SIR,—In the leading article (30 October, p. 251) you state that it is an interesting hypothesis that general hypermobility of the joints may be the cause of some cases of backache. It is not merely an interesting hypothesis but has long been a well recognized syndrome among manipulators and physical medicine consultants. You omit to state that the type of pain in this syndrome is of considerable diagnostic importance. You also omit treatment. The type of pain with lax ligaments is usually associated with standing for a long period of time, such as at cocktail parties or standing ironing, and is relieved by sitting down or walking. There is also usually a long history of low back pain on walking or on a long car journey. Another type is the patient with backache who after manipulation is pain free, but on walking only as far as the door of the consulting room or on the train on the way home gets recurrence of pain.

The treatment of this condition falls into three categories. Firstly as the ligaments are lax we usually have an associated sacroiliac or lumbar 4-5 facet lock derangement. This must be manipulated before the second stage is attempted. This is a sclerosant injection of either phenol or ethanolamine oleate which is injected with xylocaine into the ligomento-periosteal attachments of all the affected ligament. These are usually the supraspinous, interspinous, iliolumbar, postsacroiliac, and interoseous sacroiliac ligaments. Even with one-sided pain both sides of the spine are injected, as it is found in practice that injecting only one side is usually followed by pain on the other side. One month following the sclerosant injection the third stage—rehabilitation—is instituted, and is a very important part of the treatment. This consists of spinal exercises and encouraging the patient to use his spine by walking, swimming, and playing golf.—I am, etc.,

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SIR,—For some time, even before the hypermobility syndrome was described, physicians interested in locomotor disorders have been aware of the "loose back" as an occasional cause of persistent backache. They recognized that conventional forms of treatment such as rest, physiotherapy, and manipulation, etc., often did not help patients with this form of backache, who continued to complain of diffuse lumbosacral aching without any of the acute episodes of pain characteristic of the disc syndrome.

This condition is readily recognized in the course of examination of the back, when lumbar extension particularly is found to be greater than normal. Sometimes hypermobility at one or two intervertebral joints, rather than generalized hypermobility, can be recognized. The examination is then directed towards the peripheral joints, the patient questioned about double-jointedness, and other features of hypermobility and Marfan's syndrome are sought. However, a moderately hyperextensile spine may occur even in the absence of peripheral joint laxity.

The patient should be given a trial of graded exercises together with postural advice, and many benefit from this form of treatment. Howes and Isdale[1] advise a programme of isometric back exercises and claim good results. Stoddard[2] emphasizes exercises to strengthen the erector spinae. If there is no improvement it is useless to prolong physiotherapy, and sclerosing injections into the supraspinous ligaments may then be tried. Unfortunately some regard these injections as a panacea for practically all forms of backache, which of course is indefensible, but there is little doubt that sclerosants can help a proportion of patients with the "loose back" syndrome.

First described by Hackett in 1957 (who used a phenol/dextrose mixture),[3] a satisfactory technique is as follows. The joints at fault are identified by hypermobility and tenderness of the interspinous ligaments. One ml of ethanolamine oleate mixed with 1 ml 2% procaine is injected into the ligaments at intervals of 2 weeks, three or four injections usually being sufficient. Concurrently exercises are prescribed, and a temporary corset is usually advised for a few months to allow fibrosis to occur in the ligaments. Good results are often obtained with this method when backache is in fact due to hypermobility and in the absence of disc disease or apophyseal osteoarthrosis.—We are, etc.,

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1 Hackett, G. S., *Joint Ligament Relaxation*, Springfield, Ill., Thomas, 1957.
2 Howes, R. G., and Isdale, I. C., *Rheumatology and Physical Medicine*, 1971, **11**, 72.
3 Stoddard, A., *Manual of Osteopathic Practice*, London, Hutchinson, 1969.

Digoxin and A-V Block

SIR,—We should like to take exception to the conclusions drawn regarding the effect of digoxin on A-V conduction in the article by Dr. R. A. J. Spurell, Dr. A. M. Harris, and Mr. M. R. Howard (4 September, p. 563) and offer the following comments:

(1) Terminology.[1-3]—The criteria for the diagnosis of "complete heart block" are not stated. If these were the criteria of "complete A-V dissociation" a serious and notorious error may have occurred, since A-V dissociation in acute inferior wall infarction is frequently caused by an accelerated junctional pacemaker in the absence of any A-V block or in the presence of only lesser degrees of A-V block. Neither atrial nor ventricular rates during "complete" A-V block are listed, nor is the site of the subsidiary pacemaker mentioned.

(2) Type of block (site of lesion) and digitalis effect.[2 4 5]—No distinction is made between second degree A-V block of type I (Wenckebach) and type II (Mobitz). Since digitalis depresses mainly A-V nodal transmission it has little or no effect on subnodal conduction, and the type of second degree block should be indicated in an evaluation of digitalis effect on A-V conduction.—We are, etc.,

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1 Pick, A., *American Heart Journal*, 1963, **66**, 147.
2 Langendorf, R., and Pick, A., *Circulation*, 1968, **38**, 819.
3 Langendorf, R., *Bulletin of the New York Academy of Medicine*, 1971, **47**, 877.
4 Rosen, K. M., *et al.*, *Circulation*, 1970, **42**, 925.
5 Sutton, R., and Davies, M., *Circulation*, 1968, **38**, 987.

