monary complications. In this country the physiotherapeutic regimens of the post-operative patient are largely concerned with teaching effectively controlled breathing, assisting with coughing, percussion, and positioning the chest to allow drainage in such a way as to treat established and serious pulmonary complications. There is only one study¹ in which physiotherapy has been shown significantly to reduce the rate of pulmonary complications and in that the physiotherapy was largely concerned with prophylactic deep breathing exercises. When deep breathing and SMI are emphasised as part of the regimen it is likely that alveolar and lobular collapse may be reversed and not progress to collapse consolidation. Cheap instruments exist to aid the patient to perform SMIs, and their wider use would reduce the work load on and demand for physiotherapy staff in the general surgical ward.

Undoubtedly there will always be a need for the help of physiotherapists in treating major collapse and consolidation, but we would like to see, meanwhile, an introduction into general physiotherapeutic manoeuvres of some method or other of encouraging and achieving frequent sustained maximum inspirations.

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¹ Craven, J L, *et al*, *British Journal of Surgery*, 1974, **61**, 739.

² Bartless, R H, *et al*, *Surgery, Gynecology and Obstetrics*, 1973, **137**, 925.

³ Ward, R J, *et al*, *Surgery, Gynecology and Obstetrics*, 1966, **123**, 51.

⁴ Thoren, L, *Acta Chirurgica Scandinavica*, 1954, **107**, 193.

Standardisation of bibliographical reference systems

SIR,—With reference to Miss Maeve O'Connor's article on this subject (7 January, p 31), whether the name/date or non-sequential-numeric system is adopted is immaterial to librarians. But what is important is that citations should include the title of the article (first six words only, if you like) and the total pagination of the article. These are necessary for the following reasons:

Title—(1) For identification; sometimes the citation is incorrect. (2) The greater insight into the value of the article which the provision of a short title can give.

Inclusive pagination—(1) The length of the article can be an indication of its usefulness—for example, a two-page article could not be expected to be terribly exhaustive. (2) Requests for photocopies from other librarians often require the inclusion of prepayment tokens based on the number of pages required; this information can be hard to find, particularly with journals not included in the *Index Medicus*.

I appreciate that the object of these omissions is to save space and to simplify, but I am afraid that you do so at the cost of loss of usefulness for your readers and extra work for librarians. Please have another think.

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Alpha-fetoprotein in antenatal diagnosis of neural tube defects

SIR,—Mr R Carachi (19 November, p 1357) would like to know the false-positive rate associated with the use of amniotic fluid α -fetoprotein (AFP) measurement in the antenatal diagnosis of open spina bifida. The results of individual studies indicate that this is much less than 1% if levels equal to or exceeding 5 standard deviations above the mean are considered positive.¹⁻⁴ Provided the procedure is carried out on women with a sufficiently high risk of having a fetus with open spina bifida (say, 5% or greater) the number of normal pregnancies with raised amniotic fluid AFP levels is likely to be small in comparison with the number of affected ones with raised levels.

The UK Collaborative AFP Study Group is currently undertaking a study designed to obtain a more precise estimate of the amniotic fluid AFP false-positive rate than has so far been possible from smaller individual studies. So far results on more than 9000 singleton pregnancies without neural tube defects and more than 100 cases of open spina bifida have been collected. Information on pregnancies with conditions such as exomphalos which may cause raised amniotic fluid AFP levels in the absence of neural tube defects is also being collected.

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¹ Nevin, N C, *et al*, *Journal of Obstetrics and Gynaecology of the British Commonwealth*, 1974, **81**, 757.

² Stewart, C R, *et al*, *British Journal of Obstetrics and Gynaecology*, 1975, **82**, 257.

³ Brock, D J H, *Colloques d'INSERM*, 1976, **61**, 221.

⁴ Kimball, E M, Milunsky, A, and Alpert, E, *Obstetrics and Gynecology*, 1977, **49**, 532.

"Basic Health Education"

SIR,—We read with interest Dr J A Muir Gray's letter (14 January, p 107) and we will certainly take note of some of the points he raises in the next edition of *Basic Health Education*.

There still remain, however, points of dispute. It has been our experience that very many teachers are ignorant of the simple factual side of preventive medicine and that the extent of this ignorance is increasing with years. The word "basic" in the title of our book was perhaps a little unfortunate as it was intended to imply the basic facts about health rather than the basic facts about education.

The fact that it is possible for two people to have the same factual knowledge about a subject and yet differ in their attitudes was pointed out by Stevenson¹ as long ago as 1944. His theories were, quite rightly, criticised because he denied the importance of ethical facts. In the same way it is essential that health educationalists should not underestimate the importance of the factual aspects of their subject. Our experience in general practice and in classroom teaching has convinced us that doctors are best at influencing factual knowledge (an important factor in modifying

attitudes) and teachers are best at more directly influencing attitudes.

Finally, we echo Dr Muir Gray's sentiment that health education should be grateful to the *BMJ* for stimulating debate on this sadly neglected topic.

