Cruysberg *et al* is that delay in diagnosis should be prevented as far as possible. Cruysberg and colleagues offer a helpful definition of "myopia plus" (as myopia associated with skeletal, central nervous, or vascular disease) to alert doctors to request appropriate diagnostic investigations.

What are the implications of Cruysberg *et al*'s observations for clinical practice and research? Firstly, their work emphasises the importance of undertaking appropriate tests in any patients with onset of severe myopia in childhood. This view is supported by a study of tests on 7500 urine and 4500 blood samples from 9000 selected patients, which resulted in the detection of four patients with homocystinuria.¹⁸ The natural course of homocystinuria is that lens dislocation will have occurred in half of patients by about 8 years of age whereas half of patients will have reached 29 years before a thromboembolic event occurs.⁶ There is therefore a window of opportunity of about 21 years to intervene to prevent thrombosis if a diagnosis is made at the time of lens dislocation. Secondly, Cruysberg *et al*'s findings suggest the need for research into identifying suitable tests to undertake mass neonatal screening. Unfortunately, the use of hypermethioninaemia for this purpose is unreliable,^{6 19} and perhaps research would be better directed towards tests based on molecular genetic techniques.

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Primary care: choice and opportunity

Letting a thousand flowers bloom to promote the primary care led NHS

Last week saw the launch by the British government of yet another white paper on primary care¹ as a prelude to another new law. Those in the front line of the health service can be forgiven for reflex alarm; we seem to have been here before. But this time seems to be genuinely different. This white paper comes after the "listening process"² and distils ideas presented to the Department of Health and the NHS Executive by professionals on the ground. And for the first time it is not them telling us that 'mother knows best'. It is more a confession that rigidities have been imposed in the past that have inhibited our capacity to function effectively.

In essence *Choice and Opportunity* creates the capability for the NHS to sanction and evaluate experiments in primary care that are designed to improve both sides of the cost-effectiveness equation. General practices can choose to continue as at present. But those who find that current contracts and regulations inhibit the changes they want to make, will be helped and even encouraged to test their ideas. In theory this should unleash general practitioners' imaginations and exploit their innate capacity for innovation, creating a market place of ideas and excellence through evolution and diversity. However, the history of health service reforms argues for caution, and there are caveats that must be heeded if this white paper is to attain its lofty objectives.

The antagonism generated by the 1990 contract³ was not predominantly due to its content—although some of this was and is contentious—but to the way it was imposed on general practitioners. The subsequent establishment of fundholding, even though voluntary, still proved divisive because of perceived inequalities of funding opportunity and care. But fundholding can be seen as a paradigm for the innovations that the new legislation will encourage, and it is reasonable to consider what lessons can be learnt from the experience.

Firstly, as a global scheme fundholding has shown few efficiency savings, largely due to high transaction and management costs.⁴ Future innovations should be able to be self funding, except for the cost of their evaluation, with any cost of setting up the innovation being balanced by efficiency savings. But this of course is only possible if there is sufficient slack in the system. If there is not, innovation will only flourish if the NHS as a whole receives more funding. Secondly, despite the lack of efficiency savings, leading fundholders have improved patient care,⁴ and it is this that should be the main criterion for judging the success of future initiatives.

But the real lesson from fundholding seems to me to be that the levers have been too indirect, and the usual unit size (a single general practice) has been too small (and thus the availability of skills to low and management costs too high). In Christchurch, New Zealand, a group of 200 general practitioners have been commissioning primary and now secondary care services using real money and redeploying real savings,⁵ without direct financial benefit to the doctors (such as the use of savings for new buildings as happens in Britain). Locality commissioning has been advocated here⁶ and might, given real financial control, offer a useful model for evaluation under the new white paper's proposals.

Every change carries risks and benefits, and this is no exception. There is a clear commitment that practices wishing to continue under the present arrangements can do so, but many will feel that they should follow local colleagues into local experiments. The clearest risks are the integration of General Medical Services, and thus general practitioner earnings, into commissioning, and the erosion of the purchaser-provider split. I will take these in turn.

This white paper describes the possibility of practice based contracts. In these a whole practice team will negotiate a contract for providing primary care services for patients on their list and will be monitored against an agreed range of services and quality of care markers. While liberating the practice from most regulations and encouraging practices to explore new skill mixes and cost effective ways of delivering services, any underfunding would put the partners' income at risk (and surpluses in the fund could lead to excessive income). Such a scheme would move us towards a "salary"—in the sense of a predicted, ring fenced income—even if not quite to the salaried option for individual doctors that is also described in the white paper.

