Correction of Plasma Calcium Measurements

SIR,—Two recent papers (15 December, pp. 640 and 643) have provided valuable new data on the important practical question of how best to correct total plasma calcium measurements for changes in protein. The suggested formulae are accurate in subjects with normal ionized calcium, but a significant error may be introduced by applying the same formulae when the ionized calcium level is high or low. This is because the slope relating calcium to protein is not fixed but varies with the ionized calcium level, so that a proportional rather than an absolute correction is required. This can easily be deduced from the equation describing the dissociation of calcium proteinate¹ and is clearly shown in the nomogram devised by McLean and Hastings² for clinical use. This nomogram is cumbersome and requires concentrations in plasma water rather than plasma (though incorrectly labelled to the contrary), but it may still be the best way of handling the data. A program to solve the quadratic equation on which the nomogram is based, written for the Olivetti 101 computer, is available on request.

Alternatively, a proportional correction may be applied by using a slightly more complex formula than is needed for an absolute correction. Such a formula³ has been shown to give more accurate correction for the changes in protein due to posture⁴ than the original SG formula of Dent.⁵ The following modified version assumes that 55% of the total calcium is diffusible, with a reference value for total protein (TP) of 7.2 g/100 ml.

$$\text{Corrected calcium} = \text{measured calcium} / 0.55 + \text{TP}/16.$$

The results when this is used agree closely with those given by the nomogram or total calcium values between 6 and 14 mg/100 ml.—I am, etc.,

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- ¹ McClean, F. C., and Hastings, A. B., *Journal of Biological Chemistry*, 1935, 108, 285.
- ² McLean, F. C., and Hastings, A. B., *American Journal of the Medical Sciences*, 1935, 189, 601.
- ³ Parfitt, A. M., *New England Journal of Medicine*, 1969, 281, 55.
- ⁴ Husdan, H., Rapoport, A., and Locke, S., *Metabolism*, 1973, 22, 787.
- ⁵ Dent, C. E., *British Medical Journal*, 1962, 2, 1419.

Team Work in General Practice

SIR,—The articles by Dr. G. N. Marsh and Mr. R. A. McNay (23 February, pp. 315 and 319) once again emphasize the importance of knowing the "vital statistics" of one's practice.

A consultation rate of 2.3 per patient per year is an achievement. It will give the doctor the opportunity to spend more than twice as long on a consultation compared with a colleague who has an average rate. This is just what is required to practice effective patient-centred medicine. If this happens, however, the conclusion that a family doctor can look after much larger numbers of patients is not valid.—I am, etc.,

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A Professional Responsibility?

SIR,—Dr. M. T. Sweetnam's letter (16 February, p. 289) calling attention to our profession's failure to "look after its own" in the matter of long-term care and accommodation for those who are prevented by permanent illness or handicap from continuing their work and life in the open community is timely—or indeed overdue.

In 1972 I was so impressed by this recurring need for long-term accommodation for our profession that I asked the Charities Committee of the B.M.A. for its help, and in response to their "positive interest" submitted to them a memorandum on how such a facility could be set up, financed, and run. This was in August 1973 and I have heard nothing more. I understand that this committee meets normally only once a year and it may well be that this machinery is unsuitable to such a dynamic activity as the setting up of a home or homes of the kind required by our colleagues in distress. Perhaps Dr. Sweetnam and I and others who are aware of the urgency of the need might work with the committee on this special project?

Alternatively it might be worth considering setting up such a home under the auspices of some other organization which has the rather special expertise this kind of work demands. The Cheshire Foundation Homes for the Sick might well be able to help in this way, and I should be happy to ask my fellow trustees on its Homes Planning Committee to consider a special home for, perhaps, doctors, dentists, and others with similar interests and needs. The main difference of such a home would presumably be that the appeals for money for capital and special running expenses would be confined to our own profession and not to the general public. Straightforward per capita costs would be obtained in the usual way from local authority sponsorship payments assessed, of course, against the private resources of the individual, as for anyone in long-term residential care under nursing home or part III rulings.

It is always difficult to quantify a need until there is a facility for which the individual in need can apply. My own experience in the rehabilitation and handicap field leaves me in no doubt that there is a need for more than one such unit dotted here and there through the country. To set up one unit, however small, now would not only relieve the loneliness and improve the quality of life of at least some of our colleagues but would also allow an assessment of the size of the need and guide us about the kind of facilities which they (should I not say we?) most appreciate in these special circumstances of long-term illness or handicap.—I am, etc.,

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Extra Administrative Burdens

SIR,—On 1 April the National Health Service enters into a new era with a reorganization many of us believe to be long overdue. Since 1948 the service has been governed mainly by unpaid amateur teams or committees, many of which, though of

good intent, had little or no training in the complexities of running a modern hospital. Of the professionals we had, in the main, the consultant medical staff, the hospital administrators, virtually powerless, and, probably, a nurse at senior level.

For many hospitals 1974 will see these committees replaced by fully professional teams composed of both medical and non-medical staffs, nursing and non-nursing staffs, and administrative staffs. For the first time in the history of the hospital service we will experience a multiplicity of staffs, in most cases the most senior of their respective professions, sitting with consultant, nursing, and senior administrative staff in meetings which will eventually be the main policy-making areas of the hospitals concerned. To many senior medical staff the prospect is daunting, for they will see in reorganization a diminution of their powers. I and many others like me, who will for the first time be involved in overall hospital management as opposed perhaps to departmental management, sincerely hope that medical staff, though naturally cautious of these changes, will encourage a spirit of co-operation that will make the complex reorganization a success. Non-medical staff have no wish to interfere with medical responsibility, however many other skills and expertise are involved in a hospital, and these people have much to offer.

We look forward to reorganization and hope that over the months and years that lie ahead all staffs will work together with a common purpose—an efficient, compassionate Health Service. Non-medical staff are prepared to accept the "extra administrative burdens" at hospital level, even though it would appear that some consultant medical staff at district level are not unless there is some financial bargain to be gained (Mr. J. S. Elkington, 2 February, p. 196).—I am, etc.,

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Consultants' Salaries

SIR,—Dr. P. M. Oppenheimer (19 January, p. 117) in questioning the figures given by Dr. B. O. Scott (15 December, p. 679) quotes the retail price index in comparing the rise in prices with the increase in consultants' salaries. He states that this shows that consultants' real pay has shown an increase of 10% over the past 10 years and not, as Dr. Scott claims, a fall of 15%. He makes the point that consultants should not deceive themselves with incorrect statistics.

The retail price index did not start until 1947. The Central Statistical Office has constructed an index of prices of consumer goods and services spanning per-war years to date with the exception of the years 1939-45. This index increased from 33.3 in 1938 to 179.4 in 1973, an increase of nearly sixfold. During roughly the same period consultants' maximum salaries have increased from £2,500 for 1939 (the "Spens" recommendation accepted by the post-war Government) to £7,599 for 1974 an increase of only threefold.—I am, etc.,

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