The Characteristics of Residents in Extra Care Housing and Care Homes in England

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Abstract

Extra care housing aims to meet the housing, care and support needs of older people, while helping them to maintain their independence in their own private accommodation. It has been viewed as a possible alternative, or even a replacement for residential care. In 2003, the Department of Health announced capital funding to support the development of extra care housing, and made the receipt of funding conditional on participating in an evaluative study. This paper presents findings on the characteristics of the residents at the time of moving in, drawing on information collected from the 19 schemes in the evaluation and a recent comparable study of residents who moved into care homes providing personal care. Overall, the people who moved into extra care were younger and much less physically and cognitively impaired than those who moved into care homes. However, the prevalence of the medical conditions examined was more similar for the two groups, and several of the schemes had a significant minority of residents with high levels of dependence on the Barthel Index of Activities of Daily Living. In contrast, levels of severe cognitive impairment were much lower in all schemes than the overall figure for residents of care homes, even among schemes designed specifically to provide for residents with dementia. The results suggest that, although extra care housing may be operating as an alternative to care homes for some individuals, it is providing for a wider population, who may be making a planned move rather than reacting to a crisis. While extra care supports residents with problems of cognitive functioning, most schemes appear to prefer residents to move in when they can become familiar with their new accommodation before the development of more severe cognitive impairment.

Keywords: care homes, dementia, extra care housing, older people, physical frailty

What is known about this topic:

- Information on residents in extra care is based mainly on individual studies, with little comparability across schemes or with care homes
- Extra care can provide some residents with dementia with a good quality of life, but there is little evidence that it can support people with more severe problems

What this paper adds:

- Comparative information about residents in 16 smaller extra care schemes, 3 villages and for a sample admitted to care homes
- Mean Barthel scores ranged from 11.4 to 17.7, compared with 10.4 for care homes
- 3% were severely cognitively impaired, compared with 39% of care home admissions and 54% of nursing home admissions

Word count: 299 (abstract), 111 (what known), 5015 (text), 135 (acknowledgements), 1391 (references), 1000 (tables)

Introduction

A central principle underlying the policy of recent governments has been to help people maintain their independence in their own homes for as long as possible. In particular, policies have emphasised the personalisation of services, with the aim of giving people greater choice and control over the services they receive (Department for Communities and Local Government, 2008; HM Government, 2010). Increasingly, housing has been seen as essential in the development of effective community care services. The 1998 White Paper (Cm 4169, 1998) identified a need for partnership between health, housing and social services for the development of successful community care services, and this was reinforced in subsequent policy documents (Office of the Deputy Prime Minister, 2006; Department for Communities and Local Government, 2008; Cm 7673, 2009), and by the Coalition Government in 2010 (Department of Health, 2010).

In 2003, the Department of Health announced a new fund to support the development of extra care housing (Department of Health, 2003b,c). Although there is no agreed definition, Laing & Buisson (2010) suggest that extra care housing can be recognised by several characteristics: it is primarily for older people; the accommodation is (almost always) self-contained; care can be delivered flexibly, usually by staff based on the premises; support staff are available on the premises for 24 hours a day; domestic care is available; communal facilities and services are available; meals are usually available, and charged for when taken; it aims to be a home for life; and it offers security of tenure. A distinction needs to be made between smaller extra care schemes, typically with 40 or more units of accommodation, and larger retirement villages, with 100 or more units (Evans, 2009). Retirement villages provide a wider range of social and leisure activities and more accommodation for purchase. Individuals are encouraged to move in at a younger age to stimulate the development of a mixed or balanced community of interests and abilities.

Extra care housing has also been viewed as a possible alternative to moving into a care home (Cm 6499, 2005). Indeed, some have advocated the complete re-provision of residential care by developing extra care (Appleton and Shreeve, 2003; Housing Learning & Improvement Network, 2003; Department of Health, 2004). However, it is likely to have more impact on homes providing personal care, formerly termed residential homes, since care homes will still be needed for residents requiring high levels of nursing care or continuous monitoring (Laing & Buisson, 2010).

