NAVIGATION INSTRUCTIONS

Overview

Difficulty in Accessing Key Services is an Internet only release produced in pdf format. The spreadsheets behind the figures are available for use in MS Excel by clicking on the figure number or the figure itself. Then click on File > Save As if you want to process the data on your computer.

Navigation

The PDF file has a bookmark panel down the left-hand side, which allows you to jump from one section to another. The main sections, references and appendix have lower levels of bookmarks enabling you to jump to subheadings within a file and to the charts and tables contained in each chapter. You can show and hide the bookmarks panel using the Show/Hide Navigation Pane toolbar to the right of the printer icon. Select Thumbnails if required by clicking on the appropriate tab when the pane is showing. In addition, where references to other parts of the article are made, there is a link to the relevant place in the report.

Searching

The first large binoculars button at the top of the screen will do a simple search on a word in the current document. To see if the word appears again in the publication click again on the binoculars button.

Spreadsheets

In some cases, more data is available in this way than is illustrated in the figure. For instance clicking on figure 2 (which presents data for just the post office and hospital) gives you information on how people travel to all of the services included in the survey. Displaying a spreadsheet is slow the first time but is faster subsequently. In Acrobat Reader v.4 select File>Preferences>Retain View on Close to return to the same PDF page.

Screen Resolution

Adobe Acrobat works with any screen resolution. For this product 800x600 is acceptable, but 1024x768 works better if the monitor and graphics card are able to. To change the type to one which best suits your screen, use the view menu.

Other

If the text looks blurry on screen, this may be improved by visiting File Menu>Preferences>General and switching smooth Text and Monochrome images off.

Difficulty in Accessing Key Services

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Summary

Many studies measuring deprivation now include some idea of proximity to services such as a post office or food shop. Improving the accessibility of local services is an important part of the Government's strategy for tackling neighbourhood renewal. This article reports on surveys conducted in January and March 2000 and 2001, which examined actual (as measured by usual journey time) and perceived difficulty experienced in accessing a range of services.

The main findings are:

- 20 per cent of adults experience some kind of difficulty getting to their hospital; no more than 6 per cent experience difficulty in accessing any of the other services examined (chemist, General Practitioner (GP), post office, main food shop);
- there is a clear relationship between actual difficulty (as measured by usual journey time) and perceived difficulty;
- household car availability has an impact on perceptions of difficulty: the proportion of people who said that they experience some difficulty in households without a car is nearly twice as great (38 per cent) as those with a car (21 per cent).

Other findings are:

- women are more likely than men to report difficulty in accessing all of the services examined, reflecting the longer journey times they experience and their lower car use;
- younger people, aged 16 to 24, and the elderly, aged 75 and over, have more difficulty accessing services than the general population; these differences remain even when controlling for different levels of household car availability and other factors;
- people living in rural or deprived areas report only slightly more difficulty in accessing services than people living in more urban areas.

Introduction

This article reports on the results of surveys undertaken in January and March 2000 and 2001 to examine the difficulty experienced by adults when accessing a range of services (see technical annex for more information on the National Statistics Omnibus survey). The analysis was designed to focus on perceptions of difficulty, but it also looks at actual difficulty (as measured by journey time) and mode of transport used in accessing services. More detailed analyses are presented for four groups of people who are often considered to be disadvantaged in terms of access to good quality transport. These are: women, older people, those living in rural areas and those living in deprived areas. The services examined are those which every household are likely to need to access at some time – the hospital, GP, chemist, post office and main food shop.

Background

The importance of good access to transport and local services is commonly recognised. The Urban White Paper[1] states that '...efficient and reliable transport is essential to provide people with access to jobs, services and leisure opportunities and enable communities to function properly'. The National Strategy for Neighbourhood Renewal[2] includes commitments to improve public transport in the most deprived areas and to improve access to services and local retail facilities, recognising in particular the importance of primary care facilities and post offices in deprived urban areas and rural areas.

Previous research[3,4,5,6,7] suggests that there are four groups of people who are relatively disadvantaged in their access to good quality transport: women, older people, unemployed people seeking employment/training opportunities and those living in rural areas. The studies find that women's greater domestic responsibilities, along with their weaker access to household resources (such as a car), can result in constrained mobility. Fears about personal safety can also be a barrier to mobility. The Integrated Transport White Paper[8] identifies older people as an excluded transport group. They are more likely to be on low incomes and are less likely to have access to a car. This has a knock-on effect on personal mobility. The studies also comment on the differences between urban and rural communities, whose needs and characteristics differ strongly. The Countryside Agency[9] suggest that rural transport is characterised by higher car dependence, higher travel budgets and poorer public transport.

