

which Dr Philip Home and Dr Simon Walford refer in paragraph 5 was one which we submitted to the *BMJ* but which we agreed would be more suitably published elsewhere. The paper which appears on page 726 is by Dr B M Singh and others on control of diabetes in general practice clinics.

Your review of the Wolverhampton system combines incorrectly information from both the published and the as yet unpublished paper. The published paper points out that glycosylated haemoglobin estimations at the time of the study were done by only half of the general practices but that in those practices glycosylated haemoglobin estimation was done just as often on individual patients: the unpublished paper indicated that this was changing. Dr Home and Dr Walford suggest that fundoscopy is performed without a mydriatic in general practice clinics, but this is a misquotation from the unpublished paper, which points out that more than half the practices examine fundi with dilated pupils but that some still do so with undilated pupils—several of these refer patients to ophthalmic opticians or ophthalmologists.

Lastly, you suggest that practices may have to devote one session a week to diabetes whereas we have always suggested that a clinic once a month was usual.

P A THORN

Royal Hospital,
Wolverhampton WV2 1BT

Osteogenesis imperfecta 1984

SIR,—It was disappointing to find that among the many moths attracted to the candle of osteogenesis imperfecta Dr Roger Smith (18 August, p 394) did not include an otolaryngologist. Deafness is a prominent feature of the mild or type 1 disease, with an incidence assessed at 40%.¹ Typically the onset is in early adult life, but deafness may be present from birth. In the large series by Smars the incidence of significant deafness increased from 6.8% at age 20 or less to over 50% at age 50.² Management of the hearing loss will be an essential part of the rehabilitation of these patients. If the patient is a child special schooling may be required and both child and parents will need help and guidance. The deafness may be either conductive or sensorineural in type, and both can be successfully managed with hearing aids. In many patients a conductive hearing loss may be corrected surgically by ossicular reconstruction or stapedectomy, obviating the need for an aid. Failure to rehabilitate can only increase disability in a group which can ill afford it.

NORMAN VON HAACKE

Royal Infirmary,
Edinburgh EH3 9EN

- 1 Smith R, Francis MJO, Houghton GR. *The brittle bone syndrome. Osteogenesis imperfecta*. London: Butterworths, 1983.
- 2 Bergstrom L. Fragile bones in fragile ears. *Clin Orthop* 1981;159:58-63.

The lupus syndrome induced by hydralazine

SIR,—Between October 1979 and August 1984 we used hydralazine in 67 patients (40 men and 27 women) as additional treatment for hypertension. We have included in this analysis only patients who had a minimum of three months' treatment, and as in the study of Dr

H A Cameron and Dr L E Ramsay (18 August, p 410), the daily dose of hydralazine used was the highest dose taken for three months or longer. The mean age of our patients was 57 (range 33-75), mean pretreatment blood pressure 155/100 mm Hg, and mean duration of follow up 32 months (range 3-57 months).

Twenty patients received 25 mg a day (a fixed combination tablet), 28 received 50 mg, and 19 received 100 mg (15 men and 4 women). We looked for antinuclear factor before treatment in 59 patients, and in 57 patients we have values both during and after treatment. Only one woman on 100 mg daily for two years had antinuclear factor present at a titre of 1/256. We do not have a pretreatment value for her. At present she continues to be well on treatment with an erythrocyte sedimentation rate of 17 mm in the first hour. None of our patients have developed the lupus syndrome. With the low doses used in general practice we find no evidence to disagree with the recommendations of Dr Cameron and Dr Ramsay as to the doses that should be used in practice.

JAMES HOSIE
GILLIAN A C HOSIE

Glasgow G13 2SW

Age-sex registers as a screening tool for general practice: size of the wrong address problem

SIR,—The article by Dr Alan Silman (18 August, p 415) contains inaccuracies and assertions which are not only unsupported by the data presented but are also unsupportable in the light of other studies. Consequently, it gives a misleading account of the role of the age-sex register as a screening tool in general practice.

As early as the introduction Dr Silman erroneously stated: "Error rates in addresses based on letters returned either by the post office or the current occupant have been estimated between 13 and 17%.^{1,2} In fact Warren¹ had an 18.5% non-response rate (13.5% confirmed as the wrong address and 5% non-respondents for reasons unknown). The second figure of 17%² had a range of 7.5-29.5% and arose from a comparison of the congruency between executive council files (sic) and patient medical record envelopes—not age-sex register entries. At no time was any contact with patients attempted or claimed.

