

THE HISTORY AND PRACTICE OF SCHOOL INSPECTION.*

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MEDICAL INSPECTION is the natural outcome of the public provision of education, compulsory upon the whole population between certain ages. The interference with natural conditions and the alteration in environment which that brought about at the very period when the individual is most susceptible to external influences, should have required from the beginning the aid and guidance of the physiologist and the physician. This aid was not sought; education was arranged upon clerical lines, physiology ignored; child study considered unnecessary.

This unwisdom in the beginning necessarily led to evil results, and suspicions arose in the minds of the educators themselves; the poverty of results, the growing certainty of the existence of school-made diseases, produced an alteration in outlook. Child study began to be a reality; attention for the first time was paid to eugenics, and the aid of the physician began more and more to be sought.

England was not the first country to begin to take up this attitude; she is the latest to do so. Neither, however, was it one of the other great military or naval Powers; the work began in the smaller countries. To Sweden we are indebted more than to any other land. There the importance of the physical development of the human body was first seen, and there, in the early years of the last century, physical exercises became universal, and in 1863, children began to be examined for fitness to perform physical exercises. The advantage of this examination was quickly perceived, and from 1878 the health of each child has been examined at the beginning of each school term. The term "school doctor," moreover, was first used in Sweden.

Brussels commenced, in 1874, the medical examination of school children, and was followed by the other great Belgian cities.

In France, although regulations had been framed for the conduct of school physicians in 1833, medical inspection does not appear to have been carried out until it was begun in Paris in 1884, and spread over France later by general decree.

In Germany—in Wurtemberg—a certain amount of medical inspection was commenced in 1875. Leipzig was the first noteworthy city to begin in 1889, quickly followed by Saxon towns such as Dresden, and in 1890 it was carried on in some fashion in three great German towns—namely, Leipzig, Nuremberg, and Dresden; then in this year (1890) something occurred which stirred matters up considerably in Germany, and lit a fire which soon spread over the civilised world. This was again due to Scandinavian influence. Professor Axel Key, of Stockholm, visited Berlin, and gave an account of his work and the revelations of unfitness brought to light by himself and by Axel Hertel, in Denmark.

The revelations caused much speculation as to actual conditions in Germany, and Wiesbaden commenced medical inspection on a scale never hitherto attempted. The methods and results in Wiesbaden, which were published in 1897, were so striking that all the German towns began quickly to take up the work, so that now there are school doctors in that country in 260 townships or more. The Wiesbaden experience has had an immense influence in the development of medical inspection, and its system is seen reflected, to some extent, in the schedule which the Board of Education has issued, and which is to form the pattern for work all over England and Wales. To cut a long story short, it needs only to point out that, before our country had really thought about it, medical inspection was already practised, in addition to the countries named, very thoroughly in Switzerland, especially in Zurich, Lucerne, Neuchâtel, and the canton of Zug; in Norway since 1891 (where the school doctor's functions are defined on a larger scale than perhaps anywhere else, as he is, in addition to medical inspector, the educational inspector of physical exercises, of manual employments and school work generally); in Roumania from 1899; in Chili; in the Argentine Republic from 1894, after Dr. Coni had gratuitously, for some time, carried on medical inspection, and demonstrated its vital importance to the State—one of the many examples of how devotion to the ideal has actuated members of the medical profession, who have given of their best without asking, expecting, or receiving any return; in the greater cities of the United States, beginning with Boston, in 1894, and being followed by Chicago and New York, daily inspection is the practice; in Japan, where, by Imperial

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decree, from 1894 all districts with over 5,000 inhabitants have been compelled to appoint school doctors, so that very quickly nearly 9,000 school doctors were at work; and, in fact, in every civilized country in the world to a greater extent than in our own.

In our own country in 1893, Dr. Kerr was appointed by the Bradford School Board, and was the first medical man to go daily into the elementary schools, and study, in the light of modern medical and physiological knowledge, the condition of the children and the educational methods in vogue. In London in 1891, a medical officer was appointed to the school board, and in 1902 Dr. Kerr was transferred here. Before that year the London School Board had already appointed two examiners of special schools and a ringworm nurse, but after Dr. Kerr's appointment the department quickly began to grow; he was given assistants; six "occulists" were appointed to supervise the vision testing; the number of school nurses was increased, until, in 1904, in addition to four permanent assistants, there were twenty local medical inspectors appointed, and the number of school nurses rose to more than thirty.

