Assessment of the costs to the NHS arising from the need for interpreter, advocacy and translation (IAT) services

CENTRE FOR HEALTH SERVICES STUDIES (CHESS),
AND
CENTRE FOR RESEARCH IN ETHNIC RELATIONS (CRER)

UNIVERSITY OF WARWICK

1998

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Executive Summary

- This report describes the results of an exercise to calculate the costs to the NHS arising from the need for interpreting, advocacy and translation (IAT) provision.

- After preliminary analysis, 13 representative health authorities were identified for data collection, and information on the costs of IAT provision within these health authorities was obtained.

- The relationship between identifiable IAT costs and a range of population measures was explored graphically and statistically for the sample of 13 health authorities.

- There appeared to be little relationship between costs and the size of the health authority population. IAT costs and census data on the size of the minority population were more closely related. IAT costs, and various estimates of the number of people who had difficulty speaking English were considered. As expected this revealed an even stronger relationship.

- A variety of potential functional forms were considered for the relationship between average IAT costs and the share of a HA's population estimated to have difficulties in the English language. It was concluded that a quadratic equation was the most appropriate functional form to adopt.

- Of the 13 health authorities surveyed, IAT provision was deemed to be inadequate in 7 authorities either because of a lack of comprehensive IAT provision or because of poor quality provision.

- A dummy variable was therefore included in the equation in order that the costs of adequate as opposed to inadequate provision could be established. The use of the dummy variable increased the degree of 'fit' of the equation.

- The resulting Warwick formula enables calculation of resource allocation at health authority level to cover both 'adequate' and 'inadequate' levels of provision as follows:

$$C^{(IAT)}_{adequate} = b_0 - b_1.X_i + b_2.X_i^2 + b_3 \quad \textit{Equn 1}$$

$$C^{(IAT)}_{inadequate} = b_0 - b_1.X_i + b_2.X_i^2 + \quad \textit{Equn 2}$$

Where:

$C^{(IAT)}_{adequate}$ = *Average IAT cost per person with language problems - adequate provision (£)*

$C^{(IAT)}_{inadequate}$ = *Average IAT cost per person with language problems - inadequate provision (£)*

b_0 = *14.916006* (constant) b_1 = *7.4924978* (constant)

b_2 = *2.7430544* (constant) b_3 = *6.7375167* (constant)

X_i = *Percentage of HA population with problems in English*

- The total cost for all 100 health authorities in England of allocating resources to cover IAT provision is calculated to be £9.40 million for 'adequate' levels of provision and £6.87 million for 'inadequate' or more basic provision (1997/98 prices).

- The use of the Warwick formula suggests that in order to provide adequate IAT provision an average of £16.54 per person with language needs is required, compared to an average of £9.80 for inadequate provision. Actual average costs in HAs will vary according to the extent of language needs that a health authority has. This is reflected in the resource requirement projections which we have made by health authority (contained in the report).

- It is recommended that an allocation be made which is sufficient to provide adequate IAT provision.

- The proxies used within the Warwick formula are far from ideal and liable to become outdated. However, as an interim measure it is recommended that the Warwick formula be used to 'fine tune' the existing York resource allocation formula.

- To further improve the Warwick formula, we suggest that the 2001 Census of population should include a question relating to language needs. In addition, more routinely updated information could be compiled if ethnic monitoring data relating to language needs were collected by all trusts. Improved information on language needs could be used to refine the Warwick formula relating to IAT costs to the NHS.

- The Audit Commission (1994) identified numerous managerial failures associated with IAT service provision. More recent evidence gathered during the course of our research suggests that many of the Audit Commission's criticisms still apply in some trusts and health authorities. Such managerial deficiencies need to be addressed if adequate IAT services are to be provided on a nation-wide basis.

- A number of potential funding models have been considered. It is concluded that a non-ring fenced formula based approach will provide the most appropriate basis for distributing resources to meet IAT needs.

- The study team identified failings associated with the organisation and provision of IAT services in the cross-section of health authorities surveyed. These will not necessarily be rectified through adequate financial provision alone.

- One possible approach might be to assign a statutory responsibility to each health authority to provide adequate IAT services for its resident population.

1 INTRODUCTION

1.1 Background

This report was commissioned by the Technical Advisory Group (TAG) of the Department of Health following an initial scoping exercise on the 'unavoidable costs of ethnicity' carried out by the University of Warwick (Johnson et al 1998).

The scoping exercise was literature-based and identified two types of unavoidable cost. The first was the *additional cost of providing the same service* to an ethnic population. This principally reflects language needs i.e. the cost of providing interpreter, advocacy, and translation services. The second was the *additional cost associated with necessary differences in provision of services* to ethnic populations compared with non-ethnic populations, caused by variations in the incidence or prevalence of specific diseases combined with differences in treatment patterns. Although sufficient data were not available in the literature to quantify either of these unavoidable costs, the research team were convinced that data could be identified at health authority level to address more rigorously both types of cost associated with ethnicity.

Following a presentation to TAG on the findings of the scoping exercise, a further study was commissioned to look in greater detail at the first category of unavoidable cost i.e. language needs. The aim of the study was to quantify the costs to the NHS arising from the provision of interpreter, advocacy, and translation (IAT) services and to relate these to ethnic population figures with a view to improving the workings of the current national formula for resource allocation.

1.2 IAT Definitions

The study team first arrived at a number of definitions for use in the project. The distinction between interpreter and advocacy provision is not clear cut, but the advocacy role clearly involves more than just interpreting. 'Health advocates' have been defined as those who "mediate between patients and professionals to make sure that clients are offered an informed choice of health care. If there are clinical or cultural problems they will negotiate, although ultimately they see themselves as advocates for their people." (Parsons and Day 1992). Advocacy services may be provided for particular groups of patients regardless of language needs. In terms of the present study advocacy costs were only included in IAT costs if staff were fulfilling an interpreting or bilingual advocacy role. Otherwise, the cost of providing advocates for an ethnic population was judged to fall under the second type of unavoidable cost, and to represent necessary differences in provision of services to ethnic populations compared with non-ethnic populations e.g. some diabetes link workers.

Apart from the provision of interpreter and advocacy services, translation of written or taped (including video) material may also be required within the NHS. This can involve anything from the provision of menus in other languages, to the provision of leaflets and reports which are accessible to those who cannot read or speak English. A major activity in many hospitals in recent years has been the adaptation of signs around hospitals, for example. All these costs were included in the definition of IAT services used in this study.

1.3 Resource Allocation Formula

The current resource allocation formula is used to distribute resources in the NHS (NHS Executive 1997). It involves the use of *weighted capitation targets* which are set using a pre-defined formula which attempts to distribute resources fairly based on a regression formula developed at York University. The formula is used to calculate 'fair shares' of available resources for health authorities

by taking into account the age distribution of the population, additional need, and unavoidable variations in the cost of providing services in different parts of the country.

The York formula informs the level of *recurrent baselines* which are the current allocations that health authorities receive for their resident populations. The recurrent baseline is equivalent to the previous year's allocation plus adjustments. The recurrent baselines rarely reflect the targets informed by the York formula, this is because of a *distance from target* arising due to an attempt by the NHS Executive to ensure that transitions towards resource allocation targets are smooth. To this end the NHS Executive ensures that the *pace of change* of baselines towards targets is not too fast.

The present report examines the feasibility of refining the formula further to take into account unavoidable variations in the cost of providing IAT services in different parts of the country. We provide an analysis of the costs of IAT service provision at district level and relate this to proxies for the need for such services (i.e. the size of ethnic groups within a resident population and their related language needs) in order to explore further some of the unavoidable costs of ethnicity. The TAG research brief required us to focus on hospital and community health services (HCHS) and exclude general practitioners (GPs). Where information was extracted on IAT service expenditure in general practice during the course of this study, this is therefore reported separately.

2 METHOD

The study was carried out over a period of 14 weeks (April - July 1998) and involved four main strands.

2.1 Preliminary overview of a cross-section of health authorities

The first aim of the study was to identify IAT costs and language needs in a cross-section of health authorities. A list of twenty four health authorities were therefore identified as possible study sites (see Annex 1). These health authorities were selected to include:

- a mix of 'shire', 'metropolitan' and London health authorities;
- a range in terms of size of ethnic population;
- various types of language/ ethnic groups (including refugees).

An introductory letter was sent to each health authority (HA). This was followed by structured telephone interviews with HA staff. The following information was requested in order to build up a profile of the authority:

- key language groups, and approximate numbers in each group (if possible);
- model/ type of interpreter, advocacy and translation service provision;
- availability of cost and utilisation data;
- willingness and ability to provide data for the study.

2.2 Collection of detailed cost / utilisation data from selected health authorities

Once baseline information had been collected from the twenty four health authorities, responses were compared and thirteen health authorities were selected for more detailed data collection (see Annex 1). The authorities selected represented a cross-section in terms of geographical location; size of ethnic minority population; number/ types of language groups; and types of IAT service provision. Four HAs were located in the West Midlands; three in North Thames; two in Northern and Yorkshire; two in Trent; one in Anglia and Oxford; and one in North West region. Ethnic groups represented between 1.6% and 37.3% of their total populations (1991 Census data).

Information was collected via site visits in nine of these health authorities and by telephone and fax in the remaining four (see Annex 1).

For each health authority information was requested (if possible) on:

- cost of interpreting/ advocacy services in the financial year 1997/98;
- type(s) of interpreter service provided;
- client groups served i.e. areas of provision;
- level of service provision and utilisation of services;
- whether services are HA funded;
- perceived 'gaps' in current service provision and whether provision is adequate;
- any capping of expenditure or service use.

In addition, views on 'minimum standards' of provision were investigated to inform our understanding of minimum acceptable levels of provision. Finally, details of the manner in which services had developed historically were gathered.

Similar information was requested in relation to translation services.

We were able to obtain reasonably robust data on the costs of interpreter services direct from several of the 13 selected health authorities. However, in many health authorities, the required information on interpreter/ advocacy services was found not to be readily available at a health authority level. In these cases we approached trusts and service providers directly. A few trusts were unable to provide us with any cost information because interpreter/ advocacy services were not provided out of readily identifiable budgets

In addition to the direct costs of interpreter services which we recorded, there will be *indirect* costs [e.g. due to increased length of clinical consultation times (Johnson et al 1998)]. We considered the feasibility of including this in our cost analysis. However, there is little research evidence to demonstrate the length of additional consultation time required, although the NHS Executive has recently funded a research project addressing this issue which is being undertaken by researchers based at East London and The City Health Authority. In the interim, however, we conclude that this form of indirect cost cannot be estimated with any accuracy. Such indirect costs are therefore **excluded from our calculations.** Because of this decision, the figures presented in the results section may be an under-estimate of the total cost to the NHS of providing IAT services.

On the other hand, a *failure* to provide adequate services may also impose additional indirect costs upon the NHS. For example, Leman (1996) examined a large sample of patients who presented for emergency treatment at St Thomas' Hospital in London. Fifty five patients were identified who were deemed to be 'non-English speaking' because their language ability was poor. Consultations were found to have been prolonged because of language difficulties by an average of 9.92 minutes (94% confidence interval, range 5.38 to 14.46 minutes) (Leman 1996). Furthermore the Audit Commission has pointed out that "In hospitals where significant numbers of patients do not speak English, clinical staff spend more time in out-patient consultations and on ward rounds, and there is a much greater potential for medical errors" (Audit Commission 1994). This evidence suggests that the provision of good interpreter or advocacy services can potentially prevent wasteful use of clinical staff time. Once again, this is excluded from our costs analysis.

2.3 Examination of data on ethnicity of resident population for health authorities selected

For each of the 13 health authorities studied, Census and other key population-based data on ethnicity were examined. Unfortunately, 1991 Census Local Base Statistics data for the 100 Health Authority areas which have been in existence in England since April 1996 has not been published by the Office for National Statistics, nor is it yet available in electronic form for use by the academic community.

Hence it was necessary to estimate data for these areas using 1991 Census data for electoral wards. The first stage in this process was the creation of a "look-up table", listing the 1991 Census wards which were located within each of the 1996 Health Authority areas. This was achieved by first calculating the geographical centroid of each ward using the digital boundary data for each ward, and then using a "point-in-polygon" program to take the digital boundary for each Health Authority (provided to the project by the Department of Health in Mapinfo format) and test each centroid to see whether or not it was located within this area. Census data for Health Authorities was then generated

by aggregating ward-level Local Base Statistics data, using the SASPAC program on the University of Manchester computer system. The results of this procedure were fairly satisfactory, yielding population estimates which were very close to those produced by the Office for National Statistics, but the two sets of data do not match exactly. One reason for this is that it was necessary to use entire wards for our estimation procedure in order to retain the maximum detail for the ethnic group and country of birth data, while Health Authorities are defined in terms of enumeration districts in some areas, and therefore cut across ward boundaries.

The ethnic composition of the population in 1991 was calculated from table 6 of the Local Base Statistics, with the percentage of the resident population from each of the ten Census ethnic groups (and those born in Ireland) presented. There is no more recent data on the ethnic composition of the population for geographical areas as small as Health Authorities and hence it was not possible to update these figures to represent the ethnic composition of these areas in the mid 1990s.

2.3.1 The "Diamond" correction

The published results from the 1991 Census revealed the population of Great Britain to be 54.9 million people. This figure was arrived at following strenuous efforts by the Census Offices to maximise coverage of the Census and to "impute" missing data for households which did not return Census forms. However, a comparison with an alternative estimate of the British population, obtained by starting with the 1981 Census population total, adding births and estimated net in-migration and subtracting deaths over the intervening ten years to 1991 (the "rolled-forward estimates") indicated that the 1991 Census had underestimated the population by about 1.2 million people (2.2 per cent of the population). Comparison of the "rolled-forward estimates" and 1991 Census data by age and sex revealed this "undercount" to be largely concentrated among people (especially men) aged 20-34, young children (especially babies less than 1 year of age) and very elderly women (aged 80 and above).

The Census Offices have calculated a set of age- and sex-specific correction factors to apply to Census data in order to make it match the "rolled-forward estimates". They have also calculated correction factors for different types of geographical area (OPCS/GRO(S), 1994). While the overall effect of the undercount is minor, it has very severe effects on the estimates of particular population groups (e.g. young men in inner cities, and even more so, *young men from minority ethnic groups* living in inner city areas characterised by houses in multiple occupation).

Therefore, the Economic and Social Research Council (ESRC) funded a research project carried out under the direction of Steve Simpson at Manchester University and Professor Ian Diamond at Southampton University, which aimed to provide robust estimates of the corrected Census population for small areas, which could then be used as a basis for purposes such as updating Census population data for small areas for intercensal years, and for population projections. This project took the Census Office's adjustment factors as its starting point, and used them to generate a "gold standard" set of local population estimates for 1991, for all ca. 10,500 Census wards in Great Britain. These estimates have been designed to be consistent with the 1991 mid-year estimates of local authority and health authority populations, produced by the Office for National Statistics and the General Register Office for Scotland. Thus, they distribute students to their term-time addresses, include an estimate of the number of armed forces personnel in a ward and add in demographic changes between the time of the Census (April 1991) and the mid-year estimate date (30th June 1991).

Having produced such estimates for each age and sex group in every ward, the ratio between the "gold standard" ward population estimate and the ward 1991 Census data can be used as a correction factor to apply to Census data. These correction factors have come to be known as the *"Diamond" correction factors*. Such correction factors can be applied to any 1991 Census variable which is disaggregated by age and sex (e.g. economic activity or ethnic group), since the "rolled-forward" population estimates were only calculated for the population disaggregated by age and sex.

From the description above of how these factors are calculated, it should be clear that the "Diamond correction" is only relevant when applied to 1991 Census of Population data. Its effect is to make 1991 Census data match 1991 mid-year estimate data. The Office for National Statistics' mid-year estimate

data for years since 1991 is the *best estimate* of the population of a local authority area or health authority area, and needs no further adjustment; in fact, no alternative information exists upon which better local estimates could be made (though some local authorities have arguably better estimates of their own populations, based on school records, development monitoring, or local population surveys).

2.4 Synthesis of cost and population data

Once all available cost data had been obtained, we examined whether a relationship could be observed between the health authority resource costs and the population-based Census data described above.

We first used the "lookup-table" linking wards to Health Authorities to calculate a set of "pro-rating" factors which were used to estimate population data for 1996 from ONS mid-year population estimates for local authority districts. Because there is no more recent reliable data on the ethnic composition of localities within Great Britain, the estimate of the minority population used in the analysis was taken from the 1991 Census, to which the "Diamond correction" factors were applied in order to take account of the undercount. This measure of the minority population which potentially experiences problems with the English language was created by summing the Black-African, Indian, Pakistani, Bangladeshi, Chinese and Other-Asian populations in each Health Authority for 1991. Black-Caribbean people were excluded because survey evidence reveals that nearly all are proficient in English, while the majority of Black-Other and "Other-Other" people are UK-born and hence most will be fully proficient in the English language.

We were aware that the relationship between Census data and IAT costs might not prove to be a simple one for three main reasons, and we addressed each of these in a different manner.

Firstly, data on the minority ethnic group population is not necessarily a good indicator of the facility in the English language of the local population. This is because people from some minority ethnic groups (e.g. Black-Caribbean people) overwhelmingly have English as their first language, while a number of surveys (such as those carried out by the Health Education Authority) have shown that people from minority ethnic groups born in the UK are mostly quite competent in the English language (and often report English as the language they understand best). Within each South Asian ethnic group, ability to speak English declines with increasing age, is lesser for women than men, and is much less for those born outside the UK. It was therefore necessary to derive a proxy for language need in each Health Authority area, which could be constructed from data available from (or derived from) the 1991 Census. Given the strong influence of birth within or outside the UK upon the ability to speak English, the best proxy indicator was considered to be country of birth. However, it was necessary to find a method of translating country of birth into languages spoken, or at least ability in the English language, since English would be the first language in many countries. This was achieved using data from the Family and Working Lives Survey (Research Services Limited Social Research 1995, King et al 1996), which covered persons aged between 16 and 70 interviewed during 1994 and early 1995. Data for 11,237 individuals was obtained, with a broadly representative coverage of the whole of Great Britain. The data set included an "ethnic boost" of around 2,000 interviews, undertaken in order to yield sufficiently large sample sizes for the analysis of minority ethnic group characteristics. The survey included variables which provided a breakdown of the ability of individuals to speak, read and write English, as well as information on their country of birth. It was therefore possible to calculate the percentage of the population born in each country which experienced difficulties in using the English language. These percentages were calculated (using data weighted to match the age and sex breakdown of the adult population as a whole) separately for men and women and for three geographical divisions: Greater London, the metropolitan counties and the remainder of England. A measure of the number of people experiencing problems in English can thus be calculated by multiplying the proportion of people with problems speaking or reading English in the region in which a health authority is located against the number of persons born in the relevant country estimated to be resident within the health authority, and then summing the result across all countries of birth for each sex separately. The percentage of the population experiencing language problems can thus be calculated by expressing this estimate as a percentage of the estimated total population. Estimates of language need were made for 1991, using Census data only and for 1996, based on data derived by combining Census and mid-year estimate data.

Secondly, net international migration to the UK has been at extremely high levels during the 1990s (nearly 100 thousand per annum), an important part of which is made up of asylum seekers and refugees. Many such people will have poor levels of literacy in the English language, and hence it is desirable for any estimates of the magnitude of language need to take this factor into account, especially for Health Authorities in London (where around 250 thousand refugees are estimated to have settled since 1991). The Office for National Statistics includes estimates of the number of asylum-seekers and visitor-switchers (people who arrive in the UK on a visitor or student visa who later apply for acceptance as a resident) in their mid-year estimates of local authority and health authority populations. ONS made the numbers of such people that they allocated to each area available to the Warwick study team, and this data was used to refine the estimate of language need by updating 1991 Census data on the population by country of birth and feeding this into the calculations described above. This was achieved by calculating the percentage of the 1996 resident population represented by asylum-seekers and visitors, adding this to the percentage born outside the UK in 1991, taking the ratio of the 1996 percentage to the 1991 percentage, multiplying this ratio against the percentage of the population born in each country outside the UK in 1991 and applying these percentages to the 1996 population estimate. The resulting estimates of population by country of birth in 1996 are probably overestimates, since some of the asylum-seekers and visitor switchers may have left the UK.

