculosis, orthopaedic conditions and a great variety of less frequent ailments, and some who are convalescing after illness.

203. These children have a wide range of educational needs. Some are of secondary school age, and are interested in the subjects usually found in secondary courses; others are at the commencement of their schooling; some are under instruction for a brief period; others must depend on home teaching throughout the years of normal schooling; some are retarded because of long illness; others are normal in attainments.

204. The children often present problems of personality. Many of them are cut off from the companionship of other children of their years, and some of them live in homes where the illness of the child has caused or increased emotional tensions within the family. Those who have been confined to bed or to the home for a great part of their lives have a limited experience of the world, and their educational needs are very different from those of ordinary children.

205. In proposing that their needs be met we are aware that unwise parents might be tempted to retain their children within the protection of the home

rather than allow them to attend a school for the physically handicapped. Parents who make this foolish choice would be few in number, and it would be wrong to make them the reason or the excuse for failing to provide educational services to children who are in genuine need of home-bound instruction.

206. We recommend that *instruction by visiting teachers be made available to physically handicapped children who are unable to attend schools for the physically handicapped.*

30. Home-bound Children: Selection

207. In order that home-bound instruction may not be abused, the school medical officer should certify that this is the most appropriate method available for each case. The first intimation that a child is physically fit for home-bound instruction should come from the family doctor or a health visitor to the school medical officer, who should then decide if the child should have the help of the visiting teacher rather than attend a school. The Education Authority would then have the responsibility of arranging home instruction. Periodical reviews of all cases should be made in order to determine if any child could return to school. This would be ensured by arranging that at intervals of six months, or other suitable period, from the first acceptance under the scheme the school medical officer should renew his request to the Authority for the continuance of home-bound teaching or should intimate its termination. The services of a visiting teacher can make a most useful contribution to a child's education, but the system fails to provide the companions and variety of interest of a school and ought not to be continued longer than is strictly necessary.

208. We recommend that *no child receive home-bound teaching provided by an Education Authority save with the approval of the school medical officer and that a renewal of the form of instruction be granted at intervals of six months by the Authority provided that it is supported by the school medical officer.*

31. Home-bound Children: Instruction

209. The teacher of home-bound children requires a quick sense of sympathy, enthusiasm for the work, imaginative insight into the child's world and the ingenuity to overcome unexpected difficulties of all kinds. The routines are few, the improvisations are many. The child's needs must be assessed and, if necessary, remedial instruction arranged. Work must be planned for the child to do before the teacher returns, and what has been done must be corrected and errors explained. The level of accomplishment should be adjusted to the child's ability and his developing interest. Reading skills must be firmly established, because the home-bound child may have to rely on reading for his enjoyment and for the development of knowledge through personal effort. It should not be forgotten, however, that experiences of number do not occur as frequently to the home-bound child as they do to ordinary children who go shopping, or play counting games together. With careful planning and assistance, home-bound children can profit from school broadcasting, and this method of instruction should be used freely. Provision should be made for the exercise of crafts and hobbies, and material should be provided if these are not already supplied by parents.

210. We recommend that *home-bound children receive instruction adapted to their age and ability, that special attention be given to the establishment of efficient habits of reading, that having regard to the lack of experience of number special care be given to the teaching of arithmetic, that crafts and hobbies be encouraged through instruction and through provision of materials if these are not supplied by parents, and that full use be made of school broadcasting.*

32. Home-bound Children: Organisation

211. In planning the organisation of educational services for home-bound children, it is desirable to integrate them as completely as possible with the

school system and to secure the benefits that are given to all other children within the system. Children who are receiving their education at home should have such benefits as free milk, text books, the use of apparatus and materials. In order to give them an opportunity of measuring themselves against other children they should be allowed to take examinations, if their health and accomplishments permit. Those who are able to pass entrance examinations at the end of the primary school should be specially encouraged to do so, in order that they may feel assured of their achievements and know that they are not lagging behind other children. To ensure that such services and opportunities are afforded to children who are home-bound we propose that they should be enrolled in an appropriate school. For those who are temporarily ill and who have already attended a school no problem arises, for they should continue to regard themselves and be regarded by the Education Authority as pupils of that school. Children who have been unable to attend school and are receiving home-bound instruction should be enrolled in the nearest school for the physically handicapped. In country areas or in small towns where no such school exists, they should be enrolled as pupils of the nearest school for ordinary children.

212. Following the existing practice in Edinburgh we consider that teachers of home-bound children should be attached to a school for physically handicapped children or, if no such school exists in the district, to an appropriate school for ordinary children. In the cities this arrangement would bring to one centre a group of teachers of home-bound children. They should attend at an agreed time each week in order to record the work they have done, to gather new books and materials, to meet teachers in the school and, most important of all, to discuss their problems as visiting teachers. In country areas the weekly visit to school may not provide opportunity for meeting other visiting teachers, but it should enable the visiting teacher to meet class-room teachers, discuss problems of method, and carry out the duties of keeping records and assembling books and materials.

213. The number of pupils for whom one teacher should be responsible depends on many factors. If teacher-supply were satisfactory it would be desirable to aim at providing an average of one hour of instruction per day for each pupil, with a maximum period of two hours of instruction at any visit. In cities this rule might mean that four or five pupils could be taught by one teacher; in the country areas the number might be two or three pupils. In deciding the number of pupils to be allotted to a teacher, much depends on travelling arrangements and on distances between the homes that are to be visited, but the nature of the child's illness and his stamina must also be taken into account. A detailed prescription of hours to be given to pupils might prevent adjustments to the real needs of pupils. Occasions might arise when with the approach of the return to ordinary schooling or of examinations it would be desirable to give more time than usual to one pupil. There might be occasions when as a result of temporary weakness or of a change in domestic circumstances the hours of teaching would have to be diminished. For these reasons we are inclined to content ourselves with the proposal that the minimum amount of instruction should be two hours per week for each pupil. Having regard to the different problems of different areas, we do not propose exact rules governing the number of pupils to be placed in the care of one teacher, but suggest that the maximum should be ten. This maximum is chosen to permit the common meeting in a school once per week to which we have referred, but we desire to express the opinion that the maximum can be reached only in areas where travelling time is at a minimum.

214. In the cities especially, it is desirable that one teacher should be responsible for the supervision of home visitation. The responsible teacher should have certain teaching duties, but should be free to advise her assistants, to meet the pupils on occasions and to see that equipment and materials are available.

