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ANNUAL REPORT

TO THE

CITY OF BIRMINGHAM EDUCATION COMMITTEE

OF THE

SCHOOL MEDICAL OFFICER

GEORGE A. AUDEN, M.A., M.D. (Cantab,), Ph.D. (Birm.),
F.R.C.P. (Lond.), D.P.H. (Camb.).

INCLUDING THE REPORT ON THE
SPECIAL SCHOOLS

BY

JAMES M. SMELLIE, M.D., M.R.C.P.

FOR THE

YEAR ENDED 31st DECEMBER, 1929.

In accordance with Circulars 576 and 596 of the Board of Education.

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SCHOOL MEDICAL OFFICER:

G. A. Auden, M.A., M.D., Ph.D., F.R.C.P., D.P.H.

ASSISTANT SCHOOL MEDICAL OFFICERS:

Elizabeth J. Moffett, M.D., B.Sc.
Bethia S. Alexander, M.B., Ch.B., D.P.H.
Jessie J. Stooke, L.R.C.P. & S., Edin., D.P.H.
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RADIOLOGIST:

*A. A. Russell Green, M.B., B.S.

ORTHOPAEDIC SURGEON:

*Naughton Dunn, M.A., M.B., Ch.B.

ANAESTHETISTS:

*D. Buchan, M.B., D.P.H.
*H. W. Featherstone, M.A., M.D. } Dental Treatment.
*C. Bracey Dale, M.R.C.S., Tonsil and Adenoid Clinic.

*Part time Officers.

ANNUAL REPORT

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SCHOOL MEDICAL OFFICER

GEORGE A. AUDEN, M.A., M.D. (Cantab.), Ph.D. (Birm.), F.R.C.P. (Lond.), D.P.H. (Camb.).

For the Year ended 31st December, 1929.

ELEMENTARY, SECONDARY & NURSERY SCHOOLS.

In the report for 1928 reference was made to the need for an increase in the staff of school nurses to allow more systematic following up of defects found in the course of Medical Inspection, and a more intensive campaign against conditions of dirt and uncleanliness. This need has been met by the appointment of two additional nurses, bringing up the total of nurses to 27.

During the year several alterations in the Medical and Dental Staff have taken place.

Dr. W. Glegg, who had been Operating Surgeon at the Tonsil and Adenoid Clinic at Handsworth since it was opened in September, 1913, resigned owing to ill-health. He was succeeded by Mr. D. J. Evans, F.R.C.S. Dr. A. J. Davies, M.R.C.P., was appointed Senior Assistant Medical Officer, Nottingham, and was succeeded by Dr. W. H. S. McGregor. Dr. F. Asker, on his appointment as Assistant Medical Officer of Health, East Suffolk, was succeeded by Dr. G. Fraser Smith.

On the Dental side, Mr. N. A. Austin, L.D.S., who had been a part-time officer since the beginning of dental treatment in 1913, resigned, and also Mr. R. Payton, L.D.S., who had been in the service of the Committee at Handsworth since the clinic was opened in September, 1913. He was succeeded as part-time dental officer by Mr. W. Stockwin, L.D.S.

Ultra Violet lamps have been installed at Harborne Lane and Handsworth Clinics. The publication of a report on certain investigations into the value of ultra violet radiation by the Medical Research Council has tended to shake the confidence of the public in the efficacy of this form of treatment. This critical survey of the position was salutary in that it drew attention to the danger of the indiscriminate use of radiation-therapy, and of extravagant claims for this treatment as a method of almost universal application for every kind of morbid condition. As will be seen from the report of the work done in the School Clinics, we can claim with complete confidence that in the hands of experienced persons, and for cases which that experience enables them to select, the method can play a most useful part in a scheme for the treatment of school children.

From the figures given below, and in the appendix of statistical tables, it will be noted that the number of inspections in the schools (57,269) is practically the same as that in the previous year (57,512), and that when the special inspections and re-inspections in the clinics (70,000) are added, the total number of inspections exceeds that of 1928 by 5,511. In the Secondary Schools 7,051 examinations were made as against 6,614.

The number of minor ailments treated at the Clinics shews a slight reduction on those of the previous year, viz., 16,326 as against 17,176. This is, however, explicable by the high incidence of sickness and infectious diseases, especially the severe outbreak of Influenza, in January, February and March, when the numbers of children who attended the clinic shewed a very marked falling off. This was due quite as much to the illness of the parents, who were unable to bring up their children, as to the illness of the children who were themselves confined to bed. This state of affairs is reflected in the number of certificates signed by me under the provisions of Para. 15 of Administrative Memorandum No. 51 of the Board of Education. These certificates are signed where the percentage of attendance has fallen below 60 per cent by reason of infectious diseases. Certificates were signed for 150 Departments.

It will be remarked that the percentage of children found in the course of the routine inspections to have some defect, or rather it should, perhaps, be said, some departure from complete normality, remains the same from one year to another, viz.,

Entrants	29.65
Intermediates ...	26.99
Leavers	24.13

Though this average 26.9 per cent over all routine inspections is high, yet it must be remembered that very many of these noted defects are trivial or temporary. This figure, therefore, must not be taken as connoting a serious state of ill-health in the child population, though it is eloquent testimony of the need of watchful care and the provision of ample facilities for early treatment.

Amongst other duties of the Medical Department, which continues to grow, may be mentioned the examination of children between 12 and 14 years of age who apply for licence under the Bye-laws to deliver newspapers, etc. This increase may be gauged from the accompanying figures :—

1929	1,689
1928	1,686
1927	1,448
1926	1,270

During the year an interesting experiment was carried out in connection with the dental scheme. The Dental Board of the United Kingdom generously lent two dental films for exhibition to children from selected schools in various Cinemas of the City. These were attended by 34,777 children. The two films were shewn twice during each session and one or another of the Dental Surgeons gave a five minutes address between the two films. The whole scheme was carried out without a hitch, and our thanks are due to the Managers and Staffs of the Picture Houses for kindly help and courtesy. Mention should also be made of the good services of the Police in regulating the traffic, thus securing the safety of the large numbers of children who were brought from the schools through the streets to the Picture Houses.

A very satisfactory feature of the general measures for the safeguarding of the health of the children has been the readiness with which the parents have begun to avail themselves of the opportunity of having their children immunised against Diphtheria; especially those attending the Infants' Departments, as also those who have not yet reached school age at the Welfare Clinics. As was pointed out in my report for 1927, the average number of children of school age who died of this disease in the eight years 1919 to 1926 was 60 per annum. Had this holocaust of victims to a preventable disease been due to some other form of infectious

disease, equally preventable, such as Enteric Fever or Smallpox, there is no doubt that a state of grave public anxiety would have arisen. The fact that during the last three years the average number of deaths has been 38 is most encouraging. It may be claimed that, with the single exception of Edinburgh, Birmingham has done more than any other City towards the eradication of this danger to child life. It must be remembered, moreover, that it is the epidemic prevalence of the causative bacillus of Diphtheria in the community, and not the number of notified clinical cases which is the real criterion of the extent of an epidemic, i.e., the distribution of the infective agent is far wider than the distribution of the disease. The epidemicity of this, as of other infectious diseases, is at present obscure, but it may be said with certainty that it depends upon the balance of interacting forces between the parasitic organism which causes the disease, and the host, and upon the ratio of susceptible persons in the community at risk.* This point is well illustrated by the way in which an epidemic of Diphtheria or Scarlet Fever will smoulder in a school until the ratio of immunity acquired in the school population, not by actual attacks so much as by the dissemination of the infective organism through the Department without producing clinical symptoms of the disease, has reached a certain height. As soon as the epidemic "potential" has been reduced to a certain level, and an equilibrium between the opposing factors has been established, then, and not till then, will the epidemic die out.

I have dealt with this question at some length because of its intrinsic importance, for with adequate protection of the children of whom practically all are susceptible from the age of one to seven, Diphtheria could be added to the list of diseases which have little more than historic significance. In this connection, I would point out that during the last year, 12 teachers were absent from duty on account of Diphtheria for a total period of 431 school days. This is equivalent to the loss of the services of two teachers for a whole year. I would urge that every encouragement and facility should be offered to the teaching staff, especially the younger members, to become immunised. They are as much exposed to the risk of infection as is any young person who becomes a nurse in a hospital, and it is now universal practice to require all aspirants for training as nurses to be tested by the Schick test, and if susceptible to be immunised. An account of the immunisation carried out during the past year appears on page 32.

The rapid development of the housing areas in the outer ring of the City and the consequent re-distribution of the population is introducing new problems in relation to the provision of facilities for clinic treatment. Though the clinics for the most part are situate on main radial roads, yet with the expansion of the circumference there are a number of new areas with their schools which are placed at a disadvantage. This applies with special force to the Erdington, Pype Hayes, Perry Barr area, and the King's Heath area. In the first mentioned area there are fifteen existing schools and seven schools either planned or now being built, with a total accommodation of 16,000 places, which would be better served by a more easily accessible clinic than is possible at present. It is possible that the solution of the difficulty will be found in the provision of temporary sub-clinics in convenient and accessible spots which will be open on certain sessions in each week, rather than in the building of permanent and whole-time clinics.

(* cp. Professor Topley, Milroy Lectures, 1926).

Amongst the various Voluntary Associations for aiding children in one way or another which work in close co-operation with the Medical Department may be mentioned the following:

The Hospital Saturday Fund sent 664 children of school age to Convalescent Homes under its supervision for a period of two weeks.

The Police-Aided Association, for the clothing of destitute children, supplied boots and clothing to 5,517 children selected by Head Teachers as suitable recipients on account of poverty.

The Secretary of the Children's Country Holiday Fund has supplied the following figures:

> "Of the 1,785 children who were helped, 1,501 were sent to the country during July and August for a fortnight's holiday; forty-four convalescent children went to the country for varying periods, one small boy of eight years of age staying for 3½ months. The remaining 240 went to the Hadley Home, the seaside home at Conway, for a month or longer."

Mr. Mathews, Secretary to the Birmingham Invalid Children Association, states that there are more than 60 children under the care of the Association. These are children who are suffering from rheumatic conditions, including Chorea. Extended experience of this type of child leads to the conviction that a prolonged period of rest is necessary if relapses are to be prevented. Hence the children dealt with are away for periods considerably over one year. A scheme is now under consideration whereby all the scattered activities of the society will be centralised by the utilisation of a suitable building as an institution, recognised by the Board of Education.

The reports from the Children's Hospital shew how largely the children of the City and neighbourhood benefit from that Institution. The following figures are taken from the report for 1929:

Children admitted to general wards ...	2,931
To Day Wards	3,613
New Out Patients	14,422
Casualties	1,599
X Ray Examinations	2,266
Ultra Violet and Tungsten Arc Treatment	11,514
Dental Cases	1,315
Ophthalmic Cases	417

During the year 587 operations for tonsils and adenoids cases were performed on children under school age, sent from the Infant Welfare Clinics, and nearly 300 similar children were dealt with in the Eye Department of the Hospital.

It is not possible to ascertain the number of children who received treatment at the various voluntary Hospitals, but Dr. F. Ellis, Chief Medical Officer to the Board of Guardians, reports that 2,929 children between the ages of 3 to 16 were admitted for operations, accidents, or the treatment of acute conditions to the Dudley Road and Selly Oak Hospitals.

The main features of the treatment accomplished by the School Medical Service may be gauged from the following summary:—

Tonsil and Adenoid Operations	1,402
Minor Ailments Treatment	16,326
Children treated for Dental Defects	36,922
Mastoid Operations at Selly Oak Hospital ...	22
"Short-Stay" Operations at Selly Oak Hospital	36
Children treated by Ionization (for Otorrhoea) ...	333
Refractions for Eye Defects	3,676
X-Ray Treatment for Ringworm	126
Ultra Violet Ray Treatment	732

VISITS TO HOMES BY THE SCHOOL NURSES.

The School Nurses paid 921 visits to 759 homes. Many of these visits were paid in order to ensure that directions given as to a proper regimen at home were being carried out, and many more were paid in order to induce indifferent parents to obtain the spectacles which had been prescribed at the clinics. But useful as this work is, it cannot be said that it goes very far in the direction of the prevention of ill-health which is, after all, the real end and aim of the School Medical Service as one part of an organised system of preventive medicine. The whole question of domicilary visits is one of great importance, albeit of great complexity. The real issue which requires consideration is the question whether under existing circumstances we are not letting the valuable opportunity slip of attacking departures from health in their earliest stages, and whether it may not be possible to devise a scheme whereby it is assured that every sickly school child can be seen sufficiently early by some person of competence and skill. It may be argued that a very large proportion of absences from school on medical grounds are due to conditions which are in themselves trivial, but it is equally true that many of the more grave forms of illness appear to be trival in their early stages. Every School Medical Officer will call to mind cases seen in the School Clinics which, though unsuspected by the parents, are of grave import, e.g., acute appendicitis, peritonitis, pneumonia, osteomyelitis, and the like, but for every one brought to the clinic there are others whose parents do not obtain advice until more urgent conditions have shewn themselves. A comparatively small number are in a position to seek the advice of a private practitioner, but by far the greater number must have recourse to the Hospitals or Dispensaries. The whole question is thus wrapped up in the complex problem of the relationship of the medical practitioner and the voluntary hospitals to the health demands of the community as a whole. Moreover, the problem of the ailing school child is equally the problem of the ailing toddler, and the fifth birthday forms no magic line wiping out the past and giving a *tabula rasa* on which a new health history may be written. The key to the problem of the health of the school child is the fitness of the pre-school child.