Thirdly, reported resource costs will vary according to the adequacy of IAT provision as well as the size of language need in a health authority. Some HAs, for example, did not supply a service to major client groups and some trusts were at best able to offer an inadequate or patchy service. We addressed this problem by using dummy variables which represented the perceived adequacy of IAT service provision in a health authority, in order to evaluate the impact of quality / extent of service on cost/ population indices. Provision was deemed to be inadequate either if it was largely patchy, or if provision within a health authority largely consisted of voluntary as opposed to professional provision; in section 4.5 we indicate why voluntary provision might be considered inadequate. Furthermore in Annex 3 we provide some indication of why provision was deemed to be adequate or inadequate in each of the 13 health authorities.

Once these three important issues had been addressed, we made every attempt to establish the extent to which IAT costs could be related to the readily available Census data.

First, the relationship between IAT costs and a range of population measures was explored graphically, plotting a series of cost and cost per capita measures against possible explanatory variables for the 13 health authorities in the survey. Next, regression models with different functional forms were fitted to this relationship (using ordinary least squares), and the model which performed best was identified. This model was then used to estimate likely costs for all 100 English Health Authorities. We substituted the estimated number of people with language needs as a percentage of the resident population for each area into the formula which was yielded by fitting the model.

Unfortunately, due to the paucity of available data on the utilisation of IAT services in most health authorities, there was insufficient data to be able to robustly relate resource costs to service utilisation data in a large enough number of health authorities.

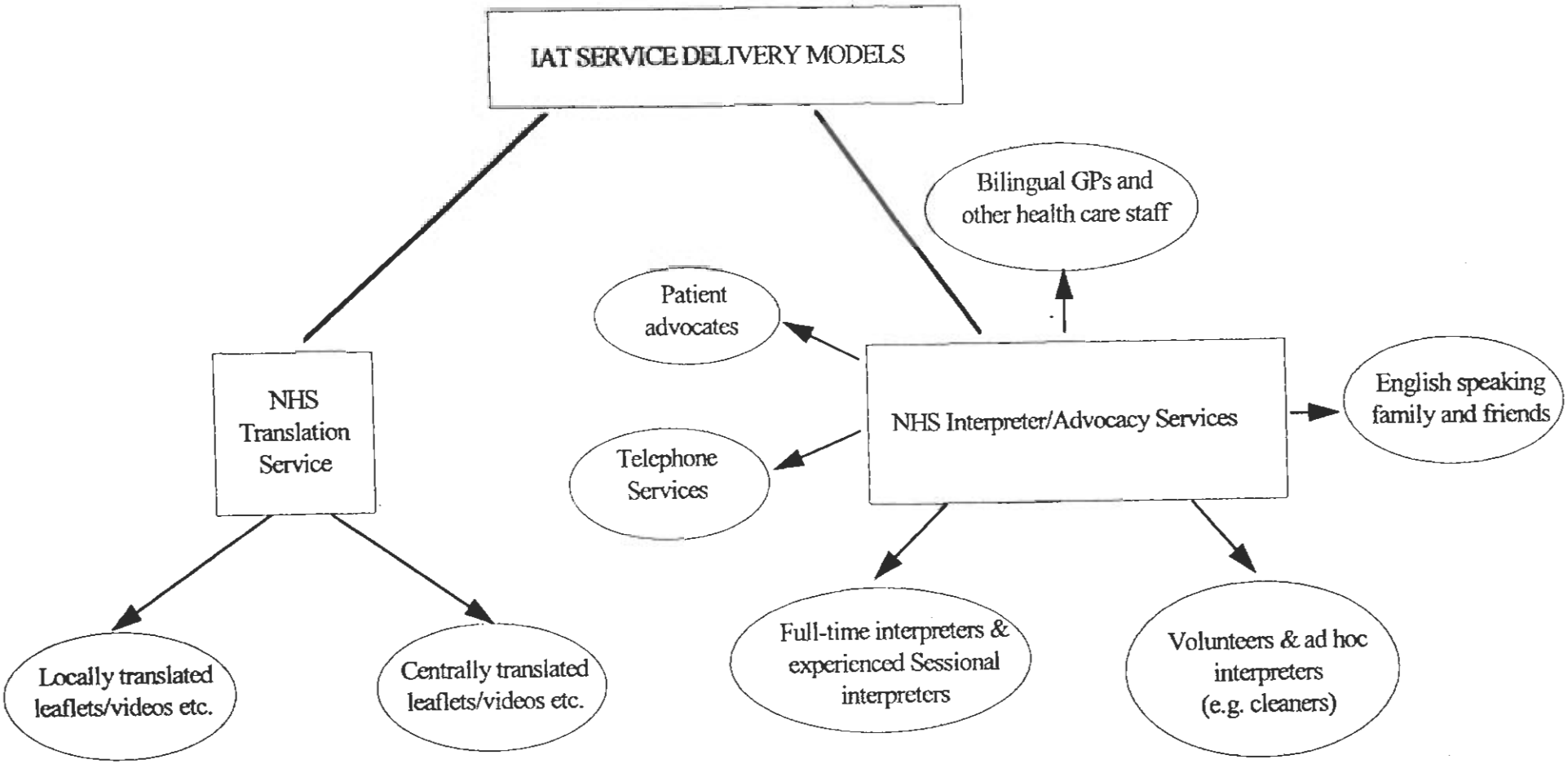
3 RESULTS

3.1 Models of interpreting service provision in study districts

There are a number of possible service delivery models for IAT provision (see Figure 3.1.1). These will vary in terms of their costs, generalisability, and in their effectiveness or 'adequacy'.

In the health authorities studied, it was apparent that NHS trusts used a variety of models for interpreter/ advocacy provision (see Annex 2). The organisation of these services also differed. At one extreme the services were centrally coordinated and delivered at a health authority level from within a central unit, usually by the voluntary sector (for example, CINTRA or the Newcastle Interpreting Services for Health and Social Services); such services were generally of a high quality.

Fig 3.1.1 Service Delivery Models



Within other health authorities there was diverse provision, usually organised at trust level. In some trusts there was a complete reliance upon voluntary interpreting provision, but such trusts were the exception rather than the rule. Usually trusts provided some form of professional interpreting or advocacy service delivered within the trust; such provision varied in its comprehensiveness and therefore often varied in quality.

Health authorities also varied in the extent to which they attempted to establish minimum standards of provision. Health authorities such as Leicestershire and Birmingham were attempting to co-ordinate a reasonable level of provision across the board with varying degrees of success. Whereas in other authorities (e.g. Coventry and Doncaster) there was a failure to provide either co-ordinated, or apparently adequate, provision.

The vast majority of the trusts and health authorities which we surveyed provided interpreter as opposed to advocacy services. East London and The City Health Authority was a notable exception. Provision within some other health authorities (for example Salford and Trafford; Kensington, Chelsea and Westminster; and Warwickshire) was mixed, including the use of staff who on occasions fulfilled an advocacy role (for example link-workers, advocates in mental health, or co-workers).

The manner in which services had developed differed across the health authorities surveyed (see Annex 3, final column). IAT service development sometimes demonstrated collaboration between various local bodies (for example the CINTRA interpreting service in Cambridgeshire). Alternatively, provision had sometimes come about as a result of the development of services at trust level, or as a result of specific health authority intervention to promote the use of services. In many health authorities provision of services in Obstetrics had been triggered by the Asian Mother and Baby Campaign.

3.2 Costs of interpreter, advocacy and translation services in selected health authorities

Table 3.2.1 lists the total interpreting and advocacy costs identified and the total translation costs in the 13 health authorities studied. A more detailed breakdown is available in Annex 5, showing how these figures are constituted and sources of information. Also included in Table 3.2.1 is an indicator of adequacy of provision within the authority. This was informed by the literature review and our perception of whether a professional and sufficiently comprehensive service was provided (as described in Section 2.4, page 6).

Initially, the Warwick team approached health authority staff in order to obtain cost information on the provision of IAT services. In most instances health authorities did not have centralised information about the costs of IAT provision. This was because most health authorities do not contract directly with NHS trusts for such services. In the few cases where they did contract directly with trusts we obtained the details from the health authorities. In some instances health authorities contracted with outside agencies for interpreting services, and in these cases service providers were approached for cost information. On other occasions however we had to resort to approaching all the NHS trusts within a health authority in order to get cost information for each trust, and in this way identify the overall costs within the health authority.

Many individual trusts were able to provide good translation cost information. Acquiring comprehensive information for the entire health authority did, however, prove difficult. Fortunately, this should not distort resource requirement projections significantly because translation costs typically account for only a small proportion of a health authority's budget relative to interpreter/ advocacy costs.

In Table 3.2.1 below we have also included information on the dummy variable used, which indicates whether or not provision is adequate. Provision was deemed to be inadequate if a substantial proportion of provision was lacking because services were patchy, or if a substantial proportion of provision was unprofessional and voluntary in nature. Section 4.5 explains why voluntary provision is inadequate, whilst Annex 3 provides details of the reasons why provision was deemed to be either inadequate or adequate in each health authority.

Table 3.2.1: Costs of interpreter, advocacy and translation services (1997/98 financial year)

Health Authority	Total identifiable costs of interpreting and advocacy provision	Total identifiable costs of written translation provision	Total identifiable costs of interpretation, advocacy, and written translation provision	Adequate minimum standard of provision usually met? (Used for dummy variable in the regression analysis).
Birmingham	£357,685	£0	£357,685	Yes
Bradford	£322,792	£4,660	£327,452	Yes
Coventry	£48,064	£2,342	£50,406	No
Doncaster	£200	£647	£847	No
Ealing, Hammersmith, and Hounslow	£167,528-168,528	£10,385-13,385	£177,913-181,913	No
East London and The City	£2,335,975	£27,903	£2,363,878	Yes
Kensington, Chelsea and Westminster	£308,000	£18,000-£24,000	£326,000-£332,000	Yes
Leicestershire	£86,280	£8,500	£94,780	No
Newcastle and North Tyneside	£40,600	£2,037	£42,637	Yes
North West Anglia	£20,507	£108	£20,615	No
Salford and Trafford	£31,500	£10,500	£42,000	No
Sandwell	£68,595	£10,090	£78,685	No
Warwickshire	£31,081	£3,000	£34,081	Yes

Further information on the organisation and provision of IAT services is presented in the Annexes. This includes information on:

- speciality groups served i.e. areas of provision (see Annex 4): Provision can either be fairly general in nature (e.g. primary care provision, provision in acute hospitals) or more specialised (e.g. provision in acute mental health, or provision in obstetrics). As the Annex shows, the type of provision ranges from practically no provision (e.g. Doncaster Health) to highly specialised provision (e.g. East London and The City Health Authority), to very general provision (e.g. Newcastle and North Tyneside).

- levels of service provision and utilisation of services (see Annex 3): The level of service provision was defined as either generally good as in the case of six health authorities, or generally inadequate as in the case of the remaining seven. Information on service utilisation patterns was available for only two health authorities.

- whether services are HA funded (see Annex 3): Services were sometimes funded centrally by health authorities, but more usually they were funded by trusts or a combination of trusts and health authorities.

- perceived 'gaps' in current service provision and whether provisionally adequate (see Annex 3): This information was compiled in order to judge whether or not provision was adequate.

Table 3.3.1 (continued): 1996 Health Authorities in England: Ethnic composition at the time of the 1991 Census (percentage of residents in each ethnic group)

Code	Health Authority	Residents	White	Black-Caribbean	Black-African	Black-Other	Indian	Pakistani	Bangladeshi	Chinese	Other-Asian	Other-Other	Born in Ireland	Minority ethnic groups	Black	South Asian	Other
QC2	Liverpool	472791	96.1	0.3	0.6	0.7	0.3	0.1	0.1	0.8	0.2	0.8	1.3	3.9	1.7	0.5	1.7
QC3	Manchester	435002	87.2	2.6	0.9	1.3	1.1	3.8	0.5	0.8	0.5	1.4	4.5	12.8	4.7	5.4	2.7
QC4	Morecambe Bay	299537	99.2	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.2	1.1	0.8	0.1	0.3	0.4
QC5	St Helen's & Knowsley	339245	99.2	0.1	0.1	0.1	0.2	0.0	0.0	0.2	0.0	0.2	0.8	0.8	0.3	0.2	0.4
QC6	Salford & Trafford	445857	96.2	0.7	0.1	0.3	0.8	0.6	0.1	0.3	0.2	0.5	2.6	3.8	1.2	1.6	1.0
QC7	Sefton	297132	99.1	0.1	0.1	0.1	0.1	0.0	0.0	0.2	0.0	0.2	1.3	0.9	0.2	0.2	0.5
QC8	Stockport	289929	97.6	0.2	0.1	0.1	0.5	0.6	0.1	0.3	0.1	0.4	1.5	2.4	0.4	1.1	0.9
QC9	West Pennine	471723	93.9	0.3	0.1	0.2	1.1	2.4	1.5	0.2	0.1	0.3	1.1	6.1	0.6	4.9	0.6
QCA	East Norfolk	600754	99.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.6	0.9	0.2	0.2	0.5
QCC	Northamptonshire	587796	96.5	0.8	0.1	0.3	1.2	0.1	0.3	0.2	0.2	0.4	1.9	3.5	1.2	1.5	0.8
QCD	North West Anglia	409284	96.6	0.3	0.1	0.2	0.7	1.2	0.0	0.2	0.2	0.3	1.1	3.4	0.7	2.0	0.7
QCE	Oxfordshire	564108	96.6	0.4	0.2	0.4	0.5	0.5	0.1	0.3	0.3	0.6	1.6	3.4	1.1	1.2	1.2
QCF	Suffolk	649563	97.7	0.4	0.2	0.7	0.2	0.0	0.1	0.1	0.2	0.5	0.8	2.3	1.3	0.3	0.8
QCG	Barnsley	225044	99.4	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.5	0.6	0.1	0.2	0.2
QCH	North Derbyshire	370478	99.3	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.5	0.7	0.2	0.2	0.3
QCJ	South Derbyshire	543841	95.3	0.7	0.1	0.3	1.9	1.1	0.0	0.2	0.2	0.3	1.0	4.7	1.1	3.1	0.6
QCK	Doncaster	294341	98.4	0.3	0.0	0.1	0.4	0.4	0.0	0.1	0.1	0.2	0.7	1.6	0.4	0.8	0.4
QCL	Leicestershire	885364	88.8	0.6	0.1	0.3	8.5	0.4	0.2	0.2	0.4	0.6	1.0	11.2	1.0	9.0	1.2
QCM	Lincolnshire	589429	99.2	0.1	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.2	0.9	0.8	0.2	0.2	0.4
QCN	North Nottinghamshire	392033	99.1	0.2	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.7	0.9	0.3	0.3	0.3
QCP	Nottingham	621620	94.0	1.6	0.1	0.6	1.2	1.3	0.1	0.3	0.2	0.6	1.1	6.0	2.4	2.6	1.1
QCQ	Rotherham	256270	98.0	0.1	0.0	0.1	0.2	1.3	0.0	0.1	0.1	0.2	0.5	2.0	0.2	1.5	0.3
QCR	Sheffield	520979	94.8	1.0	0.2	0.4	0.3	1.8	0.2	0.3	0.2	0.7	0.7	5.2	1.6	2.3	1.2
QCT	Bury & Rochdale	374882	94.0	0.2	0.1	0.2	0.4	3.9	0.5	0.2	0.2	0.3	1.9	6.0	0.5	4.8	0.7
QCV	North Cheshire	311513	98.9	0.1	0.1	0.1	0.3	0.2	0.0	0.2	0.1	0.2	1.2	1.1	0.2	0.4	0.4
QCW	South Cheshire	659183	99.1	0.1	0.0	0.1	0.2	0.0	0.0	0.2	0.1	0.2	1.1	0.9	0.2	0.3	0.5
QCX	East Lancashire	516012	91.8	0.1	0.1	0.1	2.2	4.7	0.4	0.1	0.2	0.3	1.3	8.2	0.2	7.3	0.7
QCY	North West Lancashire	455759	96.6	0.2	0.1	0.2	2.0	0.4	0.1	0.1	0.1	0.3	1.4	3.4	0.5	2.5	0.5
QD1	North & Mid Hampshire	527214	98.2	0.2	0.1	0.2	0.3	0.1	0.1	0.2	0.3	0.3	1.4	1.8	0.5	0.5	0.8

Table 3.3.1 (continued): 1996 Health Authorities in England: Ethnic composition at the time of the 1991 Census (percentage of residents in each ethnic group)

Code	Health Authority	Residents	White	Black-Caribbean	Black-African	Black-Other	Indian	Pakistani	Bangladeshi	Chinese	Other-Asian	Other-Other	Born in Ireland	Minority ethnic groups	Black	South Asian	Other
QD2	Portsmouth & South East Hampshire	534030	98.5	0.1	0.1	0.1	0.2	0.0	0.2	0.3	0.1	0.3	1.0	1.5	0.3	0.5	0.7
QD3	Southampton & South West Hampshire	508385	97.3	0.2	0.1	0.2	1.0	0.2	0.1	0.3	0.2	0.4	1.2	2.7	0.5	1.4	0.8
QD4	Isle of Wight	126892	99.3	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.9	0.7	0.2	0.1	0.4
QD5	Somerset	467310	99.5	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.8	0.5	0.1	0.1	0.3
QD6	South & West Devon	579549	99.3	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.9	0.7	0.2	0.1	0.4
QD7	Wiltshire	585627	98.4	0.3	0.1	0.1	0.4	0.1	0.1	0.2	0.2	0.3	1.5	1.6	0.5	0.5	0.6
QD8	Avon	955174	97.2	0.8	0.1	0.3	0.4	0.3	0.1	0.2	0.1	0.4	1.1	2.8	1.2	0.8	0.8
QD9	Birmingham	1009828	78.2	4.7	0.3	0.9	5.4	6.9	1.3	0.4	0.6	1.2	3.9	21.8	6.0	13.6	2.2
QDA	Wigan & Bolton	575915	95.8	0.1	0.1	0.1	2.5	0.8	0.0	0.2	0.1	0.2	0.9	4.2	0.4	3.4	0.5
QDC	Wirral	338770	99.0	0.1	0.0	0.1	0.1	0.0	0.1	0.3	0.1	0.2	1.5	1.0	0.2	0.2	0.6
QDD	Bradford	474617	84.1	0.7	0.1	0.3	2.6	10.1	0.8	0.2	0.4	0.7	1.0	15.9	1.2	13.5	1.2
QDE	County Durham	599810	99.3	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.1	0.1	0.4	0.7	0.1	0.3	0.3
QDF	East Riding	558470	99.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.9	0.2	0.2	0.4
QDG	Gateshead & South Tyneside	360464	98.9	0.0	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.4	1.1	0.2	0.5	0.5
QDH	Leeds	707724	93.9	1.0	0.2	0.5	1.5	1.4	0.3	0.3	0.2	0.7	1.3	6.1	1.7	3.2	1.2
QDJ	Newcastle & North Tyneside	466288	97.1	0.1	0.1	0.1	0.6	0.7	0.4	0.4	0.3	0.3	0.6	2.9	0.3	1.7	0.9
QDK	North Cumbria	318060	99.6	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.7	0.4	0.1	0.1	0.2
QDL	South Humber	318954	98.7	0.0	0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.2	0.8	1.3	0.2	0.7	0.4
QDM	Northumberland	308704	99.5	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1	0.5	0.5	0.1	0.2	0.2
QDN	Sunderland	298916	98.9	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.1	0.1	0.3	1.1	0.1	0.6	0.4
QDP	Tees	560816	98.0	0.0	0.1	0.1	0.3	1.0	0.0	0.1	0.1	0.2	0.6	2.0	0.2	1.3	0.5
QDQ	Wakefield	316783	98.5	0.1	0.0	0.1	0.3	0.7	0.0	0.1	0.1	0.1	0.5	1.5	0.2	1.0	0.3
QDR	North Yorkshire	716909	99.3	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.8	0.7	0.1	0.2	0.4
QDT	Calderdale & Kirklees	575835	91.4	0.8	0.1	0.4	2.2	4.2	0.1	0.1	0.2	0.5	1.2	8.6	1.3	6.5	0.8
QDV	Cornwall & Isles of Scilly	477143	99.4	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.2	0.7	0.6	0.2	0.1	0.3
QDW	Dorset	663590	99.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.3	1.1	0.9	0.2	0.2	0.5
QDX	North & East Devon	454845	99.4	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.7	0.6	0.1	0.1	0.4
QDY	Gloucestershire	534461	98.1	0.5	0.1	0.2	0.6	0.0	0.1	0.1	0.1	0.3	1.2	1.9	0.7	0.7	0.5
QEA	Coventry	300002	88.0	1.1	0.1	0.4	7.4	1.3	0.4	0.3	0.3	0.6	4.6	12.0	1.6	9.1	1.2