Meanwhile work was beginning to be done in some of the large centres in the country; pioneer work in the direction of convalescent schools and a country school for town children was accomplished in Manchester; Dr. Crowley continued Dr. Kerr's work in Bradford; a beginning in the direction of school clinics has been made in Cambridge; and the municipal treatment of ringworm established in Croydon.

Leading up to the establishment of medical inspection in England, we had, therefore, the following factors:—

Firstly, there was an increasing body of knowledge resulting from the reports of medical officers, especially those of Dr. Kerr, and the work in Scotland done under the direction of Dr. Leslie McKenzie;

Secondly, there were the rumours of the advances made in other countries, culminating in the first International Congress of School Hygiene, which met in Nuremburg in 1904, organized by Prof. Griesbach, and attended by many delegates from this country;

Thirdly, as a result of the Education (Defective and Epileptic) Act of 1899,

many medical examiners were appointed, and the opportunity of the medical profession to get into contact with educational methods increased;

Fourthly, the revelations in connection with the recruiting for the Boer War, raised great heart-searchings on every hand with regard to our national efficiency and physique, and led to a greater interest in the case for the study of development of children; and

Finally, Royal Commissions and Inter-departmental Committees followed one another rapidly, and strongly recommended, in their reports, medical inspection of school children—namely, the Scotch Physical Education Committee, the Royal Commission on Physical Degeneration, the Inter-departmental Committee on Physical Exercises, and the Committee on the Feeding and Medical Inspection of School Children.

During 1905–6 there were several deputations of medical and scientific men to the Board of Education, and the result was seen in Mr. Birrell's Education Bill for 1906, in which an enabling clause for medical inspection was inserted. When it came to be discussed in the House of Commons, however, from every section and shade of political opinion expressions were made as to the necessity of medical inspection, and at the end of the sitting Mr. Birrell accepted the principle of compulsory medical inspection, with an enabling clause empowering local authorities to make provision for treatment. The Bill of 1906, unfortunately, did not pass. In 1907, however, the clauses relating to medical inspection were brought up as a private Member's Bill by Mr. Russell Rea, and, having passed by the House of Commons without opposition, were incorporated in the Government's Administrative Provisions Bill of 1907 by Mr. McKenna, and became law.

The *aims* of Medical Inspection are threefold:

1. To advise alterations in curriculum adapted to special needs of the child—exclusion from school altogether, admission to special classes, exemption from special subjects, the allotment of special positions in class, and to indicate harm already done to particular children by school methods in vogue.

2. To obtain treatment or amelioration of defects after demonstrating their existence.
3. To collect statistics for national use, showing how different environments act upon growing organisms; to compare town and country, town and town, and especially decade with decade.

Details.—The difficulty in the minds of many is how to reconcile the filling up of the twenty-four to thirty items on the card with the expression of opinion in the accompanying memorandum that the examination of each child need only take a few minutes.

It is weary work filling in schedule after schedule for similar children; it is intolerable to go on doing this day after day, and can only lead to mental breakdown on the part of the inspector. The medical inspector must be set free to learn something of educational methods, of school conditions, and given time for original research. He is to develop into the school doctor of the future, who as physiologist is the natural educational adviser of the education authority.

I find myself that an adequate preliminary inspection of a child can be performed in considerably under five minutes—that is, at least twenty-five to thirty children per session. (In some German towns where it is admirably done, a class of forty-five can be done in the two hours).

Records.—Cards and cabinets are the only records necessary or admissible; have nothing to do with registers for this work. Different colours should be used for boys and girls—*e.g.*, in London we use light blue for males, and white for females. One corner of the card should be snipped off—preferably the right-hand top corner—for purposes of orientation when shuffling the cards for results.

Presence of Parent.—I would strongly recommend that the inspection be done in two visits. I would have a preliminary run, as rapidly as consonant with efficiency, over all the children in the district who are to be inspected; a special mark should be placed on the card of each child whom this preliminary inspection shows to be desirable to be examined more fully. The presence of parents is not essential at this first examination; but at the second visit, where only those whom it may be necessary to examine more fully are dealt with, the parent should be present if possible.

Suppose $2\frac{1}{2}$ minutes per child is taken over the first examination, that gives 250 minutes per 100. At the second examination ten of these are given another 5 minutes = 50 minutes—300 minutes in all. Now each child has been inspected, 3 minutes each taken per child, and yet the worst children have had $7\frac{1}{2}$ minutes devoted to them. These figures are merely illustrative, and not to be taken as necessarily the actual times or proportions. (I find it possible to do the necessary preliminary inspection in just under 2 minutes.) It must be remembered that accurate diagnosis is not asked of you, but only to establish the presence of, and roughly the degree of, ill health, and the direction in which further investigation is necessary, so that a well-founded reason may be given for reference to the private practitioner or hospital (at present) for further exploration and treatment.

