

Quality & Costs of Residential Supports for People With Learning  
Disabilities

A Comparative Analysis of Quality and Costs in  
Village Communities, Residential Campuses and  
Dispersed Housing Schemes



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# Summary

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- 1 This report provides a summary of selected results from a large-scale research project, commissioned by the Department of Health, whose overall aim was to examine the quality and costs of residential supports provided for people with learning disabilities.
- 2 The main component of the project investigated the characteristics and needs of, supports provided to, and outcomes experienced by 500 people with learning disabilities. The participants were being supported in one of three types of residential provision. These were:
  - 2.1 *village communities* operated by independent sector organisations. None of these services had been developed as a direct result of the retraction and closure of NHS Mental Handicap hospitals;
  - 2.2 *residential campuses* operated by NHS Trusts. All of these services had been developed as a direct result of the closure of NHS hospitals;
  - 2.3 community-based *dispersed housing schemes*.
- 3 The specific aims of the project were to:
  - 3.1 identify the characteristics of the people supported within residential or village communities and community-based dispersed housing schemes for people with learning disabilities;
  - 3.2 identify the relative costs of each type of provision;
  - 3.3 investigate the full service package received by each participant in each type of provision;
  - 3.4 explore the relationship between user characteristics and costs across and within each type of provision;
  - 3.5 identify selected aspects of resource and non-resource inputs, process outcomes and user outcomes associated with each type of provision;
  - 3.6 explore the relationship between user characteristics and selected aspects of resource and non-resource inputs, process outcomes and user outcomes within and across each type of provision.
- 4 This report will provide a comparative analysis of the relative quality and costs of: (1) *village communities*; (2) *residential campuses* and (3) community-based *dispersed housing schemes*. As such, it addresses aims 3.1, 3.2, 3.3 and 3.5 of the overall project.

- 5 Two companion reports examine:
- 5.1 the relative quality and costs of group home and supported living schemes<sup>1</sup>;
  - 5.2 predictors of variation in quality and costs within and across the four service models<sup>2</sup>.
- 6 A second component of the project used detailed behavioural observations to evaluate the daily routines of a sub-sample of 40 people selected on the basis of the severity of their learning disabilities<sup>3</sup>. They included:
- 6.1 20 people who were living in residential campuses;
  - 6.2 20 people who were living in community-based dispersed housing schemes.
- 7 Following consultation, the Irish Department of Health commissioned a parallel project led by Dr Patricia Noonan Walsh of the Centre for Developmental Disabilities at University College Dublin. This project used identical protocols to collect information on 60 people with learning disabilities in two village communities in Ireland and 60 people with learning disabilities in community-based dispersed housing schemes in Ireland. It is expected that a report on the comparative quality and costs of these Irish services will be available in autumn 1999.
- 8 A synopsis of the results of all four detailed reports is available in a brief *Summary Report*<sup>4</sup>.
- 9 Copies of all reports and the instrumentation used in the project are available from Hester Adrian Research Centre, University of Manchester, Oxford Road, Manchester, M13 9PL, UK.

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<sup>1</sup> Emerson, E., Robertson, J., Gregory, N., Hatton, C., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: A Comparative Analysis of Quality and Costs in Group Homes and Supported Living Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>2</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., Netten, A., Walsh, P., Linehan, C., Hillery, J., & Durkan, J. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Predicting Variation in Quality and Costs*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>3</sup> Emerson, E., Robertson, J., Gregory, N., Kessissoglou, S., Hatton, C., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: An Observational Study of Supports Provided to People With Severe Learning Disabilities in Residential Campuses and Dispersed Housing Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>4</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., Netten, A., Walsh, P., Linehan, C., Hillery, J., & Durkan, J. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Summary Report*. Manchester: Hester Adrian Research Centre, University of Manchester.

## Methodology

- 10 Potential services were identified through a process of consultation with RESCARE, ARC (the Association for Residential Care, previously the Association of Residential Communities), the National Development Team, the Community Care Development Centre (King's College, London) and leading figures in the UK supported living movement. The aim of this consultation process was to identify services considered by key informants to be an example of 'good practice' within that particular approach to providing residential support. Of the 23 services nominated, one village community did not reply to our letters and two village communities chose not to participate.
- 11 This process led to the identification of:
  - 11.1 five village communities (three in the UK, two in Ireland);
  - 11.2 five residential campuses operated by NHS Trusts (all based in the UK);
  - 11.3 ten services providing community-based residential supports in dispersed housing schemes (all based in the UK).
- 12 Wherever possible, written informed consent was obtained from individual service users. Care was taken to ensure that users clearly understood the implications of participation and that: (1) they could withdraw their consent at any time; and (2) refusal or withdrawal of consent would have no impact upon the support they received. However, many potential participants were unable to give informed consent due to the severity of their intellectual impairments. In these cases, agreement for participation was obtained from either: (1) the user's independent advocate; or (2) the closest family member who was in regular contact with the person. If the person did not have an advocate and was no longer in contact with their family, agreement to participate was obtained from either the Chief Executive or Medical Director of the provider organisation.
- 13 The information contained within the present report was collected by a combination of postal questionnaire and interview. Details of the procedures are given on pages 6 to 8 of the main text.
  - 13.1 Information about the setting in which people were supported was collected by a combination of interview with the first line manager of the person's care support team and ratings of the architectural features completed by research staff.
  - 13.2 Information about the participating users and the specific support they received was collected by a combination of postal questionnaire and interview with the person's keyworker or other member of the person's care support team who knew them well.
  - 13.3 The views of users were obtained by semi-structured interview.
  - 13.4 The views of parents were obtained by postal questionnaire.
- 14 The overall procedure for data collection was identical for each of the participating services. First, agreement to participate and, for NHS providers, approval from Local Research Ethical Committees, was obtained from the relevant organisations. Second, a sampling frame was drawn up comprising of all adults (age 18+) receiving 24 hour medium to long-term residential support from that organisation (i.e., excluding people receiving respite care or short-term assessment and treatment on a residential basis). From this sampling frame a random sample of 30 potential participants were selected. Third, consent (or agreement) was sought from each potential participant. If this was not obtained, a further potential participant was selected from the sampling frame and

consent/agreement sought. This process was repeated until 30 participants for whom consent/agreement had been obtained were identified for each provider organisation. Fourth, a nominated senior manager within the organisation was provided with a copy of the *Provider Organisation Questionnaire*. This was completed by them in consultation, if necessary, with research staff at the Hester Adrian Research Centre. Fifth, the provider organisation was supplied with 30 copies of postal questionnaires which it distributed to members of direct care staff who knew the participating users well (e.g., the person's keyworker). A timescale was agreed with the participating organisations for the completion and return of these questionnaires to research staff at the Hester Adrian Research Centre. At approximately the same time, the provider organisation sent out postal questionnaires with a covering letter and FREEPOST envelope (addressed to the Hester Adrian Research Centre) to the closest relative of participants. Sixth, research staff visited the service provided for each participant during which time they completed structured interviews with users (wherever possible), members of care staff and clarified any aspects of the postal questionnaires which informants had found problematic. Seventh, research staff from the Centre for the Economics of Mental Health visited the service to obtain cost information from agency accounts.

- 15 To ensure sufficient time for analysis and inclusion of data in the present report, a cut-off point for data collection was set at 23rd October 1998. At this time data had been collected on 560 participants across 20 services (93% of the target sample of 600 participants). These included:
- 15.1 146 users in 5 village communities;
  - 15.2 133 users in 5 residential campuses;
  - 15.3 281 people in 10 dispersed housing schemes.
- 16 Preliminary analysis of the data indicated that the two village communities located in Ireland differed substantially from the three village communities in the UK in terms of: the characteristics of people supported; the nature and costs of the support provided and the outcomes experienced by users. **As a result, data on the two Irish village communities has been excluded from the present report and will be presented in a subsequent report which will compare the quality and costs of village communities and community-based provision in Ireland.** At the time of writing, collection of data in Irish community-based services is nearing completion. It is expected that a draft report on these data will be made available to the Irish and English Departments of Health in the autumn of 1999.
- 17 Thus, analyses in the present report are based on comparisons of:
- 17.1 86 users in 3 village communities;
  - 17.2 133 users in 5 residential campuses;
  - 17.3 281 people in 10 dispersed housing schemes.
- 18 All of these services are provided in the UK.



## Characteristics of Service Users

- 19 On pages 15 to 23 of the main text we examined the differences between village communities, residential campuses and dispersed housing schemes with regard to the characteristics and needs of the people they support. A number of systematic differences between the models were apparent. These are briefly summarised below in Table 1. Those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.
- 20 The results were broadly consistent in indicating that relatively few people with mild or moderate learning disabilities were supported in residential campuses. This observation is consistent with: (1) the organisational function of such services in providing ‘continuing care’ within NHS settings (Department of Health, 1995); and (2) the historical development of residential campuses during the 1970's and early 1980's as a direct result of the reprovision of NHS Mental Handicap Hospitals.

Table 1: The Needs and Characteristics of Users	
<b>Age</b>	People living in village communities are younger than people living in either residential campuses or dispersed housing schemes.
Gender	No significant differences between models.
Ethnicity	No significant differences between models.
<b>Residential history</b>	People living in village communities are more likely to have moved from family homes, residential special schools and other village communities than people living in either residential campuses or dispersed housing schemes. They also have experienced fewer moves and have been living in their current home for longer. People living in residential campuses and dispersed housing schemes are more likely to have moved from hospital.
<b>Ability</b>	People living in residential campuses are more severely disabled than people living in dispersed housing schemes who were, in turn, more severely disabled than people living in village communities.
Additional impairments	No significant differences between models.
<b>Nature of learning disabilities</b>	People living in village communities are more likely to have Down's Syndrome than people living in either residential campuses or dispersed housing schemes.
<b>Health needs</b>	People living in residential campuses have a greater number of general health needs than people living in village communities.
<b>Challenging behaviour</b>	People living in residential campuses are reported to show more severe challenging behaviours than people living in either village communities or dispersed housing schemes.
Mental health	No consistent significant differences between models on formal measures of mental health.

- 21 With regard to village communities, the information collected on participant's previous place of residence are consistent with the historical development of the participating services in indicating that village communities have developed relatively independently of the hospital reprovision. Thus, only 4% of people living in village communities had moved to their current home from a NHS Mental Handicap hospital (compared with 75% of people living in residential campuses and 50% of people living in dispersed housing schemes).

- 22 As noted, there were significant differences between the people supported in the three different types of service in the areas of ability, challenging behaviour, age, health needs and residential history. Preliminary analyses of the data indicated that differences in the first two of these domains (ability and challenging behaviour) were related to differences within and across the three approaches on: (1) the nature and costs of the support provided; and (2) the benefits experienced by users. Two complimentary strategies were adopted to control for these effects and thereby enable ‘like by like’ comparisons to be made. First, multivariate statistical methods were used to partial out the effect of ability and challenging behaviour when these variables were known to be associated with the dimension of interest (e.g., costs). Second, we drew two sub-samples from the total sample. In the first of these we selected 81 pairs of participants matched on level of ability from people supported in village communities and people supported in dispersed housing schemes. In the second, we selected 121 pairs of participants matched on level of ability and challenging behaviour from people supported in residential campuses and people supported in dispersed housing schemes<sup>5</sup>.
- 23 **All results presented in subsequent sections, unless otherwise stated, are based on genuine ‘like by like’ comparisons between the three approaches to providing residential supports.**

## The Nature of Support Provided to Service Users

- 24 On pages 24 to 37 of the main text we examined differences between village communities, residential campuses and dispersed housing schemes with regard to the nature of supports they provide to their residents. In Table 2, below, we have summarised the comparative benefits likely to accrue to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with ‘higher quality’ supports). Where necessary, assumptions underlying judgements of quality have been indicated. Those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.
- 25 Across the 20 indicators of ‘quality’ processes:
- 25.1 *dispersed housing schemes* were the sole preferred model on five and the jointly preferred model on a further eight indicators (each time with village communities);
  - 25.2 *village communities* were the sole preferred model on five indicators and were the jointly preferred model on a further nine (eight times with dispersed housing schemes, once with residential campuses);
  - 25.3 *residential campuses* were never the sole preferred model but were the jointly preferred model on one indicator with village communities.

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<sup>5</sup> Due to the very different ability level of the people supported in village communities and residential campuses it was not possible to draw matched samples which would allow for the direct comparison of these two models.

Table 2: Summary of Benefits Associated With Specific Forms of Provision

<b>Variable</b>	<b>Preferred Model</b>
(Smaller) <b>Size of Residence</b>	dispersed housing schemes
<b>Residence (Not) Also Providing Short-Term Care</b>	dispersed housing schemes
<b>Homeliness of Residence</b>	dispersed housing schemes & village communities
<b>Staffing</b>	
(higher) overall staff ratios	dispersed housing schemes & village communities
(higher) senior staff ratios	dispersed housing schemes
(higher) care staff ratios	dispersed housing schemes & village communities
(higher) staff qualifications	dispersed housing schemes & residential campuses
<b>Active Support</b>	
person centred planning	village communities
assessment & teaching	village communities
activity planning	village communities
staff support to residents	dispersed housing schemes & village communities
training & supervision of staff	village communities
user involvement in active support systems	dispersed housing schemes & village communities
<b>Social Climate (Institutionalisation)</b>	
less social distance	dispersed housing schemes & village communities
less depersonalisation	dispersed housing schemes
less block treatment	dispersed housing schemes
less rigidity of routines	village communities
<b>Medication</b>	
less use of anti-psychotic medication	dispersed housing schemes & village communities
<b>Health Checks</b>	village communities & residential campuses
<b>Advocacy</b>	no clear difference

- 26 In general, dispersed housing schemes provided support in smaller, more highly staffed, more homely and less institutional settings than residential campuses. While not directly comparable, this pattern of results is highly consistent with the existing literature on hospital reprovision which clearly indicates small dispersed housing schemes provide a significantly greater quality of 'care' than either traditional NHS Mental Handicap hospitals or medium sized community-based hostels/units (Emerson & Hatton, 1994; Hatton & Emerson, 1996).
- 27 In one key area dispersed housing schemes was the least 'preferred' model. On three specific indicators of health screening (health, blood pressure and testicular check in the last year) significantly higher levels of access to health care were recorded among people living in village communities and the lowest levels among people living in dispersed housing schemes.
- 28 These results are broadly consistent with previous studies which have identified: significant deficiencies in health screening, health care and health gain among people with learning disabilities living in the community (Kerr, 1998; MENCAP, 1998; Molyneux et al, in press; NHSE, 1998; Singh, 1997).
- 29 The potential implications arising from poor performance in this area is, of course, quite significant in that inequalities in access to health care may be expected to have

implications for future morbidity and mortality, an issue which is currently attracting considerable attention within the context of North American services (Blacher, 1998; Borthwick-Duffy et al, 1998; Conroy & Adler, 1998; Decoufle et al, 1998; Fujiura, 1998; Hayden, 1998; Lakin, 1998; O'Brien & Zaharia, 1998; Strauss et al, 1998).

## Costs

- 30 On pages 38 to 60 of the main text we examined differences in the costs of supporting people with learning disabilities in village communities, residential campuses and dispersed housing schemes. Our investigation began by disaggregating the costs of all the elements of providing housing and associated care. These costs included 'hotel services' and staffing arrangements within the individual setting and across the whole residential facility (if appropriate). Managing agency overheads and on-site administration costs were calculated; also the opportunity cost of all capital items (buildings, vehicles, furnishings and fittings).
- 31 We then explored the use participants had made of services independently of their accommodation arrangements and costed the part these had played in total service package costs. Although the service models themselves were very different, we have used consistent measures of assessment across all residential categories.
- 32 A wide variation existed in the costs associated with residential provision. This variation was not only between the three accommodation models, but between individual organisations, individual settings and, in many cases, individual users.
- 33 The costs of providing accommodation and associated care were dominated by staffing costs, whatever the specific staffing arrangements within the facility. In village communities, the focus of resources on site-wide services meant a lower percentage of total cost was allocated to direct staffing arrangements within individual settings. Direct staffing costs made up 53 per cent of all 'official' accommodation costs in village communities, 61 per cent in residential campuses and 72 per cent in dispersed housing schemes.
- 34 'Official' costs excluded any direct contributions made by users themselves from the social security benefits they received. When these were included, to complete the cost of accommodation and living expenses, they added 3 per cent to accommodation costs in village communities, 2.5 per cent in residential campuses and 7 per cent in dispersed housing arrangements.
- 35 Total accommodation costs were significantly lower in village communities (where the average was £607 per week) than either residential campuses (£887) or dispersed housing (£859).
- 36 Fixed fees, block contracts and disability-contingent pricing arrangements were paying for the bulk of care for participants. In addition, in certain dispersed housing arrangements, the separation of housing and support meant that users were meeting most (or all) of their housing and 'hotel services' costs through housing benefit and their DSS benefits.
- 37 Day activity services were used by almost all participants. A wide variety of individual arrangements were recorded and the costs of these services, together with accommodation, made up between 97 and 98 per cent of total package costs.

- 38 Although the input of hospital- and community-based professionals and services made up only a tiny part of total service package costs, in each of the residential categories contact was recorded with a wide range of services independently of those provided as part of the accommodation package.
- 39 The cost of services received outside users' accommodation arrangements was significantly lower for the residential campus sample (£82) than for either village communities (£140) or participants in dispersed housing (£131). It was use of day activities by the study participants which accounted for this difference in cost.
- 40 The total weekly costs of accommodation and associated care, and all other services received, was significantly lower for people living in village communities (£747) than in either residential campuses (£969) or dispersed housing (£990). It may be that size of setting is influencing these costs. The settings where study participants were supported varied a great deal in size (*village communities*: mean, 9, range, 2–22; *residential campuses*: mean, 10, range, 7–20; *dispersed housing*: mean, 4, range, 1-9). Although a sensitive relationship exists between cost and size of facility, the evidence suggests that, in larger facilities, costs associated with the higher dependency of some residents may be cancelled out by the lesser needs of residents who are more able. Where there are fewer than six resident places, however, some evidence suggests sharp increases in cost per resident as the size of the facility is reduced (Raynes et al., 1994).
- 41 When participants were considered in two age groups (18 to 39 years and 40 years and over) within their residential categories, we found that total costs were significantly higher for people of both age groups who lived in dispersed housing. There were no statistically significant differences in the costs of provision between older and younger residents.
- 42 We found interesting relationships when we explored the links between ability/need and cost. In village communities and dispersed housing, less able people were receiving more costly service packages. In residential campuses, however, this pattern was reversed, with more able users receiving the more costly support arrangements. When we considered the effects of challenging behaviour and possible psychiatric disorder on service package costs, we found relationships between severity/presence and higher costs in village communities and residential campuses. Users received more costly support packages if they were living in dispersed housing, whether or not they had challenging behaviour. Participants who had possible psychiatric disorders received the most costly service packages if they were living in residential campus facilities.
- 43 As noted in previous sections, there were significant differences between the three approaches in the needs and characteristics of the people served. In order to make 'like with like' comparisons, costs were adjusted to take into account differences between the three approaches with regard to ability, challenging behaviour and the age of users. Statistical analyses of the *adjusted costs* indicated that:
- 43.1 accommodation costs associated with both dispersed housing schemes and residential campuses were significantly greater than those associated with village communities;
  - 43.2 non-accommodation costs associated with both dispersed housing schemes and village communities were significantly greater than those associated with residential campuses;

- 43.3 total costs associated with dispersed housing schemes were significantly greater than those associated with residential campuses and village communities.
- 44 ‘Like with like’ comparisons were also made by comparing actual costs in the two matched samples drawn from the full data set. Statistical analyses comparing these *actual costs* indicated that, while non-accommodation and total costs were significantly lower in residential campuses when compared with dispersed housing schemes, there were **no** statistically significant differences between village communities and dispersed housing schemes with regard to either accommodation, non-accommodation or the total costs of support.

Table 2: Summary of Costs Associated With Specific Forms of Provision	
Variable	
<b>Total costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities and residential campuses were significantly lower than those associated with dispersed housing schemes. However, no statistically significant difference was found when comparing total costs for a sub-sample of participants selected from village communities and dispersed housing schemes on the basis of them being of equivalent ability.
<b>Accommodation Costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities were significantly lower than those associated with dispersed housing schemes and residential campuses. Again, however, no statistically significant difference was found when comparing total costs for a sub-sample of participants selected from village communities and dispersed housing schemes on the basis of them being of equivalent ability.
<b>Non-Accommodation Costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities and dispersed housing schemes were significantly greater than those associated with residential campuses.

- 45 In general, our findings are consistent with the existing literature. Previous studies investigating the capital costs of residential services for people with learning disabilities (e.g. Davies et al, 1991; Felce, 1981; Felce, 1989; Korman & Glennerster, 1990; Raynes et al, 1994) have generally found no differences in capital costs between service models, with places in group homes and hostels no more expensive in capital terms than places in hospitals. Studies reporting revenue costs (e.g. Davies, 1988; Felce, 1989; Korman & Glennerster, 1990; McGill et al, 1994) have generally found that revenue costs per service user are higher for group homes than for hostels or hospitals. Studies reporting comprehensive costs have reported wide variation in costs within all service models (Cambridge et al, 1994; Donnelly et al, 1994; Hatton et al, 1995b; Knapp et al, 1992; Raynes et al, 1994). As a consequence, studies comparing the comprehensive costs of community-based residential services and hospitals have reported conflicting findings.
- 46 Few studies have satisfactorily accounted for the wide variations in costs which clearly exist. The most consistent finding is that higher service costs are related to greater user needs (e.g. Cambridge et al, 1994; Donnelly et al, 1994; Knapp et al, 1992; Raynes et al, 1994). However, it is clear that there are no simple economies of scale associated with

larger or more centralised residential services (Davies et al, 1991; Felce et al, 1980b; Felce, 1981; Raynes et al, 1994). The findings reported here identify a link between costs and needs which appears to support the findings of other evaluations, although such a link is not always strong enough to be statistically significant. A programme of multivariate analyses, reported separately (Emerson et al., 1999) provides a thorough exploration of the factors explaining difference in cost.

## Outcomes for Users

- 47 On pages 61 to 75 of the main text we examined differences between village communities, residential campuses and dispersed housing schemes with regard to the outcomes experienced by users. In Table 3, below, we have summarised the comparative benefits accruing to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with ‘higher quality’ supports). Where necessary, assumptions underlying judgements of quality have been indicated. Again, those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.
- 48 Across the 27 indicators of ‘quality’ outcomes:
- 48.1 *dispersed housing schemes* were the sole preferred model on four and the jointly preferred model on a further seven indicators (six with village communities, one with residential campuses);
  - 48.2 *village communities* were the sole preferred model on four and the jointly preferred model on a further six indicators (all with dispersed housing schemes);
  - 48.3 *residential campuses* were the sole preferred model on one indicator and the jointly preferred indicator (with dispersed housing schemes) on another.
- 49 The areas in which *dispersed housing schemes* appeared to offer particular benefits over the other models were in:
- 49.1 facilitating social inclusion through the development of relationships with people who did not have learning disabilities and were neither relatives or members of staff;
  - 49.2 providing users with a more physically active lifestyle;
  - 49.3 providing users with a greater number of recreational/leisure activities;
  - 49.4 facilitating access to employment.

Table 3: Summary of Benefits Associated With Specific Forms of Provision

Variable	Preferred Model
<b>Choice</b>	dispersed housing schemes & village communities
<b>Relationships with Family</b>	
<b>proximity to family</b>	dispersed housing schemes & residential campuses
<b>contact with family</b>	no clear difference
<b>Extent of Social Networks</b>	
<b>overall</b>	dispersed housing schemes & village communities
<b>with others who have a learning disabilities</b>	dispersed housing schemes & village communities
<b>with staff</b>	village communities
<b>with family</b>	no clear difference
<b>with others</b>	dispersed housing schemes
<b>Health</b>	
underweight	no clear difference
obese	no clear difference
<b>activity</b>	dispersed housing schemes
smoking	no clear difference
drinking	no clear difference
poor diet	no clear difference
<b>Risks</b>	
severe accidents	no clear difference
accidents out of home	no clear difference
accidents in home	no clear difference
documented physical or sexual abuse	no clear difference
<b>documented verbal abuse</b>	village communities
<b>documented victim of crime</b>	village communities
<b>Work &amp; Education</b>	
<b>employment</b>	dispersed housing schemes
<b>voluntary work</b>	dispersed housing schemes & village communities
<b>adult education classes</b>	dispersed housing schemes & village communities
<b>(participating in) day centre activities</b>	residential campuses
<b>total hours per week</b>	village communities
<b>Day &amp; Leisure Activities</b>	
<b>total number of activities</b>	dispersed housing schemes
<b>variety of activities</b>	dispersed housing schemes & village communities

- 51 The areas in which village communities appeared to offer particular benefits over the other models were in:
- 51.1 facilitating the development/maintenance of relationships with staff;
  - 51.2 reducing the risk of exposure to verbal abuse and crime;
  - 51.3 providing users with a greater number of hours per week of scheduled day time activities.
- 52 The only area in which *residential campuses* appeared to offer particular benefits over the other models were in providing users with greater access to day centres for people with learning disabilities. It is unclear, however, whether this should be considered a positive outcome as: (1) attendance at day centres for people with learning disabilities was associated with increased *dissatisfaction* among users (see page 81); (2) there would appear to be little consensus among service providers and little evidence regarding the actual value of such services (cf. Beyer et al, 1995; Lowe et al, 1993; Wertheimer, 1996).



## The Views of Users

- 53 On *pages 77 to 86* of the main text we examined the views of users about their lives in village communities, residential campuses and dispersed housing schemes. A total of 105 interviews were conducted: 45 interviewees living in village communities, 10 living in residential campuses and 55 living in dispersed housing schemes.
- 54 There were no statistically significant differences in any domain between the rated satisfaction of users who lived in village communities and users who lived in dispersed housing schemes<sup>6</sup>. In two areas, however, non-significant trends emerged: people living in dispersed housing schemes tended to express greater satisfaction with the degree of choice they experienced; people living in village communities tended to express greater satisfaction with their friendships and social relationships.
- 55 Users tended to rate their satisfaction highly across both village communities and dispersed housing schemes. High ratings of satisfaction with current arrangements are not uncommon (e.g., Donnelly et al, 1994), although asking service users retrospectively about past placements produces less positive ratings (e.g., Booth et al, 1990).
- 56 Within each of the seven areas it was possible to explore relationships between ratings of user satisfaction and information collected from care staff and site visits. The results of these comparisons indicated that satisfaction with:
- 56.1 *their home* was associated with being supported by lower overall staff ratios, living in a house that was rated as being more homely, living in a house which implemented ‘active support’ and facilitated user involvement in the implementation of ‘active support’, and was less institutional;
  - 56.2 *day activities* was associated with spending fewer hours at Adult Training/Social Education Centres, and having scheduled activities on more days of the week and for more hours per week;
  - 56.3 *social and leisure activities* was associated with participating in more activities and going shopping more frequently;
  - 56.4 *friendships and relationships* was associated with having fewer mental health problems, having a larger number of people with learning disabilities in their social network and having a greater percentage of people with learning disabilities in their social network;
  - 56.5 *support arrangements* was associated with a senior member of their staff team having a nursing qualification;
  - 56.6 *choice* was associated with being younger and more able, living in a house which facilitated user involvement in the implementation of ‘active support’, and living in a house which was rated more highly overall on the Choice Scale, particularly with regard to choice of holidays, the recruitment of staff, review of staff, employment, firing of staff, moving house in the future, the timing of the evening meal, where they live, going out and who they live with;
  - 56.7 satisfaction over *risks* was associated with not having had an accident outside of their home and not being subject to verbal abuse.

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<sup>6</sup> Insufficient numbers of users living in residential campuses participated in the interviews for us to be able to make any valid comparisons.

57 Previous studies have reported that a range of factors appear to influence user satisfaction with current placement. Positive factors included being independent and participating in domestic tasks (e.g. Booth et al, 1990; Holland & Meddis, 1993), privacy and pleasant surroundings (e.g. Donnelly et al, 1994; Wing, 1989), being with friends and friendly staff, and not being with aggressive and noisy co-residents (e.g. Donnelly et al, 1994; Wing, 1989). Factors relating negatively to user satisfaction included lack of money (Donnelly et al, 1994; Flynn, 1989), being with incompatible co-residents (Donnelly et al, 1994), isolation and harassment by people in local communities (Booth et al, 1990; Donnelly et al, 1994; Flynn, 1989), institutional constraints on preferred lifestyles (Booth et al, 1990), and poor food (Wing, 1989).

## The Views of Relatives

58 On pages 87 to 96 of the main text we examined the views of relatives about the supports provided within between village communities, residential campuses and dispersed housing schemes. A total of 251 relatives responded to a postal questionnaire. The estimated overall response rate was 51% (59% from relatives of users in village communities, 52% from relatives of users in residential campuses and 46% from relatives of users in dispersed housing schemes).

59 There were very few differences in ratings of any aspect of the quality of supports between relatives of people living in either village communities, residential campuses or dispersed housing schemes.

60 Overall, relatives expressed considerable satisfaction with their relation's current living arrangements: 81% of relatives reported that the current arrangements were 'much' or 'quite a bit' better than previous arrangements; 73% reported that it was 'very true' that their relations seem happy and content; 84% reported that it was 'very true' that they had as much contact with their relative as they desired; and 80% reported that it was 'very true' that staff were helpful when approached. Such high levels of expressed satisfaction are not uncommon among studies which have solicited the views of relatives (e.g., Booth et al, 1990; Conneally et al, 1992; Emerson et al, 1993; Halliday, 1987; Shah & Holmes, 1987; Wing, 1989)

61 Improvements which relatives would like to see included: more leisure activities (cited by 18% of all respondents); more staff/more qualified staff (cited by 18%); increased access to day services (cited by 11%); improved health care (cited by 11%); improved accommodation/food (cited by 10%). Previous studies have reported similar concerns involving: the isolation of users, the location of community residences, and lack of supervision (Booth et al, 1990); the effect of challenging behaviour on others (Halliday, 1987); concerns about staff workload in community services (Halliday, 1987); and involvement of parents and relatives (Booth et al, 1990; Halliday, 1987).

## Conclusions

62 In designing the project, dispersed housing schemes were included for three reasons. First, they now constitute the most common form of residential provision for people with learning disabilities in the UK (Emerson & Hatton, 1998). Second, little is known of the quality or costs of supported living, a recent development within the broader dispersed housing model. Finally, the existing research literature clearly indicates that dispersed housing schemes offer significantly higher quality residential supports than either traditional NHS Mental Handicap Hospitals or medium sized units (Emerson & Hatton, 1994; Hatton & Emerson, 1996). As such, they constitute a standard against which the quality of other approaches to provision may be judged. The comparative benefits associated with village communities and dispersed housing schemes are summarised below in Table 4.

Table 4: Summary of Benefits Associated With Village Communities and Dispersed Housing Schemes	
Comparative benefits associated with living in a village community	People in village communities were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the areas of: person centred planning; assessment & teaching; activity planning; and the training and supervision of staff. The care provided was rated as being less institutional in having less rigid routines. People living in village communities were more likely to have: seen a dentist and social worker in the last three months; had a general health check, testicular check and their blood pressure measured in the last year; had a vision check in the last two years. They were likely to have routine day activities (e.g., attending day centres, adult education classes) on more days per week and for more hours per week. They were less likely to have been the reported victims of crime and of verbal abuse by members of the public. They were considered to be at lesser risk of exploitation by members of the public in the local community.
Comparative benefits associated with living in a dispersed housing scheme	People in dispersed housing schemes lived in more homely settings with fewer other people with learning disabilities and were less likely to live in a house which also provided short-term care. They were likely to be supported by more senior staff and more senior staff who had relevant qualifications. They were also more likely to have an independent advocate. The care provided was rated as being less institutional in being less depersonalised and involving less block treatment. They were more likely to have a person identified in their social network who did not have a learning disability, was not a relative and was not a paid carer. They were likely to have experienced a greater number of recreational or community-based activities in the previous four weeks.
Areas in which no significant differences were found between the two approaches	There were no significant differences between the two approaches with respect to: overall staffing ratios; internal planning procedures in the area of allocating staff support to users; social distance between staff and users; receipt of psychoactive medication; contact with GPs; health screening in the areas of hearing tests, cervical smears and mammograms; choice; contact with families; overall size of social networks; weight; levels of physical exercise; variety of leisure/recreational activities; accidents inside and outside of the home; reported physical and sexual abuse in their current home; perceived risk of accidents, exploitation and abuse.

63 The comparative benefits associated with NHS residential campuses and dispersed housing schemes are summarised below in Table 5.

Table 5: Summary of Benefits Associated With Residential Campuses and Dispersed Housing Schemes

<p>Comparative benefits associated with living in a residential campus</p>	<p>People in residential campuses were more likely to be supported by senior staff who had nursing qualifications. They were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the area of assessment &amp; teaching. They were more likely to have had a general health check in the last year and a vision check in the last two years. They were considered to be at lesser risk of exploitation by members of the public in the local community.</p>
<p>Comparative benefits associated with living in a dispersed housing scheme</p>	<p>People in dispersed housing schemes lived in more homely settings with fewer other people with learning disabilities and were less likely to live in a house which also provided short-term care. They were likely to be supported by more staff, more senior staff and more care staff. They were also more likely to have an independent advocate. They were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the areas of: person centred planning; activity planning; allocation of staff support to residents; and the training and supervision of staff. The care provided was rated as being less institutional in being less depersonalised, involving less block treatment, less rigid routines and less social distance between staff and users. They were less likely to receive anti-psychotic medication. They were more likely to have had contact with a social worker in the preceding three months. They were likely to have more overall choice over the way they were supported. They were more likely to have larger social networks; more people with learning disabilities in their social network and a person identified in their social network who did not have a learning disability, was not a relative and was not a paid carer. They were likely to have routine day activities (e.g., attending day centres, adult education classes) for more hours per week. They were likely to have experienced a greater number and variety of recreational or community-based activities in the previous four weeks. Men were likely to have had more vigorous physical exercise.</p>
<p>Areas in which no significant differences were found between the two approaches</p>	<p>There were no significant differences between the two approaches with respect to: contact with GPs, dentists, psychologists and psychiatrists; testicular checks, mammograms, cervical smears; hearing tests and monitoring of blood pressure; family contact; number of family members in their social network; weight; physical exercise among women; days per week of routine day activity; accidents; victimisation; abuse; perceived risk of accidents, abuse and exploitation.</p>

64 A relatively clear picture emerges from the results of the present project. First, **residential campuses developed as a direct result of the contraction or closure of NHS Mental Handicap Hospitals are of significantly poorer quality than community-based dispersed housing schemes on a wide range of measures of benefits.** These differences cannot be accounted for by differences in the characteristics of people supported.

65 Thus, for example, once differences in the characteristics of people supported have been taken into account, people living in residential campuses (when compared with people living in dispersed housing schemes) were significantly more likely to: live in larger, less homely, more institutional settings with poorly organised internal planning procedures; be supported by fewer staff; not have access to an independent advocate; receive anti-psychotic medication; have more restricted choice; have smaller social networks; have reduced access to routine day activities (e.g., attending day centres, adult education classes); experience a reduced number and variety of recreational or community-based activities. These benefits were also apparent for a selected sub-sample of people with very severe learning disabilities and additional complex needs (Emerson et al, 1999).

- 66 The total costs of care associated with residential campuses were, however, approximately 12% less than those associated with dispersed housing schemes (an average of £51,000 per annum in residential campuses and £57,000 per annum in dispersed housing schemes for the comparative sub-samples matched on ability and severity of challenging behaviour). This is not, of course, surprising given the major contribution of staffing and day services to the overall costs of the person's package of care. As noted above, in both of these areas residential campuses provided significantly less support than dispersed housing schemes.
- 67 Determining whether additional costs are *justified* on the basis of improvements in quality is not, of course, a question amenable to scientific scrutiny. We have, however, documented the benefits associated with the cost differential between service models. Thus, the additional £6,000 per annum associated with receiving support in dispersed housing schemes is associated with: a 31% increase in staffing ratios; a 14% increase in the rated quality of internal planning procedures; a 46% decrease in the rated level of institutional practices; a 19% increase in the rated homeliness of the setting; a 52% decrease in the use of anti-psychotic medication; a 350% increase in access to independent advocacy; a 27% increase in the rated amount of choice available to residents; a 55% increase in the size of people's social networks; a 350% increase in social integration; a 32% increase in the number of hours per week of scheduled day activity; a 134% increase in the number of recreational or community-based activities; a 96% increase in the variety of recreational or community-based activities.
- 68 Second, **comparison of village communities and dispersed housing schemes suggests that both forms of provision may be associated with particular patterns of benefits.**
- 69 Thus, village communities appear to offer particular benefits in the areas of: internal planning procedures; access to routine health care; access to routine day activities (e.g., attending day centres, adult education classes); selected aspects of safety/risk (e.g., exposure to crime and verbal abuse by members of the public).
- 70 On the other hand, dispersed housing schemes appear to offer particular benefits in the areas of: size and homeliness of setting; not living in a house which also provided short-term care; ratios and qualifications of senior staff; access to independent advocacy; a less institutional social climate; social integration; access to leisure/recreational activities.
- 71 Comparisons of the costs of care associated with village communities and dispersed housing schemes provided conflicting results. When statistical procedures were used to control for differences between the two models with regards to the ability of the people supported, the total costs of care associated with village communities were significantly less than those associated with dispersed housing schemes (an average £44,000 per annum in village communities and £53,000 per annum in dispersed housing schemes for adjusted costs). However, when comparisons were made on the basis of sub-samples selected by matching pairs of participants on the basis of ability, differences in cost between the two approaches were not statistically significant.
- 72 As noted above, both users and relatives expressed high levels of satisfaction with all existing arrangements. This is consistent with previous research in the UK and elsewhere which indicates that discrimination in the views of user and/or relatives is only likely when it is possible for them to make comparative judgements. Thus, for example, relatives typically rate the quality of care provided within traditional institutions very

highly, and may often express a considerable opposition to deinstitutionalisation (Tøssebro, 1996). However, longitudinal studies have repeatedly demonstrated that, following their relation's move to community-based services, relatives rate these services highly and, in retrospect, tend to express preference for the new arrangements (e.g., Booth et al, 1990; Conroy, 1985, 1996; Halliday, 1987; Shah & Holmes, 1987; Tuvevsson & Ericsson, 1996 Walker et al, 1993; Wing, 1989).