Antibiotic Sensitivity Testing

SIR,—Editorial comment (22 May, p. 416) highlighted once again the need for a technique of antibiotic sensitivity testing which will allow meaningful comparisons to be made between different countries, and the need for a statement of policy in the United Kingdom on the method to be used.

The work of H. M. Ericsson, presented at St. Thomas's Medical School in 1966,[1] persuaded me to study this type of method. Using commercially available materials (Oxoid Ltd., London) thirteen antimicrobial agents were studied, regression curves calculated, and reported in 1969.[2] Controversy on interpretation of such methods still continues—six years later.

While adoption of the Bauer-Kirby method[3] proceeds in some areas, others adopt that of Ericsson. Automated zone analysers are now commercially available and will reduce the laboratory problems to some extent. If some standardization of method is to be adopted before international differences become too entrenched some policy statement should be made and be seen to be adopted in the United Kingdom. Many overseas workers observe and are influenced by the opinions expressed and actions of those in Great Britain.—I am, etc.,

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1 Ridley, M., and Phillips, I., eds., *Therapeutic Use of Antibiotics in Hospital Practice*. Edinburgh, Livingstone, 1966.
2 Neal, J. D., and Kite, P., *Journal of Medical Laboratory Technology*, 1969, **26**, 15.
3 Bauer, A. W., Kirby, W., Sherris, J. C., and Turck, M., *American Journal of Clinical Pathology*, 1966, **45**, 493.

*** We have made some inquiries about the point raised by Mr. Neal, and are asked to print the following letter.—ED., *B.M.J.*

SIR,—We have seen the letter addressed to you by Mr. John Neal, and are glad to be able to assure him that steps are already being taken to define a British policy in this matter. An informal meeting of a few interested persons took place shortly after the publication to which Mr. Neal refers, at which it was decided that a comparative study of different methods for sensitivity testing ought to be undertaken. A working party has been set up with the co-operation of the Laboratory Advisory Subgroup on Standards and Quality Control of the Department of Health. Its task will be not only to compare the merits of different methods, but to organize their practical trial in hospital laboratories and in those of the Public Health Laboratory Service. It is hoped that firm decisions on methods to be recommended for routine use will emerge from this investigation.—We are, etc.,

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Epidemic Keratoconjunctivitis

SIR,—We wish to support the timely warning given by Mr. J. D. C. Hart and his colleagues (23 October, p. 229) that outbreaks of epidemic keratoconjunctivitis are occurring in the United Kingdom at present. Since

May 1971 over 100 cases have occurred among workers in shipyards on the Clyde and in other industrial concerns in the west of Scotland. The peak of the outbreak was reached at the end of June and beginning of July, and a decreasing number of cases are still being notified. Those mainly involved are shipyard personnel working on the open decks of ships under construction, and only a few non-industrial workers have been affected. As in previous outbreaks in the Clyde Valley in 1956, 1967, and 1968, adenovirus type 8 is the causal virus.[1-3]

While we agree that medical personnel are frequently the cause of the passage of the virus from patient to patient, spread also takes place outside the hospital or shipyard ambulance room, probably as a result of such procedures as amateur first aid for foreign bodies. In the present Clydeside outbreak many of the patients presented with the condition at the ambulance room and had not been to a clinic with another condition. Furthermore, spread within families was a feature of the 1967 outbreak (Taylor, personal communication). However, an inquiry into family spread during the present outbreak had shown that only 6 of 103 patients questioned specifically on this point had another family member suffering from conjunctivitis. This curtailment of family spread may well be due to propaganda given at the ambulance rooms and clinics since the earlier outbreaks to ensure that the patients are punctilious about hand washing, use of personal towels, etc. Autoinoculation by contaminated fingers is probably the reason for some of the cases we have encountered among doctors, nurses, or ambulance-room attendants. The importance of hand washing was also mentioned by Wegman and his colleagues in an outbreak in an American hospital, which ceased after the institution of thorough washing of hands and instruments with soap and water.[4] We suggest that this measure should be added to the recommendations given by the Bristol workers.—We are, etc.,

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1 Sommerville, R. G., *Journal of Hygiene*, 1958, **56**, 101.
2 Taylor, J. C., *British Medical Journal*, 1967, **4**, 366.
3 Grist, N. R., Bell, E. J., and Gardner, C. A., *Health Bulletin*, 1970, **28**, No. 4, 47.
4 Wegman, D. H., Guinee, V. F., and Millian, S. J., *American Journal of Public Health*, 1970, **60**, 1230.