Table 3.3.1 (continued): 1996 Health Authorities in England: Ethnic composition at the time of the 1991 Census (percentage of residents in each ethnic group)

Code	Health Authority	Residents	White	Black-Caribbean	Black-African	Black-Other	Indian	Pakistani	Bangladeshi	Chinese	Other-Asian	Other-Other	Born in Ireland	Minority ethnic groups	Black	South Asian	Other
QEC	Dudley	310315	95.5	0.8	0.0	0.2	1.4	1.4	0.1	0.1	0.1	0.4	0.6	4.5	1.1	2.8	0.6
QED	Herefordshire	162462	99.4	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.2	0.7	0.6	0.1	0.1	0.3
QEE	Sandwell	295333	85.1	2.7	0.1	0.5	8.0	1.9	0.8	0.1	0.2	0.6	1.0	14.9	3.3	10.7	0.9
QEF	Shropshire	412388	98.4	0.2	0.0	0.1	0.5	0.2	0.0	0.2	0.2	0.2	0.9	1.6	0.3	0.8	0.5
QEG	Solihull	202976	97.1	0.8	0.0	0.3	1.0	0.2	0.0	0.2	0.1	0.3	2.1	2.9	1.1	1.2	0.6
QEH	North Staffordshire	469346	97.9	0.2	0.1	0.1	0.3	0.9	0.1	0.1	0.1	0.2	0.5	2.1	0.4	1.3	0.4
QEJ	South Staffordshire	580139	98.3	0.3	0.0	0.1	0.4	0.5	0.0	0.1	0.1	0.2	0.9	1.7	0.4	0.9	0.4
QEK	Walsall	264231	90.3	0.9	0.0	0.3	4.7	2.4	0.6	0.2	0.2	0.3	0.7	9.7	1.3	7.7	0.7
QEL	Warwickshire	491582	96.6	0.3	0.0	0.1	2.2	0.1	0.0	0.2	0.1	0.3	1.6	3.4	0.5	2.4	0.5
QEM	Wolverhampton	247093	81.3	4.1	0.1	0.9	11.5	0.8	0.1	0.2	0.3	0.6	1.2	18.7	5.2	12.4	1.1
QEN	Worcestershire	515074	98.6	0.2	0.0	0.1	0.2	0.4	0.1	0.1	0.1	0.2	1.0	1.4	0.4	0.7	0.4
QEP	East & North Hertfordshire	487001	96.9	0.5	0.1	0.2	1.1	0.1	0.1	0.3	0.2	0.5	1.5	3.1	0.8	1.3	1.0
QEQ	West Hertfordshire	506392	95.1	0.5	0.2	0.2	1.3	0.9	0.3	0.4	0.5	0.7	2.1	4.9	0.9	2.5	1.6
ENG	***England***	***48115430***	***93.7***	***1.1***	***0.5***	***0.4***	***1.8***	***1.0***	***0.3***	***0.3***	***0.4***	***0.6***	***1.6***	***6.3***	***1.9***	***3.1***	***1.3***

3.4 Synthesis of cost and population data

Following analysis of the ethnic group composition of Health Authorities (as outlined in the previous section), the study team examined the relationship between variations in levels of spending on IAT services identified by surveying a cross-section of health authorities (Table 3.2.1) and the level of need for services provided in languages other than English. Using regression techniques, a range of possible explanatory models were compared and the best of these was used to estimate IAT costs across all 100 Health Authorities in England.

3.4.1 Identifying predictors of translation and publishing costs by health authority

In the following set of figures, costs are expressed as total costs or costs per person resident in the HA, and related to a set of possible explanatory variables derived from the resident population, the minority population and an estimate of the number of people experiencing problems in using the English language.

The derivation of these variables was discussed in detail in section 2.4, but is summarised below:

Table 3.4.1a: Description of variables

Explanatory variable	Description
Population	Estimate of HA total population in 1996
Minority population	Number of people from Black-African, South Asian, Chinese and Other-Asian ethnic groups in 1991
Population with language needs	Estimated number of people with problems reading, writing or speaking English , 1996
Minority share of population	Percent of 1991 HA population from Black-African, South Asian, Chinese and Other-Asian ethnic groups
Percent of population with language needs	Percent of 1996 HA population estimated to have problems with English language

Costs are also variously expressed as total costs, costs per resident, cost per person from minority groups (as defined above) or costs per person experiencing problems in the English language.

Each Health Authority in the survey is identified on the figures which follow, as detailed below:

Table 3.4.1b: Key to scatter diagrams

Bir	Birmingham	**Bra**	Bradford	**Cov**	Coventry
Don	Doncaster	**Eal**	Ealing, etc.	**Elo**	East London & City
KCW	Kensington, etc.	**Lei**	Leicestershire	**New**	Newcastle
NWA	NW Anglia	**San**	Sandwell	**S&T**	Salford and Trafford
War	Warwickshire				

The first hypothesis to be considered was that total IAT costs are simply a function of the population size of a Health Authority area: thus, more populous areas will face higher levels of cost

Figure 3.4.1c: Relationship between total IAT costs and population size

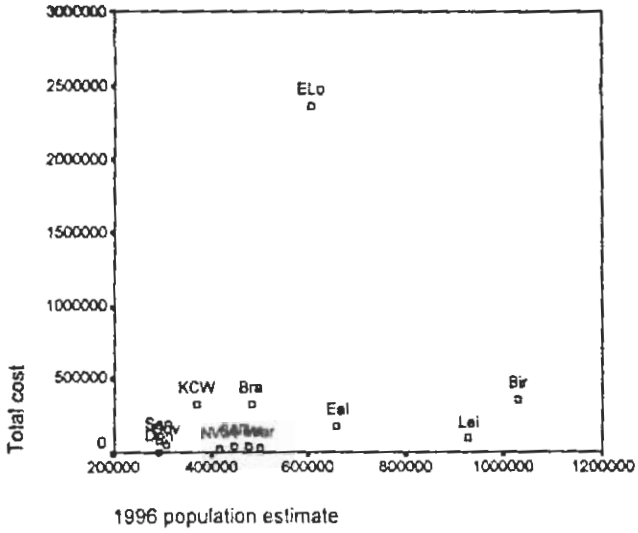
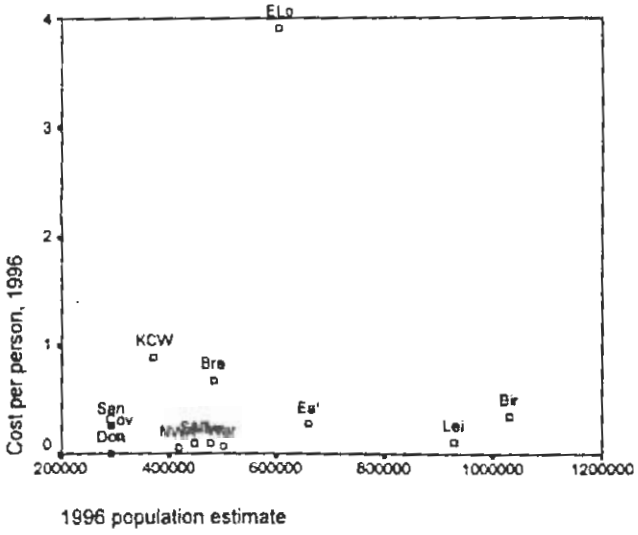


Figure 3.4.1d: Relationship between average IAT cost per person and population size



From the distribution of points on Figure 3.4.1c, there appears to be no direct relationship between costs and total HA population - perhaps even a tendency for costs to decline with increasing population. East London & The City stands out as a marked outlier, experiencing much higher IAT costs than HAs with much larger populations. When costs are expressed in the form of per capita costs, the relationship with total population appears to be even weaker (Figure 3.4.1d). Average costs per person are no greater in a HA with a population of around 1 million than in a HA with a population a third as large. East London & the City stands out as having average costs at least 8 times greater than most other HAs, but Kensington, Chelsea and Westminster and Bradford also emerge as outliers, though their spending per person is only around a quarter as high as that of East London & The City.

It seems clear that total population is a poor predictor of the level of IAT costs, and that it is preferable to relate cost to a more precise indicator of the possible level of need for IAT services. The first indicator which we considered was the 1991 Census measure of the number of people from minority ethnic groups who may experience problems with the English language.

Figure 3.4.1e: Relationship between IAT costs and minority population

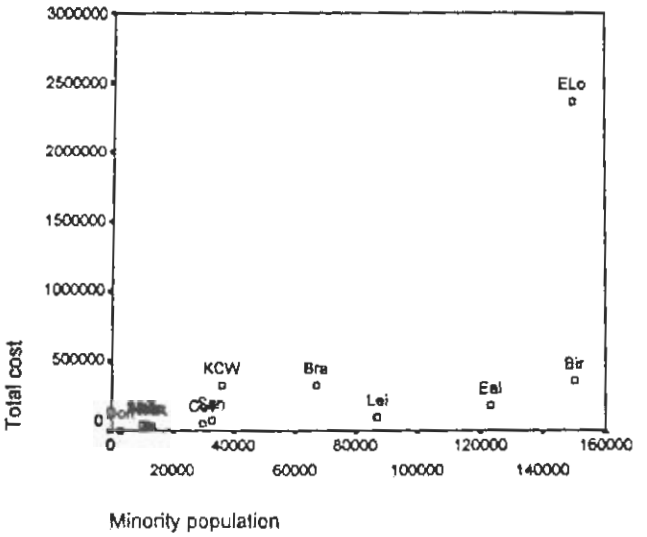


Figure 3.4.1f: Relationship between IAT costs and minority share of HA population

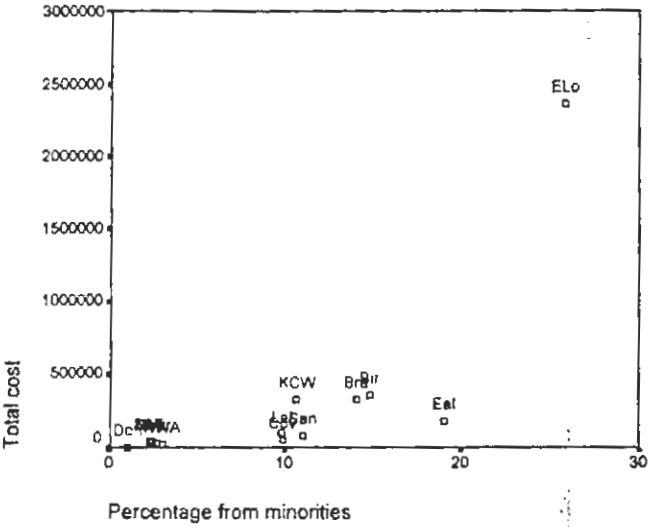
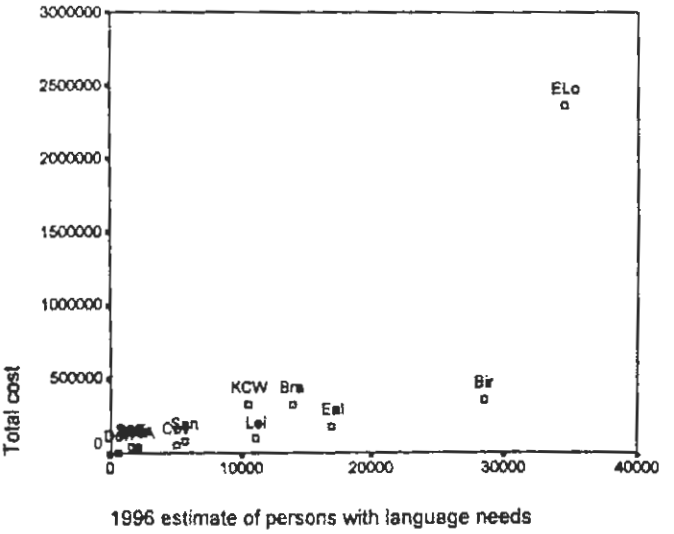


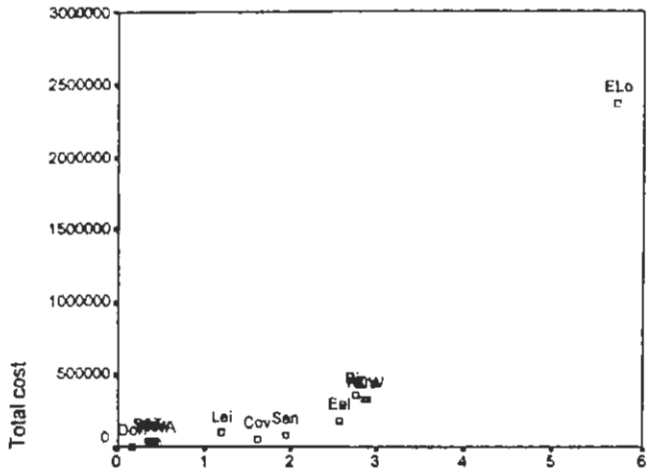
Figure 3.4.1g: Relationship between IAT costs and estimate of population with language needs



The relationship between total costs and the total "minority" population in Figure 3.4.1e is very different to that with total population (Figure 3.4.1c). The high costs experienced by East London are now revealed to be related to the large minority population of the HA, though it is still above the trend described by data for the other 12 HAs. There appears to be a weak positive relationship between in total costs and total minority population among the other HAs If the focus is changed to the *share* of the HAs population represented by ethnic minorities (Figure 3.4.1f), a stronger positive relationship between costs and possible need is revealed. East London is still an outlier, but this appears to be partly accounted for by the much larger percentage of its population being from minorities. Other HAs in which minorities form a relatively large percentage of the total population in 1991 also emerge as having relatively high IAT costs.

The better performance of the potential population with language needs as an explanatory variable clearly demonstrates that IAT cost are more a function of the population with language needs than the total population. It might therefore be expected that a more precise estimate of the population experiencing language difficulties would provide a better prediction of IAT costs. Figure 3.4.1g depicts the relationship between IAT costs and the estimate of the number of people experiencing difficulties in the English language for the 13 health authorities. In this diagram, the positive relationship between costs and population needing to be served in languages other than English appears much closer; the trend appears to be curvilinear, and most HAs are located quite close to the trend line.

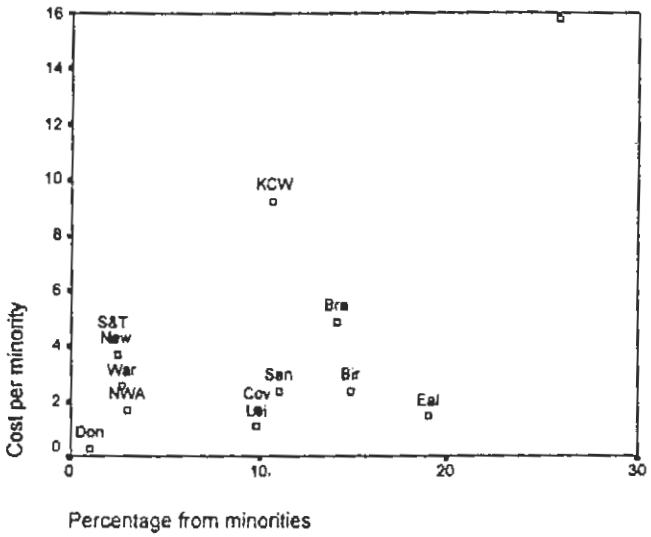
Figure 3.4.1h: Relationship between IAT costs and percentage of population estimated to experience language needs



Finally, when the level of IAT costs is plotted against the percentage of the population estimated to experience problems with the English language (Figure 3.4.1h), this positive trend becomes much more clearly apparent. The high costs experienced by East London and The City are revealed to result from the much larger share of this HA's population with language problems than occurs in the other 12 HAs. While there is variation around the trend, as the share of the population with language difficulties increases, the costs involved in serving them also increase, and there seems to be an acceleration in the increase once this share exceeds 2.5 per cent of the resident population.

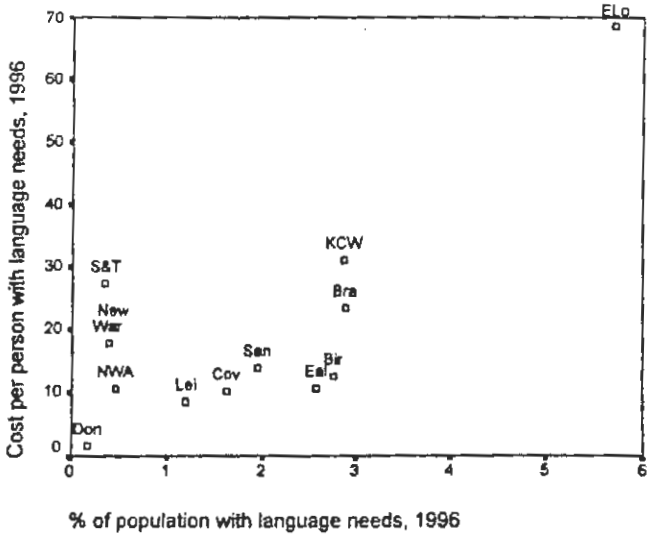
The next issue the study team explored was the way in which the average cost of providing IAT services per person with language difficulties varies with the population to be served. Figure 3.4.1j depicts the relationship between IAT costs per minority (the 1991 Census-based measure) and the percentage of the resident population accounted for by these minority ethnic groups. No clear relationship is apparent in this diagram. While East London and The City and Doncaster appear in opposite corners of the graph, there is wide variation in average costs for HAs with similar percentages of their 1991 populations from these ethnic groups.

Figure 3.4.1j: Relationship between IAT costs per minority person and minority share of HA population



However, a different pattern is revealed if the focus is switched to the estimate of the population experiencing *problems with the English language* (Figure 3.4.1k). There is a clear positive relationship between the average costs of serving this population and the percentage it forms of a Health Authority's population. However, there is considerable variation in average costs for those HAs in which linguistic minorities represent a small percentage of the population. It is possible to discern either a linear positive relationship, or a curvilinear relationship, with average costs initially high where people with language needs are a small fraction of the total population, then declining as the relative magnitude of the linguistic minority population increases, until this share is about 1 per cent, after which point average costs increase in direct relation to the increasing share of the population experiencing problems in the English language.