# Background

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- 1 In 1995 the Department of Health commissioned Professor Eric Emerson and Dr Chris Hatton of the Hester Adrian Research Centre at the University of Manchester to review the results of all scientific studies which had been undertaken in the UK since 1980 and which had examined the quality and costs of different forms of residential supports for people with learning disabilities.
- 2 The results of this review (Hatton & Emerson, 1996) suggested that:
  - 2.1 where robust differences are apparent, smaller dispersed community-based housing schemes were associated with better performance and more positive outcomes than either larger community-based hostels or NHS mental handicap hospitals;
  - 2.2 these differences have been found for people with severe and profound learning disabilities, people with multiple disabilities and people with seriously challenging behaviour;
  - 2.3 significant variation does exist, however, in the quality and costs of all types of service. This variation is of such an extent that, for a significant minority of people in dispersed housing schemes, their quality of life is largely indistinguishable from the quality of life of people in hospital.
- 3 The review also highlighted significant gaps in current knowledge. These included the relative absence of reliable information on:
  - 3.1 the characteristics of the people served by, and the quality and costs of, supported living arrangements, nursing homes and residential or village communities;
  - 3.2 variables which may account for the variation in quality and costs within differing types of provision;
  - 3.3 outcomes which may be considered salient by particular stakeholders to providing residential supports (eg personal safety and security, resident autonomy and choice).
- 4 At the same time, the Department of Health commissioned Dr Ann Netten (Personal Social Services Research Unit, University of Kent at Canterbury) to undertake a pilot study to examine the costs of village or residential communities for people with learning disabilities. Due to time constraints and the lack of readily available information, the research had to compromise between costs and fee information. As was acknowledged at the time, using fee information as a proxy for costs is unsatisfactory. Nevertheless, the study did suggest that the cost differential between village communities and community-based provision may not be as great as had been claimed (cf., Cox & Pearson, 1995; Economic and Operational Research Division at the Department of Health and Personal Social Services Research Unit, 1996).
- 5 In response to these reports the English Department of Health commissioned the Hester Adrian Research Centre (University of Manchester) and the Centre for the Economics of Mental Health (Institute of Psychiatry, London) to undertake a two year project investigating aspects of the quality and costs of residential supports provided to people with learning disabilities. Following this, the Irish Department of Health commissioned the Centre for the Study of Developmental Disabilities (University College Dublin) to undertake a parallel project in Ireland using the same protocols for data collection.

- 6 The aims of these two inter-linked projects were to identify or explore:
  - 6.1 the characteristics of the people supported within residential or village communities and community-based dispersed housing schemes for people with learning disabilities;
  - 6.2 the relative costs of each type of provision;
  - 6.3 the full service package received by participants in each type of provision;
  - 6.4 the relationship between user characteristics and costs across and within each type of provision;
  - 6.5 selected aspects of resource and non-resource inputs, process outcomes and user outcomes associated with each type of provision;
  - 6.6 the relationship between user characteristics and selected aspects of resource and non-resource inputs, process outcomes and user outcomes within and across each type of provision.
  
- 7 In this report we will examine differences in the quality and costs of three approaches to providing residential supports to people with learning disabilities:
  - 7.1 *village communities* operated by independent sector organisations. Such services typically would not have been developed as a direct result of the retraction and closure of NHS mental handicap hospitals;
  - 7.2 *residential campuses* operated by NHS Trusts. Such services would typically have been developed as a direct result of the closure of NHS hospitals;
  - 7.3 community-based *dispersed housing* schemes.
  
- 8 Two companion reports examine:
  - 8.1 the relative quality and costs of group home and supported living schemes<sup>7</sup>;
  - 8.2 predictors of variation in quality and costs within and across the four service models<sup>8</sup>.

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<sup>7</sup> Emerson, E., Robertson, J., Gregory, N., Hatton, C., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1998). *Quality and Costs of Residential Supports for People With Learning Disabilities: A Comparative Analysis of Quality and Costs in Group Homes and Supported Living Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>8</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., Netten, A., Walsh, P., Linehan, C., Hillery, J., & Durkan, J. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Predicting Variation in Quality and Costs*. Manchester: Hester Adrian Research Centre, University of Manchester.

- 9 A second component of the project used detailed behavioural observations to evaluate the daily routines of a sub-sample of 40 people selected on the basis of the severity of their learning disabilities<sup>9</sup>. They included:
- 9.1 20 people who were living in residential campuses;
  - 9.2 20 people who were living in community-based dispersed housing schemes.
- 10 A synopsis of the results of all four detailed reports is available in a brief *Summary Report*<sup>10</sup>.
- 11 Copies of all reports and the instrumentation used in the project are available from the Hester Adrian Research Centre, University of Manchester, Oxford Road, Manchester, M13 9PL, UK. Fax: +44 (0)161 275 3333.

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<sup>9</sup> Emerson, E., Robertson, J., Gregory, N., Kessissoglou, S., Hatton, C., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: An Observational Study of Supports Provided to People With Severe Learning Disabilities in Residential Campuses and Supported Housing Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>10</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., Netten, A., Walsh, P., Linehan, C., Hillery, J., & Durkan, J. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Summary Report*. Manchester: Hester Adrian Research Centre, University of Manchester.



## Design

- 12 The main component of the project involved the collection of information on selected inputs, processes, outputs and outcomes for a target sample of 600 adults with learning disabilities. The target sample consisted of:
  - 12.1 10 samples of 30 adults randomly selected from the people supported in 10 separate residential or village communities for people with learning disabilities;
  - 12.2 10 samples of 30 adults randomly selected from the people supported by 10 different providers of community-based dispersed housing schemes.
- 13 In the category of '*campus-style residential or village communities*' we included all forms of long-term residential supports which provided 24 hour support in a campus-style setting. A campus was defined as a setting in which housing for people with learning disabilities was clustered together on one site and shared some central facilities (e.g., day centre, church, shops). These schemes included:
  - 13.1 five *village communities* operated by independent sector organisations. None of these services had been developed as a direct result of the retraction and closure of NHS mental handicap hospitals. Two of these services were located in Ireland.
  - 13.2 five *residential campuses* operated by NHS Trusts. All of these services were based in the UK and had been developed as a direct result of the closure of NHS hospitals.
- 14 In the category of '*community-based dispersed housing schemes*' we included all forms of long-term residential supports which provided 24 hour support in dispersed<sup>11</sup> domestic-style housing for no more than eight people. The supports provided within these 10 schemes included a mixture of more traditional '*group homes*' or '*staffed houses*' for people with learning disabilities (e.g., Felce, 1989) as well as examples of '*supported living*' (cf., Howard, 1996; Kinsella, 1993; Ryan, 1998; Simons, 1995, 1997). All of these services were based in the UK.
- 15 Potential services were identified through a process of consultation with RESCARE, ARC (the Association for Residential Care, previously the Association of Residential Communities), the National Development Team, the Community Care Development Centre (King's College, London) and leading figures in the UK supported living movement. The aim of this consultation process was to identify services which were considered by key informants to be examples of 'good practice' within that particular approach to providing residential support. Of the 23 services nominated, one residential/village community did not reply to our letters and two residential/village communities chose not to participate. All three of these communities were operated by voluntary organisations. One residential/village community chose not to participate due to possible disruption to the care of residents. The other residential/village community withdrew from the study due to their philosophical and ideological objections to the use of quantitative research methods.

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<sup>11</sup> That is, housing is located among housing for non-disabled people.

## Consent

- 16 Wherever possible, written informed consent was obtained from individual service users. Care was taken to ensure that users clearly understood the implications of participation and that: (1) they could withdraw their consent at any time; and (2) refusal or withdrawal of consent would have no impact upon the support they received.
- 17 However, many potential participants were unable to give informed consent due to the severity of their intellectual impairments. In these cases, agreement for participation was obtained from either: (1) the user's independent advocate; or (2) the closest family member who was in regular contact with the person. If the person did not have an advocate and was no longer in contact with their family, agreement to participate was obtained from either the Chief Executive or Medical Director of the provider organisation.

## Instrumentation

- 18 The information contained within the present report was collected by a combination of postal questionnaire and interview.
- 19 Information about the basic characteristics of organisations was collected using the *Provider Organisation Questionnaire*. This questionnaire included sections on organisational aims and philosophies, organisational developments, basic characteristics of organisations, financial and management arrangements, staff and volunteers, services provided by organisations, organisational decision-making, quality monitoring processes and organisational procedures concerning resident safety.
- 20 Information about the setting in which people were supported was collected by a combination of interview with the first line manager of the person's care support team (or equivalently knowledgeable key informant) and ratings of the architectural features completed by research staff. The specific instruments used are detailed below.
  - 20.1 A modified version of the *Residential Services Setting Questionnaire* (Emerson et al, 1995), completed by interview, was used to collect information on: the size and location of the setting; the age, gender and general ability of the people served; the homeliness of the setting; the number and qualifications of direct care staff employed within the setting; and professional input to the setting.
  - 20.2 The *Architectural Features Scale* (Thompson et al, 1990), completed by research staff, was used to collect information on aspects of the physical environment.
  - 20.3 The *Residential Services Working Practices Scale* (Felce et al, 1995), completed by interview and rating by research staff, was used to collect information on procedures implemented within the setting regarding individual planning, assessment and teaching, the planning of daily and weekly activity, arranging staff support for resident activity and the training and supervision of staff.
  - 20.4 The *Group Home Management Interview* (Pratt et al, 1980), completed by interview, was used to rate the extent to which the setting embodied the cardinal features of 'total institutions': block treatment; depersonalisation; rigidity of routines; and social distance.

- 21 Information about the participating users and the specific support they received was collected by a combination of postal questionnaire and interview with the person's keyworker or other member of the person's care support team who knew them well. The specific instruments used are detailed below.
- 21.1 A modified version of the *Individual Schedule* (Alborz et al, 1994), completed by postal questionnaire and follow-up interview, was used to collect general information about the person (e.g., age, gender, ethnicity) and their recent history.
  - 21.2 Part 1 of the *Adaptive Behavior Scale - Residential and Community, 2nd Edition* (Nihira et al, 1993), completed by postal questionnaire and follow-up interview, was used to collect information on the abilities and skills of the person and the severity of additional physical and sensory impairments.
  - 21.3 A modified form of the *Index of Community Involvement* (Raynes et al, 1987, 1994), completed by interview, was used to collect information on the person's involvement in activities over the preceding month.
  - 21.4 A modified version of the *Social Network Map* (Tracy & Abell, 1994; Tracey & Whittaker, 1990), completed by interview, was used to collect information about the person's social networks and support available to them.
  - 21.5 Selected items from the *Health Survey For England 1993* (Bennett et al, 1995) and the Tameside and Glossop Health Needs Survey (Turner, 1997), completed by postal questionnaire and follow-up interview, were used to collect information on smoking, alcohol use, diet and exercise.
  - 21.6 A new *Choice* scale developed specifically for this project and completed by interview was used to measure the extent to which the person could exercise choice and control over key aspects of their life. Details of the reliability of this new scale are provided in Appendix 1.
  - 21.7 A new *Risks* scale developed specifically for this project, completed by interview, was used to measure the level of risk of exposure to accidents and injuries, abuse and exploitation. Again, details of the reliability of this new scale are provided in Appendix 1.
  - 21.8 The *Client Service Receipt Inventory* (Knapp et al, 1992; Knapp, 1995), completed by postal questionnaire and follow-up interview, was used to collect information on benefits and income received and a description of services used by the person over the preceding three months, including day time activities.
  - 21.9 The *Aberrant Behavior Checklist* (Aman et al, 1995), completed by postal questionnaire and follow-up interview, was used to provide a quantitative measure of the severity of challenging behaviour. A modified version of the *Individual Schedule* (Alborz et al, 1994), was used to collect, where appropriate, information about strategies employed for the treatment and management of challenging behaviour.
  - 21.10 The *PAS-ADD Checklist* (Moss et al, 1996, 1998) and the *Autism Screening Questionnaire* (Howlin, 1996), both completed by postal questionnaire and follow-up interview, were used to collect information about symptoms of psychiatric disorders and autistic-type behaviours shown by participants.
- 22 The views of users were obtained through semi-structured interviews using a pro-forma based on previous research conducted within the Hester Adrian Research Centre (Azmi et al, 1997; Mason et al, 1997).
- 23 The views of the closest relatives of participants were obtained through a postal questionnaire based on a scale previously used within the Hester Adrian Research Centre

to evaluate the quality of residential supports for people with learning disabilities and dual sensory impairments (Hatton et al, 1995).

- 24 All participating organisations were asked to comment on the extent to which the instrumentation used reflected important dimensions of quality of life. Seventy per cent of responding organisations reported that the instruments used provided comprehensive coverage of important aspects of quality of life. Ideas for additional aspects of quality of life included a greater focus on relationships between staff and residents, health promotion in primary care settings and resident self-determination.

## Service Costing Methodology

- 25 The principles of costing services have been detailed previously (see for example, Beecham, 1995). Economic theory advocates basing cost measures on long-run marginal opportunity cost. The opportunity cost measures the true private or social value of a resource or service, based on its value in its best alternative use. In reality, this is unlikely to be exactly the market price (or fee), since not everything is marketed, not every market works smoothly and information is rarely complete. Therefore observed prices and opportunity costs often diverge and the recorded depreciation payments on capital equipment or buildings will not usually reflect the opportunity costs of using these durable resources, nor will the (zero) payments to volunteers usually indicate their true social cost.
- 26 The service costing model developed by PSSRU/CEMH can be viewed as four separate stages, which were detailed by Allen and Beecham (1993) and are summarised below.
- 26.1 *Service description.* Before costing can begin, a detailed description of the service is required. This should be fully comprehensive, and include elements provided by other agencies, as well as those which appear to have no cost relevance.
- 26.2 *Identification of activities and service unit.* The choice of a unit of measurement for each service and the method by which it is calculated is an integral part of the costing exercise. Routinely-prepared expenditure accounts usually span one year, and there may be times when it is most useful to present costs information annually. Data are often more informative, however, if the cost consequences of policy and practice are presented in smaller units, especially because clients may not use services for a whole year. The unit should be relevant to the service and the objectives of the costing exercise, and should take into account the nature of the available data.
- 26.3 *Identification of cost implications.* For each service element there are different cost implications. A building in which a service is located is usually intended to last considerably longer than a single year. It represents a long-term investment of resources. On the other hand, the running costs associated with the use of that building are recurrent expenditures, usually presented in annual accounts. Provider agencies can be approached for building valuations and facility expenditure accounts which provide the basis for costing. Staff time presents different problems. The cost of employing a member of staff includes their salary, and overheads both direct (training, clerical support, and so on) and indirect (human resource functions and finance) as well as additional costs such as the employer's national insurance contributions and superannuation payments.
- 26.4 *Estimation of total and unit costs.* The service description and the collection of cost information allow the total cost of the service to be calculated. The aim is to



calculate a relevant cost for each service which reflects the long-run marginal opportunity cost of an appropriate unit, calculated by dividing the total cost of the service by the unit of measurement defined earlier. (For details of the costs methodology used in this evaluation, see Appendix 2.)

- 27 Costs were calculated to reflect the number of residents within each setting, or the number of places if vacancies were known to be filled without difficulty. Individual organisations' arrangements for carrying the costs of lengthy vacancies were beyond the remit of this evaluation, as were issues around the cost of staffing facilities while services were in the process of running down to closure.

## Procedure for Data Collection

- 28 The overall procedure for data collection was similar for each of the 20 participating services. First, agreement to participate and, for NHS providers, approval from Local Research Ethical Committees was obtained from the relevant organisations.
- 29 Second, a sampling frame was drawn up comprising of all adults (age 18+) receiving 24 hour medium to long-term residential support from that organisation (i.e., excluding people receiving respite care or short-term assessment and treatment on a residential basis). If there were more than 30 residents in the service, a random sample of 30 potential participants were selected.
- 30 Third, consent (or agreement, see above) was sought from each potential participant. If this was not obtained, a further potential participant was selected from the sampling frame and consent/agreement sought. This process was repeated until 30 participants for whom consent/agreement had been obtained were identified for each provider organisation.
- 31 Fourth, a nominated senior manager within the organisation was provided with a copy of the *Provider Organisation Questionnaire*. This was completed by them in consultation, if necessary, with research staff at the Hester Adrian Research Centre
- 32 Fifth, the provider organisation was supplied with 30 copies of the postal questionnaires (see items 22.1, 22.2, 22.5, 22.9, 22.10) which it distributed to members of direct care staff who knew the participating users well (e.g., the person's keyworker). A timescale was agreed with the participating organisations for the completion and return of these questionnaires to research staff at the Hester Adrian Research Centre. At approximately the same time, the provider organisation sent out postal questionnaires with a covering letter and FREEPOST envelope (addressed to the Hester Adrian Research Centre) to the closest relative of participants.
- 33 Sixth, research staff visited the service provided for each participant during which time they completed structured interviews with the user, wherever appropriate, and a member of care staff who acted as key informant (see items 22.3, 22.4, 22.6, 22.7, 22.8) and clarified any aspects of the postal questionnaires which informants had found problematic.
- 34 Seventh, research staff from the Centre for the Economics of Mental Health visited the service to obtain cost information from agency accounts. Full details of the costs methodology are provided in Appendix 2.



- 35 To ensure sufficient time for analysis and inclusion of data in the present report, a cut-off point for data collection was set at 23rd October 1998. At this time data had been collected on 560 participants across 20 services (93% of the target sample of 600 participants). These included:
- 35.1 146 users in 5 village communities;
  - 35.2 133 users in 5 residential campuses;
  - 35.3 281 people in 10 dispersed housing schemes.
- 36 Preliminary analysis of the data indicated that the two village communities located in Ireland differed substantially from the three village communities in the UK in terms of: the characteristics of people supported; the nature and costs of the support provided and the outcomes experienced by users. **As a result, data on the two Irish village communities has been excluded from the present report and will be presented in a subsequent report which will compare the quality and costs of village communities and community-based provision in Ireland.** At the time of writing, collection of data in Irish community-based services is nearing completion. It is expected that a draft report on these data will be made available to the Irish and English Departments of Health in the autumn of 1999.
- 37 Thus, analyses in the present report are based on comparisons of:
- 37.1 86 users in 3 village communities;
  - 37.2 133 users in 5 residential campuses;
  - 37.3 281 people in 10 dispersed housing schemes.
- 38 All of these services are provided in the UK.

## The Organisations

- 39 Eighteen services participated in the project. These services were managed by 15 different organisations, as some participating organisations managed more than one model of service. Thirteen of the 15 participating organisations completed a provider organisation questionnaire, upon which the results in this section are based. At the time of writing this report, all participating organisations had been operational for at least five years.
- 40 Table 2 below presents some of the basic characteristics of the participating services, and the people they serve. All data are presented as ranges across different services within a particular model, to protect the anonymity of participating services.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>
<b>Market Sector</b>	3 Independent	5 NHS	7 Independent 3 NHS
<b>Total Number of People Served (range)</b>	37 - 210	99 - 254	33 - 208
Long-term residents	28 - 179	94 - 144	22 - 161
Short-term residents	0 - 50	3 - 35	0 - 60
Day services	0 - 31	2 - 75	0 - 60
<b>Long-Term Residents</b>			
Age range (years)	11 - 79 years	20 - 91 years	17 - 87 years
% Men	54 - 63%	51 - 60%	50 - 59%
% White	95 - 100%	94 - 98%	94 - 100%
% Single	98 - 100%	100%	99 - 100%
<b>Size</b>			
Number of sites	1 - 2	7 - 9	8 - 35
Number of homes	2 - 21	10 - 24	8 - 45
Mean residents per site	18 - 179	14 - 20	1 - 8
Mean residents per home	7 - 8	7 - 10	1 - 8
<b>Staffing Levels</b>			
WTE all staff in service	23 - 350	130 - 277	19 - 288
WTE residential staff	12 - 314	104 - 214	8 - 208
WTE volunteers	0 - <10	0	0 - <10
Mean residential staff per resident	0.4 - 1.8	1.1 - 1.5	0.4 - 2.2

- 41 As Table 2 shows, all the village communities were managed by independent sector organisations, all the residential campuses were managed by NHS Trusts, and the dispersed housing services were a mixture of independent sector and NHS providers. Across all service models, the size of services varied widely, although there were no small (i.e. 20- 30 place) residential campuses. The age range of residents also varied widely within all service models. There was a slight majority of male residents in all services, and almost all residents were white and single.
- 42 As Table 2 also shows, village communities and residential campuses managed fewer sites than dispersed housing services, although the number of homes varied widely across all service models. The mean number of residents per site, and the mean number of residents per home, was higher in village communities and residential campuses than in dispersed housing schemes, although there was variation in mean size within each service model.
- 43 Organisations were also asked about residents' access to a range of facilities, either managed by the organisation or available from elsewhere. The following facilities were available to residents in almost all services: sports centres, hydrotherapy and swimming pools; day centres; places of worship; adult education; occupational therapy; physiotherapy; speech therapy; art and alternative therapies; psychology; psychiatry; community learning disability teams; social workers; medical consultants; GPs; hearing specialists; opticians; dentists; chiropodists; nurses; advocacy services; befrienders; shops; hairdressers; motor transport; holidays; and day trips and outings. Less common facilities included: social clubs; sensory rooms; dieticians; and work schemes such as supported employment, horticulture, crafts, food produce and retail work. Village communities tended to manage a greater range of services on-site, although medical services were largely provided externally. Residential campuses tended to provide more

on-site medical facilities, although other facilities were often provided externally. Facilities for residents in dispersed housing were almost all provided externally.

- 44 Participating services were asked about formal and informal exclusion criteria for entry to each service, and also whether the service had a particular focus. Formal exclusion criteria were similar across all service models, and were largely in terms of excluding children and people without learning disabilities. Village communities tended to report more informal exclusion criteria than other service models, largely people with severe challenging behaviour, people with mental health problems and/or offenders. Both residential campuses and dispersed housing services were more likely to report that a focus of their work was people with mental health problems, people with challenging behaviour and/or people with multiple disabilities.

### *Organisational Changes*

- 45 A majority of services across all service models reported structural changes in residential services over the past five years. For almost all services these changes were expansions, almost invariably in the form of providing new community-based residential services for no more than 10 residents. Approximately half of services across all service models had also closed some residential services in the past five years. For village communities and residential services, this involved the closure of larger residences; for dispersed housing this usually involved the closure of group homes to provide more individualised supports. All participating services expected there to be further structural changes in the next five years. Although definite future plans were not usually reported (largely due to uncertainties in contracting arrangements with commissioners), services reported a wish to continue existing trends in the restructuring of residential services.
- 46 Almost all services across all service models reported sources of support and also sources of hostility, although they were highly variable, with little consensus within or between service models. The most frequently reported source of support across all three service models was parents' groups. However, parents of older residents were also cited as being concerned about service changes towards more community-based services, and parents of younger residents were reported as being concerned about residents not being placed in services based in the community. There was no consistent reporting from any service model of either support or hostility from commissioners or professionals seeking to place people with learning disabilities in residential services.
- 47 All participating organisations were also asked what their ideal service would be, if they were starting from scratch. Responses were almost unanimous across all participating organisations, no matter which service model the organisation was currently managing. Organisations would ideally be providing smaller homes based in local community settings, led by the needs and wishes of residents, with access to comprehensive primary health care services and domiciliary care if needed.

## Aims & Philosophy

48 All participating organisations had a written statement of aims and philosophy. Table 3, below, provides summary information on the most important aims identified by services. The Table also provides information about which quality of life domains were agreed to be most important in services for people with learning disabilities.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>
<b>Most Important Service Aims</b>	1= High standards 1= Resident outcomes - skills & responsibilities 3 Extending services	1 Resident outcomes - QoL/rights/choice 2 Specialist, seamless service	1 Resident outcomes - QoL/rights/choice 2 Service/staff support 3 Extending services 4 High standards
<b>Most Important Quality of Life Domains</b>	1= Protection from exploitation/abuse 1= Respect from others Privacy 3= Resident responsibility 3= Choice over where to live 5 Privacy	1= Protection from exploitation/abuse 1= Privacy 3= Practical support 3= Clean & safe home environment 5= Day-to-day choice 5= Healthy/active lifestyle	1 Protection from exploitation/abuse 2 Day-to-day choice 3 Respect from others 4 Emotional support 5 Privacy

49 As Table 3 shows, there was a high degree of consistency between service models in terms of service aims and important quality of life domains. All service models highlighted high standards, resident outcomes, and extending service supports as important aims. Protection from exploitation and abuse and privacy were also considered to be important aspects of quality of life across all three service models, with respect from others, resident choice and support also commonly reported.

## Staff

50 Some basic information about paid staff in the participating services is presented below in Table 4

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>
<b>Annual Staff Turnover</b> (% of staff in service)	4 - 22%	7 - 15%	6 - 21%
<b>Days Sick Per WTE Years</b>	1.0 - 3.2 days	0.5 - 12.6 days	1.5 - 12.2 days
<b>Staff</b>			
% Men	28 - 32%	24 - 56%	24 - 60%
% White	98 - 100%	81 - 90%	75 - 99%
<b>Staffing Levels</b>			
WTE all staff in service	23 - 350	130 - 277	19 - 288
WTE residential staff	12 - 314	104 - 214	8 - 208
WTE volunteers	0 - <10	0	0 - <10
Mean residential staff per resident	0.4 - 1.8	1.1 - 1.5	0.4 - 2.2

- 51 As Table 4 shows, levels of staff turnover and staff sickness varied widely across all three service models. The proportion of male staff also varied considerably, with some residential campuses and dispersed housing services employing more than 50% male staff. While almost all staff in village communities were white, some residential campuses and dispersed housing services were employing higher proportions of staff from other ethnic groups.
- 52 Staffing levels also varied widely across all service models, although no residential campuses reported small numbers of whole time equivalent staff, reflecting the absence of small residential campus services. Staff:resident ratios also varied widely across all service models. All participating services reported very little or no volunteer activity in directly providing residential supports, although some organisations relied on volunteers in activities such as fund raising.

## The Characteristics and Needs of Service Users

- 53 In the following sections we will examine the extent to which the three approaches to service provision (village communities, residential campuses and community-based dispersed housing schemes) were comparable in terms of the characteristics of the users they supported.
- 54 The following statistical methods were employed to test the significance of differences between the three models:
- 54.1 one-way ANOVA (with Scheffé post hoc tests) were used whenever data allowed the use of parametric statistics (i.e., continuous variables whose distribution approximated a normal curve);
  - 54.2 Kruskal-Wallis (with Mann-Whitney post hoc tests) were used for ordinal scales or continuous variables of clearly non-normal distribution;
  - 54.3  $\chi^2$  tests were used to make comparisons between categorical variables.
- 55 The tests employed are indicated in all tables in the report by the following codes: (A) one-way ANOVA (with Scheffé post hoc tests); (K) Kruskal-Wallis (with Mann-Whitney post hoc tests); (C)  $\chi^2$  test.
- 56 Due to the large number of comparisons made, results will only be reported as being statistically significant if the magnitude of the difference between the three groups would only be likely to occur by chance in less than 1 in 100 cases (i.e. the two-tailed alpha level was set at  $p < 0.01$ ). When a difference between the three groups is reported, post-hoc tests will employ the more traditional two-tailed alpha level of  $p < 0.05$ .

## Age, Gender & Ethnicity

57 Table 5, below, provides summary information on the age, gender and ethnicity of users supported in the three approaches to provision.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Age (years)</b>				
average age	40.1	47.5	45.5	p<0.001 (A)
range (standard deviation)	19-72 (9.7)	22-92 (15.8)	19-89 (14.7)	
<b>Gender</b>				
% men	62%	59%	60%	n.s.
%women	38%	41%	40%	
<b>Ethnicity</b>				
Asian (Indian)	0%	2%	0%	n.s.
Asian (Pakistani)	0%	1%	0%	
Asian (Bangladeshi)	0%	0%	0%	
Asian (East African)	0%	0%	0%	
Asian (Chinese)	0%	0%	0%	
Asian (Other)	0%	1%	0%	
Black (Caribbean)	0%	0%	0%	
Black (African)	0%	0%	2%	
Black (Other)	0%	0%	1%	
White	100%	96%	96%	

58 *Summary:* There were no differences between the models with regards to either the gender or ethnicity of the users they supported. In all three approaches the majority of the residents were men (60% overall) and white (97% overall). The greater proportion of men is likely to reflect the increased prevalence of learning disabilities among males (Hatton, 1998). There were significant differences with regard to the age of people supported ( $F=7.24$ ;  $df=2,483$ ;  $p<0.001$ ), with people living in village communities being significantly younger than either people living in residential campuses (Scheffé post-hoc test,  $p<0.05$ ) or people living in dispersed housing schemes (Scheffé post-hoc test,  $p<0.05$ ).



## Residential History

59 Information was collected from informants on aspects of the users' previous residential history. This included information on when the user moved in to their current place of residence, their residential history since 1990 and when they first moved away from their family home. This information is summarised below in Table 6.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Leaving Home</b>				
average age when moved away	20.6	19.8	20.5	n.s.
range	4-58	2-53	1-60	
(standard deviation)	(11.5)	(12.7)	(12.9)	
<b>Residential History Since 1990</b>				
average years in current setting	13.8	7.8	5.2	p<0.0001 (A)
range	0-44	0-25	0-41	
(standard deviation)	(12.1)	(4.3)	(4.5)	
average number of moves	0.5	0.8	1.0	p<0.0001 (K)
range	0-2	0-6	0-5	
(standard deviation)	(0.6)	(1.0)	(0.9)	
% users who have lived in NHS Hospital	1%	54%	38%	p<0.0001 (C)
<b>Previous Placement</b>				
% users who had moved from ... ..				
... residential special school	13%	1%	2%	p<0.0001 (C)
... residential children's home	0%	3%	1%	n.s.
... family home	39%	9%	13%	p<0.0001 (C)
... foster family home	2%	0%	1%	n.s.
... group home	8%	8%	15%	n.s.
... hostel	0%	2%	4%	n.s.
... NHS hospital ward	4%	75%	50%	p<0.0001 (C)
... residential or village community	29%	2%	6%	p<0.0001 (C)
... respite care	2%	1%	0%	n.s.

60 *Summary:* There were no differences between the models in the age at which users first moved away from their families. Residents of village communities were likely to have experienced fewer moves since 1990 ( $\chi^2=26.5$ ,  $df=2$ ,  $p<0.0001$ ) and to have lived in their current home for longer ( $F=59.4$ ;  $df=2,491$ ;  $p<0.0001$ ) than residents of residential campuses (Scheffé,  $p<0.05$ ) and dispersed housing schemes (Scheffé,  $p<0.05$ ). When compared with residents of dispersed housing schemes and residential campuses, residents of village communities were more likely to have moved into their current home from their family home ( $\chi^2=38.5$ ,  $df=2$ ,  $p<0.0001$ ), another residential or village community ( $\chi^2=52.6$ ,  $df=2$ ,  $p<0.0001$ ) or residential special school ( $\chi^2=28.6$ ,  $df=2$ ,  $p<0.001$ ), and less likely to have moved from NHS hospital ( $\chi^2=103.4$ ,  $df=2$ ,  $p<0.0001$ ).

## Syndromes Associated With Learning Disability

- 61 Information was collected from informants as to whether users had been identified as being affected by any specific condition or syndrome associated with learning disabilities. These data are summarised below in Table 7.

Table 7: Syndromes and Conditions Associated With Learning Disability				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of users reported to be affected by</b>				
...				
Prader-Willi syndrome	2%	0%	0%	n.s.
Rett's syndrome	2%	1%	1%	n.s.
Cerebral palsy	8%	16%	15%	n.s.
Down's syndrome	34%	5%	12%	p<0.0001 (C)
Fragile X syndrome	4%	1%	1%	n.s.

- 62 *Summary:* A significantly greater number of people living in village communities had Down's Syndrome ( $\chi^2=39.4$ ,  $df=2$ ,  $p<0.0001$ ). It should be noted that the reported prevalence of Fragile X syndrome is markedly lower than the expected true prevalence (estimated at 6%-14% of men with severe learning disabilities; Batshaw, 1997).

## Abilities & Additional Impairments

- 63 Part 1 of the Adaptive Behavior Scale (Nihira et al, 1993) was used as a measure of the overall severity of users' learning disability and to identify additional physical and sensory impairments or disabilities. Information was also sought from informants on the nature of the person's learning disability. These data are summarised below in Tables 8, 9, 10 and 11.

Table 8: Sensory Impairments				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% users reported to have....</b>				
... visual impairment	9%	15%	8%	n.s.
... hearing impairment	4%	6%	6%	n.s.
... dual sensory impairment	2%	2%	3%	n.s.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Abilities</b> (Adaptive Behaviour Scale Scores: average and standard deviation)				
Total ABS Score	195.4 (75.4)	103.9 (59.0)	150.2 (79.5)	p<0.0001 (A)
Individual domain scores ...				
Independent functioning	78.4 (28.1)	44.5 (25.9)	60.5 (31.8)	p<0.0001 (A)
Physical development	20.4 (3.8)	15.7 (5.5)	17.2 (5.2)	p<0.0001 (A)
Economic activity	7.6 (6.4)	1.2 (2.8)	5.5 (6.6)	p<0.0001 (A)
Language development	25.0 (11.3)	15.1 (10.4)	19.4 (11.7)	p<0.0001 (A)
Number and time	6.8 (4.7)	2.8 (4.2)	4.3 (4.8)	p<0.0001 (A)
Domestic activity	13.5 (7.7)	3.3 (4.5)	9.0 (7.4)	p<0.0001 (A)
Vocational activity	6.7 (3.3)	2.8 (2.6)	4.9 (3.4)	p<0.0001 (A)
Self-direction	13.8 (7.3)	6.1 (5.7)	10.7 (7.3)	p<0.0001 (A)
Responsibility	6.2 (3.4)	2.5 (3.0)	4.5 (3.5)	p<0.0001 (A)
Socialization	17.4 (6.3)	9.9 (6.0)	14.5 (6.7)	p<0.0001 (A)

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
% users reported to have....				
...no medication and no seizures	81%	63%	66%	n.s.
...seizures controlled by medication	8%	15%	9%	
... seizures less than monthly	6%	9%	10%	
... one or more seizures per month	5%	13%	15%	

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
% users reported to have toilet accidents....				
...never	65%	30%	39%	p<0.0001 (C)
...at night only	2%	12%	8%	
...occasionally during day	23%	33%	33%	
...frequently during day	5%	10%	9%	
...not toilet trained at all	5%	19%	11%	

64 *Summary:* Overall, and in all of the specific areas of adaptive behaviour measures, people living in residential campuses were significantly more disabled (F range 19.5-60.9; df=2,489; p<0.001) than people living in dispersed housing schemes (Scheffé post hoc test, p<0.05 for all comparisons) who were, in turn, significantly more disabled than people living in village communities (Scheffé post hoc test, p<0.05 for all comparisons). Similarly, people living in residential campuses were significantly more likely to be incontinent than people living in dispersed housing schemes and people living in village communities ( $\chi^2=35.8$ , df=8, p<0.001). There were no differences between the three

groups in the reported prevalence of either epilepsy or sensory impairments. It should be noted that the reported prevalence of sensory impairments is notably lower than its estimated 'true' prevalence among people with learning disabilities (c.f., Hatton & Emerson, 1995).

### Health Needs

65 Information was collected from informants on whether the user had suffered from a range of possible medical conditions and ailments within the last 12 months. These data are summarised below in Table 12.

Table 12: Reported Health Needs Over Previous Year				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
% users reported to have had ....				
...bronchitis	5%	5%	3%	n.s.
...arthritis	5%	12%	9%	n.s.
...sciatica	5%	5%	4%	n.s.
...persistent skin problems	23%	31%	22%	n.s.
...asthma	5%	5%	3%	n.s.
...stomach trouble or indigestion	9%	19%	17%	n.s.
...constipation	17%	51%	36%	p<0.001 (C)
...piles	4%	6%	5%	n.s.
...persistent foot problems	15%	16%	17%	n.s.
...varicose veins	4%	3%	3%	n.s.
...persistent teeth or mouth problem	12%	14%	19%	n.s.
...diabetes	0%	2%	2%	n.s.
...angina	0%	2%	0%	n.s.
...high blood pressure	5%	4%	4%	n.s.
...heart attack	0%	1%	0%	n.s.
...heart murmur	6%	2%	2%	n.s.
...abnormal heart rhythm	2%	3%	2%	n.s.
...stroke	0%	1%	2%	n.s.
<b>Complex healthcare needs</b>				
% of users who have had...				
...no health problems	20%	14%	20%	p<0.01 (C)
...1 to 4 health problems	73%	63%	68%	
...5 or more health problems	7%	23%	12%	

66 *Summary:* Overall, people living in residential campuses had a greater number of health care needs than people living in either village communities or dispersed housing schemes ( $\chi^2=13.6$ ,  $df=4$ ,  $p<0.01$ ). The only specific health care need which varied in prevalence between the three groups was constipation, with over 50% of people living in residential campuses reported as suffering from constipation in the last year ( $\chi^2=25.5$ ,  $df=4$ ,  $p<0.00001$ ).

## Challenging Behaviour

67 The *Aberrant Behavior Checklist* (ABC, Aman et al, 1995) was used to provide a quantitative measure of the severity of challenging behaviour. This consists of 58 separate items (e.g., 'talks to self loudly', 'deliberately hurts himself/herself'). Each item is rated on a four point scale to indicate the severity of problem this behaviour has presented to carers in the last four weeks. These ratings range from 0 (indicating that the behaviour is not a problem at all) through 1 (the behaviour represents a slight problem for carers), 2 (the behaviour represents a moderate problem) to 3 (the behaviour represents a severe problem). Results (Table 12) are presented as the percentage of maximum possible scores and the average number of items (for the full scale and each subscale) rated at either level 2 or 3 (moderate to severe problem). Information derived from this measure is summarised below in Table 13.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Aberrant Behavior Checklist</b>				
Mean (& standard deviation) total score				
...				
... full scale	18.0 (20.3)	31.9 (23.2)	19.7 (21.8)	p<0.0001 (A)
... irritability	5.2 (7.1)	10.0 (8.4)	6.3 (7.5)	p<0.0001 (A)
...lethargy	4.9 (5.7)	7.0 (7.1)	4.6 (6.2)	p<0.01 (A)
...stereotypy	1.5 (2.7)	3.4 (4.0)	1.8 (2.9)	p<0.0001 (A)
...hyperactivity	5.2 (7.3)	9.6 (9.2)	5.6 (7.4)	p<0.0001 (A)
...inappropriate speech	1.1 (2.0)	1.9 (2.6)	1.5 (2.3)	n.s.

68 *Summary*: Overall, and in all areas with the exception of inappropriate speech, there were significant between group differences in the reported levels of challenging behaviours shown by residents (F range 6.8-16.0; df=2,488; p<0.01). In all instances, people living in residential campuses were reported to display greater levels of challenging behaviour than residents of either village communities or dispersed housing schemes (Scheffé post hoc tests, p<0.05). On no comparison were there any statistically significant differences in the reported levels of challenging behaviour displayed by residents of village communities and dispersed housing schemes.

