physicians, especially in the nationalized hospitals, have the time to bestow. But if this principle is carried out, and the patient gradually re-educated, the results can be remarkable.—I am, etc.,

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Priorities in Mental Care

SIR,—With the recent furore over mental institutions and the desperate need both to modernize present mental hospitals and to build new ones, I feel that one essential problem should not be overlooked.

Intensification of social problems related to growth of populations, increasing urbanization, industrialization, and automation, war and threats of war, tensions around racial conflicts and desegregation, and unemployment have had a serious and frequently devastating impact on the family. Initially, communities with over-optimistic expectations looked to psychiatrists for solutions to juvenile delinquency, school dropouts, drug addicts, the mounting number of illegitimate births, and other manifestations of social disorganization.

This wave of facile optimism has passed temporarily, leaving the serious problem of where and how medical and psychiatric skills can be used most strategically to solve complex community problems.

Though new hospitals will inevitably be a boon in the management of psychiatric patients, the essential unit, the family, will need the integration of the multiple skills of the teacher, social worker, psychologist, public health administrators, and psychiatrists. It is these one feels ought to be both encouraged and trained simultaneously, if not before, new mental hospitals are completed.—I am, etc.,

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Myocardial Infarction after Surgery

SIR,—Dr. P. R. Hunter and others (21 December 1968, p. 725) in a study of the incidence of myocardial infarction following surgical operations have commented on the increased levels in the serum of lactic dehydrogenase (L.D.H.) in 47 of their 141 patients.

The incidence of raised L.D.H. levels after surgical procedures was related to the type of surgical procedure performed, and a moderate postoperative rise was common when the field of operation was in the abdomen or pelvis. They also state that, in the presence of equivocal electrocardiographic changes, a confident diagnosis of postoperative myocardial infarction can often be made based on serum aspartate aminotransferase (S.G.O.T.), L.D.H., and L.D.H. iso-enzyme patterns.

We have also been interested in this problem and have measured serum L.D.H. levels in the postoperative period for 10 consecutive days in 29 patients. As the electrophoretic, chromatographic, and immunologic methods of separation of L.D.H. iso-enzymes are generally too cumbersome for the average hospital laboratory,¹ we have used a simpler procedure. The L.D.H. level of the serum was assayed, the serum placed in a water bath at 60° C. for 30 minutes and the L.D.H. level assayed again. The second assay value was called the "heat stable" L.D.H. and closely correlates with L.D.H.₁ and L.D.H.₂,^{2,3} the iso-enzymes which are raised in myocardial infarction.

It was found that there was no significant difference ($P>0.05$) from preoperative serum levels of L.D.H. or "heat stable" L.D.H. in patients who underwent surgical operation without concomitant blood transfusion. However, in patients who had transfusion of blood in the perioperative period there was a significant ($P<0.05$) elevation of total L.D.H. on the second and tenth postoperative days, and of "heat stable" L.D.H. on the second, third, and tenth postoperative days.

We also noted that serum L.D.H. levels from blood haemolysed at the time of sampling were abnormally high, and in one patient who had an intravascular post-transfusion haemolytic reaction both total L.D.H. and "heat stable" L.D.H. levels rose markedly. Serum L.D.H. is raised in cases of haemolytic anaemia.³

It is suggested, therefore, that the measurement of serum L.D.H. and "heat stable" L.D.H. in the postsurgical period is of use in the diagnosis of myocardial damage provided that the patient has not received a blood transfusion and erythrocyte haemolysis has been avoided. The relation between L.D.H. levels and type of surgery described by Dr. Hunter and others may thus be incorrect, as blood transfusion in the perioperative period was not considered, and the administration of blood during abdominal and pelvic surgery is not uncommon.—We are, etc.,

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Adenocarcinoma of the Cervix

SIR,—Adenocarcinoma of the cervix is a mixed carcinoma of the cervix containing both squamous and adenomatous elements. It responds less well to radiotherapy than its pure squamous counterpart. In the course of a special study of these lesions carried out between 1958 and 1961 it became obvious that a non-clinical (that is, preinvasive and non-clinical invasive carcinoma) could be recognized.

During that period 298 clinical carcinomas of the cervix were admitted and 37 (1.2%) were found to be adenocarcinomas. In the same period 122 cases of preinvasive cancer, all discovered by vaginal cytology, were admitted and 14 (1.1%) were adeno-

epitheliomas. Follow-up is now complete and covers a period of eight to ten years following treatment. A comparison of the results of the clinical and non-clinical forms of this disease shows the value of early diagnosis.

