staff are often heavily committed the day before an operating day and that by "admitting" a patient two to three days before they come into hospital the week's work load can be more conveniently staggered. However, this local advantage does not justify the concept of preadmission clinics in general.

We think that a more efficient use of hospital facilities would result from planned admissions with a short waiting list. It is then possible to do simple screening tests in the primary outpatient consultation clinic and to practise outpatient surgery in suitable cases.—We are, etc.,

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Au Antigen and Antibody in Cord and Maternal Serum

SIR,—It has not yet been clarified whether female carriers of the Australian antigen (Au) can transmit it to their offspring by the transplacental route. However, such an event must be uncommon as only rarely can Au be demonstrated in cord serum by conventional immunoelectro-diffusion techniques. Skinhoj and colleagues¹ could not find antigen or antibody in the cord serum of 52 children born of Au positive mothers though other workers have occasionally found Au in cord serum^{2,3} usually in association with viral hepatitis occurring in pregnancy. Au antibody has not been described in cord sera.

In Papua, New Guinea, the incidence of Au carriers in a normal blood donor population varies between 8 and 25% with a mean of 7.5%, as assessed by an immunoelectro-osmophoresis technique.⁴ Levels of Au antibody are also high, ranging between 20 and 50% of all sera, as measured by a passive haemagglutination assay with Au-coated red cells.⁵ In a continuing investigation we have now studied both Au antigen and antibody in 73 paired samples of cord and maternal serum from normal pregnancies using the above techniques. The results for Au antibody are given in the Table.

Au Antibody in Cord Serum		Au Antibody in Maternal Serum	Number of Paired Samples
+	=	+	15
+	<	+	6
+	>	+	8
+		0	1*
0		+	2*
0		0	41

* Low Titre

These findings indicate that an appreciable percentage of babies born in Papua, New Guinea, have detectable levels of Au antibody in cord serum. Using a paired comparison test there was no significant difference between the titres of Au antibody in the maternal and cord serum, and it is therefore probable that the antibody was derived from the mother by passive transfer. A low-titre Au antibody was detected in one cord serum without antibody or antigen in the mother. This may represent a fetal response to either transplacental transmission of antigen occur-

ing during pregnancy, or antibody derived from the mother as a result of a transient exposure to the hepatitis virus. On the other hand, it may simply reflect technical difficulties in assessing very low levels of Au antibody by this test method.

Au antigen was not detected in any sample of cord serum. However, this does not completely exclude the presence of Au, as more sensitive techniques may be required to detect the antigen. In the four mothers who were positive for Au antigen both antigen and antibody were absent from the cord serum. This finding as well as those from other workers¹ could provide further evidence against transplacental transmission of Au in normal pregnancy.

Au-coated cells for the passive haemagglutination assay were supplied by Dr. K. Okochi, of Tokyo University.—I am, etc.,

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Red Cross Blood Transfusion Service,
Boroko, Papua, New Guinea

- 1 Skinhoj, P., Sardemann, H., Chon, J., Mikkelsen, M., and Olesen, H., *American Journal of Diseases of Children*, 1972, 123, 380.
- 2 Keyes, T. S., Hewitt, W. L., Sever, J. L., and Gitnick, G. L., *Gastroenterology*, 1971, 60, 683.
- 3 Schweitzer, I. L., Wing, A., McPeak, C., and Spears, R. L., *Journal of the American Medical Association*, 1972, 220, 1092.
- 4 Woodfield, D. G., Oraka, R., and Nelson, M., *Medical Journal of Australia*, in press.
- 5 Woodfield, D. G., unpublished data.

Propranolol in Renal Failure

SIR,—We read the article by Dr. F. D. Thompson and others (20 May, p. 434) on the pharmacodynamics of propranolol in patients with renal failure. We should like to report on our experience using propranolol in eight patients with renal failure and resistant hypertension. The basic data are given in the Table.

Patients 1, 4, and 8 had malignant hypertension with renal failure. Patients 2, 5, and 7 had functioning cadaveric renal transplants. Patient 3 had chronic interstitial nephritis, and patient 6 polycystic kidneys and renal arterial stenosis. Good control of blood pressure had not been obtained using combinations of diuretics, methyl dopa, hydralazine, bethanidine, and guanethidine. Propranolol, three or four doses daily, was added and an eye kept open for signs of left ventricular failure. Most patients received digitalis in modified doses. Blood pressure readings (see Table) were taken with the patients in the recumbent position except in patients 3 and 4, whose blood pressure was recorded sitting. The readings are mean values of several readings on different occasions.

Two patients died in renal failure with oliguria and terminal signs of left ventricular failure. One of these (patient 8) had rapidly progressing renal failure. The renal

biopsy finding was consistent with malignant hypertension. Patient 1 had malignant hypertension also. He had been on propranolol since October 1970, and the creatinine clearances shown in the Table were in October 1970, October 1971, and May 1972. Beta-adrenergic blockade possibly modified the terminal phase in these two patients.