## Mental Health

- 69 Indications of possible mental health needs of users were measured through the use of two screening instruments.
- 70 The *PAS-ADD Checklist* (Moss et al, 1996, 1998) was used to screen for general psychiatric disorders. This consists of 29 separate items (e.g., ‘loss of self-esteem, feeling worthless’, ‘restless or pacing, unable to sit still’). Each item is rated on a four point scale to indicate the severity with which the problem has occurred in the last four weeks. These ratings range from 0 (indicating that the problem has not occurred) through 1 (has occurred, but not a problem), 2 (has been a problem) to 3 (has been a severe problem). Results (Table 14) are presented as mean scale and sub-scale scores, and the percentage of people meeting the criterion for having a possible psychiatric disorder.
- 71 The *Autism Screening Questionnaire* (Howlin, 1996) was used to screen for the possible presence of autism spectrum disorders. This 18-item checklist requires informants to rate the frequency of occurrence of various potential indicators of autism spectrum disorders (e.g., ‘delayed or immediate repetitions of what other people have said’). Results (Table 14) are presented as mean scale and sub-scale scores, and the percentage of people meeting criterion for having a possible autism spectrum disorder. The Table also includes information on the percentage of people who were reported by informants to have a formal diagnosis of autism.

Table 14: Screening for Mental Health					
		<i>Village Communities</i>	<i>Residential campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Mental Health</b>					
mean (& s.d.) ...	... total score	2.2 (3.6)	2.6 (3.8)	2.7 (4.5)	n.s.
% of users reaching criterion <sup>1</sup> for possible psychiatric disorder ....		23%	24%	24%	n.s.
<b>Autism</b>					
mean (& s.d.) ...	... total score	39.0 (9.8)	42.6 (8.6)	40.0 (8.8)	n.s.
mean item sub-scale scores ...	... rituals	1.5 (1.5)	1.9 (1.5)	1.6 (1.5)	n.s.
	... communication	2.8 (2.1)	2.8 (2.3)	2.8 (2.2)	n.s.
	... social behaviour	1.8 (1.6)	2.5 (1.5)	1.8 (1.5)	p<0.0001 (A)
% of users reaching DSMIV criteria for autism		38%	47%	35%	n.s.
% of users with <i>reported</i> diagnosis of autism		12%	15%	6%	n.s.
Note 1: Criterion was set at any positive score on the PAS-ADD checklist or one of its sub-scales.					

- 72 *Summary:* On none of the indicators of mental health derived from the PAS-ADD Checklist were there any statistically significant differences between the three groups. Residents living in residential campuses were reported to show more frequent indicators of impaired social behaviour indicative of autism spectrum disorder ( $F=10.4$ ;  $df=2,481$ ;  $p<0.001$ ) than either residents in village communities or dispersed housing schemes

(Scheffé post-hoc tests,  $p < 0.05$ ). Given a moderate association between this measure and overall ability as measured by Part 1 of the Adaptive Behavior Scale ( $r = -0.4404$ ,  $p < 0.001$ ), it is possible that these differences reflect variations in the ability of the three groups, rather than variations in the prevalence of autism spectrum disorders. Indeed, there were no statistically significant differences in the percentage of residents who reached DSMIV criteria for autism on the screening questionnaire or who were reported to have a current diagnosis of autism.

## Summary

- 73 In the above sections we have examined similarities and differences in the people supported in the three approaches to service provision. These results are summarised below in Table 15. Those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.

Table 15: The Needs and Characteristics of Users	
<b>Age</b>	People living in village communities are younger than people living in either residential campuses or dispersed housing schemes.
Gender	No statistically significant differences between models.
Ethnicity	No statistically significant differences between models.
<b>Residential history</b>	People living in village communities are more likely to have moved from family homes, residential special schools and other village communities than people living in either residential campuses or dispersed housing schemes. They also have experienced fewer moves and have been living in their current home for longer. People living in residential campuses and dispersed housing schemes are more likely to have moved from hospital.
<b>Ability</b>	People living in residential campuses are more severely disabled than people living in dispersed housing schemes who are, in turn, more severely disabled than people living in village communities.
Additional impairments	No statistically significant differences between models with regards to either sensory impairments or epilepsy.
<b>Nature of learning disabilities</b>	People living in village communities are more likely to have Down's Syndrome than people living in either residential campuses or dispersed housing schemes.
<b>Health needs</b>	People living in residential campuses have a greater number of general health needs than people living in either village communities or dispersed housing schemes.
<b>Challenging behaviour</b>	People living in residential campuses are reported to show more severe challenging behaviours than people living in either village communities or dispersed housing schemes.
Mental health	There are no statistically significant differences between models on formal measures of mental health (including autism).

## The Nature of the Support Provided to Service Users

- 74 In the following sections we will present the results of comparisons between the three models of residential provision in relation to the nature of the support provided to users (e.g., size and homeliness of residences, staffing ratios, the ‘social climate’ of support).
- 75 As noted above, there were significant differences between the people supported in the three different types of service in the areas of ability, challenging behaviour, age, health needs and residential history. Preliminary analyses of the data indicated that differences in the first two of these domains (ability and challenging behaviour) were related to differences within and across the three approaches on: (1) the nature and costs of the support provided; and (2) the benefits experienced by users.
- 76 Two complementary strategies were adopted to control for these effects and thereby enable ‘like by like’ comparisons to be made.
- 77 First, multivariate statistical methods were used to partial out the effect of ability and challenging behaviour when these variables were known to be associated with the dimension of interest (e.g., costs). Thus, if there is evidence of a significant association<sup>12</sup> between a particular aspect of service provision and either ability or challenging behaviour in at least two of the three models, we will repeat the initial comparisons statistically controlling for these effects. For continuous variables approximating a normal distribution we will use one-way ANCOVA (with ability and/or challenging behaviour entered as covariates). For categorical variables we will use logistic regression (with ability and/or challenging behaviour entered as covariates prior to entry of the criterion variable of interest).
- 78 Second, we drew two sub-samples from the total sample. In the first of these we selected 81 pairs of participants matched on level of ability from people supported in village communities and people supported in dispersed housing schemes. In the second, we selected 121 pairs of participants matched on level of ability and challenging behaviour from people supported in residential campuses and people supported in dispersed housing schemes<sup>13</sup>.

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<sup>12</sup> The criterion for a ‘significant association’ was that the correlation between the two variables was both statistically significant ( $p < 0.01$ ) and that the correlation coefficient was greater than 0.25.

<sup>13</sup> Due to the very different ability level of the people supported in village communities and residential campuses it was not possible to draw matched samples which would allow for the direct comparison of these two models.



## Size of Residences & Provision of Short-Term Care

79 A modified version of the *Residential Services Setting Questionnaire* (Emerson et al, 1995) was used to collect information on the size of the person's home and whether short-term (respite) care was also provided within the same house. This information is summarised below in Table 16.

Table 16: Size and Short-Term Care				
	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>Size</b>				
average number (& s.d.) of people with learning disabilities living in the house	10.9 (7.4)	9.9 (5.5)	4.0 (1.8)	p<0.0001 (A)
<b>Short-Term Care</b>				
% residences providing short-term care	20%	26%	0%	p<0.0001 (C)

80 *Summary:* People living in dispersed housing schemes were living with significantly fewer people with learning disabilities ( $F=127.4$ ;  $df=2,497$ ;  $p<0.0001$ ) than people living in either village communities or residential campuses (Scheffé post-hoc tests,  $p<0.05$ ). They were also significantly less likely to be living in a house which also provided short-term (respite) care for other people with learning disabilities ( $\chi^2=71.3$ ,  $df=2$ ,  $p<0.00001$ ).

81 *Association with ability and challenging behaviour:* There were no significant associations between ability and size or residence within either village communities or residential campuses. Within dispersed housing schemes, however, people with more severe disabilities were more likely to live in larger groups ( $r=0.250$ ,  $p<0.01$ ). There were no significant associations between ability and whether the person's home also provided short-term care within any model. There were no significant associations within any model between challenging behaviour and either size or whether the person's home also provided short-term care.

## Architectural Features of Housing

82 The *Architectural Features Scale* (Thompson et al, 1990) and a modified version of the *Residential Services Setting Questionnaire* (Emerson et al, 1995) were used to collect information on the architectural features of the setting. Total score on the *Architectural Features Scale* and the 'overall' rating of homeliness from the *Residential Services Setting Questionnaire* are presented as percentages of the maximum possible 'homely' score possible. For other ratings derived from the *Residential Services Setting Questionnaire*, a lower score is indicative of greater 'homeliness'. The resulting data are summarised below in Table 17.

Table 17: Architectural Features				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Architectural Features Scale</b>				
average rating (& s.d.) of homeliness of main living area	68% (10%)	58% (6%)	69% (7%)	p<0.0001 (A)
<b>Residential Services Setting Questionnaire</b>				
average rating (& s.d.) of the 'homeliness' of the ...				
... dining room	2.4	2.9	1.5	p<0.0001 (K)
... living room	1.8	2.5	1.5	p<0.0001 (K)
... bathroom	2.4	3.2	2.0	p<0.0001 (K)
... bedroom	1.0	3.2	1.2	p<0.0001 (K)
... overall	75% (17%)	50% (16%)	86% (14%)	p<0.0001 (A)
% people living in houses with ...				
... areas to which residents were denied access	24%	42%	16%	p<0.0001 (C)
... strengthened fabric (eg doors)	6%	38%	16%	p<0.0001 (C)
... strengthened furniture	2%	26%	18%	p<0.0001 (C)
... adaptations to equipment (eg TV)	9%	24%	8%	p<0.0001 (C)
... special locks	17%	76%	23%	p<0.0001 (C)

83 *Summary:* On the *Residential Services Setting Questionnaire*, the physical environment provided in dispersed housing schemes was rated as being significantly more homely ( $F=253.8$ ;  $df=2,465$ ;  $p<0.0001$ ) than that provided in village communities, which was, in turn, rated as being more homely than residential campuses (Scheffé post-hoc tests,  $p<0.05$ ). On the *Architectural Features Scale*, however, the differences between the physical environment provided by dispersed housing schemes and village communities was not significant. Similarly, 'non-normative' modifications to the fabric of the house and/or its contents were significantly more likely to occur in residential campuses than in either village communities or dispersed housing schemes ( $\chi^2$ =range 22.4-122.9,  $df=2$ ,  $p<0.0001$ ).

84 *Association with ability and challenging behaviour:* There were no significant associations between ability and the rated homeliness of setting within either dispersed housing schemes or residential campuses. Within village communities, however, people with more severe disabilities were more likely to live in less homely surroundings (*AFS*:  $r=0.387$ ,  $p<0.01$ ; *RSSQ*:  $r=0.525$ ,  $p<0.01$ ). There were no significant associations between challenging behaviour and the rated homeliness of setting within any of the three models. With regard to specific modifications:

- 84.1 within dispersed housing schemes, people with more severe disabilities were more likely to live in settings with strengthened furniture ( $r=0.341$ ,  $p<0.01$ ) and building fabric ( $r=0.252$ ,  $p<0.01$ ). People with more severe challenging behaviour were more likely to live in settings with adaptations to equipment ( $r=0.277$ ,  $p<0.01$ );
- 84.2 within residential campuses, people with more severe disabilities were more likely to live in settings with strengthened furniture ( $r=0.257$ ,  $p<0.01$ );
- 84.3 within village communities, people with either more severe disabilities and/or more severe challenging behaviour were more likely to live in settings

characterised by adaptations to equipment (*ability*:  $r=0.360$ ,  $p<0.01$ ; *challenging behaviour*:  $r=0.545$ ,  $p<0.01$ ) and strengthened building fabric (*ability*:  $r=0.353$ ,  $p<0.01$ ; *challenging behaviour*:  $r=0.521$ ,  $p<0.01$ ). In addition, people with more severe challenging behaviour were more likely to live in settings with a secure or safe room ( $r=0.341$ ,  $p<0.01$ ).

## Staffing

- 85 Information on the number and qualifications of staff employed within the setting, collected through the *Residential Services Setting Questionnaire* (Emerson et al, 1995), is summarised below in Table 18.

Table 18: Staffing Ratios and Qualifications				
	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>Staff:(1)User Ratios<sup>1</sup></b>				
mean (& s.d.)				
... all staff employed in setting	1.2 (1.0)	1.5 (0.6)	1.7 (0.8)	$p<0.0001$ (A)
... senior staff	0.2 (0.2)	0.3 (0.2)	0.4 (0.2)	$p<0.0001$ (A)
... care staff	1.0 (1.0)	1.0 (0.3)	1.3 (0.7)	$p<0.0001$ (A)
... other staff	0.0 (0.0)	0.2 (0.5)	0.0 (0.1)	$p<0.0001$ (A)
<b>Qualifications</b>				
% of people supported by senior staff with ...				
... nursing qualification	0%	95%	50%	$p<0.0001$ (C)
... social work or CSS qualification	0%	0%	6%	$p<0.001$ (C)
... NVQ/City & Guilds qualification	41%	3%	29%	$p<0.0001$ (C)
... teaching/graduate qualification	8%	0%	14%	$p<0.0001$ (C)
... any of the above	49%	95%	80%	$p<0.0001$ (C)
<b>Note 1:</b> Ratios indicate the number of staff employed across the 24 hour day to support one resident.				

- 86 *Summary (Staffing Ratios):* Overall staffing ratios ( $F=13.6$ ;  $df=2,483$ ;  $p<0.0001$ ) and ratios of seniors staff ( $F=23.1$ ;  $df=2,483$ ;  $p<0.0001$ ) were significantly higher for people supported in dispersed housing schemes than people supported in residential campuses (Scheffé post-hoc test,  $p<0.05$ ), which were in turn significantly higher than for people supported in village communities (Scheffé post-hoc test,  $p<0.05$ ). Ratios of care staff ( $F=14.3$ ;  $df=2,483$ ;  $p<0.0001$ ) were higher in dispersed housing schemes than either village communities or residential campuses. Higher ratios of other staff (e.g., cleaning and domestic staff) were reported in residential campuses ( $F=12.8$ ;  $df=2,483$ ;  $p<0.0001$ ) than in either dispersed housing schemes or village communities (Scheffé post-hoc tests,  $p<0.05$ ).
- 87 *Association with ability:* There were no significant associations between ability and any measure of staffing ratios within residential campuses. Within dispersed housing schemes and village communities, however, people with more severe disabilities were more likely to be supported in settings with higher overall staff ratios (*VC*:  $r=0.635$ ,  $p<0.01$ ; *DHS*:  $r=0.531$ ,  $p<0.01$ ), higher ratios of care staff (*VC*:  $r=0.645$ ,  $p<0.01$ ; *DHS*:  $r=0.485$ ,  $p<0.01$ ) and higher ratios of senior staff (*VC*:  $r=0.502$ ,  $p<0.01$ ; *DHS*:  $r=0.323$ ,  $p<0.01$ ). As a result of the above associations, analysis of differences between the three models in levels of staff ratios (overall) and ratios of care staff were repeated while controlling for variation

in user ability. The results of these analyses were consistent with the original analyses indicating significantly greater staffing ratios in dispersed housing schemes both overall (ANCOVA  $F=20.6$ ,  $df=2,470$ ;  $p<0.0001$ ), for care staff (ANCOVA  $F=29.7$ ,  $df=2,470$ ;  $p<0.0001$ ) and for senior staff (ANCOVA  $F=25.9$ ,  $df=2,470$ ;  $p<0.0001$ ). These results were broadly consistent with the results derived from the analyses of matched samples. Significantly higher staffing ratios were found in dispersed housing schemes than residential campuses overall ( $t=6.6$ ,  $df=238$ ,  $p<0.001$ ), for senior staff ( $t=5.1$ ,  $df=241$ ,  $p<0.001$ ) and for care staff ( $t=8.7$ ,  $df=167$ ,  $p<0.001$ ). However, while significantly higher ratios of senior staff were found in dispersed housing schemes than village communities ( $t=3.6$ ,  $df=130$ ,  $p<0.001$ ), there were no significant differences for overall staffing ratios ( $t=1.4$ ,  $df=149$ ,  $p>0.1$ ).

- 88 *Association with challenging behaviour:* There were no significant associations between challenging behaviour and any measure of staffing ratios within either dispersed housing schemes or residential campuses. Within village communities, however, people with more severe challenging behaviour were more likely to be supported in settings with higher overall staff ratios ( $VC$ :  $r=0.461$ ,  $p<0.01$ ), higher ratios of care staff ( $VC$ :  $r=0.456$ ,  $p<0.01$ ) and higher ratios of senior staff ( $VC$ :  $r=0.446$ ,  $p<0.01$ ).
- 89 *Summary (Staff Qualifications):* Overall people living in either residential campuses or dispersed housing schemes were significantly more likely to be supported by a staff team in which a senior member of staff had a qualification in health/social care or related field than people living in village communities ( $\chi^2=65.6$ ,  $df=2$ ,  $p<0.00001$ ). Nearly all of the qualifications held by senior staff employed in residential campuses and by the majority of staff holding qualifications in dispersed housing schemes were in the area of learning disability nursing.
- 90 *Association with ability and challenging behaviour:* There were no significant associations between ability and any measure of the qualifications of senior staff within residential campuses or village communities. Within dispersed housing schemes people with more severe disabilities were more likely to be supported in settings with qualified senior staff ( $DHS$ :  $r=0.304$ ,  $p<0.01$ ). There were no significant associations between challenging behaviour and any measure of the qualifications of senior staff within any of the three models.

## Management Practices: Active Support

- 91 The *Residential Services Working Practices Scale* (Felce et al, 1995) was used to collect information on procedures implemented within the setting regarding individual planning, assessment and teaching, the planning of daily and weekly activity, arranging staff support for resident activity and the training and supervision of staff. Individual procedures were rated on a four point scale, with higher scores indicative of higher quality procedures. Further information on service use was collected through a modified version of the *Individual Schedule* (Alborz et al, 1994). These data are summarised below in Table 19.

Table 19: Working Practices				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Working Practices Scale</b>				
average rating of quality of procedures for ...				
... person centred planning	4.0	3.5	3.8	p<0.0001 (K)
... assessment & teaching	3.6	3.3	2.8	p<0.001 (K)
... daily/weekly activity planning	3.7	2.5	3.3	p<0.0001 (K)
... staff support of residents	3.1	2.6	3.2	p<0.0001 (K)
... training & supervision of staff	3.2	2.6	3.4	p<0.0001 (K)
average rating of extent of user involvement in procedures for ...				
... person centred planning	3.2	1.8	2.6	p<0.0001 (K)
... assessment & teaching	3.1	1.8	2.4	p<0.0001 (K)
... daily/weekly activity planning	3.1	2.0	2.8	p<0.0001 (K)
<b>Individual Planning &amp; Case Management</b>				
percentage of residents with ...				
... a keyworker	99%	100%	91%	p<0.0001 (C)
... a case manager	84%	38%	51%	p<0.0001 (C)
... an Individual Programme Plan	99%	95%	92%	n.s.
percentage of Individual Programme Plans which address				
... communication	68%	52%	67%	p<0.01 (C)
... self-care	84%	65%	75%	p<0.01 (C)
... sexuality/relationships	37%	25%	41%	p<0.01 (C)
... challenging behaviour	45%	57%	55%	n.s.
... job skills	66%	14%	34%	p<0.0001 (C)
... academic skills	51%	11%	33%	p<0.0001 (C)
... social skills	74%	61%	78%	p<0.01 (C)
... self-esteem	59%	29%	54%	p<0.0001 (C)
... social relationships	66%	57%	80%	p<0.0001 (C)

- 92 *Summary:* There were significant differences between the three approaches on all measures of the extent to which services implemented the 'active support' model (i.e., had clearly defined procedures for planning and implementing support to both users and support staff). In all areas of performance, internal management practices reported in dispersed housing schemes were rated as being of a higher quality than those reported in residential campuses (post hoc, Mann-Whitney U, z range 3.7-9.7; p<0.001). In all but one area of performance (assessment and teaching), internal management practices

reported in village communities were rated as being of a higher quality than those reported in residential campuses (post hoc, Mann-Whitney U, z range 4.2-10.1;  $p < 0.001$ ). In all but one area of performance (staff support to residents), internal management practices reported in village communities were rated as being of a higher quality than those reported in dispersed housing schemes (post hoc, Mann-Whitney U, z range 2.9-4.6;  $p < 0.01$ ). Closer inspection of users' individual plans indicated that, within dispersed housing schemes, relatively greater emphasis appeared to be placed on developments in the areas of social relationships ( $\chi^2 = 21.7$ ,  $df = 2$ ,  $p < 0.001$ ). Conversely, within village communities greater emphasis appeared to be placed on vocational skills ( $\chi^2 = 60.9$ ,  $df = 2$ ,  $p < 0.00001$ ) and academic skills ( $\chi^2 = 38.5$ ,  $df = 2$ ,  $p < 0.00001$ ).

- 93 *Association with ability and challenging behaviour:* There were no significant associations between ability and ratings of the implementation of the active support model within either residential campuses or dispersed housing schemes. Within village communities people with more severe disabilities were more likely to be supported in settings with *lower* quality procedures for the supervision & training of staff ( $r = 0.497$ ,  $p < 0.01$ ), but higher quality procedures for activity planning ( $r = 0.387$ ,  $p < 0.01$ ). In all three models, however, more able users were more likely to be supported in settings in which they had greater involvement with the implementation of active support procedures (*DHS*:  $r > 0.569$ ,  $p < 0.01$ ; *VC*:  $r > 0.545$ ,  $p < 0.01$ ; *RC*:  $r > 0.359$ ,  $p < 0.01$ ). As a result of these associations, analysis of differences between the three models in the overall level of user involvement in the implementation of active support procedures (summing scores across all three areas) was repeated while controlling for variation in user ability. The results of these analyses were broadly consistent with the original analyses indicating significantly lower levels of user involvement in residential campuses in the implementation of active support procedures (ANCOVA  $F = 14.3$ ,  $df = 2, 470$ ;  $p < 0.001$ ). Analysis of the matched samples indicated that, while there were no significant differences in user involvement between village communities and dispersed housing schemes, people living in residential campuses were significantly less involved than people living in dispersed housing schemes ( $t = 3.60$ ,  $df = 181$ ,  $p < 0.0001$ ). There were no significant associations between challenging behaviour and ratings of the implementation of the active support model within residential campuses or dispersed housing schemes. Within village communities, however, people with more severe challenging behaviour were more likely to be supported in settings with poorer quality procedures in the areas of person centred planning ( $r = 0.338$ ,  $p < 0.01$ ) and training and support of staff ( $r = 0.329$ ,  $p < 0.01$ ). Similarly, there were no significant associations between challenging behaviour and ratings of user involvement in the implementation of active support procedures within either dispersed housing schemes or residential campuses. Within village communities, however, people with more severe challenging behaviour were significantly less likely to be involved in procedures for person centred planning ( $r = 0.329$ ,  $p < 0.01$ ), assessment and teaching ( $r = 0.373$ ,  $p < 0.01$ ) or activity planning ( $r = 0.325$ ,  $p < 0.01$ ).

## Social Climate

- 94 The *Group Home Management Interview* (Pratt et al, 1980) was used to rate the extent to which the setting embodied the cardinal features of ‘total institutions’: block treatment, depersonalisation, rigidity of routines; and social distance. Results, presented as a per cent of the maximum possible score on each sub-scale, are summarised below in Table 20.

	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>Group Home Management Interview</b>				
average (& s.d.) rating of ...				
... social distance	16%	34%	16%	p<0.0001 (A)
... depersonalisation	30%	45%	28%	p<0.0001 (A)
... block treatment	46%	62%	31%	p<0.0001 (A)
... rigidity of routines	2%	26%	9%	p<0.0001 (A)

- 95 *Summary:* In all four areas of performance people living in residential campuses were supported in a more institutional manner than people living in either village communities or dispersed housing schemes (all Scheffé post-hoc tests, p<0.05). In the area of rigidity of routines, people living in village communities were supported in a less institutional manner than people living in dispersed housing schemes (Scheffé post-hoc test, p<0.05). In the area of block treatment, people living in village communities were supported in a more institutional manner than people living in dispersed housing schemes (Scheffé post-hoc test, p<0.05).
- 96 *Association with ability and challenging behaviour:* Across all three models people with more severe disabilities were more likely to be supported in settings characterised by greater depersonalisation (*DHS*:  $r=0.745$ ,  $p<0.01$ ; *VC*:  $r=0.638$ ,  $p<0.01$ ; *RC*:  $r=0.344$ ,  $p<0.01$ ). In both dispersed housing schemes and village communities people with more severe disabilities were more likely to be supported in settings characterised by greater block treatment (*DHS*:  $r=0.453$ ,  $p<0.01$ ; *VC*:  $r=0.354$ ,  $p<0.01$ ) and rigidity of routines (*DHS*:  $r=0.233$ ,  $p<0.01$ ; *VC*:  $r=0.371$ ,  $p<0.01$ ). As a result of these associations, analysis of differences between the models in these three aspects of institutional climate were repeated while controlling for variation in user ability. The results of these analyses were consistent with the original analyses indicating significantly greater institutional climate in residential campuses (depersonalisation ANCOVA  $F=104.0$ ,  $df=2,483$ ;  $p<0.0001$ ; block treatment ANCOVA  $F=184.0$ ,  $df=2,483$ ;  $p<0.0001$ ; rigidity of routines ANCOVA  $F=165.5$ ,  $df=2,483$ ;  $p<0.001$ ). Analysis of the matched samples indicated: significantly higher levels of block treatment ( $t=15.4$ ,  $df=179$ ,  $p<0.001$ ), depersonalization ( $t=10.3$ ,  $df=231$ ,  $p<0.001$ ) and rigidity of routines ( $t=12.2$ ,  $df=227$ ,  $p<0.001$ ) in residential campuses than dispersed housing schemes; significantly higher levels of block treatment ( $t=9.3$ ,  $df=138$ ,  $p<0.001$ ) and depersonalization ( $t=5.2$ ,  $df=132$ ,  $p<0.001$ ) in village communities than dispersed housing schemes; significantly higher levels of rigidity of routines in dispersed housing schemes than village communities ( $t=4.7$ ,  $df=100$ ,  $p<0.001$ ). There were no significant associations between ability and ratings of the social distance between users and staff within either dispersed housing schemes or residential campuses. In village communities, however, more able people were more likely to be supported in settings characterised by less social distance (*VC*:  $r=0.422$ ,  $p<0.01$ ). There were no significant associations between challenging behaviour and ratings of the social

climate of settings within either dispersed housing schemes or residential campuses. In village communities, however, people with more severe challenging behaviour were more likely to be supported in settings characterised by greater depersonalisation (*VC*:  $r=0.319$ ,  $p<0.01$ ) and rigidity of routines (*VC*:  $r=0.474$ ,  $p<0.01$ ).

## Medication

- 97 Information was collected on all medication being taken by users. This information is summarised below for the following types of medication: hypnotics; anxiolytics; anti-psychotics (oral and depot injection); antidepressants; anti-epileptics; and anti-Parkinsonism drugs. Table 21 summarises the proportion of users taking these types of medication regularly and also PRN ("as required").

	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>% of users receiving PRN medication</b>				
... anti-psychotics	1%	17%	6%	$p<0.0001$ (C)
<b>% of users receiving regular medication ...</b>				
hypnotics	4%	6%	4%	n.s.
anxiolytics	2%	5%	5%	n.s.
anti-psychotics	17%	56%	27%	$p<0.0001$ (C)
antidepressants	2%	14%	6%	$p<0.01$ (C)
anti-epileptics	30%	46%	36%	n.s.

- 98 *Summary*: People living in residential campuses were significantly more likely than people living in either village communities or residential campuses to receive anti-psychotic ( $\chi^2=46.7$ ,  $df=2$ ,  $p<0.00001$ ) and anti-depressant ( $\chi^2=9.2$ ,  $df=2$ ,  $p<0.01$ ) medication on a regular basis, and to receive anti-psychotic ( $\chi^2=22.0$ ,  $df=2$ ,  $p<0.00001$ ) 'as required'. Of those people receiving anti-psychotic medication, 21% were receiving more than one form. There were no statistically significant differences between models in the extent of polypharmacy.

- 99 *Association with ability and challenging behaviour*: In residential campuses people with more severe disabilities were less likely to receive regular anti-psychotic medication (*RC*:  $r=0.319$ ,  $p<0.01$ ). There were no other significant associations between medication usage and ability within any of the three models. In both dispersed housing schemes and residential campuses people with more severe challenging behaviour were more likely to receive hypnotics on a regular basis (*DHS*:  $r=0.251$ ,  $p<0.01$ ; *RC*:  $r>0.331$ ,  $p<0.01$ ). In both village communities and residential campuses people with more severe challenging behaviour were more likely to receive anti-psychotic medication on a regular basis (*VC*:  $r=0.280$ ,  $p<0.01$ ; *RC*:  $r>0.293$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models in usage of hypnotics and anti-psychotics were repeated while controlling for variation in level of challenging behaviour. The results of these analyses were consistent with the original analyses indicating significantly greater use of anti-psychotic medication in residential campuses, even when differences in levels of challenging behaviour are taken into account (partial  $r_{\text{campus}}=0.208$ ,  $p<0.0001$ ). Again, consistent with the initial analyses, there was no significant association between models and the use of hypnotic medication. Analysis of the matched samples indicated



significantly greater use of anti-psychotic medication in residential campuses than dispersed housing schemes ( $\chi^2=14.9$ ,  $df=1$ ,  $p<0.001$ ).

### *Professional Support & Service Utilisation*

- 100 The *Client Service Receipt Inventory* (Knapp et al, 1992; Knapp, 1995) was used to collect information on the extent to which the person used external health and social services over the preceding three months. Further information on service use was collected through a modified version of the *Individual Schedule* (Alborz et al, 1994). General aspects of these data are summarised below in Table 22.

Table 22: General Aspects of Service Receipt				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Contact with health and social care professionals</b>				
percent of residents who, in the last 3 months, have seen a ...				
... GP	59%	62%	67%	n.s.
... dentist	64%	38%	49%	p<0.001 (C)
... social worker	31%	2%	15%	p<0.0001 (C)
<b>Routine Health Care</b>				
percent of residents who, in the last year, have had ...				
... a routine health check	89%	75%	56%	p<0.0001 (C)
... their blood pressure measured	89%	79%	70%	p<0.0001 (C)
... a mammogram (if a woman)	0%	0%	9%	n.s.
... a testicular check (if a man)	60%	37%	23%	p<0.001 (C)
percent of residents who, in the last two years, have had ...				
... their sight tested	92%	73%	73%	p<0.01 (C)
... their hearing tested	65%	53%	54%	n.s.
percent of residents who, in the last 5 years, have had ...				
... a cervical smear (if a woman)	33%	10%	33%	n.s.
<b>Advocacy</b>				
percent of residents who, in the last 3 months, have seen ...				
... an advocate	2%	2%	9%	n.s.
... solicitor/lawyer	1%	2%	1%	n.s.

- 101 *Summary*: In four areas (dental treatment within the last three months, routine health checks, blood pressure check in the last year, vision test in the last two years) there were statistically significant differences in health care received between the three models ( $\chi^2$  range 12.4 - 36.4,  $df=2$ ,  $p<0.001$ ). In each instance, the highest levels of service receipt were recorded among people living in village communities and the lowest levels among people living in dispersed housing schemes.
- 102 *Association with ability and challenging behaviour*: There were no associations between ability and service utilisation for people living in dispersed housing schemes. Within residential campuses and village communities more able women were more likely to have

had a cervical smear in the last five years (*VC*:  $r=0.376$ ,  $p<0.01$ ; *RC*:  $r=0.445$ ,  $p<0.01$ ). Within village communities, more able users were more likely to have had their sight checked in the last year (*VC*:  $r=0.361$ ,  $p<0.01$ ), but less likely to have had a testicular check (*VC*:  $r=0.438$ ,  $p<0.01$ ). There were no other significant associations between service utilisation and ability within any of the three models. Within village communities, users with more severe challenging behaviour were less likely to have had their sight checked in the last year (*VC*:  $r=0.370$ ,  $p<0.01$ ). There were no other significant associations between service utilisation and challenging behaviour within any of the three models.

- 103 Data on service use were also combined with information on the needs and abilities of residents to determine what supports were provided to people with specific health care needs. Presence of a psychiatric disorder was determined by the person scoring above the cut-off point on the *PAS-ADD Checklist*. Presence of challenging behaviour was determined by the person being reported to show any form of severe or moderately serious problem on the *Aberrant Behavior Checklist*. Restricted mobility was defined as people scoring below 10 points on the Motor Development sub-scale of the *Adaptive Behavior Scale*. These data are summarised below in Tables 23, 24 and 25.

Table 23: Specific Aspects of Service Receipt (Mental Health)				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Contact with health and social care professionals</b>				
percent of residents who have a possible psychiatric disorder who, in the last 3 months, have seen a ...				
... psychiatrist	20%	47%	30%	n.s.
... psychologist	10%	38%	15%	n.s.
... art/drama/music therapist	20%	3%	3%	n.s.
... alternative therapist	10%	3%	12%	n.s.
... community psychiatric nurse	0%	0%	17%	$p<0.01$ (C)
... learning disability nurse	0%	0%	0%	n.s.
percent of residents who have a possible psychiatric disorder who receive ....				
... anti-psychotic medication	30%	72%	39%	$p<0.01$ (C)
... anti-depressant medication	0%	19%	17%	n.s.
... anxiolytic medication	5%	3%	8%	n.s.

Table 24: Specific Aspects of Service Receipt (Challenging Behaviour)				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Contact with health and social care professionals</b>				
percent of residents who show challenging behaviour who, in the last 3 months, have seen a ...				
... psychiatrist	17%	43%	24%	p<0.01 (C)
... psychologist	14%	32%	13%	p<0.01 (C)
... speech therapist	17%	11%	15%	n.s.
... art/drama/music therapist	26%	8%	5%	p<0.001 (C)
... alternative therapist	6%	3%	14%	n.s.
... community psychiatric nurse	0%	2%	10%	p<0.01 (C)
... learning disability nurse	0%	0%	2%	n.s.
percent of residents who show challenging behaviour whose are sometimes subjected to ...				
... mechanical restraint	0%	3%	3%	n.s.
... physical restraint	35%	54%	39%	n.s.
... seclusion	16%	18%	23%	n.s.
... sedation	13%	56%	25%	p<0.001 (C)
percent of residents who have challenging behaviour whose care staff have a written programme to help them address the user's behaviour				
	29%	49%	45%	n.s.
percent of residents who show challenging behaviour who regularly receive ....				
... anti-psychotic medication				
... anti-depressant medication	26%	67%	33%	p<0.001 (C)
... anxiolytic medication	0%	19%	7%	p<0.01 (C)
	5%	4%	7%	n.s.

Table 25: Specific Aspects of Service Receipt (Restricted Mobility)				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Contact with health and social care professionals</b>				
percent of residents who have restricted mobility who, in the last 3 months, have seen a ...				
... physiotherapist	40%	43%	53%	n.s.
... occupational therapist	0%	12%	19%	n.s.

104 *Summary:* There were a number of statistically significant differences with regard to the ways in which potential psychiatric disorders and challenging behaviour was supported or treated across the three models.

- 104.1 People with possible psychiatric disorders living in residential campuses were significantly more likely to receive anti-psychotic medication ( $c^2=11.8$ ,  $df=2$ ,  $p<0.01$ ). People with possible psychiatric disorders living in dispersed housing schemes were significantly more likely to have seen a community psychiatric nurse ( $c^2=9.6$ ,  $df=2$ ,  $p<0.01$ ).
- 104.2 People with challenging behaviour living in residential campuses were significantly more likely to receive anti-psychotic medication ( $c^2=32.7$ ,  $df=2$ ,  $p<0.001$ ) and anti-depressant medication ( $c^2=13.7$ ,  $df=2$ ,  $p<0.001$ ), more likely to be sedated in response to an episode of challenging behaviour ( $c^2=31.0$ ,  $df=2$ ,  $p<0.01$ ), and more likely to have seen a psychiatrist ( $c^2=12.3$ ,  $df=2$ ,  $p<0.01$ ) and psychologist ( $c^2=12.5$ ,  $df=2$ ,  $p<0.01$ ) in the last three months. People with challenging behaviour living in dispersed housing schemes were significantly more likely to have seen a community psychiatric nurse ( $c^2=9.2$ ,  $df=2$ ,  $p<0.01$ ). People with challenging behaviour living in village communities were significantly more likely to have seen an art/drama or music therapist ( $c^2=15.2$ ,  $df=2$ ,  $p<0.01$ ).

## Summary

105 In the preceding sections we have examined differences between village communities, residential campuses and dispersed housing schemes with regard to the nature of the supports they provide to their residents. In Table 26, below, we have summarised the comparative benefits accruing to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with ‘higher quality’ supports). Where necessary, assumptions underlying judgements of quality have been indicated.

Table 26: Summary of Benefits Associated With Specific Forms of Provision	
Variable	Preferred Model
(Smaller) <b>Size of Residence</b>	dispersed housing schemes
<b>Residence (Not) Also Providing Short-Term Care</b>	dispersed housing schemes
<b>Homeliness of Residence</b>	dispersed housing schemes & village communities
<b>Staffing</b>	
(higher) overall staff ratios	dispersed housing schemes & village communities
(higher) senior staff ratios	dispersed housing schemes
(higher) care staff ratios	dispersed housing schemes & village communities
(higher) staff qualifications	dispersed housing schemes & residential campuses
<b>Active Support</b>	
person centred planning	village communities
assessment & teaching	village communities
activity planning	village communities
staff support to residents	dispersed housing schemes & village communities
training & supervision of staff	village communities
user involvement in active support systems	dispersed housing schemes & village communities
<b>Social Climate (Institutionalisation)</b>	
less social distance	dispersed housing schemes & village communities
less depersonalisation	dispersed housing schemes
less block treatment	dispersed housing schemes
less rigidity of routines	village communities
<b>Medication</b>	
less use of anti-psychotic medication	dispersed housing schemes & village communities
<b>Health Checks</b>	village communities & residential campuses
<b>Advocacy</b>	no clear difference

## The Costs of Service Provision

106 In the following section we will examine:

- 106.1 the costs of providing accommodation and associated care within village communities, residential campuses and dispersed housing schemes;
- 106.2 client use and cost of services not provided by the accommodation facility;
- 106.3 relationships between costs and various client characteristics.

### *Composition of Accommodation Costs*

107 In order to be sure that any comparison between models was on a 'like with like' basis, it was essential to calculate the 'true' cost of providing care in the accommodation arrangements run by participating organisations. As discussed elsewhere (Appendix 2) this allowed us to reflect 'invisible' costs (services provided free to the organisation, cross-subsidies between sites, and hidden subsidies from public sector and voluntary agencies, as well as the opportunity cost of capital). Our methodology also ensured that a consistent approach was taken to costing elements where arrangements might vary (such as leasing or ownership of site vehicles).

108 It should be noted that when we discuss 'accommodation arrangements', we are including all services provided as part of the accommodation package although, in the case of dispersed housing arrangements, the accommodation package itself might be delivered by two or more agencies. Accommodation elements varied a great deal between the residential models and between individual organisations. These elements are explored further in the next part of this section. Although, from the provider's point of view, the accommodation package in one or two instances included day services, these have been separated from accommodation for our purposes, and are examined later in the section.

109 All participating organisations were providing a residential service 365 days per annum. Several organisations provided short-term as well as long-term care within the same setting. Without exception, the managers interviewed felt that staffing costs should not be weighted to allow for intensive, short-term input, although staffing levels within the setting itself might have been higher because of a mixture of residential arrangements.