The Local Government Act, 1929, which may be considered as the most important measure of preventive medicine since the passing of the Public Health Act, 1875, in that it offers the opportunity for a unification of Public Health Services, will undoubtedly encourage a much more immediate touch between the civic health activities and the homes of the needy and sick. The full use of its possibilities for the improvement of the health of the nation can be attained by the prevention of sickness rather than by provision for the sick. This constitutes the real problem, and in its solution the School Nurse may play a part by home visits to those children whose absence from school is due to illness. It should be clearly recognised that the Medical Department has no intrinsic interest in school attendance as such, but only in so far as the absence from school is an indication of some form of illness. The School Nurse could be no substitute for the School Attendance Officer, but could materially lighten his duties by making the first visit of enquiry into the nature of the absence from school on alleged medical grounds. In this connection it may be noted that from 80 to 85 per cent. of all absences of more than two sessions are due to illness, and that at the present time all cases of supposed infectious disease are reported to the Health Department by the Head Teacher and immediately visited by a Health Visitor. The

suggestion outlined above therefore introduces no new principle. Moreover under the scheme for the re-distribution of the Poor Law work, all the boarded out children up to the age of 7 will be visited and supervised by Health Visitors.

REGISTER OF LONG-DATE ABSENTEES FROM SCHOOL ON MEDICAL GROUNDS.

This register by means of a card index, which has now been in existence for two years, has proved of very considerable value. Every child who is absent for more than three months is placed upon the card index kept by the School Attendance Department. The complete series of cards is brought to the Medical Department every month, and the card of every child concerning which the Attendance Department requires special information is "flagged" with an indicator. Each of these is dealt with in the appropriate way, e.g., by letter to the private practitioner in attendance, the hospital or dispensary, or an appointment made for the clinic. The advantages of such a system are evident in that the Medical Department can get with each individual case into more direct touch without delay much more systematically than was possible formerly.

	Private Practitioners.	Hospitals, Clinics, etc.	Total.
Tuberculosis	2	20	22
Other chest conditions	16	23	39
Eyes	—	8	8
Ears (including otitis)	2	7	9
Skin affections	2	4	6
Ringworm	1	3	4
Rheumatism and heart	14	75	89
Chorea	9	32	41
Infectious diseases	5	29	34
Mental condition	—	12	12
Epilepsy	—	6	6
Miscellaneous	24	103	127
TOTALS	75	322	397

It will be seen that 32.7 per cent. of these absences are due to rheumatic conditions or, if the figures from the following table be added, 23.5 per cent. of all the children who are not at the present time receiving education belong to the rheumatic category.

Tuberculosis	15
Eye Conditions	9
Rheumatism	13
Chorea	4
Mental Conditions	40
Epilepsy	6
Orthopaedic	47
Miscellaneous	90
	224

The scheme for the ascertainment of cases of mental defect through this card-index register, has allowed a more early notification of the ineducable cases to the appropriate authority. The Register does not include those cases, such as advanced Encephalitis Lethargica, whose names have been removed from a school register as incapable of attending school before reaching the limit for school attendance.

PROVISION OF SPECTACLES.

During the year 3,676 pairs of spectacles were prescribed at the various Clinics. This is the largest number ever reported in a single year. In addition, however, to these, a number of children attend periodically for re-examination, especially those children who are under treatment for squint.

It is understood that arrangements are now being made by the Health Department for the supervision and treatment of "toddlers" between two and five years of age who have been found by the Health Visitors.

Mr. Archer Hall, Consulting Ophthalmic Surgeon, reports as follows regarding his work at the Great Charles Street Clinic :—

"During the year ending December 31st, 1929, 727 children were examined by me at the Great Charles Street School Clinic.

"In 464 cases, I found it necessary to prescribe glasses in the case of first visits, or fresh lenses in the case of other patients.

"In 180 cases examined the spectacles already worn, were correct.

"In 83 cases, glasses were not needed.

"The 464 cases on analysis, were found to have the following errors of refraction :—

1.	Hypermetropia	116
2.	Myopia	27
3.	Hypermetropic astigmatism ...	216
4.	Myopic astigmatism	92
5.	Mixed astigmatism	13

"The vision of 44 children was so defective or myopic, that I deemed it essential to fill up certificates for transference to the Part-Sighted Schools of the Education Committee.

"The 44 children presented the following defects :—

High myopia	24
Visual nystagmus	4
Corneal nebulae	4
Optic atrophy	3
Choroidal degeneration	3
Congenital cataract	3
Coloboma of iris and choroid ...	1
Albinism	1
Interstitial keratitis	1

"Two children were certified for admission to the Blind Institution. One of these suffered from severe Visual Nystagmus, while the other had Retinitis Pigmentosa.

"Twelve children were treated for Ocular diseases at the Birmingham and Midland Eye Hospital, while on 22 cases I performed operations for Squint, Cataract and other ocular conditions."

DENTAL SERVICE.

The number of individual children who received treatment was just under thirty-seven thousand, thus shewing a slight reduction in comparison with the previous year. For this reduction the influenza epidemic and high incidence of sickness in the first quarter of the year was mainly responsible (see page 6). It is not possible to give an absolutely accurate percentage of the number of acceptances of treatment amongst those who were found on examination to require it, because many of the schools are examined more than once during the year, but a very carefully considered estimate gives the figure of 41 per cent. There is no doubt that the number of acceptances has definitely increased, and though there is still room for improvement, the result is encouraging. The treatment of children who come as casual cases after having refused treatment when it was offered, still causes a good deal of difficulty. These difficulties were, however, discussed at length in the report for 1928. The Dental Film Campaign, to which reference has already been made (page 6), took place too late in the year for any appreciable results to be noted, but it must be remembered that the value of such a campaign cannot be measured in terms of a mere enumeration of the children who receive treatment after an effort of this kind. The dental films themselves served in the main as the climax to an intensive educational preparation on the part of the teaching staffs of the schools, and the results are, therefore, likely to be deeper and more lasting than can be shewn by any series of figures. There is no doubt that the films themselves served to bring home the lessons which they were intended to teach, and if the success of the scheme is to be gauged by the enjoyment which the films gave to all the children who saw them, then the success is assured, and a repetition of the experiment will be likely to have results equally good. One slight disadvantage, though doubtless it was scarcely noticed by the children themselves, was the fact that the films themselves were not strictly true to school and home conditions in England, but represented a somewhat exotic life, thus introducing an element of unreality. A question which remains for consideration if a subsequent campaign of the kind is contemplated at any time is whether it would not be better to prepare a film locally with local scenery and conditions, thus giving to the whole a realism and familiarity which would undoubtedly be a powerful adjunct to success. The cost of production of such a film would not be excessive.

But valuable as it is the influence of oral hygiene and the care of the mouth in the preventions of oral sepsis, it is new becoming clearly shewn that behind the problem of the causation of dental caries stands the still larger problem of defective nutrition, and that the fundamental factors in nutrition are dietetic. Recent researches published by the Medical Research Council have proved that the character of the teeth and jaws, both in their general development and their microscopic character are greatly influenced by diet, and that for good calcification of the teeth there must be present in the diet the Vitamin D which regulates this calcification of the bones and teeth. In the report in question Mrs. Mellanby writes :—*

> "It is very easy to choose a diet low in its Vitamin D content, for the foods containing it are few in number, and, in general, expensive. Egg yolk, and fish fats, including cod-liver oil, are its richest known sources, but it is also associated with milk, butter,

*" Diet and the Teeth." Medical Research Council. Special Report Series. 140.

cheese, and animal fats (other than lard and bacon, which contain a variable but usually comparatively small quantity). If the experiments described have any significance for the human subject, it would seem likely that the ordinary diet, especially of the poorer classes, in this country will tend to produce imperfect teeth, since Vitamin D is either absent from, or deficient in, such articles of diet as bread, rice, oatmeal, barley, sugar, fruits, jam, most vegetables, lean meat of various descriptions, white fish, etc., which form the bulk of the food eaten.

"Although Vitamin D has such a limited distribution, it is possible to produce it in a large variety of foods by ultra-violet radiation, for many foods contain the provitamin ergosterol which becomes activated to Vitamin D by irradiation. For instance vegetable oils, such as olive oil and peanut oil, although naturally without effect on the teeth, become powerful calcifying agents after irradiation. The activity of milk and butter is greatly enhanced by the treatment, and substances which normally interfere with calcification, such as oatmeal or flour, can by this means be made to assist the process."

In the report for 1928 (page 15) some space was devoted to this question, especially to the consideration of the possible influence of a diet with an inadequate Vitamin content in leading to enlargement of tonsils and adenoids. It may be urged that our knowledge of the biochemistry of food and its assimilation is at present imperfect, and that large gaps remain to be filled. True as this is, it may be claimed with confidence that enough is already known to make dietetics one of the most important educational subjects of the day. A food replete with the elements necessary for healthy growth must be the first line of defence in the campaign to prevent the production of many of those physical defects which loom so large in the statistics of school medical inspection.

Upon the question of the use of general anaesthetics in the dental treatment there appears to be considerable diversity of opinion. In some areas few or even no general anaesthetics are given, in others a very large proportion of the children receive general anaesthetics. In Birmingham the proportion has been 30 per cent. This percentage naturally varies with the type of work done. If, for example, casual cases are accepted, extraction under general anaesthesia is indicated in almost every case. If, on the other hand, only small children are treated, then there may be divergence of opinion as to the use of a general anaesthetic. Some anaesthetists are not in favour of nitrous oxide for children under ten, as the shallow breathing of a child makes the anaesthesia very transient. Others argue that this transient anaesthesia is all that is required, in that the absence of pain is likely to secure the child's subsequent attendances at the Clinic. Teeth are extracted under anaesthesia, either local or general, according to the judgement of the Dental Surgeon concerned. Local anaesthesia is produced either by injection into the tissues, or by external application to the gum of some suitable anaesthetic. Loose teeth are dealt with in this manner, and also those where a general anaesthetic is contra-indicated. General Anaesthesia is produced in seven out of the eight Clinics by means of Nitrous Oxide, and is administered by the Dental Surgeons themselves who for this purpose work in pairs, one acting as Anaesthetist and the other as operator. In the large majority of cases the anaesthesia induced is very light, the period of induction being about 35-40 seconds, and this produces a brief anaesthesia which allows the operator to carry out the necessary work. Recovery is rapid, and there are no after-effects. This method of performing extractions (which has now been in force for some years) is convenient

for the Dental Surgeons and popular amongst the children and their parents, in fact, the usual request for a child entering the Surgery is "Gas, please." In those cases where, owing to previous neglect, multiple extractions are necessary, a prolonged Nitrous Oxide anaesthesia is induced by means of a nasal inhaler in order to allow the operator sufficient time to complete as much of the work as he considers necessary. If treatment were always accepted when offered, the necessity for prolonged anaesthesia would not arise, but unfortunately many children or parents refuse, and hence treatment is not sought until the teeth become badly broken down. These extractions are difficult, and a prolonged anaesthesia is necessary, and the amount of sepsis present in these cases often contra-indicates the use of a local anaesthetic.

At Great Charles Street Clinic ethyl chloride is used, being administered by an anaesthetist appointed for the purpose. Ethyl chloride is *par excellence* the anaesthetic for dental treatment if administered by a skilled person. The anaesthesia is produced very rapidly, thus effecting a considerable saving of time, and recovery is equally quick, and the after-effects disappear rapidly.

Speaking generally, the Dental Surgeons in the Clinics are unanimous in their belief that a general anaesthetic is the most humane, quickest, and in every way the most satisfactory method of extracting teeth in children between the ages of 5 and 14.

TONSIL AND ADENOID CLINIC.

During the year, Dr. W. Glegg, who had been operating surgeon since the opening of the Tonsil and Adenoid Clinic in October, 1913, resigned owing to ill-health. Mr. D. J. Evans, F.R.C.S., was appointed in his place. 1,402 operation were performed, making a total of 21,586 operations since the above date. Among the children operated upon during the year, 23 only shewed no adenoid growth, and in 27 there was found no tonsilar enlargement.

The Secretary of the Ear and Throat Hospital reports that 965 children of school age were operated upon, a large number of whom attended on the recommendation of the School Medical Department. At the Children's Hospital the operations performed included 587 children under school age at the instance of the Maternity and Child Welfare Department of the Health Committee. The causation of the enlargement of tonsils and adenoid growth remains one of the baffling problems of the School Medical Service, and as year succeeds year the number of cases in which operation is indicated shews no signs of diminution. This prevalence stands in marked contrast to the remarkable diminution of certain other affections of the nose and throat, although, with the facilities for treatment now offered, the extreme cases of nasal obstruction due to tonsilar and adenoid enlargement, producing the characteristic changes in the physiognomy—the so-called "frog-faced" children, which were common a quarter of a century ago, have completely disappeared. With the development of the Aural Department the foul-smelling cases of ear-discharge which pervaded the whole classroom have vanished, and the total number of cases of running ears has undergone a remarkable diminution. This is a notable triumph. The total number of dressings in the Aural Clinic was 5,694, and 333 ionisations were carried out.

Mr. Gilhespy, Consulting Aural Surgeon, submits the following report:—

"During the period under review 22 patients have been admitted to Selly Oak Hospital for operations upon the mastoid bone and 36 for other operations. These latter cases represent an increase of twelve over the preceding year, and of more than twenty over those of the year 1927.

"An analysis of the thirty-six cases shows that the majority were admitted to Hospital on account of persistent nasal catarrh. These patients were mostly sent to the Clinic at Great Charles Street on account of otorrhoea, and while under treatment there it was found that the ear condition was either due to nasal infection or was resistant to treatment owing to continual re-infection from the nose or throat; in certain cases after the ears had been dried otorrhoea recurred from the same cause. In some of the thirty-six cases efficient removal of the tonsils and adenoids, which had been imperfectly performed previously, was sufficient to cure the nasal discharge and coincidently the aural complication. In the majority, maxillary antrum infection was present as the cause of the running nose and an intranasal opening of the antrum at fault was found to be a satisfactory form of treatment. Ethmoiditis is more common than at present supposed in children, and cases of this condition were encountered.

