Schools' BCG vaccination programme

SIR,—Mr J A Stilwell's article (24 April, p 1002) on the costs and benefits of the schools' BCG vaccination programme should provide a valuable basis for discussion to those authorities operating BCG vaccination schemes. But the cost that he assigns to one case of tuberculosis is a gross underestimate. Among other factors that he has omitted from his equation are the expense of the laboratory support and the cost of surveying those at risk after the diagnosis of one case of tuberculosis, which may be of the order of £500 when the patient attends a comprehensive school.

Mr Stilwell calculates the cost of treatment from figures given in a paper by Springett,[1] whose intention was to indicate comparative costs rather than the realistic charge to the NHS. In the estimate of £264 for each patient's drugs I calculate that £4 has been allowed for a year's supply of isoniazid; this can only be the cost of the tablets from the largest hospital pack and does not include any factor for dispensing. Mr Stilwell omits consideration of later morbidity after the initial acute illness and dismisses mortality by suggesting that it would not occur in the alternative selective programme; but a comparison with alternative schemes is quite a different equation.

The economic results of illness are inadequately costed; interruption of work at this age can mean the loss of a job or even of a career. If these effects cannot be quantified in monetary terms they are still an essential element in the argument. As indeed, on the other side, are the side effects of the vaccination both physically to the individual and collectively in its impact as an intrusive procedure in the school community. The conclusion of the paper may well be capable of being substantiated, but the factors in the analysis do require more careful examination and it must not be assumed that because a selective programme is restricted to a smaller population it is thereby automatically cheaper to operate.

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[1] Springett, V H, *Practitioner*, 1975, **215**, 480.

Hazards of monocomponent insulins

SIR,—We were interested to read the article by Drs A W Logie and J M Stowers (10 April, p 879). In drawing their conclusions from one poorly controlled adolescent boy who had a 36% reduction in insulin requirement when transferred from conventional to monocomponent insulin (Actrapid MC) they have given a misleading picture of the efficacy of the more purified insulin and do not appear to have been aware of the manufacturers' instructions to reduce the dose to two-thirds of the original one when transfer is initiated.

At the children's diabetic unit at this hospital we have transferred a number of children from conventional to monocomponent insulin (see table). There was a mean reduction in total insulin requirement of 31% (range 7-52%). All the transfers were carried out under hospital supervision. There were no hypoglycaemic reactions. Although there was no comparable control group, their standard of control as judged by general well-being, routine urine testing, and random blood glucose estimations showed an improvement in all cases. Injection site hypertrophy was reduced in two of the four children in which it was present, and injection atrophy, present in one child, had disappeared within eight weeks. We have experienced no problems in the early follow-up period (3 weeks-4 months).

Drs Logie and Stowers's suggestion of 20% reduction in insulin dosage would not appear to be sufficient in the light of our own experience. The manufacturers advice to start at two-thirds the usual dose is a satisfactory initial guideline, but we must stress the difference in requirements of individual patients. In particular, children on large doses of insulin may achieve an even greater reduction and perhaps should be started on half their usual dose.

Far from being a hazard, transfer to a monocomponent insulin comes as a welcome reduction in the volume of injection required. The disappearance or reduction of injection site complications is an added bonus, especially to the fashion- and figure-conscious adolescent girl.

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SIR,—We read with interest the communication of Drs A W Logie and J M Stowers (10 April, p 879) on "Hazards of monocomponent insulins." In a recent communication to the British Diabetic Association we reported the results of changing over 22 long-standing diabetics (mean duration of insulin therapy 10 years), from daily bovine insulin (lente or PZI/soluble) to the monocomponent insulin Monotard MC. Initially a 30% reduction in daily dosage was made, but even so 5 out of the 22 patients experienced severe hypoglycaemic reactions immediately after changeover, and after three months these patients were taking less than half of their initial daily bovine insulin dosage. In four out of these five patients a difference in the affinity constants of their sera for beef and monocomponent pork insulin was demonstrated. We are now reducing daily insulin dosage by half when changing patients from bovine to a monocomponent porcine insulin and subsequently increasing the amount of insulin depending on their glycosuria.

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Case no	Age (years)	Duration of diabetes (years)	Reason for transfer	Total dose conventional insulin (U/day)	Total dose monocomponent insulin (U/day)	Reduction (%)
1	13	3	Injection site hypertrophy; increasing dose of insulin	150	76	49
2	9	5	Injection site hypertrophy	40	24	40
3	12	11	Injection site hypertrophy; ketoacidosis	60	56	7
4	13	5	Recurrent ketoacidosis	72	52	28
5	13	3	Poor control; increasing dose of insulin	116	56	52
6	14	10	Ketoacidosis	44	32	27
7	16	10	Hypertension; proteinuria	56	40	29
8	16	3	Poor control	52	36	31
9	10	2	Injections ite atrophy; poor control	52	40	23
10	16	8	Increasing requirement of insulin	88	64	27

Priority labels

SIR,—The Major Accident Review Committee in this area has been considering the use of coloured labels in order to establish the treatment priority of victims. We are aware that already some areas have established a colour code. We would therefore be most grateful to hear from any area using coloured labels in this fashion as to what is their priority code. We feel we would prefer to fall in with a consensus rather than merely set up our own, which may not perhaps be compatible with that being used in contiguous areas. I would be obliged for correspondence to me at the department of anaesthesia at the address below.

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Effect of posture on dental anaesthetic mortality

SIR,—Professor I Curson and Dr M P Coplans (17 April, p 958) argue from figures obtained from the Registrar General that there would be no improvement in mortality if the supine posture were adopted. They have kindly sent me their data, which need a small correction. There were in fact 10 deaths in ambulant patients in 1974, six of whom were (allegedly) supine and three were sitting (one case remains "not stated").

Their argument turns on the supine cases, of which they know only the number; they have no clinical information. I have this information, obtained in five of the cases directly from persons present during the dental treatment. Briefly, in two cases the patients were not supine. In two others, though the patients were supine during treatment, a sitting posture, at the start in one case and after the finish in the other case, may have contributed to the deaths. And two cases were too exceptional to have any bearing on the issue.

A mentally retarded boy suffering from a rare congenital disease recovered from the anaesthetic, administered at a London teaching hospital, but died later after a series of heart attacks.

A young man was accidentally given a very high concentration of carbon dioxide with the anaesthetic and his heart stopped. It was restarted but he remained a vegetable and died 4½ years later in 1974.

We should be chary about accepting evidence on posture from inquests, from which the Registrar General's data came. Witnesses are never cross-examined on posture, and the angle of tilt in a dental chair is deceptive. I have records of cases in which the coroner was told that the patient was nearly lying down when in fact he was at least semi-upright. And in a case a few years back it is clear from