110 Service arrangements, responsibility for budgeting, and accounting procedures were unique to each organisation, although systems at the residential campus sites did not vary greatly from one another.

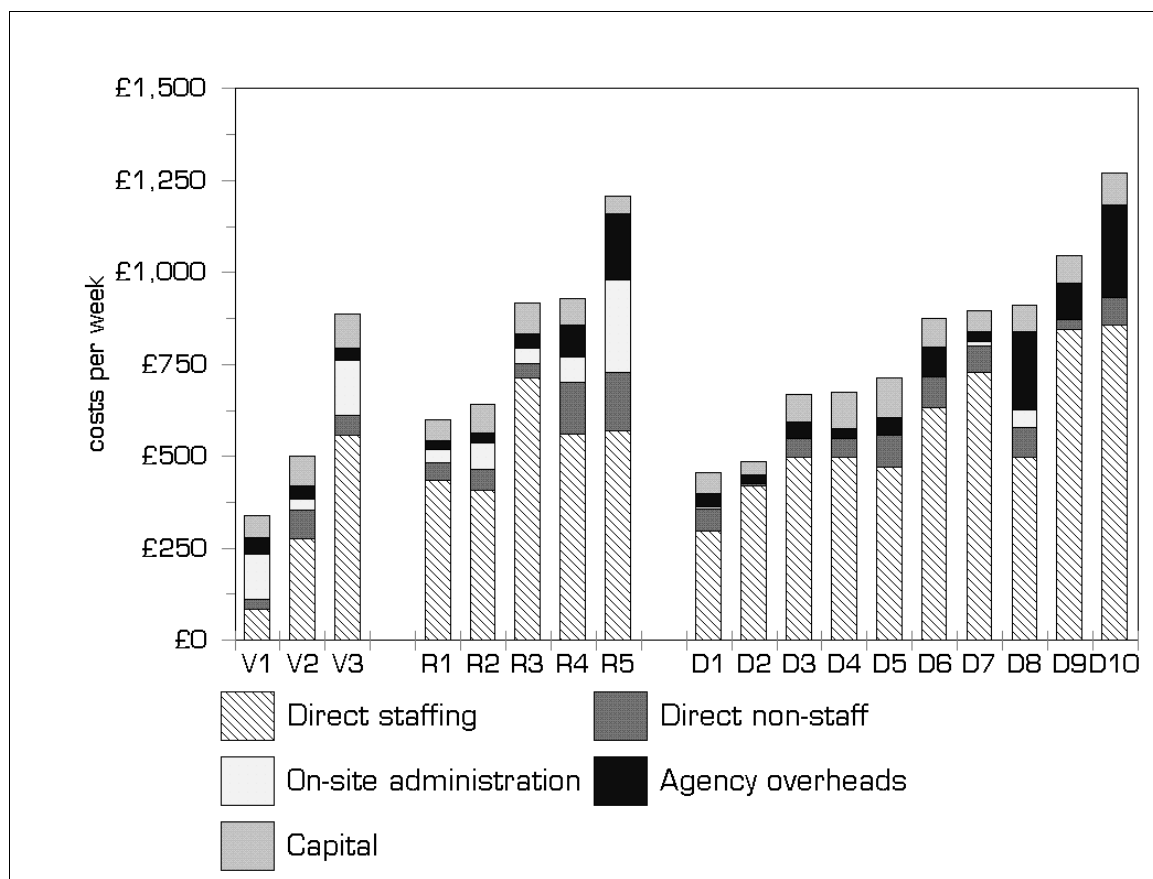
111 Staff accommodation was provided on site at only one of the residential campuses. At one of the village communities, all management staff had houses on campus and there were also several flats for support staff. A second village community provided temporary accommodation for newly employed staff moving into the area.

112 Dispersed housing arrangements included, in two organisations, a 'support tenant'. This person was intended to provide informal support, and to be a presence in the house during the night, but was otherwise leading an independent life.

113 Staff working hours varied between 36 and 40 hours per week (37.5 for each of the residential campuses). Although this variation did not affect the cost of providing care, it is possible that higher costs associated with pay were related to longer working hours.

- 114 Volunteers were generally to be found assisting in fund-raising activities, or helping out on expeditions and other day activities. No organisation appeared to rely on the input of volunteers in providing a residential service.
- 115 Although every attempt has been made to consider all the cost implications of service delivery, we must still be aware of costs we are unable to quantify. To estimate the full transaction costs for health and local authorities, including senior management, support and higher-level overheads, would involve a separate evaluation, and we have not addressed the issue in this study. We may hypothesise that the more individual the package of housing and support, the more time invested in its development, but it should be remembered that the purchase and monitoring of less user-centred services also carry cost implications (Ryan, 1998).
- 116 In order to explore the distribution of costs, Table 27 gives details of the mean weekly costs of providing accommodation and associated care within organisations in each of the three models of residential support. Figure 1 presents the same information in a bar chart. All participating organisations were costed using a consistent approach (see Appendix 2) and the amounts shown are weighted by the number of people in the sample and (where appropriate) the specific staffing arrangements which have been put in place for them. We have been able to separate out the constituent components of the cost of running each facility in a broadly comparable way. All costs are reported at 1997-98 price levels.

Organisation	<i>Direct Staffing</i>	<i>Direct non-staffing</i>	<i>On-site Admin</i>	<i>Agency Overheads</i>	<i>Capital Costs</i>	<i>Total</i>
<i>Village Communities</i>						
1	£83.89	£26.19	£123.20	£45.32	£60.39	£338.99
2	£276.78	£75.96	£30.69	£37.11	£80.69	£501.23
3	£558.86	£52.14	£149.11	£34.81	£91.49	£886.40
<i>Residential</i>						
1	£435.01	£46.47	£36.02	£25.87	£56.44	£599.82
2	£407.93	£57.14	£71.55	£26.83	£80.08	£643.53
3	£711.95	£41.96	£39.49	£39.68	£84.02	£917.34
4	£561.86	£139.49	£69.74	£85.38	£72.71	£929.18
5	£570.94	£155.49	£252.82	£179.30	£49.03	£1,284.98
<i>Dispersed Housing</i>						
1	£295.43	£61.59	£6.24	£34.81	£56.95	£455.02
2	£418.48	£8.47	£0.00	£21.20	£37.88	£486.03
3	£497.75	£52.64	£0.00	£42.63	£74.87	£667.88
4	£496.39	£52.39	£0.00	£27.44	£99.15	£675.36
5	£470.20	£87.32	£0.00	£47.95	£106.85	£712.32
6	£632.07	£85.80	£0.00	£80.45	£75.53	£873.85
7	£729.25	£70.64	£11.79	£28.21	£54.77	£894.66
8	£496.68	£82.29	£47.38	£212.71	£71.12	£910.18
9	£846.49	£25.72	£0.00	£99.73	£73.38	£1,045.31
10	£857.99	£75.13	£0.00	£251.18	£85.30	£1,269.60



**Figure 1: Costs per Week by Organisation**

117 The costs reported in Table 27 and indicated in Figure 1 are those borne (or forgone) by the provider organisation and all other ‘official’ bodies. Costs are disaggregated under the following headings:

- 117.1 *Direct staffing*: Total costs of staffing the individual setting: support workers based in each house where a study client is a resident, and the apportioned input from senior care staff and others (such as domestic staff) whose time would be divided between several different settings.
- 117.2 *Direct non-staffing*: These include provisions, heat and light, water rates, council tax, routine maintenance and household equipment.
- 117.3 *On-site administration*: The stratum of administration and management at the level of the individual campus/village site.
- 117.4 *Agency overheads*: Central office costs, apportioned across all facilities managed by the parent organisation.
- 117.5 *Capital costs*: Opportunity cost of the building and land, fixtures and fittings, and vehicles (whether leased or owned by the provider organisation).

118 The mean weekly cost per resident week varied between £339 and £886 (village communities); £600 and £1,285 (residential campuses); and £455 and £1,270 (dispersed housing). As we would expect, direct staffing costs dominated the cost of accommodation and associated care. They made up, on average, 56 per cent of the total ‘official’ cost of accommodation in the village communities, 61 per cent in the residential campuses and 72 per cent in dispersed housing arrangements.



- 119 In certain instances staffing arrangements within settings were geared to supporting a particular person. Where possible, we have weighted staff costs to take into account the fact that waking night staff cover in a particular dispersed housing arrangement, for example, was being provided for one resident and not the second person living in the house.
- 120 Two of the village communities employed methods of weighting staff time to meet the needs of individual clients, and the strategies used by these organisations were followed to calculate the costs of providing the agreed staff/resident ratio for these residents. One reason for low staffing costs at the third village community was that all residents were working full-time, either in workshops on site or elsewhere. Staff cover within the settings during the day would therefore be minimal.
- 121 At most of the residential campuses no special staffing arrangements were put in place for individual residents within the accommodation unit. Differences in staffing costs were mainly due to the number of residents in the individual settings, or one set of staffing arrangements intended to cover two or more settings. The number of residents cared for by a staff team varied between 17 and 23 (campus 1), 13 and 20 (campus 2), 4 and 6 (campus 3) 4 and 7 (campus 4) and 7 and 17 (campus 5). At campus 5, however, we were advised that one participant's needs required the same staffing arrangements as were in place for three residents in another part of the setting. (This was the most expensive service package we examined: accommodation facility costs came to a total of £3,529 per week.)
- 122 Where services were provided in village communities or residential campuses, items such as heat and light and provisions were met by budgets within the organisation itself (although not necessarily the same budget as staffing costs). These costs were covered by the charge made to purchasers on the client's behalf, leaving the client responsible for only personal items, such as toiletries.
- 123 In dispersed housing schemes, a number of different arrangements were in operation. One organisation had separated care from housing in all its settings, and study participants were meeting all non-staffing costs from their DSS benefits (except routine maintenance within the houses). Three other organisations worked with a mixture of arrangements and, from the limited information used to calculate costs in a fourth, it seemed that this organisation did likewise. We would expect to record higher levels of social security benefit receipt in settings run by organisations where residents were expected, or helped, to buy their own food and meet their own household expenses. Users' income levels will be examined later in this section of the report.
- 124 The issue of transport arrangements for residents flagged up costing problems with ideological overtones. For example, if residents were encouraged to use public transport (as was the case in at least one of the village communities), there might be fewer vehicles on site dedicated to their activities. Clearly such a situation represents a cost saving at an organisational level, but we could not tell whether residents' activities were limited in any way, or whether these arrangements placed pressure on staff to provide transport in private cars.
- 125 For village communities and residential campuses, it was possible to identify two distinct strata of costs information relating to agency overheads (such as administration, finance, personnel, management). Staff were employed on the site itself, and at the organisation's central office. Dispersed housing arrangements, on the other hand, comprised small,

scattered units and, therefore, input by administration and management staff usually came from company headquarters. There were two exceptions, where staff based at a community or campus facility managed by the same organisation were responsible for day-to-day administration work.

- 126 In addition to administration and management staff, the site-level stratum might include service professionals such as physiotherapists, psychologists and psychiatrists. We return to this issue later, but should note here that the services included under the 'on-site administration' header varied from one organisation to another. We might have expected central office costs to be lower in organisations where a level of management and administration existed at the facility level, but this did not appear to be the case.
- 127 Average capital cost totals within organisations ranged from £60 to £91 (village communities); £49 to £84 (residential campuses); and £38 to £107 (dispersed housing organisations). Sizes and types of buildings varied a great deal but it is, perhaps, surprising that capital costs for seven of the ten dispersed housing arrangements were higher than £60 per resident week, while two of the residential campus organisations were lower than £60. The calculation of capital costs for village communities and residential campuses included (at least part of) the central site building, which dispersed housing arrangements invariably lacked.
- 128 The total cost in Table 27 does not represent the final total of accommodation-related costs. It is missing any amounts contributed towards their living expenses by the users themselves. These contributions were extremely limited in situations where participants received small amounts of pocket money for the purchase of personal items such as toiletries. As noted earlier, however, in some service arrangements participants received levels of DSS benefits which were intended to meet the greater part of the running costs of the facility.
- 129 Where the fee paid by the purchasing authority covered care costs alone, there would be an additional funding source: housing benefit (whether or not this was routed via the user) or a higher rate of income support to cover rent. To avoid possible double counting (because the full opportunity cost of capital had already been included among the 'official' costs) housing benefit, or any portion of rent payment meeting bricks and mortar costs, was excluded when we were calculating these costs.
- 130 In Table 28 we look in more detail at the relationship between the costs of residential supports met by the provider organisation and all other official agencies, the client in person, and all services provided separately from accommodation arrangements. As noted earlier, although day activities have been separated from residential arrangements for the purposes of analyses, the costs of contact with health and social care professionals might, or might not, be included in accommodation facility costs.
- 131 In the village community category, the costs of residential supports appeared to be fairly straightforward. The provider organisation met all accommodation costs except for small amounts of personal living expenses.

Organisation	Accommodation facility	Client contributions	Non-accommodation costs	Total cost	
<i>Village communities</i>					
	1	£338.99	£27.36	£146.79	£513.14
	2	£501.23	£15.16	£131.16	£647.55
	3	£886.40	£13.10	£143.77	£1,043.27
<i>Residential campuses</i>					
	1	£599.82	£23.53	£71.83	£695.18
	2	£643.53	£12.25	£74.36	£730.14
	3	£917.34	£24.77	£77.88	£1,019.99
	4	£929.18	£21.57	£149.25	£1,100.00
	5	£1,284.98	£26.55	£32.36	£1,343.89
<i>Dispersed housing</i>					
	1	£455.02	£165.08	£100.90	£721.00
	2	£486.03	£118.19	£57.17	£661.39
	3	£667.88	£28.94	£170.23	£867.05
	4	£675.36	£92.40	£74.75	£842.51
	5	£712.32	£33.11	£165.56	£910.99
	6	£873.85	£15.00	£160.00	£1,048.85
	7	£894.66	£24.56	£146.74	£1,065.96
	8	£910.18	£46.78	£262.24	£1,219.20
	9	£1,045.31	£167.59	£52.89	£1,265.79
	10	£1,269.60	£15.00	£111.76	£1,396.36

- 132 Non-accommodation costs were similar in all three village communities, although community 3 employed a district nurse and physiotherapy and psychology staff, and these services would have been available to participants as part of the accommodation service.
- 133 In the residential campus category, client contributions to accommodation costs were also invariably low. All care and housing costs were being funded by the NHS and campus 5 provided a range of health services as part of the accommodation package. (Accommodation facility costs were higher than any organisation in this residential category, and the services of these professionals may be part of the reason for this.) Campus 4 employed a psychiatrist, and other services were available to residents on site, though not as part of accommodation arrangements. Campus 1 provided a small part of a psychiatrist's and a psychologist's time for residents, but all other services were seen as being separate from the residential care package. Campus 2 and campus 3 noted the availability of a range of services on site, but these were not considered to be part of accommodation arrangements.
- 134 User contributions towards the cost of accommodation were higher for people living in dispersed housing than in either of the other residential categories. As noted earlier, where the costs of items such as heat, light, water and provisions were not being met by provider agency funds, we would expect to find higher levels of DSS benefit receipt by the study clients. This does appear to be the case: accommodation facility costs were lower, and user contributions higher, in organisations where at least some of the people being supported were receiving care services only from the provider organisations. Dispersed housing 9 operated a system where very intensive staff support was provided, but the organisation did not meet housing costs in any of its settings.

- 135 No dispersed housing organisation included the input of health or social care professionals as part of the accommodation package, so it is not surprising to see that the costs of non-accommodation service receipt were generally high for participants supported by these organisations.

### **Costs & Charges**

- 136 Although our intention when carrying out this evaluation was to calculate the ‘true’ and full cost of supporting individual study clients, data were also collected on the charges made to residents, or to their sponsoring authorities for their care. We were able to explore these arrangements as part of our work. The information was sufficiently detailed to allow us to make some comparison between costs built up using facility accounts, client income and notional capital expenditure; and costs built up by using charge information, client income and, where appropriate, an element to cover housing benefit, or the housing component of rent payments. We include these comparisons here, with thoughts on some reasons for the differences between the figures reached as end products.
- 137 Residential campus facilities were all run by NHS Trusts with residents’ funding arranged by block contract. At two of the village communities fees were fixed and, at the third, group contract arrangements varied across the many different local authorities responsible for purchasing residential support. Fees were being met by individual residents’ preserved rights to higher rates of social security funding, plus local authority contributions.
- 138 Arrangements appeared to have greater flexibility in the dispersed housing category, and disability-contingent pricing was more common, reducing the amount of cross-subsidisation between clients. Three NHS organisations had been set up as part of local reprovision arrangements. Two of these were still fully funded by the health authority, although one of these organisations had divided the settings into two groups. There were plans to broaden the client group for one of these groups and to bring in another agency to manage the housing arrangements. The third NHS organisation had already changed its service: houses were owned by housing associations and complex contractual arrangements underpinned the provision of support for residents. At least one organisation received part of their funding from the ‘dowry’ payments paid to former long-stay hospital patients. Other organisations reported a variety of arrangements including block and spot contracts with local authorities.
- 139 Cost and charge information is examined in Table 29. It should be remembered that, although a consistent approach was taken to calculating costs, we would be unable to make the same claim for charges. However, details collected at interview have allowed us to identify which features of accommodation and associated care are intended to be covered by the fee and we have thus been able to estimate elements which are being met from other sources. Excluded from Table 29 are four participants living in dispersed housing for whom fee information was not available.
- 140 The two sets of figures in Table 29 were reached in the following way. Accommodation and associated care costs have been discussed above. Here the ‘official’ cost (actual and any amounts forgone) and the portion falling to residents have been combined to reach a total cost. In this instance, the figure we are calling ‘charge’ is a combination of the total fee paid and the amount left to the resident once their contribution towards the fee has been made. In certain instances, however, this did not complete the picture, since organisations providing staffing but not housing would not include property costs in their

fee, and housing benefit would be meeting the rent, without necessarily being routed via the resident. In these cases, we added an estimate for capital to the charge figure.

Table 29: Average Weekly Cost/Charge of Accommodation Arrangements				
	<i>Village Communities</i> <i>n=86</i>	<i>Residential Campuses</i> <i>n=133</i>	<i>Dispersed Housing</i> <i>n=277</i>	<i>Statistical Significance</i>
<b>Accommodation cost</b>				
Average cost	£606.62	£886.74	£865.17	p<0.0001 [A]
Range	£356-1720	£532-3555	£132-1731	
Standard deviation	£299	£324	£328	
<b>Charge</b>				
Average charge	£603.78	£903.97	£825.49	p<0.0001 [A]
Range	£190-1455	£602-1762	£156-1659	
Standard deviation	£325	£180	£322	
Statistical Significance	n.s.	n.s.	p<0.001]	

- 141 As we have already observed (and as can be seen in Table 29) there was a statistically significant difference in accommodation costs between the residential categories ( $F=23.60$ ,  $df=2$ ;  $p<0.0001$ ), with village communities having significantly lower costs than both residential campuses and dispersed housing schemes (Scheffe post hoc test,  $p<0.05$ ). Although dispersed housing costs were, on average, lower than residential campus costs, this difference was not significant. There was also a wide spread of costs within each residential category although the standard deviation was similar across all three models, ranging between £299 (village communities) and £330 (dispersed housing).
- 142 Village communities were also the least costly when the ‘charge’ total was examined. We found a significant difference ( $F=28.80$ ;  $df=2$ ;  $p<0.0001$ ) between village communities and both other residential categories. There was also a significant difference between residential campuses and dispersed housing (Scheffe post hoc test,  $p<0.05$ ).
- 143 We examined the relationship between the accommodation totals calculated using independent cost information and ‘charges.’ In village communities and residential campuses, the difference between accommodation cost and ‘charge’ was not significant, although it is interesting to note that in the residential campus category ‘charge’ was £17 higher than actual cost. In the dispersed housing category, however, costs were significantly higher than ‘charges’ ( $t=3.65$ ,  $df=276$ ,  $p<0.001$ ). This was a surprising finding, because it was in the dispersed housing category that provider organisations were most likely to be aware of the specific resource inputs for individual residents, and such awareness allowed the greatest accuracy when calculating both costs and ‘charge’ data. We would expect, therefore, to see a fairly close relationship between the two.

## Non-Accommodation Services

- 144 In order to evaluate total service packages, data were collected on all services received by the study clients during the three months leading up to the data collection interview. This retrospective period was thought to be long enough to pick up services which were used regularly, although infrequently, and short enough to ensure that details were easily remembered.
- 145 Day activities might be provided within the residential facility or in any other location. Other services have been grouped as hospital- or community-based. Various aids and adaptations to daily living received by study participants are also included separately.

## Day Activities

- 146 Almost all the study clients used some form of day activity (97 per cent of those living in village communities, 81 per cent in residential campuses and 79 per cent in dispersed housing). The activities recorded are detailed in Table 30, where the percentage using each service is shown, and the average cost per week of that service across the whole sample for each residential category, whether clients used the service or not. As can be seen, within village communities it was use of day centres (£69) and on-site workshops (£36) which made up the bulk of the cost of day activities (£119). For people living in residential campuses, day centre costs alone contributed £60 to the £66 total; and in dispersed housing arrangements, day centre (£83) and adult education (£11) contributed most to total cost (£101).

	Village Communities		Residential Campuses		Dispersed Housing Schemes		Statistical Significance (costs)
<b>Day activity</b>							
Day centre/ATC	58%	£69.12	77%	£60.25	47%	£82.53	n.s.
Open employment	-	-	-	-	3%	£0.00	
Sheltered employment	-	-	-	-	7%	£0.00	
Voluntary work	8%	£0.00	2%	£0.00	10%	£0.00	
Adult education	19%	£5.44	5%	£1.66	24%	£11.35	p<0.001 [A]
Drop in	-	-	-	-	4%	£0.86	n.s.
Social club	-	-	-	-	14%	£3.22	p<0.001 [t]
On site workshop	34%	£36.14	-	-	-	-	p<0.001 [C]
On site paid work	11%	£0.00	1%	£0.00	0.4%	£0.00	
Art/drama therapy	1%	£0.67	-	-	1%	£0.41	n.s.
Sensory suite	1%	£0.11	-	-	0.4%	£0.03	n.s.
Therapeutic recreation	1%	£0.21	11%	£3.70	5%	£0.60	p<0.01 [A]
Unpaid work	7%	£0.00	-	-	4%	£0.00	n.s.
One to one staff contact	1%	£7.11	-	-	1%	£1.78	n.s.
Self advocacy group	-	-	-	-	0.4%	£0.07	n.s.
Hydrotherapy	-	-	-	-	0.4%	£0.37	n.s.
Physiotherapy	-	-	1%	£0.23	0.4%	£0.11	n.s.
<b>Total</b>	<b>97%</b>	<b>£118.80</b>	<b>81%</b>	<b>£65.84</b>	<b>79%</b>	<b>£101.33</b>	<b>p&lt;0.001 [A]</b>

- 147 Broadly speaking, day services which were provided on-site at the village communities included workshops, day centre activities, one-to-one sessions and work placements in the various departments (such as catering and gardening). At one of the village communities, where all residents had a day opportunities programme, there was a layer of

- administration on site to oversee arrangements, as well as staff working directly in day activities.
- 148 Residential campuses provided day care, but not work activities, although individual clients might help out in the site shop, for example. One organisation ran two separate day centres. One of these offered a small, highly staffed service and the other, larger facility provided more activities for service users.
- 149 Only clients living in dispersed housing were in open or sheltered employment (three per cent and seven per cent of the sample). On-site workshops were available to the residents of only one of the village communities, and all study clients living in that community worked in at least one of these workshops. Eleven per cent of village community residents were in some form of paid work on site, however, and seven per cent undertook unpaid work. Four per cent of the dispersed housing sample engaged in work activities which were unpaid. Specific voluntary work was undertaken by eight per cent of village community clients, two per cent of the residential campus sample, and ten per cent the people living in dispersed housing.
- 150 The jobs being done by study clients varied enormously, but can be categorised broadly as: shop work (such as: shelf-filling, helping in charity shop, collecting trolleys at Tesco's); catering (food preparation, clearing dishes, washing up); manual labour (such as gardening, cleaning).
- 151 Provision of work for people with disabilities represents a cost and a benefit to the employer. On the one hand, there is the benefit of the goods produced or activities undertaken by the employee. On the other hand, there is the responsibility of providing staff to supervise those activities. We have assumed that, at the margin, the employer covers his/her cost and, therefore, a zero cost has been recorded for work-related activities, unless these were provided by the organisation responsible for accommodation, in which case the cost/benefit balance was known to us. Such a decision may mean we are under-estimating the cost of providing work activities and, by implication, the total cost of day activities. Even when users received payment for their labour, no one appeared to be earning more than the £15 disregard allowed before DSS benefit receipt would be affected.
- 152 Generally, day activities made up a considerable portion of total package costs even though, as noted above, we may be under-estimating full day service costs. It is noticeable that study clients in dispersed housing were using the widest range of services. Adult education costs per week were significantly greater ( $F=10.46$ ;  $df=2$ ;  $p<0.0001$ ) for people in dispersed housing than for those in residential campuses. Social club activities were used by 14 per cent of the dispersed housing sample, although no use of social clubs was reported for participants living in village communities or residential campuses.
- 153 The total cost of day activities was significantly lower ( $F=9.54$ ,  $df=2$ ;  $p<0.001$ ) for people living in residential campuses than for users in village communities or dispersed housing. It was only in areas of therapeutic recreation (swimming, horse riding etc) that costs for people in residential campuses were significantly higher ( $F=5.27$ ,  $df=2$ ,  $p<0.01$ ) than for either village communities and dispersed housing (Scheffe post hoc test,  $p<0.05$ , all comparisons).

## Hospital services

- 154 Table 31 provides details of the percentage of study clients in each of the three residential categories who used hospital-based services, and the cost per week of those services. Again, costs are indicated as averages across the whole residential category sample, whether people used individual services or not, so the mean weekly total is somewhat flattened out.
- 155 It is interesting to note that the majority of the study clients made little use of hospital inpatient services. Only one resident from dispersed housing was admitted to an intensive care ward, and there was no use of hospital acute care. However, ten village community residents and eight people living on residential campuses had inpatient episodes, as did 35 clients living in dispersed housing. These all took place in general medical wards. There were no significant differences between residential categories in the cost of hospital inpatient use.
- 156 A total of 165 people had general outpatient appointments and 18 had psychiatric outpatient appointments. There were significantly higher costs associated with psychiatric outpatient care ( $F=10.62$ ;  $df=2$ ;  $p<0.0001$ ) for village community residents, compared with the other two residential categories (Scheffe post hoc test,  $p<0.05$ ).

	<i>Village Communities</i>		<i>Residential Campuses</i>		<i>Dispersed Housing Schemes</i>		Statistical Significance (costs)
<b>Hospital services</b>							
Psychiatric intensive care ward	-	-	-	-	0.4%	£2.30	n.s.
Acute psychiatric ward	-	-	-	-	-	-	
Psychiatric rehabilitation ward	-	-	-	-	-	-	
General medical ward	11%	£2.96	6%	£0.95	13%	£1.48	n.s.
Psychiatric outpatient visit	11%	£0.74	-	-	3%	£0.12	$p<0.0001$ [A]
Other hospital outpatient visit	30%	£1.53	37%	£1.62	32%	£1.80	n.s.
Day hospital attendance	2%	£0.02	4%	£0.03	6%	£0.08	n.s.
Accident & emergency	9%	£0.18	22%	£0.60	21%	£0.61	n.s.
Total	48%	£5.43	47%	£3.19	52%	£6.39	n.s.

### Community-Based Services

- 157 Contact with a wide variety of community-based service professionals was recorded, although clients in dispersed housing arrangements used the widest range of services. Almost all clients in village communities and dispersed housing arrangements and 91 per cent of participants in residential campuses used some non-hospital services. Table 32 gives details, and is laid out in the same way as the previous Table.
- 158 Although the contribution of these services to the total package cost was not large, there were a number of significant differences between the three residential models. These included: speech therapy costs were significantly higher for village community participants than for either the residential campus or dispersed housing sample ( $F=7.52$ ,  $df=2$ ,  $p<0.001$ ); occupational therapy costs were significantly higher in dispersed housing ( $F=5.55$ ,  $df=2$ ,  $p<0.01$ ) than in either of the other residential categories; social worker costs were significantly higher in village communities ( $F=5.40$ ,  $df=2$ ,  $p<0.01$ ) than residential campuses (Scheffe post hoc test,  $p<0.05$ , all comparisons); dental costs were significantly higher for people in dispersed housing than for those in residential campuses



( $F=5.95$ ,  $df=2$ ,  $p<0.01$ ); chiropody costs were significantly higher for the village communities sample than for either of the other residential categories ( $F=36.94$ ,  $df=2$ ,  $p<0.0001$ ).

	<i>Village Communities</i>		<i>Residential Campuses</i>		<i>Dispersed Housing Schemes</i>		Statistical Significance (costs)
<b>Service</b>							
Community psychiatrist	9%	£0.29	39%	£0.65	19%	£1.55	n.s.
Psychologist	8%	£0.86	30%	£2.02	13%	£1.77	n.s.
General practitioner	60%	£2.88	62%	£5.35	67%	£4.51	n.s.
Community psychiatric nurse	-	-	2%	£0.03	7%	£0.71	n.s.
Learning disability nurse	-	-	-	-	2%	£0.11	n.s.
Other community nurse	24%	£0.12	2%	£0.02	24%	£0.51	n.s.
Community mental health team	5%	£0.15	-	-	3%	£0.22	n.s.
Speech therapist	20%	£1.93	10%	£0.21	11%	£0.61	$p<0.001$ [A]
Physiotherapist	4%	£0.11	22%	£2.27	19%	£2.04	n.s.
Occupational therapist	-	-	11%	£0.02	11%	£0.65	$p<0.01$ [A]
Art/drama/music therapist	12%	£0.90	8%	£0.39	5%	£0.69	n.s.
Alternative therapist	4%	£0.53	7%	£0.49	11%	£0.76	n.s.
Social worker	32%	£5.05	2%	£0.23	15%	£2.61	$p<0.01$ [A]
Home help/home care worker	-	-	-	-	0.4%	£0.01	n.s.
Advocate/counselling	2%	£0.13	2%	£0.08	9%	£1.49	n.s.
Employment service/job centre	-	-	-	-	2%	£0.01	n.s.
Solicitor/lawyer	1%	£0.12	2%	£0.13	1%	£0.04	n.s.
Police officer	-	-	1%	£<0.01	3%	£0.03	n.s.
Dentist	64%	£0.78	38%	£0.35	49%	£0.87	$p<0.01$ [A]
Optician	42%	£0.41	19%	£0.20	23%	£0.28	n.s.
Chiropodist	61%	£1.19	42%	£0.28	46%	£0.51	$p<0.001$ [A]
Other services	19%	£0.20	6%	£0.32	24%	£2.31	n.s.
<b>Total</b>	<b>99%</b>	<b>£15.64</b>	<b>91%</b>	<b>£13.00</b>	<b>97%</b>	<b>£22.31</b>	$p<0.01$ [A]

159 'Other services' included dietician, incontinence adviser and audiologist. The most widely used service in this category, however, was aromatherapy. The costs of these services were higher for clients in dispersed housing than for either of the other residential categories, although the difference was not statistically significant. The total cost of all non-hospital based services was significantly higher for people in dispersed housing ( $F=5.68$ ,  $df=2$ ,  $p<0.01$ ) than for residential campuses (Scheffe post hoc test,  $p<0.05$ , all comparisons).

### Aids & Adaptations

160 Table 33 shows the percentage of clients who received specialised aids and adaptations during the year before the interview. These included bed hoists, wheelchairs, bath rails, special boots, neck collars and splints. Twice as many people in residential campuses and dispersed housing received aids and adaptations during the year than did people in village communities. This may be partly due to the fact that users in village communities were younger and, generally, less disabled than other participants. There were, however, no statistically significant differences in the costs of aids and adaptations between models.

Table 33: Aids and Adaptations, Percentage of Clients Who Received These and Average Weekly Costs

	<i>Village Communities</i>		<i>Residential Campuses</i>		<i>Dispersed Housing Schemes</i>		Statistical Significance (costs)
<b>Aids and adaptations</b>							
Average cost	13%	£0.16	28%	£0.47	29%	£0.76	n.s.
Range		£0-7.20		£0-6.62		£0-18.63	
Standard deviation		£0.88		£1.15		£2.14	

161 In general, the costs of aids and adaptations contributed very little to total cost. It is worth noting, however, that one client living in dispersed housing had been supplied with a wheelchair, a bed hoist and a chair lift, for which the weekly total, once annuitised, was £19.

### *Total Service Package Costs*

162 In order to look at service packages in context, we need to pull together all the disparate elements that contribute to them. Complete service packages were discussed earlier at an organisational level, in order to emphasise the variation we found, and to begin to explore the influences on agency cost burdens. In Table 34 costs are compared across the three residential models. Mean costs are quoted for the accommodation facility, and costs met by the client (excluding any amounts deducted from their DSS benefits for rent or towards their care). Non- accommodation services have been divided into the groups discussed above.

163 Accommodation and associated care costs made up, on average, 81 per cent of total costs in village communities. For people living in residential campus facilities, accommodation costs made up 91 per cent of all costs and, in dispersed housing, 87 per cent.

164 When the costs of day activities were added to accommodation costs, these two service categories made up 98 per cent of total package costs in residential campuses, and 97 per cent in both village communities and dispersed housing arrangements. Although we would expect accommodation and day services to make up the vast majority of all costs, it is perhaps surprising to find these percentages quite so high.

165 Accommodation facility costs (that is, costs met by the provider organisation and all other 'official' bodies) were significantly higher for participants living in residential campus facilities and dispersed housing ( $F=18.65$ ;  $df=2$ ;  $p<0.0001$ ) than for village communities.

	<i>Village Communities</i> <i>n=86</i>	<i>Residential Campuses</i> <i>n=133</i>	<i>Dispersed Housing</i> <i>n=281</i>	Test and statistical significance
<b>Accommodation costs</b>				
Accommodation facility	£588.63	£864.48	£795.39	$p<0.0001$ [A]
Client contribution	£17.99	£22.27	£63.59	$p<0.0001$ [A]
Total accommodation cost	£606.62	£886.74	£858.98	$p<0.0001$ [A]
<b>Non-accommodation costs</b> (average cost per user)				
Hospital	£5.43	£3.19	£6.39	n.s.
Non-hospital services	£15.64	£13.00	£22.31	$p<0.01$ [A]
Daytime activities	£118.80	£65.83	£101.50	$p<0.001$ [A]
Aids and adaptations	£0.16	£0.47	£0.76	n.s.

<i>Total non-accommodation cost</i>	<i>£140.03</i>	<i>£82.45</i>	<i>£130.96</i>	<i>p&lt; 0.0001 [A]</i>
<b>Total cost</b>	<b>£746.65</b>	<b>£969.24</b>	<b>£989.94</b>	<b>p&lt;0.0001 [A]</b>

- 166 Client contributions to the cost of accommodation were significantly greater in dispersed housing schemes ( $F=37.59$ ;  $df=2$ ;  $p<0.0001$ ) than the amounts made up by clients in either village communities or residential campuses. This finding was not unexpected, given that certain organisations providing support in dispersed housing arrangements had separated care from housing and, consequently, participants were meeting more of their own 'hotel' costs from their DSS benefits.
- 167 Total accommodation costs were significantly lower ( $F=23.60$ ;  $df=2$ ;  $p<0.0001$ ) for people in village communities than for users in either of the other two residential categories (Scheffe post hoc test  $p<0.05$ , all comparisons).
- 168 There were no significant differences between the models in the cost of hospital-based services received by the study clients. However, non-hospital services were significantly higher for the dispersed housing sample ( $F=5.68$ ;  $df=2$ ;  $p<0.01$ ) than for people supported in residential campuses. The cost of day activities was significantly lower for participants supported in residential campuses ( $F=9.54$ ;  $df=2$ ;  $p<0.001$ ) than for the dispersed housing or the village communities sample.
- 169 There were no significant difference between models with regards to the costs of aids and adaptations.
- 170 Total non-accommodation costs were significantly lower for the residential campus sample than for either village communities or dispersed housing ( $F=12.10$ ;  $df=2$ ;  $p<0.0001$ ). The total cost of all services was, however, significantly lower for village communities ( $F=17.04$ ;  $df=2$ ;  $p<0.0001$ ) than for residential campuses or dispersed housing, due to significantly less costly accommodation arrangements (Scheffe post hoc test,  $p<0.05$ , all comparisons).

## Participant Characteristics and Costs

- 171 In the previous sections we have presented the results of simple comparisons between the three models on a range of measures of cost. As we have previously shown, however, the abilities and needs of participating users do vary systematically between the three approaches in two key areas: ability (as measured by total score on the *Adaptive Behavior Scale*) and challenging behaviour (total score on the *Aberrant Behavior Checklist*).
- 172 Thus, in order to make ‘like with like’ comparisons it is necessary to take into account the effect of these differences in the abilities and needs of participating users when they are themselves related to the costs of provision. First we will examine whether such associations exist<sup>14</sup>. If so, we will repeat the initial comparisons:
- 172.1 statistically controlling for these effects. For continuous variables approximating a normal distribution we will use one-way ANCOVA (with ability and/or challenging behaviour entered as covariates). For categorical variables we will use logistic regression (with ability and/or challenging behaviour entered as covariates prior to entry of the criterion variable of interest);
  - 172.2 controlling for these effects by restricting our comparisons to the two matched sub-samples we have drawn from the data.
- 173 In addition, we have undertaken an additional series of analyses examining the association between potential aspects of need and cost by dividing participants into two groups on measures of: age; ability; challenging behaviour; and mental health.

### Age

- 174 In order to find out whether the age of the study participants appeared to be affecting the cost of the service packages they received, we divided participants into two age groups within their residential categories (18 to 39 years, and 40 plus). The results of the analyses are displayed in Table 35.
- 175 There were significant differences in cost between the residential categories for both age groups and accommodation, non-accommodation and total costs. For the younger age group, accommodation costs were lower for people in village communities ( $F=13.30$ ;  $df=2$ ;  $p<0.0001$ ) than either of the other two residential categories. Non-accommodation costs were highest for users in dispersed housing, although the difference between dispersed housing and the other residential models did not reach significance levels. Total costs were significantly lower for the village communities group ( $F=10.75$ ;  $df=2$ ;  $p<0.0001$ ) than for either dispersed housing or residential campuses (Scheffe post hoc test,  $p<0.05$ , all comparisons).
- 176 For the older participants, again, accommodation costs were significantly lower for people living in village communities ( $F=12.04$ ;  $df=2$ ;  $p<0.0001$ ) than for either of the other residential categories. For this age group, non-accommodation costs were significantly lower for participants in residential campuses than either village communities or dispersed housing ( $F=7.96$ ;  $df=2$ ;  $p<0.001$ ). Total costs were lower for the village communities sample ( $F=9.10$ ;  $df=2$ ;  $p<0.001$ ) than for people living in

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<sup>14</sup> Again, the criterion for a ‘significant association’ was that the correlation between the two variables was both statistically significant ( $p<0.01$ ) and that the correlation coefficient was greater than 0.25.

residential campuses or dispersed housing (Scheffe post hoc test,  $p < 0.05$ , all comparisons).