"Certain of the children with nasal catarrh form a group with definite clinical signs. These children are generally of the plethoric type with ruddy complexions, rather broad nostrils, and suffer continuously from nasal discharge and hacking cough, and their ears discharge intermittently, but very freely, from anterior perforations. The causes of the conditions are probably varied, and, as one would expect under these circumstances, treatment is not often successful. Such "catarrhal" children do not greatly benefit from removal of the tonsils and adenoids, or sinus irrigation. Cases of aural polypi have been included in this group of thirty-six cases.

"It may be of interest to other Education Authorities to review the present arrangements made for dealing with Otological and Rhinological cases in this City. Patients are treated at the various school clinics, and if their progress is not satisfactory they are transferred to the Aural Clinic at Great Charles Street, which is satisfactorily equipped for treatment of ear, nose and throat patients. It will be understood at once that the majority of cases seen there have been resistant to treatment. Among such cases treatment by ionization will improve a proportion, but there will still remain some who will require operative treatment upon the mastoid, or, as explained earlier in this review, operative treatment upon the nose or throat. For the former, a stay of three weeks to a month is the average time required in hospital, and for the latter, about three days.

"Among the latter, cases of aural polypi, dissection of tonsils, removal of adenoids, maxillary antrum infection, have been dealt with. Four beds are allotted in the Selly Oak Hospital for this work. On discharge from hospital these cases are followed up again at the Great Charles Street Aural Clinic where any necessary treatment is continued.

"During the last year a number of X-ray negatives have been taken of children with suspected disease of the nasal accessory sinuses or of the mastoid bone. Such help has been of value in both classes of case. In the latter class this work may be said to be rather in its infancy, but in the writer's opinion is helpful and will tend to become of more value later. In suitable cases ionization maintains its advantage of drying an ear more rapidly than by other forms of treatment, and as the application only need one visit each week, it is of great value in treating children from the more distant suburbs."

ULTRA VIOLET LIGHT TREATMENT

In the course of the Summer mercury vapour lamps were installed in Handsworth and Harborne Lane Clinics thus increasing the number of lamps in use to six.

The total number of children who have undergone a course of treatment has been 692. This number does not include those children who have ceased to attend before treatment has been completed. Some parents find it difficult to bring their children regularly over a course of weeks, less from indifference than from the pressure of other domestic claims. The types of defective conditions treated are so numerous that it is not easy to combine the returns from the six different clinics into a single table, nor to deduce therefrom with any degree of accuracy or value the measure of success attained from the treatment as a whole. An example may explain my meaning. Indolent or multiple ulcers or skin conditions heal under very varied forms of treatment, and all such cases treated by radiation may be counted as "cured," whereas it is not always easy to determine the degree of cure or improvement in the more general conditions such as anaemia or debility. Any table showing the percentage of cases cured or much improved, independent of the nature of the case, would therefore be entirely misleading, and in estimating the ratio of results each class of defect treated must be considered only in relation to other cases of the same kind of defect. Dr. Wilkins, who has made a close and detailed survey of the cases treated by himself, submits the following report on the cases treated by him at Sheep Street Clinic.

"Out of the total number treated by me it is possible to give fairly precise details relating to 66. Of the remainder some attended only for short periods, and others are still in process of being followed up. No case has been included under the heading of the remarks which follow except those about whom it is possible at the time of writing to speak with definite confidence as to the effect of the treatment. No case of slight improvement, or of improvement which has been in any way doubtful, is included under the heading of "improved." As everyone who has experience of children knows, an improvement in health will often occur without any treatment or change in the child's manner of life—improvement which is, perhaps, best explained as being due to the gradual establishment of a more stable physique as part of natural growth. Hence cases of slight improvement which in previous years were recorded as such are now relegated to the group of "no change" or "result indefinite." Those recorded as "improved" or "much improved" are thus quite indisputable and little likely to be capable of explanation as due to coincidence.

"The records of weight I have found of comparatively little value as an index of the effect of radiation. I prefer to depend on the mother's verdict of improvement or otherwise in the child's functional state. The latter is, I believe, a much more sensitive index and more immediately reliable. This is, I think, only to be expected when it is realised that the period of treatment is usually only 2 or 3 months. Body-weight changes more slowly. The weight may remain stationary for 4 weeks or more and at the same time the child greatly improve in health. Quite frequently there is an initial loss of weight in the first week or two, which I now regard as an almost normal occurence even in children who derive undoubted benefit from the treatment. Any serious loss of weight—which is rare; we have not had any this year— is reflected in such symptoms as loss of appetite, increased languor, inability to sleep, etc., and these symptoms give warning before the loss of weight progresses to any extent. The majority of the children gain some weight during their course of radiation, which, of course, is to be expected in view of the fact that they *are* children.

"Debility. 33 children have been treated for debility, i.e., poor appetite, lack of energy, restless sleep, sweating at night, fretfulness and irritability, fainting attacks, etc. Of these, 16 were much improved by radiation; 13 improved definitely; and 4 are classified as no better or result indefinite. The average number of exposures per child was 15, the longest course 35, and the three shortest 8, 7, and 5. Three of the children who have benefited are continuing their treatment. In the case of 6, who have subsequently been examined and their mothers interviewed at intervals, varying from 2 to 9 months after the cessation of radiation, it has been found that a definite improvement in the child's health has been maintained ever since. This more or less permanent or prolonged benefit from a course of ultra-violet radiation has been noticed before in several instances, and in such cases as appear to be merely temporarily benefited it is worth reflecting that the gain may to an extent be a permanent gain in that the child has been helped along a definite stage of its journey towards a mature and fully developed physique. It must be remembered that the period of growth is often a precarious period, full of dangers and pitfalls, and that an apparently temporary benefit may thus have a permanent value.

"One of the children included in the above paragraph was treated and cured of bed-wetting by the administration of belladonna during the course of radiation, but it should be stated that 2 previous cases at this clinic have been cured of this habit by radiation alone.

"In addition to the above, 8 cases were treated for debility, combined with other defects. 4 of these were combined with troublesome impetigo. After an average of 20 exposures in each case, their impetigo was cured and general health greatly improved, the improvement being maintained 8-9 months later. A case of debility and nasal catarrh was definitely improved, both as regards the catarrh and general health, after 34 exposures. The same applies to a case of debility and recurrent conjunctivitis after 8 exposures. A debilitated child who suffered from frequent vomiting attacks was much improved by 32 exposures, and when last seen had had no more attacks of vomiting. Another child having remedial exercises for scoliosis was radiated simultaneously (14 exposures) for debility with great improvement to her general condition.

" 6 children were treated for *asthma and asthmatic bronchitis*, of whom 3 were much improved, one of these (18 exposures) continuing to be practically free from asthmatic trouble 10 months later, and another (20 exposures) having had his attacks reduced from 2 or 3 per week to 3 attacks during the 3 months he was being radiated. 2 others were definitely improved, and one was no better.

"9 cases were treated for chronic or frequently recurring *bronchitis* (averaging 23 exposures each). 6 of these were much improved. One of the latter, who had suffered from an attack of vomiting every 2 or 3 weeks, possibly due to the bronchial catarrh, had neither vomiting nor bronchial trouble during the course of treatment (19 exposures). Another of these, a case of chronic bronchitis, probably due to an unresolved pneumonia, receives continuous treatment all the year round, and is always definitely worse during the vacations when the radiation is interrupted. Of the remaining 3 bronchitis cases, one was recorded as improved, and 2 were no better, one of the last 2 being complicated by a chronic otorrhoea.

"A case of *otorrhoea and frequent nasal catarrh* was much improved by 18 exposures though some otorrhoea persisted. Of 2 cases of *deafness* 1 was improved, and the other slightly, but undoubtedly improved in hearing, probably due to the beneficial effect of the radiation on the catarrhal condition. A child suffering from frequent attacks of *tonsilitis* was no better after 7 radiations, but was undoubtedly in need of a tonsil and adenoid operation.

"One case of *chorea* was worse after 10 exposures. I have a deal of doubt of the value of ultra-violet radiation in true chorea, although Dr. Kemp reports two cases treated by him as much improved. Of 3 cases of subacute *rheumatism* with frequent pains in the limbs, one after 20 exposures was much improved in every way, and 2 were improved. I am coming to the conclusion that U.V.R. is of definite value in rheumatism.

"One case of *psoriasis* was much improved after 26 exposures and the improvement appeared to be maintained a year later.

"As regards the general trend of the work and the results obtained, there would appear to be little more to add to what has been said in the reports of the last two or three years. Some comment on a report published during the year by the Medical Research Council is, perhaps, called for as appearing to conflict with the results of work carried on at clinics such as this. That report claimed to show that there was no evidence that U.V. radiation as carried out in the experiment had been of benefit to an average group of school children. While it is not, of course, my function to criticise that report here, nor to say whether or not I accept in part or whole the evidence put forward in that report, yet, in view of the wide publicity given to it, and its tendency to give rise in the mind of the average reader to misunderstanding regarding the value of U.V. radiation, it would seem very desirable to emphasise a fundamental

difference between the material dealt with in that experiment and at school clinics. I refer to the fact that the children experimented on under the aegis of the Medical Research Council were not selected as being in need of treatment, but were ostensibly an average group of children in comparatively normal health; whereas the children treated by U.V. radiation at school clinics are specially selected on account of their suffering from some malady or defect in health which previous experience on the part of School Medical Officers, as well as the general experience of workers in U.V. radiation elsewhere, leads them to expect will derive benefit, if not cure, from this form of treatment. We can say unhesitatingly that of the children treated at this clinic the majority benefit considerably, especially in their general well-being. I feel bound to say further that our observation of this improvement in general well-being leads me to suspect that the Medical Research Council's experiment has not yet discovered the whole or final truth regarding the effect of U.V. radiation on the health of an average lot of school children. After three years of continued experience of this treatment in this clinic, I am satisfied as to its outstanding value, and that for the wide range of disabilities for which it has been given there is no other form of treatment which can be so readily applied, so inexpensively operated, and at the same time gives such a general proportion of really good results as are obtainable with ultra-violet radiation.

"In view of the fact that the M.R.C. report has been construed by some as a challenge to the work done at clinics such as this, Dr. Kemp and I propose to investigate very closely the results obtained in our U.V. department. As the following up and securing of a reliable verdict on the value of the treatment in all cases is a matter which must of necessity be spread over a period of time, we propose to postpone a more detailed statement till the end of the present year. Contrary to what might have been expected there has been no noticeable aversion to U.V. treatment as a result of the publication of the M.R. Council's report. There appears rather to be growing eagerness to accept this form of treatment when offered; and the reluctance of parents to have their child's course of treatment terminated continues to be as striking, and, we believe, as reliable a testimony to its value as it has been in previous years."

ORTHOPAEDIC SCHEME.

The past year is the first completed year of the reciprocal scheme arranged with the Royal Cripples' Hospital. It is, therefore, now possible to gain some idea of the type and distribution of crippling conditions in the child population and the proportion of attendances at the Hospital rendered necessary by these conditions. Tuberculous infections do not come within the scheme, as they are dealt with as part of the general anti-tuberculosis campaign. The accompanying table shews the outpatient attendances at the Cripples' Hospital.

Classification.	Out-Patient Clinic. No of cases.	Out-Patient Clinic. Attend-ances.	Massage Dept. No of cases.	Massage Dept. Attend-ances.
Talipes, club feet, etc.	125	709	32	994
Congenital deformities	44	159	12	499
Dislocated hips	15	69	4	110
Spastic paralysis	37	171	10	211
Infantile paralysis	225	1,800	85	3,549
Birth palsy	6	13	2	120
Rickets	104	487	23	519
Flat feet	109	469	64	1,511
Scolio kyphosis, etc.	54	309	33	1,256
Old fractures	9	28	3	89
Injuries	23	172	3	223
Amputations	6	39	—	—
Osteo myelitis	6	17	1	26
Arthritis	8	51	1	30
Unclassified	44	202	23	786
Total	815	4,695	296	9,923

attendances per patient 5.7 Out-Patient Clinic.
33.7 Massage Clinic.

The table bears testimony to the large demands upon the Staff made by Infantile Paralysis, the treatment of which must extend over several years. One of the essential parts of treatment is electrical, and at the present time owing to the absence of electrical apparatus these cases cannot be fully treated at the Remedial Exercises Clinics. In addition to the out patient treatment, 24 non-tuberculous children were admitted as in-patients under the scheme, the average length of stay being 91.3 days. In addition to the above, there were 74 new admissions to the Woodlands under Part V of the Education Act, 1921, together with 9 carried over from the previous year making in all a total of 83 children. The organisation for ascertainment of the existence of physical defects appears to be complete, and Clinics are held at the Remedial Exercises Clinics in alternate weeks for the examination of all children where there is presumptive evidence of the existence of physical defect requiring supervision or special treatment. I examined 305 such children during the year. Periodically, Mr. Naughton Dunn, Consulting Orthopaedic Surgeon to the Education Committee, has examined those cases in which a further opinion is considered desirable.

The following figures give a summary of the admissions and discharges at the two remedial excercise clinics during the year.

	Admitted.	Discharged
Spinal curvature and postural deformity	57	43
General Muscular debility	8	7
Various forms of paralysis	12	7
Deformities of feet	62	42
Chest conditions, asthma, etc.	8	6
Injuries to limbs	1	1
Wry neck, etc.	8	5
	156	111

In addition, 709 children attended for breathing exercises after operation for tonsils and adenoids. The younger children attend for six sessions, the elder for three sessions. In exceptional cases they attend for longer periods, and where necessary are admitted into classes for other forms of remedial exercises or for ultra-violet treatment. Mention may here be made of the remedial exercises now provided by the Health Committee at a number of the Welfare Centres for children under school age.

VERMINOUS CONDITIONS.

