gravity forward increasing the frequency of falling over. However, the relation of vertebral deformities with risk of fracture was independent of frequency of falling. Secondly, and we believe more likely, vertebral deformities may reflect impaired bone strength in the whole skeleton since the relation was independent of bone mineral density. We conclude that by assessing the degree of spinal deformity patients with a fourfold increased risk of future non-vertebral fractures can be identified.

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Use of translated written material to communicate with non-English speaking patients

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To communicate with patients we must provide information in a form that they can understand. This is particularly true for patients from ethnic minority groups who do not understand written or spoken English. For these patients documents are translated into appropriate languages (or dialects). If, however, these patients cannot read then our efforts are fruitless and we must consider other ways of communicating. A recent survey of the Bangladeshi population in Leeds showed that 49% could not read or write English and 35% could not read or write Bengali. We looked at literacy rates among non-white patients in Bradford with regard to their first or any language.

Patients, methods, and results

In Bradford's hospitals 10 liaison workers provide the language services. Between January and April 1993 they gathered information on 1000 non-white patients who either attended a clinic or were helped as inpatients. The inpatients were mostly non-English speaking, but the outpatients were a true population sample. We gathered data on the patients' first language, English, and any other languages they understood. Ability to read and write was graded as fluent, partial, or absent. We asked about length of residence in Britain. We analysed 425 obstetric patients separately.

The overall rate of complete illiteracy was 58.8% but varied among language groups (table). In the obstetric patients the rate was 58.1% (247/425). In all, 57 of the 176 (32.4%) patients who had some understanding of

Ability of 1000 non-white patients in Bradford to read or write in English or other languages. Values are numbers of patients

Patients' first language	In English (n=176)	In Urdu but not in English (n=205)	In first language only (n=31)	No ability in any language (n=588)
Bengali	8	1	2	22
English	ĭ	ō	õ	0
Gujerati	9	ŏ	19	5
Hindi	2	0	0	4
Hinko	1	1	Ō	5
Kashmiri	1	0	Ō	Ō
Malayaim	1	0	0	0
Miripuri	37	16	9	60
Pushto	6	1	0	15
Punjabi	77	132	1	398
Urdu	33	54	0	79

written English had partial understanding (44 of the 57 (77·2%) obstetric patients). Of the 205 patients who had some understanding of written information, but not in English, 73 (35·6%) had partial understanding (47 of 118 (39·8%) obstetric patients). The average length of residence in Britain for the patients who were illiterate was $11\cdot82$ years (range $0\cdot1-40$).

Comment

A recent report by the Audit Commission highlighted the adverse effects of poor communication in non-English speaking patients and suggested that hospitals need to plan language services. In our obstetric unit 30% of deliveries are to non-white mothers and it is important for us to communicate adequately with them. This survey is part of the process of improving communication.

We have shown a high rate of illiteracy in the non-white patients who attend Bradford hospitals, which supports our impression. The rate is higher than the 35% rate found in the Bangladeshi population of Leeds.² Even if we allow for having missed some patients who understood English the illiteracy rate in the non-English speaking patients whom we surveyed was 71.4% (588/824) overall and 67.1% (247/368) in the obstetric patients. Although in Bradford we try to provide as much written information as possible in a wide variety of languages, our efforts may not be improving the dispersal of information. Providing written information in Urdu alone (which would reach 86.9% (205/236) of the literate non-English speaking patients) might be sensible.

We wish to use the information from our study to try to improve our language service. We have produced audio tapes of some information³ and are also working on video tapes in different languages. We believe that producing information in these forms is a better use of resources than simply providing written information. If written information is often unhelpful in the elective setting it will be more so in the acute setting. Purchasers should therefore recognise the value of interpreting services in areas such as labour suites and casualty units. They must also realise, however, that these services would need to be adequately resourced.

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