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¹ Stevenson, C, *Ethics and Language*. New Haven, Yale University Press, 1944.

Alcohol-induced hypoglycaemia

SIR,—I was interested to see the letter from Drs C Miquel and J Rubiés-Prat (15 October, p 1027) regarding the possibility that disturbances of hypothalamic-pituitary-adrenal function might be an important predisposing cause of ethanol-induced (fasting) hypoglycaemia. There is indeed a large body of circumstantial evidence in favour of this hypothesis, much of which has been reviewed in recent publications.^{1,2}

There is no doubt that chronic alcohol abuse can produce disordered hypothalamic-pituitary-adrenal function in both directions. Hypofunction, which appears to affect 20% or so of all chronic alcoholic subjects, seems to be commoner, though less easily identifiable, than hyperfunction.^{3,4} Impairment of hypothalamic-pituitary growth hormone secretion by alcohol, though less thoroughly investigated, is now well established.^{5,6} Since both adrenocortical insufficiency and growth hormone deficiency predispose to the development and continuance of hypoglycaemia, whatever its primary cause, I can only echo the suggestion by Drs Miquel and Rubiés-Prat that the integrity of both growth hormone and cortisol secretory mechanisms should be investigated in all cases of alcohol-induced (fasting) hypoglycaemia.

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¹ Marks, V, *Proceedings of the Royal Society of Medicine*, 1975, **68**, 377.

² Marks, V, and Wright, J W, *Proceedings of the Royal Society of Medicine*, 1977, **70**, 337.

³ Rees, L H, *et al*, *Lancet*, 1977, **1**, 726.

⁴ Smals, A G H, *Journal of the Royal College of Physicians*, 1977, **12**, 36.

⁵ Andreani, D, Tamburrano, G, and Javicoli, M, in *Hypoglycemia: Proceedings of the European Symposium*, ed D Andreani, P J Lefebvre, and V Marks. Stuttgart, Thieme, 1976.

⁶ Chalmers, R J, *et al*, *Psychological Medicine*, 1977, **7**, 607.

Cross-infection with *Serratia marcescens*

SIR,—In a leading article (7 May 1977, p 1177) you drew attention to the potential pathogenicity of *Serratia marcescens* in susceptible patients and predicted the arrival in the United Kingdom of strains resistant to gentamicin, as reported from France. We have recently experienced an outbreak of infection with a very resistant, non-pigmented strain of *S. marcescens*. The strain was first noticed in October 1977 and since then 10 patients have been infected, all in association with the intensive care unit. Isolations have been made from sputum or tracheal aspirate, wounds, and urine and two patients with positive blood cultures have died. Subcultures of strains

from each patient were typed at the Cross-infection Reference Laboratory, Colindale, by bacteriocin sensitivity, by flagellar and somatic serology, and by bacteriophage. The strains were indistinguishable by these methods. The organism was sensitive to amikacin, nalidixic acid, and trimethoprim (except in one patient who previously had been treated with co-trimoxazole) and was resistant to gentamicin (minimum inhibitory concentration 10 mg/l), ampicillin, carbenicillin, chloramphenicol, cephalosporins, colistin, kanamycin, mecillinam, nitrofurantoin, sulphonamides, tetracyclines, and tobramycin.

Environmental investigation has failed to reveal the source of the organism and there is no evidence of intestinal carriage in patients or staff. The hands of medical and nursing staff in the unit were examined on several occasions using a glove washing technique¹ followed by filtration of the washings through membrane filters and incubation on cystine-lactose electrolyte-deficient (CLED) medium² overnight. This showed that the hands of one nurse who was noted to have a mild paronychia were heavily colonised with *S. marcescens*, and direct swabbing of the paronychia showed that this was infected. The strain, which was indistinguishable from those isolated from patients, could still be isolated from her hands after washing with soap and water but was cleared temporarily by using a spirit-chlorhexidine-glycerine lotion.³ The organism was not found on the hands of other members of the staff. As the paronychia improved direct swabbing of the site sometimes failed to show the organism when its presence was evident by the hand washing technique, showing the latter to be more sensitive.

At the time of writing there have been no new cases of infection in the intensive care unit and we hope that the removal of the carrier has brought the incident there to an end. So far as we know this is the first time such a resistant strain of *S. marcescens* has infected several related patients in the UK.

We are grateful to Mr T L Pitt for typing the strains.

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¹ Casewell, M, and Phillips, I, *British Medical Journal*, 1977, 2, 1315.

² Mackey, J P, and Sandys, G H, *British Medical Journal*, 1966, 1, 1173.

³ Lowbury, E J L, Lilly, H A, and Ayliffe, G A J, *British Medical Journal*, 1974, 4, 369.

Oxytocin and neonatal jaundice

SIR,—Drs Mary N Smith and R G Wilson (7 January, p 50) associate oxytocin with neonatal jaundice. An association there is, but it is probably not a cause-and-effect relationship. Our work in Winchester¹ has shown that the babies of women induced for "post-maturity" have a lesser incidence of jaundice than do those of women who go into labour spontaneously. Women induced for obstetric indications (and therefore frequently preterm) have babies who are more prone to become jaundiced. The implication is that it is prematurity and not oxytocin that is the important factor causing jaundice in babies born after induction of labour. The differences between our work and that of others is that we used

ultrasound to determine a patient's estimated date of delivery rather than her "dates."

