to pay a lot of money for screening for prostatic cancer even though this results in overtreatment and evidence about a possible reduction in the mortality from prostatic cancer is lacking. Therefore the initiation of new studies and extension of current studies must be stopped.

A paradoxical situation exists in Belgium. Despite the European guidelines on screening for breast cancer[2] the initiation of a national screening programme for breast cancer is discouraged because of insufficient support by the national and regional health authorities. On the other hand, a lot of money is spent on so called pilot projects on screening for prostatic cancer.

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Vaccines should be more environmentally stable

EDITOR,—No prospective study to monitor the storage and distribution of vaccines in temperate countries is comprehensive if it does not monitor non-thermal environmental changes as well as temperature.[1] In developing countries, apart from varying ambient temperatures, extremes of sunlight, humidity, sandstorms, and snowstorms jeopardise the efficacy of vaccines.[2]

Study of the changing humidity around vaccine phials is possible with an innovative microenvironmental card. In Kinshasa, Zaire, Behets *et al* exposed whole blood specimens with high and low HIV antibody titres to 14 standardised environmental conditions over 20 weeks. The maximum antibody stability during the rainy season occurred with storage in gas permeable bags with a desiccant.[3] The use of such devices and of temperature recorders could give a permanent record of changes in humidity and air velocity in bulk storage centres for vaccines.

Unintended loss of effectiveness of vaccines because of faulty techniques during their distribution is not unknown in industrialised countries. Use of outdated poliovirus vaccine with inadequate virus particles, exposure of vaccine containers to the sun, and simultaneous ingestion of chlorinated water with oral vaccines are well known problems.[4] Only critical evaluation of storage, distribution, and administration of vaccines will enable us to improve the knowledge and training of staff.

Research is needed into vaccines that are stable despite fluctuations in temperature and humidity. Potentially stable vaccines need to be rigorously tested against environmental stresses in the laboratory and then be tested for potency. Only then will the public be safe from unexpected vaccine failure.

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Medical details crucial for residential care

EDITOR,—In the past couple of weeks my practice has been asked to look after two elderly residents in local part III accommodation, who arrived with no medical notes and no explanation of why they were receiving major and complicated drug treatment (one was taking morphine). Because both residents were in the accommodation for only a one month trial the practice had no information about their medical conditions. One patient had been transferred directly from hospital, but no discharge slip came through to the practice (but may well have been sent to the patient's previous practice). The second patient was transferred urgently from a general practitioner in the town when the carer fell ill.

I am concerned that, with the increasing trend to respite and short stay care, more people will be looked after by general practitioners who know little or nothing about their past medical care. No provision is being made to transfer the relevant medical information urgently. Even when they will be looking after the patient for only a short period the general practitioner and primary care team deserve to be involved in the process before the patient arrives in their practice.

My practice is looking towards implementing a system whereby the main medical details will be kept with patients and go with them wherever they are treated within health and social services departments. I guess that this will not become universal for some time.

Hospitals, social services, and general practitioners must work together to enable urgent exchange of information to ensure proper continuity of care. Undoubtedly, until a few years ago many of these patients would never have left hospital. They are seriously medically ill in many cases but should continue to be allowed access to high quality health care. Full information for the carers is essential. Unless general practitioners are in full possession of such facts I fear that many mistakes will be made.

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Infant mortality in Switzerland

EDITOR,—Data on births and mortality in Switzerland are relevant to Ken Judge and Michaela Benzeval's paper on health inequalities for the children of single mothers.[1] An evaluation of these Swiss statistics for 1979-81 is given in the table.[2]

The table shows that the children of unmarried mothers of low socioeconomic standing are at a higher risk of death. This is the case especially for those without occupation, students, apprentices, and those out of work, among whom the mortality ratio for children born to unmarried versus married mothers is an astounding 4·7. This clearly supports Judge and Benzeval's claim that poverty increases infant mortality.

