this topic (9 February, p 381). Careful graphic representation of a series of growth measurements can allay unnecessary anxiety and sometimes makes expensive investigations redundant. Much experience of charting weights has come from tropical countries,¹ and some aspects are worthy of consideration for the NHS.

Some form of calendar or dates recorded on the horizontal time axis of an individual's graph saves much time and avoids mistakes. It is a considerable chore to calculate the age of each child in weeks and months on every visit to the clinic. The simplified method developed by Professor D C Morley when he was working in West Africa has stood the test of time.² This uses a series of boxes along the base of the chart, each one representing one month, and the first box on the left is the month of birth (see accompanying figure). This system

Growth chart showing the calendar method of recording time on the horizontal axis (the month of birth is in the box with heavy outline).

could easily be modified to take account of the precise date of birth, and also of pre-term and post-term babies.

Events which affect growth and health can be recorded on the weight chart. Dr Valman gives an example of this in his figure *f*, with the introduction and exclusion of gluten from the diet. By recording illnesses it is easy to see their relationship to growth, and this single record indicates the main points in the medical history at a glance, instead of requiring a search through pages of notes and letters.

The World Health Organisation has recognised the importance of such personal growth charts in primary health care for children.³ The individual weight card is an example of an instrument that has largely been developed in tropical countries, but could with benefit be more intensively used in many temperate countries.

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¹ Morley DC, Woodland M. *See how they grow*. London: Macmillan, 1979.

² Morley DC. *Trop Geogr Med* 1968;20:101-5.

³ World Health Organisation. *A growth chart for international use in maternal and child health care*. Geneva: WHO, 1978.

Distinguishing direct and indirect inguinal hernias

SIR,—The findings of Mr D N L Ralphs and colleagues that a proportion of inguinal hernias cannot preoperatively be accurately defined (12 April, p 1039) confirm an impression that many experienced surgeons will have already

gained and acknowledged. However, the authors' conclusion that the degree of inaccuracy is such that the whole exercise is pointless is not supported by their discussion. There are several unmentioned reasons why attempting to distinguish the two clinically is of value.

Firstly, medical students are more likely to understand the pathological anatomy of inguinal hernias if they witness the differing signs. These will be clear cut in only a proportion of cases, but this is surely true of many other clinical signs and yet does not detract from their value. Secondly, surgical trainees at the start of their careers often have difficulty finding and isolating the hernial sac. The expectation of finding one particular kind, which is shown to be correct in a majority of cases, is often of considerable assistance, with benefit to the patient by way of reduced dissection and length of operation.

I suggest that these factors are of more than little relevance and in no way diminished by this study.

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Identification of tablets

SIR,—I should like to reiterate Dr J D W Whitney's clear and concise recommendations about how best to handle the burgeoning problem of identifying unknown tablets by imprinting the tablet itself (22 March, p 867). I would remind your readers that more than 15 years ago we documented the inaccuracy and inefficiency of attempting to differentiate tablets by their physical characteristic.¹ Fifteen minutes failed to achieve even a 60% accuracy among a relatively small sample of unknowns. Some three years later we documented that using an imprinted code on tablets or capsules permitted over 95% to be identified in less than 15 seconds.² Today, in the United States 81 of 83 major manufacturers illustrating their products in the *Physician's Desk Reference* utilise an imprinting system on one or more of their products—a fortunate development in an era of generic manufacturers producing deceiving "look-a-likes." Within the fortnight our State of Washington joined South Dakota in legislating that henceforth all legend (by prescription) solid medication forms sold here would henceforth be imprinted for identification purposes. Other states are expected to join us shortly. It is good to catch up with Polo mints.

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¹ Caldwell JG, Shoman AF, Hurst GB, Robertson WO. *JAMA* 1964;187:951-4.

² Symonds JK, Robertson WO. *JAMA* 1967;199:664-5.

Inseminators as vectors of *Salmonella* dublin

SIR,—I was interested to read Dr Eirian Williams's paper (22 March, p 815) on veterinary surgeons as vectors of *Salmonella dublin*. It is perfectly true that no proof exists of venereal spread and the disease is common in dairy herds even when breeding is by artificial insemination. This latter aspect is not surprising to those of us who have taken an interest in artificial insemination and breeding

dairy cattle. If the veterinary surgeon can be a vector of the disease, then it is even more probable that the technician who performs the artificial insemination is also a vector.

In order to inseminate the cow the inseminator places his gloved hand deep into the rectum of the cow and grasps the cervix through the rectum and vaginal walls. He then guides the cannula ("insemination gun") into the cervix. The gun is frequently contaminated with faeces. There is frequently a hole in the glove. On numerous occasions there is more than one cow to inseminate, and without changing his glove the inseminator proceeds to inseminate other cows. With the ability to synchronise heat with prostaglandin $F_{2\alpha}$ it is becoming more common for a number of cows to be inseminated at the same time, with the possibility of cross-infection.

Inseminators employed by the milk marketing boards and artificial insemination co-operatives move from one farm to another with much greater frequency than veterinary surgeons. I have so far been unable to find any reference to itinerant inseminators being tested for *Salmonella* antibodies, although this has been investigated not only in veterinary surgeons but in farm workers and butchers.

The possible danger of the milk marketing boards' inseminators being vectors of salmonellas, with its consequences, has frequently been ignored and the boards boast of their health record with no absolute evidence that this is in fact justified. The Ministry of Agriculture, Fisheries and Food has also ignored this possible danger and, so far as I know, no investigation has been performed.

The introduction of salmonellas on to a farm is frequently a mystery, as Dr Williams describes, although animals other than domestic animals can be infected. Nevertheless, this gap in our knowledge should be closed, as deaths have occurred from salmonella-infected milk and recognition of this possible method of transfer of infection should be accepted by the DHSS and the Ministry of Agriculture.

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Advice about malaria prophylaxis

SIR,—On a recent tour of a malaria-infested area—the Delta region of Lower Egypt—about half a dozen of the three dozen travellers were taking no antimalarial drug despite very definite advice that it was necessary given by the tour operators. They were intelligent and responsible people who had been told by their doctors that antimalarial drugs were quite unnecessary, and naturally were worried when they learnt of the risk they were taking. Fortunately a whip-round raised enough pyrimethamine to start them with double doses a few days before they could revisit their doctors.

It is interesting to speculate on the liability of a doctor who blatantly advises against accepted prophylactic practice for no particular reason beyond his own perversity. Some experience of the medical advice given by foreign tour operators suggests that this is soundly based and that doctors are unwise to countermand it without any special reason for doing so.

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