lem. A survey of disabled persons¹ found the overall frequency of involved joints to be: knee 64%, fingers 37%, and hips 27% (percentages not exclusive). While inpatient stays are shorter for finger joints, mean stays for total knee replacement are at least as long as for hips.

Since my article was written Taylor,² of the Office of Health Economics, has shown that the net economic benefit of total joint replacements to the health and social services as a whole is considerable.—I am, etc.,

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¹ Thompson, M., Anderson, M., and Wood, P., *Disabled Arthritics in Newcastle upon Tyne*, Arthritis and Rheumatism Council Symposium, London, May 1973.

² Taylor, D., *Economic Cost of Arthritis and Benefits of Joint Replacement Surgery*, Royal Society Meeting on Total Joint Replacement, London, 27 February 1975.

Crisis in Medical Education

SIR,—At a time when the nation is calling for an increased production of medical graduates medical education is in a state of crisis even greater than that of the N.H.S. The number of medically qualified teachers in so-called "preclinical" departments is diminishing so rapidly that fears have been expressed that there will be none within a few years; and good-quality technicians, paid at rates below the Whitley scales, are almost impossible to recruit. Furthermore, the savage cuts recently inflicted on higher education are being applied as much to medical faculties as to others.

Two other points should be noted: (a) postgraduate medical education is organized through the N.H.S. and carried out by medical schools on a purely voluntary basis; (b) the University Grants Committee has fairly recently been placed under the direct rule of the Department of Education and Science—a government department with no experience of medical organization.

Arising in part from a consideration of the Morrison Report¹ and with the intention of keeping medical education firmly integrated with the university system, the following suggestions may serve as a basis for reorganization:

(1) Medical schools to be the direct and independent responsibility of the Medical Subcommittee of the U.G.C.

(2) The Medical Subcommittee of the U.G.C. to be responsible to, and funded by, the Department of Health and Social Security and not the D.E.S.—together with an appropriate interdepartmental transfer of Government funds.

(3) Postgraduate education to be a statutory obligation on medical schools.

(4) All medically qualified teachers, irrespective of subject, to be paid at appropriate N.H.S. rates.

(5) If merit awards are to be retained, all medically qualified staff to be eligible—those in laboratory-based subjects on the basis of achievement in research.

(6) Academic and graduate research staff who are not medically qualified to be assimilated to appropriate N.H.S. grades.

(7) Technical staff to be assimilated to Whitley Council structure.

Various comments have recently been made about the position of medically qualified staff in "preclinical" departments, some of whom hold (honorary) consultant con-

tracts in the hospital service. The traditional division between "preclinical" and "clinical" has not been between direct patient care and its absence (for example, pathology and microbiology) but on whether the departments concerned teach medical students in the first two or the last three years of the course. Given the increasing vertical integration of the undergraduate curriculum and the large amount of postgraduate teaching frequently undertaken by "preclinical" departments, this distinction is becoming increasingly blurred. Furthermore, the argument put forward in the past by the Committee of Vice-Chancellors and Principals that differential salaries within "preclinical" departments would be intolerable seems to be invalidated by the presence in "clinical" departments of increasing numbers of lecturers and senior lecturers who are not medically qualified.

The sums involved in these proposals are relatively small in the context of total N.H.S. costs, and in any event good medical education cannot be had on the cheap; nursing tutors, for example, are, rightly, not the lowest-paid S.R.N.s. In the interest of the quality of future medical practitioners the profession must take united action on its own educational problems.—I am, etc.,

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¹ Report of the Committee of Inquiry into the Regulation of the Medical Profession. London, H.M.S.O., 1975.

Ulceration of Small Intestine and Slow-release Potassium Tablets

SIR,—The letter from Mr. T. Treasure (2 August, p. 302) confirms my suspicion that some doctors are unaware of the formulation of potassium chloride in HydroSaluric-K tablets. Mr. Treasure obviously believes that the potassium is present in a slow-release base when in fact it is in an enteric-coated form. The ability of enteric-coated potassium chloride to cause intestinal ulceration and stricture is well known, the case described by Mr. Treasure being a further illustration.

