however, that the concentrations of maternal free (biologically active) 1,25-dihydroxyvitamin D₃ are raised during pregnancy, increasing net calcium absorption^{8,9}; whether or not there is a concomitant reduction in the amount of calcium secreted in the gastrointestinal tract is uncertain.

Because of the limited access to the fetal circulation the endocrine influences on fetal calcium concentration are even more contentious. Probably quite early in pregnancy the placenta begins to pump calcium ions from the mother to the fetus against a concentration gradient. The ionised calcium concentration in the umbilical vein at term is around 1.10 mmol/l, compared with the maternal value of 0.90 mmol/l. What is the driving force for this calcium influx into the fetus? In sheep the fetal parathyroid glands seem to play a part as parathyroidectomy leads to fetal hypocalcaemia,¹⁰ but whereas the lamb maintains its high calcium concentration for several weeks after birth, the calcium concentration in the newborn baby falls rapidly in the first 48 hours by about 8-9%. This fall is greater in preterm or asphyxiated infants or those born to diabetic mothers.¹¹⁻¹³ Recent studies have raised the possibility that the newly discovered parathyroid hormone related peptide(s)—the cause of hypercalcaemia in patients with some malignancies—may be the placental calcium transport hormone.¹⁴ The suggestion is that in ruminants this peptide is formed in the parathyroid gland and in primates is either from another source—perhaps the placenta—or formed in the parathyroid glands, under the control of the placenta.

The practical implications of these research findings for clinicians are straightforward and important. The well nourished mother has a slightly positive calcium balance during pregnancy, and this is reversed if she breast feeds subsequently.¹⁵ Although the calcium requirement of the fetus is only about 2.5% of the maternal skeletal reserve, repeated pregnancies and prolonged lactation without adequate replenishment may lead to osteomalacia in the mother^{2,16} and neonatal rickets.¹⁷ These disorders are mostly confined to economically deprived communities¹⁷; those living at high latitudes¹⁸; and Asian immigrants in northern Europe,¹⁹ especially in winter.

Clinicians caring for pregnant mothers should, therefore, ensure that their patients receive a diet adequate in calcium

(1000-1200 mg a day) and vitamin D (400 IU a day), and they should prescribe supplements to women in the high risk groups. This is important not only in achieving the goal of a healthy mother and baby but also in ensuring the long term health of women—those with a low bone mass are more likely to develop early osteoporosis after the menopause.

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A revised consultant contract

Professional principles retained but more accountability

A remarkable feature of the National Health Service has been the wide measure of autonomy enjoyed by consultants in treating their patients and arranging their professional working practices. They have responded by showing exceptional dedication despite a chronic shortage of resources, the increasing intrusion of management, and repeated arbitrary interference with their pay awards. Indeed, doctors' contributions to the NHS have represented excellent value for what most countries would regard as comparatively modest resources, and the service has engendered widespread patient satisfaction. This has been achieved with remarkably low administrative costs, and the treasury has been able to contain the increase in costs to an extent which few if any other developed countries have been able to match. The aficionados of cost-benefit analysis can therefore be excused for wondering why the government has insisted on a reform of the consultant contract. The answer is that the existing arrangements do

not measure up to the government's policies to dismantle protectionism, promote competition, and strengthen management accountability. Furthermore, the politicians and the media have made much of those relatively few consultants whose work for the NHS has fallen short of their contractual commitments.

The government should not have been surprised that the survey carried out by the Office of Manpower Economics, which the review body took the unusual step of publishing as an appendix to its 1990 report, showed that consultants had been working on average 10 hours a week more than required under their contracts, not including on call commitments.¹ For their part consultants will not have been surprised that the government responded by refusing yet again to accept their review body's related recommendation for an increase in the top of the consultant incremental pay scale. The health service has not been alone in attracting unwelcome political

attention. Professionals working in other public or quasipublic services—notably teachers, lawyers, and university staff—are receiving similar treatment. The difference is that probably no other public service has depended so heavily on the dedication of its professionals as the NHS, and this is the context in which the outcome of negotiations on the NHS review working paper on consultants should be assessed.²

It was clear 20 years ago that the NHS could benefit from improved management, but if any lesson was learnt from the McKinsey inspired reorganisation of 1974³ it was that caution is necessary in importing American inspired ideas about the provision of health care.⁴ In the event, consultant autonomy was not seriously compromised by that unhappy exercise—indeed, it was to some extent endorsed by the introduction of consensus management in the form of district management teams. But the implementation of Sir Roy Griffiths's proposals nearly a decade later effectively removed the consultants' power of veto, eroding their influence on the day to day running and planning of the service.⁴ As was pointed out at the time, if managers operating in the Griffiths structure had output targets to meet and were to be judged by their relative position in the national performance indicators they had no alternative than to challenge consultants. That challenge will be more powerful as a result of the NHS review.