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing Schemes</i>	Test and Statistical Significance
<b>Accommodation cost</b>				
Group 1: Aged 18 – 39 ( <i>n</i> =210)	£600.56 ( <i>n</i> =43)	£909.67 ( <i>n</i> =50)	£904.28 ( <i>n</i> =117)	$p < 0.0001$ [A]
Group 2: Aged 40 – 92 ( <i>n</i> =274)	£612.68 ( <i>n</i> =43)	£850.34 ( <i>n</i> =78)	£850.73 ( <i>n</i> =153)	$p < 0.0001$ [A]
Statistical significance	n.s.	n.s.	n.s.	
<b>Non-accommodation cost</b>				
Group 1: Aged 18 – 39	£151.52	£104.96	£148.49	n.s.
Group 2: Aged 40 – 92	£128.55	£71.86	£118.32	$p < 0.0001$ [A]
Statistical significance	n.s.	n.s.	n.s.	
<b>Total cost</b>				
Group 1: Aged 18 – 39	£752.08	£1014.62	£1052.77	$p < 0.0001$ [A]
Group 2: Aged 40 – 92	£741.23	£922.20	£969.05	$p < 0.001$ [A]
Statistical significance	n.s.	n.s.	n.s.	

177 There were no statistically significant differences in the costs of provision between the older and younger groups within any residential category. There were, however, significant negative correlations between age and

177.1 non-accommodation costs in residential campuses ( $r = -0.227$ ,  $p < 0.01$ ) and dispersed housing schemes ( $r = -0.248$ ,  $p < 0.001$ );

177.2 total costs in residential campuses ( $r = -0.256$ ,  $p < 0.01$ ) and dispersed housing schemes ( $r = -0.187$ ,  $p < 0.001$ ).

178 For all significant associations, increased age was associated with reduced costs.

#### Need: Ability, Challenging Behaviour and Mental Health

179 In order to explore the relationship between costs and user characteristics, participants were divided into two equal groups on each of three indicators of 'need'. The three indicators examined were total scores on: the *Adaptive Behaviour Scale* (ABS, Nihira et al, 1993), an indicator of overall severity of the person's learning disabilities; the *Aberrant Behaviour Checklist* (ABC, Aman et al., 1995), an indicator of severity of challenging behaviour; the *PAS-ADD Checklist*, an indicator of possible psychiatric disorder.

180 For each group within each residential category, the average weekly costs for accommodation and all non-accommodation services were calculated. Tests for statistical significance were then carried out to identify relationships between and within categories of accommodation and groups of characteristics.

181 In Table 36, costs are shown for participants grouped by ABS score. People with ABS scores between zero and 145 are included in Group 1 (less able:  $n = 252$ ), and those with a score of 146 or higher are in Group 2 (more able:  $n = 236$ ).

Table 36: Average Weekly Costs by Groups (Ability)				
	Village Communities	Residential Campuses	Dispersed Housing Schemes	Test and Statistical Significance
<b>Accommodation cost</b>				
Group 1: ABS Score; 0 – 145 (n=252)	£982.63 (n=20)	£856.77 (n=97)	£991.57 (n=135)	p<0.001 [A]
Group 2: ABS Score ; 146 – 313 (n=236)	£496.59 (n=64)	£964.69 (n=34)	£747.29 (n=138)	p<0.0001 [A]
Statistical significance	p<0.0001	n.s.	p<0.0001	
<b>Non-accommodation cost</b>				
Group 1: ABS Score; 0 – 145	£166.09	£78.04	£144.75	p<0.0001 [A]
Group 2: ABS Score ; 146 – 313	£132.21	£97.99	£117.27	n.s.
Statistical significance	n.s.	n.s.	n.s.	
<b>Total cost</b>				
Group 1: ABS Score; 0 - 145	£1148.72	£934.82	£1136.32	p<0.0001 [A]
Group 2: ABS Score ; 146 – 313	£628.80	£1062.68	£864.56	p<0.0001 [A]
Statistical significance	p<0.0001	n.s.	p<0.0001	

- 182 For participants living in village communities, accommodation and total costs were significantly higher for people with lower levels of ability (*accommodation*:  $t=8.73$ ;  $df=82$ ;  $p<0.001$ ; *total cost*:  $t=8.14$ ;  $df=82$ ;  $p<0.001$ ). Costs of non-accommodation services were also higher for the more disabled group, although results did not achieve significance. For users in dispersed housing, there were significant differences between groups on accommodation and total costs (*accommodation*:  $t=6.68$ ;  $df=271$ ;  $p<0.001$ ; *total cost*:  $t=6.92$ ;  $df=271$ ;  $p<0.001$ ). In the residential campus category, however, accommodation, non-accommodation and total costs were all higher for more able participants, although differences were not significant.
- 183 Similar results were obtained by examining the correlation between ability (total score on the ABS) and costs within models. For participants living in village communities and dispersed housing schemes, accommodation and total costs were significantly higher for people with lower levels of ability (*VC accommodation*:  $r = -0.763$ ,  $p<0.001$ ; *VC total cost*:  $r = -0.735$ ,  $p<0.001$ ; *DHS accommodation*:  $r = -0.471$ ,  $p<0.001$ ; *DHS total cost*:  $r = -0.485$ ,  $p<0.001$ ).
- 184 There were also major differences in costs between the residential categories. For people with lower levels of ability, accommodation costs were significantly higher in dispersed housing ( $F=8.23$ ;  $df=2$ ,  $p<0.001$ ) than for people in residential campuses. Non-accommodation costs were significantly lower for the residential campus sample ( $F=11.59$ ;  $df=2$ ,  $p<0.0001$ ) than for users in village communities or dispersed housing. As we would expect, there were also significant differences in the total cost of all services ( $F=16.77$ ;  $df=2$ ,  $p<0.0001$ ), with residential campus costs lower than either village communities or dispersed housing (Scheffe post hoc test,  $p<0.05$ , all comparisons).
- 185 Participants with higher levels of ability received significantly less costly accommodation packages if they were living in village communities ( $F=23.83$ ;  $df=2$ ;  $p<0.0001$ ) than in either of the other residential categories. Accommodation costs in dispersed housing were also significantly lower than in residential campuses for people who were more able (Scheffe post hoc test,  $p<0.05$ ). Services received independently of accommodation arrangements were lower for residential campus participants than in village communities or dispersed housing, but there were no significant differences. Total costs were significantly lower for people living in village communities ( $F=18.58$ ;  $df=2$ ;  $p<0.0001$ )

than for residential campuses or dispersed housing participants. Costs were also significantly lower for the dispersed housing sample than for people living in residential campuses (Scheffe post hoc test,  $p < 0.05$ , all comparisons).

- 186 In Table 37, costs are presented for participants grouped by ABC score. People with ABC scores between zero and 16 are included in Group 1 (less severe challenging behaviour:  $n = 251$ ) and those with a score of 17 or higher are in Group 2 (more severe challenging behaviour:  $n = 241$ ).

Table 37: Average Weekly Costs by Groups (Challenging Behaviour)				
	Village Communities	Residential Campuses	Dispersed Housing Schemes	Test and Statistical Significance
<b>Accommodation cost</b>				
Group 1: ABC Score; 0-16 ( $n=251$ )	£502.09 ( $n=54$ )	£798.46 ( $n=39$ )	£873 ( $n=158$ )	$p < 0.0001$ [A]
Group 2: ABC Score; 17-118 ( $n=241$ )	£783.01 ( $n=32$ )	£921.37 ( $n=92$ )	£937.61 ( $n=117$ )	n.s.
Statistical significance	$p < 0.0001$	n.s.	$p < 0.01$	
<b>Non-accommodation cost</b>				
Group 1: ABC Score; 0-16	£119.52	£81.02	£139.17	$p < 0.01$ [A]
Group 2: ABC Score; 17-118	£174.65	£84.15	£120.84	$p < 0.001$ [A]
Statistical significance	n.s.	n.s.	n.s.	
<b>Total cost</b>				
Group 1: ABC Score; 0-16	£621.61	£879.48	£951.59	$p < 0.0001$ [A]
Group 2: ABC Score; 17-118	£957.67	£1005.53	£1058.45	n.s.
Statistical significance	$p < 0.0001$	n.s.	n.s.	

- 187 Within village communities and dispersed housing schemes, there was a significant positive relationship between severity of challenging behaviour and the cost of accommodation arrangements (*village communities*:  $t = -4.71$ ;  $df = 84$ ;  $p < 0.001$ ; *dispersed housing*:  $t = -3.20$ ;  $df = 273$ ;  $p < 0.01$ ). A similar association was observed in the total cost of service packages, but only for people living in for village communities ( $t = -5.19$ ,  $df = 84$ ;  $p < 0.001$ ). There were no significant differences between non-accommodation costs, however, when participants were grouped according to challenging behaviour scores.
- 188 Similar results were obtained by examining the correlation between challenging behaviour (total score on the ABC) and costs within models. For participants living in village communities, accommodation, non-accommodation and total costs were significantly higher for people with more severe challenging behaviour (*accommodation*:  $r = 0.593$ ,  $p < 0.001$ ; *non-accommodation*:  $r = 0.340$ ,  $p < 0.001$ ; *total cost*:  $r = 0.621$ ,  $p < 0.001$ ). For participants living in dispersed housing schemes and residential campuses, however, there were no significant associations between costs and challenging behaviour.
- 189 People who did not display challenging behaviour, or whose behaviour was rated as less severe, received less costly accommodation packages if they were supported in village communities ( $F = 23.69$ ;  $df = 2$ ;  $p < 0.0001$ ) than either of the other residential categories. Non-accommodation costs, however, were lowest in residential campuses, and significantly less than in dispersed housing ( $F = 5.70$ ;  $df = 2$ ;  $p < 0.01$ ). Total costs were significantly lower in village communities ( $F = 21.13$ ;  $df = 2$ ,  $p < 0.0001$ ) than in either residential campuses or dispersed housing.

- 190 For participants with more severe challenging behaviour, services associated with accommodation were less costly for people in village communities than in residential campuses or dispersed housing, although the difference was not statistically significant. Non-accommodation services, however, were significantly higher in village communities than in the other two residential categories ( $F=8.883$ ;  $df=2$ ,  $p<0.001$ ), but total costs were higher in dispersed housing and in residential campuses than in village communities, although the difference did not achieve significance (Scheffe post hoc test,  $p<0.05$ , all comparisons).
- 191 Finally, in Table 38, costs are examined when clients were grouped according to their scores relating to general psychiatric disorders screened with the PAS-ADD checklist (Group 1: no psychiatric disorders,  $n = 219$ ; Group 2: presence of possible psychiatric disorder,  $n = 271$ ).

Table 38: Average Weekly Costs by Groups (Mental Health)				
	Village Communities	Residential Campuses	Dispersed Housing Schemes	Test and Statistical Significance
<b>Accommodation cost</b>				
Group 1; Total Score (PAS-ADD); 0 ( $n=219$ )	£473.67 ( $n=42$ )	£769.02 ( $n=52$ )	£813.54 ( $n=125$ )	$p<0.0001$ [A]
Group 2; Total Score (PAS-ADD); 1-37 ( $n=271$ )	£733.53 ( $n=44$ )	£958.85 ( $n=77$ )	£909.14 ( $n=150$ )	$p<0.01$ [A]
Statistical significance	$p<0.001$	$p<0.01$	n.s.	
<b>Non-accommodation cost</b>				
Group 1; Total Score (PAS-ADD); 0	£118.55	£88.61	£140.45	$p<0.01$ [A]
Group 2; Total Score (PAS-ADD); 1-37	£160.54	£81.68	£123.81	$p<0.001$ [A]
Statistical significance	n.s.	n.s.	n.s.	
<b>Total cost</b>				
Group 1; Total Score (PAS-ADD); 0	£592.21	£857.63	£953.99	$p<0.0001$ [A]
Group 2; Total Score (PAS-ADD); 1-37	£894.08	£1040.53	£1032.94	n.s.
Statistical significance	$p<0.001$	$p<0.01$	n.s.	

- 192 In village communities and residential campuses there was a positive relationship between this indicator of possible psychiatric disorder and accommodation ( $VC$ :  $t=-4.45$ ;  $df=84$ ;  $p<0.001$ ;  $RC$ :  $t=-3.36$ ;  $df=127$ ;  $p<0.01$ ) and total costs ( $VC$ :  $t=-4.72$ ;  $df=84$ ,  $p<0.001$ ;  $RC$ :  $t=-3.20$ ;  $df=127$ ;  $p<0.01$ ). In dispersed housing schemes, there were no significant associations between possible psychiatric disorders and costs.
- 193 Similar results were obtained by examining the correlation between possible psychiatric disorder (total score on the PAS-ADD) and costs within models. For participants living in village communities, accommodation costs were significantly higher for people with more severe psychiatric disorder (*accommodation*:  $r = 0.285$ ,  $p<0.001$ ). For participants living in dispersed housing schemes and residential campuses, however, there were no significant associations between costs and psychiatric disorder.
- 194 There were significant differences in cost between the residential categories. For Group 1 (people who did not have a psychiatric disorder), accommodation costs were significantly lower for participants living in village communities ( $F=21.90$ ;  $df=2$ ;  $p<0.0001$ ) than for people in residential campuses or dispersed housing. Non-accommodation costs were significantly higher in dispersed housing than residential campuses ( $F=5.04$ ;  $df=2$ ;  $p<0.01$ ) and total costs were lower in village communities than in either of the other two residential categories ( $F=19.36$ ;  $df=2$ ;  $p<0.0001$ ).



195 People who did have a possible psychiatric disorder received significantly less costly accommodation packages in village communities ( $F=6.88$ ;  $df=2$ ,  $p<0.01$ ) than in residential campuses or dispersed housing schemes. Non-accommodation costs, however, were significantly lower for people in residential campuses ( $F=8.33$ ;  $df=2$ ;  $p<0.001$ ) than for village communities or dispersed housing. Total costs were lowest in village communities, although the differences between residential categories were not significant (Scheffe post hoc test,  $p<0.05$ , all comparisons).

### Adjusted Costs and Costs in Matched Samples

196 The adjusted average *annual* accommodation, non-accommodation and total costs of provision are summarised below in Table 39. These costs have been adjusted to take into account differences between the three approaches with regard to ability, challenging behaviour and the age of users. In addition, this Table includes the actual *annual* accommodation, non-accommodation and total costs of provision for the two matched sub-samples (i.e. costs for those participants selected on the basis of their equivalence in terms of ability and, for Sample 2, challenging behaviour).

197 Statistical analyses of the *adjusted costs* indicated significant differences between the three models for accommodation ( $F=15.8$ ;  $df=2,473$ ;  $p<0.001$ ), non-accommodation ( $F=8.6$ ;  $df=2,473$ ;  $p<0.001$ ) and total costs ( $F=16.6$ ;  $df=2,473$ ;  $p<0.001$ ). Post-hoc analyses indicated that:

- 197.1 accommodation costs associated with both dispersed housing schemes and residential campuses were significantly greater than those associated with village communities (*DHS*:  $F=24.0$ ;  $df=1,347$ ;  $p<0.001$ ; *VC*:  $F=10.4$ ;  $df=1,206$ ;  $p<0.001$ );
- 197.2 non-accommodation costs associated with both dispersed housing schemes and village communities were significantly greater than those associated with residential campuses (*DHS*:  $F=12.1$ ;  $df=1,390$ ;  $p<0.001$ ; *VC*:  $F=13.5$ ;  $df=1,206$ ;  $p<0.001$ );
- 197.3 total costs associated with dispersed housing schemes were significantly greater than those associated with residential campuses ( $F=9.1$ ;  $df=1,390$ ;  $p<0.01$ ) and village communities ( $F=19.0$ ;  $df=1,347$ ;  $p<0.001$ ).

Table 39: Average Annual Accommodation, Non-Accommodation and Total Costs of Provision				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing Schemes</i>	Test & Statistical Significance
Full Sample:				
<b>Adjusted Costs</b>				
accommodation costs	£36,324	£41,760	£45,917	$p<0.001$ (A)
non-accommodation costs	£7,706	£4,060	£6,874	$p<0.001$ (A)
total costs	£44,030	£45,820	£52,791	$p<0.001$ (A)
Matched Sample 1:				
<b>Actual Costs</b>				
accommodation costs	£32,388	n/a	£39,231	n.s.
non-accommodation costs	£7,407	n/a	£6,301	n.s.
total costs	£39,796	n/a	£45,532	n.s.

Table 39: Average Annual Accommodation, Non-Accommodation and Total Costs of Provision				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing Schemes</i>	Test & Statistical Significance
Matched Sample 2:				
<b>Actual Costs</b>				
accommodation costs	n/a	£46,517	£50,606	n.s.
non-accommodation costs	n/a	£4,233	£6,753	p<0.001 (t)
total costs	n/a	£50,749	£57,359	p<0.001 (t)

198 Statistical analyses comparing the *actual costs* for the two matched sub-samples indicated that, while non-accommodation ( $t=3.8$ ,  $df=204$ ,  $p<0.001$ ) and total costs ( $t=3.3$ ,  $df=242$ ,  $p<0.001$ ) were significantly lower in residential campuses when compared with dispersed housing schemes, there were **no** statistically significant differences between either the accommodation, non-accommodation or total costs associated with village communities and dispersed housing schemes.

### Summary

199 In this evaluation, we set out to examine the costs of supporting people with learning disabilities within three types of residential provision. Our investigation began by disaggregating the costs of all the elements of providing housing and associated care. These costs included ‘hotel services’ and staffing arrangements within the individual setting and across the whole residential facility (if appropriate). Managing agency overheads and on-site administration costs were calculated; also the opportunity cost of all capital items (buildings, vehicles, furnishings and fittings). We then explored the use participants had made of services independently of their accommodation arrangements and costed the part these had played in total service package costs. Although the service models themselves were very different, we used consistent measures of assessment across all residential categories.

200 A wide variation existed in the costs associated with residential provision. This variation was not only between the three accommodation models, but between individual organisations, individual settings and, in many cases, individual users. The costs of providing accommodation and associated care were dominated by staffing costs, whatever the specific staffing arrangements within the facility. In the village communities category, the focus of resources on site-wide services meant a lower percentage of total cost was allocated to direct staffing arrangements within individual settings. Direct staffing costs made up 53 per cent of all ‘official’ accommodation costs in village communities, 61 per cent in residential campuses and 72 per cent in dispersed housing schemes.

201 ‘Official’ costs excluded any direct contributions made by users themselves from the social security benefits they received. When these were included, to complete the cost of accommodation and living expenses, they added 3 per cent to accommodation costs in village communities, 2.5 per cent in residential campuses and 7 per cent in dispersed housing arrangements. Total accommodation costs were significantly lower in village communities (£607 per week, on average) than in either residential campuses (£887 per week) or in the dispersed housing category (£859 per week).

202 Fixed fees, block contracts and disability-contingent pricing arrangements were paying for the bulk of care for participants. In addition, in certain dispersed housing

arrangements, the separation of housing and support meant that users were meeting most (or all) of their housing and 'hotel services' costs through housing benefit and their DSS benefits.

- 203 Day activity services were used by almost all participants. A wide variety of individual arrangements were recorded and the costs of these services, together with accommodation, made up between 97 and 98 per cent of total package costs. Although the input of hospital- and community-based professionals and services made up only a tiny part of total service package costs, in each of the residential categories contact was recorded with a wide range of services independently of those provided as part of the accommodation package.
- 204 The cost of services received outside users' accommodation arrangements was significantly lower for the residential campus sample (£82) than for either village communities (£140) or participants in dispersed housing (£131). It was use of day activities by the study participants which accounted for this difference in cost.
- 205 The actual total weekly costs of accommodation and associated care, and all other services received, was significantly lower for people living in village communities (£747) than in either residential campuses (£969) or dispersed housing (£990). It may be that size of setting is influencing these costs. The settings where study participants were supported varied a great deal in size (*village communities*: mean, 9, range, 2–22; *residential campuses*: mean, 10, range, 7–20; *dispersed housing*: mean, 4, range, 1–9). Although a sensitive relationship exists between cost and size of facility, the evidence suggests that, in larger facilities, costs associated with the higher dependency of some residents may be cancelled out by the lesser needs of residents who are more able. Where there are fewer than six resident places, however, some evidence suggests sharp increases in cost per resident as the size of the facility is reduced (Raynes et al., 1994).
- 206 When participants were considered in two age groups (18 to 39 years and 40 years and over) within their residential categories, we found that total costs were significantly higher for people of both age groups who lived in dispersed housing. There were no statistically significant differences in the costs of provision between older and younger residents.
- 207 We found interesting relationships when we explored the links between ability/need and cost. In village communities and dispersed housing, less able people were receiving more costly service packages. In residential campuses, however, this pattern was reversed, with more able users receiving the more costly support arrangements. When we considered the effects of challenging behaviour and possible psychiatric disorder on service package costs, we found relationships between severity/presence and higher costs in village communities and residential campuses. Users received more costly support packages if they were living in dispersed housing, whether or not they had challenging behaviour. Participants who had possible psychiatric disorders received the most costly service packages if they were living in residential campus facilities.
- 208 As noted in previous sections, however, there were significant differences between the three approaches in the needs and characteristics of the people served. In order to make 'like with like' comparisons, costs were adjusted to take into account differences between the three approaches with regard to ability, challenging behaviour and the age of users. Statistical analyses of the *adjusted costs* indicated that:

- 208.1 accommodation costs associated with both dispersed housing schemes and residential campuses were significantly greater than those associated with village communities;
  - 208.2 non-accommodation costs associated with both dispersed housing schemes and village communities were significantly greater than those associated with residential campuses;
  - 208.3 total costs associated with dispersed housing schemes were significantly greater than those associated with residential campuses and village communities.
- 209 'Like with like' comparisons were also made by comparing actual costs in the two matched samples drawn from the full data set. Statistical analyses comparing these *actual costs* indicated that, while non-accommodation and total costs were significantly lower in residential campuses when compared with dispersed housing schemes, there were **no** statistically significant differences between village communities and dispersed housing schemes with regard to either accommodation, non-accommodation or the total costs of support.

## Outcomes for Service Users

- 210 In the following sections, we will present the results of analyses which compare the outcomes for users across the three types of provision in five separate domains:
- 210.1 individual choice;
  - 210.2 relationships and social support;
  - 210.3 health issues;
  - 210.4 accidents, safety and risks;
  - 210.5 day and leisure activities.
- 211 As in the previous section, each section will follow a similar pattern. First, we will present the results of simple comparisons between the three models. Second, we will examine whether this particular outcome is related to two potentially important characteristics of users which, as we have shown above, vary systematically between the three approaches: ability (as measured by total score on the *Adaptive Behavior Scale*) and challenging behaviour (total score on the *Aberrant Behavior Checklist*). If there is evidence of a significant association<sup>15</sup> between a particular aspect of service provision and either ability or challenging behaviour in at least two of the three models, we will repeat the initial comparisons:
- 211.1 statistically controlling for these effects. For continuous variables approximating a normal distribution we will use one-way ANCOVA (with ability and/or challenging behaviour entered as covariates). For categorical variables we will use logistic regression (with ability and/or challenging behaviour entered as covariates prior to entry of the criterion variable of interest);
  - 211.2 controlling for these effects by restricting our comparisons to the two matched sub-samples we have drawn from the data.

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<sup>15</sup> Again, the criterion for a 'significant association' was that the correlation between the two variables was both statistically significant ( $p < 0.01$ ) and that the correlation coefficient was greater than 0.25.

## Choice

212 Level of individual choice was measured using a 26 item *Choices* scale was developed specifically for the project (see Appendix 1). A member of care staff asked in an interview what procedures were in place to support users in making choices with regard to various aspects of their life. Responses were rated on the following four point scale.

- 1 nothing mentioned
- 2 some procedure(s) mentioned but unlikely to give the person much real choice
- 3 some procedure(s) mentioned through which person can express preferences but final say does not rest with the person
- 4 procedures in place for person to express preferences and these are the final say unless clearly inappropriate or dangerous.

213 Information derived from the *Choices* scale is summarised below in Table 40.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Total Score</b>				
mean	73.5	46.2	68.4	p<0.0001 (A)
range	27-99	26-80	29-102	
standard deviation	13.9	11.9	18.1	

214 *Summary:* Overall, people living in village communities had greater choice ( $F=107.3$ ;  $df=2,470$ ;  $p<0.0001$ ) than people living in dispersed housing schemes (Scheffé post hoc test  $p<0.05$ ) who, in turn, had greater choice than people living in residential campuses (Scheffé post hoc test  $p<0.05$ ).

215 *Association with ability and challenging behaviour:* There were strong associations between ability and total score on the choice scale across all three models (*DHS*:  $r=0.811$ ,  $p<0.01$ ; *VC*:  $r=0.858$ ,  $p<0.01$ ; *RC*:  $r=0.746$ ,  $p<0.01$ ). As a result of these associations, analysis of differences between the models with regard to choice were repeated while controlling for variation in user ability. The results of these analyses were consistent with the original analyses indicating significantly less choice in residential campuses (ANCOVA  $F=91.4$ ,  $df=2,458$ ;  $p<0.0001$ ). The results derived from the analyses of the matched samples was consistent with the results of the multivariate analyses in that greater choice was found in dispersed housing schemes than residential campuses ( $t=7.8$ ,  $df=211$ ,  $p<0.001$ ). Differences in choice between dispersed housing schemes and village communities did not attain the level of statistical significance ( $t=1.6$ ,  $df=148$ ,  $p>0.1$ ). There were no significant associations between challenging behaviour and choice within either dispersed housing schemes or residential campuses. Within village communities, however, users with more severe challenging behaviour were less likely to have choice over aspects of their environment (*VC*:  $r=0.603$ ,  $p<0.01$ ).

## Relationships & Social Support

### Family Contact

- 216 The distance between the family home of the user and the user's residence was recorded. The level of contact with families was recorded separately for: visits to the user's residence; visits by the user to the family home; letters from and phone calls with family. The distance between user home and family home and level of contact with families is summarised below in Table 41.

Table 41: Family Contact				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of users living the following distances from relatives</b>				
1 mile (or same town)	1%	36%	49%	p<0.0001 (C)
2 to 50 miles	52%	52%	39%	
51 to 100 miles	29%	9%	6%	
100 miles plus	11%	3%	5%	
relatives live abroad	6%	1%	1%	
<b>Family contact in prior 3 months</b>				
Average number of visits by family to users home	2.0	4.6	3.5	n.s.
Average number of visits by user to family home	1.3	2.2	4.1	n.s.
<b>% of users in the prior 3 months receiving</b>				
no family contact	6%	25%	22%	p<0.0001 (C)
contact by letter or phone only	11%	3%	7%	
visits by family to residence	22%	38%	20%	
visits to family home	12%	13%	14%	
visits to residence and visits to home	50%	21%	37%	

- 217 *Summary:* People living in village communities lived further away from their families than people living in either dispersed housing schemes or residential campuses ( $F=89.9$ ;  $df=2,488$ ;  $p<0.00001$ ). However, there were no statistically significant differences in the number visits of received from or made to relatives between models. Overall, a greater proportion of people living in dispersed housing schemes or residential campuses had no contact with their families in the preceding three months ( $\chi^2=40.8$ ,  $df=2$ ,  $p<0.00001$ ).
- 218 *Association with ability and challenging behaviour:* There were no significant associations between either ability or challenging behaviour and any measure of family contact within any of the three models.

## Social Networks

- 219 Individuals included in the user's social network were defined as people who had been important in the user's life and who had had active contact with them in the month preceding interview. The data on social networks was summarised with social network members categorised as: other people with a learning disability; members of staff; family members; and "other" (ie neighbours, people living locally, people met through work or leisure who are not part of formal services). This information is summarised below in Table 42.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
Average (& s.d.) total number of people in social network	6.7	4.4 (3.0)	6.8 (4.0)	p<0.0001 (A)
<b>Average number of people in social network who...</b>				
...have a learning disability	1.5	0.5	1.4	p<0.0001 (K)
...are a member of staff	3.1	2.3	2.7	p<0.01(K)
...are a family member	1.8	1.5	1.9	n.s.
...are "other"	0.2	0.2	0.9	p<0.0001 (K)
<b>Percentage of the person's social network who...</b>				
...have a learning disability	20%	9%	19%	p<0.0001 (K)
...are a member of staff	50%	47%	41%	n.s.
...are a family member	28%	40%	29%	p<0.001 (K)
...are "other"	3%	4%	11%	p<0.0001 (K)

- 220 *Summary:* Overall, people living in village communities and dispersed housing schemes had larger social networks ( $F=20.0$ ;  $df=2,495$ ;  $p<0.00001$ ) than people living in residential campuses (Scheffé post hoc test  $p<0.05$ ). More specifically:
- 220.1 people living in either village communities (post hoc Mann-Whitney  $z=5.6$ ,  $p<0.0001$ ) or dispersed housing schemes (post hoc Mann-Whitney  $z=6.4$ ,  $p<0.00001$ ) had more people with learning disabilities in their social network than people living in residential campuses;
- 220.2 people living in village communities had more staff in their social network than people living in either dispersed housing schemes (post hoc Mann-Whitney  $z=2.6$ ,  $p<0.01$ ) or residential campuses (post hoc Mann-Whitney  $z=3.5$ ,  $p<0.001$ );
- 220.4 people living in dispersed housing schemes had more 'other' people in their social network than people living in either village communities (post hoc Mann-Whitney  $z=5.2$ ,  $p<0.0001$ ) or residential campuses (post hoc Mann-Whitney  $z=6.8$ ,  $p<0.0001$ ).



221 *Association with ability and challenging behaviour:* There were no significant associations between ability and the numbers of relatives or ‘others’ in the person’s social network within any of the three models. However, more able people were more likely to have a greater number of people with learning disabilities in their social networks (*VC*:  $r=0.380$ ,  $p<0.01$ ; *DHS*:  $r=0.296$ ,  $p<0.01$ ; *RC*:  $r=0.393$ ,  $p<0.01$ ). As a result, analyses of differences between the models were repeated while controlling for variation in user ability. The results of these analyses were consistent with the original analyses indicating significantly greater numbers of people with learning disabilities in the person’s social network among people living in dispersed housing schemes and village communities (ANCOVA  $F=7.9$ ,  $df=2,457$ ;  $p<0.0001$ ). The results derived from the analyses of the matched samples was consistent with the results of the multivariate analyses in that a greater number of people with mental retardation were found in the social networks of participants in dispersed housing schemes than residential campuses ( $t=4.2$ ,  $df=208$ ,  $p<0.001$ ). Within residential campuses and village communities, more able people were more likely to have larger social networks (*VC*:  $r=0.436$ ,  $p<0.01$ ; *RC*:  $r=0.359$ ,  $p<0.01$ ). Within residential campuses, more able people were more likely to have a greater number of staff in their social networks (*RC*:  $r=0.264$ ,  $p<0.01$ ). There were no significant associations within dispersed housing schemes and residential campuses between challenging behaviour and any measure of social networks. Within village communities, however, people with more severe challenging behaviour were likely to have fewer people with learning disabilities in their social networks (*VC*:  $r=0.313$ ,  $p<0.01$ ).

## Health

### Weight

222 Information was collected on users’ weight and height. Body Mass Index (BMI) was calculated by dividing weight in kg by height in metres squared. BMI scores fall into one of four categories: underweight, normal, overweight and obese. The percentage of the general population falling into each of these categories is noted below (from the Health Survey for England, 1993; Bennett et al, 1995):

1. Underweight (BMI < 20; men 5%, women 7%)
2. Normal (BMI 20-25; men 38%, women 44%)
3. Overweight (BMI 25.1-30; men 44%, women 32%)
4. Obese (BMI > 30; men 13%, women 16%).

223 BMI information for users is summarised separately for men and women below in Table 43.

224 *Summary:* There were no statistically significant differences between models with regard to weight either overall or, separately, for men and women. However, when compared with the proportions of the adult *general* population falling into each of these categories:

- 224.1 a significantly greater proportion of men with learning disabilities were underweight when compared with men in the general adult population ( $z=7.54$ ,  $p<0.0001$ );
- 224.2 a significantly greater proportion of women with learning disabilities were underweight when compared with women in the general adult population ( $z=5.05$ ,  $p<0.0001$ );

- 224.3 a significantly smaller proportion of men with learning disabilities were overweight ( $z=6.54$ ,  $p<0.0001$ ) when compared with men in the general adult population;
- 224.2 a significantly smaller proportion of women with learning disabilities were overweight ( $z=2.72$ ,  $p<0.01$ ) when compared with men in the general adult population;
- 224.2 a significantly greater proportion of women with learning disabilities are obese when compared with women in the general adult population ( $z=4.90$ ,  $p<0.0001$ ).

% of users in BMI category...	Village Communities		Residential Campuses		Dispersed Housing		Test and statistical significance
	M	F	M	F	M	F	
Underweight (BMI < 20)	23%	13%	26%	23%	22%	23%	n.s.
Normal (BMI 20 to 25)	30%	28%	36%	39%	39%	26%	
Overweight (BMI 25 to 30)	34%	36%	27%	21%	25%	22%	
Obese (BMI > 30)	13%	23%	10%	17%	14%	28%	

- 225 *Association with ability and challenging behaviour:* There were no significant associations between weight categorisation and ability among people living in dispersed housing schemes. However, more able people living in residential campuses and village communities were significantly less likely to be underweight ( $VC: r=0.293$ ,  $p<0.01$ ;  $RC: r=0.316$ ,  $p<0.01$ ). There were no associations between weight categorisation and challenging behaviour among people living in dispersed housing schemes and residential campuses. Within village communities, people with more severe challenging behaviour were more likely to be underweight ( $VC: r=0.288$ ,  $p<0.01$ ).

## Physical Activity

- 226 Items from the Health Survey for England 1993 (Bennett et al, 1995) were used to collect information on users' participation in physical activity during the four weeks preceding interview. Physical activity was categorised on a 'frequency-intensity activity level' based on the number of occasions of moderate or vigorous activity. Sports and exercise activities were only included if they lasted for 20 minutes or more. All other moderate or vigorous activities were included irrespective of duration. This categorisation gives the following levels:

- Level 5: Twelve or more occasions of vigorous activity
- Level 4: Twelve or more occasions of a mix of moderate and vigorous activity
- Level 3: Twelve or more occasions of moderate activity
- Level 2: Five to eleven occasions of at least moderate activity
- Level 1: One to four occasions of at least moderate activity
- Level 0: No occasions of moderate activity

- 227 The Health Survey for England defines people as 'inactive' if they fall in levels 0, 1 or 2, that is, doing activity of moderate or vigorous intensity less than 12 times in 4 weeks. This level of inactivity is defined in the Health Survey for England as representing a risk factor for cardiovascular disease. The Health Survey for England reported that 53% of men and 64% of women were inactive according to this definition.

228 If any user was rated as 'physically incapable' on any category of physical activity they were excluded from the analysis of levels of physical activity. This led to the following percentages of users in each model being excluded from the analysis: village communities 17% (13% of men, 24% of women); residential campuses 51% (47% of men, 59% of women); dispersed housing schemes 53% (55% of men, 53% of women). The information on physical activity for users physically capable of *all* categories of physical activity is summarised below in Table 44.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of users by frequency-intensity activity level ...</b>				
No moderate activity (Level 0)	23%	75%	38%	p<0.0001 (C)
1-4 occasions moderate activity (1)	31%	16%	21%	
5-11 occasions moderate activity (2)	32%	6%	16%	
12+ occasions moderate activity (3)	3%	2%	9%	
12+ with some vigorous activity (4)	4%	0%	15%	
12+ occasions vigorous activity (5)	7%	0%	2%	
<b>% of users defined as inactive...</b>				
... overall	86%	97%	74%	p<0.001 (C)
... men	80%	95%	70%	p<0.01 (C)
... women	96%	100%	80%	n.s.

229 *Summary:* People living in residential campuses were significantly more likely to lead inactive lifestyles than either people living in dispersed housing schemes ( $\chi^2=14.7$ ,  $df=2$ ,  $p<0.001$ ). Comparison with the proportion of the general adult population of England indicated that:

- 229.1 men living in either residential campuses ( $z=12.8$ ,  $p<0.000001$ ), village communities ( $z=4.1$ ,  $p<0.0001$ ) or dispersed housing schemes ( $z=3.28$ ,  $p<0.01$ ) were significantly more likely to lead inactive lifestyles than men in the general adult population of England;
- 229.2 women living in either residential campuses ( $z=17.0$ ,  $p<0.000001$ ), village communities ( $z=5.4$ ,  $p<0.000001$ ) or dispersed housing schemes ( $z=2.95$ ,  $p<0.01$ ) were significantly more likely to lead inactive lifestyles than women in the general adult population of England.

230 *Association with ability and challenging behaviour:* There were no significant associations between either ability or challenging behaviour and activity levels among people living in either residential campuses, dispersed housing schemes or village communities.

### Smoking & Drinking

231 Within the general adult population of England, 28% of men and 26% of women smoke (Health Survey for England 1993; Bennett et al, 1995). Levels of alcohol consumption for men and women within the general adult population of England have been categorised as none (less than 1 unit per week), low (1-10 units per week for men, 1-7 units per week for women), moderate (10.1-21 units per week for men, 7.1-14 units per week for women) and high (more than 21 units per week for men, more than 14 units per week for women)

(Health Survey for England 1993; Bennett et al, 1995). Information was collected on users' consumption of alcohol and levels of smoking. This information is summarised below in Tables 45 and 46 along with data extracted from the English Health Survey.

- 232 *Summary:* Men living in residential campuses were significantly less likely to drink than men living in either dispersed housing schemes or village communities ( $\chi^2=26.1$ ,  $df=2$ ,  $p<0.001$ ). There were no differences between models with regard to smoking. Levels of smoking and alcohol consumption among people with learning disabilities participating in the present study were notably lower than rates reported in the general population of England. As such, there were no differences between the models with regard to either smoking or drinking as health risks.
- 233 *Association with ability and challenging behaviour:* There were no significant associations between ability and either smoking or drinking among people living in either dispersed housing schemes or village communities. Within residential campuses, more able people were likely to smoke a greater number of cigarettes (*RC*:  $r=0.307$ ,  $p<0.01$ ). There were no significant associations between challenging behaviour and either smoking or drinking among people living in either residential campuses, dispersed housing schemes or village communities.