After finding that the proportion of wrong age-sex register addresses based on postal returns rose from 16% to 26% when all non-respondents were followed up by a visit to their last known address, Dr Silman claims that the "true error rate in recorded addresses might be approximately double that reported by others," again quoting rates of 13%¹ and 17%.² He has not only failed to compare like with like but has conveniently overlooked some truly comparable figures where follow up visits did take place.

It was as long ago as 1977 that Hannay reported address error rates of 46% from an inner city Glasgow health centre age-sex register computer file.³ Another study reported a "true error rate" for age-sex register listed addresses of 16% in five practices in mixed settings.⁴ Unfortunately these findings do not support Dr Silman's highly selective use of data nor his conclusions.

Dr Silman's contention that because of address error rates in practice age-sex registers only 75% of a screening "target population" could be reached is also misleading. This claim is incompatible with his earlier (and correct) statement that "the response rate from screening needs to be calculated from a denominator of invitations received rather than those sent."

To ensure maximum effectiveness in reaching

bona fide practice patients screening in general practice should be carried out as follows:

(1) Identify the appropriate target group of patients from the age-sex register.

(2) A varying proportion of age-sex register entries will represent individuals who are no longer practice patients.⁴ These can be readily identified by establishing whether a corresponding practice medical record (FP5/6) and a family practitioner committee file entry exist for each patient identified from the age-sex register. If a patient identity is present in all three files there is a 95% probability that he or she will be present and contactable in the community.^{4,5} This total can also act as a reasonably accurate denominator.

(3) Send postal invitations only to the group of patients who appear in all three files. The medical record envelope should be used to identify the patient's address as it is the most accurate source. The incorrect address rate for the patient's medical record is 4% (practice range 0.7-9%), for the age-sex register 8% (3-13%), and for family practitioner committee files 17% (8-30%).⁴ These figures represent the "true" address error rate for a "target population."

(4) Send one reminder letter to non-respondents since this will increase yield by around 10%.

(5) Use case finding techniques for the non-respondents.

(6) Since 2% (practice range 0-5%)⁴ of bona fide patients will not be represented in the age-sex register instruct the practice staff to "keep a look out" for patients and their records with the appropriate attributes of the screening group.

Finally, Dr Silman provides no guidance on how to improve the accuracy of age-sex registers. Information is available, however, on the practical steps which can be taken to maximise the accuracy and hence the effectiveness of age-sex registers.^{4,6}

ROBIN C FRASER

Department of Community Health,
Leicester Royal Infirmary,
Leicester LE2 7LX

- 1 Warren MD. Identifying handicapped people in general practice. *J R Coll Gen Pract* 1976;26:82-6.
- 2 Farmer RDT, Knox EG, Cross KW, Crombie DL. Executive council lists and general practitioner files. *Br J Prev Soc Med* 1974;28:49-53.
- 3 Hannay DR, Maddox EJ. Missing patients on a health centre file. *Community Health* 1977;8:210-6.
- 4 Fraser RC, Clayton DG. The accuracy of age-sex registers, practice medical records and Family Practitioner Committee registers. *J R Coll Gen Pract* 1981;31:410-9.
- 5 Sheldon MG, Rector AL, Barnes PA. The accuracy of age sex registers in general practice. *J R Coll Gen Pract* 1984;34:269-71.
- 6 Fraser RC. Patient movements and the accuracy of the age-sex register. *J R Coll Gen Pract* 1982;32:615-22.

* * * Dr Silman replies below.—ED, *BMJ*.

SIR,—Professor Fraser's comments, which are answered in detail below, are based on a lack of appreciation of the difference between this and the other studies to which he refers. The addresses used were obtained from the patients' record envelopes further corrected, as described, by reference to other sources—for example, telephone directories. Thus the age-sex registers studied were specifically constructed to have the most recent address available, and yet despite this the error rates described were observed.

The reference to Warren's paper was not erroneous; we are both agreed he reported a wrong address rate of 13%, and the total non-response rate is irrelevant. Similarly the figure of 17% quoted is correct from the study by Farmer *et al*. I accept that this was not based on the accuracy of age-sex registers per se but rather on executive council lists; and thus gives an indication of the address error rate in the latter.

The results from this study did show that, for example, in practice A the true error rate obtained from home visiting was double that estimated from returned letters alone. Thus by implication studies of address error rates obtained without home