Some studies[10,11,12] of deprivation now include a measure of proximity to services although relatively little work has been done in this area.[13] An important measure of deprivation is the Index of Multiple Deprivation (IMD).[12] This is a set of six separate domains. One of these, accounting for 10 per cent of the overall index, is geographic access to services. This domain contains four indicators: access to a post office, access to food shops, access to a GP, and access to a primary school. A limitation of these indicators is that they measure access purely in geographical terms. This may mask the fact that physical or social barriers can contrive to make journey distances much longer. Distance is also a relative concept: a bus stop that is accessible to a healthy adult may be impossible to reach for someone with a disability, small child or heavy load to carry. Perceptions of difficulty can be important. If people believe that getting to an activity or service is difficult they may not make that journey.

One of the aims of this article is to examine individuals' perceptions of difficulty in travelling to key services. Although data are collected regularly on how and why people travel around Britain (in the National Travel Survey for instance) there is relatively little information on perceived difficulty. This article focuses on the difficulties experienced by four groups of people: women, older people, those living in rural areas and those living in deprived areas. (Travel barriers are also an issue for the unemployed seeking employment/training opportunities, but this study was not designed to address this issue.) This article examines the mode of transport used to travel to a range of key services, and the difficulty experienced in doing so, both actual (as measured by journey time) and perceived.

In further recognition of the importance of this issue the Prime Minister last year asked the Social Exclusion Unit (SEU) to examine how transport was a barrier to accessing work, learning, health care, food shops and other essential services. The SEU will be reporting on recommendations to tackle this problem later in 2002.

Table 1 Usual time taken to travel to services

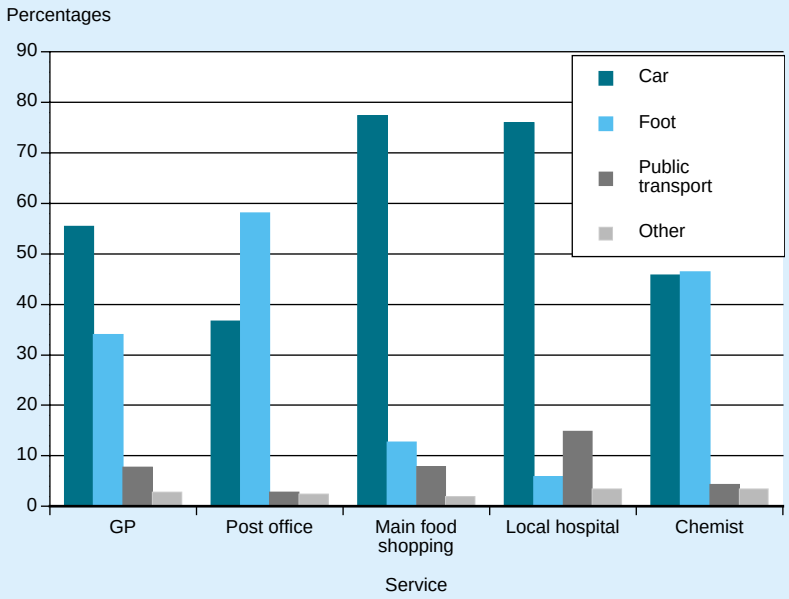
Great Britain *Percentages*

	5 minutes or less	6–10 minutes	11–20 minutes	21–30 minutes	31 minutes or longer	All journeys
GP	*38*	*36*	*20*	*4*	*2*	*100*
Post office	*58*	*29*	*11*	*2*	*-*	*100*
Main food shopping	*22*	*34*	*32*	*9*	*3*	*100*
Local hospital	*7*	*17*	*33*	*25*	*18*	*100*
Chemist	*47*	*35*	*15*	*3*	*1*	*100*

Source: NS Omnibus, January and March, 2001

Figure 1
Usual mode of transport to services

Great Britain



Source: NS Omnibus, January and March, 2000 - 2001

Table 2 Usual mode of transport to services, by gender

Great Britain *Percentages*

		Foot	Car	Public transport	Other	All journeys
Men	GP	*32*	*60*	*5*	*3*	*100*
	Post office	*55*	*40*	*2*	*3*	*100*
	Main food shopping	*13*	*80*	*6*	*2*	*100*
	Chemist	*44*	*50*	*3*	*4*	*100*
	Local hospital	*5*	*79*	*12*	*3*	*100*
Women	GP	*36*	*52*	*10*	*3*	*100*
	Post office	*61*	*34*	*4*	*2*	*100*
	Main food shopping	*13*	*75*	*10*	*2*	*100*
	Chemist	*49*	*42*	*6*	*3*	*100*
	Local hospital	*6*	*73*	*18*	*4*	*100*

Source: NS Omnibus, January and March, 2000 – 2001

How do people travel to different services and how long does it take?