215. We recommend that

(1) *home-bound children be enrolled as pupils in a school for physically handicapped children or in an ordinary school;*

(2) *they receive as far as possible the benefit of all the services given in these schools;*

(3) *visiting teachers be attached to one school and that they return to this school once per week for conference and to attend to records and supplies;*

(4) *the minimum amount of instruction be two hours per week;*

(5) *the maximum number of pupils for one teacher be ten but that this maximum be permitted only when travelling time is limited;* and

(6) *where two or more teachers are appointed by an Education Authority one be made responsible for supervising the work.*

33. Home-bound Children: Children in Remote Places

216. In various parts of the world where travelling is difficult, schemes of postal tuition are used, and these have worked well when parents were willing and able to co-operate. In Scotland such a scheme has been developed by the Argyll Education Authority. Careful assignments of work, adapted to the individual child, are prepared by experienced teachers and posted to the children. They send back their scripts to a centre where comments and corrections are made by the teachers and the scripts are then returned to the children. Visits are paid to the children when circumstances permit. This system is of value to home-bound children in remote places, but it should be used only when it is impracticable for the Education Authority to give the amount of tuition by a visiting teacher recommended above and when residential treatment is not required.

217. We recommend that *where circumstances make it impracticable for an Education Authority to provide the recommended amount of instruction, a system of postal tuition be arranged if the parents or other responsible persons in the home are willing and able to co-operate*, and we further recommend that *the system be used for children who are not in need of residential treatment.*

CHAPTER 9

EDUCATION OF EPILEPTIC CHILDREN

1. Existing Provision and Need in Scotland

218. Epileptic children are to be found in schools for the physically handicapped, institutions for mental defectives, their own homes and, in a comparatively small number of cases, in schools that make special provision for epileptics. The main centre devised for these children is the department for boys and girls in the Colony for Epileptics in the Orphan Homes of Scotland, Bridge of Weir, Renfrewshire. Forty epileptic children, who must be of the Protestant faith, receive their education in the school attached to the colony. No special residential provision exists in Scotland for Roman Catholic epileptic children save for some of those who are mentally handicapped. No residential provision is made for mentally handicapped Protestant children under 12 years of age. In order to reach the rate of provision of residential places that already exists in England the Scottish rate would require to be doubled; and it has recently been estimated* that to meet the essential needs of epileptic children in England the existing residential school accommodation there should be more than doubled.

*The Health of the School Child. Report of the Chief Medical Officer of the Ministry of Education for the Years 1946 and 1947. His Majesty's Stationery Office, 1949.

219. We have recommended that epileptic children should attend schools for the physically handicapped and residential schools for the epileptic in an estimated incidence of 0·3 per thousand of school population (paragraph 25). This estimate relates only to children with frequent or severe seizures and excludes those who might remain in ordinary schools.

220. We have suggested (paragraph 22) that the pupils to be accepted in schools for the physically handicapped should be those whose condition was too serious to warrant retention in ordinary schools, but not serious enough to require residential treatment. It is our opinion that the number of children in this immediate category would be small. In practice it would be found that for their own sakes, and often for the sake of the home, it would be desirable that children who cannot remain in ordinary schools should go not to a day school for the physically handicapped but to a residential school for the epileptic. If children are to be sent away from home on account of epilepsy, they should not attend a residential school for physically handicapped children, but should be admitted to a residential school for the epileptic. In deciding between the day school for the physically handicapped and the residential school for the epileptic it is necessary to take into account not only the needs of the epileptic child but the interests of the physically handicapped children with whom he might be associated. We have already acknowledged that an epileptic child can cause emotional disturbance in the minds of ordinary children in an ordinary class. Some degree of disturbance is created when seizures occur in a school for physically handicapped children. Teachers of physically handicapped children are more accustomed to illness than are teachers of ordinary children, and they are usually able to deal quietly and efficiently with a seizure. But some physically handicapped children are more susceptible to emotional disturbance than ordinary children, and some of them, notably those with cardiac or nervous disorders, might be adversely affected by the presence of an epileptic child in the class. When the needs both of the epileptic child and of physically handicapped children are borne in mind it will appear that only a small proportion of the epileptic children with whom we are concerned might attend schools for the physically handicapped. We are aware that the population of a school for physically handicapped children is apt to change and that a class that has not been disturbed by the presence of an epileptic child may be joined by a new member whose health and adjustment to the new school situation might be seriously prejudiced by witnessing epileptic seizures. The day school for physically handicapped children can seldom be an appropriate place for an epileptic child. The educational interests of epileptic children require that the great majority of those who cannot attend ordinary schools should be accommodated in residential schools for the epileptic.

221. Applying the rate of incidence of 0·3 per 1,000 of school population it is estimated that Scotland would have 231 epileptic children in need of special treatment. If allowance be made for the few children who might suitably be placed in a school for physically handicapped children and if a further deduction is made for children retained in their own homes, it might be estimated that approximately 180 children would need residential accommodation. It has been estimated that England requires 1,500 residential places for epileptic children, but this estimate assumes that no epileptic children with severe or frequent seizures will be placed in schools for the physically handicapped.*

222. A considerable number of epileptic children are mentally retarded. Some require to be placed in a certified institution, but others might profitably remain in a residential school for epileptics, provided that the school was suitably organised, staffed and equipped.

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*The Health of the School Child. Report of the Chief Medical Officer of the Ministry of Education for the Years 1946 and 1947. His Majesty's Stationery Office, 1949.

223. We recommend that *epileptic children attend day schools for the physically handicapped only in exceptional circumstances, that children with severe epilepsy, estimated as having an incidence of* 0·3 *per thousand of school population, attend residential schools in the great majority of cases, and that epileptic children who are mentally handicapped might, if their mental handicap is not severe, remain in a residential school for the epileptic.*

2. A National Centre

224. In considering a national centre for all epileptic children unable to attend ordinary schools and yet with sufficient intelligence to profit from instruction, many facts have to be taken into account. The centre that is already giving medical and educational services to the largest number of epileptic children who are not seriously handicapped mentally is the Colony for Epileptics in the Orphan Homes of Scotland, Bridge of Weir. This institution is capable of expansion. It would be in the interests of the children if a larger group attended, because better classification could then be made for educational purposes. The site imposes no serious limitations on expansion; it would be possible to erect all the required buildings in the grounds. If a national centre is to be established at Bridge of Weir, changes would be required in policy and administration. It would be necessary to provide for Roman Catholic children. Arrangements would require to be made to give responsibility to local authorities for the conduct of the centre. To attain these objectives the Secretary of State should consult the Council of Management of the Orphan Homes of Scotland. In making this proposal we recall with gratitude and appreciation the vision and energy of William Quarrier, founder of the Orphan Homes of Scotland, who in the opening years of the twentieth century saw the needs of the epileptic and planned so vigorously to meet them.

225. If the proposal for one national centre is accepted, plans would require to be made for the education and care of a group of children varied in intelligence. It would be desirable to have special arrangements for the education and perhaps for the domestic life of the mentally handicapped group. For certain subjects of instruction they would be segregated in their own interests and in the interests of others, but in some activities they might join with abler children of their own age. Special care might also be required for maladjusted children, but the need for this provision could not be assessed in advance since their number and the character of their maladjustment would be determined in part by the quality of the corporate life in the centre as a whole. If a single centre is established, special arrangements for religious education would be needed.