Figure 3.4.1k: Relationship between IAT costs per person with language needs and persons estimated to have problems with English language as a percentage of HA population

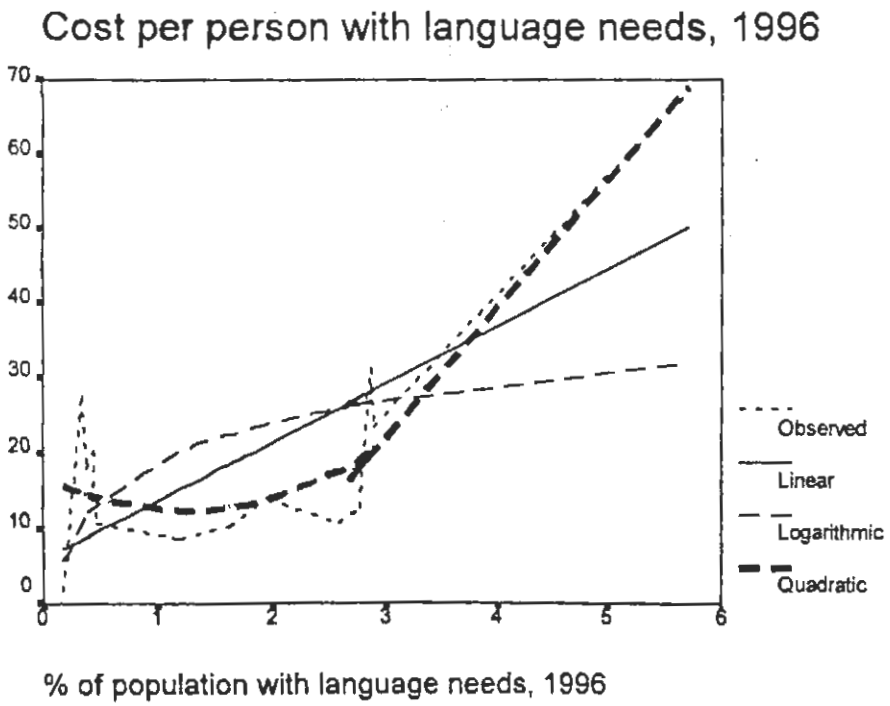


3.4.2 *Identifying the relationship between average IAT costs and the population estimated to have problems with the English language*

Having established that there seems to be a positive relationship between the average costs of providing IAT services for people experiencing difficulties in the English language and the relative magnitude of this section of a Health Authority's population, the next stage was to identify the form of the relationship and to estimate a formula which could be used to predict average IAT costs for the remaining 87 Health Authorities in England.

As discussed in section 3.4.1, a visual inspection of the scatter diagram could identify a number of different types of functional form for the relationship, and three seemed possible. First, a simple linear trend, with costs increasing directly in proportion to the change in the share of the population with language problems. Secondly, a curvilinear positive trend, with average costs increasing more than proportionately as the percentage of the population with language difficulties increased (this can be represented as a linear trend in the logarithms of the independent and dependent variables). Thirdly, a "u-shaped" trend, describing a tendency for average costs to be initially high where the share of the population with language difficulties is very low, declining as this percentage increases, then increasing again after a given point at least in proportion to the increase in the percentage of the population experiencing language difficulties. The third of these possible functional forms is particularly interesting, as it raises the possibility of economies of scale in the provision of IAT services; i.e. when the linguistic minority is very small, unusually high costs are incurred in making special provision to meet their needs (e.g. buying in telephone interpreter services) which diminish as provision becomes more routine, up to the point where the increase in the population to be served involves increasing costs (e.g. the need to fund additional full-time staff to meet their needs, and the production of greater volumes of literature in a greater range of minority languages).

Figure 3.4.2a: Alternative relationships between average IAT costs per person and percentage of HA population experiencing language difficulties



The identification of which of these functional forms best describes the relationship between the two variables was achieved using regression analysis. The results from fitting three *alternative types of regression model* to the relationship between the percentage of the population with language problems and the costs per person with language problems are presented below, and the shape of the relationships identified is plotted as Figure 3.4.2a. Table 3.4.2b demonstrates that the simple linear model accounts for just over half of the variation in the data and is statistically significant at the 0.5 per

cent level, but the logarithmic relationship fits the data very poorly, accounting for less than a quarter of the variation in the data. The functional form which fits the data best is the quadratic trend (the parameters of which are detailed in Table 3.4.2c), which accounts for over 80 per cent of the variance in the data and which is statistically significant at better than the 0.1 per cent level - i.e. there is less than a 0.1 per cent chance of there not being a quadratic trend in the data. This functional form implies that costs per person are initially around £15 per person in health authorities in which the estimated population of people with language problems is below 1 per cent, reaching a minimum (c. £12 per person) when this share is around 1.5 per cent, then increasing at an increasing rate as the percentage of a health authority's population estimated to be suffering from some kind of problem with the English language increases, reaching a maximum of nearly £70 per person in HAs where the share of the population with difficulties in the English language exceeds 5 per cent.

Table 3.4.2b: Comparison of "goodness of fit" of regression models

Functional form	R-square	F-statistic	Statistical significance of F
Linear	0.533	12.56	0.005
Logarithmic	0.236	3.39	0.093
Quadratic	0.803	20.36	0

Table 3.4.2c: Regression coefficients for quadratic model

Independent variable	Unstandardized coefficients (B)	Standard Error	Standardized coefficients (Beta)	T-value	Statistical significance
Constant	16.692556	4.5850905		3.6406165	0.0045322
% of population with language needs, 1996	-7.0643359	4.277522	-0.6647037	-1.6515019	0.1296459
Squared % of population with language needs, 1996	2.8448013	0.7692715	1.4884058	3.698046	0.0041218

Note: *These measures are fully explained in the note to Table 3.4.2d.*

However, the relationship between average IAT costs and the percentage share of the population with difficulties in the English language will probably also be influenced by the degree to which the provision of IAT services is 'adequate' or 'inadequate' in a health authority. Although some of the distortion introduced by including cost data from health authorities with low levels of provision could have been eliminated by only using data from those authorities with good overall provision, this would have reduced the size of the sample of health authorities from which data could be drawn. As a result, any generalisation of findings to the wider NHS context might be suspect. Thus an approach involving the inclusion of a dummy variable pertaining to levels of service provision was preferred. An assessment was made of whether or not health authorities were making adequate provision (see Sections 3.2 and 2.4), and a dummy variable (set to 1 for adequate, 0 for inadequate) was added to the quadratic regression equation. Adding this dummy variable improved the degree of fit of the model, which now accounted for 83.8 per cent of the variation in the data (falling to 78.4 per cent when R-squared is adjusted for the number of independent variables).

The Warwick formula corresponding to the regression model for predictions of "adequate" and "inadequate" provision is as follows.

$$C^{(IAT)}_{adequate} = b_0 - b_1.X_i + b_2.X_i^2 + b_3 \qquad \textit{Equn 1}$$

Where:

$C^{(IAT)}_{adequate}$ = *Average IAT cost per person with language problems - adequate provision (£)*
b_0 = *14.916006* (constant) b_1 = *7.4924978*
b_2 = *2.7430544* b_3 = *6.7375167*
X_i = *Percentage of HA population with problems in English*

For inadequate provision the formula is:

$$C^{(IAT)}_{inadequate} = b_0 - b_1.X_i + b_2.X_i^2 \qquad \textit{Equn 2}$$

The full details of the parameters of the Warwick formula are presented below, in Table 3.4.2d. The effect of the "adequate minimum provision" dummy variable is to identify that average IAT costs are £6.73 higher in those health authorities in which adequate minimum IAT provision has been made, for a given percentage of the population experiencing difficulties with the English language, than in those where provision is inadequate.

Table 3.4.2d: Regression coefficients for quadratic model with dummy variable measuring "adequacy" of IAT provision

Independent variable	Unstandardized coefficients (B)	Standard Error	Standardized coefficients (Beta)	T-value	Statistical significance
(Constant)	14.916006	4.5671999		3.2658974	0.0097464
% of population with language needs, 1996	-7.4924978	4.1023297	-0.7049907	-1.8264007	0.1010715
Squared% of population with language needs, 1996	2.7430544	0.7393133	1.4351716	3.7102735	0.0048429
Adequate minimum provision	6.7375167	4.844833	0.2082146	1.3906603	0.1977512

Notes: The unstandardized coefficients measure the *change* in average IAT costs as each independent variable changes by 1 *unit*. The constant term represents the average IAT cost when the independent variables are all zero; this is in fact the mean of average IAT costs for the 13 HAs. The first regression coefficient is negative, which has the effect of pulling average costs down as the percentage of the population with language difficulties increases, while the second (Squared) term is positive, increasing average costs as the percentage of the population with language difficulties increase. Taken together, the two coefficients describe a u-shaped curve. The standard errors measure the degree of uncertainty in the estimate, and the (Student's) *t* statistic measures the statistical significance of each coefficient - the larger the *t* value, the more reliable the coefficient estimate. The standardized coefficients measure the *percentage* change in average IAT costs when the independent variable changes by 1 *per cent*, and thus measure the relative influence of each variable upon the fitted relationship. However, given that a curve is being fitted to the data, and that both the linear and quadratic terms must be considered together, it is not valid to examine the independent contribution of each variable to the degree of 'fit' of the regression model.

3.5 Estimating costs by health authority

The likely average IAT costs for a health authority can be estimated by substituting the estimates of the number of people experiencing language difficulties into the formula estimated in section 3.4.2. The way in which this calculation works is presented below for Hillingdon;

$$C^{(IAT)}_{adequate} = 14.916006 - 7.4924978 \times 1.365 + 2.7430544 \times 1.863 + 6.7375167 \qquad \textit{Equn 1}$$

$$C^{(IAT)}_{inadequate} = 14.916006 - 7.4924978 \times 1.365 + 2.7430544 \times 1.863 \qquad \textit{Equn 2}$$

The result obtained for adequate provision is **£16.54** per person and for inadequate or basic provision **£9.80** per person.

Table 3.5.1 below presents the results of this calculation for all 100 HAs in England. Estimated costs per person and total costs are presented for both "adequate" and "inadequate" provision of services by a health authority.

Table 3.5.1. Estimated costs per capita (and total HA costs) of provision of IAT services

			Estimated population with language difficulties			Costs per person		Total costs	
Code	Health Authority	1996 Population	Number	Percent	% squared	Inad-equate	Ade-quate	Inad-equate	Adequate
QA2	Hillingdon	247718	3381	1.4	1.9	9.8	16.5	33133	55912
QA3	Kensington Chelsea & Westminster	369364	10574	2.9	8.2	15.9	22.7	168626	239868
QA4	Enfield & Haringey	478724	19291	4.0	16.2	29.3	36.0	564572	694546
QA5	Redbridge & Waltham Forest	439390	10417	2.4	5.6	12.6	19.3	130948	201133
QA6	Bedfordshire	545173	7603	1.4	1.9	9.8	16.5	74524	125750
QA7	Berkshire	797429	7697	1.0	0.9	10.2	17.0	78815	130673
QA8	Buckinghamshire	670230	4401	0.7	0.4	11.2	17.9	49198	78850
QA9	Cambridge & Huntingdon	450823	1188	0.3	0.1	13.1	19.9	15601	23605
QAA	Bexley & Greenwich	425128	3438	0.8	0.7	10.7	17.4	36617	59781
QAC	Bromley	295584	1943	0.7	0.4	11.2	17.9	21715	34806
QAD	Croydon	333787	4879	1.5	2.1	9.8	16.6	47936	80808
QAE	East Kent	596194	945	0.2	0.0	13.8	20.5	13038	19405
QAF	West Kent	961143	3739	0.4	0.2	12.4	19.2	46425	71617
QAG	Kingston & Richmond	321714	4042	1.3	1.6	9.8	16.6	39743	66976
QAH	Lambeth Southwark & Lewisham	742349	9858	1.3	1.8	9.8	16.5	96644	163062
QAJ	Merton Sutton & Wandsworth	623987	8846	1.4	2.0	9.8	16.5	86753	146353
QAK	East Surrey	420663	1401	0.3	0.1	12.7	19.5	17828	27267
QAL	West Surrey	623363	2772	0.4	0.2	12.1	18.9	33615	52291
QAM	East Sussex	734857	1903	0.3	0.1	13.2	19.9	25043	37864
QAN	West Sussex	737282	2467	0.3	0.1	12.7	19.5	31371	47992
QAP	Barking & Havering	403614	1881	0.5	0.2	12.0	18.8	22610	35283
QAQ	Barnet	319353	10411	3.3	10.6	19.6	26.4	204502	274646
QAR	Brent & Harrow	451933	14464	3.2	10.2	19.0	25.8	275303	372754
QAT	Camden & Islington	365109	11434	3.1	9.8	18.4	25.1	209860	286897
QAV	Ealing Hammersmith & Hounslow	659549	16979	2.6	6.6	13.8	20.5	234422	348818
QAW	East London & The City	604515	34506	5.7	32.6	61.5	68.3	2122883	2355367
QAX	North Essex	895336	1678	0.2	0.0	13.6	20.3	22834	34140
QAY	South Essex	683269	1395	0.2	0.0	13.5	20.2	18833	28232
QC1	South Lancashire	309385	276	0.1	0.0	14.3	21.0	3938	5798
QC2	Liverpool	467995	1045	0.2	0.0	13.4	20.1	13982	21023
QC3	Manchester	441767	5390	1.2	1.5	9.9	16.6	53134	89449
QC4	Morecambe Bay	309484	270	0.1	0.0	14.3	21.0	3856	5676
QC5	St Helen's & Knowsley	333536	228	0.1	0.0	14.4	21.2	3287	4823
QC6	Salford & Trafford	448072	1531	0.3	0.1	12.7	19.4	19407	29722
QC7	Sefton	289739	276	0.1	0.0	14.2	21.0	3927	5786
QC8	Stockport	291080	841	0.3	0.1	13.0	19.7	10916	16583
QC9	West Pennine	472657	5615	1.2	1.4	9.9	16.6	55512	93343
QCA	East Norfolk	619057	663	0.1	0.0	14.1	20.9	9378	13845
QCC	Northamptonshire	604351	1959	0.3	0.1	12.8	19.5	25027	38226
QCD	North West Anglia	417168	1947	0.5	0.2	12.0	18.8	23396	36514
QCE	Oxfordshire	601322	2146	0.4	0.1	12.6	19.3	27021	41480
QCF	Suffolk	656868	973	0.1	0.0	13.9	20.6	13492	20048
QCG	Barnsley	227213	140	0.1	0.0	14.5	21.2	2025	2968
QCH	North Derbyshire	371435	260	0.1	0.0	14.4	21.1	3745	5497
QCJ	South Derbyshire	558796	2997	0.5	0.3	11.7	18.4	35025	55217
QCK	Doncaster	291804	509	0.2	0.0	13.7	20.4	6970	10399

Table 3.5.1 (continued). Estimated costs per capita (&total HA costs) of provision of IAT services

QCL	Leicestershire	927463	11128	1.2	1.4	9.9	16.6	10989	18486
QCM	Lincolnshire	611533	539	0.1	0.0	14.3	21.0	7695	11327
QCN	North Nottinghamshire	391467	297	0.1	0.0	14.4	21.1	4266	6267
QCP	Nottingham	640305	3222	0.5	0.3	11.8	18.6	38150	59858
QCQ	Rotherham	255342	893	0.3	0.1	12.6	19.4	11280	17298
QCR	Sheffield	530375	3155	0.6	0.4	11.4	18.2	36061	57317
QCT	Bury & Rochdale	378487	4160	1.1	1.2	10.0	16.7	41578	69606
QCV	North Cheshire	312050	334	0.1	0.0	14.1	20.9	4725	6973
QCW	South Cheshire	667977	666	0.1	0.0	14.2	20.9	9455	13942
QCX	East Lancashire	511763	7025	1.4	1.9	9.8	16.5	68844	116173
QCY	North West Lancashire	466592	1847	0.4	0.2	12.4	19.1	22866	35310
QD1	North & Mid Hampshire	543406	1253	0.2	0.1	13.3	20.1	16708	25150
QD2	Portsmouth & South East Hampshire	540888	1129	0.2	0.0	13.5	20.2	15209	22816
QD3	Southampton & South West Hampshire	532591	1790	0.3	0.1	12.7	19.4	22747	34807
QD4	Isle of Wight	125466	158	0.1	0.0	14.0	20.8	2215	3279
QD5	Somerset	482654	563	0.1	0.0	14.1	20.8	7927	11720
QD6	South & West Devon	589815	611	0.1	0.0	14.2	20.9	8657	12774
QD7	Wiltshire	604947	1401	0.2	0.1	13.3	20.1	18672	28112
QD8	Avon	983345	2188	0.2	0.0	13.4	20.1	29286	44027
QD9	Birmingham	1030003	28477	2.8	7.6	15.2	21.9	431956	623820
QDA	Wigan & Bolton	575235	3408	0.6	0.4	11.4	18.2	38987	61949
QDC	Wirral	329179	380	0.1	0.0	14.1	20.8	5353	7914
QDD	Bradford	483422	13978	2.9	8.4	16.2	22.9	226237	320414
QDE	County Durham	603960	418	0.1	0.0	14.4	21.1	6024	8840
QDF	East Riding	556634	430	0.1	0.0	14.4	21.1	6172	9069
QDG	Gateshead & South Tyneside	357046	532	0.1	0.0	13.9	20.6	7374	10958
QDH	Leeds	726939	4951	0.7	0.5	11.1	17.8	54884	88242
QDJ	Newcastle & North Tyneside	475957	2089	0.4	0.2	12.2	18.9	25394	39468
QDK	North Cumbria	318042	212	0.1	0.0	14.4	21.2	3059	4487
QDL	South Humber	332384	594	0.2	0.0	13.7	20.4	8117	12119
QDM	Northumberland	307417	209	0.1	0.0	14.4	21.2	3014	4422
QDN	Sunderland	298416	487	0.2	0.0	13.8	20.5	6704	9985
QDP	Tees	557699	1493	0.3	0.1	13.1	19.8	19568	29628
QDQ	Wakefield	317342	727	0.2	0.1	13.3	20.1	9701	14599
QDR	North Yorkshire	734680	699	0.1	0.0	14.2	21.0	9945	14655
QDT	Calderdale & Kirklees	581651	7657	1.3	1.7	9.8	16.5	75087	126676
QDV	Cornwall & Isles of Scilly	483326	429	0.1	0.0	14.3	21.0	6123	9013
QDW	Dorset	687465	1132	0.2	0.0	13.8	20.5	15573	23199
QDX	North & East Devon	469451	571	0.1	0.0	14.0	20.8	8020	11867
QDY	Gloucestershire	551022	1068	0.2	0.0	13.6	20.3	14489	21685
QEA	Coventry	306503	1964	1.6	2.6	10.0	16.7	49523	82968
QEC	Dudley	312194	1805	0.6	0.3	11.5	18.2	20759	32921
QED	Herefordshire	165152	150	0.1	0.0	14.3	21.0	2139	3149
QEE	Sandwell	292196	5693	1.9	5.8	10.7	17.5	61091	99847
QEF	Shropshire	421251	764	0.2	0.0	13.6	20.4	10427	15574
QEG	Solihull	203922	480	0.2	0.1	13.3	20.0	6386	9620
QEH	North Staffordshire	471164	1412	0.3	0.1	12.9	19.7	18239	27752
QEJ	South Staffordshire	584554	1174	0.2	0.0	13.5	20.3	15875	23785

Table 3.5.1 (continued). Estimated costs per capita (&total HA costs) of provision of IAT services

QEK	Walsall	262593	3840	1.5	2.1	9.8	16.6	37729	63601
QEL	Warwickshire	500592	1910	0.4	0.1	12.5	19.2	23792	36661
QEM	Wolverhampton	244453	5048	2.1	4.3	11.1	17.9	56240	90251
QEN	Worcestershire	522009	1090	0.2	0.0	13.5	20.2	14684	22027
QEP	East & North Hertfordshire	496083	1718	0.3	0.1	12.7	19.4	21733	33308
QEQ	West Hertfordshire	523372	3105	0.6	0.4	11.4	18.2	35510	56430
ENG	*England Total*	*49089083*	*376052*	*0.8*	*0.6*	*10.8*	*17.5*	*6869566*	*9403223*

The cost figures listed in Table 3.5.1 above exclude the *indirect* costs of provision of IAT services as outlined in Section 2.2 [e.g. increases in clinical consultation times due to use of interpreters].

3.6 Recommendations on Adaptation to Resource Allocation Formula

We consider that our results (in the form of the Warwick formula, Equations 1 and 2) demonstrate a valid relationship between IAT costs and language need in the health authorities surveyed. We also consider that when applied to all English health authorities the Warwick formula produces intuitively sensible results (Table 3.5.1).

