treated with neutrons and photons.[2] Results were significantly better, however, for neutron than photon treatment in node positive patients, but worse in node negative patients with the suggestion that these were caused by inadequate planning because of the fixed neutron beams. No opposition was expressed to continued trials now under way. The discontinuation of funding suggested by Dr Tobias refers to that of new cyclotrons rather than of existing units.

The arguments against neutrons have been well rehearsed. We still do not have clear cut answers. The proposed unit at St Thomas's would be for not only neutron therapy but also particle treatment of eye tumours and nuclide production for positron emission tomography. Cancer therapy depends on adequate planning of treatment obtainable only with the newer high energy neutrons. The earlier work at Hammersmith using fixed horizontal beams was a remarkable achievement, whatever the final value of neutron therapy.

The real interest in this debate lies not only in the true role of neutron therapy but in the political machinations of the funding process. These have no long term significance. We await with interest the results of clinical trials and the evaluation of data obtained by positron emission tomography.

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1 Tobias JS. The cyclotron saga continues. *Br Med J* 1989;**299**: 1294-5. (25 November.)
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Insertion of permanent pacemakers as a day case procedure

SIR,—Dr Guy A Haywood and colleagues report that the insertion of permanent pacemakers as a day case procedure is as acceptable to patients as conventional admission and that the incidence of complications is comparable in these groups. I wish to draw their attention to a few facts.

The incidence of lead displacement causing capture failure was reported to be 1/21 in the day case group and 1/19 among patients managed conventionally. Whether this was detected during the hospital stay or after discharge and the mode of presentation have not been mentioned by the authors. As only 37 patients received new permanent pacemakers (three having received only generators), the incidence of capture failure following lead dislodgement is 2/37—that is, more than 5%. Although there was no significant difference between the two groups, this is a significantly high rate of displacement considering the present lead designs. The rate has been reported to be as low as 0·4%,[2] and this problem has not occurred in my latest 73 patients. This is an extremely important complication: for patients who depend on pacemakers capture failure could be fatal, especially if the patient has been discharged from the hospital. May I therefore suggest that the authors review and if necessary revise their method of lead implantation before taking to implanting permanent pacemakers on a day case basis?

Also, the authors have mentioned that "standard implantation procedures" were used but did not specify the exact number of procedures performed by subclavian puncture or cephalic vein cut down. It is important to note that the chances of haematoma formation are considerable with subclavian puncture.[3] In cephalic venous cut down complete haemostasis is possible because the same is done under vision. Thus in patients undergoing permanent pacemaker implantation as a day case procedure cephalic venous cut down would be preferable to prevent the complication of haematoma formation and subsequent infection.

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1 Haywood GA, Camm AJ, Ward DE. Insertion of permanent pacemakers as a day case procedure. *Br Med J* 1989;**299**:1139. (4 November.)
2 Mond H. The pacemaker lead. In: Mond H, ed. *The cardiac pacemaker: function and malfunction*. New York: Grune and Stratton, 1983:76.
3 Janchuck SJ, Gill BS, Petty AH. Permanent cardiac pacing through the subclavian vein. *Br J Surg* 1974;**61**:373-6.

AUTHORS' REPLY,—Two patients were affected by lead dislodgement. One was assumed to have a microdislodgement as he had a low threshold before discharge but at one month follow up was failing to pace. A chest radiograph showed no obvious displacement, and increasing the pulse amplitude resulted in recapture. The other patient was one of the three who were to receive new generators, but an insulation break was noted in the old lead and a revision of system was carried out. Pacing was satisfactory before discharge, but at follow up at one month the chest radiograph showed lead displacement. Assuming that the threshold rise in the first patient was due to a microdislodgement, the rate was 2/38 (5·3%) for the series, which is within the range for electrode displacement quoted in other series (0-12·5% for ventricular and 0-9·6% for atrial leads) but is higher than the mean reported in these series (1·6% for ventricular and 3·2% for atrial leads).[1] The numbers are, however, small, and Dr Dalvi's suggestion that our displacement rate is significantly higher is statistically incorrect.

