

The Review Body's recommendation of a "common extended scale" might be applied to the established specialist, and lead in due course to the top of the medical assistant scale, which is regarded as a career level. There are some anomalies which should also be considered. Most professional men do much of their saving between the ages of 30 and 50 by buying a house on mortgage, and obtaining income-tax remission, which may be as much as £200 per annum. Hospitals are often in relatively unattractive areas, owing to local industry, poor schools, poor housing, or lack of open spaces, so that a specialist required to live within the curtilage of the hospital might well expect some compensation for loss of amenity. It seems reasonable to suggest that the rents payable to the N.H.S. by such established specialists should take note of these factors. Since domestic architecture is now costing between £4 and £8 per sq. ft. (£43 and £86 per sq. m.), the provision of these residen-

tial facilities would cost between £50,000 and £150,000 per hospital, and economic rents would be between £350 and £800 per annum. The loss of income-tax remission and loss of amenity might justify a reduction in rent by as much as £400 per annum. Most parties would probably be satisfied if the practice were to charge rent as 5 to 7½% of gross salary.

Such a radical overhaul of the organization will obviously raise many problems which cannot be discussed here: how to differentiate between "training" appointments, such as are now classified as senior registrar, and utilitarian appointments such as "medical assistant"; whether anyone should be allowed to spend his whole career within one hospital group; and how much change from one specialty to another should be encouraged. But the advantages are considerable, and I fear that without some such change the hospital services will collapse.

CONTEMPORARY THEMES

Diabetic Children

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According to Henderson (1949) the incidence of diabetes in the age group 5-15 was one per 4,300, and it was therefore concluded that there were some 1,200 such children in England and Wales. A subsequent pilot study in London and Middlesex, reported by Robertson (1960), gave a minimum incidence of one diabetic child per 3,300 schoolchildren between the ages of 5 and 17 years. After that survey the British Diabetic Association initiated further investigations, and in the course of these it was found that the number of diabetic schoolchildren known to the Northamptonshire School Health Service in July 1960 was 14 out of a school population of 45,500, giving an incidence of one in 3,250. This figure, however, subsequently proved to be an underestimate because, as it became known that the county School Health Service was particularly interested in diabetes in children, there was a substantial rise in the reporting of cases by head teachers and by family and hospital doctors, and by the end of 1964 the total number of children between the ages of 2 and 16 known to be diabetic had risen to 43, comprising 20 boys and 23 girls. Of these, 39 were of school age, giving an approximate incidence of one diabetic schoolchild per 1,200 pupils aged 5 to 16, inclusive.

The Investigation

Insulin

All the children were on insulin, which in 37 (86%) cases was insulin zinc suspension. The earliest age at which a child had learned to inject his own insulin was 6 years 9 months, and among those who had become diabetic before reaching 8 years the average age for beginning their own injections was 10 years. Three children over the age of 12 were still unwilling to inject themselves.

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Diet

Of the 43 children 38 (88%) were on diets which involved measured carbohydrates, the remaining five being on more lax regimens, with restrictions only in the more concentrated carbohydrates, or with virtually free diets unless tests revealed substantial glycosuria. In order to try to assess the level of understanding of diet among mothers and older children, three questions were asked: (1) What are the three main constituents of food? (to which the expected answer was carbohydrate, protein, and fat); (2) name three high-carbohydrate foods; and (3) name three low-carbohydrate foods.

In the case of the mothers 29 (68%) could name all three constituents, 4 (9%) knew only two, and 10 (23%) could not answer the question. The results of the second question were more encouraging: only 2 (5%) were unable to name any high-carbohydrate food, and 37 (86%) could name three. The answers to the third question, however, were disappointing, with 25 (58%) parents unable to name any of the customary "free" foods listed on the diet sheets used by local hospitals. The level of understanding of diet in different social classes appeared to be approximately the same, with the exception of class V, where there was a lower level of knowledge. A similar investigation among the 30 children over the age of 8 showed, as might have been expected, that they understood diet less well than their mothers.

Of the 39 schoolchildren 12 (31%) had their lunches by special arrangement with the school meals service, being supplied with suitably modified main courses, followed by fresh fruit or biscuits and cheese.

Hypoglycaemia

Only 5 (12%) children had never experienced any symptoms of hypoglycaemia. Of the remainder 4 (9%) had had repeated

episodes and the other 34 (79%) had had infrequent attacks. The majority usually carried sugar, though 15 (35%) did not do so, in some instances because it was thought by their parents to be too great a temptation.

