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Key Findings

- The study presented here is a re-examination of published data on wheelchair housing. Different approaches to estimating the need for wheelchair dwellings have resulted in widely varying conclusions. Morris (1988) quotes the Department of the Environment as estimating the need in the late 1970s at 61,420 dwellings. Ounstead (1987) estimated that some 150,000 purpose built or adapted dwellings were needed, whereas the Housing Corporation (1991) suggested that there was 'a notable requirement for new purpose built wheelchair accommodation'. In what was claimed to be the most thorough research to date in its field, funded by the DoE, McCafferty (1995) claimed that the shortfall in England was 12,988 dwellings.
- There are logical errors in McCafferty's calculations which compromise his estimate of need. Recalculating McCafferty's data without the errors, we find the estimate of need rises to 40,658 dwellings, which represents a 213% (27,670) increase on his stated estimate of 12,988.
- McCafferty used data from the DoE's annual Housing Investment Programme returns of local housing authorities. In addition to examining such HIP data, we have also used housing construction statistics - although we recognise that the two are not strictly comparable. Comparing the count of dwellings for disabled people derived from the HIP data with that of the construction statistics reveals a significant difference.
- Our study examines in detail several problems with McCafferty's study (1995). It is claimed that the figures for mobility dwellings are derived from the HIP data, but it should be noted that they are specifically excluded from the relevant count in that source. We have therefore assumed that McCafferty's category of 'mobility housing/housing adapted for disabled people' is in fact the 'other dwellings for disabled people' category in the HIP data, as it is the only additional category of adapted dwellings for non-elderly disabled people.
- McCafferty makes it appear that dwellings for disabled people rose by 19,146 between 1990 and 1993 and then dropped by 9,106 in the next two years! As this is unlikely to have actually occurred we can only conclude that either McCafferty has included additional dwellings from another category in his tables or the reliability of the HIP1 data is extremely low due to erratic differences in the returns.
- Local Authorities were far more significant than Housing Associations in the provision of specialist housing until the 1990s when the position reversed. The rate of 'new build' had fallen, with Housing Associations only now achieving their 1970 levels. The dramatic fall in 'new build' at the beginning of the 1980s coincides with the Conservative governments overall reduction in public housing.
- The figures for wheelchair 'dwellings started' in 1994/95 can be expected to indicate future trends. Overall, they show that Housing Associations are consistent in their rate of building during the 1990s whilst local authorities have ceased building altogether.
- Our report shows deficiencies in knowledge concerning specialist housing need relating to both the official housing data and analyses of it.
- At the moment we have a meaningless national estimate of dwellings for disabled people. Basically, it is statistically unreliable, but in addition it is neither applicable to local circumstances, nor related to the needs of actual service users.

Background

The provision of 'special needs' housing forms part of a more general policy of care in the community which has been pursued with increasing vigour since the NHS and Community Care Act, 1990. However the value and success of the policy in application to housing provision has long been in question (for example Clapham and Smith, 1990). Under the general heading of 'special needs' housing there are a whole raft of provisions for people with learning difficulties, mental health problems, homeless and disabled people. Within the latter group come the housing needs of wheelchair users: the subject of the current report. Responses to their housing needs within the context of public policy have mainly taken the form of providing social rented housing through local authorities or housing associations.

Whilst the community care project pushes forward towards ever more independent living for all service user groups, local authority social rented housing has undergone its own transformation, from actual provider of homes to being an 'enabler' working with other organisations. All local housing authorities have lost stock via the Right to Buy and over 50 by sale or transfer to housing associations. It is not too much of an exaggeration to claim that the government wished to see the housing association movement shoulder most of the task of providing 'special needs' housing. However, changes in the Housing Association Grant have had radical implications for 'special needs' housing provision since the flat rate provision of special needs management allowance ceased to exist (Mountford-Smith, 1994). In effect, these changes put the extreme funding arrangements for 'special needs' housing on a much less firm footing. Schemes can only proceed if future funding is known. In effect, the rug of guaranteed funding was pulled from under the providers feet.

This report concerns the objective housing need of wheelchair users. We are examining the available data and analysis which purports to show how many wheelchair dwellings are needed, however we are aware that this discussion is also located in a complex set of highly politicised debates concerning 'independence' and 'disability' as well as policy instruments and appropriate provider institutions.