Although it has been viewed as a possible alternative to (some) care home provision, there is much less extra care housing. Taking a very broad definition, there were about 43,300 extra care dwellings in England in 2009 (Elderly Accommodation Counsel, 2009), compared with about 276,000 personal care and 179,000 nursing care places in care homes in the United Kingdom (Laing & Buisson, 2009). In contrast, there were nearly 480,000 sheltered housing dwellings in England (Elderly Accommodation Counsel, 2009). However, extra care provision more than doubled since 2003 (Department of Health, 2003a). Furthermore, extra care dwellings may be occupied by more than one person, typically a married couple, and so this comparison underestimates the relative level of provision to some extent.

Studies of extra care have often concentrated on individual developments (for example Kingston et al., 2001; Croucher et al., 2003; Bernard et al., 2007; Evans and Means, 2007). Larger studies include a comparative study of seven schemes (Croucher et al., 2007), and studies of schemes managed by one housing provider, including an investigation of the care of people with dementia (Vallelly et al., 2006; Evans and Vallelly, 2007). Another recent study has focused on dementia and other mental health problems in ten schemes owned by another single provider (Brooker et al., 2009). However, the information collected has usually been specific to the particular study, making comparisons difficult. Exceptions to this are comparisons of residents of two developments with people living in the local community (Kingston et al., 2001; Bernard et al., 2007). In addition, housing providers collect information for management purposes; for example Housing 21 (2008).

The Extra Care Housing Fund provided £87 million capital funding for local authority social services departments and housing associations to help create up to 1,500 places between 2004 and 2006 (Department of Health, 2003c). Another £140 million was allocated between 2006 and 2010 (Department of Health, 2005; Department for Communities and Local Government, 2008). Around 450 bids were submitted altogether, and 86 were successful. The successful schemes included smaller schemes and larger villages, and included both new build and remodelled schemes.

Participation in an evaluation was a condition of receiving support from the first two rounds of the Fund. This was the first evaluation of specialised housing supported by the Department of Health. It aimed to examine the development of the schemes from their implementation, and to follow the residents' experiences and health over time. One of the aims was to compare the residents of extra care schemes and care homes. Initial findings were presented in Darton et al. (2008), and early comparative findings for those

that opened in 2006–2007, focusing on the support of people with dementia, were presented in Darton and Callaghan (2009). This paper presents more detailed results on the characteristics of residents, drawing on information collected from all of the schemes included in the evaluation, and compares these residents with individuals who moved into care homes in 2005.

Method

The Schemes

Originally, 22 schemes were included in the evaluation and were expected to open between April 2006 and October 2007. However, several experienced delays, and three had to be dropped to keep to the research timetable. The remaining schemes included three villages, each with approximately 250 units of accommodation, and 16 smaller developments, with between 35 and 75 units. The schemes opened between April 2006 and November 2008. They were located in eight of the nine Government Office Regions in England, excluding the South West. Three were in metropolitan districts, three in Outer London boroughs, five in shire counties, and eight in unitary authorities.

Among the 19 schemes, 16 were built on brownfield sites, five on the sites of previous sheltered housing or housing for older people and two on the sites of residential care homes. A third scheme was part of a more extensive re-development and replacement of a residential care home. The schemes were intended to support residents with a range of levels of disability, as well as to provide facilities for members of the local community. They offered a mixture of housing tenures, including rented accommodation and leasehold and shared ownership arrangements. However, the villages provided relatively more accommodation for sale, while seven of the 16 smaller schemes only provided rented accommodation.

The smaller schemes aimed to achieve a balance of dependency among residents, such as one-third low, one-third medium and one-third high care needs. However, the villages aimed to provide accommodation for active older people as well as those with care needs, and the majority of new residents were not expected to require care services. These residents were more likely to have been owner-occupiers and to have purchased their accommodation. A small number of residents in the smaller schemes, such as live-in carers, would also not have needed care services.

Data Collection

Prior to the opening of each scheme, a local interviewer was recruited to coordinate data collection and undertake interviews with residents. An assistant was also recruited for the villages.