Now let us take the items of the schedule in detail:—

The items capable of being filled in by teacher or school nurse should be grouped together at the beginning and separated by a thick line from those following. After item 16 a thick line should again be drawn across the card. The preliminary inspection should deal only with the items between these two lines, say from 8 to 16 inclusive, practically no stripping being necessary.

Let us now take the items in order:—

1. *Date.*—This should already be filled in by assistant, together with the remaining items above the first thick line.

2. *Standard and Regularity of Attendance.*—This will only be possible at further examinations, not in entrants; regularity of attendance should be expressed as a fraction, *e.g.* $\frac{12}{15}$, actual attendance being the numerator, possible attendances being the denominator.

3. *Age.*—This should be stamped, preferably in red ink, so far as the year of age is concerned; when reports come to be made out everything must be distributed according to age and sex, otherwise statistics are valueless. It will, therefore, greatly facilitate sorting if the age is the most prominent item on the card, the sex being already denoted by the tint of the card.

4. *Clothing and Footgear.*—Wherever possible for the sake of rapidity of recording, all conditions at the preliminary examination should be assessed by a system of marks from

1 up to 5. Thus, in inquiries I have carried out, 1 has denoted clothing of the scantiest possible, one ragged coat buttoned up and practically nothing beneath, boots either absent or represented by a mass of rags tied upon the feet; 2 has denoted clothing insufficient to retain animal heat and needing urgent remedy; boots leaking; 3, clothing poor but passable, an old and perhaps ragged suit, with some attempt at proper underclothing—usually of flannelette; 4, well clad, stuff suit, good boots, with a flannel undergarment, or a guernsey; poor, perhaps, but sufficient; 5, very well clad. In using a system of marks such as this, any momentary hesitation is solved by leaning towards the centre mark. Some inspectors prefer the use of the symbols +, O, and —, to the numerals.

5 and 6. *Height and Weight*.—There are to be three examinations during school life at present. Records of height and weight at these long periods are useless for the child itself, especially as there are no standards available, nor can they give adequate data for statistics. Why then are they introduced? Partly possibly to the influence of Wiesbaden (where they are measured every half year), but chiefly owing to the determination of the Board, no doubt, that a commencement must be made in the direction of anthropometry. There must be a supply of weighing and measuring instruments, and whenever teachers are willing to measure and make records of their children at regular intervals they should be encouraged to do so. I believe the Board will be better satisfied if a start on real scientific anthropometry be made and incorporated in your report. This entails less work, is interesting, and will commence a standard for your neighbourhood with which individual weighings can later be compared. On no account should weighing and measuring be part of the rapid preliminary inspection to which I am referring.

7. *Nutrition*.—Here again marks should be used. This is a very difficult thing to assess and should on no account be left to the unqualified assistant. Important action may be based upon the findings, such as reference to feeding committees or to the Society for Prevention of Cruelty. The colour of mucous membranes is very important in this connection. Children selected on this account as anæmic for open-air schools in London, turned out in every instance to have insufficient

hæmoglobin when later tested by Tallgoist's method. Palpitation of the scapula through the clothes is also a useful guide. (If when the child is standing erect a thumb is placed in contact with either inferior scapular angle, important indications as to torsion of the spine are obtained.)

8. *Cleanliness*.—Marks again should be used here from 1 very dirty to 5 perfectly clean. The head should be noted if scurf is present, for in the majority of instances this is due to chronic ringworm in children, only to be dismissed after microscopical examination. (A little of the scurf, which often contains short stumps only seen after soaking in potash, being placed in a small envelope, labelled with the name of the child and carried away for examination at home.) The presence of parasites should be noted by V for vermin and N for nits. With regard to the body the hem of the undergarment can be fished up nearly always without undressing and examined.

9. *Teeth*.—It is unnecessary to count the numbers of temporary and permanent teeth decayed as some schedules I have seen contemplate. With regard to conservative treatment a single decayed tooth presents a better field for operation than a considerable number. A peep inside the mouth is all that is required. Marks 5 represent a perfect set of teeth; 4 if caries has appeared ever so slightly; 3 if there are several decayed teeth not impairing the bite to any extent; 2 where several decayed teeth affect powers of mastication; 1 where practically all teeth are affected.