226. We have considered the effect of centralisation of epileptic children on the organisation of the adult group. The objection might be made that centralisation of epileptic adults restricts the range of occupations because work tends to assume the character of industries in the locality where the colony is situated. The objection would not be sustained if the superintendent of the colony made a deliberate effort to relate the work of the colony to a wider range of industry. Contacts could be made with business and industry over a wide area in order to secure a market for the work of the colony.

227. If the proposal for the establishment of one national centre at Bridge of Weir or elsewhere is not adopted, it would be desirable to retain the existing centre and plan a second centre which would be of service to all children who could not be accommodated in the Bridge of Weir colony. We do not consider that the second centre should be reserved for Roman Catholic children, because the number would not be adequate to permit satisfactory classification for educational purposes. The second centre should be for epileptic children irrespective of religious denomination and for all degrees of intelligence within the range of educability. Special provision would require to be made for religious education. The proposal to have two centres is less

satisfactory than the proposal to have one national centre. One of the main objections is that it would in effect place the intelligent Roman Catholic child in a community with a large proportion of children of lower intelligence. A further objection is that classification might be unsatisfactory in both centres. It could also be objected that the establishment of two centres would mean a certain degree of duplication in expert medical and educational services and in equipment.

228. We recommend that *educable epileptic children normally attend a national centre, that the Secretary of State consult the Council of Management of the Orphan Homes of Scotland regarding the establishment of a national centre at Bridge of Weir with due provision for the representation of the interests of local authorities, and that if a national centre cannot be established at Bridge of Weir or elsewhere a second centre be established to meet the needs of educable epileptic children of all denominations who cannot be accommodated in the existing colony.*

3. An Immediate Expansion

229. More children could be accommodated at the colony for epileptics at Bridge of Weir if an additional school class could be formed. We recommend that *additional accommodation, even of a temporary nature, be provided immediately for a third school class in the colony for epileptics at Bridge of Weir.*

4. Curricula: Methods: Staffing

230. Many investigations have been made of the intelligence of epileptic children.* They show that the intelligence of those with severe or frequent seizures tends to be below average, but almost all the investigations find that a fair proportion of the children are normal in intelligence. It might be expected from these studies that approximately one-third of the epileptic children in need of education and treatment at the proposed Scottish centre or centres would be average or over-average in intelligence. Education for these children must, therefore, be designed to suit a considerable range of ability.

231. We have already recommended (paragraph 72) that education for epileptic children with severe or frequent seizures should be designed to give them access to the common culture of our society, to help them to employ their leisure in the pursuit of interests and to fit them for work. These principles, together with the facts concerning their intelligence, must be taken into consideration in devising curricula in the centre or centres. The basic subjects of the primary school must be taught; at all stages emphasis should be placed on arts and crafts; music and rhythmic movement should be included. Individual methods should be used in the basic subjects and other subjects that lend themselves to private reading and study, but for the sake of the social adjustment of the children group activities should not be neglected. Because of the varied curricula it would be necessary to have the services of visiting specialist teachers to assist the class teachers. The children should have the opportunity of joining some of the recognised youth organisations, and groups should be organised for the purpose outside the time of normal schooling.

232. In the later years of schooling the curriculum should have a vocational bias. Opportunities should be given for experience in such employments as gardening, work in wood, leather and metal, needlework, basket-work, cooking and home management.

233. We recommend that *curricula be varied to meet the needs of a wide range of intelligence and that they include the basic subjects of the primary school, arts, crafts, music and rhythmic movement, that in the later stages of schooling*

*For summaries of studies of intelligence in epileptic children see *The Psychology of the Physically Handicapped.* Pintner, R.: Eisenson, J. and Stanton, M. Crofts, 1941, and also *The Health of the School Child,* Report of the Chief Medical Officer of the Ministry of Education for the Years 1946 and 1947. His Majesty's Stationery Office, 1949

vocational training be offered in a variety of occupations, that individual and group methods of instruction be employed, and that the services of visiting teachers be made available.

5. Size of Class

234. We recommend that *the maximum size of class be 20 pupils.*

6. Home Units

235. We recommend that

(1) *the residential centre be organised in a series of cottage homes;*

(2) *each home unit have not more than 15 children;*

(3) *children normally remain in one cottage throughout their period of residence, but that a special cottage be set aside for those who are maladjusted;*

(4) *regular conferences be held of medical and educational staffs with the adults in charge of the home units;*

(5) *the cottage homes be different from the school and other parts of the centre in furnishings and decoration;* and

(6) *the life of the homes be planned to give a sense of security without imposing irksome restraints.*

7. Staff Amenities

236. We recognise that the medical, educational and domestic staffs of a centre for epileptic children are called on to discharge duties that are exacting and that require them to live in a community which is to some extent separate from the ordinary world. We recommend that *special attention be paid to the conditions of living and working of the medical, educational and domestic staffs in a centre for epileptic children and that, in particular, general provision be made of well furnished private and common rooms.*

CHAPTER 10

SOME GENERAL CONSIDERATIONS AFFECTING CHILDREN WITH PHYSICAL DISABILITIES

1. School-leaving Age

237. Children who are disabled have usually had a period of interruption in schooling, and many of them have been unable to undertake full courses of normal study while in attendance. For these reasons they should generally remain in school until they reach the age of 16 years. We have proposed, however, that some of these children should receive their education in ordinary schools while enjoying certain special services such as special diet and a mid-day rest, and we see no reason why they should be compelled to remain in school for a year longer than their associates.

238. We have considered carefully the position of children in schools for the physically handicapped, and especially children with static conditions or with injuries which, although preventing them from facing the stress of ordinary schools, permit them to profit from education without interruption throughout their school life. We recognise that a case can be made for their release from school at age 15. We have already advised, however, that disabled children should have training that will enable them to secure employment on leaving school, and we feel that if this additional training is to be given without endangering their accomplishments in general education it would be desirable to provide for their compulsory attendance at school until they reach the age of 16 years.

239. Epileptic children with severe or frequent seizures should remain in school until they reach the age of 16 years.

240. Children of lowered vitality should not be required to remain in school after reaching the age of 15, but special provision for care and education should continue to be available for all pupils remaining beyond the age of compulsory schooling. A special problem is presented by home-bound children who receive educational services that may be restricted to two hours per week. If such children have opportunity of gainful occupation in their own homes between the ages of 15 and 16, it is difficult to maintain that it should be surrendered because they can be offered two hours of tuition per week. Instruction for home-bound children might be made compulsory until 15 and optional until age 18.