- We therefore recommend that the Warwick formula be used in order to 'fine tune' the existing York resource allocation formula, so that it better takes into account the unavoidable costs of IAT provision arising in health authorities with ethnic minority populations.
- We also recommend that allocations be made using the 'adequate' IAT service cost figures (final column Table 3.5.1) derived from the Warwick formula.
- Finally, we recommend that, if possible, improved information on language needs be collected from trusts (as described in Sections 5.1 and 5.4), in order to enable further refinement of the Warwick formula.

If the recommendations of this report are accepted, then this would result in a slight change in health authorities resource allocation targets. This would in its turn gradually result in a series of small changes in health authorities recurrent baselines.

4 POLICY AND MANAGERIAL IMPLICATIONS

The discussion so far has concentrated on the resourcing of IAT services but little has been said about the requirement for these services, their management, or possible policy implications. These issues were also explored as part of the study, principally through an extension to the original literature review commissioned by TAG.

4.1 Overview of 'key' literature

A further literature review was conducted in order to provide a contextual framework for the technical report. Literature relating to linguistic diversity in Britain was identified and examined. We also reviewed international literature on the costs, effectiveness, and cost-effectiveness of interpreter and translation provision. Finally, we examined literature on the appropriateness of different models of IAT service provision.

Literature searches were conducted for the period 1990-98 using the databases Medline, BIDS and ASSIA. The search terms used included 'interpreter' or 'interpretation', 'advocate' or 'advocacy' or

'translator' or 'translation', in conjunction with the search term 'cost(s)'. There was a lack of literature specifically relating to the cost-effectiveness of interpreter, advocacy, or translation service provision. However, literature describing the effectiveness of different types of provision was identified.

Additional, more complex searches, were also carried out in order to obtain relevant literature on the use of interpreters and advocates within ethnic minority populations. We obtained papers cited within this literature, and also identified relevant 'grey literature' from a variety of sources. In the latter category, particular attention was paid to the Audit Commission report (1994) which evaluated the provision of interpreter/ advocacy services in the NHS, and its recommendations.

4.2 Interpretation as a basic civil/ legal right: Patients Charter and some policy implications

Interpreter provision as a civil / legal right:
In the United States the Department of Health and Human Services (DHHS) Office for Civil Rights views inadequate interpretation as a form of discrimination, a view which has its origin in the Civil Rights Act of 1964 (Woloshin et al 1995). There is evidence however that even in the USA "factors other than quality, such as costs, preclude greater use" of trained interpreter services (Hornberger et al 1997). Exclusion arises because, although in theory the provision of interpreters is required as a basic civil right, the regulation is vague and the Office of Civil Rights provides no guidance about how to determine the adequacy of interpreter provision (Woloshin et al 1995).

Similar problems emerge in the United Kingdom because in theory the 1976 Race Relations Act encourages initiatives to ensure equal access to health services (this would imply that adequate provision of IAT services should be considered a basic civil right in the UK). However, in practice whilst some health authorities provide good services, adequate provision is lacking in many health authorities (Audit Commission 1994). The fact that our findings suggest that this situation has continued (see final column Table 3.2.1) may be a result of a lack of clear senior management direction in this area, as well as a consequence of continuing financial constraints. Inadequate provision may be regarded as discriminatory because it prevents equal access to services on the basis of need. The failure to provide adequate services by some health authorities may also be in breach of the ECHR being imported to UK constitutional law.

Interpreter provision and the Patients Charter:
A lack of good interpreter provision undoubtedly also leads to hospitals failing to meet a number of the criteria set out in the Patients Charter (1996). The Patients Charter informs patients they have a right to "receive health care on the basis of your clinical need, not on your ability to pay, your lifestyle or any other factor." Clearly if access to health care is impaired by inadequate interpreter provision there is a breach of this 'right' as embodied in the charter.

Inadequate language provision may also result in misunderstandings and therefore in cultural insensitivity which would represent a further breach of the Charter's expectation that NHS staff will "respect your..dignity and religious and cultural beliefs at all times and in all places." The expectation of respect for patient privacy may also be breached if family members or unsuitable staff are used to interpret. In order to meet the Charter's expectation that "enquiry points and clear signposting in all hospitals" will allow "you and your visitor to find your way around" then multi-lingual signs may be required. Thus in order to meet the targets enshrined in the Patients Charter, hospitals need to provide good, culturally sensitive and confidential IAT services.

4.3 The role of good communication

Published research clearly demonstrates that good communication is important in health care for a variety of reasons:

i) Effective communication can help to prevent misunderstandings which can be distressing to patients, or families [e.g. if patients or families misunderstand diagnoses (Serrano 1989)]. It can also prevent medical accidents.

ii) Patients who are actively involved in consultation and participate in decision-making with physicians are often more satisfied than those who are less involved (Street 1991). Satisfaction is not the "only indicator of effective physician-patient communication." (Kaplan et al 1989). Active participation in treatment regimes is known to lead to better outcomes.

iii) Language differences can create a barrier in doctor-patient relationships (Holden 1994). These might emerge in part because of cultural differences. However language difficulties are also likely to lead to misunderstandings and misconceptions (Ebden et al 1988).

iv) There is a need for "transfer of sufficient information to the chronically ill patient to permit them to implement the treatment regimen correctly and equally importantly, to persuade them that the regimen as agreed upon should be carried out." (Kaplan et al 1989)

v) Language barriers may prevent some patients alerting medical staff to the need for medical attention when it is required. For example, research in the United States indicates that ethnicity was a risk factor for inadequate emergency department analgesia. Findings suggested that "Hispanics were twice as likely as non-Hispanic whites to receive no ED pain medication." (Todd et al 1993).

vi) Differences in "cultural, social, and religious values, together with language difficulties, are likely to make it difficult for Asian patients to understand British family doctors" (Jain et al 1985). Similar problems may arise with some other language groups, and are particularly likely in groups which are new to the United Kingdom, for example Refugees. Moreover misunderstandings may result in a failure to comprehend physician instructions, and therefore result in non-compliance with recommended treatments (Jain et al 1985).

vii) Patients who are unable to communicate adequately with a physician who either do not have access to interpreters or are unaware that they can access interpreters may be less likely to present to the health care system. This results in inequality of access to provision, and is likely to create inequality in health outcomes or to exacerbate existing inequalities in health outcomes. Some US evidence relating to compliance with follow-up appointments in hospital emergency departments suggests that language was "not a significant variable influencing follow-up compliance." (Enguidanos and Rosen 1997). Thus in some contexts language barriers may not significantly affect compliance. In other contexts however patient non-compliance may be encouraged by a lack of good provision. Evidence relating to a sample of USA Spanish speaking asthmatics suggests that those with language discordant physicians were more likely not to comply than those patients who did not have a language barrier with their physician (Manson 1988).

viii) Particular problems may arise when diagnosing and dealing with Mental Health problems if interpreter provision is inadequate (Marcos 1979). This is a considerable problem because the issue of communication is of particular importance in this context (Johnson 1996). Some research in this context involving the use of volunteer interpreters found that many of them "felt overwhelmed by the responsibility of serving as translators" (Marcos 1979). Furthermore the volunteers (often relatives or friends) were said to lack objectivity and the use of such interpreters was thought to be associated with 3 major sources of bias arising due to 1) interpreters deficient linguistic or translation skills; 2) lack of a background in psychiatry; 3) the attitude of interpreters towards either patients or clinicians (Marcos 1979).

ix) Communication with members of minority groups "may require more personal, individual attention, and less reliance upon indirect printed and 'mass media' methods" (Johnson 1996). Communication should also be culturally sensitive which means that staff need to avoid stereotypes which suggest that ethnic minorities "present communication difficulties, and not rely upon stereotyped notions of culture or language ability in communicating with minority clients" (Johnson 1996). Unless this occurs, being appraised according to stereotypes can lead to stress, as can poor communication more generally (Johnson 1996).

x) Communication should be culturally sensitive showing an awareness of diet and religion, thereby ensuring it is more readily received (Johnson 1996).

xi) When breaking bad news to non-English speaking patients it has been argued that "This is best done using a Health Care Interpreter to ensure that all members of the family have equal access to information and participation in decision making." (Norman 1996)

xii) As the Health of the Nation report on ethnic minority health points out communication difficulties may serve to reinforce other pre-existing inequalities since "black and ethnic minority patients also face the potential obstacles of racism (overt or indirect)...and attitudes that are culture-specific. (Balarajan R, and Raleigh VS 1993).

xiii) In primary care the failure to communicate that women-only options (or female practitioners) are available, can act as a barrier to the uptake of maternity and gynaecology services (Baxter 1993).

While the points above summarise some of the reasons why good communication is important, they do not represent an exhaustive list.

4.4 Written translation/ videos

Written translation can also have an empowering role if it provides the right information in the right way, at the right time, to ethnic minority groups. One factor which sometimes reduces the impact of translation is that in order to be effective patients must either be able to read translated material, or they will require access to someone who can explain it or read it to them. This may pose a problem because some patient minority groups may not be able to read the written version of their first language. Moreover for some language groups a written version of the language is not available (e.g. Mirpuri and Sylhetti, the two most commonly reported dialects in the Pakistani and Bangladeshi populations). Nevertheless translation of key material can fulfil an important role for minority communities. It can be used to increase patient awareness of health care provision availability. It is also potentially useful in order to convey health promotion information, and to empower minority communities by making them aware of complaints procedures etc. Translation of material into other languages may also be worthwhile if it makes service provision appear more culturally sensitive.

The failure to translate key leaflets or reports into other languages may have the effect of making patients feel marginalised. Thus translating material into other languages can send out an important signal to ethnic minority communities about the extent to which those providing health services aim to be inclusive. The Audit Commission (1994) also implicitly acknowledged that translated material can play an important role in terms of alerting service users to the availability of interpreter provision, and pointing them in the direction of provision as required. The use of video material may also be particularly useful in order to convey material verbally and visually. This may be especially useful were individuals cannot read the written form of their language.

4.5 Models of interpreting service provision

The literature search identified seven main reported approaches for overcoming language barriers. These vary in their costs, generalisability, and in their effectiveness or 'adequacy'.

i) Patient selection of GPs:
In some geographical areas it may be possible for patients to self select to enrol with a GP who is able to speak their language proficiently (Ahmad et al 1989). Evidence from the Bradford area suggests that patients who were less fluent "countered their linguistic disadvantage by consulting the Asian doctor who was fluent in their own language(s). Only 15% of the male patients who consulted the Caucasian doctor were poor or non-speakers of English compared with 30% of the Asian doctor's patients." (Ahmad et al 1989). However whilst such a strategy can be adopted by patients in some geographical locations, in others areas because of a paucity of GPs with suitable language skills (and of a suitable gender e.g. female) other strategies will need to be adopted. Furthermore one limitation of this approach is that if patients are forced to select GPs who can speak their language this could reduce

a patient's choice of physician, unless of course interpreters are available to patients should they choose to enrol with a GP who does not speak the same language. Secondly, it is now recognised that many of the Asian GPs in inner city areas are approaching retirement age and this route may not be available for much longer.

A major advantage of bilingual GPs is that even if a physician requires training paid for by the NHS in order to speak in other languages, the approach will be cost-saving in the longer-term because it avoids the need for additional costly interpreter provision. In so far as it is possible to adopt this approach (because bilingual physicians are available), it is likely to prove cost-effective. This is because it is relatively inexpensive and (as long as a physician speaks a second language proficiently and is aware of and sensitive to relevant cultural factors) it will be effective and facilitate good communication without the potential for distortion introduced by a third party such as an interpreter. Thus it will in these circumstances prove to be a very cost-effective option, although it may place increased costs (e.g. travel) on the service user. At the same time, indirect costs (e.g. increases in clinical consultation times due to use of interpreters) will clearly be absent.

ii) Use of bilingual health care workers:
This is closely related to (i) above, but it applies more generally to other health care workers apart from GPs. The approach has been described as the "ideal option for most patients" because it removes the need for a third party to be involved in a consultation (Phelan and Parkman 1995). However, bilingual health care workers are few (Phelan and Parkman 1995) and the quality of language provision may be poor if bilingual workers have an inadequate grasp of a particular language, or if they lack the training to be sufficiently culturally sensitive. The approach may also entail an economic cost if NHS trusts have to pay a wage premium in order to attract suitably qualified bilingual workers. Nevertheless such provision should prove cost-effective if bilingual workers speak fluently and are well trained, particularly if they speak a language which is frequently required. It should be noted that the Race Relations Act (1976) does specifically allow employers to appoint using racial/ linguistic criteria on the basis of, for example, a genuine occupational qualification i.e. linguistic skills.

iii) Use of English speaking family members and friends as an interpreter:
Evidence suggests that this strategy should be pursued with caution. The use of relatives and friends, whilst having the advantage that interpreting costs to the NHS can be eliminated, has the disadvantage that the quality of interpretation may be poor, and patient confidentiality may be violated if the patient does not want a family member or friend to have access to medical information about them. Also "family, friends, and ad hoc interpreters pose problems. They may lack sufficiently good language skills and frequently commit stereotypical errors, including omissions, additions, substitutions, or other editing, which may result in serious semantic distortions" (Woloshin et al 1995). Particular problems may arise if children are used to interpret since "both the parent and the child may be embarrassed by the problem and the information that the doctor or patient receives may thus be censored." (Ahmad et al 1989). The use of a family's children may also "upset the family's social order." (Poss and Rangel 1995). Distorted communication and confidentiality are especially problematic in cases involving issues such as sexuality and child abuse.

The approach may also be associated with poor patient compliance, and may create additional costs to the NHS if patients are incorrectly diagnosed or treated due to incorrect informal interpretation. Patients may also be discouraged from attending appointments if they perceive the quality of interpretation, and therefore subsequent health provision, to be poor. Those patients who have no choice but to use a friend or relative as an interpreter may have higher rates of morbidity or mortality if inadequate interpreting results in poorer health provision. Thus this option is not likely to prove cost-effective, and is also potentially unethical and inequitable.

iv) Use of volunteer and ad hoc interpreters:
Some UK hospitals use volunteer interpreters. This usually involves introducing systems to enable existing bilingual staff to provide interpreter services when required on a voluntary basis. In some hospitals voluntary provision from the local community is utilised. Whilst this approach may have the merit of minimising salaries, it will involve a cost (an opportunity cost - the opportunity foregone to undertake another task) if it takes staff away from another job. Registers of staff availability and

language competence have also proved to be notoriously inaccurate and imprecise, and require considerable administrative costs in upkeep.

Furthermore, whilst training can be provided for volunteers, this could well prove to be expensive if large numbers of staff require training, and it has been reported that usually volunteers "have not received any training in interpreting" (Phelan and Parkman 1995). Moreover, volunteers who provide interpreting input on an irregular basis are less likely to acquire the same expertise as trained interpreters with considerable work experience, and thus the standard of interpreting may not be as high. If the standard of provision is poor, this type of service is unlikely to prove cost-effective. Volunteer and ad hoc provision is perhaps best deployed to deal with emergency situations where a professional, trained interpreter is not available when required.

v) Use of full-time interpreters or experienced sessional interpreters:
Some hospitals and health authorities use the services of either full-time trained interpreters or experienced interpreters employed on a sessional basis. These are typically either employees of NHS Trusts or, increasingly, projects and teams working for, or jointly sponsored by, Social Services Departments or outside voluntary agencies. As a general rule so long as such interpreters are adequately trained and experienced the quality of interpreting is high, with the result that many of the problems associated with inadequate communication (detailed in Section 4.3) can be avoided. Once the benefits to patients of such provision (including patient satisfaction and any improvements in health outcomes) have been taken into account, such provision is likely to prove more cost-effective than other forms of provision, except perhaps use of well trained, bilingual staff. Furthermore provision of such interpreting services can have an informing and empowering role. This may improve the health and well-being of patients of marginalised communities (Ntshona 1997).

vi) Use of telephone interpreter services:
American research (Hornberger et al 1996) has suggested that electronic simultaneous interpretation can be very effective and popular. Telephone interpreter services such as 'Language Line' have been introduced gradually in the NHS over the last few years (Leman 1997). They can offer the advantage of 24 hour access to interpreting services. The obvious limitation of such provision is that it lacks a visual dimension. This may present difficulties for the interpreter for example if a patient wants to draw a physician's attention to a particular part of the body. The service is also likely to be expensive if used as the main form of interpreter provision in trusts with significant numbers of patients requiring provision. Thus the use of face-to face interpreting/ advocacy is likely to be more cost-effective in such a situation.

However use of the service might be justified to provide out of hours provision, or to provide interpreter services for patients speaking very rare languages. Telephone interpreting provision might also be justified if a trust's demand for interpreter services is very low. In these circumstances, use of services such as Language Line may prove more cost-effective than face-to-face interpreting if a trust cannot access other locally available service provision.

vii) Use of patient advocates:
A patient or health advocate speaks or pleads on behalf of a client combining "his or her expert knowledge and ability in a rational, persuasive and articulate manner" (Chiu 1991). Such a role is likely to be appropriate in contexts in which the patient is unable or unlikely to do this themselves. Moreover, advocacy can be used to "improve the access of all groups to the health service" (Chiu 1991) and to inform patient choices. Some evidence suggests that patients who are more in control (i.e. they ask more questions, make more attempts to direct conversation flow and physician behaviour) report fewer days off from work, health problems, and functional limitations because of illness, whilst rating their health more favourably during follow-up (Kaplan et al 1989). This would tend to suggest that, in so far as advocates are able to put patients in control, they may be able to improve patient well-being and health status. However, because advocates are not able to act as perfect agents on behalf of patients, inevitably some improvements in patient satisfaction and health status will not be generated.

Advocates may or may not act as interpreters as well. Clearly, if they perform a dual role the cost-effectiveness of using advocates as interpreters will depend upon the extent to which they are sufficiently trained and experienced as interpreters. The overall cost-effectiveness of using advocates

in a dual interpreting/ advocacy role will also depend upon the extent to which an individual who can perform both roles is required by the patient. More research is required in order to assess the cost-effectiveness of using patient advocates in such a dual role.

There is some evidence that would seem to suggests that advocates are able to affect the nature/ quality of service obtained by patients. A retrospective study was conducted in Hackney, East London which compared 1,000 non-English speaking women delivering at the Mothers' Hospital in 1986 when accompanied by an advocate with 1,000 women delivering at the same hospital in 1979, and similar deliveries at a reference hospital (Parsons and Day 1992). The study identified significant differences between the 3 groups in terms of outcomes such as antenatal length of stay, and induction and mode of delivery. Rates of caesarean section rose from 11% to 17% at the reference hospital, but fell from 10.8% to 8.5% at the Mothers' Hospital. Whilst these findings may not necessarily be causally linked to provision of advocacy services "it was considered reasonable to deduce that improved communication could have influenced clinical practice." (Parsons and Day 1992). It was therefore suggested that health advocacy might provide a mechanism to redress adverse obstetric outcomes amongst some ethnic minorities. Health advocacy services may also be able to generate similar benefits for mental health patients.

Health advocacy, as opposed to straightforward interpretation, may also provide a useful way of bridging gaps in cultural understanding. During a survey (Meadows 1992) it was noted that doctors identified a gulf between medical knowledge about a specific condition and the cultural and neighbourhood beliefs of patients relating to the cause of illness. Health advocates might be in a better position than interpreters to actually address this lack of patient understanding. This is because their role may extend to persuading patients of the scientific validity of a particular treatment approach.

Advocates may also be particularly important if, in the interests of ensuring a patient's health, representations are necessary to the Benefits Agency or to Social Services on behalf of a patient. It is unclear whether such provision is best provided by the NHS or whether it would be better provided by Social Services. However, it is clear that patients often present to the health service with additional problems which require the assistance of Social Services, and in these circumstances patients may require someone to act as their advocate.