There has been a further slight improvement in the general cleanliness of the children, but it must be admitted that there is still room for further improvement. 1,391 visits to the schools were made by the School Nurses, an average of 6.8 visits per school. 18,246 children were found to shew evidence of louse infestation as against 22,446 children in 1928. There were 64 prosecutions of parents in respect of verminous children. In September two additional nurses were appointed, in the hopes that a more strenuous campaign for cleaniness might result in a reduction of these figures. It is true that the chief trouble lies in a very small minority of families which are constantly and persistently verminous. The children from such homes form foci of infestation to the other children in the schools. In all Clinics the necessary materials and utensils and towels have been provided which are at the disposal of any parent who finds her child to have become infested. For various reasons far too little use is made of this opportunity. The School Nurses do not themselves undertake the cleansing—that is the duty of the parent—except when the children are motherless or orphans or when the mother is known to be an invalid. Many of the schools provide metal combs which can be hired by the parents, and in some areas very good use is made of this facility. There is, however, as will be admitted from the above figures, a good deal of indifference in the matter.

The re-building and enlargement of the Bathing Centre at Floodgate Street will greatly improve the possibilities of this Centre in the promotion of cleanliness. The bath installations continue to be useful for the treatment of general septic conditions, 1,952 children being treated for conditions other than Scabies.

The incidence of Scabies appears to have reached its minimum, there having been little change in the figures for the last four years, as will be seen from the following table.

1919	1202	cases
1921	675	,,
1923	307	,,
1924	213	,,
1925	187	,,
1926	154	,,
1927	151	,,
1928	133	,,
1929	143	,,

SECONDARY SCHOOLS.

In the course of the medical inspection of 6,860 pupils in the Secondary Schools, 21 per cent. shewed some condition which required treatment. This percentage remains constant from year to year. Defective vision forms the largest proportion, i.e., 7.3 per cent. of the whole, again a percentage which does not vary from year to year, nor indeed does the percentage of those whose eyesight is already corrected by glasses who are kept under supervision (3.3 per cent.). Although the treatment of defects in pupils in the secondary schools is not at the present time one of the functions of the Medical Department, these cases are treated at the clinic wherever the financial circumstances of the home warrant it. Twenty pupils were thus treated. The next most frequent form of defect is that of the teeth, 5.7 per cent., a condition which is largely the result of individual carelessness and indifference. The fact that there is no routine inspection by a Dental Surgeon and no treatment in the School Clinics is no doubt a contributary factor. Five cases were treated at the clinics, others attended the Dental Hospital. None of the other defects require special comment.

NURSERY SCHOOLS.

The maintenance of the health and future of the pre-school child is a social problem of real complexity, which has no clearly defined boundaries and forms a debateable ground in which both the local Education Committee and Health Committee have a share. But this problem is itself an integral part of the still more intricate problems concerned with the provision of healthy housing conditions, of adequate wages, and of female employment, and cannot be dealt with as a question separate and distinct from other cognate questions. Accordingly, whatever type of accommodation is provided for children under five years of age, whether as crêches, play centres, nursery schools or the like, the *raison d être* is the same, and if every effort is not made to utilise the opportunity of improving the standard of health of the children who attend the results will fall short of the possibilities. Sir George Newman put the case tersely in the Report for 1928. He writes :—

> "Until we can devise and carry out suitable arrangements for dealing with disease and impairment in early childhood, we are subjected to a great mass of preventable disease, which contravenes the education and frustrates the treatment of the school child, and sows the seeds of incapacity and invalidity in the adult population."

There may even be a danger lest the provision of accommodation for the children of this age period should be looked at as an educational end in itself and thus tend to direct attention away from the real protean social problems which underlie the obvious need, to the relief of which, however, that provision offers no solution. The housing conditions under which large numbers of children are living cannot fail to have a detrimental influence upon their physical constitution, and make it well nigh impossible that their development should be vigorous and sturdy. Hence each Annual Report has included in considerable detail particulars concerning the home conditions of those children who have been selected for attendance at the Nursery Schools. It will be noted that, amongst the children examined as entrants into the Elementary Schools practically 30 per cent. showed some departure from complete normality of growth, health or nutrition. It may, therefore, be presumed that the same percentage will hold in the children who attend the Nursery Schools. Hence the opportunity afforded by their attendance should be utilised to the full to supply every adjunct to the improvement of the fitness. The provision of the growth-promoting vitamins, which are so deficient in the ordinary food of the homes of the poor, by meals, milk, and cod liver oil should be regarded as the first line of defence. Reference has already been made in this report (page 12) to the great importance of a diet containing the full complement of Vitamins, especially Vitamin D, in promoting a sound growth of bones and teeth. Furthermore, under the smoke-laden skies of our cities the activating influence of sunlight is missing. It is, however now possible to supply through the new form of tungsten filament lamp an artificial sunlight which possesses a greater range of the required wave-lengths than that of natural light which under the most favourable circumstances penetrates the atmosphere.

The Health Committee through its Maternity and Child Welfare Department is now about to introduce at a number of Welfare Clinics the systematic inspection of children of pre-school age, on lines similar to those of the School Medical Inspection. It is proposed to call the children up for inspection twice a year, and a medical schedule will be used very similar to that used for the school medical inspection. There

will be 17 new sessions used for this purpose and it is estimated that 600 children will be examined at each clinic in each year. Further, five Remedial Exercises Clinics are to be opened for weekly sessions for flat foot, badly shaped chests, breathing exercises, etc. A proposal to establish a number of Play Centres, and opportunities for the guidance of parents in the case of difficult and nervous children is also under consideration.

Summer Lane. (Accommodation 92).

Three visits were made to this School for routine work, and 95 examinations of the children were made. In addition to this eight non-routine visits were made, when the defects found were seen again, and any special cases which were brought forward by the nurse. The following is the result of treatment of routine cases :—

No report available ...	4
Remedied	24
Improved	10
No change	4
Not treated	3

65 special cases were seen at these visits consisting of 51 septic sores of all kinds including impetigo, and—

4 cases of Otorrhoea
3 cases of Squint
2 cases of Tonsils and Adenoids
1 case of Debility
1 case of Blepharitis
1 case of Nervous Debility
1 case of Defective Speech
1 case of Accident to Forehead.

Nurse Cordery reports that dressings for sores of all kinds have been done at School—1,720 in all during the year.

One case of squint was treated at the Clinic and one at the Eye Hospital. Two cases of tonsils and adenoids were operated on at the Children's Hospital. Four cases of Pneumonia were treated at home and one at hospital. Ten cases of Influenza were treated at home. One case of Chorea was admitted to the hospital, and one of Talipes to the Cripples' Hospital. A case of Colitis was treated at the Dispensary, and one child had an abdominal operation at the General Hospital.

Infectious diseases :—

5 cases of Chickenpox.
3 cases of Diphtheria.
1 case of Mumps.
1 case of Whooping Cough.

1,015 visits were made to the homes of the children.

Miss Bolton, the Head Teacher, reports :—

"Social conditions—three families have moved into Municipal Houses, and others have moved from rooms into a house of their own. One father, a disabled soldier, lives with two children in an

attic and pays 7/- a week for the room out of a pension of £1. Another woman pays 10/- a week for an attic.

Fathers out of work	18
Fathers with part-time or irregular work	12
Widowed mother working	1
Widowed mothers with pensions ...	3
Mothers working	24
Fathers invalided or disabled ...	4

One mother is epileptic and two are very nervous and irresponsible.

During the year there have been very few infectious diseases although prevalent in the district."

Tiverton Road. (Accommodation 50).

Dr. Alexander reports:—

"105 examinations were made. Extra visits were given for re-inspections and for special cases. These included two of Bronchitis, two with discharging ears, and one with Impetigo. 64 children were seen at re-examinations with the following results:

No report available	7
Remedied	28
Improved	17
No change	12
Not treated	4

Miss Jones reports:—

"We started the year badly. More than half the children had Mumps. In February only ten children came to School for a fortnight, Mumps and Influenza accounting for all those absent. There were also three or four cases of Whooping Cough. Since March there has been no infectious disease. About ten children have been operated on for tonsils and adenoids. Two children have been provided with glasses—one was operated upon for hernia. Two have been treated at the Ear and Throat Hospital for discharging ears. Two children had Pneumonia.

Homes: About ten children come from good homes—clean and comfortable, recommended for attendance on account of the child's or mothers's health, or because the father is invalid and the mother goes to work. 23 live in whole houses, but the housing accommodation is poor.

4 live in two rooms.
6 share houses.
2 live in 3 rooms. Parents and 7 children.

6 come from very over-crowded homes—10, 11, or 12 children in four-roomed houses. The fathers are all unskilled labourers and very few of them have permanent jobs. In 24 cases the fathers work. In eight cases the mothers or grandmothers work.

In three of the cases the father is an invalid.

In two of the cases there is no father.

In three of the cases children are supported by grandmothers.

In 17 cases both parents work.

In 1 case neither parents work.

About 223 visits to the homes have been made.

One dental inspection has been held at which 41 children were examined, 13 were recommended for treatment, and 8 were treated, but during the year many others have taken advantage of the Dental Clinic."

Nursery Class, Dartmouth Street. (Accommodation 32).

Dr. Stooke reports:—

"10 visits were paid. Examinations (a) Routine, 34; (b) Special, 15; (c) Re-examinations, 27.

On admission the children had a good record for health. Comparing last year with this only about half the number had Bronchitis at the routine examination, and there was only one case of Otorrhoea. On the other hand, the number of minor ailments which cropped up during the year was greater.

Total number of new treatments	...	128
Total individual treatments	...	1431

Ringworm, 1; Impetigo, 26; Eye Disease, 10; Ear Disease, 9; Miscellaneous, 82."

One case of squint received glasses; 2 cases of ear disease were seen by the Aural Surgeon, and 2 children were treated by ultra violet light.

The Social conditions of the families living in the area do not alter. Fourteen families are able to rent a whole house. At the other extreme are those who live in lodgings. Three families have only one room, two have one bedroom and share a sitting-room and two others have two rooms.

Six mothers were at work and eight looking for work. In one family visited, the mother was dead, the father at work and the child locked out till his return. In four families both parents worked. Six fathers were out of work, and six fathers and three mothers were invalids.

The size of the families is not small. In only one is there one child, who was admitted at the instance of the Welfare Clinic. Seven families had six or more children. One family has reached ten and the children are rickety and undersized. Another family of nine is maintained by the Guardians.

CAMP SCHOOLS.

The Camp School at Bell Heath, with accommodation for 100 boys and that at Blackwell for 60 girls, have been opened continuously during the year. 1,160 boys from 35 schools, and 1,020 girls drawn from 46 schools have had two school weeks' residence therein. The health has been uniformly good, and there has been no case of infectious disease even during the heavy epidemic of influenza in February. All children are examined by a school nurse before going to the Camp.

REMAND HOME.

Forty-four children were examined by me at the Remand Home, and a number of others in connection with their probation.

Youth is a period of emotional instability and unrest, and, even under favourable circumstances, the unfolding personality cannot escape from the conflict between the primitive self-regarding instincts and the demands of the social environment in which he finds himself. This

inevitable conflict is rendered all the more intense if there is in addition any failure of satisfaction of the emotional needs. The conflict cannot be shirked, but its intensity can often be circumvented by some psychological process, and it is in the emotional maladjustment that we find the chief cause, not only of the varied neurotic manifestations of youth and early adolescence, but also of the juvenile delinquencies which are so often the forerunners of anti-social attitude in adult life. In a paper read during the Summer* I analysed the notes of 169 children who had been examined by me either at the request of the magistrates or probation officers, or at the Remand Home after appearance in the Children's Court. In this analysis I find the following points noted :—

One parent dead	27	including two orphans.
Step-parents	7	not included in above.
Father or mother deserted	6	
Drink in family	9	
Bad home environment, including overcrowding	27	
Psychological conflicts	42	excluding the following groups:
Sex delinquencies	9	
Feeble-minded children	13	

It must be borne in mind that these figures are not, of course, exclusive; thus a case of mental conflict may also appear under one or other heading. In many cases reliable information was not forthcoming, and in some the child had been sent to the Remand Home pending disposal on account of improper guardianship, etc. The numbers do, however, indicate a heavy weighting of the figures on the side of the social or psychical maladjustments. The analysis of these imperfect records does, moreover, point to the supreme importance of probing as far as may be into the underlying psychological basis of the various forms of aberrant conduct, for only by so doing can we hope to relieve the conflict or to bring about that readjustment which must be a preliminary in any attempt to bringing the child back into the paths of rectitude and social behaviour. These figures relate to juvenile delinquents only, but they give abundant room for thought, and prove the insistent need for the investigation of maladjusted children and for their efficient treatment. The need is indeed recognised in the movement towards the foundation of Child Guidance Clinics. Such Clinics, however, can scarcely achieve their best results if divorced from the general scheme for child and juvenile welfare of which the local educational system is the central pivot. In actual practice a Psychological Clinic has already come into being as part of an increasingly integrated scheme for supervision of the welfare of the individual child. This development has been rendered easy by the close co-operation which exists between the officers of the Medical Department and that for juvenile employment and welfare. Moreover, the Teaching Staff are conscious of the problem of the difficult child at school, while the attendance officers meet with the same problem at the homes which they visit and learn from the parents their troubles and anxieties concerning their children. The Probation Officer, in turn, is necessarily in close touch with various officers of the Education Committee. The Medical Department thus becomes more and more the meeting point of these various converging avenues of information and solicitude, and each week brings several new cases for consideration and action. How useful a part is played by this collaboration may perhaps be gathered from the following extract from a report presented to the Juvenile Employment and Welfare Sub-Committee.

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* "The Difficult Child." Journal Royal Sanitary Institute, Vol. L. No. 3. p. 158.