241. We recommend that *physically handicapped children and epileptic children be required to remain in schools until they reach the age of* 16 *years, that home-bound children and children of lowered vitality be not required to continue under instruction after reaching the age of* 15 *years, and that instruction be made available for home-bound children until they reach the age of* 16 *years.* We further recommend that *when the age of school-leaving is raised for all children to* 16 *years special consideration be then given to the age of school-leaving for disabled children.*

2. Prevention

242. Many disabilities are inherited, and some occur through infections that cannot at present be controlled. Some disabilities, however, can be prevented, and if the costs to the individual and to the community were appreciated the case for preventive treatment would gain in urgency. Prevention is largely a by-product of improvements in medical and social services, and the twentieth century has had its share in developing these services. But the battle of prevention cannot be won in the hospital or in the welfare departments of local and central government. Children may be undernourished in homes where no poverty exists, and where the cause is not in environmental conditions capable of improvement by legislative measures but in lack of knowledge, conscience or affection. The expansion and improvement of education is an important means of combating these evils, and must continue to be used with energy, though they will not always be overcome by these means. If society provides the means of a healthy life in childhood, those who squander or misuse these privileges should be required to do their duty. It is true that parents who neglect their children can be faced with the rigour of the law, but, in general, only cases of gross neglect are punished, and the victims of neglect have had to suffer long and grievously before their plight has been relieved. What is needed is a vigilance that will ensure that children do not suffer the neglect that leads to loss of vitality.

243. In making these observations we are aware that some parents have to bring up their children in adverse conditions beyond their control, and we know that vitality is lowered for many reasons besides neglect. It is not our desire to depend on punishment to end neglect, but the sanctions of the law might in our opinion be more frequently invoked against parents who needlessly impoverish the life and health of their children. Within the sphere of education various preventive actions are possible. By increasing efficiency in the teaching of hygiene and domestic subjects, the schools can help to make the next generation more aware of the importance of good environmental conditions and more skilful in the preparation of foods. The school also has an important part to play in forming the attitudes and values that can ensure the sense of duty and responsibility, if not of affection, that make neglect impossible. Perhaps the most important service that education can render in prevention would be given if teachers co-operated fully in the early detection of neglect. Teachers have an opportunity not given to other members of society to observe constantly the

children of the nation. They should bring to the notice of the Education Authority children whose cleanliness in person or clothing or whose state of health appears to give evidence of lack of parental care. The Authority should then institute a medical examination and advise the parent of the course of action best suited to the needs of the child. The teacher could act long before there was any thought of legal action against the parent; the motive would be the interests of the child, and the means would be expert guidance and advice on the part of the school medical service.

244. Some children, a minority, become disabled through accidents on the roads or in their own homes. The schools have co-operated in many ways in campaigns for safety, and it is important that they should continue these efforts.

245. We recommend that *the schools be actively engaged in the prevention of temporary or permanent disablement by the teaching of hygiene and domestic subjects, by continuous concern for the formation of attitudes and values that would make neglect impossible, by reporting cases of neglect to the Education Authority in order that medical examinations might be made and skilled advice given, and by continuing to share in campaigns for the prevention of accidents.*

3. Publicity

246. Disabled children are apt to be forgotten by the general public. The public mind has a vague sense that something is being done for their treatment and care, but no anxious thought is given to the question whether the needs of all are being met. This incurious and contented mood is dangerous when so many are being neglected. It is no exaggeration to say that at least a quarter of the population of Scotland lives in areas where no special assistance of any kind is given in the education of disabled children. The provision of treatment and education for disabled children matches about one-fifth of the need. For a period of years until the major deficiency has been remedied, it is desirable that publicity should be given to the lack of provision as well as to facts of provision of treatment and education.

247. We recommend that *in the reports of the Scottish Education Department statistics be given showing the provision that is made by each Education Authority for the treatment and education of disabled children, with notes on new services that have been introduced and observations on the provision still requiring to be made.*

4. Association with Mentally Handicapped Children

248. Some schools for physically handicapped children in Scotland are contiguous with schools for mentally handicapped children. The children use the same system of special transport and in certain cases share to some extent a common life. We appreciate the reasons that prompted an association between physically and mentally handicapped children in the past, and agree that some are still valid. Administrative convenience and reasons of economy are not the only reasons for the association. It is argued that the two groups can use, to a large extent, the same transportation and medical services, and it is also said that some physically handicapped children are low in intelligence and that some mentally handicapped children have physical disabilities. Some of the arguments lose their force as the system of schools for disabled children becomes increasingly differentiated. Special treatment for various groups of disabled children has been proposed in this Report, and in consequence we look forward to a time when schools for the physically disabled will be given the opportunity of dealing with homogeneous groups. They will then be able to plan an educational service that is well adjusted to the needs of the children. These needs are different from those of children who are mentally handicapped, and it is appropriate, and indeed necessary, that they should be met in separate institutions.

249. Many physically disabled children are normal in intelligence, and there is no educational reason for attaching them to a school for the mentally handicapped, and many reasons for keeping them separate. If it is said that some of them approach to the level of intelligence of the mentally handicapped it may be rejoined that some schools in our cities have as large a proportion of retarded children as is found among the physically handicapped, yet no one suggests that the mentally handicapped should be attached to such a school. It is important that disabled children should be encouraged to think of themselves as having powers that can be used, and we believe that this attitude is more likely to be fostered in separate schools than in schools associated with the mentally handicapped. The argument is sometimes advanced that the parents of physically handicapped children would be more inclined to send them to special schools if they were not associated with mentally handicapped children. We admit that this contention may have some force, although we consider that the idea of a stigma of mental handicap can be overworked, but our proposal for separation rests on educational advantage to the children rather than on parental attitudes, however right or wrong they may be.

250. We recommend that, *normally, schools for physically disabled children be not associated with schools for the mentally handicapped and that, where possible, different systems of special transport be used for the two groups.*

5. School Titles

251. We recommend that *the official name of a school for physically disabled children bear no reference to disability or handicap directly or by implication and that the word "special" form no part of the title of the school for public use.*

6. Training of Teachers

252. We approve of the proposals for the training of teachers of handicapped children set forth by the previous Advisory Council on Education in Scotland in their report on "Training of Teachers."* Courses for teachers of physically disabled children should help teachers to understand the common ailments that they are likely to encounter among their children and should enable them to understand the reasons for medical treatment and for modifications in education required by the school medical officer. Courses should provide instruction in the use of diagnostic and achievement tests in the common school subjects, in remedial techniques, in individual and group methods of teaching, in the apparatus and books designed for those methods, and in appropriate crafts. Teachers should be given an opportunity of visiting schools, hospitals, sanatoria and private homes where physically disabled children receive their education, in order that they may appreciate that they belong to a structured organisation for the education of the physically disabled and that they may observe methods and procedures used by their colleagues.

253. Teachers in service should from time to time have regional or national conferences to discuss their professional interests and to learn of new developments in the care and education of physically disabled children.

254. We recommend that *in implementing the proposals made by the previous Advisory Council on Education in Scotland as contained in the report on the Training of Teachers, sessional and vacation courses and conferences be held to enable teachers to study methods and procedures used in the treatment and education of physically disabled children.*

7. Research and Experiment

255. The education of disabled children has not formed its established ways, and there is scope and need for research and experiment. Many basic

*Cmd. 6723

facts are still missing: knowledge of incidence is still based on a few studies and much conjecture; examinations of local incidence and the cause of variation are still required. Studies are needed of the intelligence and personality of different types of physical disability, and research should be undertaken in the effects of various disabilities on school learning and in the relationship between age of onset of certain disabilities and school achievement.