Table 45: Smoking and Drinking in Adult Population of England				
Alcohol consumption	Non-drinker	Low	Moderate	High
Men in general population	15%	34%	21%	30%
Women in general population	33%	38%	16%	13%

Table 46: Smoking and Drinking in Participants				
	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>Alcohol consumption</b>				
Men participating in project				p<0.01 (C)
Non-drinker	64%	73%	49%	
Low	36%	27%	50%	
Moderate	0%	0%	0%	
High	0%	0%	1%	
Women participating in project				n.s.
Non-drinker	82%	96%	76%	
Low	18%	4%	23%	
Moderate	0%	0%	1%	
High	0%	0%	0%	
<b>Smoking</b>				
Non-smoker	98%	92%	88%	n.s.
Smokes 1 to 20 a week	2%	5%	8%	
Smokes 20 plus a week	0%	3%	4%	

## Diet

- 234 Information was collected from care staff on the frequency with which residents ate different classes of food. The results were used to establish whether residents' diet satisfied the "4.2.2.4." formula recommended by dieticians (Watson & Charlton, 1993) as being the minimum daily food intake goal for adults (4 daily helpings of starchy foods; 2 of protein foods; 2 of milk or milk based products; and 4 of fruit or vegetables). Poor diet was defined as having three or more behaviours from the following list: using full-fat milk rather than skimmed or semi-skimmed; using butter rather than low fat spread; using white rather than brown bread; having fruit or fruit juice less than four days a week; having vegetables or salad less than four days a week; having chips on more than four days a week. This measure has also been used to look at the diet of people with learning disabilities (Turner et al, 1997). The present study employed all behaviours from this list except using white rather than brown bread. 'Fatty diet' was defined as following at least two of the following three behaviours: using full fat rather than skimmed or semi-skimmed milk; using butter rather than low fat spread; and eating chips on four or more days per week (Turner et al, 1997). This information is summarised below in Table 47.

	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of users eating ...</b>				
sufficient starch	42%	45%	42%	n.s.
sufficient fruit and veg	16%	22%	19%	n.s.
sufficient protein	69%	75%	73%	n.s.
sufficient milk based foods	69%	87%	81%	p<0.01 (C)
<b>% of using meeting 4.2.2.4 criteria</b>	7%	8%	8%	n.s.
<b>% of users having ...</b>				
poor diet	2%	8%	10%	n.s.
fatty diet	3%	8%	10%	n.s.

- 235 *Summary:* There were no robust differences between the three approaches to providing residential supports with regard to diet.
- 236 *Association with ability and challenging behaviour:* There were no significant associations between either ability or challenging behaviour and any measure of diet for people living in either dispersed housing schemes, residential campuses or village communities.

## Accidents, Safety & Risks

- 237 Information was collected by interview regarding actual accidents, physical or sexual abuse, verbal abuse, vandalism and crimes suffered by users. Information was also collected on staff perceptions as to whether or not users were at any risk from accidents, abuse or exploitation. The information on perceived risks was collected on a 4 point scale of: 0 (no risk); 1 (perceived risk but no evidence for staff concern); 2 (perceived risk with some support for staff concern); and 3 (perceived risk with solid evidence to support concern). In view of the low numbers for points 1 to 3 these were collapsed to form dichotomous yes/no responses for perceived risk (see Appendix 1). The information on actual incidents and perceived risk is summarised below in Table 48.

Table 48: Accidents, Safety and Risks				
	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>% of users suffering accidents or injuries requiring hospital treatment in past 5 years</b>	3%	9%	12%	n.s.
<b>% of users suffering accidents or injuries requiring medical attention ..</b>				
...in the home in past year	19%	31%	21%	n.s.
...out of the home in past year	21%	9%	14%	n.s.
<b>% of users who have...</b>				
..been the victim of physical or sexual abuse in their current home in the past 5 years				
...been the victim of a crime	6%	13%	9%	n.s.
...had their current home vandalised	2%	14%	15%	p<0.001 (C)
...been verbally abused by members of the public	1%	10%	8%	n.s.
	5%	22%	23%	p<0.001 (C)
<b>% of users perceived to be at some risk...</b>				
...of accidents in the home	13%	30%	21%	p<0.01 (C)
...of traffic accidents	14%	13%	11%	n.s.
...from dangers outside the home	7%	8%	8%	n.s.
<b>% of users perceived to be at risk of physical or sexual abuse by ...</b>				
...other service users	21%	25%	16%	n.s.
...people living in local community	1%	5%	10%	n.s.
...staff working in services	0%	1%	3%	n.s.
...any other persons	1%	2%	5%	n.s.
<b>% of users perceived to be at risk of exploitation by ...</b>				
...other service users	15%	9%	13%	n.s.
...people living in local community	1%	3%	13%	p<0.001 (C)
...staff working in services	0%	2%	4%	n.s.
...any other persons	0%	5%	4%	n.s.

238 *Summary:* People living in village communities were significantly less likely than people living in either dispersed housing schemes or residential campuses to have been the documented victims crime (*DHS*:  $\chi^2=14.5$ ,  $df=1$ ,  $p<0.0001$ ; *RC*:  $\chi^2=8.9$ ,  $df=1$ ,  $p<0.001$ ) or verbal abuse (*DHS*:  $\chi^2=14.4$ ,  $df=1$ ,  $p<0.0001$ ; *RC*:  $\chi^2=12.2$ ,  $df=1$ ,  $p<0.001$ ). With regard to *perceived risk*, people living in village communities were considered by informants to be at significantly greater risk than people living in residential campuses within their own homes ( $\chi^2=8.7$ ,  $df=1$ ,  $p<0.01$ );). People living in dispersed housing schemes were considered by informants to be at significantly greater risk than people living in either village communities or residential campuses of exploitation by people in their local community (*VC*:  $\chi^2=10.2$ ,  $df=1$ ,  $p<0.01$ ; *RC*:  $\chi^2=10.4$ ,  $df=1$ ,  $p<0.01$ ).

239 *Association with ability and challenging behaviour:* There were few significant associations between either ability or challenging behaviour and measure of actual or perceived risk:

- 239.1 within dispersed housing schemes and residential campuses, more able people were considered to be at significantly greater risk of exploitation by members of the local community (*DHS*:  $r=0.370$ ,  $p<0.01$ ; *RC*:  $r=0.286$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models in perceived risk of exploitation by members of the local community were repeated while controlling for variation in level of ability. The results of these analyses were consistent with the original analyses indicating significantly greater perceived risk in dispersed housing schemes, even when differences in levels of ability were taken into account (partial  $r_{\text{dispersed housing}}=0.161$ ,  $p<0.001$ ). Analysis of the matched samples indicated significantly higher perceived risk in dispersed housing schemes than in village communities ( $\chi^2=17.2$ ,  $df=1$ ,  $p<0.001$ ), with differences between dispersed housing schemes and residential campuses being non-significant;
- 239.2 within dispersed housing schemes, more able people were also considered to be at significantly greater risk of abuse by members of their local community (*DHS*:  $r=0.310$ ,  $p<0.01$ );
- 239.3 within village communities, more able people were considered to be at significantly lesser risk of abuse by other users (*VC*:  $r=0.321$ ,  $p<0.01$ );
- 239.4 within village communities, people with more severe challenging behaviour were considered to be at significantly lesser risk of having an accident within their home (*VC*:  $r=0.312$ ,  $p<0.01$ ).

### Work & Education

- 240 The *Client Service Receipt Inventory* (Knapp et al, 1992; Knapp, 1995) was used to collect information on users' weekly participation in vocational, educational and other forms of day-time activities. This information is summarised below in Table 49.
- 241 *Summary*: People living in village communities had significantly more hours per week ( $F=52.5$ ,  $df=2,499$ ,  $p<0.0001$ ) of scheduled day activities than people living in dispersed housing schemes (Scheffé post hoc test,  $p<0.05$ ) who, in turn, had significantly more hours per week of scheduled day activities than people living in residential campuses (Scheffé post hoc test,  $p<0.05$ ). Similarly, people living in village communities had scheduled day activities on significantly more days per week ( $F=32.2$ ,  $df=2,499$ ,  $p<0.0001$ ) than people living in dispersed housing schemes (Scheffé post hoc test,  $p<0.05$ ) or residential campuses (Scheffé post hoc test,  $p<0.05$ ). With regard to specific forms of activity:
- 241.1 a greater proportion of people living in dispersed housing schemes were in some form of employment than people living in residential campuses (*VC*:  $\chi^2=11.0$ ,  $df=1$ ,  $p<0.01$ );
- 241.2 a greater proportion of people living in either village communities or dispersed housing schemes attended Adult Education classes than people living in residential campuses (*VC*:  $\chi^2=11.5$ ,  $df=1$ ,  $p<0.001$ ; *DHS*:  $\chi^2=22.6$ ,  $df=1$ ,  $p<0.00001$ );
- 241.3 a greater proportion of people living in dispersed housing schemes did voluntary work than people living in residential campuses ( $\chi^2=9.6$ ,  $df=1$ ,  $p<0.01$ );
- 241.4 a greater proportion of people living in residential campuses attended Adult Training or Social Education Centres than people living in either village communities ( $\chi^2=21.2$ ,  $df=1$ ,  $p<0.0001$ ) or dispersed housing schemes ( $\chi^2=54.8$ ,  $df=1$ ,  $p<0.00001$ );

- 241.5 a greater proportion of people living in village communities attended ‘other’ services than people living in either residential campuses ( $\chi^2=51.7$ ,  $df=1$ ,  $p<0.00001$ ) or dispersed housing schemes ( $\chi^2=102.9$ ,  $df=1$ ,  $p<0.00001$ ).

Table 49: Vocational, Educational and Other Day Activities				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of users who participate on a regular basis in ...</b>				
... open or supported/sheltered employment	0%	0%	8%	$p<0.001$ (C)
... voluntary work	7%	2%	10%	$p<0.01$ (C)
... Adult Education classes	19%	5%	24%	$p<0.0001$ (C)
... ATC/SEC	57%	85%	47%	$p<0.0001$ (C)
...other	34%	2%	4%	$p<0.0001$ (C)
<b>Mean (&amp; s.d.) Days per week of scheduled activity</b>	4.6 (1.1)	3.3 (1.8)	2.9 (1.9)	$p<0.0001$ (A)
<b>Mean (&amp; s.d.) hours per week of scheduled activity</b>	25.8 (11.2)	10.2 (10.2)	13.5 (12.0)	$p<0.0001$ (A)
<b>% of users with different levels of schedules activity (hours per week)</b>				
... none	6%	11%	21%	$p<0.0001$ (C)
... up to 15	11%	59%	36%	
... 15.1 to 30	49%	26%	32%	
... more than 30	35%	4%	10%	

242 *Association with ability and challenging behaviour*: There were few significant associations between either ability or challenging behaviour and use of day services:

- 242.1 within dispersed housing schemes, more able people were more likely to attend Adult Education classes ( $r=0.277$ ,  $p<0.01$ );
- 242.2 within dispersed housing schemes, more able people were more likely to participate in voluntary work (*DHS*:  $r=0.337$ ,  $p<0.01$ );
- 242.3 within village communities, more able people were more likely to attend some form of day service for a greater number of hours per week (*VC*:  $r=0.504$ ,  $p<0.01$ ), were more likely to participate in ‘other’ activities (*VC*:  $r=0.410$ ,  $p<0.01$ ) and less likely to attend an ATC/SEC (*VC*:  $r=0.294$ ,  $p<0.01$ ).



## Leisure & Community Involvement

243 Information was collected on users' participation in various activities during the 4 weeks preceding interview, using items from the Index of Community Involvement (Raynes et al, 1994). This information is summarised below in Table 50.

	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>% of users who in past 4 weeks had</b>				
...				
had guests to stay	0%	1%	3%	n.s.
had family/friends round for meal	12%	11%	26%	p<0.001 (C)
been to a social club	36%	17%	48%	p<0.0001 (C)
stayed overnight with family/friends	37%	12%	17%	p<0.0001 (C)
had trips out with family or friends	51%	33%	37%	n.s.
been to a cafe	81%	57%	88%	p<0.0001 (C)
been to a pub	80%	30%	73%	p<0.0001 (C)
been to a hairdresser	63%	56%	61%	n.s.
been shopping	80%	58%	94%	p<0.0001 (C)
been to place of religious worship	30%	9%	22%	p<0.0001 (C)
been to a sports event	17%	5%	13%	p<0.01 (C)
been to a cinema	28%	3%	26%	p<0.0001 (C)
been to a concert or play	21%	4%	19%	p<0.001 (C)
been on a public bus	24%	11%	38%	p<0.0001 (C)
been to their bank	27%	3%	57%	p<0.0001 (C)
mean (& s.d.) of number of activities undertaken	18.3 (10.0)	7.3 (8.2)	27.8 (20.7)	p<0.0001 (A)
mean (& s.d.) of number of different activities undertaken	9.3 (3.1)	4.8 (3.0)	9.4 (3.0)	p<0.0001 (A)
<b>% of users who in past year weeks had been on holiday</b>	93%	65%	82%	p<0.0001 (C)

244 *Summary:* People living in dispersed housing schemes participated in a greater number of leisure activities ( $F=67.6$ ;  $df=2,492$ ;  $p<0.0001$ ) than people living in village communities (Scheffé post hoc test,  $p<0.05$ ) who, in turn, participated in a greater number of leisure activities than people living in residential campuses (Scheffé post hoc test,  $p<0.05$ ). People living in dispersed housing schemes and village communities participated in a greater variety of leisure activities ( $F=117.0$ ;  $df=2,492$ ;  $p<0.0001$ ) than people living in residential campuses (Scheffé post hoc test,  $p<0.05$ ). With regard to specific activities:

- 244.1 a greater proportion of people living in either dispersed housing schemes or village communities had, when compared with people living in residential campuses, been to a social club ( $DHS: \chi^2=35.2$ ,  $df=1$ ,  $p<0.00001$ ;  $VC: \chi^2=10.0$ ,  $df=1$ ,  $p<0.001$ ), been to a concert or play ( $DHS: \chi^2=16.3$ ,  $df=1$ ,  $p<0.0001$ ;  $VC: \chi^2=15.7$ ,  $df=1$ ,  $p<0.01$ ), been to the cinema ( $DHS: \chi^2=30.3$ ,  $df=1$ ,  $p<0.00001$ ;  $VC: \chi^2=28.0$ ,  $df=1$ ,  $p<0.00001$ ), been to a pub ( $DHS: \chi^2=67.0$ ,  $df=1$ ,  $p<0.00001$ ;  $VC: \chi^2=51.6$ ,  $df=1$ ,  $p<0.00001$ ) and been on holiday in the last year ( $DHS: \chi^2=14.5$ ,  $df=1$ ,  $p<0.00001$ ;  $VC: \chi^2=22.2$ ,  $df=1$ ,  $p<0.001$ );
- 244.2 a greater proportion of people living in dispersed housing schemes had, when compared to people living in either village communities or residential campuses,

- had family or friends round for a meal (*RC*:  $\chi^2=12.1$ ,  $df=1$ ,  $p<0.001$ ; *VC*:  $\chi^2=7.7$ ,  $df=1$ ,  $p<0.01$ ), been shopping (*RC*:  $\chi^2=79.2$ ,  $df=1$ ,  $p<0.00001$ ; *VC*:  $\chi^2=14.7$ ,  $df=1$ ,  $p<0.0001$ ) and been to a bank (*RC*:  $\chi^2=106.8$ ,  $df=1$ ,  $p<0.00001$ ; *VC*:  $\chi^2=24.0$ ,  $df=1$ ,  $p<0.0001$ ). A greater proportion of people living in village communities had participated in the latter three activities than people living in residential campuses (*café*:  $\chi^2=13.5$ ,  $df=1$ ,  $p<0.001$ ; *bus*:  $\chi^2=7.0$ ,  $df=1$ ,  $p<0.01$ ; *bank*:  $\chi^2=26.3$ ,  $df=1$ ,  $p<0.0001$ );
- 244.3 a greater proportion of people living in village communities had, when compared to people living in either dispersed housing schemes or residential campuses, stayed over with family or friends (*DHS*:  $\chi^2=16.4$ ,  $df=1$ ,  $p<0.0001$ ; *RC*:  $\chi^2=19.8$ ,  $df=1$ ,  $p<0.0001$ );
- 244.4 a greater proportion of people living in dispersed housing schemes had, when compared to people living in residential campuses, been to a place of worship ( $\chi^2=10.2$ ,  $df=1$ ,  $p<0.01$ ), been on a bus ( $\chi^2=32.1$ ,  $df=1$ ,  $p<0.00001$ ), and café ( $\chi^2=48.5$ ,  $df=1$ ,  $p<0.00001$ );
- 244.5 a greater proportion of people living in village communities had, when compared to people living in residential campuses, been to a sports event ( $\chi^2=15.4$ ,  $df=1$ ,  $p<0.0001$ ), had trips out with family or friends ( $\chi^2=7.4$ ,  $df=1$ ,  $p<0.01$ ) or been to a place of worship (*DHS*:  $\chi^2=29.8$ ,  $df=1$ ,  $p<0.00001$ ; *RC*:  $\chi^2=15.5$ ,  $df=1$ ,  $p<0.0001$ ).
- 245 *Association with ability and challenging behaviour*: There were few significant associations between either ability or challenging behaviour and participation in leisure activities:
- 245.1 within all three models more able people were more likely to participate in a greater number of activities (*VC*:  $r=0.304$ ,  $p<0.01$ ; *DHS*:  $r=0.507$ ,  $p<0.01$ ; *RC*:  $r=0.346$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models in total number of activities were repeated while controlling for variation in level of ability. The results of these analyses were consistent with the original analyses indicating significantly greater levels of participation among people living in dispersed housing schemes, even when differences in levels of ability are taken into account (ANCOVA  $F=59.3$ ;  $df=2,477$ ;  $p<0.0001$ ). The results derived from the analyses of the matched samples was consistent with the results of the multivariate analyses in that participants in dispersed housing schemes engaged in a greater number of recreational/community based activities than participants living in village communities ( $t=5.8$ ,  $df=105$ ,  $p<0.001$ ) and residential campuses ( $t=9.6$ ,  $df=185$ ,  $p<0.001$ );
- 245.2 within all three models more able people were more likely to participate in a wider variety of activities (*VC*:  $r=0.452$ ,  $p<0.01$ ; *DHS*:  $r=0.255$ ,  $p<0.01$ ; *RC*:  $r=0.$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models in total number of activities were repeated while controlling for variation in level of ability. The results of these analyses were consistent with the original analyses indicating significantly lower levels of participation among people living in residential campuses, even when differences in levels of ability are taken into account (ANCOVA  $F=80.9$ ;  $df=2,477$ ;  $p<0.0001$ ). The results derived from the analyses of the matched samples was consistent with the results of the multivariate analyses in that participants in dispersed housing schemes engaged in a greater variety of recreational/community based activities than participants living in residential campuses ( $t=11.7$ ,  $df=242$ ,  $p<0.001$ ), with differences between dispersed housing schemes and village communities being non-significant;

- 245.3 within dispersed housing schemes and residential campuses more able people were more likely to have been shopping (*DHS*:  $r=0.319$ ,  $p<0.01$ ; *RC*:  $r=0.372$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models were repeated while controlling for variation in level of ability. The results of these analyses were consistent with the original analyses indicating significantly lower levels of participation among people living in residential campuses, even when differences in levels of ability are taken into account (partial  $r_{\text{residential campus}}=0.350$ ,  $p<0.001$ );
- 245.4 within dispersed housing schemes, village communities and residential campuses more able people were more likely to have been to their bank (*DHS*:  $r=0.426$ ,  $p<0.01$ ; *VC*:  $r=0.342$ ,  $p<0.01$ ; *RC*:  $r=0.253$ ,  $p<0.01$ ). As a result of these associations, analyses of differences between the models were repeated while controlling for variation in level of ability. The results of these analyses were consistent with the original analyses indicating significantly greater levels of participation among people living in dispersed housing schemes, even when differences in levels of ability are taken into account (partial  $r_{\text{dispersed housing}}=0.352$ ,  $p<0.001$ );
- 245.5 within dispersed housing schemes and village communities, more able people were more likely to have been on a bus (*DHS*:  $r=0.424$ ,  $p<0.01$ ; *VC*:  $r=0.500$ ,  $p<0.01$ ). The results of these analyses were consistent with the original analyses indicating significantly greater levels of participation among people living in dispersed housing schemes, even when differences in levels of ability are taken into account (partial  $r_{\text{dispersed housing}}=0.198$ ,  $p<0.001$ );
- 245.6 within residential campuses, more able people were more likely to have been to a café (*RC*:  $r=0.332$ ,  $p<0.01$ );
- 245.7 within village communities, more people with more severe challenging behaviour were less likely to have been on holiday (*VC*:  $r=0.337$ ,  $p<0.01$ ) and less likely to have been to the hairdresser (*VC*:  $r=0.422$ ,  $p<0.01$ ).

## Summary

246 In this section we have examined differences between village communities, residential campuses and dispersed housing schemes with regard to the nature of outcomes experienced by residents. In Table 51, below, we have summarised the comparative benefits accruing to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with 'higher quality' outcomes). Where necessary, assumptions underlying judgements of quality have been indicated.

Table 51: Summary of Benefits Associated With Specific Forms of Provision		
Variable		Preferred Model
<b>Choice</b>		dispersed housing schemes & village communities
<b>Relationships with Family</b>		
	<b>proximity to family</b>	dispersed housing schemes & residential campuses
	contact with family	no clear difference
<b>Extent of Social Networks</b>		
	<b>overall</b>	dispersed housing schemes & village communities
	<b>with others who have a learning disabilities</b>	dispersed housing schemes & village communities
	<b>with staff</b>	village communities
	with family	no clear difference
	<b>with others</b>	dispersed housing schemes
<b>Health</b>		
	underweight	no clear difference
	obese	no clear difference
	<b>activity</b>	dispersed housing schemes
	smoking	no clear difference
	drinking	no clear difference
	poor diet	no clear difference
<b>Risks</b>		
	severe accidents	no clear difference
	accidents out of home	no clear difference
	accidents in home	no clear difference
	documented physical or sexual abuse	no clear difference
	<b>documented verbal abuse</b>	village communities
	<b>documented victim of crime</b>	village communities
<b>Work &amp; Education</b>		
	<b>employment</b>	dispersed housing schemes
	<b>voluntary work</b>	dispersed housing schemes & village communities
	<b>adult education classes</b>	dispersed housing schemes & village communities
	<b>(participating in) day centre activities</b>	residential campuses
	<b>total hours per week</b>	village communities
<b>Day &amp; Leisure Activities</b>		
	<b>total number of activities</b>	dispersed housing schemes
	<b>variety of activities</b>	dispersed housing schemes & village communities

## The Views of Users

- 247 The views of users were obtained through semi-structured interviews using a pro-forma based on previous research conducted within the Hester Adrian Research Centre (Azmi et al, 1997; Mason et al, 1997). Participants were approached to seek their consent to be interviewed if care staff reported that they had sufficient receptive and expressive communicative ability to participate.
- 248 A total of 105 interviews were conducted, representing 19% of the total sample of participants. Of these, 45 interviewees were living in village communities (31% of the total possible sample of 146 participants living in village communities), 10 were living in residential campuses (8% of the total possible sample) and 55 were living in dispersed housing schemes (20% of the total possible sample). The small numbers of people interviewed in residential campuses reflects the severity of communication and learning disabilities experienced by this group of people (see para 61, above).
- 249 Interviews were conducted by members of the research team, primarily in the person's own home. A small number of interviews were conducted in the person's day service. Interviewees were given the choice of being interviewed alone or of having a member of their support team (or other person) present. In the majority (approximately 80%) of cases participants opted to be interviewed alone. Individual interviews lasted between approximately 20 and 40 minutes.
- 250 The interview schedule used simple open ended questions with additional probe questions to explore the user's views with regard to seven areas:
- 250.1 their home (e.g., aspects of their home they particularly liked or disliked);
  - 250.2 their day time activities (e.g., satisfaction with work, day service, educational opportunities);
  - 250.3 their social and recreational activities (e.g., satisfaction with frequency and nature of activities available to them);
  - 250.4 their friendships and relationships (e.g., activities undertaken with friends, frequency of contact, contact with family);
  - 250.5 the support they received from services (e.g., amount and nature of support, experience of IPP meetings);
  - 250.6 the choices available to them (e.g., over household routines, day activities, recruitment of staff, where they live);
  - 250.7 risks in their environment (e.g., feeling safe in their home and when going out, experience of discrimination and abuse).
- 251 The interviewer rated the interviewees' responses to each section on the following six point scale indicating their overall expressed level of satisfaction.
- |   |                          |   |                          |
|---|--------------------------|---|--------------------------|
| 0 | No clear response        | 3 | Neutral/mixed response   |
| 1 | Very positive response   | 4 | Mildly negative response |
| 2 | Mildly positive response | 5 | Very negative response   |
- 252 Table 52, below, summarises the satisfaction ratings given to the comments made by users for each of the seven areas. Due to the very small number and percentage of interviewees living in residential campuses, information is restricted to the views of users in village communities and dispersed housing schemes.

Table 52: Levels of Satisfaction Expressed by Users				
	<i>Village Communities</i>	<i>Dispersed Housing</i>	Test and statistical significance	
<b>their home</b> (98% of interviewees provided a clear response)				
very positive	54%	50%	n.s.	
mildly positive	33%	34%		
neutral/mixed	12%	12%		
mildly negative	2%	2%		
very negative	0%	2%		
<b>day activities</b> (95% of interviewees provided a clear response)				
very positive	58%	50%	n.s.	
mildly positive	38%	36%		
neutral/mixed	3%	10%		
mildly negative	3%	4%		
very negative	0%	0%		
<b>social &amp; recreational activities</b> (88% of interviewees provided a clear response)				
very positive	22%	35%	n.s.	
mildly positive	58%	48%		
neutral/mixed	19%	17%		
mildly negative	0%	0%		
very negative	0%	0%		
<b>choice</b> (54% of interviewees provided a clear response)				
very positive	18%	48%	n.s.	
mildly positive	36%	30%		
neutral/mixed	36%	18%		
mildly negative	9%	5%		
very negative	0%	0%		
<b>friendships &amp; relationships</b> (87% of interviewees provided a clear response)				
very positive	45%	22%	n.s.	
mildly positive	29%	42%		
neutral/mixed	26%	29%		
mildly negative	0%	4%		
very negative	0%	2%		
<b>support received</b> (76% of interviewees provided a clear response)				
very positive	26%	37%	n.s.	
mildly positive	52%	46%		
neutral/mixed	16%	15%		
mildly negative	7%	0%		
very negative	0%	2%		
<b>risks</b> (85% of interviewees provided a clear response)				
very positive	16%	34%	n.s.	
mildly positive	54%	36%		
neutral/mixed	22%	14%		
mildly negative	8%	11%		
very negative	0%	5%		

253 As can be seen, there were no statistically significant differences in any domain between the rated satisfaction of users who lived in village communities and users who lived in dispersed housing schemes. In two areas, however, non-significant trends emerged: people living in dispersed housing schemes tended to express greater satisfaction with the degree of choice they experienced (Mann-Whitney  $z=1.85$ ,  $p=0.065$ ); people living in

village communities tended to express greater satisfaction with their friendships and social relationships (Mann-Whitney  $z=1.93$ ,  $p=0.053$ ).

- 254 Spearman rank order correlation coefficients were used to explore the associations between ratings of user satisfaction in the seven areas. Of the 21 possible paired combinations, 6 were significant at the 0.01 level. The statistically significant relationships were between: friendships and choice ( $r=0.416$ ,  $p<0.01$ ); day and social activities ( $r=0.394$ ,  $p<0.001$ ); home and friendships ( $r=0.374$ ,  $p<0.001$ ); home and support ( $r=0.324$ ,  $p<0.01$ ); support and risks ( $r=0.328$ ,  $p<0.01$ ); home and day activities ( $r=0.318$ ,  $p<0.001$ ).
- 255 Wilcoxon Matched-Pairs Signed Ranks Tests were used to explore differences in level of rated user satisfaction between the seven areas. Of the 21 possible paired combinations, 8 were significant at the 0.01 level. The statistically significant relationships were:
- 255.1 greater satisfaction with their home than with friendships (Wilcoxon  $z=3.25$ ,  $p<0.01$ ), risks (Wilcoxon  $z=3.18$ ,  $p<0.01$ ), support received (Wilcoxon  $z=2.88$ ,  $p<0.01$ ) and choice (Wilcoxon  $z=2.82$ ,  $p<0.01$ );
- 255.2 greater satisfaction with their day activities than with friendships (Wilcoxon  $z=3.04$ ,  $p<0.01$ ), choice (Wilcoxon  $z=3.02$ ,  $p<0.01$ ), risks (Wilcoxon  $z=2.97$ ,  $p<0.01$ ) and support received (Wilcoxon  $z=2.86$ ,  $p<0.01$ ).
- 256 When these comparisons were restricted to people living in village communities, 5 of the 21 possible comparisons were significant at the 0.01 level. The statistically significant relationships were:
- 256.1 greater satisfaction with their home than with risks (Wilcoxon  $z=2.97$ ,  $p<0.01$ ) and social activities (Wilcoxon  $z=2.68$ ,  $p<0.01$ );
- 256.2 greater satisfaction with their day activities than with support received (Wilcoxon  $z=3.21$ ,  $p<0.01$ ), risks (Wilcoxon  $z=3.14$ ,  $p<0.01$ ) and social activities (Wilcoxon  $z=3.02$ ,  $p<0.01$ ).
- 257 Correspondingly, when these comparisons were restricted to people living in dispersed housing schemes, 3 of the 21 possible comparisons were significant at the 0.01 level. The statistically significant relationships were:
- 257.1 greater satisfaction with their home than with friendships (Wilcoxon  $z=2.69$ ,  $p<0.01$ );
- 257.1 greater satisfaction with their day activities than with friendships (Wilcoxon  $z=2.77$ ,  $p<0.01$ ) and risks (Wilcoxon  $z=2.60$ ,  $p<0.01$ ).
- 258 Within each of the seven areas it was possible to explore relationships between ratings of user satisfaction and information collected from care staff and site visits. The results of these comparisons and illustrative comments made by users are presented in the following sections.

## Their Home

259 Table 53, below, gives some of the comments made by interviewees about their home.

Table 53: Comments Made in Response to Questions About the Interviewees Current Home	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"I like it here - a lot better for me here - nearer my family. I get to go out more, meet more people."	"I like quiet, but it's a bit too quiet here...it's quite lonely, no-one comes up here."
"I don't like people (other residents) bossing me around."	"I got my own bedroom and my own telly and my own wireless. I like it on my own."
"(I) can get a public bus, rather than one of the these minibuses"	You go out often here, go up town, do a bit of shopping. More freedom, you see. This place is ten times better (than the institution). I called it X prison, cos people got shut away there - only used to be allowed out sometimes, with a ticket to show people - now we go anywhere. This (house) is just nice, right size..I like everybody (here).
"Good relationship with other residents - like a neighbour - living together and getting to know each other; can talk about sports, friendly neighbourhood - freedom you get, - nobody turning their nose up or being bad tempered."	"Ideally I'd have my own place."
"It's nice - you make friends...get on well with the staff."	"You can do more things on your own and be independent."
"It was my idea that I would love to live in a [name] village...had to wait and wait and wait because we had a fight with social services to give us money so I could get in here."	"It's brilliant, the house. Nice people."
"I love it here, I really do. I like the staff, I like making friends, I like my house, the other people living here - I get on with them...nice environment, like being in the country."	"You don't have to tell other people where you're going, ever."
"I made more friends... I like living here, the people are so nice."	"We're our own bosses and no-one tells us to do things at such and such a time." "It's like a little community here. If I fell over, there's about 6 people would be picking me up."
"Nice flat, like being able to do my own thing...I want to stay here, I like it."	"Here's better (than the institution) because it's about real life, (I) like it a lot."
	"(I) come in the house, it's my own house. I like it here."
	"I like it here, with the atmosphere that's going on. you can please what you do, where you go. Got my own room, own stuff, own stereo."



- 260 Users were more likely to express positive views about their accommodation if their home:
- 260.1 had lower ratios of 'other' (e.g., domestic) staff (Spearman's  $r=0.255$ ,  $p<0.05$ ) and/or lower overall staff ratios (Spearman's  $r=0.210$ ,  $p<0.05$ );
  - 260.2 was rated as being more homely on the Architectural Features Scale (Spearman's  $r=0.242$ ,  $p<0.05$ ) and the Residential Services Setting Questionnaire (Spearman's  $r=0.250$ ,  $p<0.05$ );
  - 260.3 implemented 'active support' in the areas of person centred planning (Spearman's  $r=0.216$ ,  $p<0.05$ ), assessment and teaching (Spearman's  $r=0.258$ ,  $p<0.01$ ) and staff support to residents (Spearman's  $r=0.236$ ,  $p<0.05$ );
  - 260.4 facilitated user involvement in the implementation of 'active support' in the areas of person centred planning (Spearman's  $r=0.315$ ,  $p<0.01$ ), assessment and teaching (Spearman's  $r=0.293$ ,  $p<0.01$ ) and activity planning (Spearman's  $r=0.274$ ,  $p<0.01$ );
  - 260.5 was less institutional in the areas of depersonalisation (Spearman's  $r=0.205$ ,  $p<0.05$ ) and social distance (Spearman's  $r=0.268$ ,  $p<0.01$ ).

### Day Activities

- 261 Table 54, below, gives some of the comments made by interviewees about their day activities.

Table 54: Comments Made in Response to Questions About the Interviewees' Current Day Activities	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"Plenty to do - keeps us going...get to show the new residents the ropes, get the new residents interested in things."	"I don't mind (work)...you see people come in and out the shop... I like them."
"Like working outside - pleasure to work with the people, get on with them."	"Get bored with staying indoors all the time."
"Got myself a job at a day centre, do sandwiches, washing up, make lots of friends there."	"I packed (my job) up because they gave me too much hard work."
"I go to a day service...I'd love to have a job. I'm quite able to have a job, but I don't know if I can because of my behaviour - I get in moods, sometimes get aggressive, so I can't work."	"She's my employer, I get on very well with her. I get on with what I'm doing and let them get on with theirs. I've got all my friends there too."
	"I'm quite happy at the moment cos I've got three jobs and they keep me occupied."
	"I like all of it, cos it gets me out and about and meeting people."

- 262 Users were more likely to express positive views about their day activities if they spent fewer hours at Adult Training/Social Education Centres (Spearman's  $r=0.212$ ,  $p<0.05$ ), had scheduled activities on more days of the week (Spearman's  $r=0.269$ ,  $p<0.01$ ) and had more hours per week of scheduled activities (Spearman's  $r=0.218$ ,  $p<0.05$ ).

## Social & Recreational Activities

263 Table 55, below, gives some of the comments made by interviewees about their current social and recreational activities.

Table 55: Comments Made in Response to Questions About the Interviewees' Current Social and Recreational Activities	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"Go out like what other men do - to pubs and that."	"I go out more often (here). It's livelier and you can go down the shops..library, market, paper shop...sometimes go out with the staff, or on my own."
"I go horse riding. Most of the time I like going to the pub and getting drunk - go out and make friends."	"Sometimes go for a lovely lunch; go to (friend's) house or friends come here; go to the library, get some books; sometimes we go on short outings; do writing or reading, read books."
"Go to pub, go on exercise bike while watching TV...Weekends have a lie in, go for picnics... or out on mountain bike."	"Go out with my friends, for a pint. Sometimes you go in and they won't serve you. Go to the disco, go cycling. I don't think I've ever been bored in the evenings."
"Sometimes I might listen to my music or I might watch TV or pop down the village to the pub. Weekend go to [town] on the bus to do shopping, haircut or something. Sometimes go for trips in the minibus. I feel I've got plenty to do."	"Go to the shops and out for walks. We can come and go when we want in this house."
	"It's money again, money is the problem."

264 Users were more likely to express positive views about their social and leisure activities if they participated in more activities (Spearman's  $r=0.225$ ,  $p<0.05$ ) and went shopping more frequently (Spearman's  $r=0.233$ ,  $p<0.05$ ).

## Friendships & Relationships

265 Table 56, below, gives some of the comments made by interviewees about their friendships and relationships.

Table 56: Comments Made in Response to Questions About the Interviewees' Current Friendships and Relationships	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"Got nice friends, can phone my Mum and Dad."	"I'm quite happy as I am, (but) I'd like to get married and settle down somewhere."
"I get on quite well with the residents and get on quite well with friends at work. (I) have acquaintances that I see when I'm down at the (local pub)...(I) pop up to see (Mum) with my keyworker."	"I ring up [friend]. I used to live with him. Phone him up and talk to him. Meet him at his house or he visits here. Sometimes go to the pub."
"Got loads of friends actually, mostly from here. Got friends at work too."	"Some (friends) have died... some have moved away."

266 Users were more likely to express positive views about their friendships and relationships if they had fewer mental health problems (Spearman's  $r=0.283$ ,  $p<0.01$ ), had a larger number of people with learning disabilities in their social network (Spearman's  $r=0.263$ ,  $p<0.05$ ) and had a greater percentage of people with learning disabilities in their social network (Spearman's  $r=0.252$ ,  $p<0.05$ ).

### Support Received

267 Table 57, below, gives some of the comments made by interviewees about the support they receive.

Table 57: Comments Made in Response to Questions About the Interviewees' Current Support Arrangements	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"Meetings (are) very good - can say what we want and they (staff) will do something about it."	"They're quite alright here, as long as you do what you're told."
"(I) feel a lot of warmth from staff."	"I would like to hold them (meetings) myself - to discuss how I'm getting on, what I like, what I don't like."
"When you decide to have an IP you...sit and talk about old IP and new one and sort out things I can do in the workshop, and new things."	<i>IP meetings</i> "I'm quite content with the way they go."
"(I) go to staff interviews and get a say - can tell (the management) what I think of staff."	<i>IP meetings</i> "They're just a waste of time."
"Staff boss me around. I don't like it... I'm not happy about staff bossing me around, telling me what to do (in the house)."	<i>IP meetings</i> "I'd like to stop having them, cos it makes you feel you're no good, a bad person."
"They (IP meetings) 're nice. (I) like the way they do them, no interruptions."	
"If I get upset, they talk to me. (One staff member) is like a good friend to me - I like most of the staff."	
"I get upset at what they're saying about me, my behaviour, don't like them talking about it."	
"(Staff) talk too fast in meetings, they're too bossy."	

268 Users were more likely to express positive views about the support they received if a senior member of their staff team had a nursing qualification (Spearman's  $r=0.237$ ,  $p<0.05$ ).

## Choice

269 Table 58, below, gives some of the comments made by interviewees about the choice available to them.

Table 58: Comments Made in Response to Questions About the Interviewees' Opportunity to Exercise Choice and Control	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"We didn't know who was going to be in the house, (it was) up to [management] to organise it."	"This is where I was put. This is the place they said stay where you're at."
"Staff do ask what we want to do and we do our own washing and ironing."	"I usually just choose myself, what I do or what I eat...I choose anything"  "I'm pretty much in charge of what I want to do."  "I had to sit in on a job interview and I was interviewing people."  "(I was) just told that this was the address that I would have and I could move there."  "If you don't want to do something, you've only got to say." "Before we left [previous home], manager brought us to see the bungalow a few times."  "People come and have a look round. They come and we decide if we want them to move in. We have a say, to a certain extent. It has to be a gel."  "We choose when they (the staff) come, and we can kick them out if we don't like them."