The assumption that HydroSaluric-K contains slowly released potassium chloride is understandable, as all other diuretic/potassium combined tablets do contain potassium in either a slow-release or effervescent base.—I am, etc.,

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Drug Information Centre,
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SI Units

SIR,—Just think—a few years ago we were told we must measure things in milli-equivalents and so we did. Now it's moles. What next?

We are assured that the recommendation for using SI units was made by a "broadly based working party." But who were they? Representatives of the Association of Clinical Biochemists, the Association of Clinical Pathologists, the Biological Engineering Society, the British Society for Haematology, the Hospital Physicists' Association, the Institute of Medical Laboratory Technology,

the Royal College of Pathologists, and the Section of Measurement in Medicine of the Royal Society of Medicine. Where were the bedside clinicians?

The advantages of climbing on the SI bandwagon are said¹ to be these.

(1) "Laboratories all over the world are, or will be, adopting SI units"—except the U.S.A.

(2) "The great advantage of these units is that they are the same for all branches of science, and . . . will ensure that [medicine] does not become isolated with such units as mmHg and Calorie." What disadvantages existed for scientists and doctors in the use of such well-tried units as these?

(3) "Molecular units . . . per unit volume . . . corresponds to the actual biological activity, whereas . . . mass per volume does not." But the biological activity of a substance depends upon many things besides its molecular weight. Take insulin—the effect of a given serum level, however expressed, is dependent upon how fat the person is, how much insulin antibody he has, and other variables.

(4) "The units currently used . . . are . . . so diverse that there is a danger that results may be misunderstood by those not familiar with the particular scale . . . used." Who are those, unfamiliar with the current units, who need to be familiar with them? Far greater is the real practical danger of a slip in the decimal point which might cause a blood glucose of 45 mg/100 ml (2.5 mmol/l) to be mistaken for one of 450 mg/100 ml (25 mmol/l).

(5) "SI units are being . . . taught in schools and universities." A medical student, however, during his long training, is quite capable of learning a system which has worked admirably for years in medicine and is safe.

(6) "The system . . . is designed to provide a coherent system of units." Unfortunately there are so many substances measured in medicine which cannot be measured in molar concentrations (for example, proteins, haemoglobin, vitamin B₁₂, folate, enzymes, etc.) that it can hardly be called coherent.

Add to the very real dangers of conversion to SI units the cost of redesigning forms, diet cards, and instruments and the time-consuming inconvenience of the local education programmes involved and one wonders if we are not all heading for a lunatic asylum.—We are, etc.,

EDWARD ARMITAGE, RICHARD BURWOOD, D. A. CHAMBERLAIN, T. A. COPP, GEORGE DEUTSCH, PATRICK HALL-SMITH, ALEC HARDEN, BRIAN HOBGIN, JOHN HORLEY, R. P. JUNIPER, EUAN KEAT, P. A. LANE-ROBERTS, B. A. LATHAN, D. R. LEVINSON, ALEC MACFARLANE, BRIAN MEASDAY, DAVID MELCHER, B. R. P. MURRAY, C. E. QUIN, JOHN REES, DONALD REID, CLIFFORD RILEY, DAVID S. T. C. ROBERTS, PAUL SHARPSTONE, JOANNA SHELTON, P. G. SOMERVILLE, J. R. R. SPURRELL, ANTHONY TRAFFORD, JAN DE WINTER, P. A. D. WILLIAMS.

Brighton Health District

¹ Baron, D. N., et al., *Journal of Clinical Pathology*, 1974, 27, 590.

Local Renal Hypothermia

SIR,—Your leading article on this subject (12 July, p. 62) misrepresents my views and those of my colleagues. Please allow me to make my position clear.

Of course we feel it is better to remove every least fragment of a renal calculus; we have never said anything to the contrary.¹ What we have shown is that even an incomplete removal is better than leaving a large, bulky stone in situ² and, furthermore, that even when the surgeon thinks he has got all the stone out he is usually deluding himself, since contact x-rays on the operating table cannot reveal with any accuracy