Advocates may be particularly appropriate in geographical areas with substantial refugee populations. They may also be particularly necessary in order to support those who have been victims of torture prior to obtaining refugee status in the United Kingdom. As a result of their experiences such individuals may well be apprehensive and not able to seek out the provision they require. In such circumstances, advocates fulfil an invaluable role and are likely to prove cost-effective.

viii) Staff training in use of interpreters;

It is clearly important to ensure that interpreters are adequately trained as interpreters, but they may also require additional training. For example, interpreters used in a mental health context may benefit from psychiatric training. Indeed there is some evidence that a failure to train interpreters adequately in this way can lead to diagnostic uncertainty in relation to fundamental questions, for example whether or not a patient is psychotic (Dreenan 1996). Failure to provide adequately trained interpreters in a mental health context has also been associated with the need for repeat interviews which inevitably result in wasted resources.

Furthermore, as the Audit Commission (1994) pointed out, "*clinical staff* may also need training in how best to communicate through interpreters." Good practice may require for example that staff policies are established to ensure that staff appropriately identify the need for an interpreter when required, and ensure that interpreters are booked to coincide with consultations when an interpreter is required, and to this end they need to be able to assess language need (Giacomelli 1997). Staff also need to know how to communicate effectively via an interpreter. This may require a physician to summarise what has been said to ensure patients understand (Phelan and Parkman 1995). It may also require physicians to allow extra time for consultations "because everything has to be said at least twice" (Poss and Rangel 1995). Patients should also be encouraged to ask questions if they appear inhibited because a third party is in the room (Phelan and Parkman 1995). Thus in order to ensure that interpreters are used well and cost-effectively, staff training should be regarded as a priority.

4.6 Factors influencing IAT service provision

IAT services do not develop in isolation and there may be a number of factors (organisational, financial and political) which influence their development. Some of these are considered below.

The lack of a strong local voice:
Partly because of language barriers, but also as a consequence of other socio-economic factors, ethnic minority populations are often in a poor position when it comes to articulating their needs, and they may lack the ability to put political pressure on health authorities to meet their needs.

The impact of internal budgeting systems:
Internal hospital budgeting systems may also exacerbate the problem. For example Woloshin et al (1995) have suggested that in the United States the practice of building in the costs of interpreter services to hospitals overheads rather than reimbursing for such services as separately reimbursable service costs, militates against the objective of providing a good interpreter service. In the UK, a parallel situations sometimes arises when purchasing authorities do not explicitly budget for interpreter services and instead interpreting provision has to be provided out of hard pressed departmental overheads or budgets. This situation may result in under-provision of professional interpreter services, and sometimes encourages reliance on the use of family members or volunteers which for reasons we have already discussed may be inappropriate. In certain instances, our findings suggest that there is still a total lack of interpreting provision for patients in trusts or specialities.

The need for a stronger 'lead' when contracting by purchasing authorities:
There is a general need to ensure that purchasing authorities either separately contract for interpreter services, or at the very least monitor provision within their district to ensure that adequate provision of such services is available through existing contracting arrangements. It may be necessary for the NHS Executive to encourage health authorities to produce an explicit strategy document for the provision of adequate IAT services. Without some pressure to address the issue, it is doubtful whether some health authorities will ensure adequate provision of such services.

The role of other funding bodies:
Another key finding which emerges from our research is that in many instances the development of interpreter services has at some point been assisted by acquisition of funding from outside bodies, for example in East London and The City health authority. Significant numbers of projects to set up interpreting services or translate materials have received funding from the Department of Health, the Ethnic Health Unit and other bodies such as Training and Enterprise Councils and Social Services Departments. Some of this funding has subsequently been discontinued. A major disadvantage of funding service provision in this way is that expensive management time is wasted in submitting bids for further funding. In a MORI report entitled Evaluation of Bilingual Health Care Schemes in East London (MORI 1994) it was concluded that "it is questionable how funders themselves can justify the creativity, time and effort which goes into the annual (or even monthly) ritual of funding applications". This ad hoc approach to funding was attacked by the authors of the report who pointed out that demand for most types of advocacy provision is likely to be long term; they therefore suggested that the minimum period for funding should be 3 years.

The impact of NHS under funding:
One barrier to ensuring adequate provision of interpreter services may well result from under funding within the NHS generally. Trusts with budget deficits, or those which are currently struggling to stay within a given financial allocation, are in a poor position to improve the provision of interpreter or translation services to their patient and resident populations.

The need for financial backing for primary care interpreting provision:
The general picture which emerges from our survey of health authorities suggests that unless the HA earmarks funds to support the provision of interpreter services in primary care, interpreting provision is likely to be grossly inadequate at a primary care level. This is because many GPs are either unwilling to provide such services, or they lack the resources or the infrastructure to do so.

4.7 "What seems to be the matter: Communication between hospitals and patients" (Audit Commission Report 1994):

An important Audit Commission Report published in 1994 pointed out that non-English speaking patients "have particular problems in respect of *access* to services, *confidentiality* and *feedback* process." The Commission regarded all three shortfalls as managerially related, and identified a number of other important issues as well.

i) Lack of access to services:
The report identified that access to services was inhibited because non-English speaking patients often do not know what services exist or they feel that a service is not intended for them. Sometimes access to services was prevented because of a lack of an adequate interpreter service. Moreover, even when interpreter services did exist patients were often inadequately informed about their existence.

ii) Breaches of confidentiality:
The Audit Commission report commented that "It is open to question how far bringing members of the patient's family into consultations, or involving other patients or non-clinically trained staff in confidential discussions, contravenes professional codes of conduct". The use of family members, the report points out, means that "normal rules of privacy are frequently broken."

iii) Lack of patient feedback:
Patient feedback is also inhibited because complaints procedures are seldom highlighted in languages other than English. Such a problem could well be exacerbated by the reported tendency for some ethnic groups (i.e. Asians) not to complain because of a fear of authority (Madhok et al 1992).

iv) Uncertainty in funding arrangements:
The report pointed out that uncertain funding arrangements affect perceptions of the service and "its status within the hospital. They make it easy to treat the service as an add-on rather than an integral part of its organisation. The sense of it being peripheral is often reinforced by temporary and poor quality accommodation for interpreters." The Audit Commission's survey also identified patchy coverage as a problem, with limited hours and services confined only to certain types of provision such as maternity or paediatric services.

v) Need for quality assurance mechanisms and evaluation of provision:
The Audit Commission report also highlighted the need to ensure that quality assurance mechanisms are properly in place. Hospitals need to be able to monitor uptake and set minimum standards for recruitment, training, and supervision. The report pointed out that the quality of language provision is variable and that there is virtually no routine evaluation of provision. It was suggested that "the uncertainty and confusion that surrounds the definition of the role, the type of service the hospital offers and the peripheral nature of many services makes it difficult or impossible to evaluate the service. In those hospitals where managers recognise the need to evaluate what they are doing, they are often at a loss as to how they might go about it."

Part of the solution to this problem is identified as being to make the provision more mainstream in nature. To this end the objectives of the service need to be clearly defined by commissioning authorities. These objectives should be established having conducted a thorough assessment of needs, which will serve to make provision less patchy. Standards can be set by the commissioning authority which it can subsequently monitor.

vi) Lack of managerial support:
The Audit Commission also identified shortfalls in the management of interpreting services with less than half of services having a dedicated manager. Even when interpreters were managed it was suggested that managers "May or may not understand their role and be supportive."

vii) Shortfalls in interpreter training:
Major shortfalls in interpreter training were also identified with less than half the hospitals surveyed offering some form of training, and only one hospital offering training specific to health care settings.

viii) Shortfalls in planning and management of services:
The Audit Commission report concluded that on the whole interpreter services are not meeting "communication needs and there are common problems in relation to planning, management and quality of services." The report criticised a lack of planning, claiming that "Needs assessment is rare, funding is inadequate and service provision is patchy."

Services, it was pointed out, have often evolved as a result of political battles and the enthusiasm of key individuals rather than due to careful planning. The Audit Commission identified a number of dimensions to the bad planning including a lack of needs assessment, poor funding arrangements, and patchy coverage.

ix) The need for ethnic monitoring data to plan service provision:
Finally, the Audit Commission stressed the need to use ethnic monitoring procedures in order to find out:

- which patients do not speak English;
- which languages they do speak;
- whether they can read at all, and which scripts;
- if these patients use all parts of the service, or only some and how often?

4.7.1 Observed IAT provision in health authorities and trusts in 1998

Despite the fact that the Audit Commission report has been available for four years, evidence from our survey suggests that shortfalls in provision continue (for more detailed analysis see Annex 3):

i) Lack of access to services continues:
Although a few health authorities have good provision of interpreting services throughout all trusts, provision in many trusts and health authorities remains patchy, so access is prevented because of lack of provision. Within some NHS trusts, also, inadequate measures are taken to make patients aware of the availability of interpreter provision, once again reducing access.

ii) Breaches of confidentiality continue:
Many trusts and health authorities report they are making a concerted effort to move in the direction of providing services using trained professional interpreters. However, in some trusts a continued lack of provision, linked both to funding constraints and management failure, means that breaches of confidentiality will undoubtedly arise in some medical specialities because family members or inappropriate staff members end up filling gaps in provision.

iii) Lack of patient feedback continues:
Very few of the trusts and health authorities we surveyed reported that they had recently translated leaflets (during the 1997-98 financial year) setting out how to make a complaint in the event of a grievance. Furthermore, when asked about the range of services provided, interpreter provision to facilitate complaints was rarely mentioned.

iv) Uncertainty in funding arrangements continues:
As a result of an absence of earmarked central resource allocation to meet a HA's need for IAT services; the status of interpreting service provision remains lower than it might be. The need for provision is not always identified when required.

v) Need for quality assurance mechanisms and evaluation of provision evident:
We did not explicitly collect information on contract monitoring of interpreting and advocacy provision. However, at least one health authority (Leicester Health) has informed us that it has established quality standards as part of its minority ethnic health strategy. This is an example of good practice which other health authorities could follow.

vi) Lack of managerial support evident:
Many services reported they do not have a dedicated manager. This is hardly surprising given the pressure on trusts and health authorities to reduce management costs. That said, most trusts (and health authorities) do appear to have services 'managed' by someone sympathetic to the aims of good

professional interpreting/ advocacy provision. Several managers voiced their frustration about the levels of provision which their trusts or health authorities could provide. There can be little doubt that a combination of resource constraints and the low status of language services within many trusts and health authorities contribute to the low priority afforded to IAT provision. This, in its turn, results in a high levels of managerial frustration.

vii) Shortfalls in interpreter training evident:
The Audit Commission argued that the long term objective should be to create a service using only suitable trained staff. Most trusts or health authorities reported that they use trained interpreters. In a small number of cases, trusts use untrained professional interpreters. Those trusts which rely on mainstream staff for interpreting provision usually do not train these staff. Most trusts or health authorities do not provide training for clinical staff to enable them to work alongside interpreters to maximum effect. However, some trusts and health authorities expressed a desire to expand provision in this direction.

viii) Shortfalls in planning and management of services continue:
Usually trusts and health authorities lack the data required to make a good assessment of need. None of the trusts or health authorities we surveyed reported that they compiled ethnic monitoring data relating to language requirements despite the Audit Commission's recommendations. Most trusts and health authorities were unable to provide us with a breakdown of the use of interpreter services by language group. Some health authorities were even unable to provide any interpreting services in certain areas. So in many trusts and health authorities provision remains patchy, something which is no doubt partly attributable to resource constraints in certain cases. Although there is evidence that some health authorities are trying to fill gaps in provision, provision still remains patchy. The historical development of services in many instances seems to owe more to 'planning by decibels' (i.e. whoever shouts the largest gets the most) rather than rational planning.

ix) Lack of ethnic monitoring data to plan service provision evident:
The Audit Commission regarded ethnic monitoring data as a pre-requisite for successful management of interpreting provision since it would allow managers "to make plans and identify areas of the hospital they need to cover, the hours required, the costs and the resources."

As a result of the statutory requirement to compile ethnic monitoring data within the acute care sector, ethnic monitoring data is now more widely available than it was when the Audit Commission reported in 1994. Even so, there remain a number of deficiencies in the data and these may be linked to a number of causes:

- ethnic monitoring data is often of a low quality, and many trusts fail to identify and record the ethnic origin of large numbers of patients;

- ethnic monitoring data does not to relate to language needs. Instead the data concentrates upon meeting the statutory requirement to obtain information pertaining to ethnic origin (usually in Census group categories);

- the type of data collected may contribute to low collection rates. The policy of many trusts is to collect data on ethnic origin rather than on language needs and religion. Staff may be unaware of the reasons for which data is required, and may therefore be reluctant to ask for the information because they think they may offend the sensibilities of patients by trying to obtain information without a clear reason for doing so. It may prove easier to collect information on language requirements, since this can be more ostensibly linked to tailoring provision to meet patient needs.

- the statutory requirement to collect data does not extend to the primary care level. This almost certainly contributes to a general lack in many health authorities of interpreting provision within primary care. Data need to be compiled at a primary care level as well.

4.7.2 Recommendations based on Audit Commission report and Warwick study

The Audit Commission's report (1994) implied that the provision of consistently good interpreter services was more than just an issue of funding. In the light of the continuing failure of many trusts and health authorities to meet the recommendations of the report the following conclusions can be reached:

- In order to ensure adequate provision throughout the NHS, the Government needs to establish clear unequivocal policy directives in this area reinforcing the recommendations made by the Audit Commission.

- Recommendations need to be reinforced by adequate funding in order to markedly improve the provision of interpreter and translation services. It should also be noted that the method of funding may affect the provision and quality of services (Woloshin et al 1995), a theme we consider further in the next section.

5 REVIEW OF FINANCING OPTIONS

There is undoubtedly a need for trusts and health authorities to provide good well managed translation, interpreting, and where appropriate advocacy services. However, as the current resource allocation formula does not explicitly take these unavoidable costs of ethnicity into account, there appears to be a case for providing a separate allocation to meet such needs. This would appear to be reinforced by the fact that many trusts and health authorities are only able at best to provide a patchy level of service out of existing levels of resources.

A range of options for financing IAT services are possible. We have examined some of these and considered their advantages and disadvantages. Overall two main approaches to financing IAT provision in the NHS were identified as being plausible. The first involves use of a formula with either a ring-fenced or non-ring- fenced budget. A second approach involves using some form of bidding system i.e. either a competitive or non-competitive bidding system. A competitive bidding system would differ fundamentally from a non-competitive bidding system in that it could result in some less successful bidders receiving no funding, whereas with a non-competitive bidding system in theory every applicant could obtain funding so long as the bidders themselves can demonstrate an ability to deliver adequate provision at a reasonable price. The two main approaches and four options are considered below.

5.1 Amend the existing resource allocation formula to reflect ethnic need

The advantage of a formula approach is that distributing resources via an amended formula is likely to be considerably less time consuming and less resource intensive than using a system of bidding for resources. The criteria for making resource allocation decisions can also be made explicit. Furthermore, such an approach would go with the grain of existing NHS resource allocation policy, which is predominantly formula based. In order to amend the existing resource allocation formula, an additional term would have to be included to take 'need' for IAT services adequately into account.

One of the problems with using a formula approach in this instance, however, is identifying language need accurately. Census data on the ethnic composition of resident populations does not necessarily indicate language needs (i.e. English not first language) in any clear cut way. Moreover, even if other information is used to translate the data relating to the population profile into language needs (as is done in the Warwick formula), the information on ethnic composition of populations cannot be perfectly transformed into linguistic need (i.e. language groups/ dialects).

It is unfortunate that, despite a recommendation by the Audit Commission (1994), health authorities appear generally not to collect ethnic monitoring data relating to language needs. Thus adopting an approach of using ethnic monitoring data on language needs and mapping this to resource needs is not a practical proposition at the moment. However, if health authorities and trusts were in future encouraged to collate such information (either as a mandatory requirement, or in order to secure resources for IAT provision) the formula approach could be improved further.

Another problem with adopting a formula approach is that many health authorities and trusts have significant gaps in provision. In these circumstances it is not altogether clear what is an appropriate level of service provision and cost to map against information on the ethnic composition of resident populations, since existing expenditure may inadequately reflect need. Also, the costs of existing provision vary considerably between health authorities reflecting not only differences in levels of provision, but also different ways of managing provision and therefore different costs of provision. In the Warwick formula this is addressed through the use of dummy variables which represented the perceived adequacy of IAT service provision in a health authority.

A more rigorous approach would clearly result if more accurate data were available on linguistic needs. To this end, we would suggest that a statutory requirement is imposed upon trusts to compile ethnic monitoring information which relates to language needs. If good quality information of this type becomes available, a revised formula incorporating it would provide the most accurate basis for allocating resources. It would also possess all the advantages of ease of administration and explicitness which a formula approach provides. In the meantime we consider that a formula approach can be adopted using the Warwick formula described in this report.

5.2 Ring-fence expenditure allocated via a formula

In the section above the advantages and disadvantages of adopting a formula approach for the distribution of resources to provide for IAT services have been discussed. If resources were allocated in this way then it is open to question whether this allocation ought to be ring-fenced. If ring-fencing were introduced then this would naturally ensure that resources are used for IAT provision. However, trusts and HAs who are facing severe financial constraints may resent any attempt to ring-fence resources if there are other more pressing priorities. Furthermore, unless some virement is permitted ring-fencing may also result in waste and inefficiency. If ring-fencing is combined with annual budgets which must either be spent or returned this could encourage the 'typewriters in March syndrome' (Mayston 1990) i.e. a tendency to spend any remaining resources at the end of the financial year on items which may or may not represent the most efficient use of capital or consumables.

However, without ring-fencing there is a possibility that health authorities with little enthusiasm to provide necessary IAT services may continue to under-resource such provision. One possible way of addressing this problem might be to make Trust Chief Executives, other key trust managers, Non-Executive Directors and possibly local Community Health Councils aware of the size of the additional allocation that health authorities receive for IAT provision. In this way individuals within provider organisations, and key individuals outside these organisations, would be in a strong position to argue that resources should be used to provide such services.

Another possible approach might be to assign a statutory responsibility to each health authority to provide adequate IAT services for its resident population. If necessary, health authorities could even be asked to draw up management plans to demonstrate how they will provide such services. If individual trusts or health authorities do this very efficiently then any remaining resources could be used in order to provide other services - this in itself might provide a valuable additional spur to efficiency.

5.3 Adopt a competitive bidding system to resource IAT provision

Competitive bidding offers the advantage that well thought out bids are more likely to be successful. A similar approach is adopted in the Home Office administered "Section 11" budget which, through pressures for District Auditors to pick up on available funds, has led to appreciable development of relevant services in Local Authority departments (Johnson and Cross 1988).

However, producing a competitive bid is likely to prove time consuming, and the fact that bids may not be successful may reduce the number of bids submitted. If health authorities are allowed to bid for resources to fund existing provision then it is very likely that bids will be more forthcoming from those health authorities or trusts that already have well developed provision. This may militate against the objective of trying to establish good minimum standards of provision nation-wide.

At the same time, excluding health authorities with good existing provision from bidding is also counter-intuitive because then some existing services will lack long-term funding and provision may therefore deteriorate or cease to be available in these areas. There would also be a strong equity argument in favour of allowing those currently providing services to bid. This is because, with a few notable exceptions (e.g. North West Anglia Health Authority), provision of IAT services is better developed in areas with the greatest need for provision (e.g. East London and The City, and Kensington, Chelsea and Westminster health authorities).

Finally, in a competitive bidding environment some health authorities or trusts will fail to attract the resources to provide adequate provision. This may lead to large variations in the level of provision provided throughout the country. A situation whereby some trusts and health authorities do not provide adequate provision would thus continue. The approach might therefore prove both inequitable and unacceptable.