270 Users were more likely to express positive views about the opportunity to exercise choice and control if they:

- 270.1 were younger (Spearman's  $r=0.409$ ,  $p<0.01$ ), more able (Spearman's  $r=0.443$ ,  $p<0.01$ ) and had not moved into their home from a NHS Mental handicap hospital (Spearman's  $r=0.313$ ,  $p<0.05$ );
- 270.2 were living in homes which facilitated user involvement in the implementation of 'active support' in the areas of person centred planning (Spearman's  $r=0.477$ ,  $p<0.01$ ), assessment and teaching (Spearman's  $r=0.430$ ,  $p<0.01$ ) and activity planning (Spearman's  $r=0.481$ ,  $p<0.01$ );
- 270.3 were living in homes which were rated more highly overall on the *Choices Scale* (Spearman's  $r=0.667$ ,  $p<0.01$ );
- 270.4 were living in homes which were rated more highly on the *Choice Scales* in the areas of choice of holidays (Spearman's  $r=0.650$ ,  $p<0.01$ ), the recruitment of staff (Spearman's  $r=0.542$ ,  $p<0.01$ ), review of staff (Spearman's  $r=0.537$ ,  $p<0.01$ ), employment (Spearman's  $r=0.536$ ,  $p<0.01$ ), firing of staff (Spearman's  $r=0.526$ ,  $p<0.01$ ), moving house in the future (Spearman's  $r=0.471$ ,  $p<0.01$ ), the timing of the evening meal (Spearman's  $r=0.469$ ,  $p<0.01$ ), where they live (Spearman's  $r=0.431$ ,  $p<0.01$ ), going out (Spearman's  $r=0.415$ ,  $p<0.01$ ), who they live with (Spearman's  $r=0.391$ ,  $p<0.01$ ), the content of the evening meal (Spearman's  $r=0.389$ ,  $p<0.01$ ), where the evening meal was eaten (Spearman's  $r=0.361$ ,

p<0.01), daytime activities (Spearman's  $r=0.330$ ,  $p<0.05$ ), household routines (Spearman's  $r=0.320$ ,  $p<0.05$ ), keeping pets (Spearman's  $r=0.297$ ,  $p<0.05$ ), involvement with partners (Spearman's  $r=0.278$ ,  $p<0.05$ ) and haircut (Spearman's  $r=0.261$ ,  $p<0.05$ ).

## Risks

271 Table 59, below, gives some of the comments made by interviewees about risks.

Table 59: Comments Made in Response to Questions About Risks	
<i>Interviewees living in village communities</i>	<i>Interviewees living in dispersed housing schemes</i>
"We all say we're lucky living here."	"I don't like these boys who wear jeans and boots. I get a bit worried when I see them and cross the road."
"People take the Mickey out of us"	
"I am safe here, I love living here."	"Do get some drunks, but some people are nice, and (I) do meet some people I know - I generally only talk to people I know."
"I don't like them (one other resident) shouting so much, always shouting at me. I hate it."	"Never used to feel safe, cos of names I've been called, but I feel safe now."
"I hate people being horrible to me. (Another resident) being bossy, she drives me bloody mad. Some of them are a bit loud, a bit mouthy."	"At college, people outside the classes call me silly names and you have to ignore it."
"One of the residents said he was going to box me ears...another resident hit me on the arm and another hit me. I was upset and crying, I don't like it."	"One night, someone rang the doorbell and ran way... knew I was on my own in the house... very scary." "Youngsters hang around, follow me around, call me names - they threw water over me."

272 Users were more likely to express concerns about risks if they had had an accident outside of their home (Spearman's  $r=0.258$ ,  $p<0.05$ ), had been subject to verbal abuse (Spearman's  $r=0.318$ ,  $p<0.01$ ) and had not moved into their home from a NHS Mental handicap hospital (Spearman's  $r=0.285$ ,  $p<0.01$ ).

## Summary

- 273 There were no statistically significant differences in any domain between the rated satisfaction of users who lived in village communities and users who lived in dispersed housing schemes. In two areas, however, non-significant trends emerged: people living in dispersed housing schemes tended to express greater satisfaction with the degree of choice they experienced; people living in village communities tended to express greater satisfaction with their friendships and social relationships.
- 274 Users did, however, express greater satisfaction with some areas of their lives than with others. Specifically:
- 274.1 they expressed greater satisfaction with their home than with friendships, risks, support received and choice;
  - 274.2 they expressed greater satisfaction with their day activities than with friendships, choice, risks and support received.
- 275 Within each of the seven areas it was possible to explore relationships between ratings of user satisfaction and information collected from care staff and site visits. The results of these comparisons indicated that satisfaction with:
- 275.1 *their home* was associated with being supported by lower overall staff ratios, living in a house that was rated as being more homely, living in a house which implemented 'active support' and facilitated user involvement in the implementation of 'active support', was less institutional;
  - 275.2 *day activities* was associated with spending fewer hours at Adult Training/Social Education Centres, having scheduled activities on more days of the week and for more hours per week;
  - 275.3 *social and leisure activities* was associated with participating in more activities and going shopping more frequently;
  - 275.4 *friendships and relationships* was associated with having fewer mental health problems, a larger number of people with learning disabilities in their social network, a greater percentage of people with learning disabilities in their social network;
  - 275.5 *support arrangements* was associated with a senior member of their staff team having a nursing qualification;
  - 275.6 *choice* was associated with being younger and more able, living in a house which facilitated user involvement in the implementation of 'active support', living in a house which was rated more highly overall on the Choice Scale, particularly with regard to choice of holidays, the recruitment of staff, review of staff, employment, firing of staff, moving house in the future, the timing of the evening meal, where they live, going out and who they live with;
  - 275.7 *risks* was associated with not having had an accident outside of their home and not being subject to verbal abuse.

## The Views of Relatives

- 276 The views of relatives were evaluated through their responses to a postal questionnaire designed specifically for this study. The questionnaire was distributed by the provider organisation to all families of participating users who met both of the following two criteria. First, they had ongoing contact with their relative. This was operationalised as them having had actual contact with their relative in the past six months. Second, there was no reason to believe that any members of the user's family would be upset as a result of being approached to gain their views.
- 277 The questionnaire was distributed by the provider organisation with a covering letter from the provider organisation explaining the purpose of the study and urging families to reply. Attached to the questionnaire was a FREEPOST envelope addressed to the Hester Adrian Research Centre.
- 278 A total of 251 responses were received: 93 from relatives of people living in village communities; 68 from relatives of people living in residential campuses; and 90 from relatives of people living in dispersed housing schemes. Overall, 161 (65%) of responses were from users' parents and 59 (24%) from siblings.
- 279 Thirteen of the participating organisations kept detailed records of the numbers of questionnaires sent out. The overall response rate for this subset of organisations was 51% (59% from relatives of users in village communities, 52% from relatives of users in residential campuses and 46% from relatives of users in dispersed housing schemes).
- 280 The questionnaire sought to collect information through a combination of seven point rating scales and open-ended questions on: (1) where the user was living before moving into their current home; (2) the comparative quality of their current and previous home; (3) specific opposition or support experienced by families in securing their relatives' current placement; (4) opinions about various aspects of their relatives' current placement; (5) aspects of their relatives' current placement that the families particularly liked; (6) aspects of their relatives' current placement that the families would like to see changed; (7) what families expect their relative to gain from their current placement.

## Comparisons With Previous Placement

281 Table 60, below, provides summary information regarding where the user was living before moving into their current home and relatives' rating of the comparative quality of their current and previous home.

Table 60: Family Reports of Comparative Quality of Current and Previous Residence				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>% of participants living in different types of previous residence ...</b>				
family or foster family	57%	21%	29%	p<0.0001 (C)
children's home or residential school	0%	2%	0%	n.s.
group home or hostel	11%	13%	11%	n.s.
hospital	5%	52%	47%	p<0.0001 (C)
<b>Rated comparative quality of current and previous residential supports. Current placement is...</b>				
... much better	64%	69%	68%	n.s.
... quite a bit better	13%	14%	15%	
... a bit better	6%	7%	8%	
... neutral	16%	5%	5%	
... a bit worse	0%	5%	3%	
... quite a bit worse	0%	0%	0%	
... much worse	2%	0%	2%	

282 *Summary:* There were no statistically significant differences in ratings of the comparative quality of supports between relatives of people living in either village communities, residential campuses or dispersed housing schemes. Across all three approaches, however, relatives were significantly more positive about the current arrangements if the person had moved from a NHS Mental handicap hospital (Mann-Whitney  $z=2.64$ ,  $p<0.01$ ). There was also a trend for relatives to be significantly more negative about the current arrangements if the person had moved from their family home (Mann-Whitney  $z=2.31$ ,  $p<0.05$ ). There were no statistically significant associations between the nature of the relationship (e.g., mother, father, sibling) and ratings of comparative quality.



## Opposition and Support

283 Table 61, below, summarises the percentage of families who reported specific opposition or support in securing their relatives' current placement and the nature/source of opposition/support encountered.

Table 61: Family Reports of Opposition to and Support for Securing Their Relative's Current Placement				
	Village Communities	Residential Campuses	Dispersed Housing	Test and statistical significance
<b>% of families who report</b> specific opposition to securing relative's current placement	32%	3%	20%	p<0.0001 (C)
nature of opposition <sup>1</sup> ...				
... Local Authority (financial)	32%	-	13%	n.s. (C)
... Local Authority (other)	32%	-	33%	n.s. (C)
... other	59%	-	67%	n.s. (C)
<b>% of families who report</b> specific support for securing relative's current placement	64%	47%	69%	n.s. (C)
nature of support <sup>1</sup> ...				
... present placement				
... previous placement	33%	24%	34%	n.s. (C)
... family/friends	10%	14%	13%	n.s. (C)
... GP/Doctor	26%	0%	6%	p<0.01 (C)
... Local Authority	24%	31%	11%	n.s. (C)
... social worker	2%	24%	22%	p<0.01 (C)
... other	21%	10%	23%	n.s. (C)
	22%	21%	25%	n.s. (C)

<sup>1</sup> Percentages reported for nature of support/opposition are the percentages of families who completed the relevant section of the questionnaire (rather than the total number of families returning the questionnaire).

284 *Summary:* Relatives of people living in residential campuses reported significantly less opposition to their relations' current placement than relatives of people living in either dispersed housing schemes ( $\chi^2=8.8$ ,  $df=1$ ,  $p<0.01$ ) or village communities ( $\chi^2=18.7$ ,  $df=1$ ,  $p<0.0001$ ). There were no significant differences between the latter two groups in terms of either the amount or nature of opposition encountered. There were no statistically significant differences in reported overall levels of support for securing their relations' current placement between relatives of people living in either village communities, residential campuses or dispersed housing schemes. However, relatives of people living in village communities reported significantly more support from family and friends than relatives of people living in either dispersed housing schemes ( $\chi^2=7.9$ ,  $df=1$ ,  $p<0.01$ ) or residential campuses ( $\chi^2=8.3$ ,  $df=1$ ,  $p<0.01$ ). Correspondingly, they also reported significantly less support from Local Authorities than relatives of people living in either dispersed housing schemes ( $\chi^2=10.9$ ,  $df=1$ ,  $p<0.001$ ) or residential campuses ( $\chi^2=11.6$ ,  $df=1$ ,  $p<0.001$ ). There were no statistically significant associations between either the nature of the relationship (e.g., mother, father, sibling) or the nature of the user's previous living arrangements and reported support or opposition.

## Perceptions of Quality

285 Table 62 provides summary information regarding family ratings of various aspects of their relatives' current residential supports.

Table 62: Family Views on Aspects of Their Relatives Current Residential Supports				
	<i>Village Communities</i>	<i>Residential campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Mean rating of quality of aspects of current residential supports<sup>1</sup></b>				
Frequency of contact with relative	1.7	1.5	1.4	n.s.
Helpfulness of staff and volunteers	1.3	1.5	1.3	n.s.
Involvement in decisions about relative	2.0	2.3	2.1	n.s.
Perceived happiness of relative	1.4	1.5	1.6	n.s.
Being kept informed	1.8	1.9	1.8	n.s.
Own happiness with relative's service	1.6	1.5	1.8	n.s.
Extent of choices available to residents	1.9	2.8	2.0	n.s.
Emotional support available to residents	1.6	1.7	1.4	n.s.
Sufficiency/appropriateness of day services	1.7	2.3	2.0	n.s.
Effort to maintain contact with family	1.4	1.7	1.4	n.s.
Protection from exploitation and/or abuse	1.5	1.6	1.5	n.s.
Support for user to have busy/enjoyable life	1.6	2.1	1.6	n.s.
Support for user to have active/healthy life	1.7	2.1	1.7	n.s.
Residents look well dressed and healthy	1.6	1.6	1.4	n.s.
Residents seen happy/content	1.4	1.6	1.4	n.s.

Note<sup>1</sup>: 1= high quality; 7= low quality

286 *Summary:* There were no statistically significant differences in the rated quality of their relations' current placement between relatives of people living in either village communities, residential campuses or dispersed housing schemes. There were no statistically significant associations between either the nature of the relationship (e.g., mother, father, sibling) or the nature of the user's previous living arrangements and ratings of quality of their relations' current placement. Overall, however, it is clear that the majority of relatives rated the quality of all aspects of provision very highly. The percentage of all respondents giving the highest possible rating (1) to each item are: frequency of contact with relative (84%); helpfulness of staff and volunteers (80%); effort to maintain contact with family (74%); residents seem happy/content (73%); perceived happiness of relative (70%); protection from exploitation and/or abuse (68%); residents look well dressed and healthy (68%); own happiness with relative's service (66%); emotional support available to residents (66%); support for user to have; busy/enjoyable life (64%); being kept informed (58%); sufficiency/appropriateness of day services (58%); support for user to have active/healthy life (57%); extent of choices available to residents (55%); involvement in decisions about relative (53%).

287 For each form of provision Tables 63, 64 and 65 summarise the most common comments made by relatives regarding: (1) what they most like about the current supports received by their relative; (2) what they would like to see changed about the current supports received by their relative; (3) what they expect their relative to gain from receiving their current service.

Table 63: What Relatives Most Like About Current Support Arrangements				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Aspects of the residential supports provided to their relative most liked by families<sup>1</sup> ...</b>				
... physical aspects of (service general)	36%	31%	27%	n.s.
... accommodation/food	7%	18%	27%	p<0.01 (C)
... location/facilities	5%	2%	2%	n.s.
... support to family (general)	5%	10%	9%	n.s.
... proximity/frequency of contact	16%	23%	22%	n.s.
... support staff	70%	79%	68%	n.s.
... social climate/atmosphere	10%	10%	18%	n.s.
... health care	6%	10%	7%	n.s.
user-centred supports (eg keyworkers)	6%	7%	15%	n.s.
user outcomes: social life/friends	12%	5%	4%	n.s.
user outcomes: leisure activities	15%	13%	21%	n.s.
user outcomes: skill development	3%	0%	1%	n.s.
user outcomes: work	8%	0%	1%	n.s.
user outcomes: community involvement	2%	2%	2%	n.s.
user outcomes: choice/autonomy	6%	2%	7%	n.s.
user outcomes: safety/security	5%	5%	2%	n.s.
user outcomes: user satisfaction	21%	15%	11%	n.s.

Percentages reported for aspects of supports are the percentages of families who completed the relevant section of the questionnaire (rather than the total number of families returning the questionnaire).

Table 64: What Relatives Would Like to See Improved in Current Support Arrangements				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>Aspects of the residential supports provided to their relative families would like to see improved<sup>1</sup></b>				
... physical aspects of (service general)	0%	0%	0%	n.s.
... accommodation/food	12%	23%	18%	n.s.
... location/facilities	0%	0%	9%	p<0.01 (C)
... support to family (general)	0%	0%	0%	n.s.
... proximity/frequency of contact	9%	2%	7%	n.s.
... communication with family	16%	12%	14%	n.s.
... support staff	28%	44%	21%	n.s.
... social climate/atmosphere	5%	0%	0%	n.s.
... health care	21%	21%	16%	n.s.
user-centred supports (eg keyworkers)	9%	9%	5%	n.s.
stability	7%	12%	11%	n.s.
transport	0%	12%	7%	n.s.
user outcomes: social life/friends	2%	5%	7%	n.s.
user outcomes: leisure activities	32%	37%	27%	n.s.
user outcomes: skill development	21%	7%	7%	n.s.
user outcomes: work/day services	9%	23%	30%	n.s.
user outcomes: community involvement	5%	0%	2%	n.s.
user outcomes: choice/autonomy	0%	0%	0%	n.s.
user outcomes: safety/security	0%	0%	0%	n.s.
user outcomes: user satisfaction	0%	0%	0%	n.s.

Percentages reported for aspects of supports are the percentages of families who completed the relevant section of the questionnaire (rather than the total number of families returning the questionnaire).

Table 65: What Relatives Expect Their Relative to Gain From the Current Support Arrangements				
	<i>Village Communities</i>	<i>Residential Campuses</i>	<i>Dispersed Housing</i>	Test and statistical significance
<b>What families expect their relative to gain from their current supports<sup>1</sup></b>				
personal development	60%	33%	54%	p<0.01 (C)
family contact	3%	0%	0%	n.s.
a quality home/care/support	26%	38%	30%	n.s.
good health care	6%	20%	10%	n.s.
friends/social life	15%	20%	13%	n.s.
safety/security	35%	31%	26%	n.s.
participation in community activities	13%	20%	17%	n.s.
happiness/quality of life	39%	47%	40%	n.s.

Percentages reported for aspects of supports are the percentages of families who completed the relevant section of the questionnaire (rather than the total number of families returning the questionnaire).

288 There were very few statistically significant differences in what relatives most like about the current support arrangements, what they would like to see changed about current support arrangements and what they expect their relative to gain from current support arrangements between relatives of people living in either village communities, residential campuses or dispersed housing schemes. Relatives of people living in village communities expected their relations to gain more in the area of personal development than relatives of people living in residential campuses ( $\chi^2=9.8$ ,  $df=1$ ,  $p<0.01$ ). Relatives of people living in dispersed housing schemes reported liking the accommodation in which their relation was living more frequently than relatives of people living in village communities ( $\chi^2=11.9$ ,  $df=1$ ,  $p<0.001$ ).

289 Similarly, there were very few statistically significant associations between the nature of the user's previous living arrangements and what relatives most like about the current support arrangements, what they would like to see changed about current support arrangements and what they expect their relative to gain from current support arrangements. Relatives of users who had moved to their current home from hospital more frequently reported valuing the nature of the relationship between the service and themselves ( $\chi^2=7.7$ ,  $df=1$ ,  $p<0.01$ ) and less frequently reported expecting their relation to gain in the area of personal development ( $\chi^2=12.2$ ,  $df=1$ ,  $p<0.001$ ). Relatives of users who had moved to their current home from a community-based house less frequently reported valuing the proximity of the service to themselves ( $\chi^2=7.6$ ,  $df=1$ ,  $p<0.01$ ) and more frequently cited the need for their relations' current service to improve its user centred planning processes ( $\chi^2=13.0$ ,  $df=1$ ,  $p<0.001$ ). There were no statistically significant associations between the nature of the relationship (e.g., mother, father, sibling) and what relatives most like about the current support arrangements, what they would like to see changed about current support arrangements and what they expect their relative to gain from current support arrangements.

290 Illustrative comments made by families whose relative was living in village communities, residential campuses or dispersed housing schemes are presented below in Tables 66, 67 and 68.

Table 66: Illustrative Comments Made by Families Whose Relative Was Living in A Village Community
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"The fact that he now lives one hour from home rather than two hours away is a big help as his parents grow older. At his previous placement the focus on personal choice was so extreme that little attempt was made to discourage residents from sitting idly around."

"[VC] is an organisation worthy of imitation in all sectors of this type of social service".

"[name] is extremely happy and we as parents are very grateful for a [VC] village that comes as close to her living at home as possible, with the added joy of many friends, a work environment and independence. We could not have found a better place for her".

"As far as our daughter is concerned we know that she longs to be with the family at home but we also know that this is unrealistic for her and for the family if she is to learn to live her own life as best she can with her basic needs and protection ensured. We think she is as happy as she can be in her circumstances".

"I can't praise [VC] enough ... I can't praise the staff enough. All my family feel this too. Friends we have taken to see her can't believe how wonderful it and the staff are. All I can say is a big thank you to everyone".

"[VC] has provided [name] with a safe happy environment and I can think of no other ways that his life can be improved. Would that all people like [name] could experience [VC] communities".

Table 67: Illustrative Comments Made by Families Whose Relative Was Living in A Residential Campus

“residents [should be] occupied more. Prisoners get more activities - this must be due to staff shortages”

“I prefer [name] to be in a core and cluster home ... if he was in a house in the community I would never know if any staff were hurting/abusing him. I know this might not sound right but it is a genuine concern”

“I feel the transition from the old hospital with several beds in a dormitory to a smaller family unit has done wonders for the life of my relative. The care and support from the staff at [RC] has been excellent and I feel happy in the knowledge that my relative is living in the most suitable environment for her needs”

“[name] benefits greatly from being in a establishment like [RC] ie community village concept. Mutual assistance and companionship with other residents. Understanding neighbours. Quality and quantity of staff ie less staff required overall due to “banking system”. As chairman of league of friends the establishment provides a focal point and helps justify the provision of minibuses and other joint facilities”

“[name] has had a hard life - those institutions of the past had an awful atmosphere, he was ordered about and many personal possessions were either lost or stolen. [name] was unhappy, shared dormitories. He is now treated well, is happy, well cared for, allowed freedom of choice and medical treatment are all excellent. Also own bedroom!!”

“I was quite happy with this placement at first but over the last few years things have been starting to slide. If the parents don’t take out their relative they don’t go anywhere as they have no bus. I don’t think there has been any real attempt to get one”

“Medical matters could be improved. We are not informed of her visits, outcome and status of her conditions. Regular health checks are poor - [name] nearly went blind with glaucoma before it was discovered”

“I am extremely happy with the bungalow ... she is happy there , it is a peaceful, quiet place ... I only hope the NHS doesn’t try to close the bungalows down which seems to be a concern”.

Table 68: Illustrative Comments Made by Families Whose Relative Was Living in A Dispersed Housing Scheme

"After some initial hostility by local people when this and other homes were established there seems to be a more tolerant acceptance and understanding by neighbours and the general public, shop keepers etc. People now accept that the several men and women in the area with learning disabilities are not the dangerous rapists and psychopaths portrayed originally by the media!"

"I am very happy with [name's] placement in his own village where he was brought up and is known to all the residents and he is able to get about as he pleases .. he enjoys taking his dog for a walk, he goes to a club in [town] and is also a member of a rambling club"

"[name] has had a number of problems during his past seven years at [house]. The most noticeable of these was when his feeding apparatus became dislodged from his stomach lining. He has recently been in hospital with pneumonia. These problems could be attributed to supervision of carers in relation to the community care in operation at the home"

"I think [name] was placed here because they didn't know where else to put him. [Name] can read, spell, operate a music centre etc but the other residents are unable to communicate, two are autistic and very noisy and [name] does not like noise"

"As [name] is severely disabled he needs 1 to 1 supervision - he is getting it (at house) before in hospital he did not get it"

"Provides a challenge for [name] instead of vegetating against a hospital wall"

"wonderful. Wish his mum had been alive to see it all, she worried all her life about what would happen to him if she died".

"This placement has enhanced my relative's life ten-fold. She enjoys a life-style which we would never have thought possible and as a result now has a calm and relaxed personality"

"my only concern is [name's] vulnerability where another resident is concerned. She has come to live in the house more recently and regularly scratches or "attacks" him. This means he is not at all relaxed when she is around, staffing levels are not sufficient for her to be watched all the time"

"Continue providing service to make life enjoyable and comfortable for users including bringing out or developing all their capabilities but stop trying to make them "normal" - they never will be and in some cases this can cause distress ..... Staff must listen to the parent regarding the needs, peculiarities and habits, after all most of us have had many years experience which is very important to the person with learning difficulties especially if they can't voice their own opinions and concerns"

" We were unsure about a) moving into community b) provision of medical backup c) stated logic of move being a "cost saving" measure d) provision of OT etc" ..... [but now] .... "Very satisfied with general overall improvement and attention to his specific needs"

"The change in [name] since moving to her new home has been fantastic. She has calmed down a lot and really enjoys her life. She looks great all the time and is very well looked after. The staff are very caring towards [name]. Also the communication between all the staff and myself is brilliant. [Name] is no longer a name on a piece of paper but a person cared and loved for by everyone she knows, not only her family. I cannot praise the staff at [house] enough"

## Summary

- 291 Views of relatives were sought via a postal questionnaire. A total of 251 responses were received: 93 from relatives of people living in village communities; 68 from relatives of people living in residential campuses; and 90 from relatives of people living in dispersed housing schemes. Overall, 161 (65%) of responses were from users' parents and 59 (24%) from siblings. The estimated overall response rate was 51% (59% from relatives of users in village communities, 52% from relatives of users in residential campuses and 46% from relatives of users in village communities).
- 292 The questionnaire sought to collect information through a combination of seven point rating scales and open-ended questions on: (1) where the user was living before moving into their current home; (2) the comparative quality of their current and previous home; (3) specific opposition or support experienced by families in securing their relatives' current placement; (4) opinions about various aspects of their relatives' current placement; (5) aspects of their relatives' current placement that the families particularly liked; (6) aspects of their relatives' current placement that the families would like to see changed; (7) what families expect their relative to gain from their current placement.
- 293 There were very few differences in ratings of any aspect of the quality of supports between relatives of people living in either village communities, residential campuses or dispersed housing schemes. The differences which did occur indicated that:
- 293.1 relatives were significantly more positive about the current arrangements if their relation had moved into their present accommodation from a NHS Mental Handicap hospital;
  - 293.2 relatives of people living in residential campuses reported significantly less opposition to their relations' current placement than other relatives;
  - 293.3 relatives of people living in village communities reported significantly more support from family and friends and less support from Local Authorities than other relatives;
  - 293.4 relatives of people living in village communities expected their relations to gain more in the area of personal development than other relatives;
  - 293.5 relatives of people living in dispersed housing schemes reported liking the accommodation in which their relations' was living more frequently than relatives of people living in village communities.
- 294 Overall, relatives expressed considerable satisfaction with their relation's current living arrangements: 81% of relatives reported that the current arrangements were 'much' or 'quite a bit' better than previous arrangements; 73% reported that it was 'very true' that their relations seem happy and content; 84% reported that it was 'very true' that they had as much contact with their relative as they desired; 80% reported that it was 'very true' that staff were helpful when approached.
- 295 Improvements which relatives would like to see included: more leisure activities (cited by 18% of all respondents); more staff/more qualified staff (cited by 18%); increased access to day services (cited by 11%); improved health care (cited by 11%); improved accommodation/food (cited by 10%).



# Comments & Conclusions

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- 296 As noted in the introduction, the overall aims of the project were to:
- 296.1 identify the characteristics of the people supported within residential or village communities and community-based dispersed housing schemes for people with learning disabilities;
  - 296.2 identify the relative costs of each type of provision;
  - 296.3 investigate the full service package received by each participant in each type of provision;
  - 296.4 explore the relationship between user characteristics and costs across and within each type of provision;
  - 296.5 identify selected aspects of resource and non-resource inputs, process outcomes and user outcomes associated with each type of provision;
  - 296.6 explore the relationship between user characteristics and selected aspects of resource and non-resource inputs, process outcomes and user outcomes within and across each type of provision.
- 297 In this report we have examined the quality and costs of the residential supports provided to people with learning disabilities in dispersed housing schemes, village communities and residential campuses. As such, we have presented information pertinent to aims 296.1, 296.2 and 296.4. Information pertinent to aims 296.3 and 296.5 are presented in a companion report<sup>16</sup>. Additional reports investigate differences in the quality and cost of group homes and supported living schemes<sup>17</sup> and of differences in the quality and cost of supporting people with very severe disabilities in residential campuses and dispersed housing schemes<sup>18</sup>. A *Summary Report* brings together the main findings of the overall project<sup>19</sup>.
- 298 Before discussing the results, it is appropriate to make a few general points about the selection of organisations and services which participated in the project. First, it is

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<sup>16</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Predicting Variation in Quality and Costs*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>17</sup> Emerson, E., Robertson, J., Gregory, N., Hatton, C., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: A Comparative Analysis of Quality and Costs in Group Homes and Supported Living Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>18</sup> Emerson, E., Robertson, J., Gregory, N., Kessissoglou, S., Hatton, C., Hallam, A., Knapp, M., Järbrink, K., & Netten, A. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: An Observational Study of Supports Provided to People With Severe Learning Disabilities in Residential Campuses and Dispersed Housing Schemes*. Manchester: Hester Adrian Research Centre, University of Manchester.

<sup>19</sup> Emerson, E., Robertson, J., Hatton, C., Gregory, N., Kessissoglou, S., Hallam, A., Knapp, M., Järbrink, K., Netten, A., Walsh, P., Linehan, C., Hillery, J., & Durkan, J. (1999). *Quality and Costs of Residential Supports for People With Learning Disabilities: Summary Report*. Manchester: Hester Adrian Research Centre, University of Manchester.

particularly important to note that the project did not seek to provide an accurate picture of current practice within the three approaches to providing residential supports. Rather, organisations and services were approached if they had been nominated by key informants as exemplars of ‘good’ or ‘better’ practice within their respective fields. As a consequence, the results are likely to be skewed *within all models* towards the ‘better’ end of the continuum of current provision. Given this, it is perhaps appropriate to view the results as indicative of what can realistically be achieved when attempting to implement these models in the context of services for people with learning disabilities in the UK and Ireland in the 1990s.

- 299 Second, relatively few exemplars of each type of model were included within the project (five village communities, five residential campuses and ten dispersed housing schemes). While we are confident that, by selecting a random sample of 30 people within each service, we have been able to describe the participating services in appropriate detail, the small number of participating organisations does limit the extent to which these results may be generalised with confidence to the wider universe of village communities, residential campuses and dispersed housing schemes.
- 300 Finally, while our focus has been on the quality and costs of residential supports, such services obviously do not exist in isolation. Dispersed housing schemes, in particular, are likely to be dependent upon wider service infrastructures in areas where they are located in facilitating access to professional support, work, educational and leisure activities.

## Characteristics of Service Users

- 301 On pages 15 to 23 of the main text we examined the differences between village communities, residential campuses and dispersed housing schemes with regard to the characteristics and needs of the people they support. While each model serves people with a significant range of abilities and disabilities, a number of systematic differences between the models were apparent. These are briefly summarised below in Table 69. Those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.
- 302 The results were broadly consistent in indicating that relatively few people with mild or moderate learning disabilities were supported in residential campuses. This observation is consistent with: (1) the organisational function of such services in providing ‘continuing care’ within NHS settings (Department of Health, 1995); and (2) the policy context surrounding the development of residential campuses in the 1970's and early 1980's. While the general policy context during this period was strongly influenced by the re-provision NHS Mental Handicap Hospitals, there was little in the way of a national or, in the majority of areas, regional lead regarding what would constitute the most appropriate model for replacement services (cf., Department of Health and Social Security, 1984; Korman & Glennerster, 1990). One option adopted in a number of NHS Regions, including those covering the Health Authorities now commissioning residential supports within the residential campuses who participated in the present project, was to adopt or allow a two tier approach to re-provision. Such approaches aimed to re-provide residential supports within the community for more able people while developing residential campuses for people with severe and complex disabilities and/or elderly hospital residents.

Table 69: The Needs and Characteristics of Users

<b>Age</b>	People living in village communities are younger than people living in either residential campuses or dispersed housing schemes.
Gender	No statistically significant differences between models.
Ethnicity	No statistically significant differences between models.
<b>Residential history</b>	People living in village communities are more likely to have moved from family homes, residential special schools and other village communities than people living in either residential campuses or dispersed housing schemes. They also have experienced fewer moves and have been living in their current home for longer. People living in residential campuses and dispersed housing schemes are more likely to have moved from hospital.
<b>Ability</b>	People living in residential campuses are more severely disabled than people living in dispersed housing schemes who are, in turn, more severely disabled than people living in village communities.
Additional impairments	No statistically significant differences between models with regards to either sensory impairments or epilepsy.
<b>Nature of learning disabilities</b>	People living in village communities are more likely to have Down's Syndrome than people living in either residential campuses or dispersed housing schemes.
<b>Health needs</b>	People living in residential campuses have a greater number of general health needs than people living in either village communities or dispersed housing schemes.
<b>Challenging behaviour</b>	People living in residential campuses are reported to show more severe challenging behaviours than people living in either village communities or dispersed housing schemes.
Mental health	There are no statistically significant differences between models on formal measures of mental health (including autism).

303 Over the past three decades, however, an increasingly powerful liberal consensus has emerged which has argued for the inherent value of 'inclusion' (e.g., Philpot & Ward, 1995). At the same time, numerous demonstration projects have indicated that people with severe and complex disabilities could be effectively supported within dispersed housing schemes (Emerson, 1990; Emerson & Hatton, 1994; Felce, 1989, 1998; Felce et al, 1986; Hatton & Emerson, 1996; Hatton et al, 1995; Lowe & de Paiva, 1991; Mansell, 1989, 1994, 1996; Mansell & Beasley, 1993). This combination of ideology and evidence led, in many areas, to dispersed housing schemes coming to be seen as the 'model of choice', either replacing plans for residential campuses or running in parallel with them. As a result, it is not surprising to find dispersed housing schemes supporting people across the full spectrum of ability, while residential campuses have retained their initial focus on supporting people with more severe and complex disabilities.

304 With regard to village communities, the information collected on participant's previous place of residence are consistent with the historical development of the participating services in indicating that village communities have developed relatively independently of the hospital reprovision 'movement'. Thus, only 4% of people living in village communities had moved to their current home from a NHS Mental Handicap hospital (compared with 75% of people living in residential campuses and 50% of people living in dispersed housing schemes).

## The Nature of Support Provided to Service Users

305 On pages 24 to 37 of the main text we examined differences between village communities, residential campuses and dispersed housing schemes with regard to the nature of supports they provide to their residents. In Table 70, below, we have summarised the comparative benefits likely to accrue to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with ‘higher quality’ supports). Where necessary, assumptions underlying judgements of quality have been indicated. Those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.

Table 70: Summary of Benefits Associated With Specific Forms of Provision	
Variable	Preferred Model
(Smaller) <b>Size of Residence</b>	dispersed housing schemes
<b>Residence (Not) Also Providing Short-Term Care</b>	dispersed housing schemes
<b>Homeliness of Residence</b>	dispersed housing schemes & village communities
<b>Staffing</b>	
(higher) overall staff ratios	dispersed housing schemes & village communities
(higher) senior staff ratios	dispersed housing schemes
(higher) care staff ratios	dispersed housing schemes & village communities
(higher) staff qualifications	dispersed housing schemes & residential campuses
<b>Active Support</b>	
person centred planning	village communities
assessment & teaching	village communities
activity planning	village communities
staff support to residents	dispersed housing schemes & village communities
training & supervision of staff	village communities
user involvement in active support systems	dispersed housing schemes & village communities
<b>Social Climate (Institutionalisation)</b>	
less social distance	dispersed housing schemes & village communities
less depersonalisation	dispersed housing schemes
less block treatment	dispersed housing schemes
less rigidity of routines	village communities
<b>Medication</b>	
less use of anti-psychotic medication	dispersed housing schemes & village communities
<b>Health Checks</b>	village communities & residential campuses
<b>Advocacy</b>	no clear difference

306 Across the 20 indicators of ‘quality’ processes:

- 306.1 *dispersed housing schemes* were the sole preferred model on five and the jointly preferred model on a further eight indicators (each time with village communities);
- 306.2 *village communities* were the sole preferred model on five indicators and were the jointly preferred model on a further nine (eight times with dispersed housing schemes, once with residential campuses);
- 306.3 *residential campuses* were never the sole preferred model but were the jointly preferred model on one indicator with village communities.

- 307 In general, dispersed housing schemes provided support in smaller, more highly staffed, more homely and less institutional settings than residential campuses. While not directly comparable, this pattern of results is highly consistent with the existing literature on hospital reprovion which clearly indicates small dispersed housing schemes provide a significantly greater quality of 'care' than either traditional NHS Mental Handicap hospitals or medium sized community-based hostels/units (Emerson & Hatton, 1994; Hatton & Emerson, 1996).
- 308 In one key area dispersed housing schemes was the least 'preferred' model. On three specific indicators of health screening (health, blood pressure and testicular check in the last year) significantly higher levels of access to health care were recorded among people living in village communities and the lowest levels among people living in dispersed housing schemes.
- 309 These results are broadly consistent with previous studies which have identified: significant deficiencies in health screening, health care and health gain among people with learning disabilities living in the community (Kerr, 1998; MENCAP, 1998; Molyneux et al, in press; NHSE, 1998; Singh, 1997).
- 310 The potential implications arising from poor performance in this area is, of course, quite significant in that inequalities in access to health care may be expected to have implications for future morbidity and mortality, an issue which is currently attracting considerable attention within the context of North American services (Blacher, 1998; Borthwick-Duffy et al, 1998; Conroy & Adler, 1998; Decoufle et al, 1998; Fujiura, 1998; Hayden, 1998; Lakin, 1998; O'Brien & Zaharia, 1998; Strauss et al, 1998).

