ography and to introduce new teaching methods and staffing structures. However, many people are still unaware of the organization and equipment necessary to raise schools to the required standard. Those interested should visit one of the newer schools and read the pamphlet *Standards Recommended by the Society of Radiographers for the Establishment and Organization of Training Schools.*[1]

They will then understand why both teacher principal A and superintendent radiographer grade III are posts of high and equal responsibility—and, in addition, both equally underpaid.—I am, etc.,

Plymouth, Devon EDWARD A. WALDRON.

REFERENCE

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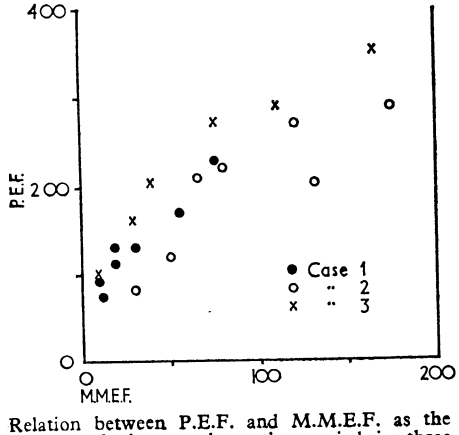
Sudden Death in a Young Asthmatic

SIR,—In his condemnation of the use of peak expiratory flow (P.E.F.) as an index of airways obstruction Dr. A. Bouhuys (5 July, p. 53) suggests that significantly different information would be obtained from measurements which reflect maximum flow rates at smaller lung volumes, such as the forced expiratory volume in one second ($F.E.V._1$) or the maximum expiratory flow in the middle of the vital capacity (M.M.E.F.). Although it is not difficult to visualize situations where there are gross discrepancies between P.E.F. and maximum flows at smaller lung volumes, numerous studies[1–6] have shown that for groups of patients P.E.F. correlates surprisingly well with the $F.E.V._1$ (correlation coefficients ranging from 0·81–0·94). There have been fewer studies of the relation between P.E.F. and M.M.E.F., but some years ago, in the course of an investigation with Dr. J. Jordanoglou on maximum expiratory flow-volume curves,[7] we obtained information on this relationship in 14 asthmatic patients with airways obstruction of varying severity.

Our results confirmed what might be predicted on theoretical grounds, that M.M.E.F. was in general a more sensitive indicator of the milder degrees of obstruction than P.E.F. However, when there was established airways obstruction, although the proportionate reduction in M.M.E.F. was greater than in P.E.F., it appeared that the direction of changes in the obstruction could be obtained from either the M.M.E.F. or P.E.F. (Fig.). These studies obviously need to be extended, but they do indicate that the greater sensitivity of a test should not automatically be equated with a greater power to pick out those patients whose asthma threatens life.



Relation between P.E.F. and M.M.E.F. as the severity of airways obstruction varied in three asthmatic patients.

I agree with Dr. Bouhuys in that I would prefer to assess an asthmatic patient by means of a full forced expiratory spirogram rather than by the P.E.F. alone. But until the day comes when spirometers are part of every doctor's equipment I would expect there to be a place for the measurement of P.E.F., since I believe that clinical experience has in general confirmed the modest hopes of the originators of the method that "the lesser usefulness of P.E.F. is to some extent compensated for by the greater simplicity and portability of the instrument used for measuring it."[8]—I am, etc.,

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Asymptomatic Bacteriuria

SIR,—The recent articles by Dr. D. C. L. Savage and others (12 July, p. 75) and Dr. S. R. Meadow and others (p. 81) reporting the results of screening schoolchildren for bacteriuria are of great interest, and I should like to comment on that of Dr. Meadow and his colleagues. As all the urine specimens were examined by microscopy, it is regrettable that pyuria rather than the presence of bacteria was taken as an indication for further investigation. The unreliability of pyuria as a means of identifying girls who have bacteriuria is well recognized,[1] and Dr. Savage and colleagues observed more than 10 pus cells per cu. mm. in only 60% of their bacteriuric girls. The 40% false negative rate incurred by the method is totally unacceptable in a screening procedure. Most white cells in voided urine from girls come from the vulva, as can be shown by comparison of voided and suprapubic specimens,[2] and as Dr. Meadow and colleagues demonstrated.

Clinicians who regularly microscope fresh, unstained urine have been impressed by the significance and ease of visualization of motile bacteria in both uncentrifuged[3 4] and centrifuged specimens.[5] Kunin[5] has reported excellent correlation between the number of bacteria visualized in a fresh, unstained urine deposit and bacterial counts.