256. School practice requires the mood of adventure and experiment. Curricula, methods, school organisation should not be regarded as immutable but should be adapted to meet the constant and emergent needs of disabled children. We do not ask for novelty for the sake of novelty, but we desire a fresh-minded and purposeful approach to the varied needs of physically disabled children.

257. We recommend that *encouragement be given to basic research in the psychology and education of physically disabled children and to experiments in adapting curricula, methods and school organisation to their needs.*

SUMMARY OF REPORT

(Specific recommendations are indicated by a line at the side of the paragraphs)

Chapter 1: Educational Entitlement

258. The purpose of the report is to propose ways of improving the provision of education for physically disabled children in Scotland. (Paragraphs 3 and 4.)

259. New medical, psychological and social techniques have combined with the persisting regard for individuality based on religious and humanitarian traditions to develop a new care for the handicapped. (Paragraph 5.)

260. In making plans for the education of the disabled a sense of proportion must be retained. If the able are not fitted to sustain the economy of a nation, the disabled will suffer. (Paragraph 6.)

261. The physically disabled child has special psychological and social problems associated with his disablement. (Paragraphs 7-10.)

262. Handicapped children should attend ordinary schools provided they are able to profit adequately from the education there offered and provided also that they do not seriously retard or disturb other children by their presence. (Paragraphs 11-13.)

263. Many physically handicapped children should have a measure of vocational training. (Paragraphs 14 and 15.)

264. Education for physically disabled children is not a palliative of misfortune but a necessity for a useful life. They depend largely on the school for their formative experiences and have fewer opportunities than other children of learning from the agencies of informal education. (Paragraph 16.)

265. Appropriate forms of education should be adequately provided for all physically disabled children in special schools, hospitals, sanatoria, convalescent homes and, where necessary, in their own homes, and due heed should be paid to their physical welfare, their mental hygiene and their vocational preparation as well as to their general education. (Paragraph 17.)

Chapter 2: Types and Incidence of Physical Disabilities

266. The following three categories should be adopted:—children of lowered vitality: physically handicapped children: children who are epileptic. (Paragraph 18.)

267. In the category of children of lowered vitality there should be included children who are anæmic or debilitated or undernourished, children with bronchial catarrh, convalescent children, and other children requiring recuperative treatment. Convalescent or holiday homes and residential schools should be made available for children of lowered vitality. For those less seriously debilitated who are attending ordinary schools special care should be given to diet and, where necessary, arrangements should be made for a midday rest. (Paragraphs 19 and 20.)

268. The category of physically handicapped children should include children with heart or chronic lung disease, children with severe deformities including those who have been disabled by tuberculosis of bones and joints or by infantile paralysis, children with cerebral palsy and other children who by reason of protracted or permanent physical disability are unable to attend ordinary classes in ordinary schools. Under medical supervision, adequate provision should be made for the education of physically handicapped children in hospitals, sanatoria, residential schools, special day schools and in the private homes of those children who are confined thereto. (Paragraph 21.)

269. The category of epileptic children should be confined to children with severe or frequent epileptic seizures. Provision should be made for the medical care of all epileptic children. For those who may not remain in ordinary schools because of harm to themselves or others, education should be provided in schools for the physically handicapped and, in most cases, in a residential school or schools for epileptic children. All should receive vocational guidance and provision should be made for vocational training. (Paragraph 22.)

270. Diabetic children should be treated either as ordinary children with special dietetic needs or, in appropriate cases, as children of lowered vitality. All diabetic children should be under medical care and due provision should be made for their needs in school meals. Most children diagnosed as diabetic should attend a residential school for a period and should thereafter return home and attend a day school if conditions are favourable. (Paragraph 23.)

271. The following general estimates of the incidence of physical disabilities per 1,000 of school population should be accepted for Scotland as a whole:

Children of lowered vitality ..	20
Physically handicapped children	5·0 to 9·0
Epileptic children	0·3

(Paragraphs 24 and 25.)

272. Energetic measures should be taken to meet the situation revealed in the fact that although 20,000 Scottish children suffering from physical disabilities are in need of special educational treatment, provision is made for less than 4,000 of these children. (Paragraph 26.)

273. Periodic reviews of incidence should be made throughout the country in order that educational services may be planned for emerging needs. (Paragraph 27.)

Chapter 3: Ascertainment

274. Provision should be made for the early ascertainment of physical disabilities. (Paragraph 28.)

275. Medical examinations should be instituted at enrolment, or as soon as possible thereafter, in nursery schools and classes. (Paragraph 29.)

276. Reports of school medical officers on disabled children should show the diagnosis, the treatment that might be given if adequate facilities are available, and the best treatment available within the existing provision. (Paragraph 30.)

277. An effective information service should be provided by Education Authorities to encourage parents to report to the appropriate authorities children with physical handicaps or epilepsy. The authorities responsible for the care of children in hospitals, sanatoria and similar institutions should report to Education Authorities the presence of any child who was or was likely to be lacking educational care by the end of the sixth year of the child's life. (Paragraphs 31-36.)

278. Disabled children of school age in hospitals, sanatoria and other medical institutions who for a period are capable of education should be reported to Education Authorities. Medical practitioners should similarly report in order that instruction be made available to home-bound children. Teachers should be encouraged to report to school medical officers children who become disabled. School medical officers should, at examinations throughout childhood and adolescence, present to the authorities reports similar to those recommended as appropriate to the examination at the commencement of school life. (Paragraph 37.)

279. The Education Authority should maintain a register of physically disabled children showing the category in which each child has been placed, the school or institution in which the child is receiving instruction, and in all cases where no educational service is being given, a note explaining the reason. (Paragraph 38.)

280. While the main responsibility for advising the Education Authority on ascertainment must rest with the school medical officer, arrangements should be made for securing the advice of teachers and educational psychologists in ascertainment and guidance. Ascertainment and guidance should be undertaken through the child guidance service of the Education Authority and efforts should be made in all cases to secure the fullest co-operation of parents. (Paragraphs 39-41.)

281. In order to promote common standards of ascertainment and guidance careful studies of incidence of disability should be made in comparable social and economic areas. Conferences and refresher courses for school medical officers should be held locally and nationally. Conferences of all concerned in ascertainment and guidance should be held from time to time by Education Authorities and by the Scottish Education Department or the Department of Health or some organisation approved for this purpose. (Paragraphs 42-44.)

Chapter 4: Needs of Children of Lowered Vitality

282. In providing for the special educational treatment of children of lowered vitality due heed should be paid to the differing circumstances of town and country children. (Paragraph 45.)

283. The treatment and education of children of lowered vitality should seek to establish hygienic habits. (Paragraph 46.)