## Costs

- 311 On pages 38 to 58 of the main text we examined differences in the costs of supporting people with learning disabilities in village communities, residential campuses and dispersed housing schemes. Our investigation began by disaggregating the costs of all the elements of providing housing and associated care. These costs included 'hotel services' and staffing arrangements within the individual setting and across the whole residential facility (if appropriate). Managing agency overheads and on-site administration costs were calculated; also the opportunity cost of all capital items (buildings, vehicles, furnishings and fittings).
- 312 We then explored the use participants had made of services independently of their accommodation arrangements and costed the part these had played in total service package costs. Although the service models themselves were very different, we have used consistent measures of assessment across all residential categories.
- 313 A wide variation existed in the costs associated with residential provision. This variation was not only between the three accommodation models, but between individual organisations, individual settings and, in many cases, individual users.
- 314 The costs of providing accommodation and associated care were dominated by staffing costs, whatever the specific staffing arrangements within the facility. In village communities, the focus of resources on site-wide services meant a lower percentage of total cost was allocated to direct staffing arrangements within individual settings. Direct staffing costs made up 53 per cent of all 'official' accommodation costs in village

- communities, 61 per cent in residential campuses and 72 per cent in dispersed housing schemes.
- 315 'Official' costs excluded any direct contributions made by users themselves from the social security benefits they received. When these were included, to complete the cost of accommodation and living expenses, they added 3 per cent to accommodation costs in village communities, 2.5 per cent in residential campuses and 7 per cent in dispersed housing arrangements.
- 316 Total accommodation costs were significantly lower in village communities (where the average was £607 per week) than either residential campuses (£887) or dispersed housing (£859).
- 317 Fixed fees, block contracts and disability-contingent pricing arrangements were paying for the bulk of care for participants. In addition, in certain dispersed housing arrangements, the separation of housing and support meant that users were meeting most (or all) of their housing and 'hotel services' costs through housing benefit and their DSS benefits.
- 318 Day activity services were used by almost all participants. A wide variety of individual arrangements were recorded and the costs of these services, together with accommodation, made up between 97 and 98 per cent of total package costs.
- 319 Although the input of hospital- and community-based professionals and services made up only a tiny part of total service package costs, in each of the residential categories contact was recorded with a wide range of services independently of those provided as part of the accommodation package.
- 320 The cost of services received outside users' accommodation arrangements was significantly lower for the residential campus sample (£82) than for either village communities (£140) or participants in dispersed housing (£131). It was use of day activities by the study participants which accounted for this difference in cost.
- 321 The total weekly costs of accommodation and associated care, and all other services received, was significantly lower for people living in village communities (£747) than in either residential campuses (£969) or dispersed housing (£990). It may be that size of setting is influencing these costs. The settings where study participants were supported varied a great deal in size (*village communities*: mean, 9, range, 2–22; *residential campuses*: mean, 10, range, 7–20; *dispersed housing*: mean, 4, range, 1–9). Although a sensitive relationship exists between cost and size of facility, the evidence suggests that, in larger facilities, costs associated with the higher dependency of some residents may be cancelled out by the lesser needs of residents who are more able. Where there are fewer than six resident places, however, some evidence suggests sharp increases in cost per resident as the size of the facility is reduced (Raynes et al., 1994).
- 322 When participants were considered in two age groups (18 to 39 years and 40 years and over) within their residential categories, we found that total costs were significantly higher for people of both age groups who lived in dispersed housing. There were no statistically significant differences in the costs of provision between older and younger residents.
- 323 We found interesting relationships when we explored the links between ability/need and cost. In village communities and dispersed housing, less able people were receiving more

costly service packages. In residential campuses, however, this pattern was reversed, with more able users receiving the more costly support arrangements. When we considered the effects of challenging behaviour and possible psychiatric disorder on service package costs, we found relationships between severity/presence and higher costs in village communities and residential campuses. Users received more costly support packages if they were living in dispersed housing, whether or not they had challenging behaviour. Participants who had possible psychiatric disorders received the most costly service packages if they were living in residential campus facilities.

- 324 As noted in previous sections, there were significant differences between the three approaches in the needs and characteristics of the people served. In order to make ‘like with like’ comparisons, costs were adjusted to take into account differences between the three approaches with regard to ability, challenging behaviour and the age of users. Statistical analyses of the *adjusted costs* indicated that:
- 324.1 accommodation costs associated with both dispersed housing schemes and residential campuses were significantly greater than those associated with village communities;
  - 324.2 non-accommodation costs associated with both dispersed housing schemes and village communities were significantly greater than those associated with residential campuses;
  - 324.3 total costs associated with dispersed housing schemes were significantly greater than those associated with residential campuses and village communities.
- 325 ‘Like with like’ comparisons were also made by comparing actual costs in the two matched samples drawn from the full data set. Statistical analyses comparing these *actual costs* indicated that, while non-accommodation and total costs were significantly lower in residential campuses when compared with dispersed housing schemes, there were **no** statistically significant differences between village communities and dispersed housing schemes with regard to either accommodation, non-accommodation or the total costs of support.
- 326 In general, our findings are consistent with the existing literature. Previous studies investigating the capital costs of residential services for people with learning disabilities (e.g. Davies et al, 1991; Felce, 1981; Felce, 1989; Korman & Glennerster, 1990; Raynes et al, 1994) have generally found no differences in capital costs between service models, with places in group homes and hostels no more expensive in capital terms than places in hospitals. Studies reporting revenue costs (e.g. Davies, 1988; Felce, 1989; Korman & Glennerster, 1990; McGill et al, 1994) have generally found that revenue costs per service user are higher for group homes than for hostels or hospitals. Studies reporting comprehensive costs have reported wide variation in costs within all service models (Cambridge et al, 1994; Donnelly et al, 1994; Hatton et al, 1995b; Knapp et al, 1992; Raynes et al, 1994). As a consequence, studies comparing the comprehensive costs of community-based residential services and hospitals have reported conflicting findings.

Table 70: Summary of Costs Associated With Specific Forms of Provision

Table 70: Summary of Costs Associated With Specific Forms of Provision	
<b>Variable</b>	
<b>Total costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities and residential campuses were significantly lower than those associated with dispersed housing schemes. However, no statistically significant difference was found when comparing total costs for a sub-sample of participants selected from village communities and dispersed housing schemes on the basis of them being of equivalent ability.
<b>Accommodation Costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities were significantly lower than those associated with dispersed housing schemes and residential campuses. Again, however, no statistically significant difference was found when comparing total costs for a sub-sample of participants selected from village communities and dispersed housing schemes on the basis of them being of equivalent ability.
<b>Non-Accommodation Costs</b>	Once differences in age, ability and challenging behaviour were statistically controlled, costs associated with village communities and dispersed housing schemes were significantly greater than those associated with residential campuses.

327 Few studies have satisfactorily accounted for the wide variations in costs which clearly exist. The most consistent finding is that higher service costs are related to greater user needs (e.g. Cambridge et al, 1994; Donnelly et al, 1994; Knapp et al, 1992; Raynes et al, 1994). However, it is clear that there are no simple economies of scale associated with larger or more centralised residential services (Davies et al, 1991; Felce et al, 1980b; Felce, 1981; Raynes et al, 1994). The findings reported here identify a link between costs and needs which appears to support the findings of other evaluations, although such a link is not always strong enough to be statistically significant. A programme of multivariate analyses, reported separately (Emerson et al., 1999) provides a thorough exploration of the factors explaining difference in cost.

## Outcomes for Users

328 On pages 61 to 76 of the main text we examined differences between village communities, residential campuses and dispersed housing schemes with regard to the outcomes experienced by users. In Table 71, below, we have summarised the comparative benefits accruing to residents living in particular forms of provision. For each of the main variables of interest we have indicated the preferred model(s) (i.e. that model, or those models, associated with 'higher quality' supports). Where necessary, assumptions underlying judgements of quality have been indicated. Again, those areas in which there are clear differences between the people supported in the three approaches are highlighted in bold.

329 Across the 27 indicators of 'quality' outcomes:



- 329.1 *dispersed housing schemes* were the sole preferred model on four and the jointly preferred model on a further seven indicators (six with village communities, one with residential campuses);
- 329.2 *village communities* were the sole preferred model on four and the jointly preferred model on a further six indicators (all with dispersed housing schemes);
- 329.3 *residential campuses* were the sole preferred model on one indicator and the jointly preferred indicator (with dispersed housing schemes) on another.

Table 71: Summary of Benefits Associated With Specific Forms of Provision		
Variable		Preferred Model
<b>Choice</b>		dispersed housing schemes & village communities
<b>Relationships with Family</b>		
	<b>proximity to family</b>	dispersed housing schemes & residential campuses
	contact with family	no clear difference
<b>Extent of Social Networks</b>		
	<b>overall</b>	dispersed housing schemes & village communities
<b>with others who have a learning disabilities</b>		dispersed housing schemes & village communities
	<b>with staff</b>	village communities
	with family	no clear difference
	<b>with others</b>	dispersed housing schemes
<b>Health</b>		
	underweight	no clear difference
	obese	no clear difference
	<b>activity</b>	dispersed housing schemes
	smoking	no clear difference
	drinking	no clear difference
	poor diet	no clear difference
<b>Risks</b>		
	severe accidents	no clear difference
	accidents out of home	no clear difference
	accidents in home	no clear difference
	documented physical or sexual abuse	no clear difference
	<b>documented verbal abuse</b>	village communities
	<b>documented victim of crime</b>	village communities
<b>Work &amp; Education</b>		
	employment	dispersed housing schemes
	<b>voluntary work</b>	dispersed housing schemes & village communities
	<b>adult education classes</b>	dispersed housing schemes & village communities
	<b>(participating in) day centre activities</b>	residential campuses
	<b>total hours per week</b>	village communities
<b>Day &amp; Leisure Activities</b>		
	<b>total number of activities</b>	dispersed housing schemes
	<b>variety of activities</b>	dispersed housing schemes & village communities

- 330 The areas in which *dispersed housing schemes* appeared to offer particular benefits over the other models were in:
- 330.1 facilitating social inclusion through the development of relationships with people who did not have learning disabilities and were neither relatives or members of staff;
  - 330.2 providing users with a more physically active lifestyle;
  - 330.3 providing users with a greater number of recreational/leisure activities;
  - 330.4 facilitating access to employment.
- 331 The areas in which village communities appeared to offer particular benefits over the other models were in:
- 331.1 facilitating the development/maintenance of relationships with staff;
  - 331.2 reducing the risk of exposure to verbal abuse and crime;
  - 331.3 providing users with a greater number of hours per week of scheduled day time activities.
- 332 The only area in which *residential campuses* appeared to offer particular benefits over the other models were in providing users with greater access to day centres for people with learning disabilities. It is unclear, however, whether this should be considered a positive outcome as: (1) attendance at day centres for people with learning disabilities was associated with increased *dissatisfaction* among users (page 81); (2) there would appear to be little consensus among service providers and little evidence regarding the actual value of such services (cf. Beyer et al, 1995; Lowe et al, 1993; Wertheimer, 1996).

## The Views of Users

- 333 On pages 77 to 86 of the main text we examined the views of users about their lives in village communities, residential campuses and dispersed housing schemes. A total of 105 interviews were conducted: 45 interviewees living in village communities, 10 living in residential campuses and 55 living in dispersed housing schemes.
- 334 There were no statistically significant differences in any domain between the rated satisfaction of users who lived in village communities and users who lived in dispersed housing schemes<sup>20</sup>. In two areas, however, non-significant trends emerged: people living in dispersed housing schemes tended to express greater satisfaction with the degree of choice they experienced; people living in village communities tended to express greater satisfaction with their friendships and social relationships.
- 335 Users tended to rate their satisfaction highly across both village communities and dispersed housing schemes. High ratings of satisfaction with current arrangements are not uncommon (e.g., Donnelly et al, 1994), although asking service users retrospectively about past placements produces less positive ratings (e.g., Booth et al, 1990).

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Insufficient numbers of users living in residential campuses participated in the interviews for us to be able to make any valid comparisons.

- 336 Within each of the seven areas it was possible to explore relationships between ratings of user satisfaction and information collected from care staff and site visits. The results of these comparisons indicated that satisfaction with:
- 336.1 *their home* was associated with being supported by lower overall staff ratios, living in a house that was rated as being more homely, living in a house which implemented ‘active support’ and facilitated user involvement in the implementation of ‘active support’, and was less institutional;
  - 336.2 *day activities* was associated with spending fewer hours at Adult Training/Social Education Centres, having scheduled activities on more days of the week and for more hours per week;
  - 336.3 *social and leisure activities* was associated with participating in more activities and going shopping more frequently;
  - 336.4 *friendships and relationships* was associated with having fewer mental health problems, having a larger number of people with learning disabilities in their social network and having a greater percentage of people with learning disabilities in their social network;
  - 336.5 *support arrangements* was associated with a senior member of their staff team having a nursing qualification;
  - 336.6 *choice* was associated with being younger and more able, living in a house which facilitated user involvement in the implementation of ‘active support’, and living in a house which was rated more highly overall on the Choice Scale, particularly with regard to choice of holidays, the recruitment of staff, review of staff, employment, firing of staff, moving house in the future, the timing of the evening meal, where they live, going out and who they live with;
  - 336.7 satisfaction over *risks* was associated with not having had an accident outside of their home and not being subject to verbal abuse.
- 337 Previous studies have reported that a range of factors appear to influence user satisfaction with current placement. Positive factors included being independent and participating in domestic tasks (e.g. Booth et al, 1990; Holland & Meddis, 1993), privacy and pleasant surroundings (e.g. Donnelly et al, 1994; Wing, 1989), being with friends and friendly staff, and not being with aggressive and noisy co-residents (e.g. Donnelly et al, 1994; Wing, 1989). Factors relating negatively to user satisfaction included lack of money (Donnelly et al, 1994; Flynn, 1989), being with incompatible co-residents (Donnelly et al, 1994), isolation and harassment by people in local communities (Booth et al, 1990; Donnelly et al, 1994; Flynn, 1989), institutional constraints on preferred lifestyles (Booth et al, 1990), and poor food (Wing, 1989).

## The Views of Relatives

- 338 On pages 87 to 96 of the main text we examined the views of relatives about the supports provided within between village communities, residential campuses and dispersed housing schemes. A total of 251 relatives responded to a postal questionnaire. The estimated overall response rate was 51% (59% from relatives of users in village communities, 52% from relatives of users in residential campuses and 46% from relatives of users in dispersed housing schemes).
- 339 There were very few differences in ratings of any aspect of the quality of supports between relatives of people living in either village communities, residential campuses or dispersed housing schemes.

- 340 Overall, relatives expressed considerable satisfaction with their relation's current living arrangements: 81% of relatives reported that the current arrangements were 'much' or 'quite a bit' better than previous arrangements; 73% reported that it was 'very true' that their relations seem happy and content; 84% reported that it was 'very true' that they had as much contact with their relative as they desired; and 80% reported that it was 'very true' that staff were helpful when approached. Such high levels of expressed satisfaction are not uncommon among studies which have solicited the views of relatives (e.g., Booth et al, 1990; Conneally et al, 1992; Emerson et al, 1993; Halliday, 1987; Shah & Holmes, 1987; Wing, 1989). This is consistent with previous research in the UK and elsewhere which indicates that discrimination in the views of user and/or relatives is only likely when it is possible for them to make comparative judgements. Thus, for example, relatives typically rate the quality of care provided within traditional institutions very highly, and may often express a considerable opposition to deinstitutionalisation (Tøsssebro, 1996). However, longitudinal studies have repeatedly demonstrated that, following their relation's move to community-based services, relatives rate these services highly and, in retrospect, tend to express preference for the new arrangements (e.g., Booth et al, 1990; Conroy, 1985, 1996; Halliday, 1987; Shah & Holmes, 1987; Tuvsesson & Ericsson, 1996 Walker et al, 1993; Wing, 1989).
- 341 Improvements which relatives would like to see included: more leisure activities (cited by 18% of all respondents); more staff/more qualified staff (cited by 18%); increased access to day services (cited by 11%); improved health care (cited by 11%); improved accommodation/food (cited by 10%). Previous studies have reported similar concerns involving: the isolation of users, the location of community residences, and lack of supervision (Booth et al, 1990); the effect of challenging behaviour on others (Halliday, 1987); concerns about staff workload in community services (Halliday, 1987); and involvement of parents and relatives (Booth et al, 1990; Halliday, 1987).

## Conclusions

- 342 In designing the project, dispersed housing schemes were included for three reasons. First, they now constitute the most common form of residential provision for people with learning disabilities in the UK (Emerson & Hatton, 1998). Second, little is known of the quality or costs of supported living, a recent development within the broader dispersed housing model. Finally, the existing research literature clearly indicates that dispersed housing schemes offer significantly higher quality residential supports than either traditional NHS Mental Handicap Hospitals or medium sized units (Emerson & Hatton, 1994; Hatton & Emerson, 1996). As such, they constitute a standard against which the quality of other approaches to provision may be judged. The comparative benefits associated with village communities and dispersed housing schemes are summarised below in Table 72.

Table 72: Summary of Benefits Associated With Village Communities and Dispersed Housing Schemes

<p>Comparative benefits associated with living in a village community</p>	<p>People in village communities were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the areas of: person centred planning; assessment &amp; teaching; activity planning; and the training and supervision of staff. The care provided was rated as being less institutional in having less rigid routines. People living in village communities were more likely to have: seen a dentist and social worker in the last three months; had a general health check, testicular check and their blood pressure measured in the last year; had a vision check in the last two years. They were likely to have routine day activities (e.g., attending day centres, adult education classes) on more days per week and for more hours per week. They were less likely to have been the reported victims of crime and of verbal abuse by members of the public. They were considered to be at lesser risk of exploitation by members of the public in the local community.</p>
<p>Comparative benefits associated with living in a dispersed housing scheme</p>	<p>People in dispersed housing schemes lived in more homely settings with fewer other people with learning disabilities and were less likely to live in a house which also provided short-term care. They were likely to be supported by more senior staff and more senior staff who had relevant qualifications. They were also more likely to have an independent advocate. The care provided was rated as being less institutional in being less depersonalised and involving less block treatment. They were more likely to have a person identified in their social network who did not have a learning disability, was not a relative and was not a paid carer. They were likely to have experienced a greater number of recreational or community-based activities in the previous four weeks.</p>
<p>Areas in which no significant differences were found between the two approaches</p>	<p>There were no significant differences between the two approaches with respect to: overall staffing ratios; internal planning procedures in the area of allocating staff support to users; social distance between staff and users; receipt of psychoactive medication; contact with GPs; health screening in the areas of hearing tests, cervical smears and mammograms; choice; contact with families; overall size of social networks; weight; levels of physical exercise; variety of leisure/recreational activities; accidents inside and outside of the home; reported physical and sexual abuse in their current home; perceived risk of accidents, exploitation and abuse.</p>

343 The comparative benefits associated with NHS residential campuses and dispersed housing schemes are summarised below in Table 73.

Table 73: Summary of Benefits Associated With Residential Campuses and Dispersed Housing Schemes	
Comparative benefits associated with living in a residential campus	People in residential campuses were more likely to be supported by senior staff who had nursing qualifications. They were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the area of assessment & teaching. They were more likely to have had a general health check in the last year and a vision check in the last two years. They were considered to be at lesser risk of exploitation by members of the public in the local community.
Comparative benefits associated with living in a dispersed housing scheme	People in dispersed housing schemes lived in more homely settings with fewer other people with learning disabilities and were less likely to live in a house which also provided short-term care. They were likely to be supported by more staff, more senior staff and more care staff. They were also more likely to have an independent advocate. They were supported in settings in which the internal planning procedures for organising support were rated as being of higher quality in the areas of: person centred planning; activity planning; allocation of staff support to residents; and the training and supervision of staff. The care provided was rated as being less institutional in being less depersonalised, involving less block treatment, less rigid routines and less social distance between staff and users. They were less likely to receive anti-psychotic medication. They were more likely to have had contact with a social worker in the preceding three months. They were likely to have more overall choice over the way they were supported. They were more likely to have larger social networks; more people with learning disabilities in their social network and a person identified in their social network who did not have a learning disability, was not a relative and was not a paid carer. They were likely to have routine day activities (e.g., attending day centres, adult education classes) for more hours per week. They were likely to have experienced a greater number and variety of recreational or community-based activities in the previous four weeks. Men were likely to have had more vigorous physical exercise.
Areas in which no significant differences were found between the two approaches	There were no significant differences between the two approaches with respect to: contact with GPs, dentists, psychologists and psychiatrists; testicular checks, mammograms, cervical smears; hearing tests and monitoring of blood pressure; family contact; number of family members in their social network; weight; physical exercise among women; days per week of routine day activity; accidents; victimisation; abuse; perceived risk of accidents, abuse and exploitation.

344 A relatively clear picture emerges from the results of the present project. First, **residential campuses developed as a direct result of the contraction or closure of NHS Mental Handicap Hospitals are of significantly poorer quality than community-based dispersed housing schemes on a wide range of measures of benefits.** These differences cannot be accounted for by differences in the characteristics of people supported.

345 Thus, for example, once differences in the characteristics of people supported have been taken into account, people living in residential campuses (when compared with people living in dispersed housing schemes) were significantly more likely to: live in larger, less homely, more institutional settings with poorly organised internal planning procedures; be supported by fewer staff; not have access to an independent advocate; receive anti-psychotic medication; have more restricted choice; have smaller social networks; have reduced access to routine day activities (e.g., attending day centres, adult education

classes); experience a reduced number and variety of recreational or community-based activities. These benefits were also apparent for a selected sub-sample of people with very severe learning disabilities and additional complex needs (Emerson et al, 1999).

- 346 The total costs of care associated with residential campuses were, however, approximately 12% less than those associated with dispersed housing schemes (an average of £51,000 per annum in residential campuses and £57,000 per annum in dispersed housing schemes for the comparative sub-samples matched on ability and severity of challenging behaviour). This is not, of course, surprising given the major contribution of staffing and day services to the overall costs of the person's package of care. As noted above, in both of these areas residential campuses provided significantly less support than dispersed housing schemes.
- 347 Determining whether additional costs are *justified* on the basis of improvements in quality is not, of course, a question amenable to scientific scrutiny. We have, however, documented the benefits associated with the cost differential between service models. Thus, the additional £6,000 per annum associated with receiving support in dispersed housing schemes is associated with: a 31% increase in staffing ratios; a 14% increase in the rated quality of internal planning procedures; a 46% decrease in the rated level of institutional practices; a 19% increase in the rated homeliness of the setting; a 52% decrease in the use of anti-psychotic medication; a 350% increase in access to independent advocacy; a 27% increase in the rated amount of choice available to residents; a 55% increase in the size of people's social networks; a 350% increase in social integration; a 32% increase in the number of hours per week of scheduled day activity; a 134% increase in the number of recreational or community-based activities; a 96% increase in the variety of recreational or community-based activities.
- 348 **Second, comparison of village communities and dispersed housing schemes suggests that both forms of provision may be associated with particular patterns of benefits.**
- 349 Thus, village communities appear to offer particular benefits in the areas of: internal planning procedures; access to routine health care; access to routine day activities (e.g., attending day centres, adult education classes); selected aspects of safety/risk (e.g., exposure to crime and verbal abuse by members of the public).
- 350 On the other hand, dispersed housing schemes appear to offer particular benefits in the areas of: size and homeliness of setting; not living in a house which also provided short-term care; ratios and qualifications of senior staff; access to independent advocacy; a less institutional social climate; social integration; access to leisure/recreational activities.
- 351 Comparisons of the costs of care associated with village communities and dispersed housing schemes provided conflicting results. When statistical procedures were used to control for differences between the two models with regards to the ability of the people supported, the total costs of care associated with village communities were significantly less than those associated with dispersed housing schemes (an average £44,000 per annum in village communities and £53,000 per annum in dispersed housing schemes for adjusted costs). However, when comparisons were made on the basis of sub-samples selected by matching pairs of participants on the basis of ability, differences in cost between the two approaches were not statistically significant.
- 352 As noted above, both users and relatives expressed high levels of satisfaction with all existing arrangements. This is consistent with previous research in the UK and elsewhere

which indicates that discrimination in the views of user and/or relatives is only likely when it is possible for them to make comparative judgements. Thus, for example, relatives typically rate the quality of care provided within traditional institutions very highly, and may often express a considerable opposition to deinstitutionalisation (Tøssebro, 1996). However, longitudinal studies have repeatedly demonstrated that, following their relation's move to community-based services, relatives rate these services highly and, in retrospect, tend to express preference for the new arrangements (e.g., Booth et al, 1990; Conroy, 1985, 1996; Halliday, 1987; Shah & Holmes, 1987; Tuveesson & Ericsson, 1996 Walker et al, 1993; Wing, 1989).



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# Appendix 1: Psychometric Evaluation of the *Risks* and *Choices* Scales

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- 353 The *Risks* and *Choices* scales were developed specifically for the present study. Both scales were designed to be conducted by interview with a knowledgeable member of the person's support team.
- 354 The *Risks* scale consists of 18 items addressing accidents (3 items), physical or sexual abuse (1 item), verbal abuse (1 item), vandalism (1 item) and crime (1 item) suffered by users. Information was also collected on staff perceptions as to whether or not users were at any risk from accidents (3 items), abuse (4 items) or exploitation (4 items). Informant responses regarding perceived risks were rated on a 4 point scale of: 0 (no risk); 1 (perceived risk but no evidence for staff concern); 2 (perceived risk with some support for staff concern); and 3 (perceived risk with solid evidence to support concern).
- 355 The *Choices* scale consists of 26 item addressing the procedures operating within the person's home to support users in making choices with regard to various aspects of their life. Informant responses were rated on the following four point scale: 1 (nothing mentioned), 2 (some procedure(s) mentioned but unlikely to give the person much real choice), 3 (some procedure(s) mentioned through which person can express preferences but final say does not rest with the person), 4 (procedures in place for person to express preferences and these are the final say unless clearly inappropriate or dangerous).
- 356 Inter-rater reliability was evaluated for both scales by tape recording the interview conducted with care staff for an availability sample of 50 participants. The *Risks* and *Choices* scales were then completed by a member of the research team 'blind' to the ratings given in situ.
- 357 Levels of agreement between raters for each item of the scales is presented below. Agreement was assessed by calculating the exact percentage agreement (i.e., the percentage of occasions on which both raters gave an identical rating) and either Cohen's Kappa (for Yes/No items) or Spearman's rho (for items rated on a four point rating scale). All items of both scales showed good levels of inter-rater agreement. Information on the *Risks* scale is presented in Table 74. Information on the *Choices* scale is presented in Table 75.

Table 74: Inter-Rater Agreement on *Risks Scale*

	<i>exact % agreement</i>	<i>Kappa</i>	<i>Spearman's rho</i>
<b>Has user had accidents or injuries requiring hospital treatment in past 5 years?</b>	98%	0.928	
<b>Has user suffering accidents or injuries requiring medical attention</b>			
...in the home in past year	100%	1.000	
...out of the home in the past year	100%	1.000	
<b>Has user</b>			
..been the victim of physical or sexual abuse in past 5 years	96%	0.881	
...been the victim of a crime	98%	0.928	
...had their current home vandalised	98%	0.877	
...been verbally abused by members of the public	100%	1.000	
<b>Is user perceived to be at some risk...</b>			
...of accidents in the home	98%		0.999
...of traffic accidents	96%		0.999
...from dangers outside the home	96%		0.999
<b>Is user perceived to be at risk of physical or sexual abuse by ...</b>			
...other service users	95%		0.911
...people living in local community	98%		0.999
...staff working in services	100%		no variation
...any other persons	100%		1.000
<b>Is user perceived to be at risk of exploitation by ...</b>			
...other service users	98%		0.999
...people living in local community	100%		1.000
...staff working in services	98%		no variation
...any other persons	100%		1.000



Table 75: Inter-Rater Agreement on *Choices* Scale

	<i>exact % agreement</i>	<i>Spearman's rho</i>
content of evening meal	82%	0.937
timing of evening meal	80%	0.866
where evening meal is eaten	92%	0.924
indoor leisure activities (eg TV)	92%	0.840
going out (eg pub, cinema)	72%	0.861
time they go to bed in the evening	84%	0.685
clothes they purchase	64%	0.756
clothes they wear each day	82%	0.782
household routines (eg shopping)	67%	0.789
keeping pets	98%	0.977
who they live with	82%	0.894
where they live	93%	0.959
recruitment of staff	81%	0.914
review of staff performance	89%	0.931
firing of unsuitable staff	83%	0.920
involvement with girl/boyfriends	98%	0.715
haircut	94%	0.975
day time activities	69%	0.734
holidays: where/when/who with	83%	0.886
time spent in bath	80%	0.638
employment	93%	0.969
access to a private area	98%	1.000
moving home in the future	77%	0.852
furnishings in their home	85%	0.853
furnishings in their bedroom	89%	0.935
personal possessions	87%	0.792

358 Data from the total sample was used to examine the internal consistency of the *Choices* scale. Cronbach's Alpha was 0.952 with a mean inter-item correlation for the 26 item scale of 0.435. Alpha would not have been increased by the deletion of any of the 26 items. These results indicate that, as a scale, the *Choices* scale shows excellent internal consistency.



## Appendix 2: Costing Methodology

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- 359 A version of the *Client Service Receipt Inventory* (CSRI: Beecham & Knapp, 1992; Beecham, 1995) was devised for this evaluation. The CSRI is a flexible schedule, originally developed by researchers at the Personal Social Services Research Unit (PSSRU) at the University of Kent at Canterbury in the early 1980s and used in a wide range of projects.
- 360 The inventory is divided into several sections and is completed for each study client. It collects data relating to the client's accommodation arrangements, income and expenditure, and recent use of services provided both by and independently of the residential facility. In the present project, questions relating to accommodation facility managing agency arrangements, staffing levels within individual houses and the physical layout of each site were excluded from this version of the CSRI. Instead these details were incorporated within the *Residential Services Setting Questionnaire* (Emerson et al, 1995).
- 361 CSRI data were collected by researchers from the Hester Adrian Research Centre (HARC) when they were completing their own instruments and both the hard copies and disk versions were passed to the Centre for the Economics of Mental Health (CEMH). Details of study clients' use of services provided independently of their accommodation arrangements were married up with national unit costs data (see below). More information than could be collected using the CSRI was needed, however, to allow the detailed costing of accommodation facilities and all services provided on the sites of village communities and residential campuses.
- 362 An introductory letter was sent to each of the organisations participating in the study. This set out the aims of the economic evaluation and outlined the areas of information which would be needed in order for comprehensive costing to take place. Broadly, these areas covered:
- 362.1 *Costs and charge information*: charges to purchasers for places in the accommodation facility and all other sources meeting the cost of supporting residents. Also charges made to non-residents for using the facility's services.
  - 362.2 *Details of individual settings within the facility*: location, number of residents, number of bedrooms. Capital valuation of buildings and costs of any recent refurbishment.
  - 362.3 *Staff characteristics*: paid staff and volunteers, whole time equivalent numbers, qualifications, grades. Staff salary details.
  - 362.4 *Revenue costs*: the full, disaggregated running costs for individual houses and for all building-based services on site.
  - 362.5 *Services provided by the facility (especially day activities)*: description and number of hours/days available to residents/ non-residents.
  - 362.6 *Business enterprises run on site*: product details, number of residents involved in production and sales.
  - 362.7 *Central management costs*: how these are apportioned; details of any cross-subsidies between sites.

## Accommodation & Associated Care

- 363 The data recorded by the HARC researchers were used as a starting point by the CEMH researcher at interview with a member of the organisation's management staff (dispersed housing) or a senior member of staff at the village community or residential campus. At this stage it was important to check whether there were any particular arrangements which might have cost implications which would not be immediately obvious. Examples would be staff members dividing their time between several facilities; input of volunteers and services provided by the facility's staff for non-residents.
- 364 Costing the facilities provided by each organisation presented a number of problems. In the dispersed housing organisations, care and housing were often contracted out to several different agencies. Therefore, it was difficult to co-ordinate the necessary accounts information and to gain access to the people able to interpret the data. Constraints on researcher time meant that not all of these arrangements could be investigated in detail. However, while compromises were made in some cases when estimating running costs associated with housing, facility-specific direct staffing costs were always obtained, and disaggregated to the level of the individual setting.
- 365 Each village community or residential campus received a visit from the CEMH researcher. Service arrangements on these sites were often complex, and a member of the management staff was asked to explain them and interpret the organisation's accounting system. Separating out provision within individual settings (houses) was relatively simple, but facility (community/campus) costs were more difficult to disentangle. For example, the administration staff might be responsible for support services to a part of the organisation not included in the facility accounts, or to day activities as well as residential care, or to people living in dispersed housing as well as the facility itself.
- 366 Accounts information relating to a full financial year was used to calculate costs, but inevitably a flexible service would be expected to alter during that period and, indeed, there were numerous changes, particularly in staffing levels, during a single year at most of the participating facilities. We wished to reflect arrangements at the time the data were being collected by the HARC researchers, so every attempt was made to cost the service as it was during the data collection period. An annual figure was calculated as the cost of providing care for each study client, but the cost per resident week was considered to be the most appropriate unit for representing the data.

### *Staffing Costs*

- 367 Analysis of costs began at the level of direct staffing within the individual setting. This was the area where most researcher time was employed because staff costs make up the greatest part of the cost of providing accommodation and associated care, and are the most likely to fluctuate in response to changes in the profile of residents' needs or because of resident vacancies. These costs were built up using facility staffing lists with details of grade, number of hours worked and pay levels.
- 368 The cost of employing staff is not limited to salary. An allowance must be made for 'on costs,' (superannuation and employer's national insurance contributions) and for recruitment and training, staff travel and subsistence, and so on. Expenditure on these items was taken from facility accounts or from the organisation's central office accounts.

- 369 Costing the input of volunteers is problematic in any evaluation. On the one hand, volunteers represent a resource which has no cost implications to the purchasing or provider agency. However, a comprehensive calculation of the cost of running a service must take into account the full opportunity cost of volunteer labour. This may be done by considering the alternative use volunteers might be making of their time, or the cost of replacing their input with paid workers (Knapp, 1993).
- 370 As discussed in the main report we found that, although volunteers were recognised as an important resource by several of the participating organisations, it was not usually in the residential service that their activity was relied upon. Consequently, the full implications of costing voluntary labour have not been explored as part of our work. Where a volunteer worker was noted, we used the mean salary of a support worker in the relevant organisation as a notional cost.

### *Non-staffing Costs*

- 371 House-specific, direct running costs (such as heat and light, routine maintenance, household equipment) were examined next. It was important to identify the point at which responsibility for expenditure items passed from organisation to the individual resident. A facility's running costs may look artificially low if residents are expected to meet household expenses from the social security benefits they receive.
- 372 Some organisations providing support in village communities or residential campuses did not produce accounts information which disaggregated running costs to the level of the individual house. In these instances it was important to ensure that costs were apportioned so that day activities or other non-residential services were kept separate from the provision of accommodation.

### *Agency Overheads*

- 373 For dispersed housing organisations, the next stratum of costs information was usually at the level of the managing agency itself. These overheads were calculated using the organisation's own accounts where possible, or by adding five per cent of other revenue costs (Audit Commission, 1993). Village communities and residential campuses had a further level of management and administration within the facility itself, and costs for this stratum were calculated using facility accounts information.

### *Capital Costs*

- 374 In order to estimate the long-run marginal (opportunity) costs of building-based services, the cost implications of these buildings must be included in the total cost. Where services were provided in new-build facilities, the costs of constructing and fitting out the premises were requested from the organisation. Otherwise, a recent market valuation of the house or site was used as the closest approximation of the nature of resource investment. If neither of these figures was available, a valuation of the facility was estimated from its council tax banding.
- 375 When discussing annuitisation of the value of capital, Netten and Dennett (1996) assumed a six per cent discount rate over 60 years for buildings and land. HM Treasury now recommend that when publicly provided capital is for a service that is traded on the open market, eight per cent should be used so, for consistency, all building capital has been discounted at eight per cent. Ten per cent of the annual figure was added as an estimate of

the replacement of fixtures and fittings, unless the organisations themselves were including a realistic amount for such items. Because a consistent approach was taken to estimating the cost of capital, rent payments made by the individual organisations and their own arrangements for depreciation of capital were removed from the accounts before costs were calculated.

- 376 The capital cost of site vehicles was treated in a number of different ways by the participating organisations. In some cases, cars or minibuses were owned by the organisations themselves, or donated by fundraising groups. In other arrangements, vehicles were leased, or residents' mobility allowance was used to fund the replacement of vehicles. We needed to find a way of representing the cost of depreciating vehicle capital, no matter who, or which organisation, would be responsible for this cost. The Automobile Association provides a handbook which details depreciation costs, based on the cost of a new car and assuming an economical life of 80,000 miles, or eight years. This estimate was used for every known vehicle in service at each site. (If use was split between residential and day activities, the cost was apportioned as appropriate).

## Day Activities

- 377 When costing day services managed by the organisations responsible for residential support, the procedure was the same as detailed above. These services were usually on the same site as the accommodation facilities. More individualised day programmes (such as visits to special swimming facilities or riding schools) were costed by using the charge which would normally be made for the activity itself and the time of the service professional accompanying the client, unless that person was a member of the residential staff in which case their time would already have been costed.
- 378 Many study clients were in some form of work-related activity. Provision of work for people with disabilities represents a cost and a benefit to the employer. On the one hand, there is the benefit of the goods produced/activities undertaken by the employee. On the other hand, there is the responsibility of providing staff to supervise those activities. For now, we are assuming that, at the margin, the employer covers his/her cost and, therefore, a zero cost has been recorded for work-related activities. The exception to this is where workshops are run by the accommodation provider organisation, in which case we know the cost/benefit balance and have reflected this by calculating the netted cost.
- 379 The average market wage for the types of jobs undertaken by study clients was approximately £3.50 per hour in the autumn of 1998. It could be argued that this notional cost should be used to represent the value of the labour to the employer. However, the worker's productivity level is unknown. Equally, it is impossible to tell whether the job was created specifically for a disabled person or whether, in the absence of this worker, someone else would be hired at the going rate. It will be interesting to see what impact the introduction of a national minimum wage will have on the employment of people with learning disabilities.
- 380 If a worker receives some payment for their labour, the cost to the employer is inevitably higher, since it will include both supervision and the wage being paid. However, in the case of the study clients, we picked up this item at the recipient's end, since 'wages' recorded in the CSRI were used to pay for personal items included in cost calculations as living expenses.

- 381 There may have been a cost involved in work activities carried out on the residential facility site, but not actually in a formal workshop (for example: watering plants, ground care, helping in the coffee shop). We ascertained that there was no specific dependence on residents to undertake these activities and, consequently, have not costed their labour. Nevertheless, such tasks and use of clients' time should be noted.
- 382 Many types of job were undertaken by study clients on a voluntary basis. The same arguments apply here as when costing the input of 'able bodied' volunteers in residential and day services. However, as we have taken the decision to 'zero cost' sheltered work and open employment for study clients, we cannot legitimately introduce notional costs for these activities.

## Hospital & Community-Based Services

- 383 Services received by clients which were not provided by the organisation responsible for accommodation and associated care were costed using national unit costs data (Netten et al, 1998) or, where costs for specific professionals were not available, unit costs calculated by colleagues and used in current or recent evaluations. This approach was taken for costing all hospital services, day centres and education and training where these services were not included as part of the residential package. Community-based professionals such as GP, psychiatrist, psychologist, community mental health team, occupational therapist, dentist and optician were also costed using national unit costs data. Where appropriate, we were able to reflect higher salary costs due to London weighting, and travel costs for professionals making domiciliary visits.

## Aids & Adaptations

- 384 A wide range of aids and adaptations had been provided for service users during the months before the data collection interview. Often these were items which involved a considerable outlay by the purchasing agency (for example: hydraulic bed, bath rails, chair lift). If purchased by the organisation responsible for accommodation, such costs would already have been included in our estimate for replacement of capital. If, however, another agency or individual provided the capital, we used the average charge as quoted in catalogues produced by suppliers, annuitised over a five year period. We also took advice from the suppliers themselves, for example on the cost of making and fitting special boots, and the period such items would be expected to last.
- 385 The provision of many small items of equipment was also recorded. We assumed that the cost of items such as special cutlery or 'banana boards' purchased by the organisation would appear in the facility accounts and would thus have been included in our calculations of accommodation costs. Also, if the client paid a small amount for a white stick, for example, we would expect the money to come from his or her own pocket and thus we would already have included it in service package costs. Expenditure on small items by other agencies was added, but such amounts were not annuitised.
- 386 At the end of the costing process, we had defined and costed a service package unique to each study participant. All costs relating to residential services, day activities and use of all other services were represented as their weekly contribution to the total cost of care. As far as the participating organisations themselves were concerned, although we had begun with a top-down approach to calculating costs, costs were then weighted to the resource use of individual clients and are reported only in this way. All costs are reported at 1997-98 price levels.