"Particular reference must now be made to the very arduous and detailed work which has been carried out during the year in respect of cases specially referred by teachers and parents either direct to the School Medical Officer or through one of the Committee's officers to the Juvenile Employment and Welfare Department. Children of all ages have been referred for consideration in regard to some difficulty or maladjustment. In every case the School Medical Officer or an Assistant School Medical Officer has examined these children physically and psychologically. In some cases no co-operation has been possible, as other means were taken to overcome the difficulites, but in some 200 cases comprising children who had stolen, or received assaults, or committed sexual offences, or who were physically or mentally maladjusted, or who had proved difficult and non co-operative in every-day life, Dr. Auden asked that special action should be taken through the Juvenile Employment and Welfare Sub-Committee to give effect to his suggestions."

It is not, however, only in cases of psychological difficulty that this collaboration is of value, for there are many children for whom at the time of leaving school some further help is required before they can be fit to enter employment, or for whom some special type of employment is necessary if they are to hold their own, or some special examination and preparation is required for some particular type of work, e.g., the Mercantile Marine.

The following are typical cases reported by the Juvenile Employment Department :—

1., A.B. Acute heart trouble. Quite unfit for work. Poor home where mother was also an invalid. Examined by the School Medical Officer and afterwards sent on his certificate, through the Birmingham Citizens Society, to a Convalescent Home for three months, from which treatment he returned fit for light work, and suitable employment was found him.

2., C.D. Delicate boy, leaving school Christmas, 1929, but obviously unfit for industrial conditions. Examined by the School Medical Officer and on his certificate sent through the Birmingham Citizens Society to Kenilworth.

3., E.F. Brought to the Juvenile Employment and Welfare Department by the Probation Officer, as causing his mother great anxiety by his moody behaviour. Examined by the School Medical Officer who stated lad was suffering from melancholia and must have supervision. Since admitted through the Guardians' Medical Officer who confirmed the diagnosis, to a residental institution for treatment. Had this boy not come under medical examination he would possibly have done himself some injury.

PHYSICAL TRAINING.

The accompanying report has been supplied by Mr. McCuaig and Miss Fernyhough, Organising Inspectors of Physical Training :—

"Physical training forms an integral part of the curriculum of all Elementary, Secondary, Special, Commercial, Junior Technical, and Evening Schools in this city. The Elementary Schools have usually three syllabus lessons on the school premises and one organised games lesson, generally on a playing field, each week. A few schools have made provision for a daily lesson. The majority of the physical

training lessons last 20 minutes, while the actual playing period on the field is about 40 minutes for the majority of schools. During the swimming season, some schools substitute a swimming lesson for one of the three syllabus lessons or for the games period. A detailed report on the teaching of swimming is given below.

"The usual provision made in Secondary Schools is two gymnastic periods and one games period per week. The duration of the gymnastic lesson varies between 30 and 50 minutes.

"Students attending Evening Institutes must enrol for grouped courses which are held on three evenings weekly. This is equivalent to six hours weekly. In all such courses physical training is a compulsory subject and lessons last one hour.

"The syllabus (one for Boys and one for Girls) is specially devised to suit local conditions and includes exercises on gymnastic benches and vaulting boxes.

Swimming Instruction in Elementary Schools.

"Reference was made in our Report last year to a Swimming Scheme which had then been prepared. This scheme was issued to all schools in March, 1929. The chief recommendations in the scheme are that attendance at the swimming baths during school hours should be made definitely for the purpose of teaching children to swim; that the number in learners' classes should not exceed 30; that swimmers and non-swimmers should not be mixed, and that where schools have only one or two periods weekly preference should be given to non-swimmers. Already the scheme has produced improved results, and when the teaching staff are conversant with the up-to-date systematic method of class rather than individual teaching, the swimming instruction in our Elementary Schools should reach as high a level as conditions (referred to later) will permit. The keen interest of the teachers is reflected by the large number who have taken advantage of the classes which have been arranged specially for them during the past five years, no less than 900 having attended, an increase of 200 since our last Report.

"There are fifteen Public Baths in the city, all of which are used by Elementary Schools. The total number of swimming periods used is 526 per week.

"Counting Mixed Departments as two, and excluding Infants and Physically Defectives, there are 452 Elementary Departments in the city. Two hundred and ninety six of these include swimming as part of the school curriculum, while 156 Departments have not yet found it possible, from one cause or another, to include this subject, but chiefly because facilities are lacking. The average number of periods per department using the Baths is thus less than two. One hundred and sixty-one periods weekly available to the schools are not used, but these vacant periods only occur in those baths which are situated inconveniently for all except a few schools, e.g., Harborne, King's Heath, Nechells.

"The number of scholars attending weekly is about 12,000, so that the average number in each class is about 22. These figures represent a large reduction on those of previous years, and this reduction is the first essential step towards securing conditions which allow systematic class instruction. Up to a certain point, a reduction

in the average number attending per period is an indication of progress, in so far as *conditions* are concerned—a point not often realised.

"There are about 13,000 leavers from Elementary Schools annually, so that even if all the classes attending were made up of non-swimmers, and every pupil taught to swim in one season, there would still be a large number of scholars leaving the schools unable to swim.

School Swimming Baths.

"All the swimming instruction under this authority is given in the Public Baths. These are built chiefly to provide facilities for recreation and competition, and not for teaching purposes. The area of shallow water, in fact, is generally too small for the purpose of teaching young children to swim, and the modern method of purifying the water which comes into the shallow end as a strong current reduces this area very considerably and, indeed, makes it dangerous for small children.

The water even at the shallow end of nearly all our baths is too deep for beginners. It will be realised that young children require less time to gain confidence when the water is reasonably shallow than when they experience difficulty in "keeping their feet."

Occasionally the depth of the water is reduced for young children, but the rail round the walls of the bath is then too high above the water. This rail is indispensable for class-teaching, and gives the greatest help when comfortably within the reach of the pupils lying on the surface of the water.

Furthermore, the scholars share the baths with the general public, and in warm weather, particularly, the baths are often so over-crowded that systematic instruction becomes impossible.

The only solution to these numerous difficulties is the provision of comparatively small School Baths, especially built for and exclusively used by school children. Such baths would be used principally by learners' classes, and each bath by a group of several schools, while the public baths could be used to greater extent by the swimmers' classes which the limited facilities and the stronger claims of the less fortunate non-swimmers preclude from attending."

ENCEPHALITIS LETHARGICA.

Happily the depredations of this infective disease are less apparent in each successive year and, since the great outbreak of the early part of 1924 there has been a progressive diminution of new recognised cases. Moreover, there has been an extraordinary change in the general manifestations of the infection, both clinically and in the late sequelae, especially in the character-changes which gave such a social importance to the disease. It is now exceedingly rare to meet with children whose behaviour brings them before a Children's Court or whose unruly conduct breaks the peace and comfort of the home. In an investigation made last year, outlined in my report for 1928, it was found that 25 per cent. of the children known and indexed had already come under some form of permanent care. The proportion is now probably greater and a considerable number have gravitated to the Erdington House. The accompanying table from returns kindly supplied by the Health Department shows the diminution in each of the last four years of notified cases *of all ages*: the deaths are those of these notified cases. The disease, though slowly progressive, kills but slowly, taking away by degrees the

power of voluntary movement, but the while leaving its victim fully concious of his condition, yet with a lowered emotional threshold, which makes his condition still more pitiable. During the year only nine additional cases have been added to the index, in two of which the diagnosis is really uncertain. Two are recent cases in which there is no evidence at present of any untoward developments. Three are old-standing cases with no marked sequelae and not in need of permanent care, while two are in the late stages of physical disability, but are at present satisfactorily looked after at home. Thus the problem of making special provision for post-encephalitic sufferers which was so acute three years ago, has largely solved itself. Even should the disease shew itself again in epidemic form, our experience of recent cases seems to shew that it is possible that the moral and behaviour changes may not resume the prominence which marked the earlier phases of the epidemic from 1919 to 1924.

Year.	Notified cases (all ages)	Deaths	Percentage of deaths in former notifications.
1926	89	36	40.4
1927	53	32	60.4
1928	41	22	53.7
1929	29	20	69.9

PROVISION OF MEALS FOR NECESSITIOUS CHILDREN.

No changes of importance have been introduced into the methods employed, nor in the type of menu which was described in the report for last year. There was a slight reduction in the number of children, chiefly due to the reduction in the numbers during the summer months.

	1928	1929
Total Meals Provided :	412,701	345,772
Daily average 1st January	1,058	1,088
,, ,, 1st July	1,068	841
,, ,, 31st December	1,050	1,051
Total numbers of children who received meals	3,703	3,388

MILK SUPPLY IN THE SCHOOLS.

During the year 3,126,000 bottles of milk were supplied to the children attending Elementary Schools, as compared with 3,296,776 bottles last year.

EPILEPTIC REGISTER.

The number of children who, while in attendance at ordinary elementary schools, are kept under continued observation for attacks of an epileptic character remains more or less constant. The term "epilepsy" covers a varied assortment of morbid conditions which are probably causally distinct but grouped together because they are manifested by a congeries of similar signs and symptoms. The experience of the years since the Register was established in 1911 is very encouraging, for though it is not possible to trace the after-histories of the individual children whose names have been placed thereon, it is clear that a very large proportion of them were able to complete their elementary education and have become normal members of the community.

No. of children on the Register	146
No. of children placed thereon during the year	34
No. of children taken off during the year	7

Since the Register was first begun there have been 544 children placed thereon, and kept under constant supervision.

RESEARCH.

(*a*) Dr. Kemp has been carrying out an investigation into the temperature of children in attendance at school in order to determine if there

is any relationship between body temperature and the nutritional state, the general physical fitness, and general health. To neutralise the influence of possible diurnal variations, the investigation has been confined to the two hour period, 9-30 to 11-30 a.m., during the months September to December.

THE RESULTS HAVE BEEN AS FOLLOW:

	Upper Departments.	%	Infants' Departments.	%
Normal	38	5.7	28	9.7
Above normal	65	9.8	33	11.5
Below normal	561	84.3	225	79.1
	664	—	286	—

THE INVESTIGATION IS STILL IN PROGRESS.

(*b*) An investigation into the nature of impetigo in relation to other conditions and its treatment: The results of this special enquiry are too technical to admit of recension and as they have been already forwarded to the Senior Medical Officer of the Board of Education at whose instance it was undertaken, it is unnecessary to give further details.

(*c*) Influence of Tonsilectomy.

Dr. Wilkins and Dr. Kemp have undertaken a detailed review of the problem of enlarged tonsils and adenoids, the causes which render operation advisable, the results of surgical interference, and the subsequent history of the cases. To be of any real value such an enquiry must inevitably be carried out over a number of years and it is, therefore, not possible at the present time to give any systematised results.

They write: "It is hardly necessary to emphasise that the systemic disturbances associated with diseased tonsils and adenoids are manifold; and there appears to be no diminution in the number of pathological throats discovered at the routine medical inspections. While we are of opinion that in reality abnormal tonsils are an effect rather than a cause, and that much depends on nutritional errors, we are convinced that the majority of cases cannot, at the present time, be properly treated without operation. We feel also that until measures are taken for the systematic education of parents in the rudiments of healthy living and in simple dietetics the case-incidence is not likely to diminish.

"Although the decision to resort to operation is only arrived at after a comprehensive review of the child's state of health, as well as its home environment, generally speaking removal of tonsils and adenoids is recommended in the presence of one or more of the following conditions: attacks of tonsilitis or quinsy, nasal obstruction, nasal catarrh, otorrhoea, deafness, and enlargement of the cervical glands. Combinations of these ailments, especially when repeated or chronic, are, of course, a stronger indication than isolated attacks in the absence of other evidence. Following the recognised authorities on rheumatism in children these ailments are regarded more seriously in the presence of a choreic or rheumatic tendency.

"In interpreting the results we are careful to discriminate between benefit directly attributable to the operation and benefit which might be explained as a general improvement in health, and lessened liability to catarrhal infections as part of natural growth and development. In the majority the improvement following operation has been striking and immediate.

"With regard to the cases which appear to be no better, or who have not been relieved of their main symptons, it has become obvious to us that in a considerable proportion the source of the trouble is elsewhere than in the tonsil and adenoid region, and that further treatment, generally surgical, is called for. As has been emphasised recently by Mr. Gilhespy (see page 15), it is futile to expect from the removal of tonsils and adenoids relief of ailments which are not due to, or are only in part due to enlarged tonsils and adenoids. Following up the results of the operation has brought to light a number of cases where the continued nasal obstruction or catarrh is clearly due to abnormalities in the nostrils themselves or to chronic infections in the air sinuses connected with the nose. In many of these cases further treatment is necessary. Again, the operation when performed for the relief of discharging ears, is often sufficient in itself to cure this trouble, or at any rate to render its cure practicable by simple ear treatment; but there are many cases in which a more deeply rooted infective disease in the ear or mastoid cells requires additional treatment for its eradication. It is clear that in these cases the tonsil and adenoid operation should not be allowed to fall into discredit; the operation is necessary as a preliminary to further treatment directed to the chief focus or a secondary focus of disease."

INFECTIOUS DISEASES.

The Health Department has supplied the following figures for the chief forms of notified infectious disease:—

	1923.	1924.	1925.	1926.	1927.	1928.	1929.
Scarlet Fever	2,619	2,219	1,852	1,709	1,510	1,521	2,405
Diphtheria	1,537	1,887	1,896	1,804	1,543	1,552	1,621
Cerebro-spinal Meningitis	4	11	7	10	12	12	18
Anterior Poliomyelitis	33	39	11	38	15	6	7
Encephalitis Lethargica	29	282	92	89	53	41	29
Ophthalmia Neonatorum	433	413	335	395	409	530	522
Polio-Encephalitis	3	6	1	4	2	1	3

These figures refer to cases of all ages, but as the greatest amount of infectious disease occurs before adolescence is completed, they afford a reliable index as to the general incidence in the school population.

PREVENTION OF DIPHTHERIA.

