pyrexia for 24 hours with reluctance to feed and the passage of one loose stool. During the previous three weeks he had been fed undiluted, unmodified cows' milk ("milkman's milk") with an added protein-rich cereal. He was desperately ill but recovered, only to be left with evidence of severe brain damage. It seems likely that this high-solute feeding regimen was the major factor in the production of this hypernatraemia. His mother's explanation for such an unusual feeding regimen in a young infant was that she could not afford the prepared dried milk powders.

I believe that a major campaign is required to alert mothers to dangerous feeding practices and this could be part of a national drive to encourage breast-feeding. There may also be a case for further subsidies on low-solute milk powders when breast-feeding is impracticable.—I am, etc.,

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¹ Department of Health and Social Security, *Present-day Practice in Infant Feeding*. London, H.M.S.O., 1974.

The Disc Sensitivity Test

SIR,—Your leading article on this subject (13 July, p. 74) has come to our attention. It contained a number of misapprehensions about the Food and Drug Administration (F.D.A.) and International Collaborative Study (I.C.S.) recommendations for diffusion susceptibility testing. The most important is the statement that these procedures are "uncontrolled." Specific recommendations for the use of two recognized control strains and the statistical limits of acceptable results with them have been published in several places.¹⁻⁴ The question of quality control has also been broadly reviewed.¹⁻⁶ Medium control at the manufacturer level is feasible to resolve finally the problem with *Pseudomonas aeruginosa* and the gentamicin group of antibiotics and hopefully will soon come about.⁷ With this one exception, inter-manufacturer and batch-to-batch reproducibility of Mueller-Hinton medium produced by the two major U.S. manufacturers is now very good.

The basic question raised by your article, however, is whether the aim should be towards the performance of susceptibility tests by standardized methods and with standardized reagents designed to give reproducibility in absolute terms or whether we should be satisfied with the results relative to those of control strains without requiring standardization of media or test conditions. We favour the first approach for several reasons. It permits relating diffusion to quantitative dilution test methods and allows the collection of cumulative statistical information as to population distributions. These can then be used in determining breakpoints for qualitative reports with both old and new antimicrobics. A statistical approach to control can be used which takes account of inherent technical variation in the results of individual tests with control strains but which will also detect variation in control strains because all other components have been standardized.

In the method recommended in your article the experimental error for individual

tests may be the sum of the errors with both the test and control strains and will be enhanced if objective methods of inoculum standardization are not used. The procedure uses preset criteria of "sensitivity" which have not been described in quantitative terms and which are the same for most antimicrobics irrespective of their diffusion rates. Results with all organisms and antimicrobics appear to be related to single strains of *Staphylococcus aureus*, *Escherichia coli*, and *P. aeruginosa* and variation or contamination could thus go undetected and lead to serious errors. The procedure in its manual form is also restrictive of the number of agents that can be tested on one plate.

Three other points in your article merit brief comment. A 100- μ g carbenicillin disc has now been approved in the United States as a result of studies such as that which was cited in the article. Neither cefoxitin nor cefamandole has so far been released for use in the United States and thus the issue of separate discs for these agents has not yet arisen here. As to a separate minocycline disc, evidence to date is insufficient to recommend this agent for the treatment of tetracycline-resistant staphylococcal infections, and diffusion tests are inapplicable to slow-growing organisms such as *Nocardia asteroides*. However, we know of no fixed positions as to restriction of discs and new congeners which have significantly different spectra of activity and would expect their licensure by the F.D.A. as and when the need arises and is supported by the necessary scientific data and the recommendations of their expert advisory committees.

We agree with you on the desirability of further studies to determine current inter-laboratory reproducibility with these techniques, and several involving the F.D.A. diffusion test are under way or are in the process of being reported. It is, however, equally important to be concerned about what can be achieved and we believe that results of both dilution and diffusion tests can be significantly improved only by the acceptance and use of standardized methodology at the very least for reference procedures.—We are, etc.,

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- 1 Federal Register, 1972. Rules and regulations. Title 37: 20525-20529.
- 2 Federal Register, 1973. Rules and regulations. Title 38: 2576.
- 3 *Current Technique for Antibiotic Susceptibility Testing*, ed. A. Balows. Springfield, Thomas, 1974.
- 4 *Manual of Clinical Microbiology*, ed. E. H. Lennette, E. H. Spaulding, and J. P. Truant, 2nd edn. Washington, American Society for Microbiology, 1974.
- 5 Schoenkecht, F. D., and Sherris, J. C., in *Recent Advances in Clinical Pathology*, ed. S. C. Dyke, ser. VI, p. 275. Edinburgh, Churchill Livingstone, 1973.
- 6 Blazevic, D. J., Koepcke, M. H., and Matsen, J. M., *American Journal of Clinical Pathology*, 1972, 57, 592.
- 7 Reller, L. B., et al., *Journal of Infectious Diseases*. In press.

