chronically ill people in relatively worse health and on low incomes.[2]

Whether useful or not, something like fishbowl medicine is certainly coming to the UK. Primary care groups will undoubtedly take more interest in what their own doctors, and those they commission from, are doing. Their forerunners, the total purchasing pilots, are already flexing their muscles, especially at the interface between primary and secondary care—which is almost certainly a good thing, given how much can break down at that point.

But perhaps the biggest challenge to hospital clinical autonomy comes not from primary care groups but from central government. The two central bodies proposed in the English white paper are likely to have a direct impact on clinicians' choice of treatment, with the National Institute for Clinical Effectiveness formulating clinical guidelines, and the Council for Health Improvement enforcing them.[3] The consultative document on performance proposed some 37 performance indicators, including the use of inappropriate surgery.[4] Again much of this may be beneficial. But central direction on this scale will not be popular: clinicians may start yearning for the good old days of the internal market.

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2 Ware JE, Bayliss MS, Rogers WH, Kosinski M, Tarlov AR. Differences in 4-year health outcomes for elderly and poor, chronically ill patients treated in HMO and fee-for-service systems: results from the Medical Outcomes Study. *JAMA* 1996;276:1039-47.
3 Secretary of State for Health. *The new NHS.* London: Stationery Office, 1997. (Cm 3807.)
4 NHS Executive. *A national framework for assessing performance.* London: Department of Health, 1998.

Where's the chief knowledge officer?

To manage the most precious resource of all

"There's a burst water main causing problems on the A146 in Lowestoft; the M25 is busy in a counterclockwise direction between the M40 and the M4." Despite the wonders of modern communication applied to traffic information, never have I had useful information pushed at me through the *Trout Quintet* on my car radio. I was not going anywhere near Lowestoft, and I know that the M25 is always busy between the M4 and the M40. Push technology to disseminate information has magnified the problem of unwanted information, and busy clinicians are now caught in an information paradox—overwhelmed with information but unable to find the knowledge they need when they need it.

Yet the intentions of those who push information are honourable, and often they can point to the fact that those who complain about information overload are the same people who complain about never being adequately informed. This has led almost every healthcare organisation to develop a communication strategy, nominate someone to implement that strategy, and disseminate, disseminate, disseminate. It still isn't enough.

There are two laws of dissemination. Firstly, the probability that a disseminated document will arrive on someone's desk the moment it is needed is infinitesimally small. Secondly, the probability that the same document will be found three months later, when it is needed, is even smaller. Too much knowledge whizzes past the clinician to become but a memory: "Now I think I did see something about… ." The use of paper, of course, aggravates the problem, for paper is an unsatisfactory medium for rapidly changing information. Electronic communication will obviously solve some of these problems, but it is easy to be overwhelmed by electronic junk mail.

The truth is that the management of knowledge cannot be dealt with by individuals alone. The organisation in which individual clinicians work has to manage knowledge as well as it manages its other resources. Every hospital, primary care team, and community service needs to decide what knowledge comes into the organisation, how that knowledge should be distributed, and what knowledge should be exported from the organisation; and this system of knowledge management requires someone to take responsibility for it—the organisation's chief knowledge officer. Just who is responsible in an organisation for looking at the new Cochrane reviews each quarter and drawing the board's attention to the action that is required? Who is responsible for ensuring that the people who are buying equipment—ripple mattresses, for example—are receiving a knowledge service from the librarian? And who is responsible for ensuring that all the knowledge provided to patients and carers is evidence based and comprehensible? The chief knowledge officer should be responsible for ensuring all these things happen in modern healthcare organisations.

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The present position is intolerable and counterproductive, as the article by Hibble et al illustrates (p 862),[1] and the problem is getting worse. This is not only a matter of inconvenience to professionals; it also affects patients and carers. The need for easy access to up to date knowledge is emphasised in the Department of Health's paper on quality in the NHS. [2] We have managed money and buildings and people and energy. Now we need also to manage the most precious commodity of the 21st century—knowledge and know how.

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2 Department of Health. *A first class service: quality in the new NHS.* London: DoH, 1998.