General Health

The children appeared to constitute a generally healthy group, and only two complained of other illnesses, in the form of asthma and bronchiectasis respectively, although another child was a mild epileptic, and a fourth was a mongol. Only 18 (42%) had received B.C.G. vaccination.

Good dental health is particularly desirable in diabetic children, and all 43 appeared to be in a satisfactory state, though 10 (23%) admitted that they did not clean their teeth every day. Regular dental attention was obtained in 39 (91%) cases, the remaining 4 (9%) having treatment only when emergencies forced this upon them.

Education

Head teachers were asked to classify diabetic pupils as being above average, average, or below average in general school work, and it was found that the children were almost evenly divided between these three groups. Most seemed to have fitted into their schools extremely well, and teachers repeatedly said that until they were approached in connexion with the survey they had forgotten that the pupils were in fact diabetic. The majority of the children took pride in being as normal as possible, and all but 3 (8%) participated fully in physical education.

In 4 (10%) cases it had proved necessary to arrange for diabetic schoolchildren to live in special hostels, from which they attended local schools, returning to their homes only at holiday times. In each instance the reason for admission was of a primarily social rather than medical nature, and need for such facilities was comparable to the figure of 11% suggested by Henderson (1949).

There is still widespread public ignorance about diabetes, and families often had to face up to misinformed attitudes of friends and neighbours. Understandably, the child could sometimes be overwhelmed by the sudden interest taken in him, and it is important to help him to regard his diabetes as a condition which is simply a nuisance with which he has to live, rather than as an incurable disease. Although there are substantial numbers of diabetic children throughout the country, it usually happens that any given child is the only sufferer from the condition in his own school, and this tends to increase his feeling of isolation and of difference from others. Parental attitudes are therefore of particular importance. In the course of the survey it was considered that 36 (84%) mothers were sensible in their attitude towards their children, while 3 (7%) were overprotective, and the attitude of the other 4 (9%) was likewise unsatisfactory.

It was encouraging to find, however, that the great majority of the children were independent and self-sufficient. Of the 35 who were old enough to go to holiday camps organized by the British Diabetic Association only nine had at the time of the survey attended, despite the fact that the local education authority made grants for the purpose. Attendance at such camps is desirable because of the feeling of independence it gives, while at the same time helping the diabetic child to realize that he is not alone, and giving him a fuller understanding of the control of his disease.

Discussion

The value of using specially trained health visitors for after-care work in diabetes has been stressed by O'Shea (1950) and by Walker (1953, 1955). These health visitors have key roles, in the case of child diabetics, in co-ordinating arrangements between parents, hospitals, family doctors, and schools. Their links with the parents of such children are particularly important, as they can continue in individual homes the instruction which has been started at diabetic clinics, while at the same time providing the necessary psychological support, especially in the early months of the disease. Encouragement can be given for children to perform their own injections from an appropriate age, and there is also wide scope for dietary education. To these tasks the health visitor brings her nursing knowledge, as well as her training in socio-medical matters and in health education.

Diabetic children spend the major part of their lives at school, and it is important that the principal school medical officer should be kept in the picture, in order that everything possible may be done to help the child to benefit fully from his education. It is also desirable that teachers should have an understanding of diabetes, and that they should know how to look after diabetic children generally, as well as how to deal with episodes of hypoglycaemia. School meals can likewise play an important part in maintaining diabetic children in good health, while at the same time assisting in dietary education and helping such pupils to feel less unlike their classmates. All schools which have diabetic pupils should be provided with copies of the British Diabetic Association's booklet, *Introducing Diabetes*, in order to furnish teachers with adequate knowledge of the disease and to prevent the imposition of needless restrictions.

Diabetes should not be allowed to become an excuse for failure to take part in physical education, although in some cases it may require to be modified in extent or timing (Dawkins and Reid, 1965). The school dental staff should give priority treatment to diabetic schoolchildren, and there should be a clear understanding between the school health service and local hospitals about which is to accept responsibility for B.C.G. vaccination.

When social circumstances require special arrangements to be made for the child's education, it is desirable that a decision should be reached as early as possible, as once a child has strayed from the path of good diabetic control it can become very difficult to establish a satisfactory outlook. There is likewise need to pay early regard to the question of subsequent job-placement in order to ensure that he does not enter upon an unsuitable course of studies. Throughout all this there is wide scope for cooperation between the hospital consultant, family doctor, school medical officer, health visitor, youth employment officer, and school-teacher on the one hand, and the child and his parents on the other (Reid, 1963).

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