** Our correspondents are themselves under at least one misapprehension. Naturally if the type of test advocated in our leading article were to be commended by any authority for general use the test conditions (including inoculum standardization, now possible by a simple method not involving turbidimetry¹), and indeed its every feature except the composition of the culture medium would require definition. If a small fraction of the effort which has gone into the evolution of the F.D.A. and particularly the I.C.S. method were devoted to this task it should not present difficulty. Indeed, a description of one such method adequate for its performance without risk of any serious error already exists.² It will be little consolation to workers in Britain and many other countries if two manufacturers in the United States at last manage to control the composition of Mueller-Hinton medium sufficiently. Such control is most unlikely to operate world-wide.—ED., B.M.J.

¹ Felmingham, D., and Stokes, E. J., *Medical Laboratory Technology*, 1972, 29, 198.

² Stokes, E. J., and Waterworth, P. M., *Association of Clinical Pathologists, Broadsheet 55*. London A.C.P., 1966 (Rev. 1972).

Quality Evaluation in Histopathology

SIR,—Opinions have recently been expressed about the desirability of a quality control system in histopathology. Many factors affect the quality of histopathological opinion, not the least of these being the quality of the surgical specimen, the technical processing of the tissue, and clinicopathological consultation. However, we are concerned particularly with quality evaluation of the pathologist's opinion and consistency of diagnosis by a group of pathologists.

An ideal system of quality evaluation of histopathological opinion should reproduce the normal laboratory situation. The design of a system is complicated by (1) the difficulty of obtaining an acknowledged correct diagnosis based on opinion, (2) the need for clinical and other pathological data in reaching a diagnosis, and (3) variation in terminology. The Royal College of Pathologists of Australia base their system on sets of sections illustrating uncommon conditions, the diagnosis being "established" by acknowledged experts. Specialist histopathologists obtain an average of only 75% "correct" answers.¹ The histopathology proficiency testing programme of the American College of Pathologists uses randomly selected sections from five types of tissue. Consensus among the participating pathologists is reached when 50% or more of the participants make the same diagnosis. Consensus was reached in only 77% of cases.²

Both of these surveys suggest a disturbing disparity in histopathological opinion. For this reason a quality evaluation system has been instituted in this department. Each week 10 random sections from 1970 are used. The participating pathologist is informed of the age and sex of the patient and the site of origin (where known) of the tissue. Diagnoses are collected before group discussion, at which time full clinical information, including follow-up details, are available. Consensus is reached when all the participating pathologists agree on a final diagnosis after review of the clinical and pathological information. A final consensus diagnosis has

	Senior	Junior	No Consensus Diagnosis	1970 Diagnosis
Total no. of diagnoses	876	698	8	292
Major difference (A)	18 (2.1%)	56 (8.0%)		2 (0.7%)
Minor difference (B)	41 (4.7%)	77 (11.0%)		12 (4.1%)
Total A + B	59 (6.8%)	133 (19.0%)		14 (4.8%)

been obtained in all but eight of the first 300 cases reviewed. Differences between the consensus diagnosis and the participants' diagnoses are placed in two categories; (a) a diagnosis that gives a misleading prognosis or one that would lead to inappropriate treatment, and (b) a minor diagnostic difference of no clinical relevance. The consensus diagnosis has been compared also with the original 1970 diagnosis. Nine pathologists participated. These have been divided into two groups, senior pathologists who have obtained the M.R.C.Path. diploma and junior pathologists without this diploma. The results of the first 300 cases are shown in the table. Since clinical information was minimal and since consultation between pathologists before diagnosis was not permitted, the figures may be interpreted as the maximum for incorrect diagnosis.

The benefits of this on-going system are as follows. (1) It has proved to be a valuable educational exercise for consultant and trainee pathologists. (2) Uniformity of nomenclature and diagnostic criteria have been promoted. (3) It is a valuable guide to the suitability for delegation of responsibility for reporting. We can see that a comparable system may have advantages in the clinical field.—We are, etc.,

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- 1 Royal College of Pathologists of Australia, Board of Education. *Report of Surveys*: 1969, 1970, 1971. Sydney, R.C.P.A.
- 2 Penner, D. W., in *Pathology Annual*, vol. 8, ed. S. C. Sommers, p. 1. New York, Appleton-Century-Crofts, 1973.

Disclosure of Medical Records

SIR,—Since August 1971 the Rules of the Supreme Court have provided (Order 24 Rule 7A made under the Administration of Justice Act 1970) that before commencing proceedings a potential plaintiff in a personal injury case may apply to the court for an order requiring a medical practitioner who is a potential defendant to disclose his clinical records. Similarly, once proceedings have been started to which a medical practitioner is not a party (for example, a factory accident case) a medical practitioner who would be a material witness in the case can be required by order of the court to disclose his clinical records at an early stage in the proceedings rather than delaying this until he is in the witness box. It is worth pointing out in general terms that an order of the court is not made automatically and that if the practitioner chooses not to submit his records voluntarily (as is his absolute right) the court will consider the merits of each application and restrict the disclosure of records to that which justice requires.

