specifically represented at Park Crescent. Paediatrics (or, better, child health) is not.

When it comes to health the child is father of the man; and research into the nature and origins of neonatal and childhood conditions is more likely to improve the health of our nation than further exploration of what to do when it is already too late to mend. For too long medicine, surgery, and obstetrics, with the emphasis on the adult and his or her problems, have been allowed to dominate the university schools and the interests of grant-giving bodies; yet when these subjects were named by the GMC more than 100 years ago as the fundamental elements of medical practice they included paediatrics, which is now no longer the case. Paediatrics may once have been the study of diseases peculiar to children and therefore on a par with other minor specialties; but it is now the general medicine and surgery of childhood. Its basic science is growth and development. Just as general and special pathology embraces all the clinical disciplines, so does paediatrics.

We ourselves heartily approve of the customer-contractor principle for a substantial proportion of nationally sponsored medical research. We do not identify the difficulties as you do. For us they derive from the frequent incapacity of the practising clinician to formulate projects from the problems he understands well enough; and the equally frequent incapacity of the basic researcher to comprehend the questions which only he has the skills to answer. Each is too often tragically and sometimes hilariously lost in the other's territory, and this is where the customer-contractor idea goes aground. The old, often-rehearsed wrangle about pure and applied science is comparatively irrelevant.

It is surely not too banal to beg for a constructive approach to these fundamental matters. A few clinical fellowships to enable the clinician to try his hand are quite inadequate. Nothing short of a quite massive change of attitude towards the training of some young clinicians so that they can be good customers from a position of some experience as contractors can create this vital relationship. Let us all be far more active in promoting this new climate even in the face of accumulating clinical apathy. Let us also formally recognise child health as a primary area of contractual demand. And may you, sir, come to understand that the inadequacies of the customer-contractor principle lie not in the principle but in deficiencies in both customer and contractor which are accessible to improvement if we all make the effort.

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What kind of cot death?

SIR,—We would like to reassure Dr A S Cunningham (6 May, p 1216) that the DHSS multicentre study of postneonatal mortality is very much aware of the need to investigate the relationship between sudden infant death syndrome (SIDS) and breast-feeding. A detailed interview is carried out with the parents of the infants who died and of living control infants. A great deal of the information collected at the interview relates to infant feeding practices.

We are impressed, however, with the numbers of SIDS victims who have received

neither cow's milk supplements nor cereals at any time during their life. This has resulted in much bewilderment being shown by bereaved parents who had been taught that breast-feeding would "protect" their baby. Similarly, much guilt is being felt by mothers who for one reason or another cannot breast-feed when they are told that their baby is at increased risk of SIDS because he is bottle-fed.

There can be little doubt that incorrect bottle-feeding contributes to infant deaths from hypernatraemic dehydration in conjunction with gastroenteritis and respiratory tract infections, but the relationship between bottle-feeding and SIDS is less clear. Of course "breast is best" as a general rule, but it may be that *correct* bottle feeding with "humanised" formulae is a very close second. Much harm can be caused by pressurising unwilling mothers into attempting to breast-feed, just as harm can be caused by neglecting to support mothers who *do* wish to breast-feed.

We intend to use multicentre data to examine the relationship between present-day infant feeding practices and SIDS and to present this in an early report.

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Prediction of gangrenous and perforating appendicitis in children

SIR,—For many years clinicians have been attempting to predict the severity of disease by means of clinical criteria. Most methods have been devised by clinicians who have quantified the differences between patients who have mild and severe forms of the same disease. Given that the populations at risk are identical, a predictive test should discriminate with similar accuracy wherever it is used. While it is gratifying to see that Mr D P Drake and Mr J G Knott (22 April, p 1052) have evaluated our clinical scoring index in children with appendicitis (26 November, p 1375), in effect they are comparing symptoms and signs from patients in a highly specialised regional paediatric centre with those from a district general hospital. The fact that Bangour General Hospital does not admit children under the age of 7 years and also that, of the 200 patients studied, children aged 7 to 16 years made up only 8% of the total may account for their criticisms of the method of prediction.

Since perforated and gangrenous appendices account for approximately 24% of all patients undergoing appendectomy, your correspondents would have correctly identified six of their 26 patients by applying probability theory alone. In fact the clinical scoring index correctly predicted 11 of their patients with macroscopic and microscopic perforation (groups I+II) and a further four patients were correctly predicted who had acute inflammation only. This results in an overall accuracy of 57%. It would therefore appear that although the two series of patients were not strictly comparable, the clinical scoring index was of more value than they imagine.

I would, however, agree that in children the three predictive factors listed may be poor discriminants. Increasing severity of pain may be described by an adult, but children are frequently unable to give an accurate description of the severity of their pain. The pulse rate in a child may be elevated by fear

and pain and similarly the total leucocyte count in normal children is frequently higher than in the adult.¹ We have now found our computer program for the differentiation of acute from gangrenous and perforated appendicitis to be sufficiently accurate to dispense with the routine estimation of the white cell count, although in adults when clinical features are used alone it is a reliable prognostic factor.

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¹ Doraiswamy, N V, *British Journal of Surgery*, 1977, **64**, 342.

Deep-vein thrombosis after hip replacement

SIR,—The recent article by Mr J D Stamatakis and others (22 April, p 1031) highlights the problem of the unpredictable results of prophylaxis against deep-vein thrombosis (DVT) in patients undergoing hip replacement. Papers have been published in favour of and against the use of low-dose heparin, warfarin, dextran-70, plaquenil, and now aspirin. It is of interest to consider why resistance to the effectiveness of prophylactic agents should be offered by this group of patients in particular when the results in the general surgical population are consistently favourable.

The answer is obviously multifactorial, but may lie partly with the severity of the operation of hip replacement. In support of this Nicolaides and Irvine¹ list the severity of the operation as a risk factor which predisposes to DVT. It is also known² that the rate of clinically detected thromboembolism rises with revisional hip surgery, where the operation time and blood loss are increased. At Gartnavel General Hospital patients undergoing hip replacement are monitored for the development of DVT using the fibrinogen uptake test and venography. We have observed that 50% of thrombi have begun forming on the first postoperative day (the day limb counting begins) and 80% in the first three days. We agree with others on this point. Although indirect, this evidence suggests that the operation itself is an important stimulus to thrombogenesis.

We began a prospective study in 1975 into the use of dextran-70. At this time all hip replacement patients underwent normotensive general anaesthesia and alternate patients were given 500 ml of dextran-70 in theatre. An early assessment revealed that, used in this way, dextran-70 had no effect on the overall incidence of DVT. What did influence the development of DVT, however, was the operative blood loss (measured gravimetrically), which was found to be significantly higher (mean 958 ± 69 ml) in the 36 patients who subsequently developed DVT than in the 28 who did not (741 ± 55 ml; $P < 0.02$). The age, operative time, and risk factors were comparable in the two groups.

It may be, therefore, that operative blood loss is linked with the severity of the operation. This has significance in that anaesthetic techniques exist which are associated with reduced operative blood loss—for example, spinal or epidural (local), or hypotensive (general) anaesthesia. Use of such a technique for hip replacement procedures is therefore theoretically advantageous in this respect