obese people have been interpreted as a consequence of relative insensitivity to endogenous leptin, possibly caused by deficient functioning of leptin receptors in the brain.⁸ The ratio between leptin in the cerebrospinal fluid and the blood decreases with increasing obesity,¹¹ suggesting that in obese people the capacity for transporting leptin across the blood-brain barrier is diminished. Although giving exogenous leptin may result in weight loss in animals without obesity or with dietary induced obesity,^{3,4} the possibility of leptin resistance makes exogenous leptin less suitable as a treatment for obesity in humans.

The crucial signal that induces *ob* gene expression and leptin production in fat cells is still unknown. Insulin and corticosteroids are obvious candidates.^{3,12} Studies have shown that these hormones do have such an effect, but the evidence is not consistent.^{3,12} Zimmet *et al*⁹ and others³ have found a correlation between insulin and leptin levels even after correcting for size of body fat mass. Fasting reduces insulin levels and leptin production, and insulin supplementation may reactivate leptin production.³ Except in the fasting state, insulin does not have acute effects on leptin in humans, but prolonged supplementation increases leptin production, which suggests a more indirect mechanism.¹²

Several recent studies have investigated the relation between spontaneous or enforced weight changes and serum leptin levels.^{3,8} These have found that leptin levels change more than

would be expected from the changes in size of the body fat mass. On the other hand, obese subjects who have reduced their weight down to the normal range and maintained this weight for some time exhibit higher leptin levels than non-obese subjects with the same body fat mass.^{3,8} One possible mechanism that deserves further investigation is that leptin production parallels the process of fat accumulation in the adipocytes rather than the current amount of stored fat. This relationship may also explain the residual variation in serum leptin as well as the correlation with insulin levels at any given size of the body fat stores.

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Listen to the parents

They may know best

See pp 983, 987, 991

There are two contrasting perspectives on the way patients and their parents use health services. When searching the literature on out of hours and emergency treatment, helpful keywords are "inappropriate" and "misuse."¹ Meanwhile, there is evidence that parents are more effective than professionals in the early diagnosis of a wide range of child health problems.^{2,3}

Three qualitative studies reported in this week's *BMJ*⁴⁻⁶ address these contrasting views, which are at the heart of general practice. Children with trivial complaints, parental anxiety, and out of hours calls make major demands on general practitioners' time. But the antecedents of these calls make demands on the wellbeing of parents, usually mothers, whose hours of work and on call duties can make the commitment of even the most overworked general practitioner seem modest.

The two papers by Kai (pp 987, 983) explore parental concerns about childhood illness and communication difficulties between professionals and parents.^{4,5} Based on group discussions and one-to-one interviews with parents in a disadvantaged inner city area, his work indicates parents' anxiety, sense of lack of control, and bewilderment at what they see as inconsistent prescribing patterns, unhelpful explanations, and opaque decision making. Kai advocates more information and education for parents. His title, "parents' difficulties," suggests

where the problem might lie. But it takes two to tango, and "empowering" patients means recognising their and their children's special expertise on their own bodies, lives, and environments, as well as getting professionals to relinquish "their monopoly on expert knowledge."⁴

Hopton and her colleagues (p 991) show that patients usually have a rationale for actions that may seem to the medical practitioner haphazard, perverse, or plain cussed.⁶ In their qualitative analysis of service users' accounts of telephoning their general practitioner out of hours they draw, like Kai, on the context as well as the content of the consultation. For those interviewed, a key factor was their prior experience with health services. Hopton *et al* conclude that educating and informing patients is not enough.

So what should be done? Decision making, differential diagnosis, risk assessment, and living with doubt are part of the good general practitioner's stock in trade.⁷ But this also goes for patients and parents of young patients. Douglas Black has suggested that there is a false antithesis between "the medical model" and "the social model" of health.⁸ Whether or not the antithesis is false, these papers show that in some circumstances there remains at best a divergence of view—at worst a yawning gap—between users and providers of general medical services.