Clinical Adenocarcinoma

Method of Treatment	Radiotherapy Only	Surgery Only	Modified Radiation and Radical Surgery	Total
Dead ..	13	2	7	22
Alive at 5 years ..	2	1	12	15

The overall survival rate for this group is 40%. For those treated purely by radiation it is 13%, and for those treated by modified radiation followed by radical surgery the five-year cure rate is 63%. It is interesting also to note that there were five cases only of stage 4 tumours. One was too advanced for any treatment, and one was treated by radiotherapy only and died in three months. Three were treated by modified radiation followed by pelvic exenteration. Two of these still survive, and the other died at four years from a cerebral haemorrhage without recurrence.

There were 14 cases with no clinical evidence of disease, and all were diagnosed by vaginal cytology. Ten of these were non-invasive on histological examination and four were frankly invasive though they had no signs or symptoms of the disease.

All these patients are still living. Ten were treated by modified radical hysterectomy. Of the four cases (all preinvasive) treated conservatively (cone biopsy), two have had a successful pregnancy since treatment, though one of these has subsequently undergone hysterectomy for a recurrence of the lesion.

Finally, it is of interest to note that the youngest patient in each group was only 22. The 22-year-old in the clinical group had a stage three tumour treated by radiation and died of cancer four months later. The 22-year-old in the non-clinical group was treated by cone biopsy, has since had a further successful pregnancy, and remains well.—I am, etc.,

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Paroxysmal Nocturnal Haemoglobinuria and Leukaemia

SIR,—Your leading article (30 August, p. 483) draws attention again to paroxysmal nocturnal haemoglobinuria (P.N.H.) and connections with leukaemia and the myeloproliferative disorders. While studying the lysis of P.N.H. cells in solutions of low ionic strength¹ Dr. F. Stratton and I also tested cells from patients with some of these diseases with a screening test for P.N.H. as you suggest. One out of three patients with acute myeloid leukaemia was weakly positive.

Of greater interest was the fact that three out of three cases of myelocytomatosis gave a more strongly positive result. In an attempt to elucidate this I measured the levels of red cell acetyl cholinesterase² (AChE) in these and other blood disorders.³ This enzyme is known to be low in P.N.H.⁴ The expected

low figures were found in all three cases of P.N.H. in which this test was performed. Ham's test and the sugar-lysis test were also strongly positive. A low figure of AChE (less than 0.550 pH units/hour) was also found in several cases of myeloproliferative disorder, including polycythaemia vera, myeloid sclerosis, di Guglielmo's disease, thrombocythaemia, and myeloid reticulosis. In some of these cases there was also slightly increased lysis in the sucrose-veronal buffer.

Though there was not complete correlation between a low AChE and increased sugar lysis, the high proportion of abnormal results in the diseases under discussion supports Dameshek's⁵ speculation that they are connected.—I am, etc.,

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Elusive Tumours

SIR,—For a good number of years I have observed the difficulty among medical students and even medical practitioners in eliciting a small subcutaneous tumour by palpation. This is particularly so in small breast tumours.

Palpation of such small tumours can be improved by wetting the skin surface over the affected site. The use of a soapy solution will increase the sensitiveness of this examination. Small subcutaneous tumours can become very obvious by rubbing the palmar surface of the terminal phalanx of the index finger (or any other finger) over the wetted skin surface.

I am sure a lot of clinicians know this little trick, although I do not recall reading about it in medical publications.—I am, etc.,

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Maternal Rh Immunization

SIR,—In opposition to Dr. W. Q. Ascari and his colleagues (15 February, p. 399), Dr. D. F. Hopkins (29 March, p. 843) upholds the accepted view that a proportion of Rh-negative women of blood groups A and B, as well as O, are protected against Rh immunization if they are married to ABO-incompatible husbands. Dr. Hopkins bases his case—a case disregarded by Dr. Ascari and his colleagues (7 June, p. 634)—on the three series quoted by the latter,¹⁻³ plus a series of his own,⁴ and if to these four are added the other six relevant series,⁵⁻⁹ as in the accompanying Table, his already convincing case becomes conclusive.

The Table gives the observed and expected numbers of Rh-immunized wives in the aggregate of eight of the ten series.¹⁻⁷ It shows that the ratio of observed to expected wives of ABO-incompatible husbands is 0.76 (296:390.3) for A wives and 0.66 (208:316.2) for B wives. Such massive

departures from expectation speak for themselves, and essentially similar results are given by the aggregate of the remaining two series,^{8,9} the data from which are differently presented.