'Special needs' housing for disabled people remains under researched with regard to the extent of provision and need. A RADAR working party commented that statistical data on the housing stock of local authorities was 'vague, contradictory and missing' (RADAR, 1992). Most Authorities were seen as over reliant on transfer and waiting lists to identify need and even then, their focus tended to be on medical assessment while social need was always a discretionary matter. Robinson (1991, p.26) suggests that

a focus on disabled peoples' medical conditions and consequent denial of all the other roles we play in our lives has devastating consequences for the disabled individual and her/his family.

One of the clearest needs identified by Sapey (1995) was for an improvement in the adaptation of homes for wheelchair use. The way forward in this respect should include building new homes to an adaptable standard. There is evidence that the additional cost of building to such standards can be minimal and that the potential savings could be as much as 60% when it comes to adapting the property (Dean, 1987; Nationale Woningraad, 1989). More recently the Lifetime Homes campaign (Bonnett, 1996; Cobbold, 1997) has reinforced the validity of constructing houses to adaptable standards through cost analysis of such schemes. While this will not benefit people in immediate need, it is important in terms of preventing the further disablement of people in the future.

It is important to understand that while many people are in a similar situation (they use a wheelchair), their preferred solutions are personal and particular to them. This obvious but somewhat neglected observation is important because of the difficulty of welfare agencies in providing suitable personal solutions not only reinforces some people's dependency, but could cause them to have to move to communities to which they do not choose to belong.

Why is it important to have reliable estimates of housing need for disabled people - wheelchair users in particular? Without reliable estimates it could be argued our provisions are akin to unfocused charity or merely respond unsystematically to demand. It could be considered that the latter

situation would be met by the free market, but we know that, in the main, because the service users are in the lowest income groups and the cost of provision is high, the free market cannot meet expressed need.

There have been several approaches to estimating the need for wheelchair dwellings resulting in widely varying conclusions. Morris (1988) quotes the Department of the Environment in estimating the need in the late 1970s as 61,420. Ounstead (1987) estimated that some 150,00 purpose built or adapted dwellings were needed. More recently, the Housing Corporation (1991) suggested that with 330,000 wheelchair users who were not living in suitable dwellings in the social housing sector and while acknowledging that the private sector had a significant role, felt that ‘a notable requirement for new purpose built wheelchair accommodation’ remained. The most recent estimate from McCafferty (1995) was derived from a survey of 850 non-elderly disabled adults to establish the proportion who would choose to use the social housing sector. McCafferty estimated that the shortfall in England was 12,988 dwellings, just less than half the stock at that time.

McCafferty’s estimate was the subject of a question in the House of Lords on the 17th January 1995 by Lord Swinfen to seek an explanation of the difference between that report ‘Living Independently’ and the greater level suggested by the Housing Corporation, (1991) in their report ‘Housing for People with Disabilities’. The Government’s reply, given by Viscount Ullswater suggested that the data from the reports was not comparable. In fact what matters is the starting point one takes in attempting to estimate housing need. The House of Lord’s Question further indicates the lack of clear statistical information concerning the need for housing for disabled people.

Objectives

Our objectives were to examine and update the reported information on the provision of housing for wheelchair users and to analyse the methodology of these reports in order that we could evaluate the reliability of their estimates of need.

Methodology

As we have observed, there are a range of estimations of need for wheelchair dwellings in the social housing sector that are considerably different. This arises in the main because of the methodology they employ and the sources of data on which they rely. Our report analyses the range of data that have been used by others. In particular we look at the reported provision of wheelchair housing in the 1995 Department of Environment’s Housing Investment Programme (HIP1) returns from all local authorities and compare this with the Housing Construction Statistics from 1970 to 1995. Earlier HIP1 data was used in two of the reports we have studied (Housing Corporation, 1991; McCafferty, 1995) while the Housing Construction Statistics were used by Morris (1988). We have included additional data from the 1991 Census (updated for new Unitary Authorities) and Aldersea’s (1996) survey of Disablement Services Centres in order to compare the provision of wheelchair dwellings across authorities. The latter of these two datasets has not been used within previous studies on housing need.