Reference has already been made in this report to the importance of taking measures for the prevention of Diphtheria. There has been throughout the past decade a widespread prevalence of the infection, with a heavy toll of life as its result. It is satisfactory that continued progress is being made towards the immunisation of the child population which it may be hoped will in time have an influence upon the mortality amongst the children. The scheme for the utilisation of the opportunities afforded by the children's attendance at School has continued to work satisfactorily through the interest and co-operation of the Head Teachers concerned. The procedure is as follows:—

A circular letter is sent to the parents by the Head Teacher in which the matter is explained in simple language and the parents who desire protection for their children are asked to return a signed slip. A Medical Officer from the Health Department then visits the School at the end of a morning session. All children over ten years of age, and all children who are known to have had Diphtheria are tested by the Schick test, but all under ten are treated without this preliminary test, it being the general experience that practically all children under this age are susceptible. Three injections of 1 c.c. of Toxoid-antitoxin are given at weekly intervals

into the Deltoid muscle. The process is not attended by discomfort and there is no interruption of School attendance. In 1928, 1,387 children, fourteen School Departments were thus treated, in 1929, as is shewn in the accompanying table 2,621 children were treated in 21 Departments. Similar treatment is being given at the Welfare Centres and at the Health Department Offices in the Council House, and 852 children were thus rendered immune. Even so the number of cases notified annually in the City remains high.

PROTECTION AGAINST DIPHTHERIA. SCHOOLS. 1929.

Date.	School.	No. on Register	Accept-ances. %	Schick. Neg.	T.A.M. given.
April	Alston Road Infants	495	42	—	207
May	,, ,, Boys	509	43	46	176
June	,, ,, Girls	518	47	35	212
March	Bordesley Green Infants	393	27.5	—	108
Jan. & Feb.	,, ,, Senior	700	40	40	251
Feb.	Dudley Road Infants	347	30	—	115
July	Handsworth New Road Girls	300	26	25	53
June	Jenkins Street Infants	240	21	—	50
Nov. & Dec.	Middlemore Homes	—	100	8	56
Nov. & Dec.	Moseley Church of England Infants	120	63	—	76
May	Norton Boys' Homes	93	100	69	24
Oct.	Paget Road Infants	690	35	—	238
Nov.	,, ,, Senior	670	19	20	105
Sept.	Rookery Road Infants	250	33	—	83
,,	,, ,, Junior	480	30	—	143
Oct.	,, ,, Senior	460	34	59	96
April	St. Michael's Infants	124	30	—	115
May	,, ,, Senior	273	53	42	105
Oct.	Wattville Road Infants	161	23	—	36
Nov.	,, ,, Junior	298	43	—	130
Dec.	,, ,, Senior	542	52	96	186
Feb.	Benson Road Senior .... (*continued from* 1928)	—	—	8	56
	TOTAL, 21 Departments	—	—	458	2,621

TUBERCULOSIS.

Dr. Dixon, Chief Tuberculosis Officer, has forwarded the following notes of the anti-tuberculosis campaign amongst children :—

"During the year 1929, the number of children dealt with at Yardley Road Sanatorium was 255. Of these 146 were males and 109 were females.

"Out of the 255 there were 154 who were admitted primarily for observation, 85 of which were discharged with no definite signs of active tuberculosis, and 69 remained for treatment.

"Of the 170 who received treatment, 76 were in Group I,* 35 in Group II, 12 in Group III, and 47 were surgical cases, i.e., Group IV.

"The surgical cases consisted of diseases of the bones and joints, abdominal tuberculosis, peripheral glands, etc., and the majority of these children were treated in the artificial light clinic with excellent results.

* The four degrees in the Turban Gerhardt classification of pulmonary tuberculosis infection are as follows :—

Stage I. Comprises those with disease of slight severity limited to small areas on either side, which in the case of affection of both apices does not extend below the scapular spine or clavicle, or in the case of an affection of the apex of one lung, does not extend below the second rib in front.

Stage II. Comprises those with disease of slight severity more extensive than Stage I., affecting at most the whole of one lung, or severe disease extending at most to the half of one lung.

Stage III. All cases of greater severity than Stage II., and all those with considerable cavities.

Stage IV. Includes those cases where no disease can be found or where the lesion is definitely proved to be obsolete.

TUBERCULOSIS (ALL FORMS) 1929.

Ages.	Respiratory System.		Nervous System.		Intestines and Peritoneum.		Other Forms.	
	Cases Notified	Deaths	Cases Notified	Deaths	Cases Notified	Deaths	Cases Notified	Deaths
0–	—	6	2	13	4	3	2	5
1–	4	5	9	12	4	6	5	3
2–	16	2	7	19	3	3	16	7
5–15	121	17	6	7	20	6	75	4
TOTAL	141	30	24	51	31	18	98	19

(System of tabulation altered January 1st, 1929).

DEATHS IN CHILDREN OF SCHOOL AGE.

As the end and aim of any public health service is the preservation of life and the prevention of disease a consideration of the causes of death is a necessary adjunct to a summary of the civic activities for safeguard-

ing the health of the child population. A certain amount of wastage of child life is inevitable, but a table of deaths of children of School age gives some indication of the degree of success or failure of our present attempts in preventive medicine :—

Causes of Death Children 5-15	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Measles	24	19	11	5	13	5	9	2	8	3	16
Scarlet Fever	24	40	16	11	18	7	7	4	3	1	3
Whooping Cough	3	8	5	7	0	2	4	8	2	4	7
Diphtheria	63	95	64	49	60	51	39	64	37	38	39
Influenza	42	25	2	6	6	8	10	2	9	4	14
Pulmonary Tuberculosis	31	26	25	22	24	17	23	16	17	10	17
Tuberculosis Meningitis	19	9	15	15	13	12	20	13	18	13	7
,, Peritonitis & Intestines	16	5	6	7	6	3	5	6	9	1	6
Other Tuberculous Diseases	17	17	7	7	12	4	9	5	11	8	4
Rheumatic Fever	9	17	8	14	13	17	22	24	21	17	18
Cerebro-Spinal Fever	2	3	0	3	0	0	0	0	1	2	2
Heart Diseases	41	30	28	31	24	21	25	27	14	22	22
Bronchitis	11	5	3	4	5	0	4	3	6	1	3
Pneumonia	56	49	46	36	31	25	31	35	34	23	25
Appendicitis	25	20	20	15	13	14	13	11	10	13	10
Accidents	44	43	29	24	32	25	40	43	28	46	58
All Other Causes	99	110	89	80	99	88	79	89	96	78	104
Total	526	521	374	336	369	299	340	352	324	284	355

The approximate number of the population in the age-group concerned has been calculated as—

5 to 15 years, 164,000

The approximate death rate for this period was 2.2, as against 1.7 in 1928.

CONCLUSION.

In bringing this report to an end, it is fitting to record the help which is always so readily forthcoming from all those who are brought in touch with the Medical Department. Without the help from teachers, school attendance officers, juvenile welfare and after-care workers, and others, the work must have been shorn of some of its usefulness. The chief function of a medical department is not mere inspection and the treatment of defects, but rather to attempt to adjust each child to meet the demands of his future social relationships, and to improve the conditions of child life as generation succeeds generation.

SPECIAL SCHOOLS SUB-COMMITTEE, 1928-29.

Councillor Miss C. Martineau, J.P. (*Chairman*).
Mr. Councillor R. H. Hume (*Ex-Officio*).
Mr. Alderman A. R. Jephcott, J.P.
Mr. Alderman T. Quinney, J.P.
Councillor Dr. W. B. Featherstone, J.P.
Mr. Councillor H. Johnson.
Councillor Miss F. E. Sant.
Mr. Councillor V. F. Yates.
Miss E. M. Barling, M.B.E.
Mr. A. Clendon, M.A.
Mr. E. F. Freeland.
Mrs. Barrow Cadbury, J.P.

CHIEF EDUCATION OFFICER:

P. D. Innes, M.A., D.Sc.

CLERK TO SUB-COMMITTEE:

H. B. Newsome.

SUPERINTENDENT OF SPECIAL SCHOOLS:

Elizabeth L. S. Ross, M.A., B.Ed.

SPECIAL SCHOOLS MEDICAL OFFICER:

James M. Smellie, M.D., M.R.C.P.

SPECIAL SCHOOLS ASSISTANT MEDICAL OFFICER:

Ernest Bulmer, M.D., M.R.C.P.

OPHTHALMIC SURGEON:

H. W. Archer Hall, D.O.

ORTHOPAEDIC SURGEON:

F. Wilson Stuart, M.D., Ch.M.

VISITING MEDICAL OFFICERS:

Baskerville School: Fredk. B. Winfield, O.B.E., M.R.C.S., M.R.C.P.

Cropwood School: Mitchell I. Dick, M.B., Ch.B.

SPECIAL SCHOOLS.

ANNUAL REPORT OF THE SPECIAL SCHOOLS MEDICAL OFFICER, JAMES M. SMELLIE, M.D., M.R.C.P., FOR THE YEAR ENDED 31st DECEMBER, 1929.

Dr. A. P. Thomson, who had held the office of Special Schools Medical Officer since 1921, resigned the position last year and I was appointed to succeed him as from 1st April, 1929. The benefit of Dr. Thomson's knowledge and experience of children suffering from rheumatic affections was, however, retained in connection with the Baskerville School, as he acted as Consultant Medical Officer there until the end of the year when the pressure of his other duties compelled him to relinquish that work also.

Dr. Ernest Bulmer, M.D., M.R.C.P., was appointed as Assistant Special Schools Medical Officer and took up duty on April 10th, 1929.

MEDICAL INSPECTION AND TREATMENT.

The general arrangements for the routine medical inspection of children attending the Special Schools have been continued unchanged throughout the year, except that rather more inspections have been held. The total number of children examined was 978.

Children requiring treatment were referred to the School Clinics while special examination and treatment for a few exceptional cases was secured at Hospitals.

SCHOOLS FOR THE MENTALLY-DEFECTIVE.

ADMISSION EXAMINATIONS.

As usual, a return is given below of the results of the examinations of children held with a view to admission to the Special Schools for the Mentally-Defective :—

Number of children examined	449
Number certified as mentally defective	311*
Number to remain at Ordinary Schools	75
Number temporarily excluded from school attendance	29
Number certified as ineducable	33
No action taken (blind and mentally defective)	1

* Of these, 1 was admitted to a School for the Partially Blind, and 17 were not admitted to Special Schools, owing to their age.

Miss Ross, Superintendent of Special Schools, reports as follows :–

"A special survey has been made of all cases reported during the year 1929 from the Elementary Schools for consideration with reference to possible admission to schools for the mentally-defective.

"The numbers reported at the various ages were as follows :—

Age	No. of cases reported.
6 years to 6 years 11 months	7
7 ,, 7 ,, 11 ,,	90
8 ,, 8 ,, 11 ,,	109
9 ,, 9 ,, 11 ,,	61
10 ,, 10 ,, 11 ,,	30
11 ,, 11 ,, 11 ,,	18
12 ,, 12 ,, 11 ,,	14
13 ,, 13 ,, 11 ,,	0
14 ,, 14 ,, 11 ,,	2
TOTAL	331

"It will be seen that by far the greatest numbers are reported at the ages of 7 and 8, at the end of the Infant School period. It is evident that while the majority of these children enter the Infant School at the usual age of 5 years, they are mentally only about 3 years of age, and the greater part of the Infant School curriculum is unsuited to their needs. They are ready rather for the kind of training given in smaller groups in a good Nursery School. Only to a very limited extent is it possible in the Infant School to give to such retarded children the sensory and muscular training which is appropriate to their mental level. Thus they reach the age of 7 or even 8 having made practically no progress in the 3 R's., since their minds have not reached the stage of being able to deal with work of this nature. While it is gratifying to find that the majority of mentally-defective children in the Elementary Schools are discovered at the comparatively early age of 7 or 8, it is unfortunate that appropriate education cannot be provided for many of them until they are aged 9 or 10 or even older, owing to the lack of Special School accommodation in certain areas of the city. This, however, should in no wise deter Head Teachers from reporting such children at the earliest possible moment, so that the extent of provision really necessary may be known and efforts made to secure it. Urgent cases may at any time be dealt with out of turn if special intimation is made regarding such children.

"Some of the children reported at the higher ages could and should have been discovered earlier, but a certain number are children who have only recently come to live in Birmingham.

"The following table shows the numbers of children reported during 1929 arranged according to the Special School which they would attend if certified. It also shows the total number of those reported regarding admission to the schools but not yet examined, as at 31st December, 1929 :—

School.	No. reported in 1929 from Elementary Schools for examination *re* admission to M.D. Schools.	TOTAL Number awaiting examination *re* admission to M.D. Schools as at 31/12/29.
Bristol Street M.D.	59	17
Burlington St. ,,	52	77
Fashoda Rd. ,,	12	3
Gem St. ,,	41	107
George St. W. ,,	55	120
Little Gr'n Lane ,,	55	84
Ralph Rd. ,,	33	26
Sherbourne Rd. ,,	24	5
TOTALS	331	439

"In the Bristol Street, Fashoda Road and Sherbourne Road districts, the children can be admitted almost as soon as they are reported, but in the case of the Gem Street, George Street West and Little Green Lane Schools, the majority of the children have to wait two to three years before being examined.

"Practically equal numbers of boys and girls were reported in 1929, viz. :—

168 Boys
163 Girls

and the same holds with regard to those actually examined and certified out of the 1929 group, viz. :—

47 Boys
43 Girls

"Dr. Lewis in his recent investigation found that the number of boys certifiable as feebleminded was 14 per cent. more than the number of girls, as compared with 9 per cent. shown in the above figures for Birmingham during 1929.

"Of the 331 reported from the Elementary Schools during the year, 192 have been tested with the Binet-Simon (Burt's London Revision) Intelligence Tests, and of these 90 have actually been certified and admitted to the Special Schools. The "Mental Ratios" of the 192 tested range as follows :—

Mental Ratio.	No. of Cases.
Below 50	12
50—59	26
60—69	95
70—79	48
80—89	8
Over 90	3

"This is not quite a true estimate of the actual distribution of Mental Ratios of all those reported during the year, since there has been some selection of children to be tested. In the areas where we have a long waiting list, precedence was given to cases which seemed more urgent than others, either because of abnormal behaviour or very low scholastic attainments, or because they were old at the date of being reported.