Mortality in first year of life of infants of married and unmarried mothers

Socioeconomic group	Married mothers: No of births 1979-81 (×10³)	Married mothers: Death rate/1000 live births	Unmarried mothers: No of births 1979-81 (×10³)	Unmarried mothers: Death rate/1000 live births	Rate ratio	p Value
Upper class	8	7·8	0·1	0		
Self employed farmers, merchants, tradesmen	24	13·7	0·2	13·8	1·0	>0·1
Middle management	41	6·2	1·0	7·0	1·1	>0·1
Employees	46	7·9	5·2	13·4	1·7	<0·01
Workers	90	7·4	0·9	15·5	2·1	<0·01
Without occupation, students, apprentices, out of work	2	4·5	1·8	21·1	4·7	<0·01

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Trauma and mental health of children in Gaza

EDITOR,—The Gaza community mental health programme, the only such provision for a largely refugee population of 700 000, has been well placed to document the cumulative impact of the trauma of the intifada (uprising) on the mental health of the children of Gaza. More than 200 children have been killed by the Israeli army, and the United Nations Relief and Works Agency estimates that 21 000 have been injured since 1987.

Last year we found in a random community sample of 1200 children aged between 7 and 15 that 1044 had been tear gassed, 852 had been subjected to night raids by soldiers on their homes, 624 had witnessed assaults on family members, 420 had been beaten, 228 had been detained, and 192 had been injured (including many with bullet wounds and broken limbs). Many had witnessed the army firing into school grounds and assaults in public on teachers and pupils; schools were also regularly shut by Israeli military authorities for indefinite periods. Our community surveys showed a high prevalence of nervousness, fears, restlessness, sleep disturbance, nocturnal enuresis, and psychosomatic symptoms among children. Teachers reported aggressive behaviour and reduced concentration and performance in the classroom.

In conflicts, however, children are not just passive victims but also active participants. Their identification with the intifada as a struggle for Palestinian identity seemed psychologically protective: we found that those who reported a willingness to confront soldiers, including many with a history of beatings, had higher self esteem than the others. Similar observations have been made by South African psychologists on the children of Soweto.[1] On the other hand, children seem less likely to respect the traditional authority of parents or teachers when they see how this can be violated with impunity by soldiers and where neither home nor classroom gives them sanctuary. There is community concern that many children are less obedient or respectful than before.

Children disturbed enough to need treatment in a clinic thus represent one end of a range. A review of 70 consecutive cases meriting a diagnosis of post-traumatic stress disorder showed that nearly half the children had had multiple exposure to the traumatic events outlined above. Commonest presenting symptoms were recurrent frightening

memories, nightmares, weeping, social withdrawal, loss of appetite, aggressive play, and phobias concerning the dark or soldiers. Similar features have been documented in children in many conflict zones worldwide, though, for example, the 12 with conversion fits were also reflecting a distress mode, which is not uncommon in an Arab cultural milieu.[2]

As well as doing direct clinical work we are counselling teachers and parents about the ways that traumatisation may present and be handled in the community. There is a lack of longer term studies anywhere of the impact of prolonged exposure to militarised violence and threat on the developmental processes of children and their future mental health, intellectual maturation, world view, and tendency to behaviours like risk taking. We are mounting a prospective study in which 100 of those from our community study who have been exposed to multiple traumas are compared with 100 others with less exposure.

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Mycobacteria in Crohn's disease

EDITOR,—Paul Ciclitira rightly concludes that the case for mycobacteria having a role in the pathogenesis of Crohn's disease is unproved.[1] I believe, however, that the evidence presented to support this conclusion has been misinterpreted.

Two points are of paramount importance when reviewing the data on this subject. Firstly, *Mycobacterium paratuberculosis* is virtually identical with *M avium* (differing by a mere 2% in its genomic DNA,[2] and, secondly, *M avium* is already well documented as a common commensal in the normal human intestine.[3,4] Thus the detection of *M avium* by Blaauwgeers *et al* in the bowel wall of both patients with Crohn's disease and controls is no surprise. Likewise, the equal distribution of antibody responses to antigens derived from whole *M paratuberculosis* sonicates among patients with Crohn's disease, patients with ulcerative colitis, and controls can be predicted from the inevitable cross reaction between conserved mycobacterial antigens. Elsaghier *et al*, on the other hand, took specific steps to distinguish from *M avium* three immunogenic antigens specific to *M paratuberculosis*. Their finding that between 18% and 84% of patients with Crohn's disease have antibodies to these specific *M paratuberculosis* antigens is thus a more important and meaningful result.

Colleagues and I have reported using the polymerase chain reaction to detect *M paratuberculosis* DNA in the intestine of 65% of patients with Crohn's disease but only 4·3% of patients with ulcerative colitis and 12·5% of controls.[5] This specific polymerase chain reaction does not detect *M avium* (or any other mycobacterial DNA). Further work in our own and other laboratories has confirmed these findings (unpublished data). Contrary to Ciclitira's statement,[1] Yoshimura *et al* did not detect *M paratuberculosis* DNA by simple nucleic acid hybridisation but found what they considered to be *M avium* DNA distributed evenly among samples from patients with disease and controls, echoing once more the findings of previous studies.