Consequently, our approach has been to undertake a quantitative analysis of data from a number of sources in order to estimate the actual provision of specialist wheelchair housing for disabled people in England and to explore in more depth the extent to which this meets the demand for such housing amongst people who use wheelchairs. Given the varying levels of reliability of the data used, we must caution that the analysis itself will also have its limitations. However, we report the reasons for this caution and are confident that our study does provide a valid starting point for further research into specialist housing.

Data Sources

The Housing Construction Statistics provide annual figures for the numbers of wheelchair and mobility dwellings¹ that have been started and completed by local authorities (including New Towns) and housing associations in England. The HIP1 data is the summary of the Housing Investment Programme returns from all housing authorities in England (358) for the 1st April 1995. In particular for our purposes, we have used the responses to question 2b, which covers ‘dwellings for wheelchair disabled’² and ‘other dwellings for the disabled’³. It should be noted that the latter of these two categories is not of a wheelchair standard. There is no specific return for ‘mobility dwellings’ in the HIP1 data and they are excluded from the two categories above as they can be occupied by non-disabled tenants.

HIP1 and Housing Construction Statistics

Prior to the Housing Corporation’s (1991) use of the HIP1 data, commentators on the provision of specialist housing for disabled people, in particular Morris (1988) and Barnes (1991), have relied on the use of the Housing Construction Statistics (HCS) to provide an indicator of the level of provision in England. While this does provide a useful indication of the level of new build activity in these sectors, we are sceptical of its value in providing a reliable source for total provision because of the marked difference with the HIP1 data (see Table 1 below).

Table 1: Comparison of Dwellings for Disabled People in the Social Housing Sector in England according to Source.

Year	Local Authority Wheelchair Dwellings	Housing Association Wheelchair Dwellings	Other Public Sector Wheelchair Dwellings	Local Authority Mobility Dwellings	Housing Association Mobility Dwellings	Local Authority Other Dwellings for the Disabled	Housing Association Other Dwellings for the Disabled	Other Public Sector Other Dwellings for the Disabled
1995 (HCS)	7,350	2,031		32,678	6,773			
1995 (HIP1)	18,901	10,467	564			48,431	8,238	599

Sources: Housing Construction Statistics 1970 - 1995 and Housing Investment Programme 1995.

The first point to note from Table 1 is that the data is not directly comparable in that it counts different *types* of dwellings. The Housing Construction Statistics give data for wheelchair and mobility dwellings while the Housing Investment Programme gives data for wheelchair dwellings and ‘*other dwellings for the disabled*’. Wheelchair dwellings can be compared and the HIP1 data shows a substantial increase over what can be accounted for from the HCS figures. The total specialised dwellings that can be counted for 1995 from the HCS data is 48,832 - i.e. ‘wheelchair dwellings’ 9,381 and ‘mobility dwellings’ 39,451. However, the HIP1 data reports a total of 87,200 specialised dwellings but does not include ‘mobility dwellings’ - i.e. ‘wheelchair dwellings’ 29,932 and ‘other dwellings for the disabled’ 57,268. It would not however be reliable to combine these figures as there is insufficient control over what is included within the HIP1 data.

There is a problem however in using these figures together. As the notes to the ‘other dwellings’ category in the HIP1 data indicate, mobility dwellings are excluded as they can be occupied by non-disabled people. However these dwellings could have been improved and redesignated to either of the categories in HIP1. Therefore the mobility dwellings may not be additional to the total in HIP1. Only 31.3% of wheelchair dwellings can be accounted for by new build, suggesting that the remainder needs to be examined: it may contain refurbishments completed to a satisfactory standard but may also include numbers of adaptations which do not come close to meeting full wheelchair standards (DoE HDD 2/74).