284. Good food, fresh air and rest should be available for all children of lowered vitality. The services of a school medical officer assisted where necessary by a trained nurse and a physio-therapist should be provided for all in need of medical treatment. (Paragraphs 47 and 48.)

285. In planning the treatment of children of lowered vitality care should be given to their social and psychological needs, and especially to the need for using their regained strength in sharing as fully as possible in the activities of ordinary children. (Paragraph 49.)

286. Special treatment should include attention to the varied educational needs of children of lowered vitality, and the content and methods of education should be determined by the length of treatment, the degree of educational disability and the therapeutic value of educational experience. (Paragraphs 50-53.)

Chapter 5: Needs of Physically Handicapped Children

287. In planning services for the physically handicapped, treatment should be equally available for town and country children. (Paragraph 54.)

288. The education of physically handicapped children should be richly varied to meet the wide range of their physical, mental and occupational needs. (Paragraphs 55-60.)

Chapter 6: Needs of Epileptic Children

289. Teachers in training should be made acquainted with the needs and interests of epileptic children and the education of the epileptic should be planned to meet the situation caused by the lack of sympathetic understanding in the public mind. (Paragraphs 61-65.)

290. Educational treatment for epileptic children should be designed to meet the needs of the normal and the sub-normal in intelligence. The Secretary of State and the Minister of Education should consider the establishment of a school for epileptic children who are emotionally unstable open to pupils from Scotland and England. (Paragraphs 66-68.)

291. Plans for the special educational treatment of epileptic children should make full provision for effective medical treatment. (Paragraphs 69-71.)

292. Education for epileptic children should make provision for their general education, for the use of their leisure in attractive occupations and for vocational training adapted to their abilities and prospective employment. (Paragraphs 72-74.)

Chapter 7: Education of Children of Lowered Vitality

293. The education of children of lowered vitality should take place in day schools with special provision for diet, fresh air and rest, convalescent and holiday homes, special day schools and residential schools. (Paragraphs 75-77.)

294. Children of lowered vitality who are retained in ordinary schools should not form a class by themselves but should remain with the class best suited to their age, ability and aptitude, or should attend adjustment classes, or should be placed for most subjects in an ordinary class. (Paragraph 78.)

295. Convalescent or holiday homes should generally be restricted to forty pupils. They should be organised in home units of approximately fifteen children and not exceeding twenty children; a teacher should be in charge of recreative activities assisted by visiting teachers of physical education, art, domestic science and music. When the whole group exceeds 25 the teacher should have the help of a play leader or helper able to assist in some of the activities. Ample playrooms, classrooms and medical rooms should be provided and equipped. The location should be healthy and stimulating and need not be confined to the area of the authority concerned. Areas with relatively small school populations should combine to establish and maintain a convalescent or holiday home. (Paragraphs 79-82.)

296. Special day schools should enrol pupils for periods between six months and two years or more. They should have a total roll of between 100 and 200, and the maximum size of class should be 20 pupils. The schools should be easily accessible by public transport or by special transport that does not involve exhausting journeys, and grounds should be ample and sited to obtain fresh air and the maximum of sunlight. (Paragraphs 83-88.)

297. Residential schools should have a roll not exceeding 100 pupils if their ages range from five to fifteen years; in smaller schools the average age range per class should be less than three years. The maximum size of class should be twenty pupils. The school should be in a healthy and accessible location in the country, and pupils should be enrolled for a period of between six months and two years, or more in exceptional cases. (Paragraphs 89-92.)

298. In planning new day and residential schools or in adapting existing buildings, careful thought should be given to the physical needs of the children and to their educational and recreational interests. Due attention should be paid to the comfort of the professional and domestic staffs, especially in residential schools. (Paragraph 93.)

299. The grounds of day and residential schools should be adapted to the playing of team games and to less organised pastimes that would appeal to children returning to health and tempt them to use recovered powers. (Paragraph 94.)

300. In residential schools staffing should be generous to prevent overburdening teachers with duties of supervision. In day and residential schools visiting teachers of special subjects should be employed, the staff should include a trained nurse and the services of a physio-therapist should be available. (Paragraphs 95-97.)

301. Child guidance services should be made readily available to all children of lowered vitality who are in need of them. (Paragraph 98.)

302. In planning curricula and methods it is important to provide children of lowered vitality with habits of healthy living. The children should be studied individually in order that their educational disabilities be assessed and remedied. They should have experience of group activities, creative work should be encouraged, and they should learn to take an interest in life out of doors and

in the care of pets. The general conduct of the school should be designed to give them security, affection and adventure. (Paragraphs 99-103.)

303. In planning secondary education for children of lowered vitality in day or residential schools the curriculum should not be based on the assumption that they will be able to maintain the standards reached in the academic or traditional courses followed by children in normal health, but should be devised to ensure the mastery of primary school attainments and to continue the studies common to secondary courses. Intelligent children desiring to progress in their studies should be given opportunities for private reading and tutorial guidance. (Paragraphs 104-107.)

304. Day and residential schools should normally be available for Roman Catholic children where justified by numbers, but in areas where only one day special school is necessary it should be attended by all the children in the area and special arrangements made for religious education. (Paragraph 108.)

305. Children of lowered vitality should be returned to normal education as soon as they can dispense with special treatment and where necessary they should have a period in an adjustment class before entering a class appropriate to their age and ability. (Paragraphs 109 and 110.)

Chapter 8: Education of Physically Handicapped Children

306. In planning the education of physically handicapped children it should be assumed that the majority suffer disablement from early years, that a few are disabled during school life and that the group contains children who are widely distributed in intelligence. (Paragraphs 111-113.)

307. A diagnostic classification formed in the United States of America is recorded. (Paragraphs 114 and 115.)

308. All physically handicapped children who are able to profit from education should receive educational care. Treatment of physical handicaps must take precedence over education. Arrangements should be made for the education of physically handicapped children in hospitals, sanatoria, day and residential schools, schools for cardiac children and for the cerebral-palsied, and at home for those who are home-bound. (Paragraphs 116-118.)

309. The medical superintendent should report to the Education Authority the name of any child in hospital who is fit for education. The Education Authority should endeavour to provide educational services as soon as possible after these have been requested and should be required to provide educational services within 14 days of notice being given by the medical superintendent that a child is fit to profit from education. (Paragraphs 119-121.)

310. A teacher should be employed full-time when 15 children are ready for educational services in a hospital or in neighbouring hospitals. The maximum number per teacher should be 20 children and when fewer than 15 children are in need of education in a hospital the part-time services of a teacher should be made available. (Paragraphs 122 and 123.)

311. The Education Authority should determine the length of the teacher's working day and should arrange with the medical superintendent teaching hours that best conform with the medical and educational needs of the children. (Paragraphs 124-127.)

312. Because of the inherent difficulties of teaching children in hospital, special attention should be paid to the controllable conditions of work and due provision made of accommodation, books, materials and aids to teaching. (Paragraphs 128-134.)

