Do they seriously believe that the Review Body is likely to recommend increased remuneration only a few months after stating that we were not seriously underpaid? If so, would an admission that the Review Body was wrong lead our negotiators to claim retrospective payments for the underpaid years? The Minister should be told by the Conference of Representatives of Local Medical Committees and by the Special Representative Meeting that our 17,875 resignations will be forwarded to executive councils on 30 June to take effect on 1 October unless he is prepared to concede every single point in the Charter, and that if he wants a comprehensive National Health Service he will have to pay for it. Simultaneously the negotiators and the backsliding members of the G.M.S. Committee and of the Council of the B.M.A. must be told that if they fail us on this occasion our dated resignations will be sent to the B.M.A., as we would prefer to negotiate our own remuneration with our own patients rather than tolerate their ineptitude for a moment longer.

Heaven help us if we allow the Minister to fool our negotiators, and to wreck the B.M.A., before disappearing into political obscurity as a member of Her Majesty's Opposition.—I am, etc.,

Hull.

DUNCAN YUILLE.

SIR,—How naive can our negotiators be? Up to now I had believed them to be a team of tough and able men, well chosen and well armed with a potent weapon which 18,000 of us had forged for them. Now it appears, finding themselves undefeated in the preliminary skirmish, and even with some vague suggestions that they might not come off too badly in the main engagement ahead, they are proposing to destroy this weapon, the only one they've had in their hands for nearly 20 years. What madness! Fortunately, the B.M.A. Council took a tougher view (*Supplement*, 5 June, p. 233), and let us hope that the two special meetings shortly to be held will uphold the Council and vote for present retention of the withdrawal notices.—I am, etc.,

East Grinstead, Sussex.

E. J. DENNISON.

SIR,—The joint statement of the Minister and the six representatives of the profession has now reached the periphery. In its narrowest remit it contains little advance on already existing proposals or concessions, particularly on ancillary help re "priming the pump." We remain saddled with "the old rope" of the Review Body. It proposes dangerous precedents such as the non-publication of written evidence by the profession to the Review Body before this body has received them.

It abolishes the Pool, but conditionally. On the most vital issue the "pricing of the contract" it promises nothing concrete. The concept of the finance corporation is emasculated by the proposals laid out in the statement. Concessions on certification are minimal. In fact the concessions in the statement, such as they are, cannot be assessed in their significance until the new overall level of family-doctor remuneration becomes known.

In its broadest concept as a sign of the Minister's intent to negotiate the rest of the family doctor charter it is an abject failure. It exposes the continuation of a consistent Ministry policy of giving away little or nothing but carrots to a near moribund professional donkey. It exposes a Government more concerned in currying votes from an electorate long enamoured by their present bonanza of a Health Service than in putting to this same electorate, who are also the consumers of a deteriorating medical service, the unpalatable fact that they can only save the service by pouring into it a realistic sum of money which in the end must come from the electorate. This nation's medical service, the profession's standards, and the cream of those providing the service are to be sacrificed on the altar of political expediency.

After negotiations described as "no easy ride," "on occasions hectic," we have a document described "as the best that could be had." On this indication of a Minister's good intent we are asked to tear up our resignations and put our hopes and good faith in the continued efforts of the Ministry and our "six wise men." Wisdom should not be equated with success.

This document is pie (of a doubtful filling) in the sky.

We have fulfilled our latest role as reasonable men. It is time we completed the casting and concluded this sorry farce as men resolved to seek the clean air of professional freedom and once again restore the profession to a state of solvency, dignity, and high service. If the periphery has at last had its surfeit of wisdom in high places and scraps of medicated paper from H.M.S.O. for heaven's sake let us say so and let us depart this Service.—I am, etc.,

Rainham, Kent.

J. RUFFELL.

SIR,—The Fellowship for Freedom in Medicine considered the "Joint Report of

Discussions with the Minister of Health Upon the Charter for the Family Doctor Service" at a well-attended meeting on the evening of Wednesday, 2 June.

It was appreciated that the profession's representatives and the Ministry of Health must have worked hard during the three months of negotiations, and that this was doubtless due in very large part to the fact that the British Medical Guild held nearly 18,000 undated resignations. It was further considered that in many extremely important respects the Joint Report was much too vague; therefore the under-mentioned resolutions were passed by very large majorities in each case:

Resolution 1.—This very well attended meeting of the Executive made a preliminary examination of the Joint Report. Opinion was expressed that it was an ambiguous document and was totally inadequate as a reason for the destruction of the resignations from the N.H.S.