There is an issue of reliability concerning the HIP1 data. Generally the rate of returns in this data set was high for the social housing sector. Only five Authorities failed to return a figure for housing

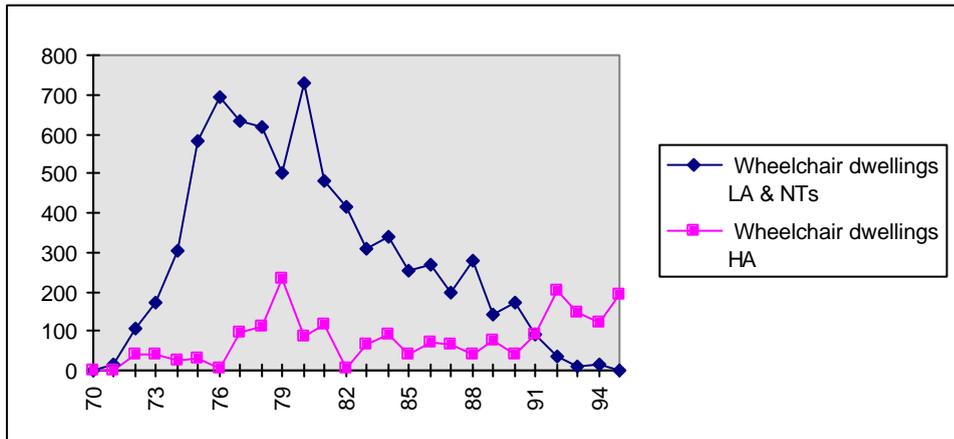
association wheelchair dwellings - Hinkley & Bosworth, Uttlesford, Epsom & Ewell, Castle Point and Rugby, while only the latter did not provide a return for local authorities.

The 564 wheelchair dwellings in the 'Other Public Sector' category were spread between only 44 authorities. A further 240 Authorities returned nil for this category leaving 74 with no return. The exact composition of this sector is unclear, but nearly half of these dwellings, 265 (47%) are in two Authorities - Blyth Valley and Wycombe.

Given the high rate of return for wheelchair dwellings by local authorities and housing associations, we ought to be confident in the figures, but as one authority told us, the mechanisms for estimating or 'knowing' the numbers of such dwellings are fraught with problems⁴.

Graph 1 below shows the number of completions each year of wheelchair dwellings from 1970 to 1995. It is clear that the local authorities have been far more significant in the provision of specialist housing up until the 1990s when the position reversed. However, the rate of new build has fallen with housing associations just beginning to achieve the levels they had previously been at in the late 1970s. The dramatic fall at the beginning of the 1980s coincides with the Conservative government's reduction in public housing spending and the consequences can be seen quite clearly.

Graph 1: Completion of Wheelchair Dwellings in England, 1970-95.

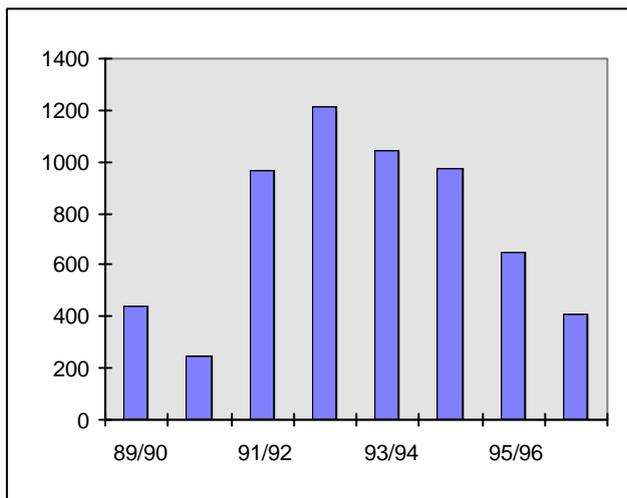


Source: Housing Construction Statistics 1970 - 1995.

The figures for dwellings started in 1994/95 can be expected to indicate how these trends might continue. In relation to wheelchair dwellings they show that housing associations are continuing at a similar level of building as they were during the 1990s while local authorities have ceased building altogether (just one dwelling in this two year period). However, the Housing Corporation (1997) data on the number of units approved for wheelchair users shows that this pattern is not continuing (see Graph 2 overleaf).

These figures relate to approvals which would precede the starting of building and indicate the pattern of completions over the subsequent years, in this case probably up to the end of the century. However, spending on wheelchair units as a proportion of total Housing Corporation spending is being maintained or even increased with the 1996/7 figure representing 2.6% of total units approved in comparison with the high point in 1992/3 representing 2.0% even increased as a proportion of the Housing Corporations programme (albeit now reduced by swingeing cuts).