5.4 Adopt a non-competitive bidding system to resource IAT provision

A non-competitive system would have the advantage that (a) resources could be targeted more effectively at IAT provision and (b) a non-competitive bidding system would prevent the large variations in levels of service provision which a competitive bidding system might encourage. If minimum standards of provision could be agreed as the basis for having a bid accepted, large fluctuations in the levels of provision between trusts might be avoided. As we have pointed out, the Audit Commission (1994) identified numerous shortfalls in the management and funding of interpreting and advocacy provision. Therefore, the Audit Commissions recommendations could be used as the basis for standards of IAT service provision in the NHS. On the basis of our site visits it is apparent that the main criticisms directed at the management and provision of such services in 1994 could still be directed at some trusts and health authorities more than four years after the report was published. There is thus an urgent need to redress this situation. The approach of offering helpful advice via an Audit Commission report has in itself had little impact upon service provision. Simply providing additional resources via a formula may also in itself be an inadequate response to the situation, unless measures are also taken to improve the management and delivery of IAT provision at the same time.

Through the use of a bidding system, any failure to provide adequate services might be redressed. In order to obtain resources, as an integral part of a bid, trusts and health authorities could be asked to demonstrate how they would meet the recommendations set out in the Audit Commission (1994) report. Regional NHS Executives could be assigned the role of monitoring this as part of performance monitoring of trusts and health authorities within their region.

In the light of the criticisms made by the MORI and Audit Commission reports about the detrimental impact of short-term funding upon advocacy provision, if such an approach were adopted minimum financial allocations should be assigned for a period of at least 3-5 years. This would help facilitate long term planning by trusts and health authorities, and also help to reduce staff turnover associated with short term contracts of employment.

The NHS Executive could establish criteria which would indicate when a re-assessment of needs should be triggered (i.e. when there are significant changes in need as demonstrated by ethnic monitoring data). A re-assessment could then be made if health authorities can demonstrate that they lack the funding to meet their language needs. This would also make it easier to meet the needs of short term or "new" groups such as refugees.

In order to bid for resources, HAs could be asked to provide ethnic monitoring data to support their application for funding, including:

- numbers of patients who do not speak English, by language group;
- the annual number of consultations for which an interpreter would have proved useful, the sections of the service which non-English speaking patients use, and the languages patients speak;

- whether patients can read adequately, and if so which scripts

The NHS Executive could then impose a number of ceilings upon the level of resources that could be claimed. For example, bids could be funded based upon a maximum allowance for an hour of interpreter or advocacy time. Health authorities which require very little IAT provision might be allowed to claim at a higher hourly rate to reflect the higher average costs of providing a low volume service. This would allow health authorities which cannot economically set up a local face-to-face interpreting service to claim at a higher rate if they have to use costly telephone interpreting services. Management costs could also be reimbursed based upon the number of patients requiring interpreting and translation provision, and once again health authorities and trusts operating a low volume service could be permitted to claim at a higher rate per service user, to allow for higher average management costs.

Whilst the advantages of such an arrangement are that the system might be used to enforce necessary managerial and organisational changes to ensure good IAT provision, the major disadvantage of such an approach is its high administrative cost. In addition, it is not essential to adopt such an approach in order to facilitate managerial change. Other measures, for example policy directives, could be used instead alongside a formula based approach to facilitate improvements. Moreover, unless health authorities are forced to submit a bid, the danger with a voluntary bid approach is that those which regard IAT provision as a low priority will not submit a bid at all. Thus a formula based approach, backed by policy directives, may provide a better policy response.

6 CONCLUSIONS

- The study team were able to successfully identify most IAT costs in the 13 health authorities surveyed.

- In the 13 health authorities surveyed interpreting, advocacy, and translation (IAT) provision was judged inadequate in 7, either because of the lack of comprehensive provision across all trusts or because of poor quality of existing provision e.g. use of family members.

- Observed cost figures for IAT provision can be related to population data, and linked to language needs using a regression analysis. Inclusion of a dummy variable representing the 'adequacy' of observed provision in a health authority improves the fit.

- The resulting Warwick formula enables calculation of resource allocation at health authority level to cover both 'adequate' and 'inadequate' levels of provision as follows:

$$C^{(IAT)}_{adequate} = b_0 - b_1.X_i + b_2.X_i^2 + b_3 \quad \textit{Equn 1}$$

$$C^{(IAT)}_{inadequate} = b_0 - b_1.X_i + b_2.X_i^2 \quad \textit{Equn 2}$$

Where:

$C^{(IAT)}_{adequate}$ = *Average IAT cost per person with language problems - adequate provision (£)*

$C^{(IAT)}_{inadequate}$ = *Average IAT cost per person with language problems - inadequate provision (£)*

b_0 = *14.916006* (constant) b_1 = *7.4924978* (constant)

b_2 = *2.7430544* (constant) b_3 = *6.7375167* (constant)

X_i = *Percentage of HA population with problems in English*

- The total cost for all 100 health authorities in England of allocating resources to cover IAT provision is calculated to be £9.40 million for 'adequate' levels of provision and £6.87 million for 'inadequate' or more basic provision (1997/98 prices).

- Alternatives to a formula based regression analysis were also considered, but it was decided that a formula based allocation represented the best solution.

- The study team identified failings associated with the organisation and provision of IAT services in the cross-section of health authorities surveyed. These will not necessarily be rectified through adequate financial provision alone.

- One possible approach might be to assign a statutory responsibility to each health authority to provide adequate IAT services for its resident population.

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ANNEXES

Annex 1: Health Authorities Approached

Health Authority	Type of Location	Non-white Population (1991 Census Figs)	Region
Berkshire	Shire	7.1%	Anglia and Oxford
Birmingham*	**Metropolitan**	**21.5%**	**West Midlands**
Bradford*	**Metropolitan**	**14.1%**	**Northern and Yorkshire**
Brent and Harrow	London	36.4%	North Thames
Cambridge and Huntingdon	Shire	2.7%	Anglia and Oxford
Camden and Islington	London	18.7%	North Thames
Coventry	**Metropolitan**	**11.9%**	**West Midlands**
Doncaster	**Metropolitan**	**1.6%**	**Trent**
Ealing, Hammersmith, and Hounslow*	**London**	**23.4%**	**North Thames**
East / North Hertfordshire	Shire	3.1%	North Thames
East London and City*	**London**	**37.3%**	**North Thames**
Kensington, Chelsea and Westminster*	**London**	**18.4%**	**North Thames**
Lambeth, Southwark, and Lewisham	London	25.7%	South Thames
Leicestershire*	**Shire**	**11.1%**	**Trent**
Newcastle and North Tyneside*	**Metropolitan**	**2.8%**	**Northern and Yorkshire**
North Derbyshire	Shire	0.7%	Trent
North West Anglia*	**Shire**	**3.4%**	**Anglia and Oxford**
Nottingham	Urban	6.0%	Trent
Salford and Trafford	**Metropolitan**	**3.8%**	**North West**
Sandwell*	**Metropolitan**	**14.7%**	**West Midlands**
South Derbyshire	Shire	4.6%	Trent
Warwickshire	**Shire**	**3.4%**	**West Midlands**
West Hertfordshire	Shire	4.9%	North Thames
West Surrey	Shire	2.6%	South Thames

13 Health Authorities in **bold** were targeted for further information. * Denotes selected for a site visit.

Annex 2: Interpreter, advocacy and translation service delivery methods reported by trust/studied

Health Authority	NHS Interpreter provision (May be provided by outside agency)	Full-time interpreters	Sessional interpreters	Ad hoc interpreting service	Telephone interpreting provision	Advocacy provision	NHS Translation provision (May be provided by outside agency)	Locally translated leaflets / videos , radio etc.	Centrally translated leaflets / videos, radio, etc.
Birmingham	✓	✓	✓	✓		✓	?	?	?
Bradford	✓	✓	✓	?		✓	✓	✓	✓
Coventry	✓	✓	✓	✓	✓		✓	?	✓
Doncaster	✓ (Minimal provision)		✓ (Minimal provision)	✓			✓	✓	
Ealing, Hammersmith, and Hounslow	✓	✓	✓	✓	✓		✓	?	?
East London and The City	✓	✓ (Usually referred to as advocates)	?	?	✓	✓	✓	?	✓
Kensington, Chelsea, and Westminster	✓	✓	✓	?	✓	✓	✓	?	?
Leicestershire	✓	✓	✓	✓	✓		✓	✓	✓
Newcastle and North Tyneside	✓	✓ (Interpreter also manages service)	✓				✓	?	✓
North West Anglia	✓	✓ (Interpreter also manages service)	✓	✓	✓	✓ (Link-workers)	✓	?	✓
Salford and Trafford	✓		✓	✓		✓	✓	?	✓

Health Authority	NHS Interpreter provision (May be provided by outside agency)	Full-time interpreters	Sessional interpreters	Ad hoc interpreting service	Telephone interpreting provision	Advocacy provision	NHS Translation provision (May be provided by outside agency)	Locally translated leaflets / videos , radio etc.	Centrally translated leaflets / videos, radio, etc.
Sandwell	✓	?	✓	✓		✓	✓	?	✓
Warwickshire	✓	?	✓	✓	✓	✓	✓	✓	

N.B. '✓' in a box indicates that this type of provision is provided in at least by / for one NHS provider unit located within the health authority boundaries.
'?' in a box indicates that we were unable to establish whether provider units obtained provision of this type
An empty box indicates that we do not believe such provision is provided within the health authority

Annex 3: Summary of Cost, utilisation, service gaps, service development of information provided by Health Authorities studied

Health Authority	Summary of utilisation information	Average cost of interpreting session or cost per hour	Are the services health authority as opposed to NHS Trust funded?	Details of any perceived 'gaps' in provision and whether provision is adequate	Any capping of expenditure or service use	Development of services
Birmingham	Not available	Not available	No	Generally good: Patchy provision in some trusts but generally good.	Likely as some local trusts in deficit and at least one trust has noted that services have been reduced due to financial constraints	By trusts themselves. Health authority now looking to co-ordinate the service
Bradford	Not available	Not available	No	Generally good: Provision in Airedale however is too low	Airedale NHS trust reports a lack of resources	By trusts themselves although some provision is skewed towards Obstetrics due to Asian Mother and Baby Campaign
Coventry	Not available	Not available	Funded by Coventry health authority.	Generally inadequate No provision outside mental health		By Lamb St Centre: Provision is skewed towards Obstetrics due to Asian Mother and Baby Campaign
Doncaster	Not available	Not available	No	Generally inadequate: Heavy reliance on voluntary provision	Low budgets	General failure to develop service
Ealing, Hammersmith, and Hounslow	Not available	Not available	No (Except in primary care)	Sometimes inadequate: Under-resourced in some trusts and some reliance on volunteers	Low budgets	By trusts themselves, although there was a more recent attempt to co-ordinate provision with other health authorities following the Sanders (1998) report.
East London and The City Health Authority	Not available	Not available	Yes	Generally good: However service is too concentrated in Obstetrics	In theory capping: In practice budgets exceeded	Much provision skewed towards Obstetrics due to Asian Mother and Baby

Health Authority	Summary of utilisation information	Average cost of interpreting session or cost per hour	Are the services health authority as opposed to NHS Trust funded?	Details of any perceived 'gaps' in provision and whether provision is adequate	Any capping of expenditure or service use	Development of services
						Campaign. Lack of planning of development identified by MORI (1994) report and recent attempt to make provision less concentrated in Obstetrics
Kensington, Chelsea, and Westminster	Interpreting Service Language Uptake as follows Apr 97- Mar 98: Urdu 17 Turkish 20 Thai 1 Tigrigna 15 Spanish 367 Somali 52 Serbo-Croat 38 Russian 49 Romanian 13 Pushto 4 Portugese 267 Polish 83 Mandarin 1 Kurdish 46 Italian 7 German 3 Greek 6 French 49 Farsi 149 Czech 3 Cantonese 13	£300,000 / 2281 consultations = £131.52	Yes	Generally good: Some shortfalls in mental health provision.	Health authority very well resourced due to large number of people in the area going private. Little evidence of major budgetary constraints	By trusts themselves, although more recent attempt to co-ordinate provision with other health authorities following the Sanders (1998) report.

Health Authority	Summary of utilisation information	Average cost of interpreting session or cost per hour	Are the services health authority as opposed to NHS Trust funded?	Details of any perceived 'gaps' in provision and whether provision is adequate	Any capping of expenditure or service use	Development of services
	Bulgarian 43 Bengali 30 Arabic 811 Amharic 22 Albanian 173 Total: 2,281					
Leicestershire	Not available	*Leicester general:* £31 per hour plus travel for agency interpretation service. *Fosse health care trust:* £31 for the first hour, and £12 thereafter for any subsequent or part hours.	No (Except primary care)	Generally inadequate: Lack of professional service in many trusts	Low budgets	Provision devolved at trust level. Some concentration of provision in Obstetrics. Development is planned via the health authorities 12 point strategic plan. Some trusts are unable to meet targets though
Newcastle and North Tyneside	Interpreting Service Language Uptake as follows Apr 97- Mar 98: Bosnian 526 Indian / Pakistan 605 Bangladeshi 662 Chinese 429 Arabic 213 Other 116 Total of 2551 bookings	Total costs to Newcastle and North Tyneside for interpreting provision to the NHS: £ 60,000 divided by 2,166 consultations implies an average cost of £27.70.	Health authority and trust funded	Generally good: Good all round provision	Sometimes purchasers are capped	Health authority has backed development of service via the voluntary sector

Health Authority	Summary of utilisation information	Average cost of interpreting session or cost per hour	Are the services health authority as opposed to NHS Trust funded?	Details of any perceived 'gaps' in provision and whether provision is adequate	Any capping of expenditure or service use	Development of services
	some of which were Social Service bookings. Bookings for health service use were: 2166.					
North West Anglia	*Peterborough General Hospital:* 330 interpreting contacts *North West Anglia health care trust:* 186 interpreting contacts.	*Peterborough General Hospital:* £33.27 for interpreting contact *North West Anglia health care trust:* £26.05 for interpreting contact	Yes	Generally Inadequate: CINTRA estimates most need is not met	Service is underfunded	Health authority has backed the development of the service via the voluntary sector. There is co-ordination with neighbouring health authorities to provide a service
Salford and Trafford	Not available	Not available	Yes	Generally inadequate: Lack of provision in Trafford	No health authority allocation for Trafford	Health authority has backed the development of service via the Salford Link project for Salford residents
Sandwell	Not available	Not available	Some are others funded by NHS trusts	Generally inadequate: Very heavy reliance on ad hoc provision, although improvements are planned	Yes	Development of services at trust level with recent attempt to set health authority level standards
Warwickshire	Not available	Not available	No	Generally good: Professional service available		Development of services by the trusts themselves

Annex 4: Summary of the main characteristics of IAT services in Health Authorities studied

Important note: The sources of the information are indicated in *italics.*

Health Authority	Key language groups catered for by the Health Authority	Health Authority backed interpreter / advocacy provision in primary care?	Interpreter / advocacy provision within acute hospitals?	Interpreter / advocacy provision within Mental Health? In Community care?	Interpreter / advocacy provision within Obstetrics?	Translation provision
Birmingham	*Birmingham Health Authority:* Urdu, Mirpuri, Pahari, Punjabi, Sindhi, Pushto, Hindi, Gujarati, Kutchi, Bengali,Creole, Patois, Bangla, Sylheti, Arabic, Vietnamese, Cantonese, Hakka, Mandarin, Swahili, Hausa.	*Birmingham Health authority:* Some general practices do not provide interpreting service provision others however do. A pilot scheme is currently in operation whereby ethnic monitoring is undertaken in return for free authority funded provision.	*City hospital NHS Trust:* Have paid professional interpreters *The Royal Orthopaedic NHS Trust:* Use bilingual staff volunteers to provide service. *Birmingham Heartlands:* Have paid professional interpreters. *University hospital Birmingham:* A professional service is provided. *Birmingham Childrens Hospital:* £8,000 interpreting costs.	*Northern Birmingham Community Health NHS Trust:* The trust uses paid professional interpreters *Northern Birmingham Mental health NHS trust:* The trust uses Express Interpreting and Translating Services *South Birmingham Mental health NHS trust:* A professional service is provided *South Birmingham Community:* A professional service is provided.	*South Birmingham Community NHS Trust:* Has provision as a result of the Asian mother and baby campaign. *Birmingham Womens Hospital:* A professional service is provided using link-workers and interpreters	There is a general lack of information about such provision
Bradford	Punjabi, Bengali, Gujerati, Hindi, Unallocated South Asian languages, Polish, Latvian, and Ukranian	*Bradford Health Authority:* Extra resources are provided in GMS resource allocations to GP practices which have a	*Bradford Community NHS Trust:* There are 8.54 WTE liaison officer posts within the management structure of the Bradford Community	*Bradford Community NHS Trust:* Provides services via Liaison Officers. Some advocacy is provided by the Community	*Bradford Health Authority:* Confirmed that, as a result of the Asian mother and baby campaign, provision is skewed	*Bradford Health Authority:* This has been provided by the interpreting and translation unit of the local authority, the Cathedral Service.

Health Authority	Key language groups catered for by the Health Authority	Health Authority backed interpreter / advocacy provision in primary care?	Interpreter / advocacy provision within acute hospitals?	Interpreter / advocacy provision within Mental Health? In Community care?	Interpreter / advocacy provision within Obstetrics?	Translation provision
		high proportion of ethnic minorities.	NHS Trust providing a service to all 3 hospital trusts. *Airedale NHS trust:* There are 3.8 WTE equivalent interpreter liaison officer staff providing a service to the trust	Health Council which may be accessed by mental health patients. *Airedale NHS trust:* Staff at the trust provide a mental health service.	towards Obstetrics.	
Coventry	*Lamb St interpreting centre:* Punjabi, Gujarati, Bengali, Sylheti, Bosnian Serbo-Croat, Korean, Latvian.	*Lamb St interpreting centre:* The health authority does not help to provide an interpreter service to primary care	*Lamb St interpreting centre:* The health authority does not help to provide an interpreter service for the mainstream hospital sector. The service is not reinforced by language line provision.	*Lamb St interpreting centre:* The health authority provides 150 hours of interpreter provision per month to the Mental Health sector	*Lamb St interpreting centre:* Provision lacking	*Lamb St interpreting centre:* Some translation is undertaken including letters for mental health commissioners, doctors' correspondence, and letters to clients. In addition leaflets on transcultural services, Mental health Therapies, access for ethnic minorities, ECT, The Rapid response service, and leaflets on careplans.
Doncaster	Very little language need.	Generally a lack of provision because of a lack of health authority funding.	*Doncaster Health Care and Doncaster Royal Infirmary:* Lack of funded provision. Resources either come from individual department budgets (Doncaster Health Care Trust) or are very poorly	*Doncaster Health Care and Doncaster Royal Infirmary:* No special provision in Mental Health. Generally low levels of provision or voluntary provision.	*Doncaster Health Care and Doncaster Royal Infirmary:* No special provision in Obstetrics. Generally low level of provision or voluntary provision	*Doncaster Health Care:* The Racial Equality Council has funded a trained Translator Co-ordinator. The health authority uses these services on an ad hoc basis for provision of leaflets etc.

Health Authority	Key language groups catered for by the Health Authority	Health Authority backed interpreter / advocacy provision in primary care?	Interpreter / advocacy provision within acute hospitals?	Interpreter / advocacy provision within Mental Health? In Community care?	Interpreter / advocacy provision within Obstetrics?	Translation provision
			funded (Doncaster Royal Infirmary). Within Doncaster Royal Infirmary there is much reliance on voluntary staff provision.			
Ealing, Hammersmith and Hounslow	*Ealing, Hammersmith, and Hounslow Health Authority:* Urdu, Punjabi, Gujarati, Farsi, Somali, Turkish, Armenian, Albanian, Serbo-Croat, Arabic, Far Eastern, Eastern European language, Kurdish, and Afghani. Some of those requiring provision are refugees.	*Ealing, Hammersmith, and Hounslow Health Authority:* General practitioners are provided with a telephone interpreting service sponsored by the health authority, as well as some face to face interpreter provision	*Ealing Hospitals NHS Trust:* The trust employs an interpreter and employs other interpreters via an agency. *The Hammersmith Hospitals NHS Trust:* Provision is provided by Language Line and Hammersmith and Fulham commission for racial equality. *West London Health Care Trust:* Some agency and freelance interpreting is provided *West Middlesex University Hospital:* A limited professional interpreting service is provided	*Hounslow and Spelthorne Community and Mental Health NHS Trust:* Have a bi-lingual support worker supporting 5 child health clinics a week, and provide interpreting support to the Department of Child and Adolescent Psychiatry, Health Visiting Services, Mental Health Services, and others. Language Line is also used a little. *Riverside Mental Health Trust:* The trust buys in interpreting services *Riverside Community:* A professional service is used		*Ealing, Hammersmith and Hounslow Health Authority:* When translation is required, it tends to be needed for 4 major languages. However the health authority infrequently provides leaflets and when it does these are not usually translated. *Hounslow and Spelthorne Community and Mental Health NHS Trust:* Patient information, and mental health audio cassettes are translated into Hindustani and Somali, Trust comments and complaints leaflets are translated into 5 Asian languages including Bengali, Somali, Arabic and Farsa. Whilst health visiting leaflets are translated into Somali, Punjabi, Urdu.