313. In order to secure co-operation in the treatment and education of physically handicapped children some instruction in child psychology should be given wherever possible to nurses in children's hospitals and some instruction should be given to teachers in the common ailments of disabled children and measures for their recovery. Opportunities should be made for co-operation between teacher and parent in the education of disabled children. (Paragraphs 135-137.)

314. Standards of staffing, arrangements concerning the length of school day, the general conditions of the work of the teacher and of co-operation between medical and educational authorities proposed in this Report for children in hospitals should also apply to children in sanatoria with such modifications as are required by the special treatment of tuberculosis. (Paragraphs 138 and 139.)

315. Having regard to the educational needs of physically handicapped children and to the long period of their treatment they should not attend the same school as children of lowered vitality save where the separation of the groups might result in long journeys to school or in residential treatment. Where it is necessary to combine the groups, attention should be given to the special needs of physically handicapped children, and a first assistant should be appointed to supervise their education. (Paragraphs 140-144.)

316. While children who are physically handicapped should attend day special schools when circumstances permit, residential schools should be provided for those who are unfit for travelling long distances or who need treatment that cannot be provided at home or who, while normally attending day special schools, require residential treatment to recuperate after illness. (Paragraphs 145-147.)

317. In day and residential schools for physically handicapped children the maximum size of class should be 20, but the average ought to be approximately 15. The school should not exceed 100 pupils, but ought from 5 to 15 years to have approximately 75 pupils. Smaller schools should be permitted, provided that the total age range is diminished and the average age range of classes is less than three years. (Paragraphs 148-150.)

318. Vocational training suited to the abilities and interests of handicapped children and to the range of local employment should be given in the later years of schooling. (Paragraphs 151-154.)

319. One or more schools should be established to meet the needs of physically handicapped pupils in Scotland desiring to pursue traditional courses in secondary education. Such schools should be residential but with some day pupils and located in a city. The staff should consist of a small group of full-time teachers supplemented by visiting specialist teachers. (Paragraphs 155 and 156.)

320. Schools for the physically handicapped should be specially planned or adapted to meet the needs of the children, attention should be given to the decoration of rooms, scope for individuality in such matters as personal possessions and dress should be given; hobbies and leisure reading should be encouraged. Rooms should be provided for medical services and, in residential schools especially, the rooms and furnishings in quarters for the professional and for the domestic staff should be planned with care and with due attention to amenities. (Paragraphs 157-159.)

321. Where sufficient numbers are available separate schools should be established for Roman Catholic children. Elsewhere such children should attend the day school for physically handicapped in the district rather than a residential school. They should not attend a school for pupils of lowered vitality save where such a combined school is provided for all physically handicapped children in the district. When Roman Catholic children join a school for physically handicapped pupils in the district, special arrangements should be made for religious instruction. (Paragraphs 160-162.)

322. From the educational point of view, rheumatic fever should be made a notifiable disease up to 15 years of age, and children suffering therefrom should be reported to the Education Authority as physically handicapped in order that plans for their education under medical supervision may be made. Educational services should be provided for all children with heart disorders in hospitals, special convalescent homes, schools for the physically handicapped, and under medical supervision in their own homes. (Paragraphs 163-165.)

323. In hospitals and convalescent homes for children with heart disorders, education should be related to physical ability and should be designed to enlarge interests within the limits set by disability. (Paragraphs 166-168.)

324. Children with heart disorders who are fit for schooling but who ought not to be subjected to the strain of ordinary school life should attend a school for the physically handicapped. Those who can travel without risk of further impairment should attend day schools and others should attend residential schools. School medical officers should advise teachers concerning the activities that these children individually might undertake and teachers should report immediately to school medical officers any signs of ill-health that they observe. (Paragraphs 169 and 170.)

325. Children with heart disorders who are nursed at home should, under medical supervision, have the help of a visiting teacher. (Paragraphs 171 and 172.)

326. In planning for the education of children with cerebral palsy in Scotland it should be assumed that their number is approximately 1,000 between the ages of five and fifteen and approximately 1,350 of all ages under fifteen years. (Paragraphs 173-179.)

327. In planning the education of children with cerebral palsy it should be assumed that approximately 30 per cent. are mentally handicapped to such a degree that they should not attend ordinary schools even if they are physically able to do so, and that approximately 12 per cent. require education adjusted to over-average intelligence. (Paragraphs 180 and 181.)

328. In making plans for the education of children with cerebral palsy it should be assumed that approximately 10 per cent. could profitably remain in ordinary schools provided that arrangements are made for speech therapy and physio-therapy when required; approximately 20 per cent. are ineducable and are in need of institutional or efficient home care, and 70 per cent. should receive treatment and education in schools for the physically or mentally handicapped or in special schools for children with cerebral palsy. (Paragraphs 182 and 183.)

329. Children with cerebral palsy should, with the exception of the mildest cases, be under expert medical supervision and should have the help of a team that includes teachers, speech therapists, physio-therapists, occupational therapists, nurses, orderlies and co-operative domestic staff. (Paragraphs 184-186.)

330. Vocational training should not normally be given in schools for children with cerebral palsy. (Paragraphs 187-190.)

331. Children with cerebral palsy who attend day or residential schools for physically or mentally handicapped children should participate fully in the life and instruction of the schools. Adequate medical and educational services should be provided. Unless there is clear and reliable evidence of mental handicap, children should be placed in the first instance in a school for the physically handicapped. (Paragraphs 191-194.)

332. The experimental work commenced at the Edinburgh centre for children with cerebral palsy should receive encouragement and support. Additional centres, adjusted perhaps to special groups of these children, should be established when the demand arises and staff is available. Children with average or over-average intelligence should have access to a special centre of treatment and of primary and secondary education where they may remain from ascertainment until the end of their school course. (Paragraphs 195-198.)

333. Children with cerebral palsy should from their earliest years have access to treatment in a hospital or specially equipped school or in a nursery class in a school for the physically handicapped. These centres should advise parents how to teach elemental movements and speech to their children. (Paragraphs 199 and 200.)

334. Instruction by visiting teachers should be made available to physically handicapped children who are unable for sufficient reason to attend schools for the physically handicapped. (Paragraphs 201-206.)

335. No child should receive home-bound teaching provided by an Education Authority save with the approval of the school medical officer. A renewal of the form of instruction should be granted at intervals of six months by the Education Authority provided that it is supported by the school medical officer. (Paragraphs 207 and 208.)

336. Home-bound children should receive instruction adapted to their age and ability. Special attention should be given to the establishment of efficient habits of reading; having regard to the lack of experience of number care should be given to the teaching of arithmetic; crafts and hobbies should be encouraged through instruction and through provision of materials if these are not supplied by parents, and full use should be made of school broadcasting. (Paragraphs 209 and 210.)