Graph 2: Number of Units Approved for Wheelchair Users by the Housing Corporation.



Source: Housing Corporation (1997)

Current Provision of Specialised Housing

The Housing Corporation (1991) and McCafferty (1995) have both made use of HIP1 data in order to help estimate the extent of and need for wheelchair housing on a regional basis. We have used more recent figures to update the information they both provide; to examine trends within this sector since 1990; and to provide the basis of our own estimates of need. Both reports include figures for the social housing sector, while the Housing Corporation alone includes a figure for the private sector.

Table 2 below shows these figures and our own figures from the 1995 HIP1 data.

Table 2: Total Housing Provision for Disabled People in England, 1990 – 1995

Wheelchair Dwellings					
Year	Local Authority	Housing Association	Other Public Sector	Private Sector	Total
1990	14,487	6,900	834	8,353	30,574
1993	18,898	8,291	473		
1995	18,901	10,467	564	14,281	44,213
Other Dwellings for the Disabled					
1990	37,066	1,118	3	28,363	66,886
1993	56,212	5,780	146		
1995	47,106	7,693	599	42,417	97,815

Source: HIP1 1990 [Adapted from Table 10, Housing Corporation (1991)], HIP1 1993 [Adapted from Table 2.4, McCafferty (1995)], HIP1 1995.

The data presented by the Housing Corporation remains in the format of the HIP1 data and allows for a simpler comparison than McCafferty's which has been adapted. It should also be noted that although McCafferty presents figures for mobility dwellings, he says that he has in fact derived these from the HIP1 data from which they are specifically excluded. He suggests;

it is extremely difficult . . . for local authorities to separate mobility housing from all housing specially designed or adapted for use by disabled people in their stock. It is highly likely, therefore, that most, if not all, of stock built to mobility standard is still included in HIP figures. (McCafferty, 1995:34)

We have therefore assumed that McCafferty's '*mobility housing/housing adapted for disabled people*' is in fact the '*other dwellings for disabled people*' category in the HIP1 data as this is the only additional category of adapted dwellings for non elderly disabled people. However, it would appear from his data that the numbers of such dwellings rose by 19,146 between 1990 and 1993 and then dropped by 9,106 in the next two years. As this is unlikely to have actually occurred, there are two possible explanations. Either McCafferty has included additional dwellings from another category in his tables or the reliability of the HIP1 data is extremely low due to erratic differences in the returns.

The figures for wheelchair dwellings also present some problems but not on the same scale. While we need to bear in mind the reliability issues relating to the definition of wheelchair dwellings raised earlier, it should be noted from the HIP1 data that within the local authority sector there were just three dwellings built between 1993 and 1995. The Housing Construction Statistics for this period showed 22 wheelchair dwellings as having been completed by local authorities, indicative of inaccuracy in these figures

Regional and Authority Variations

Both the Housing Corporation (1991) and McCafferty (1995) make use of the HIP1 data on a regional basis, partly because it corresponds with the ways in which the funding is distributed. From the point of view of the users of these services we consider a regional analysis to be pointless. First, comparing the HIP1 data from earlier years in terms of regions is difficult because of the boundary changes. Second, there is a limit to what can be concluded from a regional analysis because the responsibility for enabling the provision of housing actually lies at the local housing authority level. When people are seeking housing they do so within their own locality, not only for the pragmatic reasons that they have already decided where they wish to live, but also because of the arrangement of housing responsibilities which fall to the housing authority within which they are domiciled. Therefore it may be of little value to know that your region has a higher rate of provision than the rest of the country when your immediate area is lower. Furthermore it is unlikely that people living in an area with low provision will be prepared to move anywhere within the ten standard regions for England, rather they would probably first approach an adjacent authority.

The level of geographical aggregation which is felt by administrators to be both systematic and of some value in analysis are the counties, and metropolitan authorities (grouped in their old metropolitan counties), and greater London. Although the more valuable aggregation would be one determined by the local housing authorities on the basis of local advantage, we are obviously unable to do that task at arms-length. Attempts to present data in aggregations other than by local housing authorities therefore will fail to materialise as usable information for activists and professionals alike.

