mediate cover in their own health district and insist on this provision by the health authority in line with the national agreement. Dr Evans-Jones suggests that senior senior house officers could be one of the 'options' for this intermediate level care, together with visiting registrars, career registrars, and senior registrars. Career and visiting registrar posts will in future have to be part of the same recognised rotation. Visiting registrar posts will be open exclusively to foreign medical graduates, who will be able to stay in this country for the duration of their training only (up to five years on limited registration). There are currently some 115 foreign medical graduates occupying the 287 paediatric registrar posts. It is likely that there will be a minimum of 100 posts available for visiting registrars. There is no manpower limitation, however, on the numbers of visiting registrars envisaged in 'Achieving a Balance.' The initiative taken by the BPA must be matched by local action from paediatricians in the regions to construct appropriate training programmes for the present and any future visiting registrar appointments.

Anticipating the likely consequences of 'Achieving a Balance', and the increased authority of the Joint Planning Advisory Committee (JPAC), the BPA Manpower Committee, after careful consultation and 'piloting', carried out a nationwide comprehensive survey of paediatric manpower in 1986. The results—available to all members—have been collated and used in our submission to the JPAC. Professor Forfar, the President of the BPA, and I gave oral evidence on behalf of the Royal College of Physicians. We found that the Department of Health and Social Security (DHSS) figures seriously under-recorded the number of consultant paediatric career opportunities in England and Wales (the BPA survey in 1986 recorded 744 consultants, the DHSS 629 consultants). This discrepancy is mainly due to the DHSS failure to record the 'paediatric' specialists. The first request of the DHSS to the regional health authorities regarding future new consultant paediatric posts did not include a significant number in community child health. The DHSS officers have therefore been shortchanging our specialty in their calculations for the need for future training posts. In the next six months they will be consulting Regions as to whether they would, if offered, be able to create extra senior registrar posts in community child health. It is important, therefore, that this initiative is seized by paediatricians in all the Regions.

The JPAC have had their terms of reference extended to include paediatric registrars. These 'figures' will be the subject of their scrutiny next year. The Council of the BPA has wisely already decided to initiate a further detailed study of paediatric manpower requirements in each health district to provide us with the weapons to fight for our specialty's needs. We eventually achieved a one hundred per cent response from our 1986 survey and we are looking for the same commitment from paediatricians again this year.

For the BPA to be successful it is essential that all paediatricians are involved in the manpower planning process and keep up to date with the fast moving events, not only through our BPA Newsletter, but with their regional representative on the BPA Council, regional advisers in paediatrics, and chairmen of their regional paediatric advisory committee, and any training sub-

committee, so that a coordinated paediatric response can be made in each region.

In the December Newsletter I suggested the following checklist.

- (1) See whether your health district is going to convert senior clinical medical officer posts into consultant paediatricians (community child health) posts over the next few years.
- (2) Make sure these are included in your district plan so that the numbers can be counted centrally by the regions.
- (3) Insist on a proper 'safety net' in order to run the acute paediatric service in your health district.
- (4) Urgently activate your regional paediatric committees in association with university teaching hospitals to institute competitive schemes for 'visiting' registrars.

'Achieving a Balance' is an important document. It could enable a significant improvement in paediatric manpower to occur providing each one of us in paediatrics takes the initiative. On the other hand, if we fail to get to grips with the detail and do not become involved locally in our own districts, our specialty could suffer significantly in the new planning process.

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Precocious and premature puberty associated with treatment of acute lymphoblastic leukaemia

Sir,

We have read with great interest the article by Dr Leiper and coworkers regarding pubertal development and growth after treatment for acute lymphoblastic leukaemia.¹ Their results agree, on several important points, with our earlier findings on disturbed pubertal growth in girls after acute lymphoblastic leukaemia.²

There are, however, some methodological differences in the two studies which make direct comparison difficult. All the girls in our study were followed until menarche, and are in this respect comparable with the group of 55 girls in Dr Leiper's study, used for relating the age of onset of treatment to age at menarche (his ref 1, fig 3).