The blood pressure of four patients has been better controlled since they have been taking propranolol and in two it has been possible to reduce the dose of other drugs. We think that propranolol or some other beta-adrenergic blocking agent should be given a trial in the treatment of hypertension in patients with fairly stable renal failure. In rapidly progressing disease the use of these drugs is probably hazardous.—We are, etc.,

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Rosette Inhibition Test in Management of Transplantations

SIR,—We were interested to read the article on further assessment of rosette inhibition test in clinical organ transplantation by Mr. M. Bewick and others (26 August, p. 491). We have used the test for the past two years in an attempt to improve the management of acute rejection episodes in renal transplant patients. Our researches have confirmed the previously reported findings of raised rosette inhibition titres with immunosuppression.¹

The test, however, has posed several problems. Firstly, the titre difference between immunosuppressed patients and normal individuals in our series is on average two dilutions of antilymphocyte globulin. From the examples quoted in the article this would also appear to be the experience of Mr. Bewick's group. In standard biological practice with doubling dilution tests one dilution either way is accepted as the level of experimental error and a four-fold alteration in titre as a significant result. We have attempted to improve the accuracy of the test by an investigation of the variables involved. The antilymphocyte globulin is the most crucial of these, and as a biological product it is difficult to standardize and tends to deteriorate with time.²

Detailed results of our investigations are in preparation. We have not been able to show any clear correlation between a clinical predisposition to rejection and the level of the rosette inhibition titre. It would be interesting to know if Mr. Bewick's further studies have confirmed the predictive value of the test in acute rejection episodes previously reported.¹

In our series of 33 renal transplant patients

Patient	Sex and Age	Creatinine Clearance (ml/min)	Period of Observation (Months)	Maximum Dose (mg/24 hr)	Blood Pressure (mm Hg)	
					Before Propranolol	After Propranolol
1	Male 58	{ 39 (Oct. 1970) 10 (Oct. 1970) 3 (May 1972)	20	320	245/150	200/130
2	Female 46	24	11	120	193/133	168/110
3	Male 47	30	8	60	190/125	158/108
4	Female 38	53	4	160	230/135	190/115
5	Male 33	28	4	240	190/113	193/122
6	Male 44	9	3	120	200/147	160/112
7	Male 43	37	2	180	230/147	212/140
8	Male 53	15	1	240	186/110	218/125

(B.M.J. in press) immunosuppression has been managed on the basis of regular white cell counts with acute rejection episodes diagnosed on biochemical and clinical grounds. One patient has died, five nephrectomies have been performed, and the remaining 27 patients (82%) are alive and well at from three years to six months post-transplant. We feel from our research experience that the rosette inhibition test is not sensitive or accurate enough as an index of "immune status" to be used as the basis of patient management in clinical renal transplantation.—We are, etc.,

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1 Munro, A., et al., *British Medical Journal*, 1971, 3, 271.

2 Shanfield, I., Wren, S. F. G., and MacLean, L. D., *Transplantation*, 1971, 12, 80.

Allergy to House-dust Mites in the Tropics

SIR,—Asthma is a common problem in tropical medical practice.^{1,2} In our experience it was the third most common cause of male medical admissions to Ndola Central Hospital in 1971. The 172 male asthmatic admissions represented 9% of the total male medical admissions during that year and provided a disproportionately heavy clinical load with numerous readmissions and resistance to the usually employed bronchodilators.

Allergy to house-dust mites has been convincingly demonstrated as a cause of asthma,³ and it has been stated to be an important factor in the aetiology of asthma in the tropics.⁴ This preliminary study was designed to test the validity of this hypothesis.

Ndola lies at an altitude of 1,280 metres, latitude 13° S., and is the commercial and distributive centre of Zambia's copperbelt. Admissions to hospital of asthma cases are greatly increased during the wet season (November–April), when the relative humidity is high (Table I). The climatic conditions of the wet season provide favourable conditions for mite growth whereas the low relative humidity of the dry season (May–October) is unfavourable.⁵

TABLE I—Mean Monthly Temperature, Relative Humidity, and Total Monthly Asthma Admissions for 1971

Month	Mean Temperature	Relative Humidity	Total Asthma Admissions
January	20.1	83	16
February	20.4	81.5	31
March	20.8	75.2	61
April	20.8	70	42
May	18.2	51	28
June	16.3	50	20
July	17.2	49	8
August	19.5	39	5
September	22.0	40	12
October	23.4	41.1	7
November	21.4	69.3	9
December	20.6	78.4	13

Thirty unselected adult Zambian African asthmatics (25 men, 5 women) were tested by the modified prick test using an extract of *Dermatophagoides farinae* prepared by Bencard and compared with 30 controls matched for sex, age, and smoking history

TABLE II—Reaction of Asthmatic Patients and Controls to Prick Test with *Dermatophagoides farinae*

	Reaction		Total
	Positive	Negative	
Asthmatics	25	5	30
Controls	4	26	30
Total	29	31	60

χ^2 26.7; D.F. 1; $P < 0.0005$

(Table II). Twenty-five of the 30 asthmatics (83%) gave a positive reaction to the allergen, but only four of the 30 controls (13%) were positive, a statistically highly significant difference (χ^2 26.7, D.F. 1, $P < 0.0005$). All the asthmatics were asked to collect a dust specimen from their sleeping area. Of the 18 specimens received 11 had live mites of *Dermatophagoides* species present. Both *D. pteronyssinus* and *D. farinae* were identified. In three others only mites of the species *Glycophagus* and *Cheyletus* were found.

