New Zealand. In 1989 we performed a survey of asthma symptoms among a biracial, rural school population of 499 subjects aged 12-18. The survey questions and technique were the same as those used 14 years previously by Stanhope *et al* when examining a similar population of 741 students at the same school.²

The prevalence of reported wheeze had increased significantly from 26.2% to 34.0% ($p=0.01$), as had wheeze within the past 12 months from 20.1% to 25.5% ($p=0.05$). The prevalence of reported asthma had also increased from 8.0% to 13.3% ($p<0.005$), but to a lesser extent than a history of wheeze.

Among those without a previous diagnosis of asthma the frequency of wheezing occurring only with colds had not changed significantly (13.6% to 12.6%). By comparison wheeze unassociated with colds and without a previous label of asthma had increased significantly from 4.6% to 8.0% ($p=0.01$). Reported bronchitis, however, had not changed (16.2% to 16.1%).

For each comparison we adjusted for differences in age, sex, and race by multiple logistic regression.

Between our two adolescent populations there has been a significant increase in the prevalence of wheeze over the past 14 years. This increase is not explained simply by a change in labelling. The prevalence of diagnosed asthma has increased, but less so than the increase in wheeze, and there has been no corresponding fall in reported bronchitis.

Greater medical and public awareness of asthma may explain the increasing prevalence of reported asthma.¹ We have considered the possibility that the recognition and reporting of wheeze might also have increased for the same reasons. Among those without a diagnosis of asthma wheezing unrelated to colds increased significantly while wheezing related only to colds did not. This suggests that the increased prevalence of reported wheeze over the past 14 years is not explained by a change in public awareness.

The finding of an increased prevalence of wheezing in this New Zealand adolescent group lends further support to the likelihood that the true prevalence of asthma has increased. As Dr Burney and colleagues suggest, this might contribute to increasing hospital admissions and mortality from asthma. While comments on the reasons for this must be almost entirely speculative, the possible associations with changing patterns of treatment need to join other more or less fanciful hypotheses awaiting further investigation.

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Treatment of a pancreatic tumour secreting parathyroid hormone related protein

SIR,—Dr D Wynick and colleagues report the successful treatment with a somatostatin analogue of a patient with hypercalcaemia due to the release of parathyroid hormone related protein from a pancreatic endocrine tumour.¹ We would like to add our experience with octreotide to this.

A 42 year old woman was admitted with a three year history of intermittent episodes of vomiting.

On examination she was found to have an abdominal mass and was hypercalcaemic. At laparotomy a large retroperitoneal tumour in the area of the pancreas was found as well as liver metastases. A biopsy was performed, and histology was consistent with a neuroendocrine tumour. Prednisolone was prescribed, but she was lost to follow up. Twelve months later she was referred to our unit because of uncontrolled hypercalcaemia. She was cushingoid, and a mass was palpable in the epigastrium. Her corrected serum calcium concentration was 4.94 mmol/l and she had a low serum concentration of immunoreactive parathyroid hormone but greatly raised cyclic AMP excretion. Her serum parathyroid hormone related protein concentration was 2.38 µg/l (normal value <1.5 µg/l). Abdominal computed tomography showed a mass in the pancreas and a single liver metastasis. Bone scintigraphy yielded normal results, and the bone marrow biopsy specimen showed no evidence of malignant infiltration but showed considerably increased osteoclastic bone resorption. Plasma concentrations of vasoactive intestinal polypeptide, gastrin, glucagon, calcitonin, and neurotensin were normal. Urinary 5-hydroxyindoleacetic acid concentration was moderately raised whereas the concentrations of catecholamine excretion products were within the normal range.

She was treated with repeated infusions of pamidronate 60 mg, but this failed to normalise the serum calcium concentration. A trial of interferon alfa (3 million units thrice weekly) was ineffective, but octreotide 50 µg subcutaneously twice daily improved control with the serum calcium concentration fluctuating around 3.0 mmol/l. Selective angiography confirmed a single liver lesion, and an attempt was made to control the hypercalcaemia by surgical debulking and a 10 cm mass was resected from the liver. Immunohistochemistry showed the tumour cells to have strong parathyroid hormone related protein staining. Postoperatively, however, the calcium concentration again became raised but was finally controlled by increasing the octreotide to 100 µg twice daily. She remained well and normocalcaemic receiving this dose of octreotide 18 months after her most recent surgery.

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Depression and the menopause

SIR,—By conceding that oestrogens may be helpful for depressed mood while depressive disorder requires psychiatric treatment¹ Drs Dennis Gath and Susan Iles show but a modest shift from the traditional psychiatric opinion that oestrogens are irrelevant to either the causation or the treatment of depression in women.² Gynaecologists treating depressed women at the climacteric would fundamentally disagree with this view.

The writers pose three questions about depression "around the menopause." Is it more common? Is it due to lack of oestrogen? Does it need oestrogen replacement? Their denial of these points needs to be contested.

