new-born babies, constant support from someone with mothering experience and a partner who was not against them breastfeeding. Women said they valued breastfeeding care providers who had knowledge of correct information, established supportive relationships with them, referred them to breastfeeding specialists for problems, showed enthusiasm, and facilitated breastfeeding through concrete actions in antenatal/intrapartum and postnatal periods. Unhelpful providers were described as those who missed opportunities to discuss breastfeeding, gave misleading information, encouraged formula feeding, provided perfunctory breastfeeding care and were difficult to contact when problems arose.

The study reported by Muirhead *et al* on page 191 found no difference in breastfeeding rates between groups randomised to peer support and those who received normal professional breastfeeding support, although there seemed to be a greater difference between groups who were first-time breastfeeding mothers, and those who actually received the peer support.[8] The training course provided is not described in detail but did not seem to include debriefing of the peer supporters own breastfeeding experience. This may have an impact on the way peer supporters help women and their ability to empathise with others.

The success of the Baby Friendly Initiative[9] and some peer support schemes[10–12] may be partly related to mothers' experience of their first breastfeeds. The rapid decline in breastfeeding in the first few weeks in the UK is likely to be related to poor information and unrealistic expectations in the antenatal period and support in the immediate postnatal period. Both the intervention and control groups in this study received traditional professional support until discharge from hospital and many women had stopped breastfeeding before they first saw a peer supporter.

Muirhead and colleagues' paper adds to the body of knowledge on peer support and does show an effect on first-time mothers, which is likely to follow through to success in breastfeeding subsequent babies with the beneficial health impact this will have.[8] It is important that the training itself is examined more closely and a recognised, validated approach is taken so that variables in future research are reduced. Peer support training is particularly important because it is an effective intervention with the most disadvantaged groups, who are least likely to breastfeed.

The National Service Framework for Children, the development of Children's Centres and the evidence base about what works to increase both initiation and duration of breastfeeding, provide an opportunity to act. We can no longer accept the old mantra of 'women's choice'. It is clear that many women in the UK do not feel they have a choice to breastfeed; either because they do not know anyone who has breastfed or even anyone who was breastfed, or because they have not received accurate information and sufficient support to enable them to continue to breastfeed for as long as they like. The *Effective Action Briefing* gives the health service and the wider community the tools to change this.[2]

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Genetics, Big Brother and the GP

The imperative to promote primary care involvement with genetics is a familiar story.[1,2] If new and more scientific understandings of disease and risk are to be the expected legacy of the Human Genome Project, and if the genetic revolution is transforming medicine in the way that some commentators have claimed, then it will be because genetics has changed both its location — from specialist centres to neighbourhood surgeries — and its focus — from rare single gene conditions to common disease. The 2003 White Paper, *Our Inheritance, Our Future*[3] is the latest high profile attempt to promote and realise this vision.

High expectation of imminent clinical benefit from genetic research is almost

certainly misplaced. Despite considerable hyperbole emerging from media and researchers, applications of stem cell research and gene therapy may take another decade to become available. The hope of a new wave of rationally designed pharmaceuticals may also be over-optimistic.[4] Eye-catching ideas — such as 'genetic print-outs at birth' for every child — may be as ethically dubious as they are practically unfeasible.[5] Personalised medicine provides wonderful rhetoric for politicians, but may be less helpful in promoting health than more familiar population-wide public health measures. While genetics education for the multidisciplinary primary care team is undoubtedly important, the major application of such knowledge for the foreseeable future may be in knowing when to refer patients to specialist genetics services.

But, as Smith *et al* argue in this Journal,[6] primary care will very likely be an important location for the new genetic epidemiology, which hopes to reveal how genes and environment interact to influence health outcomes in complex multifactorial conditions. Large scale genetics studies are under way or planned in several countries and regions, often reflecting political/economic drives as much as scientific ones. Here, too, there are debates about the value-for-money of these huge investments, and the appropriate methodologies for finding genetic factors of small effect. Many of the most burdensome conditions do not have significant genetic contributions. Nor is adoption of genetic research politically straightforward. The Icelandic Medical Association refused to participate in data collection for the deCODE biobank, as they were anxious that their role would be compromised and were resistant to commercial involvement in the research.[7] In Britain, while some GPs seem actively to welcome the kudos, publications and funding that genetic epidemiology offers, others are more sceptical, invoking the Orwellian vision of a Big Brother state keeping society under molecular surveillance.

Accepting that genetic epidemiology is here to stay and that it has considerable scientific potential, questions remain about the best way to make it happen. Some of these are technical, relating to the difficulty in accurately characterising phenotype, or the potential problems with electronic patient records and data transfer. But a key question is about whether research in primary care necessarily means research by primary care.

The new emphasis on primary care genetic research does not necessarily imply that it will be GPs and practice nurses who serve as the main points of contact for recruitment or information collection. There are several reasons for this suggestion. First, the 21st century concept of high technology medicine may be incompatible with the late 20th century evolution of the 19th century concept of the family doctor. Providing medical care to sick patients may not dovetail straightforwardly with acting as research gatekeeper to a cross-section of local volunteers. Time and workload pressures may make it difficult for all but the most enthusiastic staff to get involved in research.

Rather than a bilateral doctor–patient relationship, there are now more usually large multidisciplinary teams. Families are increasingly geographically dispersed. For these reasons, it might be rare for GPs to have intimate knowledge of individual patients, and not automatic for them to have their trust. The new climate of confidentiality and autonomy makes paternalism unacceptable and primary care staff may perhaps be unwelcome intermediaries in the research relationship. Feedback from researchers may sometimes be more appropriate than feedback from GPs.

Second, public understanding and engagement with genetics is a huge task which needs to start in schools, be promoted through broadcast media and online, and certainly cannot be left to primary care teams, whose own knowledge is often incomplete and needs updating. Third, the key to genetic epidemiology will be avoiding ascertainment bias, by ensuring that those who sign up for large studies are representative of the general population. Rather than relying on primary care to avoid distortions, it may be more effective to appeal directly to the general public.

To most people, Big Brother now refers to a TV show, not *1984*. 'Reality' television — and more worthy programmes such as the BBC's *Restoration* — have successfully stimulated high levels of public interest and participation. Coupled with ubiquitous mobile telephony and ever-increasing internet access, perhaps this suggests that community participation in research might best work unmediated: recruitment from the ground up, rather than from the top down. In this approach to genetic epidemiology, primary care teams would not be gatekeepers to research, but would stand alongside patients in the role of advocates and advisers, as both groups seek to understand and participate in the brave new world of genetic medicine. The sceptics might be reassured by having a less central and more independent role, although the enthusiasts may still prefer the career rewards of acting as gatekeepers. In both visions of primary care epidemiology, ensuring that professional training reflects the increasing importance of genetic medicine remains the best way to underwrite good practice.

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