10. *Nose and Throat*.—The great point to determine is *obstruction*, partial or complete. The tonsils should not be examined as routine, but at the fuller examination where indicated. Gardeners' wooden labels should be used as recommended by Dr. Richards and thrown away after use. Six-inch wooden labels should be ordered. Glands—marks 2 unduly palpable, 3 enlarged to size of pigeon's egg.

11. *External Eye Disease* need not be thought about unless present when it is seen at a glance.

12. *Vision*.—Snellen's test types should be used; the teacher or school nurse should undertake the preliminary examination. In London the teachers have done this satisfactorily for years. No test can be carried out in the case of entrants or infants generally. As a routine thing it is found sufficient to test both eyes

together, not separately. When testing each eye separately the time is very much more than doubled, unusual conditions which are never present are introduced, and anomalous results are often obtained. A useful addition to the inspector's equipment is a set of capital E's made to the dimensions of the test types, which can be rotated and the child asked to indicate with his fingers the direction in which the arms of the E point. This gets rid of the possibility of cheating on the part of the child and can be used in the case of the deaf or of a child who does not know his letters. When squint is present (it often goes with adenoids) it can hardly be overlooked.

13. *Ear Disease.*—The only preliminary investigation necessary is the noting whether discharge is present.

14. *Hearing.*—An important part of the inspection is the asking of the child in a low and gentle voice, as soon as he is presented, a few questions as to name, age, and where he lives. His responses give sufficient clues to this and the two following items. The presence of the parent interferes with the smoothness of working of this, as she invariably persists in breaking in and giving the responses herself. Where deficiency of hearing is suspected, the child should be tested by the forced whisper at a distance of twenty feet—this is the only hearing test suitable for school work; the child is asked to repeat numerals whispered by the examiner at the termination of an ordinary expiration.

15. *Speech.*—The one thing mostly pronounced badly by a child is his own name, and the first step in the inspection is asking the child this; a further test when desirable is asking the child to count or repeat the numerals up to ten; the English numerals contain most of the difficult consonantal sounds.

16. *Mental Condition.*—The assessment of this again largely depends upon the nature of the response. A separate and thorough examination at another time should be carried out of all children suspected of mental defect after a period of a year in school. A special report is required by the Board of this condition.

It will be noted that many of these items are inadmissible at the examination of entrants, which is the chief examination for the present year, and the work is thereby lightened considerably.

Histories.—Having decided what items you

wish for information about, a form should be got out, and when a child is presented for admission to school the parent should be handed this form to fill up, and it should be understood that the child is not properly admitted until this is done. Experience shows that while not 25 per cent. of parents will attend the preliminary examination, yet 85 per cent. are willing to fill up a history form to the best of their ability at home. It is worth while getting a history of measles in every case, this being the complaint that gives most trouble in school life.

The Teachers.—As far as possible the normal life of school should be not interfered with. The teachers should be looked upon as colleagues, equal in all respect and the utmost frankness and deference should be used in dealings with them. Generally you will find the teachers very interested and very anxious to help.

Before concluding, I should like to say a word respecting the importance of rheumatism in childhood, a disease which, more than any other, produces silent ravages which can never be repaired. This should be borne in mind in every case of unexplained debility, pallor, or ill health. Generally a satisfactory preliminary examination of the heart can be made by throwing a towel over the chest and listening directly with the ear over the clothes; a murmur can often be thus distinguished; the heart sounds can always be heard, and any irregularity, undue frequency, or unsatisfactory clarity of the sounds in a moment detected, leading, where necessary, to a fuller examination.

UNDERGROUND BAKEHOUSE.—At Marlborough Street Police Court, on April 2nd, the Ritz Hotel, Ltd., were summoned by the Westminster Borough Council for using an underground bakehouse contrary to the provisions of the Factory and Workshop Act, 1901, which provides that an underground bakehouse shall not be used. The bakehouse was part of the kitchen arrangements of the Ritz Hotel, and was used for the supply of bread to the hotel visitors and to the staff. The magistrates dismissed the summons without costs, and expressed his willingness to state a case. In his judgment he said that he had come to the conclusion that there was no direct sale of bread or direct profit from it in this case. The supply of bread was part of the general business of the hotel in receiving the guests properly. There was no more a sale than that of the salt or pepper. He must look at the substantial object of the bakehouse, which it had been shown was for the supply of the staff to the extent of three-quarters of its output, only one quarter being used by the guests.