Two main sets of information were collected about the individual entrants. First, information was collected about their demographic characteristics and care needs, using a questionnaire to record information collected in the assessment process. The questionnaire was designed to correspond to those used in several previous studies of admissions to care homes, most recently in 2005 (Darton et al., 2006, 2010), and was developed in consultation with representatives of the schemes. The information collected included demographic information, previous accommodation and living arrangements, the receipt of informal care and formal care services, medical history, activities of daily living, instrumental activities of daily living, cognitive impairment, financial circumstances, and planned accommodation and services in extra care. Subject to the consent of the resident or their representative, the interviewer completed the questionnaire using the assessment information. Separate questionnaires were completed for each member of a couple. Similar information was collected six, 18 and 30 months after moving in, to identify changes over time.

Second, new residents were asked to complete a questionnaire about their experiences of moving and their expectations, assisted, where necessary, by the local interviewer. For residents that did not require care services and did not receive a care assessment, information was only collected about their expectations and experiences. A full description of the evaluation is contained in a technical report (Darton et al., 2011).

The process received ethical approval from the appropriate Research Ethics Committee at the University of Kent and, because some residents may have lacked the mental capacity to consent, from a local research ethics committee within the NHS National Research Ethics Service (Leeds (West) Research Ethics Committee, reference number 08/H1307/98).

The 2005 survey of admissions to care homes followed the design of a previous survey (Bebbington et al., 2001), using similar questionnaires to collect information on the circumstances of those admitted over a planned period of three months. The survey employed a stratified sample of 16 local authorities in England (Darton et al., 2006, 2010). The questionnaires were completed by local authority staff from the information

collected in the care and financial assessments, subject to the older person's consent, and the fieldwork was conducted by NOP World (now GfK NOP).

Two summary measures were computed from the information recorded on the assessment-based questionnaire, as in the previous studies of admissions to care homes. Physical functioning was measured by the Barthel Index of Activities of Daily Living (Mahoney and Barthel, 1965), with scores ranging from zero (maximum disability) to 20 (minimum disability). Cognitive functioning was measured by the Minimum Data Set Cognitive Performance Scale (MDS CPS) (Morris et al., 1994), with scores ranging from zero (intact) to 6 (very severe impairment). The computation of each measure involved a degree of approximation (Darton et al., 2011). However, the same questions and computer algorithm were used for the previous studies of care home residents. Therefore, the approximate versions of the two measures were equivalent for each study. The Barthel scores have been grouped into five categories (0–4, 5–8, 9–12, 13–16, 17–20), following Granger et al. (1979), but with an additional subdivision of the scores from 13–20.

This paper reports on the information collected on demographic characteristics and care needs. The evaluation included new residents who replaced those who left, but this paper is based on individuals who moved into each scheme within six months of opening, in order to provide comparability across the schemes. A number of the schemes provided intermediate care, designed to help people make the transition from hospital care back to their own homes. These individuals were not included in the evaluation.

In the statistical tests presented, chi-square (X^2) tests were computed for variables with unordered categories, with a correction for continuity for tests with one degree of freedom (d.f.). Mann-Whitney tests were computed for variables with ordered categories, and large-sample (z) tests were computed for continuous variables. The statistical analysis was undertaken using the PASW Statistics 18 computer program (SPSS Inc., 2009).

The tables present the results of 40 separate statistical tests, including two pairs of duplicate tests for continuous and categorical versions of age and the Barthel Index. A Bonferroni adjustment of a significance level of 0.05 for 38 separate tests gives α = 0.05/38 = 0.0013 (Bland, 2000). Thus, all tests with nominal p-values less than 0.001 are significant at the 0.05 level overall.

Results

Response

The three villages accounted for 770 units of accommodation and the 16 smaller schemes accounted for 716 units, a total of 1,486. Excluding the accommodation designated for intermediate care and the accommodation in the villages for people who did not require care services reduced the total to 909 units, 240 in the villages and 669 in the smaller schemes, although in the villages the number of units occupied by people who required care services varied over time. The information presented relates to 609 individuals who moved into the schemes within six months of opening, 132 to the villages and 477 to the smaller schemes. The ratios of individuals to units, 55 per cent for the villages and 71 per cent for the smaller schemes, and 67 per cent overall, represent approximate response rates. Since extra care dwellings may be occupied by more than one person, these ratios are likely to be overestimates. Conversely, the calculations are based on the assumption that all of the units were occupied.