Incidence of Rh Immunization in Wives of ABO-compatible and ABO-incompatible Husbands Respectively (Combined Data¹⁻⁹)

Type of Rh-immunized Wives	Wives' ABO Group	Rh-immunized Wives		
		Observed	Expected	O./E.
Wives of ABO-compatible husbands	AB	256	254.7	1.01
	A	3,084	2,484.2	1.24
	B	513	432.1	1.19
	O	1,948	1,655.6	1.18
Wives of ABO-incompatible husbands	A	296	390.3	0.76
	B	208	316.2	0.66
	O	1,049	1,819.9	0.58
Husbands	ABO-compatible	5,801	4,826.6	1.20
	ABO-incompatible	1,553	2,526.6	0.61
Total		7,354	7,353.2	1.00

Thus there is overwhelming evidence that a proportion of ABO-incompatibly mated A and B, as well as O, wives do indeed receive protection against Rh immunization.—I am, etc.,

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Patient-monitoring on a General Ward

SIR,—The general concept of the range of equipment carrying the name Monitron was developed in these laboratories, and I am therefore not unnaturally concerned with the future image of the equipment. Drs. J. M. Rawles and G. S. Crockett (20 September, p. 707) acknowledge the collaboration of members of my staff, and we have no quarrel with any of the results quoted or with their interpretation. What I feel is unfortunate is that certain factors which would put the trial into perspective have not been given sufficient emphasis, and that as a result a whole range of equipment may in future be viewed in a rather worse light than it deserves. These factors are:

The equipment used was so-called Mark I equipment, merely one step removed from laboratory prototypes. The quantity manufactured was only sufficient to equip 12 beds, and it was one of the purposes of the trial to obtain operational experience with rather complex equipment, so that a viable commercial range could be designed. This has now been done thanks to the work of people like Dr. Rawles, and current equipment has been shown to have an incidence of technical faults about one-tenth of that of Mark I equipment.

When allocating the equipment to five different hospitals a deliberate attempt was

made to obtain a wide spread of operational situations ranging from a busy multiple injury unit to a general medical ward. This was done in the full realization that in some situations the equipment would prove to be more useful than in others, and not entirely unexpectedly it has been demonstrated that a complex installation is unsuited to a general medical ward.

Monitron equipment is basically modular, and much simpler and cheaper installations can be assembled which provide less facilities but bring the cost down to a few hundred pounds per bed. The full range of equipment was supplied so as to identify the facilities which were useful in a particular situation.—I am, etc.,

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Platelets and Aspirin

SIR,—Drs. A. H. Youssef and P. Barkhan (16 August, p. 394) and your leading article (p. 371) implied that acetylsalicylic acid is bound to platelets via the acetyl group, and that this may be the explanation for the effect of this drug on platelet aggregation and associated release reactions.

However, careful consideration of their data does not necessarily support the above conclusion. They found that virtually no ¹⁴C-carboxyl-aspirin was bound to platelets, whereas a small amount (2–5%) of ¹⁴C-acetyl-aspirin was bound. They explain the lack of carboxyl label on the platelet as being due to a splitting off of this group when the aspirin was attached to the platelet via the acetate group. However, the carboxyl group of the aspirin is firmly attached and no enzymes or other mechanisms for splitting it off are known. By contrast the acetyl group is easily hydrolysed and there are known enzymes in plasma and other tissues to accomplish this.

A more plausible explanation of their data is that under the conditions of their incubation of labelled aspirin with plasma and platelets a portion of the ¹⁴C-acetate is split off, and that it is this free acetate ion that either binds to or enters into the platelet. Preliminary data from our laboratory using ¹⁴C-acetate support the latter explanation. The mechanism of action of aspirin on the platelet remains obscure.—I am, etc.,

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Postoperative Gas Gangrene

SIR,—Your leading article "Postoperative Gas Gangrene" (20 September, p. 665) and the article to which it refers by Dr. M. T. Parker (p. 671) are salutary reminders of the prevalence of this postoperative complication. It will surprise many surgeons to know that during this two-year investigation, by no means nation-wide, clostridial infection was reported in 85 cases, "of which 55 were gas gangrene, fatal in 31." Advocacy for penicillin operative cover for higher-risk patients is also welcome, but where do you draw the line between these and "perfectly safe, clean operations" (is there such a