These results suggest that allergy to house-dust mites is a very significant factor in the aetiology of asthma in Ndola, and this is probably so elsewhere in tropical Africa where asthma is common. No attempt was made to skin test the asthmatics with other allergens. This has been done on Nigerians on a limited scale with inconclusive results.¹ Further studies are indicated to assess the possible importance of these other allergens.

If the results of this study are confirmed it would seem reasonable to embark on a trial of hyposensitization, as this has been shown to be of some benefit,⁵ and to examine the possibility of mite eradication.—We are, etc.,

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Central Hospital,
Ndola, Zambia

1 Sofowora, E. O., *East African Medical Journal*, 1970, 47, 434.

2 Anim, J. T., and Edoo, B. B., *Ghana Medical Journal*, 1972, 11, 59.

3 *British Medical Journal*, 1971, 2, 601.

4 Githo, F., and Rees, P., *British Medical Journal*, 1971, 3, 475.

5 Maunsell, K., Wraith, D. G., and Hughes, A. M. *Lancet*, 1971, 1, 967.

Chinese Heroin

SIR,—In the light of recent press reports of a large scale importation of impure Chinese heroin to Britain via Hong Kong the following case is disturbing.

Previously treated for reactive depression attributed to frustration in her employment as a children's nurse in 1967, a 22-year-old married woman was referred after returning from London to her mother's Blackpool home. Introduced to intravenous heroin and phseptone by her boy-friend—later husband—two years ago, she obtained supplies of impure Chinese heroin from the wife of a Chinese pusher. She stated that rapidly increasing tolerance caused her to increase the dose sixtyfold ($\frac{1}{4}$ ounce (7.7 g) daily). She developed amenorrhoea and abscesses and thrombophlebitis in both arms and her general condition deteriorated, with weight loss of 20 lb (9 kg). Her husband was admitted to a London clinic for treatment of heroin addiction. She insisted that since returning to Blackpool she had taken only a tiny dose of Chinese heroin, about the source of which she was very reticent, and experienced some withdrawal symptoms—cold-

ness, sweatiness, pains in the abdomen, and constipation.

Until recently virtually all heroin in this country ultimately came from medical sources, formerly from prescribing and latterly from the treatment centres themselves.¹ To some extent this limited the spread of addiction and the purity of the drug reduced the likelihood of adverse clinical effects. Moreover, it is assumed that addicts seeking supplies will thus attend the drug-dependence centres. Now we are confronted with pushing by people supplied by allegedly extensive illegal imports. If so, we have a situation similar to that in the United States, where there has been an epidemic of addiction with disastrous social and medical effects. Furthermore, the stimulus for addicts to seek treatment may well be lessened.

That this patient came to Blackpool and was still able to obtain supplies suggests that this addiction may spread through the country. In view of these clinical and epidemiological considerations it is disturbing that notification of heroin addicts to the Department of Health through the hospitals concerned, begun in July 1967, was discontinued in January 1971, though notification to the Home Office under the terms of H.M.(68)6 remains.²—I am, etc.,

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Lancs

1 Gardner, R., and Connell, P. H., *Lancet*, 1970, 2, 455.

2 Home Office, *The Dangerous Drugs (Notification of Addicts) Regulations 1968*. London, H.M.S.O. H.M.(68)6.

School Refusal

SIR,—Dr. Lionel Hersov (8 July, p. 102) might have found space to mention more specifically the management roles of the general practitioner and the school medical officer. At primary care level they are community physicians co-operating in the fields of paediatric mental health and infectious disease control. Subject to the interest they show, they may or may not need to involve psychiatric or child guidance staff. Many cases are resolved without resort to the advice of either. Dr. Max B. Clyne¹ illustrates this point.

As Mrs. Diana J. Leigh (22 July, p. 236) and Dr. G. L. Davies (29 July, p. 293) point out, the trigger factor in a multifactorial aetiology is usually social (for example, change of school or illness of a relation). However, the social worker most likely to be involved is specifically the educational welfare officer. He is not part of the post-Seebohm social services department but at present is an educational department colleague of the school medical officer working for the same local authority. He is thus well placed to cope with those children for whom social and medical advice may be necessary or on whose behalf legal proceedings may need to be taken. The early determination of the very difficult problem of which children are challenging authority as truants (and therefore potential behaviour or conduct problems with later personality disorders) is very important indeed. Dr. Hersov has himself given very useful and valuable advice on this aspect, which has in practice been found to work.²

These children are problematic in more