It is possible to examine the level of provision of wheelchair dwellings in each of the 358 housing authorities from the HIP1 data, but in itself that would be of little practical value. We are able to see the distribution of current provision and to identify those authorities that are below or above the mean provision in relation to their size and population. However this is not an indicator of performance unless it is related to the level of need for social rented housing built to a wheelchair standard.

Allocation of Wheelchair Dwellings

One other possible indicator of performance comes from the CORE data that is collected through returns from housing associations to the Housing Corporation. In a recent analysis of the lettings of wheelchair dwellings undertaken by the National Housing Federation for NATWHAG, the figures indicated that in 1996 as few as 23.8% of allocations of housing association wheelchair dwellings in England were to wheelchair users. At the same time 54.5% of all new tenants who were wheelchair users were allocated other types of dwellings. This may be a reflection of the mismatch between the provision of housing and the needs of disabled people (Morris, 1988) or the result of the inadequate assessment and allocation systems in local authorities (RADAR, 1992). As the total number of wheelchair dwellings reported in the CORE data for 1995 is 6,246 which represents 59.7% of the total housing association stock of such dwellings in the HIP1 returns, these allocation rates probably reflect the wider picture.

Estimating the Need for Wheelchair Dwellings in the Social Housing Sector

In his research which was commissioned by the Department of the Environment, McCafferty (1995) offers a comprehensive attempt to estimate the need for wheelchair dwellings. Like Morris (1988) before him, he focuses his study on the needs of 'non-elderly' disabled people. Although the definition of wheelchair dwellings is concerned with the physical dimensions of the property, there is an administrative distinction made between those for younger and older people. The HIP1 criteria includes dwellings for older people unless it is sheltered accommodation. The Disabled Persons Accommodation Agency (1995) and H.O.M.E.S. (1995) separate people by age by arguing that accommodation for older people is unsuitable for younger people.

Although we feel obliged to follow these other writers in making an estimation based on the group of wheelchair users under 60 years of age, we would wish to highlight the need for further study of what appears to be an arbitrary division.

As we have noted earlier there have been several approaches to estimating the need for wheelchair dwellings which have resulted in widely varying conclusions. Morris (1988) quotes the Department of the Environment as estimating the need in the late 1970s as 61,420; Ounstead (1987) estimated that some 150,000 purpose built or adapted dwellings were needed; the Housing Corporation (1991) suggested that there was 'a notable requirement for new purpose built wheelchair accommodation' and; McCafferty (1995) claimed that the shortfall in England was 12,988 dwellings.

In the reports by Morris and Ounstead there is insufficient information about the methodology to replicate their figures and the Housing Corporation are too imprecise in their estimate - rather than giving a figure they merely state that the need is 'notable'. However, it is possible using the Housing Construction Statistics to make a guess at the number of dwellings that were available when the DoE came up with their estimate of 61,420 in the late 70s. Next we deduct the dwellings that we know to have been available in 1995 and to multiply the remainder by the factor of increase in wheelchair users.

In the late 1970s approximately 4,000 wheelchair dwellings had been completed in the social housing sector, since when the number has increased by almost 26,000. This would reduce the estimated need to about 40,000. However, in 1986 the OPCS Disability Surveys estimated a wheelchair population for England of 360,000 (Martin et al., 1989) which we know to have increased to at least 710,000 (Aldersea, 1996); a factor of 1.97. Therefore, the original estimate of need would rise to 121,133 dwellings, less the 26,000 that had been built or adapted for wheelchair use since the late 1970s. This would leave a shortfall of approximately 95,000 dwellings. **We do not however recommend this method as there are too many unreliable factors**, but offer it as evidence of the need for better data estimation.

The last of the estimates we have mentioned is McCafferty's at 12,988 dwellings which was the subject of the question in the House of Lords. The Government reply, given by Viscount Ullswater was one of confidence in McCafferty's estimation of need. We have some theoretical concerns about the Townsend-Clackmannan Scale of Dependency used by McCafferty as part of the process of determining the need for different types of accommodation, we would accept that at the present time, this does represent the only real attempt to put a figure on the need for wheelchair dwellings. There are some fundamental methodological issues that ought to be questioned.

