breast feeding. More extensive exposure of infants to drugs is therefore expected.

I share the authors' opinion that data are urgently needed for many drugs on whether they are transferred through breast milk to the infant. For important drugs which have been studied with inappropriate sampling and assay procedures a critical review may reveal a need for repeated studies to establish safety-risk relations. The World Health Organisation has established a working group to evaluate published material on drugs in breast milk for inclusion in a monograph on the subject.[2] Possibly many of the general warnings against breast feeding when drugs are taken by the mother will appear to be without justification.

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Nurses: an underused resource

SIR,—Dr Julian Tudor Hart's recent leading article (20 April, p 1162) draws attention to the cost effectiveness of fully using nursing resources in general practice, with subsequent benefit to the patients.

Almost identical arguments can be applied to hospital medicine. Yorkshire has long been identified as one of the country's three "black spots" for the provision of rheumatology care[1] with a very low consultant:head of population ratio. This has led to an influx of patients from West Yorkshire towns to the rheumatology clinics at the General Infirmary at Leeds and the associated regional rheumatology centre at Harrogate. Many patients requiring disease modifying drugs for their rheumatoid arthritis need regular hospital follow up for maximum safety, particularly if their practitioners are hesitant in the supervision of potentially toxic drugs.

Impressed by the improved care a general practitioner can provide with the use of a well trained practice nurse, we decided to expand the role to the existing research nurses who were employed by the University of Leeds for clinical trials to embrace a workload similar to that achieved by "nurse practitioners" in the USA. After training such nursing sisters now see booked lists of patients alongside the rheumatologists at their weekly clinics. In a typical clinic up to 15 patients, referred by the rheumatologist after diagnosis and decision on treatment, will be seen by the nurse. She will counsel them in all aspcts of their chronic disease, working in collaboration with her physiotherapy and occupational therapy colleagues, and will monitor blood and urine specimens for possible side effects of their drug therapy. Physicians have more time for initial diagnosis and assessment and patients are delighted that the wait for a consultant appointment is now less than six months. The nurses have retained their initial university appointments but their contribution to patient care is also recognised by the granting of appropriate NHS honorary contracts at a sister level.[2,3]

Whether such nurse specialists might be superseded by an expanded output from medical schools is open to debate, but internal audit in our department leaves no doubt of their cost efficacy in these hard pressed times, and a questionnaire has revealed that many patients with arthritis prefer to see a nurse at regular intervals than a doctor only occasionally (Hill J, Bird HA, paper delivered to 16th International Congress of Rheumatology, Sydney, 1985).

We share Dr Tudor Hart's anxiety about the unmet need for training such "nurse specialists." The Harrogate Health Authority, long associated with rheumatology care for historical reasons, has recently supported the establishment of a regular four week training course for nurses who wish to specialise in this sort of care of arthritic patients. Other health authorities might well follow suit in different branches of medicine. The cost of providing higher training for the paramedical professions will be more than offset by financial savings as they then take on more responsibility.

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Screening of diabetics for retinopathy by ophthalmic opticians

SIR,—The paper by Drs C J Burns-Cox and J C Dean Hart (6 April, p 1052) describes an innovative use of opticians in screening for diabetic retinopathy in a health district. However, the evaluation of the screening programme, as presented in Dr Anthony J Bron's accompanying leading article, requires further comment.

All persons under study should undergo both screening and definitive tests, or, when this is impossible, representative samples may be taken and the results extrapolated to the whole group. The table can be used to validate the screening test. It is based on the assumption, accepted by Dr Bron, that non-attendance bias is not a major problem (though this is unlikely). The proportion of people confirmed to have serious retinopathy by the ophthalmologist (18/52) has been applied to the 72 people who had a positive screening test to give the total expected numbers of true positives. Similarly, the proportion of people found to have retinopathy when screened negative (1/197) has been applied to the 742 persons who had a negative screening test to give the expected false negatives.

Numbers of people calculated to have true and false positive and true and false negative results

	Definitive test (ophthalmologists' diagnosis)		
	Positive	Negative	
Screening test (opticians' diagnosis):			
Positive	24·9	47·1	72
Negative	3·8	738·2	742
	28·7	785–3	814

The prevalence of serious retinopathy is 3·5% (28·7/814), the sensitivity or true positive ratio is 87% (24·9/28·7), and the specificity or true negative ratio is 94% (738·2/785·3). The sensitivity is substantially lower than that quoted by Dr Bron (96%), who accounts only for those who attended the ophthalmologist.

The predictive value of a positive test is 35% (24·9/72). Thus, the odds against serious retinopathy being present in a case referred by an optician are two to one. As three cases discovered were untreatable, the value in practice of this type of screening is reduced further. In contrast, the optician's ability to exclude serious retinopathy is excellent.

As opticians are accessible and enjoy high public regard,[1] the framework for a screening service exists. However, several questions need consideration, in addition to the epidemiological evaluation. Why did a high proportion of those with abnormalities detected by opticians fail to attend the specialist? How can we avoid duplicate attendance to opticians and doctors? What are the costs to the NHS in addition to opticians' fees? What are the financial and social costs to patients, especially those wrongly referred? In view of the serious criticism[2] of the economic analysis presented in the paper by Foulds *et al*,[3] it is clear that much more work on the economic appraisal is required before alternatives can be rationally compared.

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Diagnosis by bronchoalveolar lavage of cause of pulmonary infiltrates in haematological malignancies

SIR,—Two of the seven patients reported on by Dr U Costabel and others (6 April, p 1041) had pneumonitis induced by cyclophosphamide (case 5) and by busulfan (case 6): the authors observed in the bronchoalveolar lavage fluid lymphocytosis of, respectively, 62% (with an $OKT4^+$:$OKT8^+$ ratio of 2) and 83% (with an $OKT4^+$:$OKT8^+$ ratio of 3·75).

These findings are interesting and unexpected, for the two drugs are known as having a fibrosing toxic action on lung parenchyma.[1,2] We ourselves have observed in three cases of cyclophosphamide induced lung disease and in one case of busulfan induced disease no lymphocytosis but a neutrophilic alveolitis reflecting pulmonary fibrosis.[3]

The importance of the lymphocytic alveolitis observed by Dr Costabel and his colleagues is unclear. Perhaps it was discovered because bronchoalveolar lavage was performed during the early stage of pneumonitis before development of fibrosis; this would appear to be similar to the lymphocytosis recorded in bronchoalveolar lavage fluid recovered after drug induced hypersensitivity pneumonitis due to gold salts,[4,5] amiodarone,[6,7] and methotrexate.[8,9] However, and surprisingly, the T lymphocyte subset ratios in these two cases were found to be nearly normal; in drug induced hypersensitivity pneumonitis these ratios have almost always been lowered[4-9] with the unique exception of a ratio of 4.[8] One might then suppose that in these two cases lymphocytic alveolitis would be of the same nature as that recorded after radiotherapy in a series of 83 patients[10]; a radiomimetic action of busulfan has also been suggested.[1]

In conclusion, considering all these results, we think that the diagnostic value and importance of data from bronchoalveolar lavage