At the scheme level, the 'response rates' ranged from over 90 per cent for five schemes to between 30 and 50 per cent for five schemes. The lower figures were related to interviewer recruitment (two schemes), problems of obtaining consent (two schemes) and delays in setting up the fieldwork in one of the villages at the request of the scheme management. Five schemes were making specific provision for people with dementia, and two had 'response rates' of below 50 per cent. However, for the other three schemes the figures ranged from 74 to 91 per cent.

The 2005 survey of admissions to care homes was intended to produce a sample of 1,200 admissions. Although an estimated 2,613 admissions occurred during the fieldwork period, problems in obtaining cooperation from some of the authorities resulted in consent being obtained for only 1,029 individuals. Data were received for 820 people aged 65 or over. This corresponds to 31 per cent of the estimated number of admissions, ranging from 10 to 90 per cent for the individual authorities. However, reweighting the data to reflect the relative proportions of supported residents in the different types of local authority had very little effect on the distributions of the resident characteristics, and the unweighted figures are used here. Since extra care is more likely to provide an alternative for care homes providing personal care, this paper presents comparisons with the 494 residents known to have moved into such homes, termed 'care homes' here.

Demographic Characteristics

The people who moved into extra care were younger, on average, and were more likely to be male and less likely to be widowed than those who moved into care homes (Table 1). The mean age of the residents in extra care, after excluding those aged under 65, was 80.5 years, which was still significantly lower than that for residents of care homes ($z = -10.14$, $p < 0.001$). Although residents were aged from 30 to 105, only three were aged under 50 and only two were centenarians. Very few residents in either location were recorded as being of non-white ethnic origin, and the difference between the proportions was not statistically significant.

[Insert Table 1 about here]

Housing Circumstances

The majority of the residents in extra care had been living previously in ordinary housing (65 per cent), 19 per cent had been living in sheltered or supported housing, and 10 per cent had been living in a care home (Table 2). In contrast, the largest proportion of residents who moved into care homes had come from hospital. Some of the extra care schemes were designed to replace sheltered housing and care homes, and it is likely that, for extra care housing in general, a higher proportion of residents would have moved from private households.

The residents in extra care were more likely to have been owner-occupiers and less likely to have lived in privately-rented accommodation than those who moved into care homes. The majority of residents in both locations had been living alone, but those in extra care were more likely to have been living with others, reflecting the younger average age and the higher proportion of married individuals.

[Insert Table 2 about here]

Informal and Formal Care

Table 3 presents information on the receipt of informal care and formal care services before moving, and excludes individuals who had moved from a care home. Residents who moved into extra care were less likely to have received informal care or home care, while those who moved into care homes were more likely to have used a day centre or

received a meals service. Residents in care homes were also more likely to have received visits from a nurse, but there was no difference in the proportions that had seen an NHS therapist.

Residents who moved into extra care were less likely to have received more intensive home care. For those for whom the information was recorded, 31 per cent received more than 10 hours of home care per week, corresponding approximately to the definition of intensive home care (The Information Centre, Adult Social Care Statistics, 2007), compared with 42 per cent of those who moved into care homes.

[Insert Table 3 about here]

Physical and Cognitive Functioning

Residents who moved into extra care had much less need for assistance with activities of daily living (ADLs) and fewer problems of cognitive impairment than those who moved into care homes (Table 4). However, over half of the residents of extra care were unable to go out of doors, use stairs or steps or bath or wash all over without assistance, and about one-third required assistance with dressing, but fewer than 15 per cent required assistance with personal care needs, and only 3 per cent required assistance with feeding themselves.

The mean scores on the Barthel Index illustrate the difference between the two groups in terms of performing ADLs ($z = 13.77$, $p < 0.001$). The MDS CPS scores indicate that 3 per cent of those who moved into extra care suffered from severe cognitive impairment (scores 4–6), compared with 39 per cent of those who moved into a care home. For those who moved into a care home providing nursing care, the equivalent figure was 54 per cent.