Overview

The survey asked adults how long it normally takes to get to five key services. The results are shown in Table 1. As might be expected, journey times tend to be shortest for the more local services, such as the post office or chemist, which are present on most High Streets. More than four-fifths of adults can access these services within 10 minutes. By contrast, travel times to the hospital tend to be much longer. One-quarter of people could access their local hospital within 10 minutes, but over two-fifths reported travel times in excess of twenty minutes.

These findings are reflected in people's choice of mode of transport (Figure 1). Service-users were asked whether they travel to key services by foot, car, public transport or some other form of transport (such as taxi or bicycle). The dominant modes of travel are car and foot. Over four-fifths of adults use one or other of these modes to travel to each of the services examined. Travel by foot tends to be more common for the more local services, where journey times are shorter. This can be seen with journeys to the post office, where the majority of people travel by foot, and journeys to the chemist where a similar proportion of people travel by foot and car. Car is the main mode of travel for the other services examined. For main food shopping, travel choices are likely to be influenced by the necessity to carry heavy loads, as well as the proximity of the service. This is the service for which the car is used most often.

Gender differences

Table 2 compares how men and women usually travel to services. The overall pattern of transport use is broadly similar but there are some significant differences. For each service, the proportion of women travelling by car is between 5 and 8 percentage points lower than for men. Women's use of travel by foot and public transport is correspondingly higher. The table also shows that it is women who make up the majority of people using public transport to access services. Form of transport impacts on journey times and this is clearly demonstrated in the case of men and women. For all services, women report longer journey times than men (Table 3 overleaf).

Age differences

Figure 2 illustrates the different modes of transport that are used by people when travelling to two contrasting services - a local service (post office) and a less local service (hospital). It shows that the usual mode of travel varies by age, but that the extent of the variation depends on the service being used. For each service, people aged 16 to 24 travel significantly more by foot than older people. This is particularly apparent for the post office, where 69 per cent of 16 to 24 year-olds travel by foot, compared with an average of 59 per cent for all age groups. The chart also shows that people aged 25 to 54 are more likely to use the car. For those above the age of 54, use of public transport and alternative forms of transport, such as taxis and community transport schemes, increases with age. This is particularly noticeable for travel to the hospital where 26 per cent of people aged 75 and over use public transport, with a further 15 per cent using transport other than car or foot.

Rural-urban differences

As discussed earlier, travel choices are affected by whether people live in an urban or a rural environment. For this analysis, rural areas have been defined as those where the respondent's settlement size is 3,000 people or fewer. This is similar to the National Travel Survey classification.[14] Table 4 shows that across each of the services examined, use of the car is substantially greater in rural areas. For instance, more than nine in ten people living in rural areas use the car for their main food shopping and for travel to the hospital. This compares with little more than seven in ten adults in urban areas. Conversely, there is relatively greater use made of foot and public transport in urban areas. This is most marked for journeys to the chemist where half of people in urban areas travel by foot, compared with one-fifth in rural areas.