No one should suggest that the case for a role of *M paratuberculosis* in the pathogenesis of Crohn's disease is proved. We can say, however, that this organism, which is clearly pathogenic in the terminal ileum of ruminants, is present in the inflamed intestine of patients with Crohn's disease. Furthermore, when the cross reaction of conserved mycobacterial antigens is overcome there is additional support for a role in pathogenesis from serological studies. The case is unproved, but a continued search for evidence is justified.

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Increased risk of leukaemia in eating disorders likely to be small

EDITOR,—Aya Nishizono-Maher and colleagues report a possible link between eating disorders and myeloid leukaemia.[1] Although they describe two cases of leukaemia among 89 patients referred with eating disorder, proof of a relation will require larger scale studies. In the Northern region (population three million) none of 42 women aged 15-40 who presented with acute myeloid leukaemia during 1983-92 had a documented history of eating disorder, so if there is any increased risk of myeloid leukaemia it is likely to be small.

The authors suggest that the reason for their observation may be reduced cell mediated immunity secondary to the malnutrition of an eating disorder. This hypothesis is open to criticism. Firstly, other groups of patients with acquired defects of cell mediated immunity, including those with HIV infection and after transplantation, have a tendency to develop lymphoid neoplasia rather than myeloid leukaemia.[2,3] Secondly, the largest group of people with malnutrition and impaired cell mediated immunity comprises children with protein energy malnutrition. There is no documented increase in leukaemia either in people with protein energy malnutrition[4] or in areas of the world where such malnutrition is common.[5]

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Freezing assets to pay for long term care

EDITOR,—Are we at last to have a debate about the financing of continuing care?[1] There is certainly no equity in the current arrangements. All forms of continuing care are expensive, and when such care is genuinely needed the patient no longer needs to maintain an independent place of abode in the community.

Nearly all forms of continuing care are subsidised, but unequally. Even hospital long stay beds are not free at the time of use as patients' state pension is reduced to the level of pocket money. Most patients in private and voluntary homes are also subsidised. The costs of long stay care cause enormous anxiety to individual people, families, and the government. The cost is unpredictable as the level of dependence and duration of care cannot be predicted for a particular person. To burden such patients with financial worries at a time when their health and independence are both declining is to add insult to injury.

A solution would be to freeze the assets of patients accepted into permanent care while allowing them a small, standard personal weekly allowance. This proposal would have to be watertight with no loopholes such as "a simple family trust [which] can shelter assets from compulsory contribution towards the cost of local authority accommodation," as currently advertised by many solicitors. On death the assets would be unfrozen and the first claim to be settled would be that of the provider of the continuing care. Any deficit would be paid by the state and any surplus could be distributed according to the wishes of the person who has died.

Protection would be needed for genuine dependants of long stay patients or residents. This group, however, would be relatively small—less than 10% of residents or long stay patients have a surviving partner. If assets were frozen there would be no danger of patients or residents being disadvantaged if they recovered unexpectedly and were able to leave care. On such an eventuality the assets could be unfrozen—but still kept unavailable for distribution to others until death occurred.

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Asthma management guidelines

EDITOR,—I broadly agree with the British Thoracic Society and others' guidelines for the management of acute severe asthma in adults but take issue with some of the specific recommendations.[1]

It is suggested that intravenous aminophylline should be used to treat life threatening asthma. Adding intravenous aminophylline to frequently nebulised β agonists does not lead to a faster improvement in objective measures of lung function in patients with acute severe asthma treated in the emergency department.[2] This study has not been reported in patients with life threatening asthma, but there is no reason why they should differ from other patients with acute severe asthma. Anecdotal reports suggest that stopping oral theophylline in patients with poorly controlled asthma can lead to further worsening of their asthma. For this reason, if aminophylline is not used patients taking oral theophylline should continue it. If aminophylline is given the recommended loading dose of 250 mg will lead to subtherapeutic concentrations in most adults. An appropriate loading dose is 6 mg/kg.

An intravenous bolus of 0·25 mg salbutamol or terbutaline is recommended as an alternative to aminophylline in life threatening asthma. In a Swedish study, however, an intravenous bolus of salbutamol was less effective than two doses of