The important question is whether travelling after implantation increases the risk of electrode dislodgement compared with the risk in patients who remain in hospital for one or more days after implantation. As we pointed out in the article, calculations of sample size show that 2500 patients would have to be studied for a 90% probability of showing a doubling of the frequency of electrode dislodgement using a one tailed test at the 5% level of significance. We thought that it would be impracticable to attempt a study of this size, and we draw Dr Dalvi's attention to the studies referenced in the introduction to our article, which attempted to assess safety.

We agree that cephalic cut down is the method of choice for introduction of the pacing lead, and it was used in 20 of the 38 patients in our series. In the remainder the operator judged the cephalic vein to be unsuitable. We agree that this method is preferable for obtaining good haemostasis. It is our impression, however, that most haematomas form because of leakage from small vessels disrupted while the generator pocket is formed rather than from bleeding from the site of the subclavian vein puncture.

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1 Ohm J, Breivik K. Pacing leads. In: Perez-Gomez F, ed. *Cardiac pacing, electrophysiology, tachyarrhythmias*. Madrid: Grouz, 1985:971.

Child health surveillance

SIR,—Dr Leon Polnay's article highlights many important issues in child health surveillance.[1] I have recently researched the conditions and circumstances surrounding failure to thrive in children aged 12-24 months. The findings are particularly relevant to two of the issues raised—namely, the value of parental observations and the importance of growth monitoring.

The study was based in the two electoral wards of Newcastle most affected by socioeconomic deprivation. Fifty two children (mean age 20·8 months) with mild failure to thrive were identified. Each was matched by age and gender with a control child, growing normally, from the same communities. Failure to thrive is often associated by professionals with neglectful or abusing parents, but I found that the parents of children who were failing to thrive were clearly aware of their child's predicament and were concerned about it. Analysis of responses to a questionnaire on attitudes showed that parental anxieties over their child's health, growth, and eating patterns were significantly different from those of parents in the control group. Most of these families were not, however, receiving any input from health care professionals.

The mean number of weight measurements documented in the records of the children who were failing to thrive was 17, higher than for the controls (mean 12; $p=0·001$). More frequent attendance may represent an indirect expression of these parental anxieties. Evidently, listening to parents talking about their concerns will aid the identification of vulnerable children.

The article mentions the somewhat equivocal views in *Health for All Children* on the value of growth monitoring. My findings suggest, however, that growth charts represent a valuable tool for child health surveillance. Even in these deprived communities, where uptake of services is variable and often believed to be poor, 92% of all children had adequate growth charts (defined arbitrarily as those with at least six recorded weight measurements—that is, about every three months) held either by the health visitor or by the local authority clinic.

The prevalence of mild failure to thrive was found to be 20·6%. The mean body mass index of these children was 16·1 kg/m^2, significantly less than in the control group (17·4 kg/m^2; $p<0·01$), and a wide range of adversity was identified among children who were failing to thrive. This included greater socioeconomic deprivation, nutritional insufficiency, more prevalent minor illnesses, and interactional difficulties between parent and child. They were thus a highly vulnerable group of children.

Monitoring children's growth is therefore an effective way of identifying children who need further assessment and intervention. It can be applied to most children and deserves a central part in child health surveillance.

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1 Polnay L. Child health surveillance: new report highlights value of parental observations. *Br Med J* 1989;**299**:1351-2. (2 December.)

SIR,—Dr Leon Polnay[1] accurately summarises the conclusions in *Health for All Children*[2] in relation to growth monitoring. The recommendations to weigh at each clinic visit and measure height at 3 years and between 4 and 5 years seem unreasonable, however, from the evidence discussed.

Weight gain is a poor guide to health or healthy growth. Even in infancy, when it is of some clinical relevance because growth is very rapid, fluctuations largely reflect bowel and bladder contents as the report points out. In older children differences between normal and abnormal weight gain are smaller than the reproducibility of weight measurements some months apart, even on sophisticated apparatus. Weights are often inaccurate, but even accurately recorded weight gain reflects change in many tissues and can be seriously misleading as a growth indicator. Frequent weighing is thus