Table 3 Usual time taken to travel to services, by gender

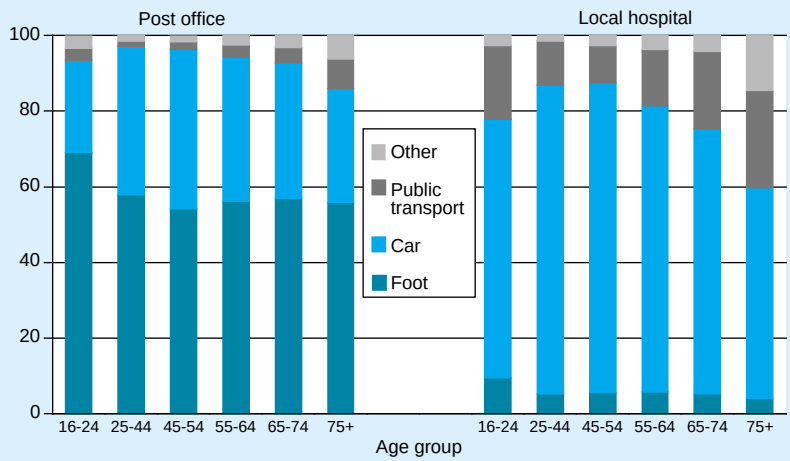
Great Britain *Percentages*

		10 minutes or less	11 minures or more	All journeys
Men	GP	*76*	*24*	*100*
	Post office	*89*	*11*	*100*
	Main food shopping	*61*	*39*	*100*
	Local hospital	*28*	*73*	*100*
	Chemist	*85*	*15*	*100*
Women	GP	*72*	*28*	*100*
	Post office	*84*	*16*	*100*
	Main food shopping	*52*	*48*	*100*
	Local hospital	*21*	*79*	*100*
	Chemist	*80*	*20*	*100*

Source: NS Omnibus, January and March, 2001

Figure 2
Usual mode of transport to services, by age group

Great Britain



Source: NS Omnibus, January and March, 2000 – 2001

Table 4 Usual mode of transport to services, by settlement size

Great Britain *Percentages*

		Foot	Car	Public transport	Other	All journeys
Rural[1]	GP	*17*	*77*	*4*	*3*	*100*
	Post office	*43*	*53*	*1*	*3*	*100*
	Main food shopping	*4*	*91*	*4*	*1*	*100*
	Local hospital	*1*	*91*	*6*	*2*	*100*
	Chemist	*21*	*72*	*4*	*3*	*100*
Urban	GP	*38*	*51*	*9*	*3*	*100*
	Post office	*62*	*33*	*3*	*2*	*100*
	Main food shopping	*15*	*74*	*9*	*2*	*100*
	Local hospital	*7*	*72*	*17*	*4*	*100*
	Chemist	*52*	*40*	*4*	*4*	*100*

[1] Defined as settlement size of fewer than 3,000 residents
Source: NS Omnibus, January and March, 2000 - 2001

Table 5 Usual time taken to travel to services, by settlement size

Great Britain *Percentages*

		10 minutes or less	11 minures or more	All journeys
Rural[1]	GP	*67*	*33*	*100*
	Post office	*86*	*14*	*100*
	Main food shopping	*45*	*55*	*100*
	Local hospital	*18*	*82*	*100*
	Chemist	*71*	*29*	*100*
Urban	GP	*76*	*24*	*100*
	Post office	*87*	*13*	*100*
	Main food shopping	*59*	*41*	*100*
	Local hospital	*26*	*74*	*100*
	Chemist	*85*	*15*	*100*

[1] Defined as settlement size of fewer than 3000 residents

Source: NS Omnibus, January and March, 2001

This is illustrated further by analysing the time it takes people to access services according to settlement size (Table 5). For all services, except the post office, journey times for people in rural areas are longer than for people in urban areas. This is most noticeable with main food shopping and trips to the chemist, for each of which the proportion of people with a journey time in excess of 10 minutes is 14 percentage points higher in rural areas. There is no significant difference in times for journeys to the post office.

Deprivation patterns

Different travel choices emerge when the area of residence of people is analysed by a measure of deprivation, such as the Index of Multiple Deprivation (IMD). The IMD covers England only and is derived from a range of socio-economic factors under six 'domains': income, employment, health, education, housing, and geographical access to services. Wards are ranked according to their overall index and divided into ten equal-sized groups (deciles). Table 6 shows how the proportion of people using the car to access key services varies across these deciles. It demonstrates a clear descent across the deciles, with lower car use in the more deprived areas which is associated with lower levels of household access to cars. The pattern is apparent with all services but is most noticeable with journeys to the hospital - car use is 33 percentage points lower in the most deprived decile when compared with the least deprived.