This subject has been dealt with in detail on more than one occasion in the medico-legal columns of your journal¹⁻³ as well as in a letter from Dr. P. H. Addison, past Secretary of the Medical Defence Union,⁴

and there is no need to go over the same ground again. What we wish to do now is to bring to the notice of members of the profession a particular aspect of the problem.

Two recent cases^{5 6} heard by the Court of Appeal and supported by the M.D.U. have established that when a court orders disclosure of medical records they shall normally be produced only to another medical practitioner, acting as medical adviser to the party that obtained the order for disclosure, and not to solicitors. A practitioner's records may well include letters written to him by another practitioner—for example, a general practitioner may have had letters from a hospital consultant about the patient. The precise description of the documents the production of which may be ordered will be set out in the order, but it should be assumed that when the order specifies "all the medical records of Dr. X relating to . . ." this will include not only the practitioner's own notes but all consultants' letters and other clinical documents which are relevant to the case.

Our purpose is to point out to all practitioners in the United Kingdom that letters to other doctors about patients should always be written in the knowledge that they may be subject to detailed scrutiny by other practitioners prior to any court hearing, as well as by the judge and lawyers when the case gets to court; and that accordingly their tone should be serious and precise, even though this may mean the loss of the "personal touches" which have in the past lightened correspondence between colleagues.—We are, etc.,

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J. W. BROOKE BARNETT

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- 1 *British Medical Journal*, 1972, 1, 577.
- 2 *British Medical Journal*, 1973, 1, 623.
- 3 *British Medical Journal*, 1974, 1, 652.
- 4 Addison, P. H., *British Medical Journal*, 1972, 1, 565.
- 5 Davidson v. Lloyd Aircraft Services Ltd., *The Times*, 15 May 1974, p. 20.
- 6 Deistung v. South West Metropolitan R.H.B., *The Times*, 26 October 1974, p. 24.

Retinitis Pigmentosa

SIR,—The leading article on this subject (17 August, p. 429) is misleading with regard to the genetic advice to be given to a family with affected members and also the visual prognosis to be given to an affected individual.

You state that the disease is usually transmitted as a recessive condition without differentiating between X-linked and autosomal recessive disease. In a family with X-linked disease the chances of affected individuals appearing in future generations is high, while in autosomal recessive disease it is low if cousin marriages are avoided. This

differentiation is particularly relevant when a heterozygote seeks advice. You correctly point out that heterozygotes for the X-linked gene (female carriers) show some phenotypic expression of the abnormal gene by early adult life,^{1 2} but it should also be emphasized that heterozygotes for the autosomal recessive gene rarely if ever have recognizable ocular changes. Therefore these two forms of the disease, which are equally common in south-east England,^{2 3} must be distinguished one from another before genetic advice is given.

Your statement that retinitis pigmentosa, once recognized, leads to blindness within a few years is quite wrong. There is no doubt that patients with severe recessive forms of the disease may be blind in early life, though such cases are rare. Even males with X-linked disease who notice loss of dark adaptation in the first decade of life are not severely handicapped until the third decade and may retain some useful vision until they are 50 or 60 years old. Autosomal dominant retinitis pigmentosa, which represents 25% of all cases in our practice, is mild and may give rise to little disability even in late life.²—We are, etc.,

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- 1 Bird, A. C., and Blach, R. K., *Transactions of the Ophthalmological Societies of the U.K.*, 1970, 90, 127.
- 2 Krill, A. E., *American Journal of Ophthalmology*, 1967, 64, 1029.
- 3 Jay, B., and Bird, A. D., *Transactions of the American Academy of Ophthalmology Otolaryngology*, 1973, 77, Op.—641.

* * We did not expand on the various patterns of retinitis pigmentosa inheritance as this was not the aspect with which our article was primarily concerned, but we deemed it sufficient to refer readers to a recent genetic analysis—indeed, by the authors of this letter. We said that retinitis pigmentosa "usually . . . leads to blindness within a few years." We readily accept these authors' findings that this was unduly pessimistic.—Ed., *B.M.J.*

Diagnostic Test for Multiple Sclerosis

SIR,—The degree of inhibition by linoleic acid of the response of human lymphocytes to antigens has been claimed by Field *et al.*¹ to be much greater in patients with multiple sclerosis (M.S.) than in other neurological disorders and could be used as a diagnostic test. Mertin *et al.*² failed to confirm that the test was diagnostically useful in double-blind trials on M.S. patients selected according to the criteria of Allison and Miller (see M. Alpine *et al.*³). Without wishing to take sides we would like to draw attention to a new factor which we believe should be taken into account in patient selection if an effect of linoleic acid is to be tested on the patients' macrophages.

Low blood linoleate levels were demonstrated in 1966⁴ in patients with M.S.; early in 1973 Millar *et al.*⁵ published evidence that sunflower seed oil might act as a remission agent. At that time we were including M.S. patients in a study of blood fatty acids. However, considerable press and television publicity was given to these findings of Millar *et al.* and by the autumn of 1973 most of the M.S. blood samples we