Examination of a drop of fresh, uncentrifuged urine by high power magnification, using the most modest of microscopes, would identify at least 90% of bacteriuric schoolgirls. As Dr. Savage observed, these urines are usually frankly turbid on naked eye inspection and contain many millions of bacteria per ml., allowing ready visualization when uncentrifuged specimens are examined under high power. In surveys of the type reported it is possible that a suitably trained technician, aware of the significance of bacteria visualized in a fresh deposit, would prove a more economical means of detecting bacteriuria than any of the alternatives suggested by Dr. Meadow and colleagues.

Would it be unreasonable to suggest that urine microscopy be carried out by school medical officers at the medical examination? The large numbers of children with bacteriuria thus detected would provide an opportunity to study the natural history of asymptomatic bacteriuria of schoolgirls. This is desirable because we must either accept the circumstantial evidence that the condition bears some relationship to chronic pyelonephritis of adults and screen for the condition, or embark upon a controlled trial of treatment versus non-intervention, and thereby perhaps avoid unnecessary exposure of thousands of children to long-term chemotherapy. It should be remembered that Kunin's[6] excellent study indicated that renal involvement, as judged by antibody studies, was unusual in girls with asymptomatic bacteriuria, but his study does not tell us about natural history, because his cases were all treated.

Now that the incidence has been established in this country, the prognosis of the condition requires urgent clarification. Certainly it cannot be deduced from children attending specialized clinics for pyelonephritis,[7] nor from the incidence of renal scarring at different ages.[8]—I am, etc.,

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Hypertension and the Pill

SIR,—I am interested to read the opinion of your expert contributor in "Any Questions?" (14 June, p. 679) that hypertension as a complication of the contraceptive pill is extremely rare. For this reason I would like to report the following case.

A 19-year-old girl was put on Orthonovin (norethisterone 2 mg. and mestranol 0·1 mg.) for contraceptive reasons and her weight rose to 11 st. 3 lb. (71·2 kg.) and her blood pressure to 200/100 mm. Hg, whereas two years previously her weight had been 10 st. 7 lb. (66·6 kg.) and her blood pressure 115/70 mm. Hg. She was therefore changed to Norinyl-1 (norethisterone 1 mg. and mestranol 0·05 mg.), which only contains half the amount of norethisterone, and her weight fell to 10 st. 7 lb. (66·6 kg.), and her blood pressure to 130/80 mm. Hg. At the same time she was also put on chlorothiazide and Slow-K, but because this

gave her indigestion it was stopped after six days. She is now on Minovlar (norethisterone 1 mg. and ethinyl oestradiol 0·05 mg.) and her weight is steady at 10 st. 7 lb. (66·6 kg.), and her blood pressure is 130/75. She is not on a diuretic.

A similar but more serious case has also been treated at Guy's and is shortly to be published (Dr. P. W. R. Harris—personal communication), and one wonders whether perhaps this is a rather more common side-effect of oral contraception than was hitherto expected.

I would like to thank Dr. G. Scott and the West London branch of the Family Planning Association for permission to publish the clinical findings on this case.

—I am, etc.,

J. E. DUSSEK.

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Treating Shock

SIR,—We agree with Dr. N. McE. Lamont and Dr. K. Posel (12 July, p. 116) that it is important to maintain an adequate central venous pressure in acute circulatory failure, and should like to point out that we did not, as they suggest, overlook this principle in administering phenoxybenzamine to the patient discussed by them.

When comparing central venous pressure measurements by different authors it is essential to allow for differences in the zero reference point. The article by MacLean *et al.*,[1] quoted by Drs. Lamont and Posel as showing the normal central venous pressure to be between 5 and 11 cm. water, makes no mention of their reference point (nor, incidentally, of "normal" values), which may, however, be taken on the basis of information given elsewhere[2] to be 5 cm. below the sternal angle in a supine patient. We have taken the sternal angle itself, as stated in our article, so that a central venous pressure of +6 cm. corresponds to a value of +11 cm. with reference to MacLean's zero, and this value, in a patient with a low cardiac output and severe pulmonary oedema, does not contraindicate a trial of vasodilator therapy.

The effect of phenoxybenzamine on the central venous pressure is variable and cannot be predicted with certainty. We agree that if it falls to low levels without a rise in cardiac output, then it should be restored with intravenous fluid. An infusion raised the central venous pressure in our case to +8 cm. (or +13 cm. relative to MacLean's zero) where it remained unaffected by more phenoxybenzamine.