337. Home-bound children should be enrolled as pupils in a school for physically handicapped children or in an ordinary school. They should as far as possible receive the benefit of all the services given in these schools. Visiting teachers should be attached to one school and they should return to this school once per week for conference and to attend to records and supplies. The minimum amount of instruction should be two hours per week. The maximum number of pupils for one teacher should be ten, but this maximum should be permitted only when travelling time is limited. Where two or more teachers are appointed by any Education Authority one should be made responsible for supervising the work. (Paragraphs 211-215.)

338. Where circumstances make it impracticable for an Education Authority to provide the recommended amount of instruction, a system of postal tuition should be arranged if the parents or other responsible persons in the home are willing and able to co-operate. The system should be used for children who are not in need of residential treatment. (Paragraphs 216 and 217.)

Chapter 9: Education of Epileptic Children

339. Only in exceptional circumstances should epileptic children attend day schools for the physically handicapped. Children with severe epilepsy, estimated as having an incidence of 0·3 per 1,000 of school population, should in the great majority of cases attend residential schools. Epileptic children who are mentally handicapped might, if their mental handicap is not severe, remain in a residential school for the epileptic. (Paragraphs 218-223.)

340. Educable epileptic children should normally attend a national centre. The Secretary of State should consult the Council of Management of the Orphan Homes of Scotland regarding the establishment of a national centre at Bridge of Weir. If a national centre cannot be established at Bridge of Weir or elsewhere a second centre should be established to meet the needs of educable epileptic children of all denominations who cannot be accommodated in the existing colony. (Paragraphs 224-228.)

341. Additional accommodation, even of a temporary nature, should be provided immediately for a third school class in the colony for epileptics at Bridge of Weir. (Paragraph 229.)

342. In the education of epileptic children curricula should be varied to meet the needs of a wide range of intelligence and should include the basic subjects of the primary school, arts, crafts, music and rhythmic movement. In the later stages of schooling vocational training should be offered in a variety of occupations. Individual and group methods of instruction should be employed and the services of visiting teachers should be made available. (Paragraphs 230-233.)

343. The maximum size of class for epileptic children should be 20 pupils. (Paragraph 234.)

344. The residential centre for epileptic children should be organised in a series of cottage homes, each home unit having not more than 15 children. Children should normally remain in one cottage throughout their period of residence, but a special cottage should be set aside for those who are maladjusted. Regular conferences should be held of medical and educational staffs with the adults in charge of the home units. The cottage homes should be different from the school and other parts of the centre in furnishings and decoration, and the life of the homes should give a sense of security without imposing irksome restraints. (Paragraph 235.)

345. Special attention should be paid to the conditions of living and working of the medical, educational and domestic staffs in a centre for epileptic children and, in particular, general provision should be made of well furnished private and common rooms. (Paragraph 236.)

Chapter 10: Some General Considerations Affecting Children with Physical Disabilities

346. Physically handicapped children and epileptic children should be required to remain in schools until they reach the age of 16 years. Home-bound children and children of lowered vitality should not be required to continue under instruction after reaching the age of 15 years. Instruction should be made available for home-bound children until they reach the age of 16 years. When the age of school-leaving is raised for all children to 16 years, special consideration should then be given to the age of school-leaving for disabled children. (Paragraphs 237-241.)

347. Schools should be actively engaged in the prevention of temporary or permanent disablement by the teaching of hygiene and domestic subjects, by continuous concern for the formation of attitudes and values that would make neglect impossible, by reporting cases of neglect to the Education Authority in order that medical examinations might be made and skilled advice given, and by continuing to share in campaigns for the prevention of accidents. (Paragraphs 242-245.)

348. In the reports of the Scottish Education Department statistics should be given showing the provision that is made by each Education Authority for the treatment and education of disabled children, with notes on new services that have been introduced and observations on the provision still requiring to be made. (Paragraphs 246 and 247.)

349. Schools for physically disabled children should not normally be associated with schools for the mentally handicapped and, where possible, different systems of special transport should be used for the two groups. (Paragraphs 248-250.)

350. The official name of a school for physically disabled children should bear no reference to disability or handicap directly or by implication. The word *special* should form no part of the title of the school for public use. (Paragraph 251.)

351. In implementing the proposals made by the previous Advisory Council on Education in Scotland and contained in the report on the Training of Teachers, sessional and vacation courses and conferences should be held to enable teachers to study methods and procedures used in the treatment and education of physically disabled children. (Paragraphs 252-254.)

352. Encouragement should be given to basic research in the psychology and education of physically disabled children and to experiments in adapting curricula, methods and school organisation to their needs. (Paragraphs 255-257.)

ACKNOWLEDGMENT

353. We desire to place on record our appreciation of the admirable services of our Secretary, Mr. Archibald Davidson, whose efficiency and constant helpfulness have greatly lightened our task. In this acknowledgment we would also include Mr. J. Baillie, the Assistant Secretary, who has given much valuable help.

We have the honour to be, Sir,

Your obedient Servants,

(*Signed*) WILLIAM MCCLELLAND, *Chairman*.
GARNET WILSON, *Vice-Chairman*.
D. S. ANDERSON.
MAY D. BAIRD.
WILLIAM BARRY.
D. KEMP COLLEDGE.
WINIFRED A. DONALDSON.
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JAMES J. ROBERTSON.
DONALDA M. ROSS.
A. D. BUCHANAN SMITH.
JAMES WILKIE.

ARCHD. DAVIDSON, *Secretary*.
J. BAILLIE, *Assistant Secretary*.

St. Andrew's House, Edinburgh, 1.
23*rd September*, 1950.

APPENDIX

SOURCES OF EVIDENCE

A. List of Bodies and Individuals who gave oral evidence, submitted memoranda or letters or otherwise assisted the Council

Directors of Education in Scotland, Association of,
Educational Institute of Scotland.
National Special Schools Union (East of Scotland Branch).
National Special Schools Union (West of Scotland Branch).
Scottish Regional Committee of the Institute of Almoners.
Society of Medical Officers of Health (Scottish Branch).

Keddie, J. A. G., Esq., M.D., Department of Health for Scotland.
Lumsden, J., Esq., H.M. Staff Inspector, Ministry of Education.
M'Gregor, Miss E. D., Edinburgh.
Miller Young, J., Esq., M.B., Ch.B., D.P.H., Glasgow.
Rodger, A. G., Esq., O.B.E., Scottish Education Department.
Simpson, G. W., Esq., M.D., D.P.H., Scottish Education Department.

B. List of Schools and Institutions Visited

SCOTLAND

Edinburgh	School for Spastics.
Renfrewshire	Colony for Epileptics, Bridge of Weir. Sandyford Special School, Paisley.
West Lothian	Trefoil School for Physically Handicapped Children.

ENGLAND

Birmingham	Baskerville Residential School. Carlson House School for Spastics. George Street West School for Physically Handicapped Children. Haseley Hall Open Air School. Uffcolme Open Air School.
Manchester	Soss Moss School for Epileptics.

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