It is likely that the information obtained for the schemes with the lowest 'response rates' related to less frail residents, particularly those with little cognitive impairment. However, there were substantial variations in the levels of need for assistance with ADLs, which did not appear to be associated with the level of response. The mean for the Barthel Index ranged from 11.4 to 17.7, compared with 10.4 for care homes, but in one scheme the proportion of residents with high levels of dependence (Barthel scores 0–8) was slightly higher (36 per cent) than the overall figure for care homes (35 per cent). For two of the villages, the level of physical dependence among the residents in receipt of care services was relatively high, with mean Barthel Index values of 12.6 and 12.9, respectively. The proportion of residents with cognitive impairment (MDS CPS scores

1-6) ranged from 6 to 61 per cent, and the figures for the schemes with the lowest 'response rates' were within this range. The residents in the villages had relatively low levels of cognitive impairment, and those in two of the villages had the lowest levels overall: 6 and 11 per cent, respectively. However, there was less variation between the schemes in terms of severe cognitive impairment. Excluding the schemes with the highest 'response rates', those designed specifically to provide for residents with dementia had the highest proportions with severe cognitive impairment: 7, 11 and 15 per cent, respectively.

For those who moved into extra care, information was also collected about instrumental activities of daily living (IADLs), relating to domestic tasks. Over two-thirds required assistance with tasks such as housework, shopping and personal laundry, and about 50 per cent required help to prepare hot meals. Thirty-five per cent required assistance to make snacks and hot drinks, but only 13 per cent required assistance with using the telephone, both activities being important in extra care, where residents' apartments have kitchen facilities and telecare systems may require residents to use sophisticated technology.

[Insert Table 4 about here]

Medical History

The items on medical history (Table 5) were drawn from a previous study of hospital admissions (Acquilla et al., 1987), with the addition of diabetes, and included factors found to predict admission to care homes and survival in care homes (Bebbington et al., 2001; Netten et al., 2001). Each one was recorded as a binary, 'yes/no', item.

Consistent with the differences in assessed levels of cognitive impairment, residents who moved into extra care were much less likely to have been diagnosed as having dementia than those who moved into care homes. They were also less likely to have been diagnosed as having depression, but there was no statistically significant difference between the proportions diagnosed as having other psychiatric disorders.

The differences between the two groups of residents were small for four of the seven medical conditions for which comparable information was obtained. However, 45 per cent of the residents of extra care were recorded as suffering from musculoskeletal conditions, such as arthritis, rheumatism and osteoporosis, compared with 35 per cent of the residents of care homes, and 29 per cent were recorded as suffering from cardiovascular disease, compared with 22 per cent of the residents of care homes.

Conversely, 7 per cent were recorded as suffering from the effects of a fracture, compared with 12 per cent of those who moved into a care home.

The residents who moved into extra care were slightly less likely to suffer from blindness, but there was no difference between the groups for deafness.

[Insert Table 5 about here]

Discussion

This paper presents information collected from 19 schemes that were developed in response to a specific government capital funding programme, and they may not be representative of extra care schemes in general. However, the study should add significantly to the evidence base on extra care schemes and their residents.

The study involved collecting data at a time when the schemes were opening and residents were facing considerable personal upheaval. Specific research arrangements had to be negotiated with each scheme while ensuring that a consistent approach was adopted. A standardised data collection procedure was designed to correspond, as far as possible, to those used in several previous studies of admissions to care homes. However, information could only be collected about the characteristics of residents who received a care assessment. Inevitably, there were differences in the success of the process in different schemes, and it is likely that the information obtained from the schemes with the lowest levels of response related to less frail residents. However, higher levels of response were obtained for most schemes and did not appear to be related to levels of frailty.

Comparisons with other studies are limited by differences in the information collected and the specific circumstances and clientele of the individual schemes. However, the proportion of male residents was similar to that in a number of other studies (Croucher et al., 2003; Bernard et al., 2007; Housing 21, 2008), although it was higher than in the retirement village examined by Evans and Means (2007). With the exception of the small number of younger adults and centenarians, the age range of the residents was similar to that reported by Evans and Means (2007), and by Brooker et al. (2009). However, the mean age for the predominantly working-class residents in the study by Bernard et al. (2007) was lower.