The first problem is basically one of mathematics. In chapter 8 McCafferty describes his 'allocation model' used to estimate the proportion of the population of disabled people who are in need of wheelchair dwellings. The model involves a number of stages and 'has approximately twenty basic needs assessment criteria'. The first twelve of these apply only to his elderly sample. The non-elderly disabled people are put through what is described as a filter of eight assessment criteria. The criteria for wheelchair housing are that:

- a) *the household is not living in ground floor accommodation; or,*

- b) *the household is living in ground floor accommodation but the building is in a poor state of repair; and -*
 - c) *if the household Clackmannan score is G (critical level - functional), a member of the household is bed-fast or chair-fast or uses a wheelchair to help them perform mobility or domestic tasks, and -*
 - d) *wants to live in accommodation specially-designed for easy access, for example, by someone using a wheelchair.*
- (Adapted from McCafferty, 1995: para. 8.19)

After applying these criteria to his sample he estimates that in:

...households containing non-elderly disabled adults, the allocation model would suggest that 2% of this group nationally have a need for wheelchair housing and just over 3% have a need for mobility housing/housing adapted for disabled people. These figures are, once again, quite low, but reflect the relatively small proportion of the sample that wished to move from their current accommodation or used a wheelchair on a regular basis (McCafferty, 1995:167).

Earlier in the report (Table 2.22 and para. 2.56) McCafferty uses this figure of 2% to estimate the unmet need in relation to wheelchair dwellings. He does this by deducting the existing stock of wheelchair dwellings in the social housing sector from 2% of the estimated population of disabled people between the ages of 16 and 65 years. This however is where an error has occurred for, as we have already seen, the criteria for being considered as being in need of wheelchair accommodation is that the household does **not** live in ground floor accommodation or, if they do, that the building is in a poor state of repair. Therefore to deduct the current stock of wheelchair dwellings is inappropriate and the effect of this error is to drastically reduce the estimate of need.

Using his methodology without this error, we have calculated the actual level of need to be **40,658 dwellings** which represents a 213% (27,670) increase on his stated estimate of 12,988.

Although it is not the concern of our report, it is worth noting that McCafferty employs the same method to the estimation of need for mobility dwellings and the range of dwellings for older people. In terms of mobility dwellings our calculation of the actual unmet need for England should be **69,104 dwellings**, almost 63,000 more than he suggests.

The second issue concerns the validity of a national figure. McCafferty argues that due to the size of his sample of non-elderly disabled people, it would be wrong to do anything more detailed than a national estimate. While we must accept his caution in regard to this, we have already argued that there are good reasons for focusing on the level of housing authorities. So it would be our intention to use this estimate to examine the level of provision in individual authorities. This does give rise to a nominal figure for each of the 358 Authorities which we would argue, while not being accurate enough to be the absolute need in each area, does provide a baseline from which more accurate figures could be calculated on the basis of further local knowledge.

Conclusions

Our studies show that apart from McCafferty's national estimate there have been no other attempts that could claim to have arrived at a figure for the need for wheelchair dwellings. Not only is his report methodologically flawed, it does not employ a means for estimating this need at a local level, which would be necessary if it is to be of value.

Developing a formula for estimating need would involve not only an examination of the social housing sector from the HIP1 data but also a reliable estimate of the numbers of wheelchair users in each area. The data available from the Disablement Services Agency could provide a more reliable starting point for this than national estimates. Furthermore the Classification of Local Authorities into corresponding districts by the Office for National Statistics should be considered as a means of providing a typology of authorities in relation to wheelchair dwellings.

Our study has also revealed large increases in the numbers of wheelchair users both nationally and locally. While the estimate from the 1986 Disability Surveys used by the Housing Corporation (1991) was 360,000, by 1995 it had risen to 710,000 (Aldersea, 1995). While we believe the latter figure to be more accurate, the changes cannot be accounted for through the more obvious explanations, for example: increasing numbers of older people; methods of accounting. In fact the DSC methods of data collection in recent years have changed to counting people rather than wheelchairs making them a more reliable source and if there is any error here, it would be due to people who buy privately rather than use the NHS, and this would lead to an under-estimation of users.