Resolution 2.—The Executive considered that resignations should be sent in on 1 July (to become effective on 1 October). Fresh discussions could then be initiated on Governmental methods of financing general-practitioner medical care.—I am, etc.,

R. HALE-WHITE,
Chairman.The Fellowship for Freedom in
Medicine Ltd.
London W.1.

SIR,—The offer to resign was made, collectively, to help our negotiators who have started so well. If this is no longer the form in which they now require our collective support, each separate offer to resign should be returned to the sender *with thanks*.

What we then do with them will be for each one of us to decide, individually. I want mine back. It will be kept for burning ceremoniously when the new contract has been priced and signed.—I am, etc.,

Peaslake, Surrey.

G. I. WATSON.

Calcium Metabolism in Sarcoidosis

SIR,—Albright and his group^{1,2} and Dent and colleagues³ independently came to the conclusions that the primary defect in calcium metabolism in sarcoidosis was over-absorption by the intestine.

From the beginning, however, it was realized that over-absorption could not be the whole story, since the urinary excretion of calcium was often considerably greater than the total amount of ingested calcium. Despite this glaring discrepancy the logical fallacy of primary over-absorption in sarcoid has been generally accepted, virtually without demur, and is quoted to-day in almost all places where the topic comes up—e.g., in a leading article in the *B.M.J.* of 19 September 1964 (p. 707).

Jackson and Lancaster⁴ investigated this problem in 1959 and found several other discrepancies in the theory that sarcoid led to over-absorption of calcium; this to hypercalcaemia; this to hypercalciuria and the deleterious effects on soft tissues. These discrepancies may be listed: (1) urine calcium often greater in amount than total ingested calcium; (2) hypercalciuria of severe degree (e.g., mean of 600 mg. per day in one case) may be present with sustained normo-

calcaemia; (3) on cortisone, a reduction in serum level often occurs considerably before the reduction in urinary calcium excretion and without change in faecal calcium (i.e., without change in intestinal absorption); (4) on a very low calcium intake—that is, when the gut cannot possibly over-absorb calcium, since it has nothing to over-absorb—both the serum-calcium level and the urinary calcium may remain elevated, even for months. Consequently it must be concluded that over-absorption could not possibly have been the responsible agent. (5) Conversely, a great increase in dietary calcium produces only very small changes in urinary calcium, whereas with an excessive absorptive capacity one would expect great increases in the calciuria.

It is clear, then, that the following sequence of events cannot satisfactorily explain the calcium disorder in sarcoid: increased intestinal absorption of calcium → raised serum-calcium level → hypercalciuria → renal damage. We suggested a different relationship, whereby the primary effect of the sarcoid was to raise serum calcium (the extra calcium presumably coming from bone), or urine calcium (by a presumed

direct effect on renal tubular handling of calcium). The hypercalciuria may itself then lead to a compensatory intestinal over-absorption as follows:

These authors produce a good deal of evidence that this sequence of events may occur in other conditions, such as in the pharmacological state of vitamin-D overdosage.^{4, 5}

"Intestinal compensation" for high urinary-calcium loss must normally be occurring all the time, since different normal adults may have consistently different urinary calcium outputs, ranging from 50 mg. in some cases to 400 mg. per day in others. These great individual variations of urinary calcium in normal adults, the relative constancy of urinary-calcium excretion in each subject over long periods under normal conditions, and the extremely small changes produced in urinary calcium by great changes in calcium intake, have been fully attested on a large scale by Knapp,⁶ Nicolaysen *et al.*,⁷ and Hodgkinson and Pyrah.⁸ Yet, whatever the natural level of urinary calcium may be, each normal adult maintains a net bodily balance for calcium when considered over long periods. Thus his intestinal absorption must be naturally compensating and attuning itself to the level of urinary loss. The absorptive calcium "barrier" is therefore controlled by the urinary output.

However good or poor this general theory may turn out to be, it must surely be clear that over-absorption cannot be the primary lesion of calcium metabolism in sarcoidosis. We believe it to be a compensatory phenomenon.—We are, etc.,

W. P. U. JACKSON.
C. P. DANCASTER.

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Health Centres

SIR,—Your leading article on health centres (29 May, p. 1394) is both timely and welcome. I hope you have started a debate which will arouse as much interest and controversy as "remuneration" usually does. General practitioners must stop looking over their shoulder, mourning the passing of their so called "independence," and we must bury

the hostility so often reserved for proposals to bring our work closer to that of the medical officer of health.

We must boldly recognize that improved hygiene and nutrition, advances in drug therapy, and immunization programmes have changed the pattern of community diseases. This, and our failure to organize to cope with the new situation and the new problems it has thrown up, is the root cause of our present discontent.

With so many problems arising from an individual's disturbed relationship with his environment, the good general practitioner needs to have at his disposal the means to operate in the environment, as well as the drugs or time to give to the patient. The environmental tools are the welfare services, and the general practitioner's frustration is the greater for being separated from them.