The proportions of residents who required help with ADLs and IADLs were similar to those reported by Evans and Means (2007) for several items, despite differences in the questions used. In relation to cognitive and psychological functioning, the Housing 21 study reported a similar figure for a diagnosis of dementia, but a lower figure for depression. However, the figure quoted for the general population, of 'up to 15 per cent' (Housing 21, 2008, p.3), was similar to that for the current study. Brooker et al. (2009) classified between 23 and 47 per cent of residents in small to medium schemes (up to 80 residents) as having cognitive impairment, compared with between 24 and 61 per cent for the 16 smaller schemes here. Brooker et al. used the Mini Mental State Examination (MMSE) (Folstein et al., 1975), but there is a close correspondence with the MDS CPS (Morris et al., 1994).

Compared with residents of private households, those in extra care housing were less able to undertake personal care and domestic tasks. For example, among the residents aged 75 and over in the 2001 General Household Survey, only 11 per cent were unable to bath, shower or wash all over, and 4 per cent were unable to dress or undress, while 21 per cent were unable to do household shopping (Traynor and Walker, 2003).

Greater difficulties arise in making international comparisons. There has been more emphasis on housing-based solutions for providing accommodation with care in many European countries (Winters, 2001). However, information about residents is limited. In the USA there is a highly developed retirement community industry, dating back to the 1920s (Hunt et al., 1984). More recently, assisted living has been the most rapidly growing form of housing for older people (Hawes et al., 2003). Assisted living shares similar characteristics with extra care housing (Regnier, 2002; Hawes et al., 2003), but there is substantial variation across states and developments often provide inferior facilities to those expected in the UK. For example, 57 per cent of the units were rooms and 43 per cent were apartments (Hawes et al., 2003). Wolf and Jenkins (2008) found that residents in assisted living had much greater care needs in terms of ADLs than people living in the community, but the average level of need was much lower than in the extra care schemes reported here.

Overall, the people who moved into extra care were substantially less physically and cognitively impaired than those who moved into care homes, although several schemes had a significant minority of residents with high levels of physical dependency. A number of the schemes were intended to make specific provision for people with dementia, but levels of severe cognitive impairment were very low compared with care homes. In general, as noted elsewhere (Fletcher et al., 1999; Croucher et al., 2007),

admissions policies required new residents to have relatively few problems of cognitive functioning, so that they could become familiar with their accommodation before the possible development of more severe problems. Vallelly and colleagues (2006) found that extra care could provide residents with dementia with a good quality of life. However, a number of studies suggest that extra care cannot easily support people with more severe problems (Croucher et al., 2006, 2007), and some residents in the study by Vallelly et al. did move to other settings, for example those who developed severe behavioural problems. Compared with admissions to care homes, a move into extra care is more likely to be a planned move, looking ahead rather than responding to immediate needs or a crisis.

However, the use of extra care housing to provide an alternative to, or even a replacement for, residential care, has important implications. Local authorities have increased eligibility criteria for social care (Commission for Social Care Inspection, 2008), and have been exerting pressure on housing providers to increase the number of residents with higher care needs (Murphy and Miller, 2008). Some providers have agreed to do this. Typically, however, schemes aim for a balance of residents with high, medium and low care needs, although there are differences in the interpretation of these categories (Murphy and Miller, 2008), and resident profiles vary considerably (Croucher et al., 2007). This appears to be the case in the present study.

Demographic changes and increased expectations will have a substantial impact on the demand for accommodation for older people (Department for Communities and Local Government, 2008; Homes and Communities Agency, 2009). However, extra care provision is relatively limited, and the results of the study suggest that only a proportion of places in extra care should be considered to be a true alternative to care home provision, while for villages the proportion would be even lower. Although the current economic downturn has affected private developers more than the voluntary, housing association sector (Laing & Buisson, 2010), it is unclear whether there will be much expansion in the next few years. Part of the rationale for having a mix of residents is to encourage the development of a vibrant and active community. However, a number of studies have identified concerns about the level of care needs of some of the other residents (Croucher et al., 2003; Evans and Means, 2007; Croucher and Bevan, 2010), and an increase in the proportion of people with higher needs could discourage more active potential residents. Furthermore, the balance between residents with different levels of need is also affected by changes in their needs over time, and maintaining this balance appears particularly difficult (Baker, 2002). Without the development of a range of specialist housing, including provision for people with greater care needs,

particularly those suffering from dementia, there is a risk that extra care housing will become occupied by increasingly frail residents, without the staffing levels needed to support their greater care needs.