Table 6 Car usage[1] in accessing key services by ward deprivation decile

England *Percentages*

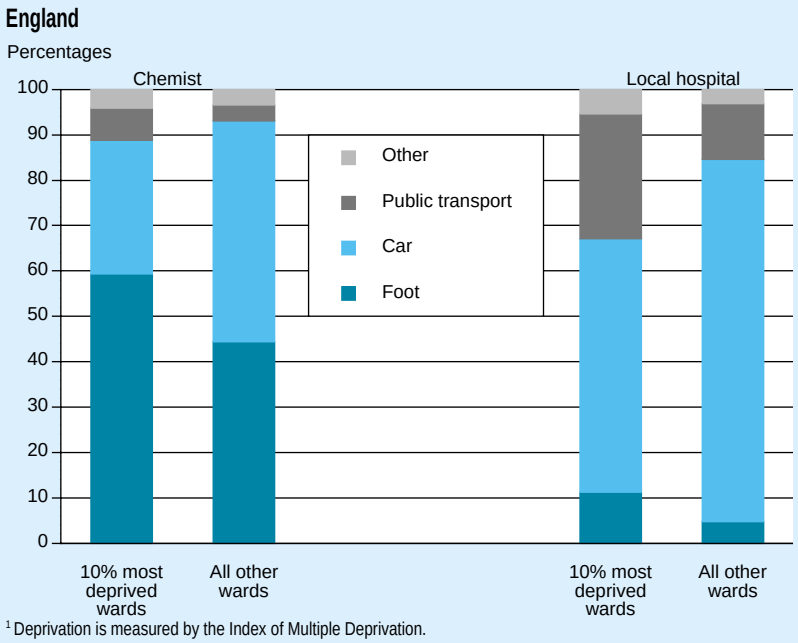
	Ward decile by Index of Multiple Deprivation (all domains)[2]										
	1 (least deprived)	2	3	4	5	6	7	8	9	10 (most deprived)	All
GP	*67*	*62*	*63*	*62*	*64*	*54*	*56*	*56*	*49*	*39*	*56*
Post office	*47*	*39*	*41*	*42*	*41*	*39*	*39*	*34*	*31*	*24*	*36*
Main food shopping	*89*	*87*	*89*	*88*	*84*	*83*	*75*	*75*	*71*	*59*	*78*
Local hospital	*89*	*86*	*84*	*86*	*85*	*82*	*76*	*72*	*68*	*56*	*76*
Chemist	*55*	*51*	*57*	*55*	*55*	*46*	*46*	*45*	*37*	*29*	*46*
Percentage of households with access to a car	*93*	*89*	*91*	*91*	*88*	*88*	*84*	*78*	*72*	*61*	*81*

[1] Respondents reporting that car is the usual mode of transport to access services
[2] Wards are ranked according to their overall index and divided into ten equal-sized groups (deciles)

Source: NS Omnibus, January and March, 2000 – 2001

Figure 3 compares the modes of transport used to access services by people living in households in the 10 per cent most deprived wards and those in other areas. It illustrates travel to the chemist and travel to the local hospital. Greater use is made of public transport and travel by foot in the most deprived areas. 59 per cent of residents in the most deprived wards walk to the chemist compared with 44 per cent in other areas. For the hospital, the corresponding figures for public transport use are 28 per cent and 12 per cent. These differences can be partly explained by varying levels of household access to a car. However, they may also reflect the greater concentration of services, and better provision of public transport alternatives in large towns and cities where most deprived wards are found. There is evidence to support this from the rankings of wards based solely on the access to services 'domain' of the IMD. An analysis of the distribution of journey times also shows no significant differences between the most deprived wards and other areas.

Figure 3
Usual mode of transport to services, by level of deprivation[1]



[1] Deprivation is measured by the Index of Multiple Deprivation.

Source: NS Omnibus, January and March, 2000 – 2001

Perceptions of difficulty

Which services do people have difficulty accessing?

An important objective of this report is to examine people's perception of difficulty in accessing services. As Table 7 shows, the majority of adults do not report difficulty getting to any of the services. The services which are easiest to access are those which are closest in terms of journey time - over three-quarters of adults found it very easy to access the post office, compared with fewer than one-third of adults for the hospital. Whilst 15 per cent of people found access to a hospital fairly difficult and 5 per cent very difficult, no more than 6 per cent of people found it difficult at all to access the other services.

For the more detailed analysis that follows, the answers for 'very' and 'fairly' difficult have been merged into a single 'difficult' category and the same has been done for the 'very' and 'fairly' easy answers.