Pregnancy Testing

SIR,—Mr. A. D. Thursz (25 September, p. 769) and Dr. F. W. Winton (30 October, p. 296) draw attention to the "free" pregnancy testing facilities available through National Health Service laboratories. We also, like Dr. Winton, are disturbed over the increasing numbers of these tests. It must be realized, however, that the increasing demand for laboratory examinations is by no means confined to pregnancy tests. This laboratory covers the disciplines of bacteriology, haematology, clinical biochemistry, and toxicology. In 1960, a gross total of 67,018 specimens (not tests) of all kinds were received, of which 1,978 (2·9%) were pregnancy tests. In 1970 the gross total had risen to 134,433, of which 6,221 (4·6%) were for pregnancy testing. According to the 1961 Census, it is calculated that there will be more pregnancy tests performed in this laboratory during 1972 than there will be births in the North-eastern Region of Scotland. By around 1990, the tests done will equal the total for women (married and otherwise) between the ages of 15 and 44. (These figures have been calculated by the statistician to the North-eastern Regional Hospital Board.)

To what do we ascribe the increasing popularity of this test? Is it a result of the pill? Is it related to the new legislation governing abortions? Is it an outcome of the greater freedom in premarital sex relationships? Is it just another result of the "free" facilities of the Welfare State?

Just how "free" is it? A total of 6,000 qualitative pregnancy tests in 1970 cost this laboratory £1,200 for reagents alone. To this must be added a further £500 because this laboratory operates a prepaid postal package service covering issue and return of specimen outfits. These figures take no account of other expenses, such as the cost of outfits, technicians' time, office time, stationery, etc. In addition to the qualitative tests done in 1970, quantitative tests totalled 111, and each of these cost a minimum of £1·40 for reagents alone. There is no abatement in demand for these tests. The figures for the first 10 months of 1971 indicate that the total for the year will pass the 7,000 mark.—We are, etc.,

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Care of Chronic Psychotics

SIR,—We find it necessary to challenge some of the claims made by Drs. M. Z. Hussain and A. G. Khan (18 September, p. 703) about psychiatric services in Saskatchewan.

It is true that Saskatchewan once had the highest ratio of patients in mental institutions in Canada, and also probably one of the worst mental hospitals in the world.[1] Also, it is true that during the sixties the Saskatchewan Hospital, Weyburn, showed the sharpest decline in population of any hospital in the western world. However, despite the repeated and numerous claims emanating from Saskatchewan we cannot agree that the effectiveness of so-called community care in that Province has been substantiated.

The big discharge began in 1964, and by early 1966 there had been complaints concerning the rate of discharge and the standards and conditions in homes in which the patients were being placed. An *ad hoc* committee investigated these complaints, and in June 1966 suggested tighter laws and improved standards for placement homes. However, complaints continued about the early discharge of patients who were still symptomatic and also about the standards in approved homes. When a former patient murdered nine people, the concern became so widespread that another inquiry was instituted under Professor Shervert H. Frazier at the end of 1967. The following extracts from the Frazier report[2] are of interest:

"Another common theme was that the Weyburn Hospital (Main Building) had adopted a policy of discharging patients no matter what the situation, the patient's condition, etc.; several mentioned that a 'statistical approach' had replaced an individual psychiatric evaluation of cases.

"*Recommendation 11:* We suggest that the practice of early discharge be brought in line with the principles, so that discharge is not determined by bed counts, 'statistics,' or attempts to satisfy institutional goals, but by the needs of the patient, his family, and his community.

"*Recommendation 23:* Outpatient care and especially home-placement should be enriched and made more therapeutic by the addition of as many of the following programs as feasible: sheltered workshops, half-way houses, day treatment centers, vocational rehabilitation programs, additional recreation, social clubs, exercise classes, nutritional guidance, and classes in personal hygiene."

We can see very little change since 1967, although the hard core of presumably non-dischargeable patients has resulted in a levelling off in the residual mental hospital population. We find it incomprehensible that a hospital which has dropped in population from 2,600 to less than 400 beds should still retain a ward with over 100 patients. We are by no means in favour of the continued existence of the large mental hospital, but we are concerned at their being phased out without any adequate planning for alternative methods of care.

Drs. Hussain and Khan mention that the readmission rate has dropped dramatically for the Prince Albert unit. As 1970 was the first full year of operation we question the validity of this statement. Reference to the Yorkton unit, which became fully operational in 1964, shows that a readmission rate of less than 40% in the first year gradually rises to over 70% together with an average length of stay of 27·5 days by 1969, both of these figures being the highest for any facility in the Province. It seems likely that Prince Albert will reveal a similar trend over the next few years.

Finally, we now view with increasing suspicion all publications which show an obsessive preoccupation with statistics such as beds per 1,000 population, while revealing nothing about what is really happening to the patients contained in these statistics.—We are, etc.,

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1 Osmond, H., *The Weyburn Review*, 4 September 1970.
2 Frazier, S. H., and Pokorny, A. D., *Report of a Consultation to the Minister of Public Health on the Psychiatric Services of Saskatchewan*, January 1968.

Neurofibromatosis and Childhood Leukaemia

SIR,—Drs. M. W. McEvoy and Jillian R. Mann (11 September, p. 641) describe the association of neurofibromatosis with acute myeloblastic leukaemia in a 5-year-old boy.