In evaluating the impact of extra care, consideration needs to be given both to the outcomes for residents with equivalent characteristics to those moving into care homes and to the outcomes for those who are more able. Apart from living in a different care environment, those who are more dependent are also living with others who are less impaired. The effects of this could be positive, with other residents providing a source of support, or negative, with more dependent residents feeling isolated and less a part of the community (Croucher et al., 2003, 2006). For the more able residents, the question is whether moving into the enabling environment of extra care prevents deterioration, and this will be less easy to demonstrate. However, the evaluation provided an opportunity to follow up residents in a range of different schemes, and should add considerably to the understanding of the development of extra care housing for older people.

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Table 1: Demographic characteristics of residents in extra care and care homes

	Extra care		Care homes		p-value
	No.	%	No.	%	
Age					
Minimum	30		65		
Mean	77.0		85.2		<0.001
Maximum	105		102		
Standard error	0.44		0.31		
No. of cases	601		494		
Age group					
Under 65	95	15.8	–	–	
65 to 69	46	7.7	9	1.8	
70 to 74	76	12.6	29	5.9	
75 to 79	104	17.3	62	12.6	
80 to 84	105	17.5	121	24.5	
85 to 89	106	17.6	126	25.5	
90 and over	69	11.5	147	29.8	<0.001
Missing	8	–	0	–	
Sex					
Male	206	33.8	131	26.8	
Female	403	66.2	357	73.2	0.015
Missing	0	–	6	–	
Marital status					
Single	76	13.4	44	9.3	
Married/living as married	166	29.2	81	17.2	
Divorced/separated	59	10.4	24	5.1	
Widowed	268	47.1	322	68.4	<0.001
Missing	40	–	23	–	
Ethnic origin					
White	586	96.5	470	98.5	
Non-white	21	3.5	7	1.5	0.063
Missing	2	–	17	–	
Total number of individuals	609		494		

Table 2: Housing circumstances before moving into extra care or a care home

	Extra care		Care homes		p-value
	No.	%	No.	%	
Previous accommodation					
Private household	390	65.0	131	27.2	
Sheltered/supported housing	114	19.0	48	10.0	
Care home	62	10.3	56	11.6	
Hospital	21	3.5	184	38.3	
Intermediate care	7	1.2	35	7.3	
Other	6	1.0	27	5.6	<0.001
Missing	9	–	13	–	
Housing tenure					
Owner occupied/mortgaged	173	33.5	103	26.5	
Rented from LA/HA	293	56.7	222	57.1	
Privately rented/rent free	51	9.9	64	16.5	0.004
Missing/not applicable[1]	92	–	105	–	
Previous household size					
Lived alone	320	60.0	294	76.4	
Married/not lived alone	165	31.0	51	13.2	
Not married/not lived alone	48	9.0	40	10.4	<0.001
Missing/not applicable[1]	76	–	109	–	
Total number of individuals	609		494		

Note: 1. Not applicable for former care home residents.

Table 3: Receipt of informal and formal care before moving into extra care or a care home

	Extra care		Care homes		p-value
	No.	%	No.	%	
Receipt of informal care					
Lived with informal carer	95	18.4	86	20.5	
Did not live with inf carer	253	48.9	275	65.6	
No informal care	169	32.7	58	13.8	<0.001
Missing/not applicable[1]	92	–	75	–	
Home care in last month					
No	250	50.7	125	34.7	
>0–7 hours per week	107	21.7	88	24.4	
>7–14 hours per week	68	13.8	72	20.0	
>14–21 hours per week	19	3.9	31	8.6	
>21 hours per week	7	1.4	13	3.6	
Frequency not known	42	8.5	31	8.6	<0.001
Missing/not applicable[1]	116	–	134	–	
Day centre in last month					
None	359	80.0	216	67.3	
Every day/nearly	9	2.0	24	7.5	
2–3 times a week	33	7.3	46	14.3	
Once a week	33	7.3	29	9.0	
Frequency not known	15	3.3	6	1.9	<0.001
Missing/not applicable[1]	160	–	173	–	
Meals on wheels last month					
None	360	81.3	212	71.1	
Every day/nearly	65	14.7	57	19.1	
2–3 times a week	7	1.6	20	6.7	
Once a week	0	0.0	0	0.0	
Frequency not known	11	2.5	9	3.0	0.001
Missing/not applicable[1]	166	–	196	–	
Nurse visits in last month					
None	322	79.7	152	70.0	
Received visits	82	20.3	65	30.0	0.009
Missing/not applicable[1]	205	–	277	–	
NHS therapist in last month					
None	371	91.8	215	89.6	
Received visits	33	8.2	25	10.4	0.411
Missing/not applicable[1]	205	–	254	–	
Total number of individuals	609		494		