Table 7 Extent of perceived difficulty[1] in getting to services

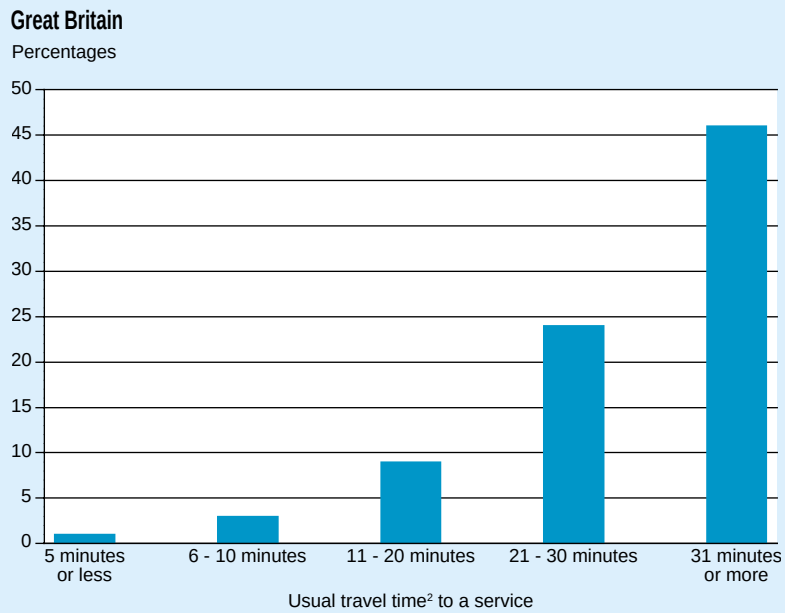
Great Britain *Percentages*

	Very easy	Fairly easy	Fairly difficult	Very difficult	All journeys
GP	*66*	*29*	*4*	*1*	*100*
Post office	*77*	*20*	*2*	*1*	*100*
Main food shopping	*51*	*42*	*5*	*1*	*100*
Local hospital	*30*	*50*	*15*	*5*	*100*
Chemist	*69*	*28*	*3*	*1*	*100*

1 Respondents finding service fairly or very difficult to access

Source: NS Omnibus, January and March, 2000 – 2001

Figure 4
Extent of perceived difficulty[1] in getting to services, by travel time



[1] Respondents finding service fairly or very difficult to access
[2] Average time over all valid services

Source: NS Omnibus, January and March, 2001

Table 8 **Difficulty[1] in getting to services, by household car ownership**

Great Britain *Percentages*

	Household access to a car	No household access to a car
GP	*4*	*11*
Post office	*2*	*5*
Main food shopping	*5*	*13*
Local hospital	*17*	*31*
Chemist	*2*	*6*
At least one service	21	38

[1] Respondents finding service fairly or very difficult to access

Source: NS Omnibus, January and March, 2000 – 2001

Table 9 **Perceived difficulty[1] in getting to services, by gender**

Great Britain *Percentages*

	Men	Women	All
GP	*4*	*6*	*5*
Post office	*2*	*3*	*2*
Main food shopping	*5*	*8*	*6*
Local hospital	*18*	*21*	*20*
Chemist	*3*	*4*	*3*
At least one service	*22*	*26*	*24*

[1] Respondents finding service fairly or very difficult to access

Source: NS Omnibus, January and March, 2000 – 2001

The connection between travel time and difficulty

Figure 4 illustrates the relationship between journey time and perception of difficulty in getting to services. The chart shows a clear link between real difficulty (in terms of time taken) and perceived difficulty travelling to services, with only one per cent of people finding journeys of 5 minutes or less difficult, compared with 46 per cent for journeys over 30 minutes. This finding goes some way to explaining why travel to hospital is found to be significantly more difficult than the other services - travel times tend to be longer.

The effect of household car ownership

Living in a household with access to a car has an impact on perceived difficulty in getting to services. Around two out of ten people living in households with a car say that they have difficulty getting to at least one key service, compared with double this proportion living in households with no car (Table 8). Even these results may understate the impact of car availability on perceptions of difficulty, as there will be people living in car-owning households who do not have access to the car because they are not the main driver or they do not have a driving licence, for instance.

Gender differences

Women report more difficulty in accessing services than men (Table 9). The differences are small but statistically significant for each of the five services. The differences can largely be explained by the fact that women use the car less and have longer journey times. More advanced analysis shows that gender differences are not significant once these and other socio-economic factors are taken into consideration.