Every obstetrician knows that labour is sometimes induced more early than intended because the "dates" are misleading. Obviously if labour is induced prematurely it is more likely that oxytocin in high dosages will be necessary to effect delivery—hence much of the confusion that surrounds this debate.

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¹ Williams, T H, *et al*, *Lancet*, 1977, 2, 1169.

Biguanides and lactic acidosis in diabetics

SIR,—I agree with the statement in your leading article (3 December, p 1436) that both phenformin and metformin predispose to lactic acidosis, but metformin seems less dangerous. We have calculated that the risk of lactic acidosis with phenformin may be 50 times that with metformin.¹ Metformin's relative safety may reflect its lesser effects on lactate metabolism,^{2,3} its lack of effect on renal acid excretion,⁴ or its different pharmacokinetics.

Although cases of metformin-associated lactic acidosis are rare and often reported more than once, we have seen one and have reviewed the 23 other cases in the literature.⁵ Two striking features emerged. Firstly, renal impairment was common. Sixteen of the 18 documented patients had renal impairment, nine were anuric (six following radiographic contrast studies), and six of the anuric patients had continued their metformin. Secondly, in the 23 documented cases other conditions which predispose to lactic acidosis often existed (cardiovascular disease in 11, liver disease in three). One other patient had taken a suicidal overdose. Although lactic acidosis can occur with metformin, the risk should be small if the drug is prescribed to patients who do not have impaired renal, hepatic, or cardiovascular function.

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¹ Phillips, P J, Thomas, D W, and Harding, P E, *British Medical Journal*, 1977, 1, 234.

² Phillips, P J, *et al*, *Australian and New Zealand Journal of Medicine*, 1974, 6, 174.

³ Phillips, P J, and Edwards, J B, in *Proceedings of 1Xth Congress of International Diabetes Federation*, Amsterdam, Excerpta Medica, 1976.

⁴ Phillips, P J, *et al*, *Proceedings of the Endocrine Society of Australia*, 1977, 20, 71.

⁵ Phillips, P J, Scicchitano, R, and Clarkson, A R, *Australian and New Zealand Journal of Medicine*. In press.

Appointment at Luton and Dunstable

SIR,—There recently appeared in the *BMJ* (14 January, p xli) an advertisement requesting applications for the post of "consultant surgeon with special experience in urology . . . with duties mainly at the Luton and Dunstable Hospital."

Long before the present holder of this position was due to retire we discussed among ourselves and with the administration the exact nature of the work of his successor. It was agreed that when the post came to be advertised it would be for a urologist with the

proviso that the successful applicant would be expected to take part in a one-in-four duty rota for general surgical emergencies.

We, general surgeons at the Luton and Dunstable Hospital, are taking the unusual step of writing to you in the hope of avoiding frustration and disappointment for any of our colleagues who may apply for the position.

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The Steve Biko inquest

SIR,—In response to Professor R Hoffenberg's letter (14 January, p 112) I would like to assure members of the BMA that the Medical Association of South Africa does not require urging or the exertion of pressure to indict unprofessional actions or to protect the ethical integrity of the medical profession.

I would at the same time direct attention to the following facts: (a) that the magistrate who conducted the inquest has referred the records regarding the medical treatment received by Mr Biko to the South African Medical and Dental Council for such action as it may deem fit; (b) that substantial claims for compensation have been preferred by the Biko family against the Minister of Justice, the Minister of Health, and the doctors concerned; and (c) that in the Republic of South Africa, as in Britain, it is a basic tenet of the law that a person is held to be innocent until such time as his guilt has been proved.

In view of the foregoing I submit that it cannot be expected of a responsible body like the MASA to express an opinion regarding the medical treatment received by the late Mr Biko on the basis of newspaper reports—it would, in fact, be highly improper to do so, as the matter is still sub judice.

In conclusion I wish to emphasise that the MASA has the fullest confidence in the South African judiciary and in the SA Medical and Dental Council, who will see to it that justice is done.

C E M VILJOEN

Secretary General,
Medical Association of
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Wasted women doctors

SIR,—I wish to congratulate Dr Peter Richards (14 January, p 95) on his excellent exposure of current defects in HM69/6 arrangements for part-time training posts—namely, (1) the time taken to set up posts and (2) the frequent lack of available funds. Perhaps he can advise me on how we can convince the Department of Health and Social Security that a lapse of time of between one and two years between application and appointment is inappropriate, as some of the doctors concerned are pregnant and the human gestation period is shorter than this!

Last week I wrote to Sir Henry Yellowlees concerning the draft replacement of HM69/6 which is currently being considered. What follows is the major portion of the text of my letter to him concerning part-time training in hospitals.

"Senior registrar posts. The draft of the successor