There is no dispute that there is an increased incidence of depression in women compared with men and that this excess begins from puberty³ and

is most apparent at times of hormonal fluctuations such as occur in the premenstrual phase, the postnatal months, and the years of the climacteric. It is also relevant that depression is uncommon in the last trimester of pregnancy, when oestrogen concentrations are high and stable.

We as gynaecologists accept entirely the environmental contribution to depression but are saddened by the failure of psychiatrists who treat these women to recognise that there is often a hormonal component and that oestrogen therapy will relieve their misery more effectively and safely than psychoactive drugs or electroconvulsive therapy. It is truly an aspect of the health care of women where there is little overlap between the two specialties.

The severe cyclical depression of the premenstrual syndrome has been shown in placebo controlled trials to respond to oestrogens, both oestradiol implants⁴ and oestradiol patches,⁵ at a dose high enough to suppress the hormonal fluctuations of the ovarian cycle.

Similarly, climacteric depression responds to percutaneous oestrogens,⁶ which are most effective in perimenopausal patients who were still having periods. In postmenopausal women the response is no better than that to a placebo. A major European study showed that climacteric depression was most severe in the two to three years before the cessation of periods.⁷ There is thus a double load for the patient to bear as cyclical premenstrual depression characteristically becomes worse with age as it blends into the years of most severe climacteric depression.

There is now a growing body of evidence to indicate that the affective components of the premenstrual and the climacteric syndromes usually respond well to oestrogen therapy. In most cases the commonplace habit of giving antidepressants and tranquilisers before trying oestrogen therapy is wrong. The difference between depression and depressed mood is irrelevant to women suffering from both the climacteric and inappropriate psychoactive drugs. But the sceptics need to be convinced, and some interspecialty collaborative research is urgently required to assess the true value of oestrogen therapy, as prescribed by gynaecologists,⁸ in the various types of depression as defined and classified by psychiatrists.

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Maternal and fetal screening for antenatal care

SIR,—While appreciating the problems of writing a general article on maternal and fetal screening for antenatal care, we feel that Dr M J V Bull's article requires comment.¹

Patients who are at risk of carrying a fetus with a genetic disorder should be considered in two categories—high and low risk. Those at high risk include families in which the single gene disorders are segregated or those where one parent carries a chromosome rearrangement leading to a significant risk of an unbalanced offspring. Such couples should be referred early, preferably before pregnancy, to allow carrier state to be assessed and linkage studies to be carried out when appropriate. For such women chorion villus sampling is an excellent method that allows couples at genetic disadvantage the chance to reproduce normally.

The application of chorion villus sampling for women of low genetic risk—for example, those over the age of 35 years—is questionable. Not only does there appear to be an increased risk of miscarriage related to the procedure but the woman is far more likely to need a termination of pregnancy owing to the increased number of fetuses with chromosome abnormalities in the first trimester of pregnancy, many of which would abort naturally. Women should also be warned that the incidence of false positive diagnoses is higher than with amniocentesis.² If both direct and culture preparations of chorionic villus samples are used then many of the placental mosaics that are not reflected in the fetus can be recognised, but in most cases this still means undergoing an amniocentesis to confirm fetal chromosome state. Such diagnostic difficulties not only are costly in clinical and laboratory time but also cause enormous emotional stress and increase the risk of pregnancy loss because of the need for two invasive procedures. Women who are offered chorion villus sampling and who are at low risk should be told that there is about a 1% chance that a reassuring amniocentesis will be required. We acknowledge that our patients must reach their own decisions but it must be in full knowledge of the benefits and risks of each procedure. The recent introduction of the combination of serum α fetoprotein, oestriol, and human chorionic gonadotrophin as a screening test for Down's syndrome³ was overlooked in the article. This "triple test" will increase our ability to detect Down's syndrome in women aged under 35 and will also lessen the need for amniocentesis in some women aged over 35. Again, adequate explanation is important as it is not a diagnostic test but merely changes the patient's odds of giving birth to an infant with Down's syndrome.

The question of increased maternal anxiety is also important in offering maternal serum α fetoprotein screening for neural tube defects. Leaving aside the vexed question of whether to screen by means of ultrasound or maternal serum α fetoprotein, or both, Dr Bull's paper contains some general advice on the interpretation of α fetoprotein screening results which suggests a lack of understanding of screening tests. The predictive value of a positive test result—that is, the chances of the patient carrying a fetus with a neural tube defect if the test is reported as abnormal—depends on the prevalence of neural tube defects in that area. Considering a test result as abnormal only if it is over 2.5 multiples of the median may therefore not be appropriate for areas of low prevalence. As the overall prevalence of neural tube defects is declining the cut off point for an abnormal test should be reconsidered regularly.