The second potential problem lies in a confusion of the general practitioners' purchasing and providing roles. One strength of fundholding has been the capacity of the general practice purchaser to raise expectations of the hospital trust providers. But what is sauce for the goose is sauce for the gander, and the quality divide in primary care brings the need to empower purchasers—at present the health authorities—as they enter into local contracts with providers, the general practices. While local general practitioner contracts that extend or replace the national contract will be possible under this legislation, the white paper also presents the option of a total fund held by practices that covers primary and secondary care. The more practices become the purchasers of their own primary care the more difficult will it be for the health service to maintain accountability. On the other hand, it could be said that it is high time that we reconsider general practitioners'

independent contractor status and the nature of medical partnership in the light of team based care; and one pre-condition of any innovation could be increased accountability for the quality of primary care.

If this white paper becomes law, the whole NHS—practices, community teams, health authorities, and trusts—is in for a cultural shift explicitly designed to further empower and resource primary care. For many of us in general practice the prospect is tantalising, but the knock on effects will be profound. By using pilots and evaluation, ill effects should be minimised and the pace of change should be contained. But there are bound to be losers. Primary care is being given real power. It must use it responsibly by working with others and keeping the goal of better patient care throughout all sectors of the health service clearly in sight.

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Surgical treatment for trigeminal neuralgia

We must have a direct, randomised comparison between decompression and thermocoagulation

Trigeminal neuralgia or tic douloureux is a debilitating syndrome consisting of mainly unilateral short bursts of lancinating pain in one or more branches of the trigeminal nerve. Typically, these bouts of pain can be provoked by touching specific trigger points, speaking, or eating. The incidence is reported to be 4.3 per 100 000 with a predominance in women.¹ The initial treatment is medical: carbamazepine is the first drug of choice, though diphantoine or baclofen, or a combination, can also be used. Most patients initially respond to medical treatment, but 30-75% do not obtain long term pain relief or experience side effects of the drugs.^{2,3} For these patients, surgical intervention should be considered.

Although, or perhaps because, the pathogenesis of trigeminal neuralgia has not been fully elucidated, various invasive procedures have been described over the years. There is a continuing struggle between supporters of percutaneous ablation of the ganglion of Gasser (percutaneous controlled differential thermocoagulation being the most widely used procedure) and supporters of microvascular decompression of the trigeminal nerve root by way of an exploration of the posterior fossa. If no vascular compression is found at operation, the sensory root can be partially transected as described by Dandy.⁴ Advocates of both techniques support their claims with results from retrospective and prospective follow up studies with all their inherent flaws. A prospective randomised comparison has never been done.

The idea that trigeminal neuralgia might be caused by vascular compression is based on Dandy's observations in the 1930s.⁴ The surgical technique for microvascular decompression, in which the offending vessel is removed and a piece of Teflon is interposed, was outlined by Gardner and Miklos in 1959⁵ and popularised by Jannetta. How vascular compression

of the trigeminal nerve, especially in the zone of the nerve root, provokes trigeminal neuralgia is still under debate. Focal demyelination caused by chronic compression and cross excitation between adjacent touch and pain conducting fibres (ephaptic transmission) is the proposed rationale. Patients with trigeminal neuralgia without vascular compression, and those with vascular compression without trigeminal neuralgia, undermine this theory.⁶

Percutaneous controlled differential thermocoagulation, as outlined by Sweet and Wepsic, is the most widely used percutaneous procedure.⁷ It is an ambulant procedure requiring only brief anaesthesia. A needle is placed transcutaneously through the foramen ovale into the Gasserian ganglion under direct x ray control. Once the position of the needle has been verified in the conscious patient by electrical stimulation, the affected trigeminal division is coagulated. Altering the electrical current and duration of coagulation controls the amount of destruction. The aim of this procedure is to destroy unmyelinated and small myelinated pain conducting fibres while sparing the thick myelinated touch conducting fibres, thus preserving touch sensation.

Jannetta, the main advocate of microvascular decompression, argued that the procedure spares the nerve, that it achieves a high proportion of immediate relief (90%), and that patients who are free of pain one year after the operation will suffer no recurrence.⁸ He also argued that decompression is less successful if patients have already had destructive therapy for trigeminal neuralgia.⁸ Barker *et al* recently described the long term results of microvascular decompression for trigeminal neuralgia in 1185 patients and 1204 procedures (19 patients were operated on bilaterally).⁹ However, they excluded 369 patients because they were suffering from