Health Authority	Key language groups catered for by the Health Authority	Health Authority backed interpreter / advocacy provision in primary care?	Interpreter / advocacy provision within acute hospitals?	Interpreter / advocacy provision within Mental Health? In Community care?	Interpreter / advocacy provision within Obstetrics?	Translation provision
			Language Line: Provides services to the health authority			*West London Health Care NHS Trust:* Obtain a limited amount of translation *West Middlesex University:* Not clear *The Riverside Mental Health trust:* Not clear *The Hammersmith Hospitals NHS Trust:* Three leaflets have been translated into Bengali, Urdu, Farsi, Arabic, Turkish, Polish, Greek, Spanish, Somali.
East London and the City	*East London and the City Health Authority:* Turkish / Kurdish, Sylheti (Bengali), Urdu, Hindi, Gujarati, Somali, Portuguese, Polish, Russian, Ukrainian, French, African, Chinese and Vietnamese. A proportion of the provision is for Eastern European refugees	*East London and The City Health Authority:* The provision of a primary care service has recently been put out to tender. For some minority languages Language Line is used.	*East London and the City Health Authority:* The health authority prioritises speciality provision, and provides advocacy services for Obstetrics and Mental Health.	*East London and the City Health Authority:* Specialised advocacy services are provided in Mental Health and there is some health authority sponsored provision via MIND.	*East London and the City Health Authority:* The health authority concentrates its provision in Obstetrics and Gynaecology	*East London and The City health authority:* Some key leaflets have been translated, although translation costs appear low suggesting this is not a priority

Kensington & Chelsea, and Westminster	*Kensington, Chelsea and Westminster health authority:* Vietnamese, Urdu, Turkish, Thai, Tigrigna, Spanish, Somali, Serbo-Croat, Russian, Romanian, Pushto, Punjabi, Portuguese, Polish, Lingala, Mandarin, Kurdish, Italian, Greek, French, Farsi, Czech, Cantonese, Bulgarian, Bengali, Arabic, Amharic, Albanian. A significant proportion of those requiring interpreter services are refugees.	*Kensington, Chelsea and Westminster health authority:* The health authority funds the provision of interpreters in primary care.	*Kensington, Chelsea and Westminster health authority:* The major hospitals within the health authority spend considerable amounts upon interpreter services. Around 12-15 full time interpreters are employed. *Language Line:* Provides service to the health authority	*Kensington, Chelsea and Westminster health authority:* Mental health advocacy provision exists. Furthermore the health authority funds a bi-lingual counsellor for provision of a service to traumatised people. Psychiatric counselling to traumatised refugees was however noted as an area for which provision was a little lacking.	*Kensington, Chelsea and Westminster health authority:* The concern was raised that not enough resources go into the provision of screening for cervical and breast cancer, and for interpretation in this context	*Kensington, Chelsea and Westminster Health Authority:* All the leaflets pertaining to service provision are routinely translated into 6 main languages: Arabic, Bengali, Chinese, Portugese, Spanish, and Somali.
Leicestershire	*Leicester Health Authority:* Urdu, Gujarati, Hindi, Punjabi, Bengali, Chinese. Polish, and other languages.	*Leicester Health Authority:* Primary care providers are encouraged to establish their own arrangements for the provision of interpreter services based upon health authority guidelines. Currently some provision is from the Fosse Trust.	*Leicester General:* The trust use a combination of hospital volunteer interpreters, professional agency interpreters, Language Line and hospital employed link-workers in maternity. *Leicester Royal Infirmary:* The trust has its own interpreters, it also has the use of professionally trained interpreters. It has access	*Leicestershire Mental Health Service NHS Trust:* Has 2 interpreters with a command of 7 different languages. *Fosse Community NHS Trust:* The trust obtains interpreting provision from the Ujala Resource Centre.	*Leicester General Hospital:* Identified Obstetrics as a major speciality user *Leicester General NHS Trust:* There are link-workers earmarked for maternity.	*Health Authority:* There is a general lack of translation provision at health authority level, health authority projections suggest that £500,000 would be required to provide what is regarded as 'adequate' provision. *Leicester General Hospital:* Not clear *Leicester Royal Infirmary:* Not clear

			Glenfield NHS Trust Provision is concentrated in Cardiology. Some secondary provision is provided by provider units, and Language Line is sometimes used. Generally though professional provision is lacking as expenditure in this area is low			
Newcastle and North Tyneside	*Newcastle and North Tyneside Health Authority:* Bengali, Sylheti, India, Pakistani, Punjabi, Urdu, Hindi, Chinese, Hakka, Mandarin, Serbo-Croat, Arabic, Farsi, French, Italian, and others	*Newcastle Interpreting Service:* Provision to primary care sector is the largest sector now that the health authority sponsors provision.	*Newcastle Interpreting Service:* Trusts obtain trained interpreters via the 'Newcastle Interpreting Service for Health and Social Services'. All trusts within the health authority encourage the use of professional interpreting provision from this service	*Newcastle Interpreting Service:* Interpreters are trained to operate in a Mental Health context as required.	*Newcastle Interpreting Service:* Provision to Obstetrics is not discernibly different.	*Newcastle and North Tyneside Health Authority:* There is a patchy provision of leaflets. It was considered that more use of audio material is required due to a lack of written skills. *Newcastle City Health NHS trust:* Not clear
North West Anglia	Asian, Serbo-Croat, French, German, Others. A small number of refugees (c.70) also receive provision.	*CINTRA information:* GPs have access to CINTRA interpreter services as a result of health authority funding but funding is subject to a financial cap / budgetary constraint.	*CINTRA information about King's Lynn Wisbech NHS Trust:* An interpretation service is provided by CINTRA to the hospital. *CINTRA information about Peterborough Hospitals NHS Trust:* Although CINTRA	*CINTRA information about North West Anglia Health care Trust:* It was suggested that provision for Mental Health is limited due to absence of counselling facilities. However CINTRA provides a service.	*CINTRA information about Peterborough Hospitals NHS Trust:* An Obstetrics service is provided to Peterborough District Hospital NHS trust, and North West Anglia Health Care Trust. There is no indication that it is a	*CINTRA information about North West Anglia Health Care Trust:* Very little was translated by CINTRA during the last financial year (1997/98). *CINTRA information about Peterborough District Hospital NHS trust and King's Lynn Wisbech NHS*

			provision is available at Peterborough Hospital patients' relatives are sometimes used as interpreters, because of gaps in provision. *CINTRA:* Service level agreements exist with the health authority. CINTRA employs sessional full time interpreters. This is sometimes supplemented by some use of Language Line *Language line:* Provides provision to the health authority		specialist service.	*Trust:* Did not place an order with CINTRA
Salford and Trafford	*The Salford link project:* Interprets into 7 main languages including: Arabic, Bengali, Cantonese, Hindi, Gujarati, Punjabi, and Urdu. A request to the purchasers has been made to expand provision into Somali, French, Spanish, Italian, and Japanese.	*Salford and Trafford Health Authority:* Currently the health authority has no funds earmarked for the provision of interpreter services within primary care.	*Salford and Trafford Health Authority:* The Salford link project provides funding for a service within Salford using health authority funding. Currently there is no funding for provision in Trafford and the Salford link project therefore does not provide such a service to Trafford	*The Salford link project:* Interpreters are suitably qualified to provide service in mental health but provision is not biased in the direction of this speciality.	*The Salford link project:* The same mainstream provision is available in Obstetrics as elsewhere.	*The Salford link project:* Some translation is undertaken into 5 main languages. Salford link has a translation budget of £10,500 (50% health authority funded, and 50% social service funded). Translation is undertaken into 5 languages: Arabic, Bengali, Cantonese, Punjabi, and Urdu. Leaflets during 1988/89 related to head lice, TB, Giardia, Campy lo bacteria, Salmonella, viral gastro-enteritis, heart problems, foot and mouth,

						impetigo, speech therapy, children's diet, and arrangements for child custody.
Sandwell	*Sandwell Health Authority:* Punjabi, Bengali, Gujarati, Hindi, Urdu, Polish, Arabic, others	*Sandwell Health Authority:* Some of the advocacy services are organised in partnership with primary care.	*Sandwell Health Care Trust:* Heavy reliance on ad hoc provision but some bilingual advocacy provision is available	*Sandwell Health Authority:* A specialist mental health interpreter /advocacy service is not provided	Yes	*Sandwell Health Authority:* Very good provision available via a central Sandwell health authority interpretation unit.
Warwickshire	Punjabi, Hindi, Urdu, Gujarati, Italian, Eastern European, Chinese.	*Warwickshire Health Authority:* The health authority does not sponsor interpreting, advocacy or written translation provision at a primary care level	*Warwickshire Health Authority:* The health authority has a contract with a Trust for provision of interpretation services. One Trust uses the social service interpretation service, whilst another has a contract with community groups for interpreter provision.	Use of mainstream provision.	Use of mainstream provision.	*North Warwickshire NHS Trust:* A limited amount of translation is provided into Gujarati, Hindi, Punjabi, and Urdu. This includes key documents such as information on the ethnic monitoring provision, information on the service provided by the bilingual co-worker, and introduction section of the health authority's annual report. *Warwick hospital:* No recorded use of translation provision

Annex 5: Costs arising due to the provision of interpreter and translation services.

Health Authority	Interpreter / advocacy costs in primary care	Interpreter / advocacy costs in acute hospitals	Interpreter / advocacy costs in Mental Health and Community	Other interpreter / advocacy costs	Total interpreter / advocacy costs to the acute sector (i.e. excluding primary care)	Translation and other media (costs).
Birmingham	Not identified	*City Hospital NHS Trust:* The total cost of interpreting within the trust was £131,126. *The Royal Orthopaedic Hospital NHS Trust:* Total cost for interpreting services was £674 (Staff and volunteers are re-deployed from other departments) *Birmingham Heartlands NHS Trust:* Costs for employed interpreters / advocates are £32,017. *University Hospital Birmingham:* Provision costs £16,000	*Northern Birmingham Community Health NHS Trust:* The total cost of interpreters was £67,725 (excluding Advocacy costs). *North Birmingham Mental Health NHS Trust:* A professional service is provided via a contractual arrangement. *South Birmingham Mental Health NHS Trust:* A professional interpreting service is provided at a cost of £15,545. *South Birmingham Community:* £15,545	*Birmingham Womens Hospital:* £49,835 *Birmingham Children's Hospital:* £37,000	*City Hospital NHS Trust:* £131,126 *The Royal Orthopaedic Hospital NHS Trust:* £674 *Birmingham Heartlands NHS Trust:* £32,017 *University Hospital Birmingham:* £16,000 *Northern Birmingham Community Health NHS Trust:* The cost of 3 full time interpreters was £42,725 plus £25,000 which was the cost of the bank of interpreters = £67,725 *Northern Birmingham Mental Health NHS Trust:* £7,763 *South Birmingham*	*City hospital NHS Trust:* Data not provided *The Royal Orthopaedic Hospital NHS trust:* Data not provided *Birmingham Heartlands NHS Trust:* Data not provided *University Hospital Birmingham:* Data not provided *Northern Birmingham Community Health NHS Trust:* Data not provided *Northern Birmingham Community Health NHS Trust:* Data not provided *Northern Birmingham Mental Health NHS*

					Birmingham Womens Hospital: £49,835 *Birmingham Children's Hospital:* : £37,000 *Total identifiable acute costs:* £357,685	*South Birmingham Mental Health NHS Trust:* Data not provided *Birmingham Womens Hospital:* Data not provided *Birmingham Children's Hospital:* Data not provided *Total identifiable costs:* £0
Bradford	A small proportion of the budget for Airedale NHS trust is used to provide interpreting but largely for one GP practice (Likely to be around £30,000 i.e. this is the approx. allocation funded by GMS)	*Bradford Hospitals NHS Trust:* £100,000 for a service based in Paediatrics, Maternity, Ante-natal and out-patients. *Airedale NHS Trust:* £29,600 for a service co-ordinator + provision to the Women and Children's Directorate.	*Airedale NHS Trust:* Community provision costs £17,162 whilst Mental Health provision costs £49,000 + £2,000 = £68,162	*Bradford Community Health Council Advocacy Service:* Ethnic minority advocacy service is employed at a cost of £25,000 per annum *Bradford Community NHS Trust:* £132,000 is spent including family planning clinics, infant welfare clinics, dental clinics, speech and language therapy, ante-natal clinics, and immex clinics. Allowing for £30,000	*Bradford Hospitals NHS Trust:* £100,000. *Airedale NHS Trust:* £95,792 *Bradford Community NHS Trust:* £102,000 *Bradford Community Health Council Advocacy Service:* £25,000. *Total identifiable acute costs:* £322,792.	*Bradford Health Authority:* Translation of the annual report, a radio advertising campaign to inform access to physicians, a radio campaign to encourage the take-up of dental provision, and translation of 2 letters at a total cost of £4,660. *Bradford Hospitals NHS Trust* : Very little outside translation. Therefore not costed.

					Riverside Community trust: Costs in 1997 / 98 were around £27,000-28,000 *Total identifiable acute costs:* £167,528-168,528	
East London and City	*East London and City Health Authority:* £22,680 for primary care Advocacy	*East London and City Health Authority:* Figures not broken down	*East London and City Health Authority:* Figures not broken down	*East London and City Health Authority:* Complaints department: Spent £135.50 on interpreting	*East London and City Health Authority:* Overall spending for 1997 / 98 is £2,335,975 (including complaints) *Total identifiable acute costs:* £2,335,975	*East London and City Health Authority:* £1,203 was spent on translation of a conciliation leaflet + £6,700 on other translations (via an agency + £20,000 on the production of videos in community languages *Total identifiable costs:* £27,903
Kensington & Chelsea, and Westminster	c.£60,000.	c.£145,000	c.£95,000	Figures not broken down	c.£240,000 for mainstream interpreting service + £68,000 for the interpreting dimension of health authority funded projects. Overall total is around £308,000. *Total identifiable acute costs:* £308,000.	Excluding print runs: £18,000-24,000. *Total identifiable costs:* £18,000-24,000

Leicestershire	*Actual:* At present the budget is £5,000.	*Leicester General Hospital:* Costs cannot be identified *Leicester Royal Infirmary:* £6,981 *Glenfield hospital NHS trust:* Currently use volunteers so costing not available.	*Leicester Mental Health Service Trust:* £41,550 to cover 2 full time staff and office costs. *Fosse Community Health trust:* The total cost is £12,473. .	Figures not broken down	*Leicester General Hospital:* Costs not identifiable. *Leicester Royal Infirmary:* £6,981 *Glenfield hospital NHS trust:* No identifiable costs *Leicester Mental health:* £41,550 *Fosse Community health trust:* Spent £35,835 on interpreters. *Language Line:* Total health authority wide spending of £1914 *Total identifiable acute costs:* £86,280.	*Leicester general hospital:* Costs not identifiable. *Leicester Royal Infirmary:* Costs not identifiable *Glenfield hospital NHS trust:* Costs not identifiable *Leicester Mental health:* Costs not identifiable. *Fosse Community health trust:* £8,500. *Total identifiable costs:* £8,500
Newcastle and North Tyneside	£19,400	Figures not broken down	Figures not broken down	Figures not broken down	*Total identifiable acute costs:* £40,600	Reported translation costs at Newcastle Interpreting Service for health and social services: £1,645 + Translation cost of maternity information into Arabic, Bengali, Cantonese, Hindi, Punjabi, and Urdu was £391.50.

						Total identifiable costs: £2,037
North West Anglia	Figures not broken down	Figures not broken down	Figures not broken down	Figures not broken down	*Peterborough District Hospital NHS Trust:* Costs of CINTRA interpretation are £10,980. *North West Anglia Health Care Trust:* Costs of CINTRA interpreting are £4846. *Language Line:* Costs of telephone interpreting for the health authority are £4,681 *Total identifiable acute costs:* £20,507	*Peterborough District Hospital NHS trust:* Costs of CINTRA provided interpretation are £60 *North West Anglia Health Care trust:* Costs of CINTRA provided translation £48. *Total identifiable costs:* £108
Salford and Trafford	Figures not broken down	Figures not broken down	Figures not broken down	Figures not broken down	*Salford and Trafford health authority:* Report total district interpreting costs to be £31,500 *Total identifiable acute costs:* £31,500	*Salford and Trafford health authority:* Report total district translating costs to be £10,500 *Total identifiable costs:* £10,500
Sandwell	Figures not broken down	Figures not broken down	*Black Country Mental Health Trust:* Costs not identifiable, and much voluntary provision anyway	Figures not broken down	*Sandwell Health Care Trust:* £68,595 *Black Country Mental Health Trust:* Not identifiable	*Health Authority Translation Unit:* Costs to Sandwell £10,090 *Total identifiable*

					Total identifiable acute costs: £68,595	costs: £10,090
Warwickshire		*North Warwickshire NHS Trust:* Estimated cost of £7,000 during 1997/98. + Language Line at £1,836 for North Warwickshire and the former Rugby NHS trust = £8,836 + £13,000 =£22,836 *Warwick Hospital:* Figures not broken down to this level *George Elliot hospital NHS Trust:* Figures not broken down to this level. *Language Line (not included in above figures):* £1,838	Figures in main totals.	*North Warwickshire NHS Trust:* A bilingual co-worker providing advocacy and interpreting provision works part time at a cost of £8,000. A proportion of the Race Equality Officer's time is spent working as an advocate at a cost of £5,000 = £13,000	*North Warwickshire NHS Trust:* £7,000 + £13,000 = £21,000 *Warwick Hospital NHS Trust:* £757 for provision from November 1997-Mar 1998. Therefore for whole year projection = £757 x2 = £1514 *South Warwickshire Combined Care:* £431 *George Elliot NHS trust:* £6,300 *Language Line:* £1,836 *Total identifiable acute costs:* £31,081	*North Warwickshire NHS Trust:* Spends an estimated £3,000 per annum on written translation *Warwick Hospital NHS Trust:* Translation is not provided. *South Warwickshire Combined Care:* Not identifiable *George Elliot NHS trust:* Not identifiable *Total identifiable costs:* £3,000.

Annex 6: Kensington, Chelsea, and Westminster.

The health authority conservatively estimates the interpretation and translation element of provision to be around 20% of the total costs for the following projects:

	£s pa (1997/98)
Somali Community Information Centre	3,000
Migrants Resource Centre	10,200
London Chinese Health resource centre	25,000
Somali Community Information Centre	25,500
Westminster Association for Mental Health	39,372
Bayswater Family Centre (Refugee / Homeless)	28,850
Westminster Racial Equality	35,000
Dutch Pot Healthy Alliances	27,700
Richmond Fellowship	19,667
North West London	29,166
MCWG Dar Al Arqam	6,800
Al-Hasaniya Moroccan Centre	25,945
Commission for Filipino Migrant Workers	2,500
Migrant and Refugee Communities Forum	31,050
Mangrove Community Association	3,500
Somali Welfare Association	22,780
Ethiopian Refugee Helpline	5,500
Total	**£341,530**
Proportion of annual 1997 / 98 costs attributable to the need for interpreter and translation service:	**£68,306**