Menarche is the single point in the pubertal development which is easy to date precisely, and as such perhaps the most suitable for comparisons of puberty. It would be interesting to know the mean age for menarche in Dr Leiper's subjects. Girls who showed pubertal development in close connection to the diagnosis should of course be excluded.

The significantly lowered mean age at menarche in our subjects was not due to precocious puberty in a few cases

but rather to early-normal puberty in the majority of girls.² One wonders why Dr Leiper did not analyse in more detail the growth and development of the well defined group of girls who attained menarche and instead formed a selected group with evidence of early pubertal maturation.

Interestingly enough, the growth pattern of the girls followed to final height who were reported in Dr Leiper's article, agrees very well with the results presented by us.² Dr Leiper and coworkers do not analyse the growth data of the 55 girls who attained menarche. In our study the average height decreased from -0.5 SD before puberty to a mean final height of -1.5 SD. This loss in stature was due to a subnormal growth spurt.

Analysis of spontaneous growth hormone secretion during 24 hours indicates that girls treated for acute lymphoblastic leukaemia, including cerebral irradiation, have severely blunted growth hormone secretion already before puberty (C Moëll *et al*, unpublished data). Growth at that time, however, is normal.

The growth hormone insufficiency of these girls seems to be relative and manifests itself only when the increased demands for growth hormone during puberty cannot be complied with. In patients who lack an adequate growth spurt the onset of early puberty will cause additional impairment of final height. In this respect we agree with Dr Leiper that precocious and premature puberty can be an important factor in contributing to short stature in girls treated for acute lymphoblastic leukaemia.

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Drs Stanhope, Leiper, and Chessells comment:

Unfortunately, the paper by Dr Moëll and coworkers was received after our manuscript had been submitted. We agree with most of their findings but we wish to indicate several important differences.

Four of the 10 patients described in Dr Moëll's paper had received craniospinal irradiation and it is not appropriate to include these children in the analysis of peak height velocity without data on sitting height and subischial leg length growth velocities. Moreover, the fields for spinal irradiation in early childhood may well have included ovarian tissue. No data were given for the onset of puberty in the patients described by Dr Moëll's group. The fact that the patients were all girls is interesting, however, and supports our hypothesis for the difference in timing of the onset of puberty in normal girls and boys.¹ We excluded patients who had developed early puberty soon after

receiving cranial irradiation; as stated in our paper, mean age at treatment was 4.0 years (range, 1.4-7.8) whereas mean age for the onset of puberty was 8.8 years in the girls and 9.3 years in the boys.

Although menarche is an easy event to date precisely, it has little physiological meaning. Menarche does not usually indicate the onset of fertility and the mechanism of a uterine 'withdrawal bleed' is simple compared with the intricate endocrine events preceding an ovulatory cycle. We only used menarche retrospectively to correlate the timing of cranial irradiation and sexual maturation.

We agree with many of Dr Moëll's comments about the growth of children with acute lymphoblastic leukaemia treated with prophylactic cranial irradiation; the predominant loss in height of such children is during the pubertal growth spurt. Although sex steroids are synergistic with growth hormone, the onset of the pubertal growth spurt is contemporaneous to a large increase in growth hormone pulsatility and indeed growth during puberty correlates with growth hormone secretion.² It is not surprising that the predominant impairment in the growth of children who have growth hormone insufficiency secondary to cranial irradiation is during the pubertal growth spurt.³

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Increasing medical burden of child abuse

Sir,

I share Drs Sharma and Sunderland's concern about the increasing medical burden of child abuse.¹ In Central Birmingham Health District, with 43 000 children aged up to 15 years, health visitors now attend over 300 child abuse case conferences annually. We too are experiencing an appreciable increase in referrals which subsequently prove to be unfounded. School and nursery staff have heightened awareness, but this has increased the rate of false positive referrals. It is well recognised that identified child abuse is more common in children from socially deprived backgrounds. Such children are also more likely to sustain accidental injuries. My concern is that an unexplained bruise found on the inner city child of inarticulate parents, socially distanced from professional staff, may be much more likely to result in a child abuse investigation than an identical bruise in the advantaged child of middle class parents.

The circumstances which lead families to abuse their children are complex, and not confined to particular classes of society. I cannot agree with Sharma and