The Department of Health has now set out the position reached in three main aspects of the negotiations on proposals for consultants in the review (p 1275). For appointment procedures consultations would be a more accurate description as the department has refused to concede any of the points made by the profession's negotiators. For example, the government has insisted that in future consultant appointment committees will include the district general manager (or exceptionally his senior deputy or the regional manager) as a full voting member. Candidates for consultant posts will no doubt bear this change in mind when asked about their priorities at interview.

The position paper on contracts introduces, against the strong objections of the profession's negotiators, the requirement that every consultant must have a "job plan." This plan will specify the nature and timing of "fixed commitments," defined as those that affect the use of other NHS resources—for example, operating sessions and outpatient clinics. These must account for between five and seven notional half days of the whole time or maximum part time contract, depending on the specialty, and must always be carried out personally, save in emergency or by agreement with local management. Although the contracts of regional consultants will continue to be held at regional level—something that the profession has resolutely defended as helping to ensure an even distribution of well qualified consultants—the management of these contracts will be devolved to district level. So it is to district managers that consultants will be accountable and it is with district managers that they must agree their "job plans" and review them annually.

The profession's negotiators have successfully modified the more unacceptable proposals in the NHS review and, importantly, have preserved the flexibility afforded by the notional half day and thus an essential aspect of the professional contract. They have also retained sufficient flexibility in the contract to allow consultants continued participation in local and national professional committees. Nevertheless, greater accountability is being introduced, which may well affect consultant autonomy. This change will be the nub of future relations between consultants and the NHS. Insensitive handling of consultants' accountability by managers or a defensive reaction from consultants will not augur well for patient care.

Distinction awards was the third subject of negotiation between the Central Consultants and Specialists Committee and the department. About one half of consultants receive an award at some time during their careers so these are an important element in their pay. Regional award committees are to be heavily weighted with management; chaired by the regional chairman, they will include five senior managers, and appointments have already been made. The committees will review awards every five years and be empowered to downgrade or withdraw awards as well as to reinstate them if a consultant's performance improves. Performance criteria must include a commitment to the management and development of the service. Appeals will go to the central advisory committee, whose membership will include a senior manager.

These changes are all part of this government's thrust to strengthen the power of management, with the development of the business style NHS Management Executive and small district management boards shorn of representative members. Indeed, doctors whose professional instincts are to place concern for their patients ahead of the achievement of management targets may wonder where their futures lie in the NHS if management skills are too heavily weighted in the appointment of consultants or when deciding who should receive distinction awards. But at least the new provisions will apply only to new or increased awards payable from 1989, the holders of which have already been notified.

The Central Consultants and Specialists Committee has accepted these changes—which are to be issued as a Department of Health circular—as the best deal obtainable. Indeed, some speakers at the CCSC's meeting on 3 May judged them to be better than they had feared when negotiations started 12 months ago. But how will the changes affect the quality of consultant services? Despite an expansion in the number of consultants the NHS suffers from a shortage of specialists in career posts. Two factors have prevented a crisis: firstly, compared with other countries only a small proportion of patients are treated by fully trained specialists, and general practitioners operate a gate to the hospitals that has controlled the flow of patients to specialist services; secondly, as the workload survey clearly showed, most consultants work much harder than their contracts require. Whether they will continue to do so in the face of this latest onslaught on their professional autonomy is a matter for conjecture. What is certain is that there will be a considerable increase in managerial scrutiny and this might undermine the good will of consultants. It is this good will that has enabled understaffed and inadequately resourced hospitals to maintain surprisingly good standards of clinical care for patients. Nevertheless, the CCSC's negotiators have done well to retain the essential principles of the professional contract agreed in 1979 when negotiating with a government determined to introduce greater accountability among professional groups.⁵ Indeed, ministers may find, as did Barbara Castle in the mid-1970s,⁶ that the practical effects of negotiating a revised contract with consultants will not be what they had originally intended.

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