"Few children with Mental Ratios of over 70 are actually admitted to the Special (M.D.) Schools unless there is definite evidence of instability of character as an additional factor. A number of children in the higher groups having Mental Ratios of over 70, are young children who have had long absences while in the Infant Schools, and therefore have not been able to reach an adequate standard of work by the time they should be promoted. Head Teachers find it very difficult to give them the necessary "coaching" in the large classes of the Junior Departments, and so report them for special education on more individual lines in the Schools for the Mentally-Defective. Where staffing and accommodation in the Elementary Schools permit, it is indeed helpful if a small class can be organised in the Junior Department to cater for these "backward" children and also for the innately "dull" children forming the group intermediate between the Special School cases and the normal children.

"There are practically no children in the Special M.D. Schools with a mental age of over 10. This means that in the "C" classes of the Senior Divisions of the Elementary Schools, the 13-14 year olds will have a mental level of from 10-12."

PERIODICAL EXAMINATIONS.

Periodical Examinations have been conducted each term at all the Schools for the Mentally-Defective, and the following table shows the cases in which action has resulted :—

Children allowed to leave between 14 and 16 years of age for approved employment	100*
Children notified to the Mental Deficiency Act Committee on leaving the Special Schools at 16 years	33
Children discharged and notified to the Mental Deficiency Act Committee as unable to benefit further from Special School Instruction	84

* 6 of these children were to be notified to the M.D. Act Committee on approaching the age of 16 years.

SCHOOLS FOR THE PHYSICALLY-DEFECTIVE.

DAY SCHOOLS—ADMISSION EXAMINATIONS.

A summary is given below of the examinations of children held with a view to their admission to the Day Schools for the Physically Defective :—

Number of children examined	57
Number certified for admission to the Day Schools for the Physically Defective	42
Number able to attend Ordinary Schools	6
Number certified as temporarily unfit for School	7
Number certified as permanently unfit for School	1
No action taken owing to age	1

A large majority of the children in attendance at the two Day P.D. Schools are or have been under treatment at the Royal Cripples' Hospital. Therefore, the desirability of obtaining the closest possible co-operation with this Hospital is obvious. Since January, 1929, Mr. Wilson Stuart, a member of the Surgical Staff of this Hospital, has conducted regular medical examinations of all the orthopaedic children in these schools. Thus continuity of treatment, so important in these cases, is being maintained, instructions are given to the Head Teachers and full co-operation obtained. Cases requiring further treatment at the Hospital or one of its ancillary branches can be referred direct, as also applies to newly admitted cases. Further, a duplicate copy of the full clinical history with details of operative and other treatment that has been carried out has now been obtained and is filed with the medical schedules of many of these children.

As Mr. Wilson Stuart has already reported a number of these children have to attend the Hospital for treatment several times a week for long periods. This curtails very considerably the time that can be spent in their education; in fact the curtailment is out of all proportion in many cases to the actual time required for such treatment, and when in addition the time and money expended by the parents in taking the children to and from the Hospital is taken into consideration, it is obvious that this arrangement is far from satisfactory. In many cases all the treatment that is required could be adequately and satisfactorily carried out in the school

premises provided accommodation, apparatus and a suitably trained masseuse was available. In this connection there are some inadequacies at these schools to which I wish to direct attention. Both Little Green Lane and George Street West P.D. Schools were built over 20 years ago, since when there has been a considerable growth in the population of the city and notable advances made in the knowledge of both the etiology and treatment of many of the crippling disorders of childhood. Consequently both the schools are now situated in undesirably crowded areas, the schools themselves are overcrowded, the type of building is far from suitable for modern requirements, and there is no accommodation for any remedial treatment. It is hoped that arrangements can be made in the near future to meet some of these difficulties, particularly with regard to the provision of accommodation for treatment, but the provision of new schools in a better environment must be considered to be a matter of some urgency.

PERIODICAL EXAMINATIONS.

The following table indicates the results arising from the Periodical Examinations conducted at each of the Day Schools for the Physically-Defective :—

Children allowed to leave for work between 14 and 16 years of age	19
Children transferred to Ordinary Schools	14
Children transferred to Baskerville Residential P.D. School	3
Child transferred to a Residential School for the Mentally Defective	1
Child excluded as an imbecile	1

BASKERVILLE RESIDENTIAL SCHOOL. (Accommodation 90).

As explained in last year's Report the Children in residence at this School are now almost entirely cases suffering from rheumatic affections.

During the past year 89 children were admitted to the School and 82 left.

The causes of leaving were as shown below :—

Children allowed to leave between the ages of 14 and 16 years	8
Child who left on attaining 16 years of age	1
Children transferred to Ordinary Schools	39
Children transferred to Day Schools for the Physically Defective	15
Child transferred to a Day School for the Mentally Defective	1
Child transferred to Uffculme Day O.A. School	1
Children discharged owing to acute illness	5
Children discharged owing to infectious disease	4
Child who died (influenza)	1
Children withdrawn at Parents' request	4
Child discharged as unsuitable	1
Children discharged owing to parents' removal from Birmingham	2

The average length of stay at the School of the children referred to above was 13 months.

OPEN-AIR SCHOOLS.

UFFCULME DAY SCHOOL. (Accommodation 120).

The number of children admitted to this School in the year under review was 84, and the number who left was 78.

A summary of the reasons for leaving is given in the following table :—

Children who improved sufficiently to be transferred to Ordinary Schools	50
Children who left at 14 years of age	14
Children transferred to Cropwood Residential O.A. School	8
Children transferred to Baskerville Residential P.D. School	2
Child transferred to Summerhill Homes	1
Children who left Birmingham	2
Child who died	1

The average length of stay at the School of the children enumerated above was 16 months.

SUMMER BOARDERS—1929.

From May 13th to September 27th, sixteen girls slept at Uffculme from Monday to Friday each week. Under the care of the usual Attendant they were very happy and contented, and improved very much in health.

Eleven girls were selected on account of home conditions, and the rest because of their long journey to school.

The gain in weight varied in individuals from 3 lbs. to 14lbs., the average being 5½lbs. in four months. During the three subsequent winter months, two girls lost weight and six remained stationary. All of these were from poor homes where there is lack of parental control and, consequently, not enough rest at night. The average gain in weight of the remaining eight was 2¼lbs. in 3 months.

CROPWOOD RESIDENTIAL SCHOOL (Accommodation 80).

The number of boys admitted to this School during the year 1929 was 82, and the number who left was 81.

The usual particulars are shown as to the causes of leaving—

Children transferred to Ordinary Schools	68
Children who left at 14 years of age	11
Children withdrawn by their parents	2

The average length of stay at the Cropwood School of the children referred to above was 10½ months.

ADDITIONAL OPEN-AIR SCHOOL ACCOMMODATION.

The delay in the provision of the proposed new Day Open-Air School at Marsh Hill, Erdington, is much to be regretted. Tenders for the work have, however, now been accepted, and it is hoped that the School will be ready for occupation by April, 1931. The School will accommodate 200 children and will meet a long-felt want in the northern half of the City.

Plans have been prepared for the erection of a Residental Open-Air School to accommodate 120 boys on a very suitable site on the Cropwood Estate at Blackwell. This will enable the existing Cropwood Residential O.A. School to be used permanently for girls in future instead of alternately by boys and girls at intervals of two years. Efforts are being made to have the new school built and ready for occupation by August, 1931. It is proposed that the building shall be a wooden structure excepting a small two-storey portion which will be brick.

SCHOOLS FOR THE PARTIALLY-BLIND.

The following report has been furnished by Mr. H. W. Archer Hall, D.O., with regard to the arrangements for the education of partially-blind children :—

"I have pleasure in submitting my report for the work done in 1929 in connection with the Partially-Sighted Schools.

"During the year, the Schools at Carpenter Road, Edgbaston, and Whitehead Road, Aston, have been inspected three times, and the new School at Moseley Road has been visited once.

"Ninety-six children have been selected for refraction or other examination at the Great Charles Street School Clinic according to their opththalmic condition.

"Almost all of these were treated in special groups on certain Tuesday mornings, but a few urgent cases, as where the glasses of highly shortsighted children had been broken, were treated at my ordinary Clinics.

" From children attending the ordinary schools, I found it necessary to advise that 44 be educated at the Partially-Sighted Schools.

"These 44 cases showed the following conditions :—

High myopia	24
Visual nystagmus	4
Corneal Nebulæ	4
Optic Atrophy	3
Choroidal Degeneration	3
Congenital cataract	3
Coloboma of the iris and choroid	1
Albinism	1
Interstitial Keratitis	1

"When children left these Special Schools, advice was given regarding choice of employment."

Reference was made in last year's Annual Report to the proposal to establish a small school for the partially-blind in connection with the re-building of the Moseley Road School for the Deaf. The new premises became ready for occupation in September, 1929, and as a result it was possible to transfer from the Edgbaston Institution for the Blind those day scholars who were able to be taught by sighted methods. It will I think be agreed that the association of these children with other sighted children rather than with blind children is distinctly desirable.

Particulars are given below concerning the children who were admitted to or left from the Schools for the Partially-Blind during the year 1929:—

	Edgbaston.	Whitehead Road.	Moseley Road.
Number admitted during the year	17	24	50
Number transferred to Ordinary Schools	2	5	1
Number who left for work at 14 or over	4	4	—
Number transferred to Edgbaston P.B.	—	4	—
Number transferred to Moseley Rd. P.B.	33	14	—
Number transferred to Whitehead Rd. P.B.	3	—	—
Number transferred for technical training at Edgbaston Institution at 16	2	—	—
Number transferred to a Residential School for the Deaf	1	—	—
Number transferred to a Day School for the Mentally Defective	—	1	—
Number transferred to a Day Open-Air School	—	1	—

SCHOOLS FOR THE DEAF.

Mention has already been made of the re-building of the Moseley Road School for the Deaf. It has been entirely re-constructed on open-air lines as far as possible and the result is an admirable building in which the work can be carried on under very favourable conditions.

A school journey to Colwyn Bay was undertaken by this school from June 1st—15th; all except the junior classes participating. The Camp was held in a delightful spot in the hills at the back of the town, thus combining the advantages of mountain and sea air. The benefits to the children educationally and physically do not need to be emphasized. Great credit is due to the Head Teacher and her staff for their initiative and enterprise. The whole of the arrangements were carried out without the necessity of any financial assistance from the Education Committee.

SUMMER SCHOOL FOR DEFECTIVE CHILDREN.

The Summer School for Special School children was again held at Glan-y-don, Towyn, during the past season. Eight groups of children, numbering in all 192, went into residence, each group remaining for two weeks. The first arrived on May 1st, and the last group left on October 2nd. All had a good share of fine weather, except the first group; but even this group looked extremely well at the end of the fortnight. Apart from one case of mumps and one of tonsilitis, the health of the children improved markedly during their stay. No fewer than 91 gained more than 4lbs. in weight during the fortnight, as compared with 41 last year and 15 the previous year. The dietary was excellent, and much importance was attached to the arrangements for a proper rest period during the afternoon.

The educational work was on much the same lines as those inaugurated last year, and interesting weather and nature records were kept. These and the diaries serve to show that a better locality than Towyn for an "educational journey" could not be wished for, affording as it does such varied types of scenery—seashore, field and farm, woods, mountains, lake and rivers.

The Head Teachers are to be congratulated on the specially neat and tidy appearance of the children, some of them wearing a very attractive school uniform. Considering that many of the children have to be fully provided with clothes, the work of preparation for weeks before is no light task, though all feel amply rewarded by the mental and physical

improvement seen in the children on their return. To all the teachers and others who assisted, grateful thanks are due, and especially to Mrs Kember, the House Mother, on whom so much responsibility falls.

The following table shows certain statistical information with regard to the children who participated in the Summer School :—

Date.	School.		Range of age of Children.	No. of days without Rain.	No. of Children who lost weight	Average gain in weight.		No. who gained over 4lbs. in weight.
						lbs.	ozs.	
1. May 1—15	Burlington St. M.D.	..... Girls	11—15	2	0	3	8	5
2. May 15—29	Gem St. Deaf	Girls	8—15	10	0	3	8	6
3. May 29—June 12	Gem St. M.D.	Boys	12—15	8	0	4	9	15
4. June 12—26	Little Green Lane P.D.	Boys	—	7	0	3	15	13
5. June 26—July 10	Sherbourne Rd. M.D.	..... Girls	10—15	10	1 (1lb.6oz.)	3	13	9
6. July 10—24	George St. West P.D.	..... Boys	—	8	0	4	9	15
7. Sept. 4—18	Little Green Lane M.D.	..... Girls	11—15	11	0	3	14	11
8. Sept. 18—Oct. 2	Ralph Rd. M.D.	Girls	11—15	10	0	4	10	17
						TOTAL		91

Total number of Children, 192—91 gained over 4 lbs. ; 13 gained over 7 lbs.

CITY OF BIRMINGHAM.

Education Committee.

Appendix to Annual Report

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School Medical Officer

for the year ended 31*st December*, 1929.

OFFICIAL TABLES.

Elementary Schools.

TABLE I.—RETURN OF MEDICAL INSPECTIONS.

A. ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections :	
Entrants	15,745
Intermediates	15,124
Leavers	12,422
Total	43,291
No. of other Routine Inspections	—

B. OTHER INSPECTIONS.

Number of Special Inspections	36,502
Number of Re-inspections	40,425
Total	76,927

TABLE II.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER, 1929.