This divergence is only rarely examined, though often discussed. While general practitioners tell colleagues their atrocity stories (my favourite is the one of a general practitioner, summoned for a night call because the baby had swallowed a condom, who was later phoned and told he needn't bother as they had found another one), patients tell their friends their stories of failures to diagnose. But the divergence is normally latent rather than manifest. As Philip Strong describes in his elegant essay on the etiquette of the consultation, "As every ... doctor was overtly competent, so every ... mother was nominally treated as loving, honest, reliable and intelligent: not, of course, capable of passing judgement on medicine, but certainly fulfilling her maternal duty to the child."⁹

Parents' views of being "a good mother" can conflict with professional views.^{10 11} However, in dealing with the content of health behaviour ("inappropriate" consultations) rather than the context of the visit (24 hours a day, seven days a week health surveillance by the mother) there is the risk that a child or a patient may be seen as a "work object," however compassionately dealt with. A recognition of parents' key role in the health care of their children would go beyond Illingworth's textbook advice that doctors do well to attend to parents' views.¹² Parents are the principal health carers of their children and are in a unique position to take an overall view of their

health. This week's qualitative papers on general practice indicate the value of low technology interventions such as listening.

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Primary care in the United States

Getting more academic but needs greater cooperation between family physicians and primary care internists

Primary care is on the up in the United States. Despite the failure of the Clinton health plan, many American politicians now believe what governments know worldwide—that primary care delivered by generalist doctors is the most cost effective way to deliver health care. Of course, primary care means many things in the United States: general internal medicine, paediatrics, and obstetrics, as well as family practice. But its core is the same as anywhere else.

The American Board of Family Practice defines primary care as a highly personalised type of first contact care that is comprehensive, ensures continuity of care and continuing responsibility for individual patients, and coordinates all a patient's health care needs. This sounds like general practice to the European ear. But Americans steer clear of the term because the general internists don't want to be muddled up with the family physicians and the family physicians don't want their broad biopsychosocial approach to be underestimated.

However, semantic scuffles and more serious turf wars among America's primary care doctors could soon be relegated to the past. The professional bodies that represent these doctors are collaborating as never before: developing shared policies and encouraging joint training and research. The American boards of both internal medicine and family practice hope that a more united front might attract more doctors to primary care.¹ Assuming that Americans want and deserve universal access to high quality health care by the end of the century (an assumption that most policymakers share²) the nation is going to have to find 35 000 more generalists and lose 115 000 specialists.³

The balance of medical manpower is already shifting. Last year one in four American medical graduates said they intended to work in primary care, compared with only one in seven in 1992.⁴ This may be because medical students now receive much more training in community and primary care and see many more positive role models working as generalists.^{5 6} Academic units of family practice exist in more

than 100 of America's 130 medical schools. And more than 400 family practice residency programmes provide postgraduate clinical training over three years in doctors' offices and community hospitals.

But medical schools wanting to improve their teaching in primary care still have an uphill struggle because they stand to lose money. The amount of federal funding for biomedical research (from the National Institutes of Health) is inversely proportional to the annual number of generalists produced by a medical school.³ This is worrying, given that medical schools get nearly a fifth of their funding through research grants.⁷

For this reason, and many others, research in primary care is not an academic luxury. Good, relevant research is essential for diagnosing and treating the diffuse and chronic conditions that present in primary care and don't fit the clinical evidence provided by predominantly hospital based studies.⁸ Research also raises the credibility and reputation of primary care and probably encourages medical students to choose careers in the discipline.⁶

But research is expensive and funding is scarce. So one organisation, the North American Primary Care Research Group (NAPCRG), set up in 1972, is trying to help primary care physicians in the United States and Canada to win big research grants. Through its new family medicine grant generating project, coordinated by Professor David A Katerndahl of the University of Texas at San Antonio, the group links family practice researchers with mentors in 10 universities nationwide. The mentors' remit is to help develop research proposals that will get through strict peer review and stiff competition and join the 10% that receive major (RO1) grants. In the project's first year, which ended in June, five of the group's ten applications to the National Institutes of Health won RO1 grants; three are still awaiting review.

However, academic primary care needs more than additional money; it also needs to change its culture. At NAPCRG's 23rd annual congress in Houston last November, Professor Bernard Ewigman from the Department of Family