Age differences

Perceptions of difficulty change with age (Figure 5 overleaf). Service-users at each end of the age range report more difficulty than others, although difficulty is most pronounced for those over 75. 36 per cent of people aged 75 and over report difficulty accessing at least one service, compared with 21 per cent of those aged between 45 and 54. At the other end of the age

range, 28 per cent of young people aged between 16 and 24 report difficulty. A similar pattern is observed when looking at individual services, such as the hospital and the GP. Some of the variation by age can be explained by other factors, such as household car availability and travel time. Figure 2 shows that young people and the elderly make relatively less use of the car. However, there remain significant differences in perceptions of difficulty between most age groups even when differences in household car availability, travel time and other factors are allowed for.

Area differences

Table 10 summarises the proportion of people who perceive difficulty in accessing services, according to where they live, comparing urban and rural dwellers, and people living in the most deprived wards and other wards. Overall, there is little difference between rural and urban areas in how service-users view their journeys. The only significant differences are for the post office and the chemist which are slightly more difficult to access in rural areas.

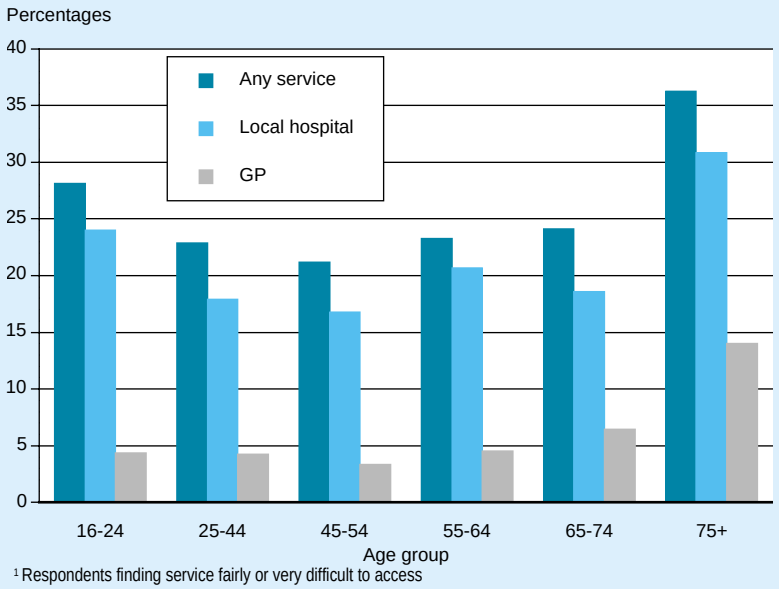
The table also shows that a significantly greater proportion of adults living in the most deprived wards have difficulty in accessing at least one service. There are also small but significantly greater proportions of people living in these wards who have difficulty accessing their GP and main food outlet. More advanced analysis shows that these findings are explained by lower rates of car ownership and other socio-economic factors.

Discussion

This report has examined the difficulties, both perceived and actual (as measured by journey time) in travelling to a selection of key services. It has found that the majority of people do not have difficulty in accessing any of the services examined. The most difficult service to access was found to be the hospital which 20 per cent of adults said that they found difficult to access. No more than 6 per cent of people reported difficulty in accessing the other services. These results are broadly consistent with findings from other studies.[15,16]

Figure 5
Extent of perceived difficulty[1] in getting to services, by age group

Great Britain



[1] Respondents finding service fairly or very difficult to access

Source: NS Omnibus, January and March, 2000 – 2001

Table 10 Extent of perceived difficulty[1] in getting to services, by type of area

Great Britain *Percentages*

	Settlement size		Index of Deprivation[3]	
	Rural areas[2]	Urban areas	10% most deprived wards	All other wards
GP	*6*	*5*	*8*	*5*
Post office	*4*	*2*	*3*	*2*
Main food shopping	*7*	*6*	*10*	*6*
Local hospital	*22*	*19*	*19*	*20*
Chemist	*6*	*3*	*3*	*3*
At least one service	*26*	*24*	*29*	*24*

[1] Respondents finding service fairly or very difficult to access
[2] Defined as living in settlements of fewer than 3,000 people
[3] England only

Source: NS Omnibus, January and March, 2000 – 2001

Other research suggests that the proportion reporting difficulty in accessing services may be underestimates due to self-censorship. The Poverty and Social Exclusion (PSE) Survey[11] asked individuals about the availability of a range of public and private services, and reasons for a lack of availability, including affordability, if appropriate. The authors observe that '...some people prefer to say that they do not want services than to admit that they cannot afford them.'[20] In the same way, we may expect that some respondents to the NS Omnibus module declined to say they experience difficulty getting to key services.