Defect or Disease.	Routine Inspections. No. of Defects.		Special Inspections. No. of Defects.	
	Requiring treatment.	Requiring to be kept under observation, but *not* requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but *not* requiring treatment.
(1)	(2)	(3)	(4)	(5)
Malnutrition	405	394	90	132
Uncleanliness	174	767	513	154
(See Table IV., Group V.).				
Skin — Ringworm : Scalp	9	9	311	7
Skin — Ringworm : Body	15	—	261	—
Skin — Scabies	23	2	359	1
Skin — Impetigo	270	5	3,770	4
Skin — Other Diseases (non-Tuberculous)	352	42	3,382	5
Eye — Blepharitis	202	4	493	4
Eye — Conjunctivitis	90	27	756	4
Eye — Keratitis	6	7	61	1
Eye — Corneal Opacities	10	16	45	5
Eye — Defective Vision (excluding Squint)	2,014	686	3,262	66
Eye — Squint	649	220	469	8
Eye — Other Conditions	58	22	425	4
Ear — Defective Hearing	330	21	419	2
Ear — Otitis Media	336	4	973	4
Ear — Other Ear Diseases	136	7	623	2
Nose and Throat — Enlarged Tonsils only	415	905	521	67
Nose and Throat — Adenoids only	252	69	122	11
Nose and Throat — Enlarged Tonsils and Adenoids	2,493	347	1,558	39
Nose and Throat — Other Conditions	664	50	1,898	16
Enlarged Cervical Glands (Non-Tuberculous)	126	183	600	3
Defective Speech	95	47	42	7
Teeth—Dental Diseases	5,739	4	219	1
(See Table IV., Group IV.)				
Heart and Circulation. — Heart Disease : Organic	157	50	85	5
Heart and Circulation. — Heart Disease : Functional	39	25	40	1
Heart and Circulation. — Anaemia	492	41	357	10
Lungs — Bronchitis	619	66	835	4
Lungs — Other Non-Tuberculous Diseases	76	13	210	2
Tuberculosis. — Pulmonary : Definite	2	1	21	3
Tuberculosis. — Pulmonary : Suspected	31	16	39	12
Tuberculosis. — Non-pulmonary : Glands	13	9	32	3
Tuberculosis. — Non-pulmonary : Spine	1	2	1	—
Tuberculosis. — Non-pulmonary : Hip	1	3	1	—
Tuberculosis. — Non-pulmonary : Other Bones and Joints	2	5	2	1
Tuberculosis. — Non-pulmonary : Skin	2	2	1	—
Tuberculosis. — Non-pulmonary : Other Forms	1	2	2	5
Nervous System. — Epilepsy	25	18	64	13
Nervous System. — Chorea	35	28	186	5
Nervous System. — Other Conditions	146	240	69	19
Deformities — Rickets	268	271	44	7
Deformities — Spinal Curvature	140	60	15	4
Deformities — Other Forms	180	102	61	18
Other Defects and Diseases	1,166	86	11,186	99

B. NUMBER OF *individual Children* FOUND AT *Routine* MEDICAL INSPECTION TO REQUIRE TREATMENT (EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).

Group.	Number of Children.		Percentage of Children found to require treatment.
	Inspected.	Found to require treatment.	
(1)	(2)	(3)	(4)
CODE GROUPS:			
Entrants	15,745	4,567	29.65
Intermediates	15,124	4,073	26.99
Leavers	12,422	3,007	24.13
Total (code groups)	43,291	11,647	26.90
Other routine inspections	—	—	—

TABLE III.—RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls.	Total.
Blind (including partially blind).	(*i*) Suitable for training in a School or Class for the totally blind.	Attending Certified Schools or Classes for the Blind	18	18	36
		Attending Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution.....	—	—	—
	(*ii*) Suitable for training in a School or Class for the partially blind	Attending Certified Schools or Classes for the Blind	67	69	136
		Attending Public Elementary Schools	8	7	15
		At other Institutions	—	—	—
		At no School or Institution.....	5	2	7
Deaf (including deaf and dumb and partially deaf).	(*i*) Suitable for training in a School or Class for the totally deaf or deaf and dumb.	Attending Certified Schools or Classes for the Deaf	67	50	117
		Attending Public Elementary Schools	1	1	2
		At other Institutions	—	—	—
		At no School or Institution.....	—	—	—
	(*ii*) Suitable for training in a School or Class for the partially deaf.	Attending Certified Schools or Classes for the Deaf	9	8	17
		Attending Public Elementary Schools	—	—	—
		At other Institutions	—	—	—
		At no School or Institution.....	—	—	—
Mentally Defective.	Feebleminded (cases not notifiable to the Local Control Authority).	Attending Certified Schools for Mentally Defective Children	687	539	1226
		Attending Public Elementary Schools	26	9	35*
		At other Institutions	—	—	—
		At no School or Institution.....	1	—	1*
Epileptics.	Suffering from severe epilepsy.	Attending Certified Special Schools for Epileptics	10	10	20
		In Institutions other than Certified Special Schools	—	—	—
		Attending Public Elementary Schools	1	1	2
		At no School or Institution	2	2	4
	Suffering from epilepsy which is not severe.	Attending Public Elementary Schools	74	72	146
		At no School or Institution.....	—	—	—

* Certified as mentally-defective and awaiting admission to Special Schools. There are in addition 234 boys and 205 girls who have been reported as probably mentally-defective and who await examination.

TABLE III. *Contd.*—RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA.

			Boys.	Girls	Total.
	Infectious pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	4	3	7
		At other Institutions	—	—	—
		At no School or Institution	—	—	—
	Non-infectious but active pulmonary and glandular tuberculosis.	At Sanatoria or Sanatorium Schools approved by the Ministry of Health or the Board	26	15	41
		At Certified Residential Open Air Schools	9	—	9
		At Certified Day Open-Air Schools	10	6	16
		At Public Elementary Schools	3	1	4†
		At other Institutions	—	—	—
		At no School or Institution.....	—	—	—
Physically. Defective	Delicate children (*e.g.*, pre — or latent tuberculosis, malnutrition, debility, anaemia, etc.	At Sanatorium Schools approved by Ministry of Health	12	9	21
		At Certified Residential Open-Air Schools	70	—	70
		At Certified Day Open-Air Schools	63	52	115
		At Public Elementary Schools	16	7	23†
		At other Institutions.....	—	—	—
		At no School or Institution.....	—	—	—
	Active non-pulmonary tuberculosis	At Sanatoria or Hospital Schools approved by the Ministry of Health or the Board	43	37	80
		At Public Elementary Schools	—	—	—
		At other Institutions	25	21	46
		At no School or Institution.....	4	8	12
	Crippled Children (other than those with active tuberculosis disease), *e.g.* children suffering from paralysis, etc., and including those with severe heart disease.	At Certified Hospital Schools	8	6	14
		At Certified Residential Cripple Schools	42	48	90
		At Certified Day Cripple Schools	104	112	216
		At Public Elementary Schools	12	7	19
		At other Institutions	1	4	5
		At no School or Institution.....	36	22	58

† Certified for, and awaiting admission to, Open Air Schools. There are in addition 74 boys and 87 girls who have been recommended for admission thereto, and who await examination.

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31ST DECEMBER, 1929.

TREATMENT TABLE.

Group I.—Minor Ailments (excluding Uncleanliness, for which see Group V.).

Disease or Defect	Number of Defects treated, or under treatment during the year.		
	Under the Authority's Scheme.	Otherwise.	Total.
(1)	(2)	(3)	(4)
Skin—			
Ringworm-Scalp	258	6	264
Ringworm-Body	208	—	208
Scabies	143	—	143
Impetigo	3,427	3	3,430
Other skin disease	2,192	42	2,234
Minor Eye Defects (External and other, but excluding cases falling in Group II.).	1,455	11	1,466
Minor Ear Defects	1,454	15	1,469
Miscellaneous (*e.g.*, minor injuries, bruises, sores, chilblains, etc.).	7,189	47	7,236
Total	16,326	124	16,450

TABLE IV. (*Contd*)

Group II.—Defective Vision and Squint (excluding Minor Eye Defects treated as Minor Ailments—Group I.).

Defect or Disease.	Number of defects dealt with			
	Under the Authority's Scheme.	Submitted to refraction by private practitioner or at hospital, apart from the Authority's Scheme.	Otherwise.	Total.
(1)	(2)	(3)	(4)	(5)
Errors of Refraction (including Squint but excluding operations for Squint).	3,676	34	—	3,710
Other Defect or Disease of the eyes (excluding those recorded in Group I.).	7	—	—	7
Total	3,683	34	—	3,717

Total number of children for whom spectacles were prescribed

(*a*) Under the Authority's Scheme 3,137

(*b*) Otherwise 32

Total number of children who obtained or received spectacles

(*a*) Under the Authority's Scheme 3,135

(*b*) Otherwise 32

Group III.—Treatment of Defects of Nose and Throat.

Number of Defects.

Received Operative Treatment.			Received other forms of Treatment.	Total number treated.
Under the Authority's Scheme, in Clinic or Hospital.	By Private Practitioner or Hospital, apart from the Authority's Scheme.	Total.		
(1)	(2)	(3)	(4)	(5)
1,460	192	1,652	532	2,184

TABLE IV. (*Contd.*)

Group IV.—Dental Defects.

(1) Number of Children who were :—

(*a*) Inspected by the Dentist :

Aged :

Routine Age Groups	5	18,746	Total	187,398*
	6	21,806		
	7	24,084		
	8	26,507		
	9	26,182		
	10	18,886		
	11	17,420		
	12	16,194		
	13	16,956		
	14	617		

Specials	5,419*
Grand Total	192,817*

(*b*) Found to require treatment	131,985*
(*c*) Actually treated	36,922
(*d*) Re-treated during the year as the result of periodical examination	17,862

(2) Half-days devoted to

Inspection	1,029	Total 4,384
Treatment	3,355	

(3) Attendances made by children for treatment 43,046

(4) Fillings

Permanent teeth	20,270	Total 27,260
Temporary teeth	6,990	

(5) Extractions

Permanent teeth	10,091	Total 72,821
Temporary teeth	62,730	

(6) Administrations of general anaesthetics for extractions 11,198

(7) Other operations

Permanent teeth	2,459	Total 11,933
Temporary teeth	9,474	

Group V.—Uncleanliness and verminous conditions.

(i.) Average number of visits per school made during the year by the School Nurses.....6.85.

(ii.) Total number of examinations of children in the Schools by School Nurses.....285,017

(iii.) Number of individual children found unclean.....18,246.

(iv.) Number of children cleansed under arrangements made by the Local Education Authority.....245.

(v) Number of cases in which legal proceedings were taken :
(*a*) Under the Education Act, 1921.....Nil.
(*b*) Under the School Attendance Bye-laws .....64.

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*These figures represent *examinations*—not individual children. Inasmuch as many of the schools are visited by the Dental Surgeons twice in the course of a year (and some of them three times) when all of the children present are examined, it is not possible to give exact figures shewing the number of *children* inspected or found to require treatment. The estimated figures, however, are :—

Inspected	127,249
Found to require treatment	89,710

SECONDARY SCHOOLS

AND

OTHER INSTITUTIONS FOR HIGHER EDUCATION.

Table I.—Return of Medical Inspections.

Number of Children Inspected 1st January, 1929, to 31st December, 1929

Number of Routine Medical Inspections	6,791
Number of Special Medical Inspections	69
Number of Re-inspections	191
Total	7,051
Number of Individual Children found to require Treatment.....	1,439

TABLE II.

A. RETURN OF DEFECTS FOUND BY MEDICAL INSPECTION IN THE YEAR ENDED 31ST DECEMBER, 1929.

Defect or Disease.		Routine Inspections. No. of Defects.		Special Inspections. No. of Defects.	
		Requiring treatment.	Requiring to be kept under observation, but *not* requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but *not* requiring treatment.
(1)		(2)	(3)	(4)	(5)
	Malnutrition	21	27	—	—
	Uncleanliness	1	—	—	—
	(See Table IV., Group V.).				
Skin	Ringworm :				
	Scalp	—	—	—	—
	Body	1	—	—	—
	Scabies	—	—	—	—
	Impetigo	4	—	3	—
	Other Diseases (non-Tuberculous)	50	12	4	1
Eye	Blepharitis	7	1	—	—
	Conjunctivitis	12	3	—	—
	Keratitis	1	—	—	—
	Corneal Opacities	2	1	—	—
	Defective Vision (excluding Squint)	501	228	6	5
	Squint	17	15	—	—
	Other Conditions	6	3	1	—
Ear	Defective Hearing	20	7	—	1
	Otitis Media	19	—	1	—
	Other Ear Diseases	9	1	2	—
Nose and Throat	Enlarged Tonsils only	62	100	3	1
	Adenoids only	5	5	—	1
	Enlarged Tonsils and Adenoids	95	11	1	—
	Other Conditions	62	2	—	—
Enlarged Cervical Glands (Non-Tuberculous)		11	1	—	—
Defective Speech		6	6	—	1
Teeth—Dental Diseases		393	2	4	—
	(See Table IV., Group IV.)				
Heart and Circulation	Heart Disease :				
	Organic	25	21	—	—
	Functional	8	24	2	1
	Anaemia	84	18	—	—
Lungs	Bronchitis	13	1	—	—
	Other Non-Tuberculous Diseases	10	1	—	1
Tuberculosis	Pulmonary :				
	Definite	—	—	—	—
	Suspected	2	1	—	—
	Non-pulmonary :				
	Glands	2	1	—	—
	Spine	—	—	—	—
	Hip	—	—	—	—
	Other Bones and Joints	—	—	—	—
	Skin	—	—	—	—
	Other Forms	—	—	—	—
Nervous System	Epilepsy	1	1	—	1
	Chorea	1	3	—	—
	Other Conditions	22	45	1	1
Deformities	Rickets	6	5	—	—
	Spinal Curvature	101	40	—	—
	Other Forms	53	29	3	—
Other Defects and Diseases		163	26	19	3