Note: 1. Not applicable for former care home residents.

Table 4: Physical and cognitive functioning of residents in extra care and care homes

	Extra care		Care homes		p-value
	No.	%	No.	%	
ADLs: need help[1]					
Go out of doors	332	56.5	386	83.0	<0.001
Get up/down stairs or steps	325	54.1	339	74.3	<0.001
Bath/shower/wash all over	324	54.2	424	91.2	<0.001
Dress/undress	210	35.2	356	76.6	<0.001
Get in/out of bed (or chair)	121	20.2	175	37.7	<0.001
Get around indoors (ex steps)	107	18.1	186	40.6	<0.001
Wash face and hands	80	13.5	216	47.4	<0.001
Use WC	78	13.1	211	45.9	<0.001
Feed self	18	3.0	86	18.5	<0.001
Barthel Index of ADL					
Mean	14.8		10.4		<0.001
Standard error	0.20		0.24		
No. of cases	557		401		
Barthel Index of ADL (banded)					
V low dependence (17–20)	254	45.6	42	10.5	
Low dependence (13–16)	145	26.0	93	23.2	
Moderate dependence (9–12)	82	14.7	127	31.7	
Severe dependence (5–8)	58	10.4	84	20.9	
Total dependence (0–4)	18	3.2	55	13.7	<0.001
Missing	52	–	93	–	
MDS CPS					
Intact (0)	384	66.1	67	14.9	
Borderline intact (1)	93	16.0	39	8.7	
Mild impairment (2)	46	7.9	52	11.6	
Moderate impairment (3)	40	6.9	114	25.4	
Moderately severe impmt (4)	6	1.0	61	13.6	
Severe impairment (5)	12	2.1	108	24.1	
Very severe impairment (6)	0	0.0	8	1.8	<0.001
Missing	28	–	45	–	
Total number of individuals	609		494		

Note: 1. The figures shown are the number and proportion of residents who required help or were unable to perform each function. Data were missing for 8 to 21 residents of extra care, depending on the item, and for 29 to 38 residents of care homes. Mann-Whitney tests were performed for the full, 4-category variable for each item.

Table 5: Medical history of residents in extra care and care homes[1]

	Extra care		Care homes		p-value
	No.	%	No.	%	
Psychiatric conditions					
Dementia (diagnosed)	43	7.2	243	51.6	<0.001
Depression (diagnosed)	83	13.8	89	18.9	0.030
Other (diagnosed)	26	4.3	30	6.4	0.176
Medical conditions					
Musculoskeletal	269	44.8	167	35.5	0.003
Cardiovascular disease	176	29.3	105	22.3	0.012
Respiratory/chest disease	97	16.1	64	13.6	0.283
Gastrointestinal disease	36	6.0	18	3.8	0.141
Diabetes	97	16.1	–	–	–
Effect of a stroke	125	20.8	84	17.8	0.255
Effect of a fracture	43	7.2	55	11.7	0.015
Malignancy (cancer)	37	6.2	35	7.4	0.481
Sensory impairments					
Effectively blind	33	5.5	42	8.9	0.039
Deafness	90	15.0	74	15.7	0.805
Total number of individuals	609		494		

Note: 1. The figures shown are the number and proportion of residents who were recorded as having each condition. Data were missing for 8 residents of extra care and for 23 residents of care homes.