However, the use of a wheelchair does not automatically mean that people require specialised housing. In order to know this it would be necessary to undertake a descriptive survey in a sample of Health Authorities. The outcome would give an indication of the pattern of wheelchair usage and also indicate whether this has an impact on housing need.

What is also apparent is that different sources of data provide drastically different figures for the provision of housing association wheelchair dwellings. In 1995 the Housing Construction Statistics suggest there are 2,031 dwellings while the the HIP1 returns claim there are 10,467. As we have argued this does not affect the unmet need for specialised housing but the issue raised by the analysis of the CORE data does question whether the provision of such housing on the pattern used by housing associations in the past is likely to be effective in meeting that need.

This is the major issue in terms of policy affecting this field of study - whether the solution to the need for wheelchair dwellings lies in building on the pattern established by housing associations so far, or whether the Lifetime Homes development will eventually make this unnecessary. We see this debate as one between short and long term solutions. The other factor we consider to be of importance here is the relationship between the Housing Corporation's funding of specialist dwellings and the individual disabled person.

Research to date suggest a number of deficiencies in the current knowledge concerning specialist housing need and ways of addressing it. There is a pressing need for empirical research which does not attempt a 'final solution' in terms of providing a meaningless national estimate of need, but which instead aids both users and providers to identify and obtain housing.

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Notes

1. Mobility housing can be defined as ordinary housing which, because of design features, is convenient for disabled people. Mobility housing is also meant to be accessible to visitors with disabilities. Mobility housing is intended for people with walking difficulties and for wheelchair users who have some walking ability whilst inside a dwelling.

It will have the following essential features (see Goldsmith 1974 for full details):

1. a ramped or level entrance and flush threshold;
2. a main entrance and internal door no less than 775mm wide and corridors at least 900mm wide;
3. bathroom and toilet at entrance level and;
4. in two storey dwellings, staircases capable of taking a stair lift or space provided capable of taking a chair-lift from ground floor to a bedroom.

Wheelchair housing has the features of mobility housing plus:

1. access from a covered carport or garage, at ground level;
2. door handles, window fastenings, lighting sockets and switches all at waist height (to be usable from a wheelchair);
3. knee spaces under a cooker hob, sink and work surface for ease of preparation of food;
4. bathrooms with knee access to the hand basin; a bath with grab rails and platforms at one end to allow greater convenience of transfer from the wheelchair and space around the toilet for the wheelchair to allow transfer onto the WC;
5. extra space in the bedrooms to allow room for the wheelchair (one at a time);
6. specially strengthened ceilings to support hoists in appropriate rooms.

Wheelchair housing should be located close to all amenities (Goldsmith 1975).

Wheelchair housing is supposed to be 'bespoke', that is entirely tailored to the needs of an individual wheelchair user. Some wheelchair user tenants may prefer a shower to a bath or require modified hoists and rails and so wheelchair housing ought to be able to accommodate such individual preferences. Although a considerable stock of wheelchair dwellings has now been built, it is believed that they should be capable of modification to meet individual user needs - otherwise the 'special' nature of this provision begins to lose its purpose. The DoE advice and professional wisdom indicates that wheelchair housing should be located within an estate which also includes mobility housing, the idea being that wheelchair users will more easily be able to visit their neighbours.

2. HIP 1 Notes to Section A states, 'Wheelchair dwellings are dwellings for people who are totally dependent on wheelchairs which conform to the standards in HDD Occasional paper 2/75. Include wheelchair dwellings also for the elderly unless they are sheltered dwellings. Exclude purpose-designed mobility dwellings adapted to mobility standards as they are suitable for both able bodied and handicapped people.'
3. HIP 1 Notes to Section A states, 'Other dwellings for the disabled include existing dwellings other than mobility dwellings, adapted for occupation by disabled people to include one or more of the following:
 - 7.5 square metres or more of additional floor space
 - an additional bathroom or shower room
 - the installation of a vertical lift.
4. This Authority suggested that if they went by the strict definition of wheelchair standards, they would only have some 8 properties but if they were to say how many dwellings are in practice proving suitable for wheelchair use, it would be about 50. Therefore, although we appear to be dealing with comparable data, there may be a tendency in the HIP1 data to include dwellings which would not qualify for inclusion in the HCS figures.