We presume that the statement "A central venous pressure lower than 5 cm. H_2O is normally regarded as indicative of hypovolaemia . . ." is meant to apply only to low cardiac output states. A central venous pressure about this level, or even lower, may be associated with a good cardiac output and require no interference,[3] as illustrated in Fig. 4 of the article now under discussion.[4]—We are, etc.,

J. F. RIORDAN.
G. WALTERS.

New Cross Hospital,
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Staffs.

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"Mediflash"

SIR,—I should like to express my thanks to the Mediflash and the Lancashire police whose motor-cyclist saw my Mediflash and led me, with his siren going, past an eight-mile traffic queue from Ormskirk to Southport to do an urgent forceps delivery with successful outcome on a Sunday afternoon.

As a busy obstetrician working at the "periphery," I have often had to use my Mediflash to negotiate holiday traffic jams and cannot speak too highly of its usefulness and praise the public and police enough in their invaluable co-operation when they notice it.—I am, etc.,

COLIN R. PORTEOUS.

Ormskirk, Lancs.

Doctors and Overtime Pay

SIR,—While the whole profession agrees that payment for extra duties is overdue for hospital junior staff, I cannot understand why this should not apply to all medical staff, including consultants.

When the idea of sessions was first applied to hospital work-load the consultant was a person who truly consulted and acted in such a capacity during normal working hours. Since those early days many consultants, especially in the smaller hospitals, have become so involved in the day-to-day working of the hospital that their hours of responsibility and labour have extended to cover a full 24-hour day, not just as a nominal cover but as one closely involved with an emergency rota and without the services of a registrar.

It should be the aim of the Health Service to form units on a regional basis so that the work of consultants will be limited to a time-factor approaching the sessions for which they are paid. This will necessitate eliminating full emergency services in the smaller hospitals. Where this is not done then those consultants who are genuinely available for emergency duties, especially in surgery, anaesthetics, and obstetrics, without the intervention of a competent registrar, should be adequately compensated for these additional commitments. Again, where locum cover is not provided for such a consultant when on leave, and where this can be shown to throw additional work on a colleague, then the latter is entitled to adequate compensation.

However, the main objective should be to trim the hours of work, including time on-call, to a figure which allows a person to lead a normal life with adequate free-time. These points should be included in the submission for consideration by the Review Body.—I am, etc.,

JAMES BLUNDELL.

Bessbrook,
Co. Armagh.

The Consultant's Job

SIR,—The regional consultants are acutely aware that they have been badly let down by the issue of a document (*Responsibility of the Consultant Grade*[1]) by a committee on which they were not adequately represented. For instance, our regional consultants and specialists association president, Mr. Donald Young, was ignored. With the emergence of a militant feeling from my fellow consultants, who associate themselves with my views, I should like to make the following points:

(1) The regional consultants will not be the "scapegoats" to cope with the problems of too many juniors keen on medicine and surgery. It is emphasized that there are advertised in the journals a large number of consultant posts that cannot be filled (200).

(2) They will not be diluted or demoted. Their work conditions and income are already at low ebb.

(3) They will maintain their junior staffs which are mainly from abroad so that they can pass on some of their extensive practical experience. If our registrar numbers are to be reduced then the reduction should be where the excess lies and the amount of practical training is minimal. This occurs in the undergraduate and postgraduate schools, three senior registrars and five registrars for every ten consultants compared with the regional hospital staffs—that is, three registrars and a half a senior registrar for every ten consultants.

(4) They insist that when they are otherwise engaged State patients are looked after by experienced juniors, not by those recently qualified. This adequate care is owed to the patients.

(5) They insist that if general practitioners are intent on doing consultant work, or acting as a specialized junior staff (for which they receive double pay), they should be compelled to receive adequate and proper training as envisaged by the colleges. It is noted that the general practitioners describe themselves as being overworked; accordingly it does not leave them much time for hospital work.

(6) The regional consultants have been trained and have participated in the training of the junior staffs at undergraduate hospitals. They therefore insist that they have a right to continue this training as being part of the training scheme.

(7) They insist, as a majority group, on taking their rightful part on the various committees which include those of the colleges.

(8) Research monies and building, medical, technical assistant, and secretarial staff to aid research in the regional hospitals should now be made readily available.

(9) Private accommodation anomalously pruned recently in the regional hospitals should be re-instituted and improved to attract suitable doctors to specialize in the regional hospitals.

To summarize—an increasing slice of the "National Health cake" is being consumed centrally in staffs, research moneys, and awards. Following the lead of our vociferous junior staffs it is now our turn to publish the facts and insist at least on maintaining