Poor understanding of the nature of screening tests is also shown in this article by the description of the use of random blood glucose testing at 28-30 weeks. Dr Bull suggests that we should screen only obese women, those who have had glycosuria, and those who have had a large baby. He further suggests that these women should be screened according to the criteria of Lind.⁴ Lind's test was designed to be applied to the entire pregnant population and was proposed because the standard clinical means of screening for abnormal glucose tolerance in pregnancy are so poor; it was also designed to replace urine analysis for glucose. This

is an example of applying a screening test to an already screened population.

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The GP contract

SIR,—Dr R R Charlwood's letter deserves comment and should encourage more discussion in your columns than hitherto.¹

I agree that there was a serious lack of local representation through local medical committees. Representatives to conferences, particularly the second special conference of representatives of local medical committees called to discuss these proposals last year,² were unclear whether to vote individually or on instructions from their local committees. Many were inexperienced, attending their first representatives' meeting. It has been obvious since then that instructions to representatives were not forthcoming and that the views of the profession as a whole, for more active and aggressive action such as sanctions, seemed to be disregarded totally by our General Medical Services Committee. The committee's decisions and actions did not represent "grass roots" opinion and this failure was reflected in the closeness of the voting at the special representatives' meeting.

The BMA council, the members' central executive, has similar problems over representation. Of the 50 representatives voted in at the recent election, just over half were general practitioners, of whom 19 were returned unopposed—does this reflect the apathy of the members? Only about one third of those members eligible to vote for them actually did so, and of doctors in the training grades only 15% considered the elections sufficiently important to express their opinions. Apparently, one general practitioner member can represent adequately each of Wales, Northern Ireland, and Scotland on the council. Only one candidate in that election was opposed.

Election of GMSC members shows similar dilution of local representation. Vacancies are filled haphazardly—by those who crave publicity or, as was the case recently, those who represented strong anti-government political views.

Would there be better representation were the BMA to be organised and structured more on the lines of a professional trade union? Had the GMSC negotiators been full time professionals, would they have negotiated a better deal? Indeed, would the practicalities of, say, immunisation targets have been realised earlier and more skilfully negotiated to the profession's advantage? The introduction of the Industrial Relations Bill by the Conservative government in 1970 made it possible for the BMA to remain in its existing form as "an organisation of workers." After representation by the BMA it was later allowed to be entered in a special register acquiring all the privileges and responsibilities of a trade union but without any change in its constitution. The incoming Labour government repealed the act, but, later, in the Trade Union and Labour Relations Act of 1974 this right was restored.

One of the successes of the BMA in the past few years has been the growth of its network of industrial relations officers. Why was this expertise not tapped? Why was there not a negotiator

with this special experience in the team? Is not a "contract" of employment an industrial relations matter? Aneurin Bevan once stated during a disarmament conference that the Labour government was so unprepared, with no alternatives to put forward, that he felt he had gone "naked into the conference table." That is what the GMSC appeared to do in its recent negotiations.

Before the last reorganisation of the NHS in 1974 the BMA appointed Sir Paul Chambers, a well known industrialist, to inquire into the association's constitution and organisation. Published in 1972, the report commented on the cumbersome nature of the organisation and the BMA's dilemma in trying to be on the one hand truly democratic and representing all opinions while on the other trying to achieve rapid professional action, particularly when faced with determined politicians.³ Chambers felt that the views of the majority should be represented by a small group of executive members. Unfortunately the report was ignored by the profession.

The BMA tell us that most doctors are now members of the association. So why should not each general practitioner have a vote in the election of one local GMSC member? Some might suggest that candidates would be unknown but many members of local medical committees do not know who their central representatives are now. Regional representatives tell us that it is impossible for them to attend both central and local committee meetings so how can they gauge local opinion accurately?

We need another special independent inquiry into the mechanics of our constitution and organisation with the aim of better direct representation of local opinion. We must not, as Dr Charlwood states, be caught out again.

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* The secretary writes: Doctors attending the BMA conferences do so as representatives and not as delegates and so may vote on proposals in the light of the debates and of up to date information available at the time, taking account of the known views of their local constituents. Doctors elected to the BMA's council and craft committees need to devote time and effort to representing their colleagues. This limits the numbers who are able to stand for election. The number of members who vote in elections to the council compares favourably with those in similar organisations. The smaller proportion of those in the training grades who vote is largely accounted for by the difficulty in keeping up to date lists of a mobile electorate.

The BMA has no special register rights as a union under the Trade Union and Labour Relations Act 1974. In negotiations the BMA uses those people it considers will be able to obtain the best deals for its members. It employs experts in industrial relations, provides training for its negotiators, and uses its industrial relations officers to provide advice to all of the BMA's negotiating groups. Experience with successive governments has also taught the BMA the value of negotiations being led by practising doctors. Sir Paul Chambers suggested radical reforms to the association's constitution and, though many were not adopted, some of his ideas were used in restructuring the association's council and committees. Subsequently, trade union legislation obliged the association to modify its election arrangements to the council, thus upsetting a balanced representation of all crafts. It is open to Dr Jones as a member to persuade his division to put an appropriate motion to the representative body proposing an inquiry on or amendments to the BMA's constitution.