It has long seemed to me that to work in close co-operation with these and the paramedical services from a health centre must inevitably lead to a more rewarding professional life.—I am, etc.,

Liverpool 8.

C. TAYLOR.

SIR,—I was very pleased to read your leading article on "Impressions of Health Centres" (29 May, p. 1394) and a description of the Stranraer Health Centre (29 May, p. 1429). I feel very strongly that health centres would be the only solution for the

general practitioners in many areas. I have been a general practitioner for over 40 years and know all the difficulties the doctors encounter by carrying on their practices from their own houses. The expense of keeping the premises properly decorated and furnished is normally impossible for a general practitioner, as the cost of this is so very high nowadays. The employment of a receptionist and caretaker is beyond a general practitioner's salary, but at the same time a busy practitioner receives innumerable telephone calls on all sorts of problems, which must be answered. How conveniently this could be dealt with at a health centre, where a receptionist could take all the visits and with the help of a nurse could solve many minor medical problems.

At a health centre there should also be a link with the local authorities which many general practitioners miss so very much. The medical officer of health, the midwives, and health visitors would be close by, and that, believe me, would save a lot of work for the general practitioner.

It is also obvious that a health centre would provide a coverage in case of illness or holidays. I hope that each district will be surveyed for the possibility of health centres by the local authorities. For the sake of economy, when necessary, a health centre could be prefabricated. I hope we will read more about health centres in your esteemed journal.—I am, etc.,

London S.W.14.

H. W. SWANN.

Transferable Antibiotic Resistance

SIR,—Your leading article (22 May, p. 1325) draws timely attention to the possibility of a situation arising in which normal gut flora may possess multiple drug resistance transferable to intestinal pathogens by cell-to-cell contact, and to the subsequent problems of achieving successful therapy in intestinal infections.

In a survey at the Dysentery Reference Laboratory of the drug resistance patterns of all *Shigella* species (to be published elsewhere), 46 (1.5%) out of 3,051 shigellae showed multiple resistance to chloramphenicol, sulphonamides, streptomycin, and tetracycline. These multiply resistant strains included 13 out of 1,483 *Sh. sonnei* strains examined. It is interesting that, with the possible exception of one *Sh. sonnei* strain resistant also to neomycin (and kanamycin), all the multiply resistant strains came from patients who had acquired their infections outside Britain.

However, doubly and triply resistant strains, most of them resistant to sulphonamides and streptomycin, or to sulphonamides, streptomycin, and tetracycline, are by no means uncommon in patients infected in this country, and there is evidence that there has been a rise in the incidence particularly of triply resistant strains over the last few years. Indeed, of the *Sh. sonnei* strains tested, 84.8% were resistant to sulphonamides either alone or in combination with other drugs.

Twelve resistant *Shigella* strains were included in an investigation of R factors (to be published elsewhere) at the Lister Institute.

Of ten strains with the common pattern of resistance to chloramphenicol, sulphonamides,

streptomycin, and tetracycline, three (two *Sh. sonnei*, one *Sh. flexneri*) were resistant also to antibiotics of the penicillin and cephalosporin groups. The complete resistance pattern of four of these multiply resistant strains, including two of those resistant also to the penicillin group, of a *Sh. dysenteriae* 7 strain resistant to sulphonamides, streptomycin, and neomycin, and of a *Sh. sonnei* strain resistant only to neomycin was transmitted by a mixed culture to *Escherichia coli* K12, and from it to *Salmonella typhimurium* LT2. Thus the drug resistance of each of these *Shigella* strains resulted from possession of a transmissible drug-resistance factor.

Phage P22, grown on *S. typhimurium* LT2 given R factors derived from *Shigella* strains, transduced resistance traits to drug-sensitive LT2 lines. With two R factors conferring resistance to chloramphenicol, sulphonamides, streptomycin, and tetracycline the pattern of transduction was the same as that reported¹ for R factors in *Shigella* strains isolated in Japan. That is, some transductants acquired only tetracycline resistance and others became resistant to chloramphenicol, sulphonamides, and streptomycin but remained tetracycline-sensitive. Phage P22 was also grown on *S. typhimurium* given one of the R factors conferring resistance to these same four drugs and to the penicillin-cephalosporin groups; with this phage the same transductant classes were observed, and also a third class with only the penicillin-cephalosporin resistance of the donor strain. This R factor, derived from a *Sh. sonnei* strain isolated in Singapore, is transferred as a unit during conjugation but seems to separate into three fragments on transduction by phage P22, instead of into two as commonly observed.

These studies on the drug resistance of shigellae suggest that the situation here, despite the presence of strains carrying transmissible multiple resistance factors, is not as yet so formidable as that reported