There may be several objective and subjective reasons why somebody finds it difficult to get to a service (proximity of service, income, transport availability, opening hours). Although the reasons are not clear, and were not explicitly asked for in the survey, it is possible to draw some conclusions. Proximity of the service has a clear influence on perceptions of difficulty. The services with the shortest travel times to access, such as the post office and the chemist, have the highest proportion of people reporting access to be very easy. Household car availability is also an important factor – nearly twice as many adults living in households without access to a car report difficulty, compared with adults living in households with cars.

These factors also go some way towards explaining the relative difficulties experienced in accessing services by the four specific groups of people examined in this report: women, the elderly, people in rural areas and people living in deprived areas. The results show that slightly more women experience difficulty accessing services than men. However, detailed analysis shows that these differences disappear once differences in journey times, age of respondents, and other socio-economic factors are taken into account. Previous research[6,17] has argued that women have unequal access to household resources (such as a car) and this may be an important factor in explaining why their journey times are longer than men's.

Relatively lower access to, and use of, a car may partly explain why younger people aged 16 to 24 and the elderly in particular, experience more difficulty accessing services. For instance, only one-third of people aged 70 and over held a full driving licence during 1997/99.[18] However, there remain significant differences between the age groups in their perceptions of difficulty even after controlling for varying levels of household car availability and other factors. The reasons for this are not clear but may reflect differences in personal mobility as well as individual (as opposed to household) access to cars.

Despite longer journey times to most services (the exception being the post office), the finding that people in rural areas experience only slightly more difficulty than others may be surprising. There is much concern about the availability of services in rural areas.[9] The Rural Services Survey (2000) found that the number of local village shops in rural areas is declining.[19] It also discovered that the largest decline in the proportion of households within 2 kilometres of a post office was in predominantly rural areas. The fact that perceptions of difficulty in rural areas are not greater is likely to be due to higher levels of car ownership and the significantly greater use made of cars in these areas.

The analysis shows no significant differences in journey times between people living in the most deprived wards and other areas, but does find a significantly greater proportion of people reporting difficulty in accessing at least one service. This is likely to reflect their greater reliance on alternative forms of transport to the car.

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Technical annex

Data sources and methods

The results presented in this article were obtained from questions commissioned for the National Statistics (NS) Omnibus survey in January and March, 2000 and 2001. The survey asks a variety of questions of a representative sample of adults, aged 16 and above, in Great Britain (GB). The survey is run in eight months of the year and modules can be commissioned in one or more months. One adult is interviewed in each household.

The overall response rate for the modules commissioned for this study was 64 per cent, giving a total of 6,991 respondents. Respondents were asked if they used the service, how they travelled there and whether or not they found it difficult to travel there. An additional question on the actual distance (in time) travelled to each service was included in 2001. The survey data for the two separate years were merged; the larger sample size obtained by combining the samples helped to improve the precision of the results.

Testing the statistical significance of the results

The results presented in this report are subject to sampling error. This is the error that arises because the estimate is based on a survey rather than a full census of the population. The results obtained for any single sample may, by chance, vary from the true values for the population but the variation would be expected to average to zero over a number of repeats of the survey. The amount of variation depends on both the size of the sample and the sample design.

It is possible to use standard statistical techniques to test whether the relationships presented in this report are "statistically significant". By this, it is meant that the probability that the relationship observed is not down to chance, arising from the particular sample of individuals being surveyed, is at least 95 per cent. This was the threshold used to test the significance of the relationships presented in the report - for instance, to check the statistical significance of the finding in Table 9 that women are more likely than men to have difficulty in accessing services. It is also possible to use more advanced techniques to test whether, for instance, women's greater difficulty in accessing services can be explained by other factors, such as whether they have lower access to a car, or their journey times are longer. Logistic regression was the technique used for this purpose. The results of these logistic regressions are not shown in this report because, although they highlighted some significant factors, the overall fit of the models was relatively poor.

Merging of the data sets

The questions asked in the two sets of surveys conducted in January and March 2000 and 2001 were very similar and most of the analyses presented in this report are based on the combined data (the exception is analysis by usual travel time which was asked only in the 2001 survey). However, before merging the datasets, statistical tests were used to check that there were no statistically significant differences between the samples. This was done using the chi square technique. The tests that were done compared the results from the key questions and some major classificatory variables (gender, region, age and car ownership). At the 95 per cent confidence level, there was no significant differences between findings in the two years.